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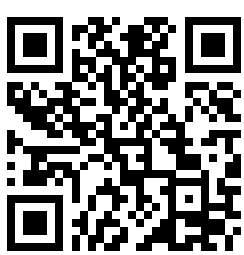
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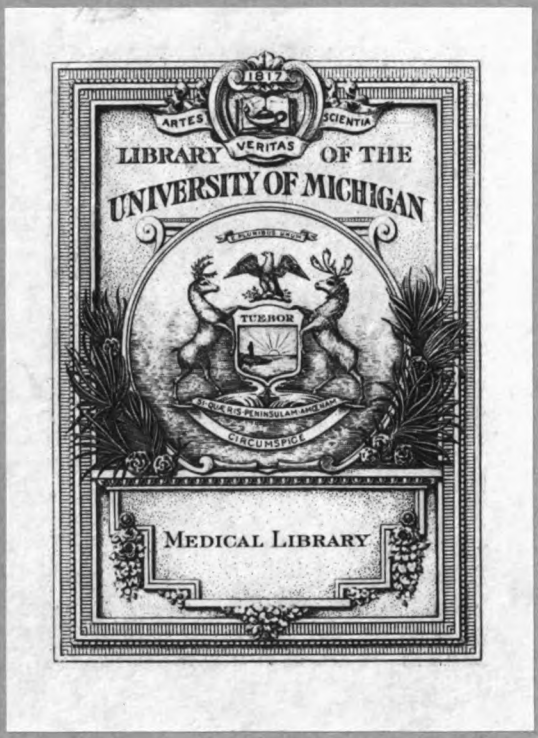
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THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

IN TWO VOLUMES ANNUALLY.

VOL. II. FOR 1887.

SIXTY-FIFTH YEAR.

EDITED BY THE PROPRIETORS:

THOMAS H. WAKLEY, F.R.C.S. ENG.,

AND

THOMAS WAKLEY, JUN., L.R.C.P. LOND.

LONDON:

PUBLISHED BY THE REGISTERED PROPRIETORS, AT THE OFFICE OF "THE LANCET," 423, STRAND.

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Introductory Lecture

ON

SOME OF THE PROBLEMS OF PATHOLOGY.

Delivered at Guy's Hospital, May 7th, 1887,

BY JAMES F. GOODHART, M.D., F.R.C.P.,

PHYSICIAN TO THE HOSPITAL, AND LECTURER ON PATHOLOGY AT THE MEDICAL SCHOOL.

GENTLEMEN,—Pathology, as something more than morbid anatomy, is an attempt to interpret morbid changes—an attempt to unravel not so much the conditions themselves as how they come about, the process which produces them, and the successive steps by which the result is reached. It deals, therefore, with morbid function as well as with structural change, and thus it becomes and is the complement to physiology—if you like so to call it, it is the physiology of decay. In illustration of this take the body of one who has died of old age. There may be nothing throughout it to show *why* it is dead. The organs are simply too small; it cannot even be said that they are too small when it is remembered that the work required of them was so little. Yet here is death. We call it senile atrophy in the certificate, to bring it within range of municipal conception—to give it, in other words, a morbid anatomy. I want, however, to impress upon you that such a case has no morbid anatomy. The viscera are small because little was asked of them, but that little they did well. On the other hand, senility is not wanting in a pathology. "Physiology played out" is the only name I can find for what has nothing to show of its nature, save the fact, the dread reality of death. We may take yet another example with advantage to the full illustration of our meaning. Let it be the grey hair, or if you like it the autumn leaf—for disease is not limited to one world of life. What of morbid anatomy have we in these? Only a change of tint. Nothing, indeed, to show why the end has come. Yet each of these, the silvery lock, the sere and yellow leaf, has its pathology, but it is not one that can be detected by the most minute inspection; it can only be discerned by the study of such changes in general, and of their obvious relation to physiological circumstance. From such as these it is that we arrive at the suggestion that rhythm is an important element of consideration. We are all set—our several parts are all set—to a fore-ordained time, determined for us by the sum of the conditions of bygone ages concentrated down into heredity. Our present environment adds for *us* only the accidental, although something towards the general determining power upon our offspring. And it is quite conceivable that if other disturbing causes did not interfere; if geological conditions, for instance, should so far slowly alter, as to have no appreciable influence on living organisms; if the struggle for existence could pause in its headlong career towards the competitive throat-cutting which threatens to reduce us to a refined Ishmaelism in the not far distant future—if, I say, such influences as these could be eliminated, then this time-setting might come to be the life closure, not of an exceptional individual only, but of all animal life; the average duration of existence, epoch by epoch, would be gradually curtailed, until time should be no longer. But were that all that could be said about rhythm and disease, save as a matter of interesting speculation, either subject might well be left alone. It is, however, not so; rhythm or periodicity plays a considerable part in many a pathological process, and plays it so prominently that perforce one must consider it. It is one of the mysteries of pain which very early in your career will insist upon being combated. Not even the ghosts of Christmastide, when disturbing the midnight watches of Ebenezer Scrooge, exhibited more inexorable punctuality than do some of the worst forms of neuralgia. Pyrexia is ofttimes rhythmic in the regularity of its rise and fall. Many an acute illness will have its diurnal hours of amelioration and relapse. Death itself may come as the climax of a rhythmic order such as this. No matter to what part of the economy we look—whether to the nervous system, with its convulsion, its insanity, its sensory disturbances of all kinds; or to the heart, with its multitudinous vagaries of action; to the liver, with its storms, lithæmic and glycosuric; to the kidney, with its tides high and low, alkaline, albuminous—all these, and no doubt others also, may readily be made to do service to the advocacy of the importance of the *rôle* of rhythm in pathology.

But I would not hold, as some perhaps might do, that pathology is exclusively devoted to the processes of decay. It concerns itself with the dissolving view of life, and therefore is largely occupied with methods of degeneration, but by no means entirely so; for surely if we study the behaviour of many of the new growths, be they hypertrophic, inflammatory, or heteroplastic in their constitution, there is evidence in many a case, not of decay, but of unnatural vigour; and it is this that proves destructive to the organism. A particular tissue or group of cells grows in excess, and other parts necessary to the due carrying on of life atrophy because of its greed, or follow its bad example, or are involved in the anarchy of disease—infiltrated we say in pathological language. But this is all physiological; it is a physiological process, an abounding vitality, that kills us—for who will say that growth and reproduction are not natural processes? The fecundity of a people is a measure of its prosperity; is it less so with the fecundity of the cell?

Have you ever followed out this line of thought or any one of its numberless by-paths? Have you ever, for instance, studied pathological processes by approaching them from the side of the individual cell—by synthesis rather than analysis? Take, for instance, if you can, the elementary cell, and place it in your mind's eye, side by side with one of the vegetable kingdom whose physiology is so much more open to inspection. What about warmth and moisture? Growth is unquestionably favoured by such an environment in the vegetable world; has it no parallel for us? Who will say "No," when a telegram such as this was received at the Guy's Nursing Home only last week: "Please send nurse immediately, skilled in poulticing"? Now what do poultices do? So far as I could make out from inquiry in the particular case, the required skill was the ignorance that should put them on hot enough; in fact, warranted to scald well! Poultices never should be painfully hot, gentlemen. If you want a blister, put on a blister, not a poultice. But this is by the way. In mentioning poultices, too, I am reminded forcibly that our knowledge of pathology is advancing, or perhaps I ought to say changing, rapidly. Forgive me if in the light of modern surgery I speak of what should seem to antiseptics as but obsolete barbarity. But, at any rate, poultices used to be applied—and no doubt successfully so—for the purpose of encouraging suppuration, and this encouragement was in great measure due to the application of warmth and moisture, and to the promotion thereby of cell growth or proliferation. We to some extent know that this is so, for in the lowest forms of animal life a carefully graduated application of warmth can be shown to increase the activity of cell proliferation. I doubt not that you can supply illustrations from your own experience of morbid processes which illustrate this, but I may mention acute inflammatory conditions of the respiratory tract and tropical abscess of the liver as two such. In the case of acute bronchitis, for example, the last thing you would do would be to put the patient into a dry, cold room; on the contrary, you surround him with a warm, moist air, and by that means unquestionably you promote secretion, and secretion is the correlative and complement of cell growth. The case of tropical abscess is more open to dispute, but it is taught by many of the ablest of those who have practised in hot climates that acute hepatitis—and its consequence, abscess—is the fate of those chiefly who imbibe freely of alcohol. Now we know that in England alcoholism never leads to hepatic abscess. I do not wish you to suppose that the fact admits of no other interpretation, for abscess of the liver of all kinds, solitary as well as multiple, are considered by some to be the result of portal pyæmia secondary to dysenteric ulceration of the intestine; but it is a favourite idea of mine that the tropical abscess is an illustration of this forcing action upon the hepatic cells, the hot-house favouring the luxuriant cell growth of abscess, while the temperate or cold-house cultivates the hardy perpetuals that we know as cirrhosis.

And still asking your attention to the primordial cell, have you ever attempted to apply the law of variation, as it occurs in all plants and animals, to it? If its natural outcome be not tumour growth, it comes very close to it. As a matter of experience, we know that all of us are not equally liable to

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develop these new growths. The tendency lies in particular strains, not as yet fully determined or understood. But my point is this: given the weakening of the restraining something, whatever that may be, which keeps the various parts of the complex organism is harmonious correlation, and by the simple laws of variation one could build up an explanation, a pathology therefore, of what still perplexes us and is likely so to do—the growth of tumours. As part of the same line of thought, too, think of the possible effect on the tissues of an excess of nutriment—a cause of monstrosities in plants, is it less so when we come to deal with the animal world? Supposing any part—take a gland cell from the breast for example—has a food supply for long in excess of its requirements, may we not have then, only supposing again some slight deficiency in the safety-valve, the first starting point of a tumour?

The question of the harmonious correlation of the various parts of the body, as necessary to the maintenance of health, is indeed a fundamental one, and numerous are the evils that may arise if the physiological balance be disturbed. One of the best illustrations perhaps of this is to be found in the curious overgrowths of fat and connective tissue that are occasionally seen in males in whom the sexual organs have failed to develop; another in the abnormal growth of hair which is sometimes associated with a similar arrest of development in females. I am myself disposed to think that the mental defect of the cretin with the associated overgrowths of fat that are present in various parts of the body are also to be explained in a like manner, notwithstanding that just now the balance of investigation seems to indicate that these things may be due to some deficiency of function on the part of the thyroid gland. But a somewhat similar change occurs in young children whose intellectual development is arrested by the growth of an encephalic tumour. All these may, I think, be in part explained by such defective correlation as I have supposed. The idea may be in part brought home to you by taking as an illustration the traffic of a great city. Supposing that the roadway of London-bridge or Regent-street is up, we all know very well the congestion that results in the tributary conduits, and if the derangement continues for any length of time the trade along the route suffers, and other thoroughfares more easy of access reap the benefit. The analogy is not perhaps of the closest, yet in it may be seen something which applies to many conditions of disease. In the case I have already quoted, I see the body furnished with what, for our present purposes, may, I think, be called a *constant* supply of pabulum. If the brain or the sexual organs, or any other part you like to mention, is working at low tides, or not at all, by some complete arrest of development, the common fund is replete with material that should have been removed, and other parts get the best of it, or worst of it, as the case may be, according as the other man's scraps are to them refuse or luxuries. Another fact of the same kind, and to my mind accepting the same explanation, is that when some large part of the body has been removed, chiefly the lower limb at the hip joint, there has been noticed a tendency in some cases to the growth of an excess of fat. Again, it is the practice with many surgeons, and unquestionably a sound one, not to do any severe operation without first having the patient quiet and in bed for some few days. Because it has been found that a preliminary treatment of this kind is more favourable to the prevention of any subsequent inflammatory processes in the wound, and therefore to the promotion of recovery. I should venture to interpret this practice after this fashion: Without the preliminary enforced rest the circulation is likely to be vigorous; the nutrient supplies abundant; the changes active. Inflammatory processes would under such conditions have from their point of view a good time of it, and probably run to excess. Whereas in the state induced by quiet and moderate nourishment the supplies are all kept well in hand, and any reactionary demonstration is deprived of its spirit by being starved of its food.

There are two other circumstances in surgery which occur to me in corroboration: one, that what are called primary amputations—that is, those done in full blood for injury—are much more dangerous than those done for disease; the other, that operations in old people often do remarkably well in respect of the local conditions. I have seen the edges of incisions for hernia in old people lie together and unite, as I have often thought, from sheer want of pluck, so to speak, to resent the injury. And if you think I am making much of very little in saying all this anent disturbances of correlation, ponder this passage from the "Autocrat of the Breakfast-table" and follow its pathological lead: "It is a good sign to have one's feet grow cold when he is writing. A great writer and speaker once told me that he often wrote with his feet in hot water; but for this all his blood would have run into his head, as the mercury sometimes withdraws into the ball of a thermometer."

Well, then, for my part I like sometimes to press this analogy between high life and low life still further, and to carry back one's idea of education and training until they converge on the rudimentary unit. May we not say that in the influence of one cell badly bred and badly trained upon the "habits of good society" (in cell life) we have another idea of the nature of that inexpressible something we call malignancy? Bad education allows of the formation of bad habits; and there are few more interesting lines of thought than that suggested by the diseases of faulty habit. Possibly I may enter more fully into this subject in another lecture. For the present purpose I will only say that a recognition of what we call "habit" is not out of place even in attempting to unravel the processes of cell life, and that, whatever be the organ or the tissue from which we take our cell, it is true—first, that stimulation leads to the exercise of function; and next, that the more frequent, short of exhaustion, the one, the more immediate becomes the response of the other, until at last a response is apparently elicited by stimuli that are quite insignificant as compared with those which called it at first into exercise.

Take two illustrations, most instructive in their differences—the nerve cell and the gland cell. The one, accustomed to action by means of discharge of nerve force, passes on in pathology through various stages of aberration into insanity. What of morbid anatomy have we there? The gland cell, on the contrary, uses up its stores of energy in the formation of fresh cells, and represents its storms by the number of these and by their form. But, as I have already said, each for each, the insanity and the secretion, or what represents it, are equivalent expressions. Surely in this lies in part an explanation of the proneness of certain tissues to grow out of bounds; of the exceeding rarity of tumours in some parts. New growths of true nerve substance (not of their cement or connective tissue) are very uncommon; and I think one might, *a priori*, from considerations of this kind have expected them so to be. For if it be true that the discharge of nerve force be the fundamental endowment of nerve cells, these must needs more readily manifest disturbance in the direction of their accustomed *habit* than in that of proliferation to which they are unaccustomed; and by the same argument the epithelial cell, knowing nothing of the tortuosities of lunacy, is liable to expend its abnormal energies in the folly of the growth of tumours. But, further, we know that what is a mere acquired habit in one generation may become by inheritance a fixed or constitutional action in another. The most direct evidence of this perhaps is supplied by some well-known experiments by Dr. Brown-Séquard upon guinea-pigs. He first made them epileptic and then paired them, and, as a result, produced an epileptic family, showing the same tendency to convulsions as their parents, although they themselves had been subjected to no lesion of any kind. It seems fair to assume, with an example of this kind before one, that there is no great improbability of the transmission of a habit when the conditions are apparently all simplified down to a most rudimentary one of the impress of a similarity of functional exercise by the parent cell on its progeny. But I take it as additional evidence that facts go to prove that in a long course of years a race of madmen or criminals may be produced. Insanity has no right to be considered in all cases as a sudden explosion, which, once happening, no one knows why, is likely to crop up again both in the individual and his offspring. Insanity is no doubt, in many cases, if we could but trace the phases of progress of individual minds, the expression of a slow process of neglect of training, just as much as any masterpiece of mental work is but the topstone of an elaborate and persistent purpose. And what more hopeful view could be taken? In the one case a man is the sport of a predestined fate; in the other he is to some extent the moulder of his own destiny. Madness, I say, is in many cases the result of the unchecked specialisation of nerve discharge along demoralising lines; a tumour is the climax in cellular pathology to a long indulgence on the part of cells in ill-assorted pairing, or what represents it in that low order of creation. The process starts in one cell,

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mitted to the next, and so on, the primary variation g ever more marked. And when investigating any disease from this point of view, who can tell how nerations have passed by and left their mark? Yet ly, if it be accepted as a recognised fact that in the ction of the species there is a tendency to the formation of varieties, which by a process of natural n are liable to become permanent, we cannot refuse nowledge the existence of such a tendency in the y elements of the organism. If the whole varies, its ill vary, and then I apprehend there will probably such process amongst the cell element of our tissues may correspond to what Darwin described as the val of the fittest." The cell varies under existing ons because those local conditions have been favour-, one might well say, have compelled variation; and ult being that best adapted to the environment, sup- this to be constant, will tend to be perpetuated. It seem a strange paradox that such beggarly elements pose a malignant tumour should constitute an example survival of the fittest, yet such in a limited sense, confining ourselves strictly to a pathological aspect, ay be said to be. This may seem a fanciful idea and no practical value, but yet it may possibly help you, r by attraction or repulsion no matter, so to arrange wn thoughts as shall enable you to discern, each in own way, something of the nature of what is called ancy.

ing suggested a cognate subject, let me now deal it a little more in detail. It is an old and favourite with me that secretion and growth, in the case of may to some extent be correlated and convertible. It teresting feature, at any rate, of glandular pathology he development of tumour centres round the epoch of g into maturity, and that when the heyday of func- as passed. Furthermore, there would seem to be a cy on the part of glands that for one reason or another ever fulfilled their own longings to produce morbid ; and there is likely to be some correspondence n the rapidity of the growth and the activity of the es going on in the body or in the part at the time of elopment. Now, what is secretion? May we not e modified growth? It is yielding up of themselves part of the gland cells to the production of a highly ised material necessary to the economy, and it ly very suggestive that gland tissue, before it at this self-sacrificial stage of unconscious martyr- hould sport or revert to some less specialised pro- n. Accustomed to periodic affluxes of excess of t supplies and to equivalent discharges, when the ds cease to which these discharges answer, the un- d energy is appropriated to other ends, or rather ates the gland cells to other processes. And one may uppose that this will be still more the case when, n energy and potentiality for a still higher develop- they have never been taxed at all. It is thus, to my that we have the cancer of the mammary gland in ale never pregnant or after childbearing has ceased, ioma of the undescended testis, the soft and rapidly ers of childhood, the hard and withered cancers ery old.

another aspect of my subject—viz., the influence of in determining disease—and see how it leads round this same goal as that we have already arrived at. In me by—gone by, did I say? I had rather said to the judgment of age—the innate tendencies of the indi- the constitution," to adopt the popular term, seemed worth attention. The impulsiveness of youth localise everything, for by that means chiefly victory be won. But do not forget that the which gains the end, while averting the less conspicuous, is the greater feat of train- You may sometimes hear it said of your- "Dr. A. is very clever, but he is so old Mr. B.; he knows my constitution." is unlettered, perhaps, but it is sound just now I would press home not the the importance of the consideration diseases there is a local factor concerned in the building up of any ular affection. I will take a syphilis to begin with.

son gets out of this difficulty by suggesting that, originally an all-pervading disease, it ceases to be so after a time, but that relics remain in this part and in that, and that these local germs may prove troublesome years after the original malady has subsided. Recent observations, which go to prove syphilis to be a germ disease, have, I think, done something to render this hypothesis a probable one. Moreover, there is a somewhat similar sequence of changes in typhoid fever, where certain local inflammatory formations are liable to appear during convalescence. But there is another explanation which I prefer, and it is this: Once syphilised, alway so; at any rate, so long as late evidences of it show themselves. It is precisely on all fours in this respect with scarlatina and variola. In any one of them you may have the disease a second time, but if you do, *you* are the peculiarity, not the disorder. We do not know what happens, but we say that these diseases as a rule exhaust the soil, and all the tissues thenceforward are bred up to the altered standard. But the alteration is invisible with scarlatina and variola, and there is an end of the matter. But syphilis is peculiar—its type is the invisible portrait—breathe on it and out comes the donkey. If a man has had syphilis and he happens to be your enemy, and you, although a doctor, be sufficiently political to be adequately lost to everything but your own ends, advise him to take a six months' course of hard training and aquatics, and he will probably come back to you with an aneurysm of the aorta; or bid him live freely both in eating and drinking, and he will worry his liver into what is called gummatous cirrhosis. A judicious kick at football may land him in a periostitis of his tibia, and so on. Forgive the flippancy, but I want to drive home this thought, that syphilitic inflammations do not burst out haphazard, but that when we find the cellular membranous sore below the patella, the gumma in the testis, the aneurysm of the aorta, the thrombus in the brain, these things come to such parts as receive injury, or are overworked, or are stimulated to resentment by some persistent irritation such as alcohol is to the liver. A beautiful illustration of this occurred in a case that I admitted a year or so ago, in a man with a much enlarged liver. He died soon after his admission, and Dr. Pitt, on making the post-mortem examination, found a huge gumma in the liver, and in its centre an old hydatid. There could be no question that the hydatid had provoked the gumma. You cannot, it is true, always put your finger on the exciting cause. The "why" of a gumma in the brain is a very difficult question to answer to the satisfaction of one who will not go further than he can see. Nevertheless, I will not lose the opportunity of insisting that this local provocative is a most important item in the pathology of late syphilis, and this is corroborated by Sir James Paget's statement that late syphilis is infrequent amongst the upper classes. This means, I take it, that in the well-cared-for, the well-to-do, the free from worry, in those who lead less laborious lives, &c., the local factor is reduced to a minimum. Thus I would say that, when a man has had syphilis, pathology teaches that he should go softly. He has in a measure used up early the margin of the vital capacity of his tissues, that margin which endows man with his ever bubbling energy, which gives him the true pleasure of living. He must pay the penalty, and live henceforth a more confined existence; he must live by rule, and haply thereby he may still live a useful life. If not, he must take the risk; excess will shrivel his skin, will bleach his hair, will dull his brain, will further the processes of disintegration which the initial energy of his being has now no longer the power to stop, and by insidious paths the eye cannot trace will send him back to dust a wasted life.

But this is rather diverging from the main question now before us, so let us take the case of the aorta—indeed, of all the vessels; their pathology is the outcome of their position. I have often said before that there would be but little atheroma of the arch of the aorta if it ran in a casing of plaster-of-Paris. The diseases of arteries are due in the main to the wear and tear to which they are subjected, and if you study the anatomical arrangement of the vessels you will be able to say what are the points on their route most open to aneurysm. It is the main trunk of the aorta which suffers most, and the arch, which bears the brunt of the impact of the blood, most of all. But the occurrence of aneurysm on smaller vessels is not less instructive, for it occurs at the coeliac axis, in the popliteal space, in the groin, &c., all of them points where either the stream splits, or the move- subject the vessel more than elsewhere to.

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chances of injury or friction. There are, besides, atheromatous vessels elsewhere far too instructive to be passed over: there are those of the brain. Once more let the Autocrat point you to a pathology: "The men of genius that I fancy most," says he, "have erectile heads like the cobra-di-capello. You remember what they tell of William Pinkney, the great pleader; how in his eloquent paroxysms the veins of his neck would swell, and his face flush and his eyes glitter, until he seemed on the verge of apoplexy. The hydraulic arrangements for supplying the brain with blood are only second in importance to its own organisation." And I would add, when we consider its own organisation in a more anatomical sense than the author alludes to, that it and they together explain the frequency of apoplexy. The advantages of the one entail the risks of the other. Take, again, the vessels in the lung. No one would require to be instructed in the cause of hæmoptysis when he can see for himself in the post-mortem room that it is nearly always due to the existence of a cavity in the lung and to a bulging of a vessel in its wall, which has lost its support and become diseased. And once more: atheroma of the pulmonary artery but seldom occurs, and when it does it is always in association with some pulmonary stasis which has necessitated undue distension, and therefore strain, of the affected vessels.

I dwelt last year upon the meaning of the spread of phthisis in the lungs—how largely it depended upon the disadvantages of locality. I shall by and by have to say something upon the importance of the same line of thought in considering the morbid anatomy of the stomach and intestines. I shall, however, only say now, and as carrying us back to our earlier contention, that there are numberless instances in these regions, of disease originating in parts that, altogether on *a priori* grounds, one could say are likely to become diseased. Further, there is a considerable amount of evidence to show that in some of these there is a life history of cell growth such as I have attempted to sketch—a passage apparently of simple healthy toned cells, by various stages, into malignant cells. Time fails ere I have supported this hypothesis by appealing to definite lesions. I had intended to take a form of disease of the tongue which may be called simple hypertrophy, and another, a chronic ulceration of the tongue, and from their common goal in cancer to fill in the gaps left by the defects of the pathological record in a scheme of malignancy such as this: that healthy physiological type is constantly owning departures in small degrees; that these variations, if the cause of departure continue, not only become persistent, but generation after generation (in cell life) much more pronounced, until at last a time comes when the family likeness is altogether lost. I cannot put it better than I did some years ago, in Dr. Maudsley's words, "that the criminal class constitutes a degenerate or morbid variety of mankind. They are, it has been said, as distinctly marked off from the honest and well-bred operatives as black-faced sheep are from other breeds, so that an experienced detective officer or prison official could pick them out from any promiscuous assembly at church or market. They herd together in our cities in a thieves' quarter, giving themselves up to intemperance, rioting, and debauchery, without regard to marriage ties or the bars of consanguinity, and propagating a criminal population of degenerate beings." Is not this the life history of a cancer? Aided by the light of such morbid sequences as I have mentioned, we can see first the gradual formation of an atypical race of cells, and next a succession, ever becoming more renegade, until at last the ties which bind them to the tissue are discarded altogether—they have denied (amongst cells) their social obligations, to live the short life and the merry one of the profligate.

I started by saying that pathology is the natural complement of physiology, and to that end have been endeavouring to depict by means of familiar analogy the life history of a single cell as it may be supposed to run, on one of the highways of pathology, from the cradle to the grave. But pathology is far reaching in its embrace, and a cellular pathology such as this, however attractive, is no more than a small part of the extent of the study. To be able to explain even such a limited part of it as we have to-day concerned ourselves with, you will require to know something of embryology and of comparative anatomy and pathology. There are tumours which, having regard both to their position and their structure, can only be explained by a knowledge of these. Another large branch of pathology, which in the present day is assuming the most bewildering proportions, depends upon a knowledge of the life history and behaviour in the tissues of parasites. And yet again there is the most fertile and inexhaustible field of physiological and pathological chemistry waiting for workers, and far too little heeded by the morbid anatomist.

But I must draw to a close. Let me say of the subject in general before I end that instruction is in the main conducted on one or other of two lines—the suggestive or the dogmatic. Pathology as I have put it before you to-day is the one; morbid anatomy fundamentally the other. But no rule is absolute, and both these assertions require important qualifications. It would be a sorry climax to this morning's labour, yours and mine, were you to go away with the idea that the one was interesting, no doubt, but highly speculative and unpractical; the other a string of dead facts with little to enliven them. This, unfortunately, is the thought of many who have paid no attention to the subject. And it is a criticism on morbid anatomy that you will often hear that it gives you no aid in treatment. Supposing that this were literally true in the sense that is meant, I would still not admit for an instant that its study were valueless, for study what you like, so long as you do study it, any investigation is instinct with instruction in all manner of ways that the ignorant man never dreams of. It is thus particularly with histology. There is certainly no very evident relationship between the study of histology and the treatment of disease, yet I shall make bold to say, as a matter of personal experience, that it will offer you hints and suggestions in this respect that one would not conceive to be possible until one had experienced them. It is, indeed, impossible that you should give thought to any morbid change and acquire knowledge concerning the actual conditions that exist, without acquiring also some ideas which concern themselves with its treatment. Be they but few, they must at any rate be more than that man possesses who has not a notion, or an entirely imaginative one, of the changes that have passed or are passing. The point would not be worth argument were it not that those are wont to make much of it who for every disease and every symptom vaunt their knowledge of a drug wherewith to scotch it. Let me, then, say to you, with all the earnestness of the most complete conviction, that while the neglect of the study of morbid anatomy and pathology tends dangerously towards the exhibition of temerity when there is need for caution, of hesitation when one should be bold, of quackery in place of the line of light and leading which it is ever our highest function to assert, the knowledge of it will make you not only exact, but skilful and ready, as good pilots amid the shifting quicksands of disease.

ABSTRACT OF A

Clinical Lecture

ON

SPINA BIFIDA OCCULTA, AND ITS RELATION TO ULCUS PERFORANS AND PES VARUS.

BY J. BLAND SUTTON, F.R.C.S.,
ASSISTANT-SURGEON TO THE MIDDLESEX HOSPITAL.

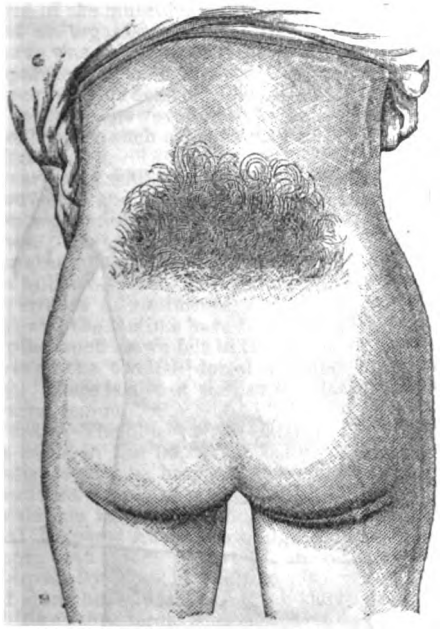
GENTLEMEN,—The term "spina bifida occulta" is applied to a defect in the arches of the vertebræ, such as occurs in the commoner forms of spina bifida, but no tumour or cyst appears externally. The deformity is, however, accompanied by some remarkable external conditions and complications, which are interesting from many points of view. For the term "spina bifida occulta" we are indebted to Virchow; the history of the matter runs somewhat as follows:—

In the year 1875 Dr. Bernhard Ornstein of Athens communicated to the *Berliner Gesellschaft für Anthropologie* an account, with a photograph, of a Greek soldier whose loins presented an abundant crop of long hairs. The hairy growth occupied the middle line of the back, and extended thence on each side. The hairs were so long, that the man found it necessary periodically to cut them, in order to prevent interference with defecation.

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A few months later, before the same Society, Virchow, referring to that very curious phenomenon, or law of duplicity of cases, stated that on the morning when he received the letter from Athens regarding Ornstein's case, there was a subject in the pathological institute which presented an unusual hairiness of the back. It was the body of a woman, aged twenty-four years, who died from peritonitis after typhoid fever. The position of the hairy spot, and its general shape and appearance, may be gathered from Fig. 1. The patch measured ten centimetres in diameter, and the hairs, which were blonde, measured from six to seven centimetres in length. The skin at this spot appeared normal. A closer examination of the part revealed the following important facts. The hairy patch corresponded to a depression which could be felt in the spine, and on removing the skin a spina bifida occulta was discovered. The spinous processes of the upper sacral vertebræ were replaced by membrane. The arches of the four lower lumbar vertebræ were incomplete, thus giving rise to a fissure, which was filled by a kind of fibro-cartilage. Virchow[1] further expresses the opinion that this collection of hairs differs from moles in ordinary, and ought to be regarded as the result of

FIG. 1.



A case of spina bifida occulta. (After Virchow.)

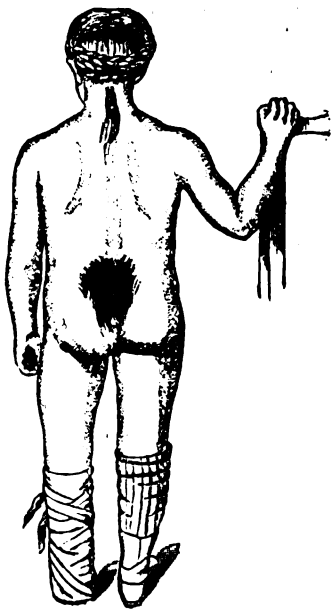
local irritation, due to disturbance during the development of the spinal column.

The next case was published in the *Deutsche Zeitschrift für Chirurgie* (Bd. xvii., p. 1), by Fischer of Strasburg. It occurred in a girl aged nine years and a half. This child, as will be seen from Fig. 2, presented in the loin a hairy patch of irregular shape. The hair was of a brown colour, and varied from five centimetres to fourteen centimetres in length. The skin from which the locks grew was normal in colour and thickness. The eye, however, detected an abnormal depression of the spine in this spot. Manipulation revealed the fact that the spinous processes of the second and third lumbar vertebræ were curved, and deviated from the middle line. The spinous process of the fifth could not be felt, and the finger detected a fossa in this situation. At the angle of the scapula there was a small dark-brown but hairless pigment spot, and a similar one existed to the right side of the spine a little above the hair-field. In the neck, between the third and fourth cervical vertebræ, was a lock of long hair (seventeen centimetres), the skin was normal, and the vertebræ in this situation did not present anything pathological. The girl also suffered from chronic ostitis of the metatarsal bones of the left foot, which was also in a more or less anæsthetic condition. To remedy this, Chopart's amputation was performed. The foot was examined and reported upon by Recklinghausen. The report is published at length

[1] Zeitschrift für Ethnologie, 1875; and Berlin Klin. Woch., 1884, p. 747.

in Fischer's paper. The most noteworthy change was found in the arteries. Their walls were hypertrophied, especially the muscular layer. There was endarteritis and an obliterating thrombus in the main trunk of the plantar artery. This last complication is of some importance in connexion with the remarkable case now to be mentioned.

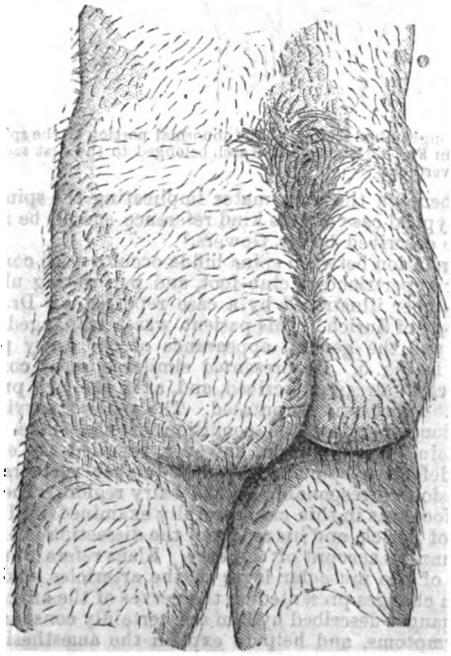
FIG. 2.



A girl with spina bifida occulta in the lumbar region, accompanied with hypertrichosis. There is also a lock of hair in the cervical region. There was also ostitis of the metatarsal bones of the left foot. (After Fischer.)

Von Recklinghausen[2] reported the details of the post-mortem examination of a case of spina bifida occulta. The

FIG. 3.



Abnormal hairiness of the loins, due to the irritation of a spina bifida occulta. (After Recklinghausen.)

report is accompanied by a careful description of all the parts concerned. There was marked lumbar hypertrichosis, as shown in Fig. 3; and, in addition, the patient, a man aged

[2] Virchow's Archiv, Bd. cvi., 1886; and Untersuchungen über die Spina Bifida. Berlin, 1886.

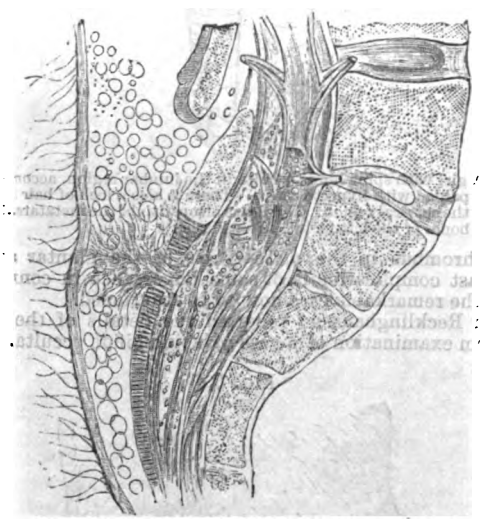
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twenty-five years, suffered from club-foot and a neurotic ulcer (mal-perforans) of the left foot, accompanied with anæsthesia. For this trouble amputation was performed by Fischer, but the man only survived the operation a few days.

At the post-mortem examination it was found, on bisecting the spine, that the cord extended lower in the canal than usual. Instead of terminating at the second lumbar, it ended at the second *sacral* vertebra. Lying in the canal, between the fifth lumbar and first sacral vertebræ, was a lipoma. It was situated within the dura mater, but communicated by means of a rounded orifice with the general tissue of the lumbar region, as represented in Fig. 4. On microscopical examination this tumour was found to be composed of fat and striated muscle fibres. The individual fasciculi strongly resembled the arrangement found in the multifidus spinæ muscle. In this instance, as in the preceding case, Recklinghausen found no changes in the nerves of the foot on microscopical examination; but there was hypertrophy of the muscular layer of the arteries, visible in the cut sections of the tissues of the foot in the immediate neighbourhood of the ulceration; the intima was normal.

Perhaps one may here digress, and draw attention to the valuable light such a case as this throws upon those tumours, composed of fat and striated muscle fibre, which have been

FIG. 4.



Longitudinal section of the abnormal portion of the spine in Fig. 3. The defective arch belonged to the first sacral vertebra.

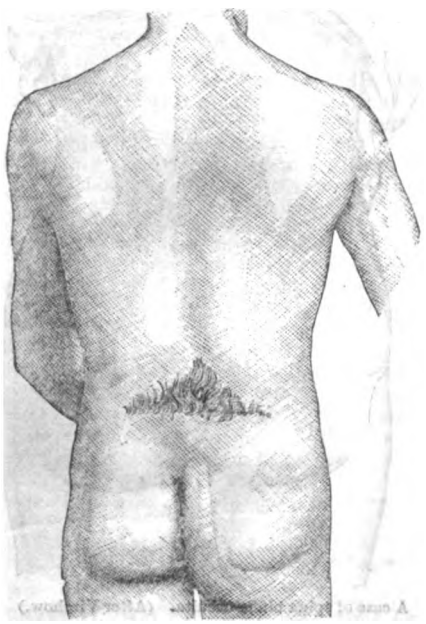
found beneath the dura mater implicating the spinal cord. For a typical case of this kind reference should be made to the one described by Dr. Gowers.[3]

The relation between spina bifida occulta with congenital lumbar hypertrichosis, club-foot, and perforating ulcer, has been further illustrated by a case reported by Dr. Conrad Brunner[4] of Zurich. This patient was a man, aged twenty years, and the general appearance of the hairy patch is shown in Fig. 5. He presented similar clinical conditions to the cases already described, and, as in the two preceding ones, the foot was amputated. The patient survived the operation, therefore the condition of the spine remains uncertain. Manipulation, however, revealed the existence of a defective spine to the first lumbar vertebra, and a depression corresponding to the hairy region. The amputated foot was in this case carefully examined by Professor Klebs of Zurich, and his report of the dissection is embodied in Brunner's account of the case. Klebs refers to a hyperplasia of the muscular layer of the arterioles, and details certain changes presented by the nerves of the affected foot. The changes described by him are certainly consonant with the symptoms, and help to explain the anæsthesia which was observed in the foot.

As far as my knowledge of the literature extends, the preceding are the four most important cases that have been recorded; the remainder were detected in fœtuses, and are described in Recklinghausen's memoir before quoted. My attention was first directed to this matter when engaged recently in studying spina bifida, but more especially on account of the subtle inferences of Virchow, when he uses these cases to explain the tuft of feathers on the head of the Polish fowl and the underlying cranial defect, as of the nature of a transmitted pathological condition, the tuft of feathers being analogous to the growth of hairs in the loins in spina bifida occulta. The conditions are alluded to and illustrated in THE LANCET of Feb. 26th, 1887. I have for some time been on the watch, and have examined many patients with the hope of detecting one of these cases. At last, through the kindness and courtesy of Mr. George Lawson, I have been enabled to study one of these interesting patients.

Three years ago Elizabeth ——, aged fifteen years, was admitted into the Middlesex Hospital under the care of Mr. George Lawson, suffering from an ulcer on the sole of the foot and caries of the metatarsal bones. At that time the patient stated that she had always suffered from cold feet, and regarded the ulcer as a chilblain, which had existed for several years. The foot was removed at the ankle joint by Mr. Lawson after Syme's method, and the girl made a good recovery. The case at the time struck me as being peculiar, and I subsequently made a careful dissection of the foot.

FIG. 5.



Lumbar hypertrichosis associated with spina bifida occulta. (After Brunner.)

Compared with its healthy companion it had a stunted appearance, and presented a minor degree of varus. The toes were short and stumpy, and at the ball of the foot was a circular ulcer with thick and callous edges. At its base a fistula was found which led to a carious metatarsal bone. All the tarsal and metatarsal bones were full of semi-fluid fat, their compact tissue being exceedingly thin. I heard no more of the girl until May, 1887, when she was brought into the operating theatre for reamputation of the stump. The base of the stump presented an ulcer of the size of a crown piece, and about a quarter of an inch in depth; the edges were callous and suggested to those who had charge of the case ulceration from pressure. Being fresh from the study of spina bifida, the whole history of the case was suggestive of spina bifida occulta, and in company with Mr. Browne, the house surgeon in charge of the case, I made a critical examination of the girl's spine. This is what we found: On the right side of the loin is a deeply pigmented wart. On counting the spinous processes of the vertebræ downwards, they all follow regularly until the lumbar region is reached; then they deviate to the right side. Instead of prominent spines, the finger feels a flattened but fairly firm tissue until the third or fourth lumbar arch is felt; at this spot an irregularly rounded depression covered with mem-

[3] Pathological Society's Transactions, vol. xxvii., p. 19.
[4] Virchow's Archiv, Bd. cviii., S. 494.

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brane is detected. Upon pressing this the girl evinces signs of pain and resents the manipulation. On asking the patient to bend forward, we found that the loin remained quite flat, and did not present the ridge, or prominent row, of spinous processes normally seen in this part of the back. Further, on glancing laterally across the loin the eye at once detected an abundant crop of fine downy hairs, radiating from the soft point in the vertebra as from a centre. These downy hairs are not conspicuous unless carefully looked for; they resemble the fine lanugo-like hair seen around the outer edge of a meningo-myelocele in an infant. From these facts it is clear that the ulcer of the foot, the varus, the condition of the metatarsals, and the ulceration of the stump must be attributed to the malformation of the spine; and that this girl has a spina bifida occulta which differs from the preceding cases only in the fact that the hairs are small, colourless, and inconspicuous, instead of being long and coloured. We must now consider the condition of the stump. The appearance of the ulcer on the apex of the stump has been already described, and need not further detain us. Portions of the anterior and posterior tibial nerves, arteries, and veins were removed as near as possible to their terminations, without spoiling the stump for museum purposes. The arteries displayed, as Recklinghausen has described, a marked increase in the size of the muscular layer. The posterior tibial veins exhibited an organised parietal thrombus. The posterior tibial nerve was the seat of extensive change. The fasciculi were separated by collections of fat, and in no part was healthy nerve tissue detected. The examination of the stump in this instance, however, can be only of secondary importance, because such changes may arise independently of any central lesion.

Six years ago, whilst preparing the spinal column of a child two years and a half old for teaching purposes, my attention was arrested by a curious deficiency of some of the arches. The specimen was preserved for future study. A re-examination of the specimen shows it to be an example of spina bifida occulta. The spinous process of the tenth dorsal vertebra is rudimentary, that of the eleventh is wanting, and the laminæ have failed to unite, leaving a gap in the spine, such as we felt in the spine of Elizabeth ——. The spine of the twelfth dorsal and first lumbar are rudimentary. There is also a similar but larger defect in the upper sacral region.

Conclusion.—The object of this lecture is to draw attention to these cases, in the hope that before long many more of these patients will be brought under observation. With a more abundant supply of material of this character we shall obtain valuable information regarding central disturbance and local lesions. Such knowledge as this is becoming daily more and more important, in relation to visceral nerves, especially those relating to vaso-motor fibres. The study of spina bifida occulta further shows that "mal perforans," like the term "locomotor ataxy," conveys no definite pathology, but serves as a convenient clinical expression for a set of associated symptoms.

REMARKS UPON A CASE OF CEREBRAL ABSCESS, FOLLOWING EMPYEMA, IN WHICH THE ATTEMPT TO TREAT BY OPERATION WAS UNSUCCESSFUL.

By DAVID DRUMMOND, M.A., M.D.,
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At a time when an unusual or novel, and especially a serious and momentous, method of treatment is on its trial, it is, I think, quite as important to place on record the unsuccessful as the successful efforts. Or I would go further and say that we owe it to the profession to make known the difficulties that may be found to beset a procedure not yet fully established, or, at least, not very often adopted. Of late the subject of brain surgery has been brought prominently forward by Hughlings Jackson, Hughes Bennett, Godlee, Victor Horsley, Gowers, Hulke, Macewen, Barker, Greenfield, and others, and the fact has been clearly demonstrated that sound surgical principles are just as applicable to the cerebrum as to any other organ. It is clear, however, that medicine and surgery must go hand in hand, as the site of the lesion must be fixed before it can be dealt with, and one of my objects in publishing the following case is to point out the difficulty and disappointment that may attend such an attempt.

M. T——, aged twenty-nine, a widow with two children, and by occupation a laundress, was admitted into the Newcastle Infirmary on Dec. 18th, 1886, complaining of pain in the left side of the chest and shortness of breath. She stated that her attack, which was ushered in by shivering, was of two weeks' duration. The only piece of information of any importance bearing on her family history was the fact that one sister had died of phthisis. Her own previous record showed typhus fever when a girl, lead-poisoning four years before her admission, when she was employed at a white-lead factory, and hard work with much exposure as a laundress for the past two years—i.e., since the death of her husband.

State on admission.—The patient was anæmic. The respirations were short and quick, 40 in the minute; the pulse was 120, soft and easily compressible; and the temperature was 100·4°. The tongue was coated. She complained of pain, of the ordinary pleuritic character, in the left axillary line, about the fifth and sixth ribs. The physical signs of effusion in the left pleural cavity were present—impaired movement, vocal resonance at base diminished, dulness absolute from angle of scapula downwards, distant sighing, tubular breathing, and so forth. The effusion, as shown by the hypodermic needle, was clear.

On Dec. 20th, two days after admission, a rigor with marked sweating occurred, the face became flushed, and vomiting and diarrhœa set in. The dulness was found to be increased, and well-marked Skodaic resonance was observed at the left apex, whilst coarse râles were audible in the right lung and upper part of left. The temperature was 104°, and the pulse 130. Next day pus was drawn off by the hypodermic needle from the left base, revealing the fact that the case was now one of empyema. It was also clear that the left lung was in a state of croupous pneumonia above the fluid at the back. For the next few days the patient's condition was most critical. She was exhausted with diarrhœa and vomiting, the pulse was 140 and exceedingly weak, whilst the temperature remained high. On Christmas Day it was feared she was sinking; the breath became excessively foul, she lost her voice, and the pulse began to fail. It was evident that pneumonia with bronchitis contributed largely to this unfavourable condition, and it was deemed unwise to attempt any operative interference until she rallied, especially as the physical signs suggested that the collection of pus at the base was not large. From Dec. 26th to Jan. 4th, 1887, distinct improvement was noticeable: the temperature sank, the pulse improved, the vomiting and diarrhœa ceased, and the general condition appeared to be much better. On the latter day, however, rigors and vomiting returned, the temperature rose to 103°, and the signs of a fresh pneumonia were detected. The symptoms again subsided, and by Jan. 10th her state was so far improved that it was decided to drain the pleural cavity. Consequently she was placed under chloroform, and an incision was made by Mr. Waldy in the eighth interspace, adjacent to the angle of the left scapula. Pus escaped and a drainage tube was inserted. The dressings employed were iodoform wool and carbolic gauze. The operation was done under the spray. Next day the discharge was fetid, and consequently the cavity was washed out with weak Condy. In a few days the pus became aseptic, when the injections were discontinued. The temperature gradually went down and the pulse and general condition improved. On Feb. 11th a rigor occurred, and once more the signs of pneumonia appeared, but this time in the left apex. The temperature rose to 104° and the pulse to 130. In spite of this the discharge continued sweet and the quantity remained small. In a week this attack subsided, and on Feb. 18th the drainage-tube was removed, as it was apparent that the little pus that escaped was from the tract in the chest wall. For ten days the progress of the case was most satisfactory, but on Feb. 28th there was a rigor followed by sweating, and the temperature, which had fallen to normal, went up to 103·5°. No physical signs of inflammation could be discovered in the chest, and for a time the cause of the disturbance was doubtful. On March 3rd, the temperature having again fallen, three fits occurred, but no accurate account of their nature could be procured. Then for three days nothing worth recording happened, but

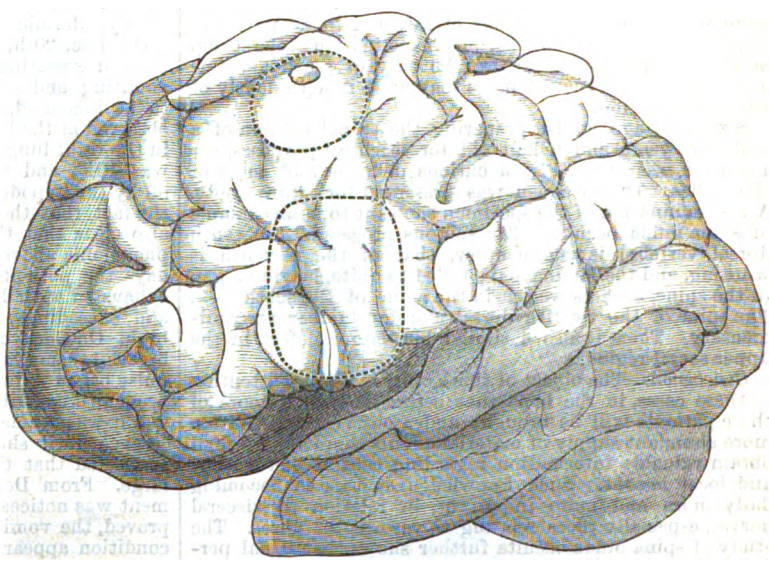
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on the 6th three more fits took place, and on the 8th there were two fits. The patient now complained of headache, which she said was most severe on the left side of the head, in the parietal region. On ophthalmoscopic examination both discs were seen to be blurred and the retinal veins distended—early optic neuritis. On the 9th two fits occurred at 8 o'clock in the morning. At 4.30 the convulsions returned and continued for some time. They were now watched for two hours by Mr. Waldy, who gave the following account of the attacks: 1st, twitching of the right eyelids; 2nd, conjugate deviation of the eyes to the right, followed immediately by the head; 3rd, twitching of the nostrils; 4th, drawing up of the right angle of the mouth (limbs flaccid); 5th, rigidity and spasm of the right arm; 6th, rigidity and spasm of the right leg; 7th, the left side of the face and the left limbs then became rigid and were affected with spasm; 8th, the whole body convulsed. Consciousness was lost during these fits, ten of which occurred one after another. The pupils were widely dilated and insensible to light. The tongue was not bitten. Occasionally urine and fæces were passed in a convulsion. After these ten fits there was an interval of two or three hours, and during this time there was conjugate deviation of the eyes and head to the left, and the right arm and leg were observed to be flaccid and paralysed, whilst the left limbs were rigid and resisted passive movements. Consciousness returned to a certain extent, but the patient was distinctly aphasic, and though she appeared to recognise what was said to her, was unable to reply to questions. After this one or two more slight convulsions occurred, and, as far as they went, were repetitions of the previous fits; indeed the march of the convulsions was reproduced in a most constant and regular way. Though the temperature had fallen and remained about 99° during the previous few days, it was feared that an abscess had formed in the brain, and, as the convulsions pointed to the left motor area, it was decided to trephine in this region.

Operation (performed by Mr. Waldy).—The head was shaved and washed with turpentine and carbolic lotion (1 in 20). A quarter of a grain of morphia was administered hypodermically, and chloroform was employed as the anæsthetic. The fissure of Rolando was then marked out, the upper limit of which was taken to be half an inch posterior to the centre of a line connecting the root of the nose with the occipital protuberance, whilst the lower limit was fixed at a point half an inch above the posterior extremity of a horizontal line drawn two inches and a quarter from the external angular process of the frontal bone. A semilunar incision was now made, and a flap dissected downwards, so as to expose the skull, corresponding with the lower half of the fissure. A circle of bone was then removed in the usual way over the lower end of the ascending frontal convolution, a second circle was removed an inch higher up, and the intervening bridge of bone was sawn out by Hey's saw. At the upper part of the aperture thus made the dura mater appeared to bulge rather prominently, and at this point a hypodermic needle was introduced into the brain, but only red serum was drawn off. A branch of the middle meningeal artery was now ligatured in two places and divided, and the dura mater was incised and reflected back so as to expose the arachnoid. This membrane bulged distinctly at the lower part of the wound, being pressed out by subarachnoid effusion; here, also, the hypodermic needle was introduced and serum drawn off as before. The piæ were evidently much congested, and this was most noticeable in the neighbourhood of the effusion. A third circle was now removed just in front of the lower part of the bony aperture, exposing the posterior part of the inferior frontal convolution; but, with the exception of the subarachnoid effusion, nothing abnormal was seen. In three different situations the needle of the hypodermic syringe was introduced, but no pus cavity was tapped. The arachnoid was incised, when a considerable quantity of serum escaped. The dura mater was now stitched with a continuous catgut suture, the lower part of the wound being left open for drainage. Two drainage tubes were introduced beneath the dura, one at each lower corner, and the wound was washed with a solution of perchloride of mercury (1 in 200). Carbolised dressings were employed, and the whole operation was done under the spray. The moderate amount of bleeding that occurred from the surface of the brain was easily controlled by the pressure of a sponge.

On March 10th, a day after the operation, the patient was conscious, was able to speak, and there was no paralysis. The temperature was 99°, and the pulse 120. A large quantity of red serum was found on the dressings. There was no tension of the wound.—11th: Temperature 98·8°; pulse 120; able to speak; no paralysis.—12th: Temperature 101°; pulse 140. Patient delirious. Wound dressed, and again a free discharge of serum; no tension; drainage tubes shortened.—13th: Temperature 102°; pulse 130. Delirious and noisy; wound nearly healed; no pus; discharge quite sweet; no tension; the posterior tube removed.—14th: Observation the same.—15th: Temperature 103°. Able to speak; walked about in her delirium, which was less violent; no paralysis; wound healed.—17th: Delirious and unconscious.—18th: Temperature 105°; pulse 140. Still delirious.—19th: Temperature 107° at 6.30 A.M. Death at 10 A.M.

Post-mortem examination.—Slight œdema of the lower extremities; body somewhat emaciated; rigor mortis present.



The wound above the left ear was healed, and on tearing open the flap a small patch of purulent lymph was found on the under surface. The opening thus exposed in the skull was two inches and three-quarters long, and an inch and a quarter wide at the widest—that is, the lowest—part. On raising the skull-cap and dura mater and exposing the brain, two or three small patches of yellow lymph were found on the surface of each hemisphere, but there was nothing like diffuse meningitis. The aperture in the skull made at the operation corresponded with the lower third of the ascending frontal convolution, the adjacent part of the ascending parietal, and the posterior fourth of the inferior frontal. At the lower part of the ascending frontal convolution the pia mater was a little thickened and adherent, but no pus was seen. The posterior part of the middle frontal, where it joins with the ascending frontal, stood out prominently, and appeared to be about three times the size of the normal convolution. The pia mater was adherent to the upper part of the swelling, and an attempt to remove it tore the cortex and allowed pus to escape. A section through this portion of the middle frontal convolution revealed an abscess the size of a large hazel-nut, containing thick greenish pus. This abscess cavity approached the surface at its upper part, where a thin layer of grey matter separated the pus from the pia mater, but from this point it passed downwards and inwards, and at the middle of the prominence was nearly three-quarters of an inch from the surface. Surrounding the abscess was

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an area of soft œdematous brain matter. The lower half of the left pleural cavity was obliterated, but there was not the slightest trace of a pus cavity, and the pleura was not materially thickened. Some congestion of the lung was detected, but the right was in the same condition. The remaining organs were healthy. (See Engraving.)

A more satisfactory result in a case of empyema could not well be obtained, and a more disappointing termination to a case of abscess of the brain could scarcely be conceived, for, as a glance at the accompanying drawing (taken from the brain as it lay on the post-mortem table by Mr. C. Steenberg) will show, the upper limit of the aperture in the skull made by Mr. Waldy's trephine was very close to the level of the lower part of the abscess. I was led to expose and explore the lower part of the ascending frontal convolution and the posterior extremity of the inferior frontal on account of the early implication, in the course of the convulsions, of the muscles of the mouth and right arm and leg. I fear that I under-estimated the importance of the phenomena at the commencement of the fits—viz., the twitching of the eyelids and the deviation of the eyes and head to the right; and this I was led to do because of the frequency with which the spasm in ordinary non-organic epilepsy commences with deviation of the eyes and head to one side, a fact with which all are familiar. But the condition of the patient after the fits ceased also aided in determining the site of exploration. It will be recollected that the post-epileptic phenomena were conjugate deviation of the eyes and head towards the left side (side of lesion), aphasia (even after consciousness had in a great measure returned), and paralysis of the right limbs, especially the arm. Here, again, the conjugate deviation was neglected, as we are unable to attach any localising importance to it in ordinary hemiplegic attacks, and hence my impression that the lesion would be found in the neighbourhood of the arm, mouth, and speech (?) centres, or, in other words, in the lower half of the ascending frontal and the posterior part of the inferior frontal convolutions, or at least about the lower part of the fissure of Rolando. The error of this conclusion was made sufficiently obvious at the post-mortem, for, as will be seen, the abscess was really situated in the posterior part of the middle frontal convolution—the centre for lateral movements of the head and eyes (Ferrier). I need scarcely point out that in the case before us the attempt to diagnose the position of the lesion was made at a time when accuracy could in no wise be assured; for all acquainted with the subject of localisation of brain mischief are aware that, on the one hand, paralysis is infinitely more reliable than spasm, and, on the other, that indirect symptoms often complicate the question for a considerable time, and until they pass off it is impossible to attain a high degree of likeliness in our local diagnosis. And, again, it will, I think, be conceded that the conditions of the post-epileptic state, no matter how well marked, are not sufficiently reliable upon which to found a diagnosis. The abscess in this case must, I think, be regarded as embolic, and I am inclined to the view that the infarct occurred some time before the rigor of Jan. 18th. It is interesting to note that the fits ceased after the operation, and that all paralysis passed off and speech returned. It is obvious from this that tension played an important part in producing the convulsions. In future, when the existence of an abscess is suspected, I should be disposed to explore more extensively, for though it was quite possible for pus to find its way out through the opening made, the chances of it so doing are nevertheless too slender to be trusted to, and the risk, from a surgical point of view, would not appear to be much increased by extending the aperture.

Newcastle-on-Tyne.

MARINE BIOLOGY. — The third annual general meeting of the Marine Biological Association was held on the 24th ult. at Burlington House, the chair being taken by Professor Flower. The report for the past year stated that the attention of the Council had been chiefly devoted to the superintendence and fitting of the laboratory at Plymouth, and to making arrangements for the future work of the Association in connexion with that laboratory, which it is expected will be ready for partial occupation in the present summer. It has been decided to issue to the members of the Association, in the form of a journal, the annual reports of the Council and other information.

ON THE FUNCTIONS OF THE FOURTH PAIR OF NERVES.

By HENRY LEE,

CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

THE fourth pair of nerves are distributed exclusively to the superior oblique muscles. They communicate with the third pair of nerves, and with the sympathetic in the cavernous sinuses. At their origin they decussate.[1] These relations indicate that they may act in sympathy with each other, conjointly, or in combination with the third pair of nerves. In the great majority of animals the muscles which they supply run transversely across the eyes and are opposed by muscles running in the same direction supplied by the third pair of nerves. Animals which have their eyes placed forward in the head offer an apparent exception to the general rule, and in these the muscles mentioned pass backward and outward, and have therefore been called "oblique." As the fourth pair of nerves supply only the superior oblique muscles, the function of the nerves and the muscles which they supply must be the same. When the superior oblique acts in conjunction with the inferior oblique of the opposite side, the two eyes move in concert and the eyes are rolled upon their axes. If the two oblique muscles act together with some corresponding action of the inferior obliques, their function is to compress the eyes laterally. In man, if one superior oblique only acted, the eye would be turned downward and outward. If both acted unopposed, both eyes would be turned downward and outward. This would give a very ungainly expression, and could be of no possible use. The real office of the superior oblique muscle is illustrated in its disposition in the eyes of the vast majority of the lower animals. In them the two transverse muscles embrace the eye, and the only action that they can have in all animals, when acting with equal force, is to compress the eyeball. For, although in some animals, from their oblique direction they might be supposed to influence the directions of the eye, this could not be the case in others. In the swan, for instance, the so-called superior oblique muscle runs directly across the eye in its transverse diameter. From the observation of the action of this muscle in man, its use has been assigned by no ordinary authority to be that of "raising and dragging the eye in conjunction with the changes to which the other features are subjected in bodily pain, in agony of mind, and in all this class of passion."[2] But not to mention that there are whole classes of animals in whose features no such expressions are ever recognised, the disposition of this muscle in fish and birds entirely forbids the idea of any such office being assigned to it. It may therefore be concluded that the oblique muscles, taken together, have a twofold action: first, that of rolling the eye; and, secondly, that of compressing it so as to alter its focal length. This affords a means of adjusting the eye to the vision of near objects, and may be regarded as the most powerful mode of adjusting the visual axis of the eye, while the mechanism for the finer adjustment is within the eye itself. The two oblique muscles taken together, then, have a double function, and a double and separate supply of nervous power.

Dr. Hosack, in a paper published in the Philosophical Transactions in 1794 (part 11, p. 222), observed that external pressure was capable of altering the focal length of the eye, so as to adapt it to vision at different distances. "With a speculum," he says, "I made pressure upon my eye while directing attention to an object twenty yards distant, and saw it distinctly; but, endeavouring to look beyond it, everything appeared confused. I then increased the pressure considerably, in consequence of which I was unable to see objects distinctly at a much nearer than the natural focal distance. For example, I held a book before my eye at the distance of two inches. In the natural state of the eye I could neither distinguish lines nor letters, but on making pressure with the speculum I was enabled to distinguish both with ease." Dr. Porterfield[3] objects to this explanation—that in the jack the oblique muscles "are both situated on the under side of the eye, where they decussate each other in the form of a cross"; and he there-

[1] College Prize Essay, by A. Woods. [2] Charles Bell.
[3] Porterfield on the Eye, vol. i., p. 421, *et seq.*

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fore argues that the disposition of these muscles is not such as to allow them to compress the globe of the eye: "Had they been so disposed as to embrace the globe in the form of a ring, their contraction might then have squeezed the eye into an oblong form." Having repeatedly dissected the eye of the jack, the author is enabled to assert positively that the oblique muscles have the very disposition which Dr. Porterfield is here contemplating. His assertion respecting their decussation below the eye has evidently arisen from his mistaking the inferior rectus for one of the oblique muscles.

A case, indeed, has been quoted in text-books in which all the muscles supplied by the third pair of nerves were paralysed, and a good accommodation remained.[4] An inference is drawn from this case that the recti and obliqui muscles have really very little power in producing this accommodation. But in this case the fourth nerve was not paralysed; and inasmuch as the peculiar function of the fourth nerve is to regulate the degree of compression exercised on the eyeball by the superior oblique muscle, the case affords additional evidence of the real function of this nerve. In seals the fourth pair of nerves is well developed. The visual focal length would be different in them in the air and in the water for correct vision, and yet a seal can catch a fish as accurately out of the water as in it. The development of the fourth pair of nerves here corresponds with its power of adaptation of the eye to accurate vision under different circumstances. In the monkey, again, where accuracy of vision, in jumping from branch to branch, is so necessary, the fourth pair of nerves is well developed. In the cat, which measures its distance accurately before making its spring, the fourth pair of nerves is also well developed. But here, as in other animals which have a *tapetum lucidum*, the nerves and the muscles which they supply have another function. They not only regulate the antero-posterior diameter of the eye for the reception of light entering the eye, but also focus the light reflected from the *tapetum lucidum*.[5] The power of concentrating reflected light accurately upon an object must give the animal the same knowledge of distance as the focus obtained in ordinary vision. In the flaccid eye of a dead cat the rays of light reflected from the tapetum are nearly parallel. If the antero-posterior diameter of the eye were altered in a living cat, as by the action of the oblique muscle, the rays of reflected light after they had left the eye would converge as they do in the larger eyes of the sheep and the ox; the degree of the action of the oblique muscles in bringing the reflected rays to a focus would then afford an indication of the distance of the object looked at. The amount of convergence of the two optic axes in binocular vision plays, no doubt, a much more important part in the measurement of distance. But by far the larger majority of animals which have a tapetum use one eye only at a time. Where the two eyes are used together the degree of convergence is under the control of the external rectus, which, like the superior oblique, is supplied by a separate nerve.[6]

Those who have called a policeman's lantern a "bull's-eye" have never realised the analogy that exists between the lantern and the real eye. The glare from the anterior surface of the cornea may have originated the name. In the living eye the rays of light reflected from the tapetum may, within certain limits, be concentrated upon any given spot, and the light thus concentrated, as may be illustrated by a slightly concave mirror, is very much more intense than that produced by ordinary scattered rays. If a policeman's lantern were constructed with a slide so that the distance between the light and the reflector could be regulated, the analogy would be more perfect. The rays of light might then be brought to a focus instead of always being directed in paralleled lines.

In ordinary carriage lamps the light is thrown straight forward, which, no doubt, is an advantage to the driver; but for the horse itself the light is required where their natural reflectors throw it—namely, in front of their feet. In the transmission and reflection of light through the transparent parts of the eye some light is necessarily lost. If the whole of the light were reflected from a concave mirror three inches square, and concentrated in a focus of one inch, that inch would receive its natural proportion of ordinary light and nine times the amount of light falling upon each square inch of the mirror.

Savile-row.

[4] Power on the Eye, p. 592. [5] Med.-Chir. Transactions, vol. lxix.

[6] The advantage of judging of distances in binocular vision has probably some compensation in animals, which use only one eye at a time. The more perfect grasp of the eye by the transverse muscles must enable them to focus the rays of light more perfectly than in animals in which the muscles are oblique. The owl, unlike other birds, has its eyes placed forward. This disposition enables it to direct both eyes to the same object at the same time. It has therefore the advantage of binocular vision. In common with other animals which seek their prey at night, it has within a limited distance the power of judging of the position of objects by the angle at which the visual axes meet.

ON DR. BERGEON'S NEW METHOD OF TREATING CONSUMPTION.

BY ARTHUR HILL HASSALL, M.D. LOND.,
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WITH a view to greater precision and uniformity in carrying out the treatment of consumption by Bergeon's method, I have had some analyses made, the results of which I will now detail. The analyses were undertaken at my request by Mr. Edwy G. Clayton, F.I.C., F.C.S., assisted by Mr. F. T. Knott, and they had for their object the determination of the quantity of sulphuretted hydrogen contained in the mineral water or other sulphurous compounds used in the process, both before and after injection.

The analyses of the Eaux Bonnes water used by Dr. Bergeon furnished the following results:—

1. *On the gallon.*

a. One gallon of the water contained
0·60816 grain of H_2S
= 25·94 cubic centimetres
= 1·58 cubic inch.

b. After passing carbonic acid gas, one gallon contained
0·095 grain of H_2S
= 4·04327 cubic centimetres
= 0·25 cubic inch.

2. *On the bottle.*

a. One bottle (700 cubic centimetres) contained
0·00608 gramme of H_2S
= 0·093814 grain of H_2S
= 3·997 cubic centimetres
= 0·2436 cubic inch.

b. After passing carbonic acid gas, one bottle contained
0·000952 gramme of H_2S
= 0·014689 grain of H_2S
= 0·623 cubic centimetre
= 0·003836 cubic inch.

3. *On the half-bottle.*

a. Half a bottle contained
0·00304 gramme of H_2S
= 0·046907 grain of H_2S
= 1·9985 cubic centimetre
= 0·1218 cubic inch.

b. After passing carbonic acid gas, half a bottle contained
0·000476 gramme of H_2S
= 0·0073445 grain of H_2S
= 0·3115 cubic centimetre
= 0·001918 cubic inch.

These results show that the amount of sulphuretted hydrogen contained in the bottled water corresponded closely with that present in the water taken at the source, according to the best analyses. This amount is, however, extremely small, it being only 0·1218 of a cubic inch in the half-bottle of the water, the quantity usually employed by Dr. Bergeon for a single injection.

After 3 litres of carbonic acid gas had been slowly passed through it, the time occupied being twenty-three minutes, the amount of sulphuretted hydrogen in the half bottle was found to have been reduced to 0·001918 of a cubic inch. This result is so far satisfactory, since it shows that the greater part of the sulphuretted hydrogen was carried over by the carbonic acid. No combined sulphuretted hydrogen is contained in the Eaux Bonnes water, and this being so there is no necessity for the employment of an acid, mineral or organic, for the liberation of the gas.

The first published results of Bergeon's method of treatment were all founded upon the employment of the Eaux

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Bonnes water. More recently, however, recourse has been had to other sources of the sulphuretted hydrogen. Thus, as we learn from Dr. Burney Yeo's recent lecture, Dr. Bardet has employed a definite solution of sulphide of sodium. This is made by dissolving 10 grammes of the salt in 100 cubic centimetres of distilled water. One cubic centimetre of this solution contains 10 cubic centimetres of sulphuretted hydrogen, which is set free by the action of tartaric acid. Of this solution 10 cubic centimetres in 200 grammes of water, = 3086 grains, are employed for each injection, so that if the whole of the gas were liberated, the quantity injected would amount to 100 cubic centimetres, equal to no less than 6·10 cubic inches. Here is an enormous difference in the amount of sulphuretted hydrogen introduced into the system: in one case less than a quarter of an inch, and in the other over 6 cubic inches.

Dr. Coghill has lately employed a saturated aqueous solution of sulphuretted hydrogen, using 1½ oz. to 2 oz. of this in 12 oz. of water; and this quantity, he states, has been well borne by every patient on whom it has been tried. Now 1½ oz. of such a solution should contain—if the water were really saturated at 15° Centigrade and 760 millimetres barometric pressure (these happening to be the temperature and pressure at the time the analyses were made)—3·117 cubic inches of the gas, and 2 oz. 4·156 inches.

Another substance which has been employed is bisulphide of carbon, but I have not seen any statement as to the quantity of this reagent that has been used. Its volatility, however, even at ordinary temperatures, is such that a comparatively small quantity of the liquid reagent (which boils at 46·6° Centigrade) yields with facility a large volume of carbon bisulphide vapour.

It is thus seen that there is a great difference in the amount of sulphuretted hydrogen injected, and yet the results of the treatment have been reported as equally favourable in all cases; the varying amount of the gas used not appearing to make any difference. According to the reports, the frequency of the pulse has been reduced, the temperature lowered, the night sweats relieved, the expectoration diminished, the nutrition greatly improved, the weight rapidly increased, and a great and surprising amelioration in every respect has ensued.

Lucerne.

A CASE OF
PERFORATING ULCERS OF BOTH FEET ASSOCIATED WITH DIABETES AND ATAXIC SYMPTOMS.

By T. DAVIES PRYCE, M.R.C.S.,
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A. D——, aged fifty-six, framework knitter and hawker, was admitted as a home patient on May 27th, 1886. He had enjoyed fair health up to eighteen months previous to his being treated at the dispensary, with the exception of an occasional winter cough. For eighteen months past he had passed large quantities of urine, and had suffered from great thirst. He was never of temperate habits, and was addicted to "drinking bouts." He was stated to have led a wild life. No history of gonorrhœa or syphilis could be elicited, but strong presumptive evidence of venereal taint was present in the form of two scars, one in each groin, and various syphilis-looking marks on both legs. Eight months previous to admission he complained of pain in his legs, and found that his feet felt dead. At Christmas, 1885, he caught cold, and suffered from an aggravation of the foot symptoms, together with abdominal pain and vomiting. He described at this time as walking on his heels. February, 1886—i.e., three months and a half before admission—the ulcers of the feet first appeared. When seen by me the patient was suffering from [illegible] symptoms of commencing diabetic coma. [illegible] feeble and occasionally intermittent. [illegible] upper limbs were evidently diseased. [illegible] to light. There was diminished [illegible] both feet and also of the lower [illegible] knee-jerk was totally abolished. [illegible] feet were of a livid hue, and [illegible] a fetid odour emanated from both feet. The ulcers commenced as corns. One ulcer of the size of a two-shilling piece was situated over the plantar aspect of the metatarso-phalangeal joint of the right great toe. Its outline was sinuous and ragged. The bones entering into the formation of the joint could be felt at the bottom of the sinus, the metatarsal bone being eroded. A sinus of the same character but of smaller size was situated over the plantar aspect of the head of the fifth metatarsal bone of the opposite foot. Carious bone could be detected. There was also the remains of a partially healed ulcer on the inner aspect of the left great toe. The patient's urine was acid, sp. gr. 1030, contained sugar and a trace of albumen, but no peptone. He died on June 1st (fourth day of treatment) of diabetic coma.

There was no history of gout, rheumatism, or injury in this case. The patient had, however, been exposed to all weathers, and in following his occupation of hawker had walked a great deal. The spinal cord and the nerves of the right lower limb were examined. The only naked-eye changes which could be detected were: (1) the posterior tibial nerve presented considerable enlargement in the lower third of the leg, and was here partially surrounded by inflammatory material, in which was also embedded the atheromatous posterior tibial artery; and (2) the plantar termination of the nerves were discoloured, and diminished in size.

The cord and peripheral nerves have been examined by Mr. Bowlby, of St. Bartholomew's Hospital, who has demonstrated the following changes. In the lumbar region of the cord there is marked atrophy of the cells of the grey matter, which are granular and have lost their processes. In the dorsal region the change is more advanced, most of the cells having completely disappeared. There was no cell exudation in either the white or the grey matter. In the peripheral nerves the changes are most marked in the posterior tibial trunk, where the white substance of Schwann is replaced by granular material which does not stain black with osmic acid. Some of the axis cylinders are normal, but many have atrophied and undergone a fatty change. The anterior tibial nerve shows a similar degeneration, but in a lesser degree, and in the sciatic the bulk of the fibres are normal. There appears to be a slight increase of the connective-tissue basis.

I wish also to mention that Dr. Byrom Bramwell, of Edinburgh, also describes similar changes in the peripheral nerves in this case, with the addition of well-marked vascular disease. He also found vascular changes in the spinal cord, but no ataxic lesion. It will be seen that the changes in the peripheral nerves differ from those recorded by Messrs. Savory and Butlin[1] in the greater amount of true nerve degeneration, and in the much smaller increase of the connective-tissue basis.

The comparatively frequent occurrence of perforating ulcer in locomotor ataxy[2] is well known, but it remains to be shown whether the ataxia in all these cases is due to a typical tabetic lesion of the cord, or, as is probable in the above case, to a peripheral neuritis or nerve degeneration. It is abundantly evident that in the case just recorded the actual cause of the perforating ulcers was a *peripheral nerve degeneration*. It will be seen that a good many of the causes which have been believed to produce perforating ulcer and peripheral neuritis were also present—i.e., cold, alcohol, diabetes, vascular disease, and continued pressure. It is probable that all these played a part in the causation of the disease, but I would venture to assign a considerable share to diabetes and vascular disease. Vascular changes have been found in a number of cases of perforating ulcer, and have been especially insisted upon by M. Pean and other observers. It also appears to me that diabetes may of itself be a cause of perforating ulcer, and this belief is induced by the following considerations: 1. That it is not uncommonly associated with locomotor ataxy, in connexion with which disease perforating ulcer occurs comparatively frequently. 2. That there exists a marked similarity between perforating ulcer on the one hand, and the destructive process of gangrene on the other, which latter is peculiarly liable to occur in diabetes. 3. It has been shown that diabetes does occasionally produce peripheral neuritis. 4. That another case of perforating ulcer has been recorded as occurring with

[1] Transactions of the Royal Medical and Chirurgical Society of London, vol. lxii., p. 373, 1879.

[2] See cases related by Professors Ball and Thiblerge (Transactions of the International Medical Congress of London, vol. ii., p. 520); Treves (THE LANCET, Nov. 29th, 1884).

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diabetes.[3] 5. That the glossy skin of Sir James Paget, which has been shown to depend on injury or disease of the pheripheral nerves, is sometimes seen in diabetes, and that there can be no doubt that this condition is of a somewhat similar pathological character to perforating ulcer. These considerations seem to show that it is possible—nay, more, even probable—that diabetes may sometimes play an active part in the causation of perforating ulcer.

Lastly, with regard to the operative treatment of this affection. It appears to me that the case which I have just related strongly supports Messrs. Savory and Butlin's opinion that the extreme measure (i.e., amputation of a portion or of the whole of the foot) is at best but a doubtful one; for it is evident from the diseased condition of the posterior and anterior tibial nerves that such a procedure would have led to no permanently good result in this case. If, however, amputation is decided upon, I believe it would be advisable not to adhere to hard-and-fast rules with regard to the site of the operation as laid down by various surgeons,[4] but rather to amputate through perfectly healthy tissues—namely, tissues external to or beyond the zone of anæsthesia so commonly present in perforating ulcer of the foot.

Nottingham.

A NOTE ON THE

TREATMENT OF PURULENT OPHTHALMIA.

By CHARLES HIGGENS, F.R.C.S.E.

SEVERE purulent ophthalmia is perhaps the most rapidly destructive disease to which the eye is subject; consequently its treatment has received a large amount of attention. It has always appeared to me that the disease could be rapidly cured if the discharge could be got rid of, or its character altered; it always seemed that it was the discharge which kept the disease going. Constantly washing away the discharge with some astringent and antiseptic lotion gave fairly good results; but the treatment was troublesome, and unless one saw to it oneself was rarely properly carried out. Some years ago Mr. Bader first suggested that persalts of mercury killed or destroyed the pus secreted by a mucous surface; he used to employ an ointment of red oxide of mercury, atropine, and vaseline applied to the conjunctiva, and with good results. The one objection to this treatment was the severe pain it caused, which seemed to me to quite counterbalance any advantage it might have over the washing away treatment. Since cocaine has been introduced, application can be made to the eye of substances which before its introduction caused so much pain that few patients could be found who would continue to use them. I have now treated some ten or twelve cases of severe purulent ophthalmia—some of distinctly gonorrhœal origin—by the following method, and the case reported from notes by my dresser (Mr. Andrews) is a fair specimen. 1. Wash away all discharge, and thoroughly cleanse the eyes with a 5 per cent. solution of boracic acid. 2. Apply thoroughly to the whole conjunctival surface, and fill the conjunctival sac with, an ointment composed of yellow oxide of mercury (16 gr.), boracic acid (20 gr.), hydrochlorate of cocaine (from 5 gr. to 10 gr.), and vaseline (1 oz.); and in some cases I also add 2 gr. of sulphate of atropine. The ointment may be applied with a camel-hair brush, a quill, a syringe with a good wide canal, or in any way that seems most suitable, so long as care is taken that no part of the conjunctival surface escapes it. 3. Cover the eyes with lint plentifully smeared with the ointment, and bandage them. Some pain is caused by the first application, which can be prevented by using a 2 per cent. solution of cocaine before making it; after the first application the effect of the cocaine in the ointment keeps the eye numb from one application to the next, unless the applications are made at very long intervals. The eyes should be examined in about two hours. If there is any discharge the whole process must be repeated; if there is none, the bandage may be reapplied and left for another two hours. As a rule, the ointment requires to be applied every four hours for the first two days, less frequently afterwards; *but the discharge must never be allowed to collect.*

Harry W——, aged eighteen, was admitted into the hospital on March 22nd, 1887. His history was that seven days before, March 15th, the left eye suddenly began to itch, and in the course of two days the eyelids became swollen and discharge commenced. Four days later the right eye became similarly affected; the discharge from both was very free. On admission pus was flowing freely from both eyes, there was much swelling of the eyelids, and intense congestion and swelling of the conjunctiva. There was some difficulty in examining the cornea; but the left was found to be perforated, and there was an ulcer on the right. The eyes were thoroughly cleansed, and the ointment, the prescription for which is given above, was applied (the application to be repeated every four hours), and the eyes were bandaged; quinine was ordered internally and the patient put to bed. The discharge was much diminished after the first application of the ointment. On March 27th, five days after commencing the treatment, there was very great improvement; the swelling of the eyelids had greatly subsided, the conjunctiva had flattened down and was much less congested, and the discharge, which had become less and less, had almost ceased. On April 1st there had been no discharge from the right eye, and very little from the left. The bandage was removed from the right eye. On April 9th, all swelling and discharge had entirely gone. There was slight corneal opacity below the pupil of the right eye. In the left eye there was an opaque flattened cicatrix—to which the iris was adherent—occupying the centre of the cornea; the eye had good perception of light.

Remarks.—The result of treatment in this case was most marked, the only cause for regret is that the patient did not apply sooner; had he done so, in all probability the damage to the left eye would have been prevented. He was not suffering from gonorrhœa, but the case looked like one of gonorrhœal infection.

Brook-street, W.

ON A CASE OF SUNSTROKE.

By A. CHEVALLIER PRESTON, M.R.C.S.

JOHN V——aged fifteen years, was brought to my house on Jan. 7th, 1887, by his mother. He had been cutting grass with a horse reaper, sitting on the machine driving, for the past two days, with no head shade but a cap, in the burning sun. He was gradually seized with pain in the chest and back, accompanied by convulsive movements of the arms and legs and contortions of the face. Has had no previous illness.

On examining him, I found him intelligent and able to tell me what I wanted to know, but his speech was muffled. His face was congested, and there was general redness of the skin of the whole body, with beads of perspiration on the forehead. His arms and legs were in a constant state of rhythmical convulsions. He could not protrude his tongue when asked to do so. Asked for drink. Pupils equal and slightly dilated. No unconsciousness. Pulse 100; temperature in axilla 99·4°; bowels constipated; passed urine freely. Unable to walk without assistance. Thinking the above symptoms were owing to the exposure to the sun in the intensely hot weather then prevalent, I ordered him to be kept in a darkened room, his head to be shaved, and an ice-bag applied to the head and back of neck, with a diet of milk and slops. I also prescribed a mixture containing ten grains of bromide of potassium and five grains of hydrate of chloral, to be taken every three hours, with five grains of calomel at bedtime.

Jan. 8th.—11 A.M.: On visiting him I found him still convulsed, with slight intermissions. No sleep had been obtained. The bowels had not acted. Unable to open jaw. No pain, but feels ill. Pulse 120, hard. Temperature in axilla 101°. Taking nourishment. Ordered ice-bag to be continued to the head, milk and ice by the mouth, and gave five grains of calomel again in powder; injected five grains of quinine hypodermically; the bromide and chloral to be continued.

9th.—3 P.M.: Has had half an hour's sleep, and says he is in no pain. Has taken two pints of iced milk in the twenty-four hours. Had a loose motion last evening, and passed abundance of high-coloured urine. Pulse 110, still hard;

[3] Laffon (Bordeaux). THE LANCET (Annotation), Sept. 13th, 1886.
[4] Bryant's Surgery, 4th edition. Erichsen's Surgery, published 1884. Jacobson in Heath's Dictionary of Surgery.

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temperature 100°; respiration 26, shallow. When asked to protrude his tongue, he did so, but it got fixed between the teeth, which were gradually closing upon it involuntarily, and I had difficulty in getting it back, as he bit it severely, causing it to bleed much. No power over jaws, but can move his tongue and swallow fluids with difficulty. No paralysis of sphincters or of general muscular system, but it seems to be confined to the head and face. Spasms tetanic. As he had had no sleep, I gave one-third of a grain of morphia hypodermically. To continue medicine.

10th.—11 A.M.: Slept two hours yesterday after morphia. Bowels not open. Pulse 104°; temperature 100; respiration 26, shallow. Conjunctivæ much injected; pupils normal. Fluids return through the nose when drinking. Quite sensible. Can open the jaws a little. Marked opisthotonos and strong convulsions of whole body every few minutes. Ordered chicken jelly to be added to his diet, and increased the dose of chloral to ten minims and gave it less frequently—every four hours.—8 P.M.: Slept at intervals through the day; drowsy. Taking food well. Paroxysms not so frequent, but quite as severe. Pulse increasing in rapidity, 142; respiration 30; temperature 101·1°. Micturates freely. Skin dry. Breathing quick, but free from crepitations or rhonchus. Can open his teeth to the extent of one inch. Quite conscious; says he is in no pain.

11th.—11 A.M.: Has passed a quieter night, but restless since daylight. No opisthotonos during my visit, but persistent trismus. Bowels not open. Pulse 120; temperature 101°; respiration 30. Taking nourishment through a tube. Complained of great pain over cervical vertebræ.—8 P.M.: Has slept at intervals during the day. No twitching during sleep. Taking food fairly well. Skin hot, congested, and dry. Pulse 132; respiration 30. Abdominal diaphragm and intercostals not working in rhythm. Bowels slightly moved. Says he feels better. A severe attack of opisthotonos occurred during my visit, otherwise the paroxysms have been less frequent, though three occurred to-day. Can open the jaws decidedly better, but cannot protrude the tongue. Cannot move his legs, but there is no loss of sensation.

12th.—11 A.M.: Has passed a restless night owing to thirst and the extreme heat of the weather. Fits less strong. Takes nourishment well through tube. Temperature 100·1°; pulse 110°; respiration 25. In no pain to-day. Can put out his tongue better, and can open the jaws wider. Tongue clean. No opisthotonos. Gave a soap enema, which brought away a normal motion.—8 P.M.: Has been restless through the very hot day (100° in shade), but slept an hour in the afternoon. Convulsions much quieter. No opisthotonos. Can open the jaw and protrude the tongue much better. Pulse 108; temperature 100·1°; respiration very jerky and irregular, 26. Asleep when I left. To continue the chloral and bromide every four hours; ordered the yelks of two eggs to be given in milk, and plenty of chicken jelly through the night.

13th.—Noon: Has had a better night and taken all the nourishment ordered. Slept four hours. Still complains of pain in his neck and back. Is having slight convulsive spasms of the whole body every few minutes, but is quite conscious during them. Pulse 110; temperature 101°; respiration 38.—9 P.M.: Very restless during the heavy thunderstorm which occurred this afternoon, and was with great difficulty kept in bed. Convulsions have now returned stronger than ever. Respiration 30 ("Cheyne-Stokes"); pulse 132; temperature 101·2°. Gave four minims of ergotine hypodermically, and added ten minims of the liquid extract of ergot and the chloral mixture every four hours.

14th.—Noon: Slept one hour and a half during the night, and took a fair quantity of milk and broth. Convulsions less severe, but more frequent. Temperature 103°; pulse 160; respiration "Cheyne-Stokes" in character. Mucous râles all over chest. No loss of consciousness, but evidently sinking. Ordered one drachm of rum in milk every two hours.—6 P.M.: Has been gradually getting weaker, but no loss of consciousness. Pulse increasing in rapidity, almost immeasurable. Says he is in no pain. Convulsive twitches all over the body incessantly. Jaw relaxing. Died, quite conscious to the last, at 10 P.M. No necropsy would be permitted.

Remarks.—I much regret that I could not obtain permission for a post-mortem examination. This case appeared to me to be primarily one of spinal meningitis following prolonged exposure to the sun, the lesion being situated in the upper part of the cervical portion of the spinal membranes. There was probably a secondary affection of the cord itself, profoundly involving the motor nuclei, and later on the medullary portion, exciting them to the state of irritability manifested during the progress of the case. The vagus remained unaffected so far as its cardiac fibres were concerned, I think, as evidenced by the little disturbance of the heart's action; but there was, I consider, an involvement of the respiratory centre accounting for the want of coördination of the intercostal muscles with the diaphragm. The persistence of the intellectual faculties and the absence of pain, during the greater part of the disease, points to the non-tendency I have observed in similar cases to the upward spread of the lesion, to the brain itself, as one would expect. The body temperature did not attain the height of many recorded cases of less severity, and the non-loss of control over the sphincters, is, I think, an unusual feature in so serious a lesion.

Lincoln, Christchurch, New Zealand.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A SIMPLE METHOD OF PROCURING DEGLUTITION WHERE SUCH IS IMPEDED BY REASON OF EXTENSIVE ULCERATION OF THE EPIGLOTTIS.

By R. NORRIS WOLFENDEN, M.D. CANTAB.,
SENIOR PHYSICIAN TO THE THROAT HOSPITAL, GOLDEN SQUARE.

ONE of the most distressing symptoms accompanying laryngeal phthisis with ulceration of the epiglottis is the difficulty patients experience in swallowing. Especially is this the case in advanced conditions where the epiglottis is more or less completely destroyed. In such circumstances the swallowing of even a teaspoonful of water, or liquid of any kind, is all but impossible, from the violent cough that is excited in consequence of the passage of some of the fluid into the larynx and trachea. Such patients are generally tormented with a thirst which they cannot satisfy, and the painful efforts they make to get down a few drops of liquid, and the terrible spasms of coughing and pain thereby produced, are truly pitiable to observe. One of my patients in the last stage of laryngeal phthisis, and in whom the epiglottis had more than half disappeared from ulceration, lately taught me a "wrinkle" which others may find of service. He informed me that he had discovered a method of drinking even large quantities of fluid with ease, and (in as nearly as possible his own words) said, "I thought of how we used to drink when we were boys, out of a running brook, by lying down upon the bank and putting our mouths to the water, and I resolved to try the plan. I sent for a piece of indiarubber tubing, and found that by adopting the same position I could drink off the whole of a tumblerful of water with ease and comfort." I asked him to give me a demonstration of the feat, and lying stomach downwards upon the couch in my consulting-room, with the head and arms hanging free over the end, and with the feet higher than the rest of the body, he took a large tumblerful of water in both hands, and placing the open end of a piece of indiarubber tubing (about six inches in length and with a vulcanite mouthpiece) in the fluid, and the mouthpiece between the lips, drained off the contents without stopping, and with the greatest ease and comfort. Not the slightest pain or cough accompanied the act, showing that none of the fluid entered the larynx. The feat was the more remarkable to me, who had often seen him making great efforts to swallow fluids, but unsuccessfully, in the sitting position. In the ordinary position a teaspoonful of fluid was as much as he could manage to get down, and this was accomplished only at the cost of much pain and terrible paroxysms of coughing. The plan is simple enough, and is one which will procure relief for other patients afflicted with the same terrible laryngeal conditions; as I have never seen it applied before, I venture to mention it to those who have to treat similar conditions, and I am sure they will find it an excellent method of alleviating one of the most distressing sufferings of patients of this class.

Upper Wimpole-street, W.

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PUNCTURED WOUND ENTERING THE SPINAL CANAL.

BY ROBERT W. WALSH, M.R.C.S., L.S.A.,
RESIDENT ASSISTANT, EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL, E.

THE following case, which lately came under my notice, may possibly be of interest.

H. B——, a boy aged twelve, was brought to the Children's Hospital, Shadwell, one evening, with the following history. Some hours before I saw him he had been playing with his sister, and the latter had accidentally wounded him in the back with a pair of scissors. The wound appeared so trifling that the patient was not brought immediately to the hospital, but continued to play about, and then had his tea as usual. Shortly after this meal he was seized with sickness, and vomited once or twice. His back was looked at by his father, and his shirt was found quite wet. He was then brought to the hospital, where I saw him. Before I could look at the wound the boy was seized with violent retching, and brought up some watery fluid. I had the boy undressed, and found his shirt and under-vest saturated with fluid of some sort. On examining the back, I saw a small punctured wound about a quarter of an inch long, and of such a character as would be expected from the nature of the instrument with which it was inflicted. Its situation was a little to the left of the spinal column, almost exactly in the mid-dorsal region. A probe introduced passed in the direction of the spinal canal, but was arrested by bony substance, which was apparently not bare; the instrument did not appear to enter the canal. The depth of the wound was just an inch. The boy's father would not leave him in the hospital, so I closed the wound with a small pledget of lint dipped in collodion, and sent the boy off, with instructions to come again if any bad symptoms appeared. He came next day, having been again sick and the wound having reopened. As admission was still refused by the father, I again examined the boy, and found matters almost exactly as before—the shirt and vest wet through, and the boy retching violently while in the room. In watching the wound, a small drop of clear watery fluid could be seen to collect at the lower angle of the puncture, and then roll slowly down the back. I united the edges of the wound with a fine silk suture, and sent the patient home as before. I saw him again in a week, when the wound was healed, and there had been no more sickness or other bad symptom. I have seen him once or twice since, and he remains perfectly well. It seems somewhat remarkable that in what was evidently a punctured wound entering the spinal canal, and remaining unclosed for over eighteen hours, there were no symptoms indicative of either spinal meningitis or irritation beyond the violent sickness; and it is also significant that this sickness continued as long as the wound remained unclosed, and ceased immediately closure was effected.

Shadwell.

CASE OF SUPPURATIVE HEPATITIS OCCURRING IN GENERAL PRACTICE.

BY CHAS. E. MONRO, L.R.C.P.ED., M.R.C.S.

C. C. S——, aged thirty-four years, formerly a sergeant in the Royal Artillery, went to India about the beginning of the year 1877, and was stationed at Ferozepore. Whilst there he contracted several attacks of malarial fever, and one of acute dysentery, lasting a fortnight; this was followed by chronic hepatitis, and an abscess was suspected. He was then a teetotaler, and had never suffered from any previous illness or syphilis. He recovered, was invalided home in May, 1880, and purchased his discharge, at the time feeling quite well. He then followed various occupations, but became very intemperate, and had one attack of delirium tremens. About eight months ago he first began to feel ill, with loss of appetite, wasting, progressive debility, and dyspeptic symptoms; he became sallow, and passed acholic stools, and latterly had diarrhœa with much mucus. There was a considerable degree of splenic tenderness, with slight splenic enlargement, also retching and vomiting. A tumour gradually formed in the right hypochondrium, extending to the epigastrium, with great pain. The patient could only lie in a position inclining to the right side, and with his knees drawn up. Rigors set in, and I diagnosed hepatic abscess. The temperature never exceeded at the time of my visit 101·5° F. At length the tumour obviously fluctuated.

On March 17th last, in consultation with Dr. Seymour Taylor, the abscess was aspirated, and fifty-one fluid ounces of pus removed. The patient rapidly recovered, and, from an almost moribund state, is now well and hearty, has gained much in weight, and has gone into the country for change of air; he is also able to walk four or five miles without feeling fatigued. The appearance of the abdomen is natural, the area of hepatic dulness a little extended. Urine: sp. gr. 1021; no albumen or casts; deposit of lithates. Thinking that it might possibly be a suppurating hydatid cyst, Dr. Seymour Taylor and I carefully examined the pus microscopically. There were no hooklets, but pus cells, broken-down hepatic tissue, crystals of cholesterine, and columnar epithelium. I saw the patient on June 23rd; he was then in good health.

Penge.

COMPLETE RETROVERSION OF THE UTERUS IN A VIRGIN.

BY WM. J. FRASER, B.A., M.B. DUB., &c.

THE following note may be worthy of record, and first I will give the girl's story or history, and then what I found on seeing her.

Mary Jane W——, aged twenty-three, of a loose build, was a general servant living at Taunton, and was in her usual good health, when on Thursday night, July 29th last, on going to bed she felt a sudden pain in the genital organs, with a total inability to pass urine. She continued in great pain all night, and vomited some watery stuff. About 5 A.M. her master asked a doctor to see her. She continued about the same, passing no urine, bowels costive, and in pain. On Sunday, Aug. 1st, a catheter was passed but drew off no urine. A swelling was then noticed in the abdomen, which increased, the pain being intense at times. Warm stupes relieved her. She afterwards passed a drop or so of urine, but she says she was "always wet." She was advised to go to the Taunton Infirmary, but her mother preferred bringing her home, which she did on Aug. 5th. When I saw her on her arrival, about 11 P.M., it being late and she exhausted by vomiting and the journey, I gave her a good dose of chloral, promising to see her again in the morning. At my visit on Aug. 6th, on examining the abdomen externally, a tumour was felt similar to about a five months' pregnancy, but more inclined to the right side, where it felt hard, though it was soft and movable on the left side, and if pressed on, she said, in answer to my question, that it made her feel as if she wanted to micturate. Per vaginam the examination revealed a chaotic mass; none of the familiar landmarks were felt. The posterior part was occupied by a round hardish mass tapering towards the pubic arch, under which was felt a round, cord-like substance, and on passing the finger further up an opening like the patulous os was felt. I now saw that I had to deal with a case of complete retroversion, causing retention and distension of the bladder and difficulty of defecation. I at once tried to pass a No. 9 gum-elastic catheter in the usual way, but totally failed; so placing her on her back, and with ocular aid finding the now retracted meatus, I came to the obstruction about an inch and a half above, which by gentle pressure I passed, thus being enabled to get into the bladder and to draw off four pints and a half of urine, the tumour disappearing and giving the patient immediate relief. Now, knowing the cause, I sent for a few pessaries, drawing off the urine twice a day; on August 10th I tried without chloroform to return the uterus, but failed. My senior partner, Dr. Gervis, being away for a few days, I waited till the 14th, when (he giving chloroform), after a good deal of difficulty, I succeeded in getting the now enlarged uterus into place, and kept it there by a Blackbee's pessary. Rest in bed was ordered, and a soothing mixture given. On the 18th the bladder had not regained its tone. The catheter was passed as before. There was no pain now, the bowels were open, and the girl felt better, but weak. In the evening she complained of pain caused by the pessary, which I removed, first passing the catheter. On the 17th, at my morning visit, I was told she had passed a little urine, and the catheter was not used. From this date she improved. She was kept in bed for a

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for ten days, and the pessary was not again introduced. After this she was up and about, and seemed as though she had never undergone the above three weeks' experience.

Burton, Devon.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

"Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morbum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare."—MORGAGNI *De Sed. et Caus. Morb.*, Ep. iv. Proœmium.

LONDON HOSPITAL.

DISEASE OF THE ANKLE-JOINT; EXCISION OF THE ASTRAGALUS.—COMPOUND FRACTURE INTO THE ANKLE JOINT; OPERATION.—DISLOCATION OF THE ASTRAGALUS.

(Under the care of Mr. RIVINGTON.)

THE following cases are illustrative of the surgery of the ankle joint. In two it was necessary to remove the whole of the astragalus, and in another a large portion of that bone was taken away. It will be seen on perusal of the notes that excellent results followed the methods of treatment adopted. In the majority of instances it is possible to reduce the astragalus when displaced forwards by manipulation when the calf muscles are relaxed; failing this, after division of the tendo Achillis. But there are cases, of which Case 3 is an instance, where no amount of skilful manipulation can effect reduction, and it is necessary to excise the bone. It is recommended by some that this removal of the bone be postponed for some time after the receipt of the damage, as the operation is then safer.

CASE 1. *Disease of ankle joint; excision of astragalus; cure.*—Rosetta C——, six years of age, was admitted in March, 1885, with disease of the left ankle joint. The parts were inflamed and swollen; there was free discharge from open sinuses; the probe passed readily into the joint, and bare bone could be felt. The patient had been in hospital at Bristol, where the sinuses had been freely opened. The foot was at first placed on a splint. After some days' rest the patient's ankle was explored, and the disease of bone being apparently limited to the astragalus, that bone was readily removed. When the patient was discharged one or two sinuses remained open. In November, 1886, she came under care again on account of an abscess at the back of the heel. This was opened, and a considerable quantity of pus evacuated. At this time all sinuses had healed, and the abscess wound having closed, the patient was discharged cured on Nov. 26th. She was last seen in April, 1887, when she could run about, and little difference beyond a diminution in the depth of the foot from the malleoli to the edge of the sole could be detected. Flexion and extension could be performed at the ankle joint. This patient was shown to the visitors at the district branch of the Metropolitan Branch of the British Medical Association at the April meeting.

CASE 2. *Compound fracture of left tibia into the ankle joint; fracture of left fibula with dislocation of the foot outwards; fracture of right tibia and fibula; secondary amputation of left ankle joint; cure.*—J. A——, aged fifty, [illegible] was admitted on January 28th, 1882. He had been [illegible] scaffolding a distance of about eighteen feet, and part of the woodwork fell on his legs, producing the injuries above mentioned, for which he was admitted. The [illegible] fibula were fractured at the junction of the [illegible] middle thirds, the tibia being much comminuted, [illegible] smelling. The left internal malleolus was [illegible] transversely, the upper fragment being forced [illegible] by the eversion of the foot. The joint [illegible] malleolus could be plainly seen, a wound [illegible] through which the upper fragment [illegible] projected, communicating freely [illegible] posterior tibial artery was uninjured, [illegible] case soon after admission, and decided [illegible] antiseptically. A carbolic spray played on [illegible] the joint was well syringed out [illegible] water, and the ankle then dressed antiseptically. The limb was kept at rest by means of a back splint and an outside splint with a footpiece. The right tibia and fibula were put up as usual—viz., on a back splint with outside and inside splints. Good position was obtained in both limbs. The patient was then given a hypodermic injection; the right tibia and fibula were swung, whilst the left limb was kept steady by means of sand-bags. A good deal of constitutional disturbance, swelling of the left leg, and suppuration followed, necessitating incisions. On Feb. 10th the limb was very boggy from the ankle to the middle of the thigh. A sinus was found to have opened midway between the ankle and the knee in front. An opening was made above the knee and a quantity of pus was evacuated. On Feb. 13th the whole of the skin in front of the leg was found to be undermined, and there was free suppuration. The incisions had to be enlarged on the 16th, and drainage tubes were inserted. By the 27th the limb was more healthy and the swelling had disappeared. A fragment of bone, comprising the whole of the internal malleolus, was removed. Erysipelas appeared on the nose and face, but there was no rigor, and the temperature was 101° only. On the 28th a free incision had to be made on the outer side of the leg. On March 4th three fragments of necrosed bone were removed from the ankle. By March 16th the wounds at the upper part of the leg were granulating; a collection of pus was opened in front of the ankle. The splints were removed from the right leg; good union had occurred. On April 3rd antiseptics were discontinued, and the wound dressed with oiled lint. On May 2nd there was no union in the fracture of the left tibia. The wound looked healthy, and there was very little discharge. It was very difficult to keep the fracture in position. On the 15th the wound required dressing every other day, and had a most unpleasant odour. The temperature varied from normal to 100°. On June 7th the wound was enlarged, the end of the fibula was removed, the lower end of the tibia chiselled, and a thick section of the astragalus taken away. The bones were very soft. The parts were dressed with oiled lint and cotton-wool, and the limb was kept in splints. The process of healing was slow, and great difficulty was experienced in keeping the foot in position. On July 4th the foot was in better position. Some amount of union had taken place on the 31st; the inner opening was very small, and the outer one closing. The patient's condition had much improved. On August 8th the sinuses had not quite closed, and the leg and foot were œdematous. On Sept. 10th a silicate of potash bandage splint was applied, which on the 18th was slit up in front, eyelet-holes made, and laced. Patient wheeled out into the garden. On Oct. 9th there was fair union, with movable joint. The foot was placed in a M'Intyre splint; subsequently the silicate of potash bandage was employed. The patient did not go out of the hospital until he had been in about twelve months. He was then going about on crutches. He was last seen on April 26th, 1887, when he was shown to the district branch of the British Medical Association. He had had a serviceable foot for a long time, with some movement at the ankle. There was no wound or sinus, and he was able to bear weight and walk on the foot.

CASE 3. *Subastragaloid dislocation of the right foot outwards, with displacement of the astragalus; removal of the astragalus.*—William D——, aged forty, bricklayer, was admitted on October 6th, 1880. He had fallen from a height of about twelve feet on to his feet. On examination it was found that the foot was elongated from the ankle forwards and turned outwards, whilst the astragalus itself was twisted, the head being prominent near the inner malleolus and the body pushed backwards and outwards, so that the posterior edge of the astragalus could be felt behind the tibia. The leg was much bruised. Attempts at reduction, including division of the tendo Achillis, failing, and the patient not consenting to the removal of the astragalus as advised by Mr. Rivington, the foot was left till Oct. 26th, when it had become still further displaced. With the patient's permission the astragalus was then excised under the spray. The foot had previously been dressed antiseptically as a precautionary measure in order to guard against possible sloughing of the soft parts over the bone. The neck of the astragalus was found to be embraced by the tendons of the tibiales muscles, and the tissues over the head of the astragalus were black and sloughing. The tendo Achillis was united by suture on removal of the bone. The wounds were dressed with gauze till Nov. 20th, when antiseptic dressings were left off, the discharge smelling offensively. On the 22nd a sinus at the upper part of the

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leg was laid freely open, and a large quantity of pus evacuated. On the 28th the leg was œdematous and the foot much swollen. In the wound at the ankle there were numerous sloughs, one being the tendon of the tibialis posticus. A fortnight later an abscess was opened over the outer ankle. In another week the wounds were granulating healthily and rapidly filling in. The temperature had always stood below 100° since the operation. The patient made a good recovery, with a useful foot.

NEWCASTLE-ON-TYNE INFIRMARY.

TWO CASES OF ELEPHANTIASIS OF THE LEG, IN ONE OF WHICH THE FEMORAL ARTERY WAS LIGATURED; REMARKS.

(Under the care of Mr. PAGE.)

FOR the report of the following cases we are indebted to Mr. Maynard, house-surgeon:—

CASE 1.—W. S——, aged twenty-one, single, glassmaker, born in Sunderland and never been out of the place all his life, was admitted on March 24th, 1887. His history contained little of note, except that he was born with the left thigh and leg larger than the right, and that, as he grew older, the calf enlarged more than the thigh. The skin was natural until he was fifteen years old, when it began to get rough and thickened. He has had a few "attacks of inflammation" in the leg—the first nine years ago. While at work he noticed the calf (from knee to foot only) red and inflamed after he had felt ill for about an hour (no vomiting or shivering). He went to bed and stayed there six weeks. The skin was dry during the attack, and never cracked or discharged at all. It was kept dredged with flour. He was delirious, and had attacks of dizziness. All his symptoms were worse at night. After this attack he felt quite well, and the leg diminished somewhat in size. He remained free until three years ago, when he had another "attack." This kept him in bed two months, and in its course three warty excrescences, the size of small walnuts, appeared behind the inner ankle, ran into one another, and spread up nearly to the knee. They cracked and discharged thin, yellowish-white, sticky matter, without itchiness. They ran the same at night as in the day, not more. The discharge has continued until lately, increasing whenever he "caught cold." After this attack the leg remained larger and harder than before, though he went about his work as usual. During the last three years he has had five or six similar attacks (the last three months ago), lasting from one to four weeks each, and leaving the leg larger each time. When a baby he was circumcised, his mother says.

On admission the condition was as follows:—All organs healthy. Penis small and buried in scrotum, which forms the prepuce, as it were, and a tight one too, the glans being completely hidden. Testes normal; pubic hair short and scanty, and does not grow towards umbilicus, as is usual in men. Left leg: The thigh looks like a continuation of the trunk, so large is it; the skin covering it is everywhere normal, without œdema, and there are no enlarged glands to be felt. The femoral artery can be felt deeply situated in Scarpa's triangle, and much larger in calibre than the right. The thigh feels firm and elastic, but not hide-bound, fluctuating laterally but not vertically. When he moves the limb (apparently an easy matter) the different thigh muscles feel very large. The bone cannot be plainly made out. At the knee the landmarks reappear, and can be felt (patella, &c.). Below the knee the leg enlarges greatly, and the skin alters. In the upper third it is like the thigh, but below that it becomes indurated, roughened, and presents numerous slightly-raised, flattened, red nodules—like blind boils—each, he says, he can distinctly trace to a blow. The lower portion of the leg presents a truly remarkable sight. It is immensely large, nodulated and gnarled on the surface like an old oak, the nodules lying close, and being of the size of shillings and half-crowns. The whole feels hard and tense, but indistinctly elastic. The surface of the patches is red, shining, and smooth; not inflamed. The skin between is dry and scaly. The skin over the last three inches of the leg resembles ichthyosis; much fissured, dry, and warty. There is a deep sulcus at the ankle, and then the dorsum of the foot rises up with a swelling similar to that of the leg, except that the skin is smooth everywhere but above the second toe, where there is a small warty excrescence like a small dried sea-anemone. The toes are spread out and flattened. The measurements on admission were as follows:—Right leg: middle of thigh, 19 in.; at patella, 10 in.; middle of calf, 12½ in.; lower, broadest part, 8¾ in. Left leg: middle of thigh, 26½ in.; patella, 24½ in.; middle of calf, 31 in.; lower, at broadest part 32½ in. No filaria were found, and the blood and urine were normal.

The patient was treated in bed with a Martin's bandage, and at the end of two weeks the calf was reduced in circumference by seven inches, the thigh only one inch, and the foot not at all. The tibia and femur were much enlarged, being nearly three times their natural thickness. During the treatment he had two attacks of erythema on the skin over the dorsum of the foot, accompanied by a slight rise of temperature, and the bandage had then to be stopped for a few days. On May 20th he got up, with the bandage on. On May 23rd the leg was much larger, though still soft. On June 1st he went home, and was told to use the bandage. Amputation in the thigh was discussed, but was put aside for the present.

CASE 2.—Lawrence M'C——, aged forty-six, single, seaman, a native of the West Indies (Nevis), where he lived until he was sixteen years old, was admitted on July 20th, 1886; his history was briefly this: General health always good; hard drinker; no syphilis. When sixteen years of age he first noticed swelling about the right ankle, which gradually spread up the leg, increasing slowly in size, but never gave him any inconvenience or pain until seven years ago, when he began to feel it heavy and a dull aching numbness about it, and which compelled him to leave the sea and do light work. Never had any attacks of inflammation in the leg, only a few boils and pimples on it. Until four years ago the skin resembled that of the other leg, but it turned darker in colour, and scabs began to form, discharging blood and matter. This discharge ceased when lying idle, and was worse in winter. His father died of phthisis; his mother and one sister had a kind of elephantiasis, though it was permanent, never varied in size like his, and gave them no pain. He is of African descent.

On admission the thigh was normal. Below the knee the leg was uniformly enlarged and hard; the skin was dark, dry, and scaly. Here and there were small excoriations discharging pus. The ankle was included in the swelling, and there was some swelling of the dorsum, slight in amount. He had a hydrocele of left tunica vaginalis testis, which was tapped twice, and contained ordinary hydrocele fluid. Blood and urine normal.

Rest in bed not producing much change, on October 1st Mr. Page ligatured the femoral artery in Scarpa's triangle. The artery was small in calibre, so much so as to make a double femoral anomaly probable. After the operation the leg gradually decreased in size, but never became as small as the left, nor the skin as supple, though the excoriations healed. The tibia could be felt to be much enlarged—half as thick again as, or more than, the opposite bone. At the end of the month he left with the wound not quite healed.

He was re-admitted on April 20th, 1887, with the leg almost as large as on his first admission and the skin much excoriated. He had been on the tramp, and fared badly. Had bronchitis and was low. With good feeding and rest the leg improved, and then, as the man declined any further operation (amputation through the thigh having been suggested), he went out.

Remarks by Mr. MAYNARD.—These cases induce comment mainly as regards their etiology and treatment. Filaria could have taken no share in producing Case 1, though in Case 2 it would be difficult to prove that their influence had never been at work. Hutchinson's idea—viz., that of constantly recurring cutaneous erysipelas,—attractive as it seems, would hardly explain it in the face of the great enlargement of the bones in both cases, and in Case 2 the absence of any inflammatory history. The general congestion in the limb caused by local inflammation could not be expected to produce such osseous hypertrophy. As regards treatment, rest with elastic pressure produced good results while it was persevered with, but only so long. Ligature of the femoral in Case 2 was certainly temporarily very encouraging, but afterwards disappointing. Indeed, when one remembers the great enlargement of the bones, the conclusion one must come to—at any rate in cases where it is present—is that no amount of rest or elastic pressure can cure, and nothing short of amputation will permanently relieve. In Case 1 this would have been a very formidable business.

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EDINBURGH ROYAL INFIRMARY.

SIMPLE FRACTURE OF THE FEMUR WITH RUPTURE OF THE POPLITEAL ARTERY AND VEIN; AMPUTATION THROUGH THE THIGH.

(Under the care of Professor ANNANDALE.)

FOR the notes of the following case we are indebted to Mr. D. G. Marshall, house-surgeon.

J. S. T——, aged fifty, admitted at 5 P.M. on Feb. 18th, 1887, suffering from an injury to the right thigh. A few hours before admission the patient was working in a mine when a mass of coal and stone weighing several tons fell upon him. At the time of the accident he was lying on his left side, and the mass struck him on the outer side of the right thigh and leg. He struggled violently to release his legs for about a quarter of an hour, but was unable to do so. At the end of this time assistance arrived and he was released; temporary splints having been employed by a medical man, he was conveyed to Edinburgh (a distance of fifteen miles) by train.

On admission, the patient was suffering slightly from shock, but was perfectly conscious. On removing the temporary splints, he was found to be suffering from a simple transverse fracture of the femur about two inches above the condyles. There was a little shortening of the limb, with a slight deformity at the knee; this was easily reduced, and seemed to depend on a displacement of the tibia forwards. There was some swelling of the limb, both at the seat of fracture and in the calf; below the knee the limb was cold to touch, and no pulsation could be felt in either of the tibial arteries. No splints were applied, the injured part being simply swathed in cotton-wool and laid on pillows. During the evening the condition of shock wore off, and some degree of warmth returned to the leg as far down as the ankle, the foot still being cold. Temperature in the axilla 99·8°.

Feb. 19th.—Morning: The cold portion is limited to the foot and leg about two inches above the ankle joint. Temperature 99·6°. Evening: The leg is cold over the lower two-thirds. Temperature 99·8°. Patient feels comfortable, excepting that his foot has a "dead" feeling.

20th.—Condition unchanged, excepting that the foot has a slightly mottled appearance.

21st.—Lower two-thirds of the leg and the foot perfectly cold; the mottling of the skin very marked. The patient having been put under chloroform, Mr. Annandale made an incision on the inner side of the limb over the seat of fracture, when some dark-coloured blood escaped. On passing his finger into the wound he found the joint was implicated, and at once proceeded to amputate at the junction of the lower and middle two-thirds of the thigh. On examining the parts removed, the femur was found to be fractured in a transverse direction about two inches above the condyles; there was a large rent in the posterior part of the capsular ligament of the knee joint, and both the crucial ligaments were torn through. The popliteal artery and vein were torn completely across; the separated torn extremities of the artery were of a pointed shape and twisted in appearance. The muscles of the calf were infiltrated with blood.

During the evening after the operation the temperature was 99°; pulse 84. On the 23rd the temperature rose to 102·2°. There was slight tension in the flaps, and some stitches were removed. After this he made good progress. The stump healed rapidly, and he was sent to the convalescent home on the 31st of March.

Remarks by Professor ANNANDALE.—This case seems worthy of record; firstly, on the question of diagnosis and treatment. Rupture of the vessels is in few surgical works referred to as specially likely to accompany this fracture. The sharp edge of the lower fragment drawn backwards and downwards is brought in close proximity to the vessels, and supposing the symptoms of injury to the vessels to be not well marked, the severity of the case might be overlooked. Billroth, in his Clinical Notes, records such a case, treated with plaster-of-Paris bandages, followed by gangrene. His patient died after amputation of the thigh. The second point of the case is the very good example of arrest of hæmorrhage by natural means. The quantity of blood effused into the tissues was very small, and the ends of the arteries looked as though they had been twisted with forceps.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Anatomy of the Capsule of Tenon.—Discussion on Toxic Amblyopia.

A SPECIAL meeting of this Society was held on the 23rd ult., Mr. H. Power, F.R.C.S., Vice-President, in the chair.

Mr. LOCKWOOD exhibited a series of specimens, brought from the museum of St. Bartholomew's Hospital, bearing on the Anatomy of the Capsule of Tenon. They showed the continuity of the capsule and the sheath of the optic nerve behind, and its relations to the conjunctiva in front. The suspensory ligament of the eye and its attachments to the wall of the orbit were clearly seen from a number of points of view. The intra-capsular ligaments of the various muscles and their relation to the recti were demonstrated, and also the inward bend of the superior rectus. Lastly, attention was drawn to the tunica adventitia oculi and to the cheek ligaments of the recti. He thought the latter might be of considerable importance in relation to squint operations.—Mr. POWER spoke of the importance of an accurate knowledge of the precise attachment of muscles and of the precise effects of division of tendons. Everyone must have experienced unexpected and unexplained instances of failure in the treatment of cases of squint.

Mr. NETTLESHIP opened the discussion on Toxic Amblyopia. In reference to the question of alcohol, he said that he had met with no instance of amblyopia in drinkers who did not smoke, but he thought that in smokers alcohol might contribute in determining the onset and degree of the affection, and he instanced the case of a man who smoked from a quarter of an ounce to half an ounce of mild tobacco a day, and who had lately taken to drinking, whose vision, which had been failing for a month, was—R.E. $\frac{2}{3}$, L.E. $\frac{2}{4}$; and also another case of a man aged forty-nine suffering from alcoholic paralysis who was a large smoker, but had no central defect for colour; his vision improved very materially when he partly left off drinking and smoking. Cases seeming to show that alcohol had no effect were common—that is, where the leaving off tobacco was sufficient to effect cure or improvement, the alcohol being indulged in in undiminished quantity. Considerable pallor of the whole disc was common in severe cases, and might persist, though the vision improved. There were forms of central amblyopia in non-smokers. There was a hereditary form in which families of young adult males got amblyopia rather rapidly, some being smokers and some not. Apart from these, he had only seen two cases of central amblyopia not attributable to tobacco. One was in an old man of seventy-two, who had not used tobacco for twenty years, and whose sight had been failing for eight years; his discs were rather pale and the arteries diminished; he remained *in statu quo*. The other patient was a man of twenty-four, whose sight failed whilst he was extremely ill with syphilitic rupia; there were no ophthalmoscopic changes, but a scotoma exactly as in tobacco cases. He had not used any tobacco for eight months, and his sight had only begun to fail three months after he left it off. He had met with this form of amblyopia in a man who only smoked three-quarters of an ounce of shag a week. As to the length of time a person must have been a smoker, he instanced the case of a man who took to smoking at the age of twenty-nine and a half years, consuming an ounce of shag daily; he was also a heavy drinker. At the end of six months he took the pledge and kept it for six months, and between two and three weeks later his sight began to fail. In another instance a man, aged fifty-two, had characteristic central amblyopia after being a smoker for three years. He (Mr. Nettleship) had met with tobacco amblyopia in father and son once, and once the son of a patient was found to have locomotor ataxy and progressive atrophy of his discs. In two patients (sailors) there was a history of an attack of night-blindness whilst at sea some years previously. He had only met with one instance of a second attack in a patient who had been cured by giving up tobacco, and then took to it again four years later; at the end of another year his vision again failed. In the speaker's experience cases might recover with complete or partial disuse of tobacco. Sometimes cases did not progress beyond a certain point, although smoking was not discontinued.—Mr. MCHARDY referred to a case of a gentleman, aged fifty-

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two, who had commencing cataracts, which had been supposed to be the cause of his failure of vision. When tobacco was given up he made marked improvement in twelve weeks, and in four months had good colour vision. He believed that some severe nervous or mental shock would always be found in these cases, if persistently inquired into, and instanced several cases supporting this view; he did not believe that the intermission of tobacco in those habituated to it had anything to do with the causation. All tobacco must be stopped, and he was decidedly in favour of giving strychnine; it must be given so as to produce its full effects, and then decided improvement would be noticed in a few days; by the end of ten or twelve weeks all the recovery possible would have taken place, and most cases did recover completely. He had observed that a considerable proportion of the patients had suffered from malaria. He had never seen it under thirty-two years of age; most of the patients were between forty and fifty.—Mr. EDGAR BROWNE spoke of the difficulty they had in Liverpool in tracing their cases, most of the patients being sailors. He had met with one instance of a relapse, and he thought that perhaps their rarity was only apparent, inasmuch as the patient would know what to do if he had a relapse, and so would not come for advice. As a rule the patients did leave off smoking for a time, and if they returned to it, a milder tobacco was used. He had seen no case of amblyopia due to alcohol alone, and he had seen no case in women—a strong point against the alcoholic theory, as women drank just as freely as men, but did not smoke. Of his forty-nine patients, seventeen were heavy drinkers, four teetotalers. Persisting pallor of the disc was the rule, notwithstanding improvement in sight. He had seen one case in which the blindness was permanent, but there was a history of a blow, and he thought there might have been some true atrophy in that case. The affection was common about thirty, but most common between forty and fifty. He believed that some impairment always preceded the onset, and in sailors there was always the great change in habits as a factor. The lowest quantity he had ever known to cause it was a daily allowance of two ounces of twist. He had tried nitrite of amyl, but only once with benefit; in that case, when the face was flushed, there was a temporary improvement of vision.—Dr. HILL GRIFFITHS gave the results of his experience. Of twenty-seven patients who completely recovered, eleven had entirely given up tobacco; the others had reduced the quantity used. Of twenty-four patients in whom partial recovery had taken place, eleven had entirely discontinued the tobacco, and nine had lessened the quantity taken; in one woman a relapse took place during the treatment, because she took to smoking again. Of eleven failures, five patients had entirely given up tobacco, and two had made no reduction. Of the three patients who had got worse, two had smoked as usual all along; the other had given it up. Therefore there was a tendency to recover even without complete disuse of the drug, as one-third of the patients had only reduced the amount taken. He had not met with atrophy of the disc. He had seen five cases independent of tobacco: the first patient was a woman much pulled down by repeated pregnancies, who did not smoke, and whose impairment of vision was exactly like that seen in purely functional cases; the second was also a woman, a heavy drinker, who did not smoke, and who made a rapid recovery; the third was also a drinker, who did not smoke; the fourth had been a smoker, and was a drunkard; he had amblyopia, but no central scotoma; the last patient, like the first, had contracted fields and resembled a functional case. He had seen fourteen instances in women, and had met with two cases in men under twenty-three. From five to six years' smoking was the shortest period in which he had known the disease to be produced. He had seen hæmorrhages in several cases, all in heavy drinkers.—Mr. ADAMS FROST had not met with a case of central amblyopia without tobacco. He had seen one case of non-central amblyopia in a lady who did not use tobacco, but it might have been consecutive to an attack of typhoid fever. Nine of his patients were total abstainers, and some were heavy drinkers. All improved, and recovery usually took place in from six weeks to three months. The youngest patient he had seen was twenty-five. He had no faith in strychnine, but found iodide of potassium very useful.—Mr. LAWFORD, with Mr. EDMUNDS, referred to a fatal case of alcoholic paralysis in a man aged fifty-six. On examination, changes were found in the optic nerves; these were central higher up and lower down; they were sector-like and at the outer side. They did not believe the changes ought to be attributed to the alcohol, but rather to the tobacco. Unfortunately no examination of the patient's sight had been made during his life.—Mr. J. HUTCHINSON, jun., mentioned one case of amblyopia apparently due to alcoholism in a heavy drinker aged forty-two, who made a rapid improvement. He had once seen the affection appear in one eye six months before the second began to fail. The patient smoked half an ounce of shag daily. The eye which had failed first was the first to improve. He also mentioned the case of a man, aged sixty-three, in whom the onset was gradual, and who had a large central scotoma, whose distant vision was bad, whilst his near vision was good. He improved. Strong tobacco was usually the cause, but he had one case where a daily allowance of an ounce of "May Blossom" had caused it, and one where cigars only had been used. He thought it fairly common to find a scotoma in the yellow field, and had once met with a scotoma for all four colours. In two cases there had been a scotoma for white; in one case the scotoma was wholly absent for a time.—Mr. JESSOP had found a history of tobacco-use in all the cases he had seen, and of strong tobacco in all but one. In most of them he thought there had been some sort of trouble. In alcoholic paralysis there was no central scotoma or limitation of the field of vision. He had seen the affection in two women, both smokers.—Mr. MORTON had only seen this amblyopia in tobacco cases. Three teetotalers recovered after giving up tobacco. In one case of persistent pallor of the disc that he had long under observation the vision remained stationary for several years. Once he had seen retinal hæmorrhages. He had not found shock play any part in the causation. Strychnine was useful in his experience. He had seen two cases in men under twenty-three. Shag was the tobacco that most frequently caused it.—Mr. GUNN said that the age was from thirty-five to fifty-five most frequently. The failure of sight was often sudden and rapid, and he thought it occurred more often in those engaged in open-air occupations. He had known half an ounce daily of coarse tobacco cause it. In all cases tobacco had been used, and he believed that both total abstainers and drunkards were more liable to it than moderate drinkers. Only one patient did not recover on leaving off tobacco; considerable improvement followed on lessening the quantity of tobacco used. One patient had been a smoker for fifty years. He had seen one case of late recovery with imperfect vision and persistent pallor. He had never met with a second attack. In a diabetic a very small quantity of tobacco would give rise to it.—Mr. CRITCHETT mentioned the case of a youth who from sixteen to eighteen years of age smoked half an ounce daily. The symptoms were very marked, but complete abstention from tobacco brought about his recovery in three months.—Dr. LITTLE referred to a case of amblyopia from bisulphide of carbon. The patient had been employed in the curing room of some rubber works for three months, when he found his sight failing, and three months later he had extreme failure of vision. The optic discs were pale and hazy; the vessels narrowed; the fields for white and blue contracted, those for red and green absent; smell and taste were numbed, and hearing was affected on one side. A year later, after abstention from his work, he had almost normal vision. In another case there was normal vision and no scotoma, but all the fields were contracted. He also recovered.—Mr. POWER thought that there was still much to be made out by inquiry. He thought that tobacco did not produce these poisonous effects until digestive disorders and anæmia were already established. Many conditions had to be thought of, and he mentioned a case where a searching inquiry brought to light an attack of typhoid fever, as well as a history of excessive drinking and syphilis. He thought that strychnine and iron were of very great advantage in these cases.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THE ninth and last meeting of the second session of this society was held on June 22nd, Dr. Samuel Sloan, President, in the chair.

Dr. JOHN WILSON (Hillhead) communicated a paper, accompanied by diagrams, on the Best Mode of assisting at the Outlet the after-coming Head. The paper was read and

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commented on by the SECRETARY (Dr. Turner).—Dr. PARK then read a paper on the Scientific Dilatation of the Os and Cervix Uteri and Intra-uterine Therapeutics. He advocated the use of the "artificial amnion" invented by Mr. Taylor of Birmingham as being superior to all other dilators in principle and detail. He laid special stress on the fact that the natural method of dilatation was closely followed, being effected really *ab intra*, and not *ab extra*. He also stated that it was more adapted for general use than Barnes' bags, as there was not so much necessity for preliminary dilatation by tents. One introduction through the os and cervix was sufficient, thus avoiding the irksomeness of instruments depending upon the principle of repeated introduction of sounds of larger and larger calibre. There was no solution of continuity of the lining mucous membrane involved, as was almost necessarily the case where dilators acting on the principle of leverage were employed. Passing to the question of intra-uterine therapeutics, he asked the Society if they did not think that the present-day neglect of and fear of intra-uterine medication was being carried too far. He pointed out that we are in the position now of having a great many more remedial agents at our command than we had even ten years ago, and instanced hazeline, resorcinol, cocaine, glycerine, iodoform dissolved in euc. extract, iodol, &c., as remedies which, alone or variously combined, might be used with perfect safety with Braune's syringe.—Dr. W. L. REID doubted whether the use of even antiseptic sponge tents was safe. He had seen two cases of septicæmia clearly traced to their use. He thought the smaller-sized Barnes' bag quite equal to Taylor's instrument. Twenty years ago many cases had been related of injury due to uterine injections, and he thought Dr. Park scarcely seemed to appreciate wherein the true danger lay—viz., in the accumulation of secretion in the uterus, and the contraction of the latter on its contents, with a closed os. He thought not much nitric acid could reach the fundus when administered on a naked probe and not through a cannula. He narrated the means taken by him to reach the interior of a womb the subject of sarcoma, and where the vagina was narrow by reason of senile atrophy. He first dilated the latter by the use of a large Barnes' bag, and was thus able readily to reach the os and dilate it by means of his own screw dilator.—Dr. SLOAN objected to the statement that mechanical dilators were not adapted for general use, and thought sponge tents dangerous.

Reviews and Notices of Books.

Diseases of Women. By Dr. F. WINCKEL. Translated by J. H. WILLIAMSON, M.D. With an Introduction by THROPHILUS PARVIN, M.D. Edinburgh: Young J. Pentland.

THIS book is described as a manual for students and physicians, and in many respects is very good. It is divided into seven sections, each section treating of the anomalies and diseases of some portion of the genital organs. These are the anomalies and diseases of the external sexual organs; of the vagina; of the uterus; of the Fallopian tubes; of the ovaries; of the uterine ligaments, peritoneum, and pelvic connective tissue; and of the breasts. Each section is divided into chapters, in which are discussed the various deformities and diseases to which the subject of the section is liable. This arrangement of the matter of the book is from a scientific point of view perhaps perfect, but from a clinical aspect it has its disadvantages. The physician, already acquainted with the diseases of women, will feel these disadvantages less than the student who is beginning his study. The first two hundred pages are occupied with the anomalies and diseases of the external sexual organs, and many subjects are discussed in this portion of the volume which are not usually referred to in English text-books. This part of the work is very well done. The third section consists of nearly three hundred pages, and deals with the anomalies and diseases of the uterus. The malformations of this organ are well described in the first chapter of the section. The second treats of the changes in the form and position of the uterus. Naturally, it begins with a discussion of the normal shape and position of the organ, and the author arrives at the conclusion that "it is a movable organ, every breath, every word and action, every variation in the fulness of the rectum and bladder influencing its position. It can, therefore, become abnormal only when the normal mobility of the organ is checked, lessened, or abolished in any given direction—i.e., when the organ is held in a fixed position." It necessarily follows from this definition of the normal position of the uterus, that all displacements of it are only signs of some other disease and not the disease itself. Displacements are classified as follows: (1) Elevation, descent, and prolapsus of the uterus; (2) ante, retro, dextro, and sinistro position; (3) anteversion and flexion, retroversion and flexion, dextroversion and flexion, sinistroversion and flexion; (4) torsion; (5) inversion; (6) herniæ. It is evident to all pathologists, "uterine" and others, that many of the above displacements are simply the results of disease in the immediate neighbourhood of the uterus, and have in themselves no pathological significance. A pretty full account is given of descent and prolapse of the uterus and its treatment. When we come to the chapters on versions and flexions we meet with a curious state of things. "Anteflexion is the normal condition of the virgin and nulliparous uterus, as anteversion is in the parous woman." And these become pathological only when they are permanent. Pathological anteversion and anteflexion usually result from diseased processes external to the uterus, such as peri- and para-metritis. The symptoms are said to depend upon the inflammatory condition coexisting with the flexion. Anteflexion causes no obstruction to menstruation or to impregnation. Yet the author recommends active treatment of various kinds, including stem pessaries.

In discussing retroflexion and version the author does not fall into such inconsistencies. Throughout he treats each as a disease calling for treatment. He discusses the causes of it and the anatomical changes in the uterine walls, and finds the latter to be elongation and thinning of the anterior wall of the uterus, but never thinning of the posterior wall at the angle of flexion. We meet with some extraordinary statements in this chapter. "The hyperæmia, erosions, and ulcerations cause great sensitiveness of the uterine walls, so that many patients will notice every movement of the uterus. Very intelligent patients have attributed the sensation to the movements of a child or some animal, as a tapeworm." What are the sensations due to the movements of a tapeworm? According to Winckel, retroflexion causes anæmia, migraine, hysteria, insanity, and suicide. "In every case therefore," he says, "of general nervousness, hysteria, or chlorosis, a thorough examination of the pelvic organs must be made, and, as Schultze has said, the same course should be taken with patients who are sent to asylums for nervous or mental diseases." If symptoms of displacement have already appeared, young girls should be made to understand the necessity of genital exploration. Perimetric adhesions are to be torn through by manipulation, and pessaries of various kinds should be used; but our author draws the line at laparotomy and Alexander's operation. With regard to the latter, he says "the results hitherto published are by no means favourable, not even encouraging." We know no work in which more incorrect views are inculcated with regard to displacements—views the fallacious character of which has been placed beyond doubt by the works of Herman and Videler, works to which Winckel makes no reference.

In the treatment of inversion Dr. Winckel recommends manual attempts at reposition; and should these fail, the use of the colpeurynter and laparotomy as a final resort when all other means have proved unsuccessful. He disapproves of continuous elastic pressure on the fundus by means of a

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cup and stem, and says: "He who has laboured for years with such a case has recognised the pressure which the inverted uterus will withstand, and will condemn as unreliable and dangerous all the sound-shaped instruments with knob, plate, or cup-like attachments, because they act upon too small a portion of the inverted body, and slip far too readily from its smooth surface." It is impossible to accept such a conclusion in face of the many old and chronic cases of several years' standing which have been successfully treated by this means.

The chapter on neoplasms of the uterus is worthy of careful study. Winckel regards öophorectomy for fibroids as still *sub judice*. He says: "The mortality is over 15 per cent., and the desired result fails in 20 per cent. of those cases not immediately fatal. The value of castration for unoperative (*sic*) uterine myomata therefore remains *sub judice*, and its value, when compared with myomotomy, cannot be definitely determined with our present limited experience."

The fourth section treats of the diseases of the Fallopian tubes, and the fifth of those of the ovaries. The little that is known of the diseases of the tubes is carefully summarised. The section on diseases of the ovaries is good. In this section the operation of spaying is discussed. The author thinks that the cases requiring this operation are rare, and that the operation frequently fails of the desired object. He considers every castration for the removal of ovaries which are not obviously diseased to be a blunder, and believes that cases in which spaying is frequently recommended recover without operative procedure. In this we heartily agree with him. "It is to be hoped," he writes, "that the time is not far distant when the extirpation of the healthy ovary for dysmenorrhœa, ovarian neuralgia, epilepsy, and mental diseases will be classed with clitoridectomy, once so frequently done, although the latter is far less injurious and harmless." The work is on the whole excellent, and will prove very valuable to the gynæcologist, though not so well suited for the beginner.

A Text-book of Pharmacology, Therapeutics, and Materia Medica. By T. LAUDER BRUNTON, M.D., &c. Third Edition. London: Macmillan and Co. 1887.

ALTHOUGH the interest of this new edition of Dr. Lauder Brunton's valuable work centres primarily in his long-promised vindication of his position with regard to homœopathy, it needs but a cursory inspection to prove that he has not thrown away his energies in his trenchant remarks in the preface. His explanation really occupies a comparatively small space; and as we have already dealt with it, any further reference is now unnecessary. In spite of judicious condensations and omissions, the amount of new material for which space was imperatively demanded has increased the size of the book by more than 100 pages since the first edition. In these additions Dr. Lauder Brunton utilises all the more recent facts concerning new remedies and new experimental methods of research; indeed, in applying his critical powers to his own work, he has discovered many opportunities of adding fresh touches to a book which was so well up to date in its last edition as to seem to call for little improvement. Not content with the record of the past, our author furnishes us with numerous prophetic glances into the future of materia medica and therapeutics; he believes that this lies in the wholesale substitution of artificially prepared compounds, of known composition and constant strength, for the far too numerous remedies at present derived directly from the vegetable kingdom—remedies whose constituents and properties are liable to extreme variations from accidental causes. While there is much to be said in favour of some such change, it may well be doubted whether it will bring much satisfaction to medical students—the names and chemical compositions of most new remedies of this type at present being sufficiently appalling, even if not actually misleading; many such drugs are now named according to the symptoms presumably calling for their employment; it can hardly be doubted that some, at least, of these names will eventually prove as evanescent as the term *officinalis* of the older botanical system. That this future, which will so largely revolutionise our studies, is not yet imminent we may gather from the number of new compounds proposed for employment being largely in excess of the number of new therapeutic successes which have been conclusively established. In the meantime, however, due recognition and appreciation must be accorded to Dr. Brunton's honest endeavour to build up a system of scientific therapeutics based upon the results of pharmacological research, and to substitute this for the dreary waste of power formerly expended over mere catalogues of botanical terms.

It is interesting to note that Dr. Brunton promises a small text-book on the connexion between chemical constitution and physiological action—a subject which, from the results of investigations with methyl and ethyl derivatives, appears likely to furnish important indications for therapeutic changes.

The Index of Diseases and Remedies still fails to produce perfect satisfaction, being avowedly little more than a "list of drugs which have been recommended by somebody or other at some time or other in the treatment of certain diseases," and thus it indicates rather what *has been* done than what *should be* done when dealing with any particular symptom or disease.

Several new diagrams have been added to elucidate the text, and on every page are to be found evidences of care in compilation and revision. As a valuable storehouse of pharmacological methods, bristling with suggestions for fresh researches, this book still worthily maintains the unique position assumed by the first edition.

A Treatise on Diseases of the Skin, with special reference to their Diagnosis and Treatment, including an Analysis of 11,000 consecutive Cases. By T. MCCALL ANDERSON, Professor of Clinical Medicine in the University of Glasgow. With plates and numerous other illustrations. London: Charles Griffin and Co. 1887.

PROFESSOR MCCALL ANDERSON has long been known as an authority on diseases of the skin, which he has had unusual opportunities of observing for upwards of a quarter of a century, and various monographs and papers which he has written from time to time on the subject have been much appreciated. The author decided—and, we think, not unwisely—to omit an account of the anatomy of the normal skin, which can be easily studied elsewhere. His main aim has been to make the work a reliable guide to diagnosis and treatment. There are numerous excellent formulæ on each page devoted to treatment, and under Diagnosis diseases liable to be confounded with one another are compared in parallel columns. The space devoted to the anatomy of the lesions is exceedingly limited, except where a discussion of the matter is of practical value. Eczema has a hundred and ten pages devoted to it, or more than one-sixth of the book, and seventy-three of these pages are given to treatment. With his main objects always in view, Professor Anderson's clear style and method are well displayed, and there is no doubt he has so far achieved a considerable success, and has produced a work likely to prove very acceptable to the busy practitioner. Personally, however, we cannot help feeling a certain disappointment, because, with a keen appreciation of Professor Anderson's special qualities and a knowledge of his opportunities and position as a teacher of clinical medicine, we sat down to the study of his work in the hope that we should find some masterly

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...ons of disease, and both acute and practical dis-...s of some of the more interesting problems of the day ...field of skin diseases. It appears to us that, though ...t we get the result of his prolonged experience in dia-...and treatment, his multifarious engagements, the wide ...f his studies, and the limited nature of the task he ...nself, have prevented him from producing a work ...worthy of his reputation and capacity. The descrip-... of disease are mostly short, many by no means ...and hardly ever complete, though doubtless the ...s illustrative cases introduced in the text will ...eful. The chapter on erythema we do not like at ...e think it confused, and not abreast of our present ...ledge. Roseola annulata, or Erythema circinatum, is ... to be mostly a chronic affection occurring on the ... and back. Is Prof. Anderson not confounding it with ...chen circinatus of authors? We deprecate also his ...mendation of the retention of the term Lichen for ...r eczema. In another edition we hope the author ...ter fully into the description and treatment of that ... troublesome malady called Lichen urticatus. Prof. ...son has been ably assisted in the description of surgical ...ons by Dr. Hector Cameron, and by Dr. James Christie ... diseases of foreign climes. The views given in the ... on guinea-worm disease are not in accordance with ...test conclusions accepted by the late Dr. Cobbold and ... authorities. There are many important omissions and ...ents to which, if space permitted, we should like to ... attention; but in making these criticisms we do not ...ght of the great merits of the treatise in the somewhat ...d field the author has allowed himself to work in.

...re occurs in the treatise a serious printer's error, to ... Prof. Anderson directs attention in a letter which we publish in another column.

ABSTRACT OF THE

REPORT OF THE COMMITTEE OF INQUIRY INTO M. PASTEUR'S TREATMENT OF HYDROPHOBIA.

THE report of the committee nominated by the President ... Local Government Board in April, 1886, to inquire ... Pasteur's treatment of hydrophobia, was presented ... Parliament on Monday last.

...report commences by stating that it was found neces-...that some of the members of the committee should, ...er with Mr. Victor Horsley, the secretary, visit Paris ... obtain information from M. Pasteur himself, to ... his method of treatment, and investigate a con-...le number of cases of persons inoculated by ...and, further, that a careful series of experiments ... be made by Mr. Horsley on the effects of such ... on the lower animals. Mr. Horsley's experi-... tended to entirely confirm M. Pasteur's discovery ...thod by which animals may be protected from the ...fection of rabies. If a dog, rabbit, or other animal be ...bitten by a rabid dog and die of rabies, a substance can be ...obtained from its spinal cord which, being inoculated into ...a healthy dog or other animal, will produce rabies similar ...to that which would have followed directly from the bite of ...a rabid animal, or differing only in that the period of in-...cubation between the inoculation and the appearance of the ...characteristic symptoms of rabies may be altered. The ...rabies thus transmitted by inoculation may, by similar ...inoculations, be transmitted through a succession of rabbits ...with marked increase of intensity. But the virus in ...the spinal cord of rabbits that have died of inoculated ...rabies may be gradually attenuated by drying the cords, so ...that after a certain number of days' drying it may be injected ...into healthy rabbits or other animals without any danger of ...producing rabies; and by using on each successive day the ...virus dried during a period shorter than that used on the previous day an animal may be made almost certainly secure against rabies, whether from a bite or from any method of subcutaneous inoculation; and this protection is proved by the fact that if animals so protected and others not thus protected be bitten by the same rabid animal, none of the first set will die of rabies, and, with rare exceptions, all of the second set will succumb.

It may hence be deemed certain that M. Pasteur has discovered a method of protection from rabies comparable with that which vaccination affords against infection from small-pox. It would be difficult to over-estimate the importance of the discovery, whether for its practical utility or for its application in general pathology. It shows a new method of inoculation, or, as M. Pasteur sometimes calls it, of vaccination, the like of which it may become possible to employ for protection of both men and domestic animals against others of the most intense kinds of virus. The duration of the immunity conferred by inoculation is not yet determined; but during the two years that have passed since it was first proved there have been no indications of its being limited. The preventive treatment adopted by M. Pasteur is based on the foregoing experience; but the determination of the success of the method is far from easy, owing to—(1) the difficulty of determining whether the bites were really those of rabid animals; (2) the probability of hydrophobia in persons bitten by dogs that were certainly rabid depending very much on the number and character of the bites, whether they were on exposed parts or parts protected by clothing; and in all cases in the amount of bleeding; (3) in all cases the probability of infection may be affected by speedy cauterising or excision of the wounded parts, or by various washings, or other methods of treatment; (4) the unequal danger of bites of different species of animals, and even of different dogs. In some groups of cases the percentage of deaths among persons bitten by dogs believed to have been rabid has been estimated at only 5 per cent., in others at 60 per cent.; and the mortality from the bites of rabid wolves has been variously estimated at from 35 to 90 per cent.

By the courtesy of M. Pasteur the committee were enabled to personally investigate ninety cases treated by him, these being mostly those which had been earliest treated, in which the periods since inoculation were longest, and living within reach in Paris, Lyons, and St. Etienne. Among the ninety cases there were twenty-four in which the patients were bitten on naked parts by undoubtedly rabid dogs, and the wounds were not cauterised or treated in any way likely to have prevented the action of the virus; there were thirty-one in which there was no clear evidence that the dog was rabid; others in which the bite had been inflicted through clothes. It is estimated, from experience of the results of bites in other cases, that had they not been inoculated, not less than eight among these ninety persons would have died. Not one of them has shown since the inoculation any signs of hydrophobia.

Since, in order to quiet fears, M. Pasteur has been obliged to inoculate many in whom there was no satisfactory evidence that the bite was that of a rabid animal, it might be unjust to estimate the total value of his treatment in the whole of his cases as being more than the rate of mortality observed in them compared with the lowest rate observed in any large number of cases not inoculated. This lowest rate may be taken at 5 per cent.; and, as between October, 1885, and the end of December, 1886, M. Pasteur inoculated 2682 persons (including 127 from this country), the mortality should have been 130. But at the end of 1886 the number of deaths was 31, including 7 bitten by wolves, in whom the symptoms of hydrophobia appeared while they were under treatment; in fact, the actual percentage mortality was between 1 and 1·2, showing, on the lowest estimate, the saving of not less than 100 lives. Of 233 persons bitten by animals in which rabies was proved, only 4 died. Without inoculation at least 40 would have died. Among 186 bitten on the head or face by animals in which rabies was proved, only 9 died, instead of at least 40. Of 48 bitten by rabid wolves, only 9 died, instead of nearly 30. Between the end of last December and the end of March M. Pasteur inoculated 509 persons bitten by animals proved to have been rabid; only 2 have died, one of these, bitten by a wolf a month before inoculation, dying after only three days' treatment. The committee think it therefore certain that the inoculations practised by M. Pasteur have prevented the occurrence of hydrophobia in a large proportion of those who, if they had not been so inoculated, would have died of

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that disease. And his discovery shows that it may become possible to arrest by inoculation, even after infection, other diseases besides hydrophobia. His researches have also added very largely to the knowledge of the pathology of hydrophobia, and supplied a sure means of determining whether an animal which has died under suspicion of rabies was really affected with that disease or not.

The question whether the method itself entails risk to health or life is then discussed, the distinction between the ordinary method and the "intensive" method being pointed out. By the first method there is no evidence or probability of any danger to health at all; but after the intensive method, which is only practised in the most urgent cases, deaths have occurred which might possibly be attributed to the inoculations rather than to the original infection. Yet in the worst cases the intensive method is relatively more efficacious than the ordinary method, nor is the rate of mortality greater after the former method than after the latter. Certain cases, one of which is detailed, have, however, excited suspicion from the mode of death. The case related is that of a man bitten by a rabid cat at the Brown Institution, treated by M. Pasteur the next day by the intensive method, continued during twenty-four days, and dying about a month later with symptoms of acute ascending paralysis. The man was very intemperate, and had been exposed to chill while crossing the Channel on his return home. Mr. Horsley proved that his death was due to the virus of rabies, by using a portion of his spinal cord for the inoculation of rabbits and dogs, who died with characteristic signs of paralytic rabies such as usually occurs in rabbits. Yet it is by no means certain that the fatal issue in this and in other cases treated by the intensive method was not due to the original infection. M. Pasteur has, however, greatly modified this plan of treatment, which he employs in none but the most urgent cases.

The final paragraphs of the report, which embody practical suggestions, may be given *in extenso*:—

The consideration of the whole subject has naturally raised the question whether rabies and hydrophobia can be prevented in this country. If the protection by inoculation should prove permanent, the disease might be suppressed by thus inoculating all dogs; but it is not probable that such inoculation would be voluntarily adopted by all owners of dogs, or could be enforced on them. Police regulations would suffice if they could be rigidly enforced. But to make them effective it would be necessary (1) that they should order the destruction, under certain conditions, of all dogs having no owners and wandering in either town or country; (2) that the keeping of useless dogs should be discouraged by taxation or other means; (3) that the bringing of dogs from countries in which rabies is prevalent should be forbidden or subject to quarantine; (4) that in districts or countries in which rabies is prevalent the use of muzzles should be compulsory, and dogs out of doors, if not muzzled or led, should be taken by the police as "suspected." An exception might be made for sheep dogs and others while actually engaged in the purposes for which they are kept. There are examples sufficient to prove that by these or similar regulations rabies, and consequently hydrophobia, would be in this country "stamped out," or reduced to an amount very far less than has hitherto been known. If it be not thus reduced, it may be deemed certain that a large number of persons will, every year, require treatment by the method of M. Pasteur. The average annual number of deaths from hydrophobia during the ten years ending 1885 was, in all England, 43; in London alone, 8·5. If, as in the estimates used for judging the utility of that method of treatment, these numbers are taken as representing only 5 per cent. of the persons bitten, the preventive treatment will be required for 860 persons in all England; for 170 in London alone. For it will not be possible to say which among the whole number bitten are not in danger of hydrophobia, and the methods of prevention by cautery, excision, or other treatment, cannot be depended upon.

The report is furnished with an appendix containing (A) an abstract report of Mr. Horsley's experiments; (B) a report on persons in France examined by members of the committee, with a list of English persons treated at the Pasteur Institute from Jan. 1886 to Jan. 1887; and (C) on M. Pasteur's methods of preventive inoculation. The report is signed by James Paget (chairman), T. Lauder Brunton, George Fleming, Joseph Lister, Richard Quain, Henry E. Roscoe, J. Burdon Sanderson, and Victor Horsley (secretary).

THE HOSPITAL SUNDAY FUND.

THE following are the principal contributions which have been received by the Secretary of the Hospital Sunday Fund since the publication of our last list:—Camden Church, Camberwell, and Sunday-schools, £103; Christ Church, Gipsy-hill, £79; St. Bartholomew's, Sydenham, £92; Holy Trinity, Roehampton, £52; Holy Trinity, Lee, £59; St. Paul's, Knightsbridge, £451; All Saints', Camberwell, £60; St. Stephen's, South Dulwich, £147; St. Paul's, Onslow-square, £322; St. Mary's, Kilburn, £78; St. Michael's, Stockwell, £51; St. Michael's, Blackheath-park, £64; St. Paul's, South Hampstead, £104; Emmanuel Church, Maida-vale, £71; Christ Church, Hampstead, £164; St. James's, Holloway, £107; St. Augustine's, Highbury, £65; Christ Church, Chislehurst, £61; Chapel Royal, Savoy, £50; Church of the Annunciation, Chislehurst, £61; St. Margaret's, Westminster, £202; Bloomsbury Baptist Chapel and Mission, £54; All Saints', Ennismore-gardens (corrected), £362; St. Mark's, Hamilton-terrace, £295; Christ Church, Highbury, £113; St. Paul's Presbyterian Church, Westbourne-grove, £63; Hampstead Parish Church, £70; St. Stephen's, Ealing, £129; Christ Church, Marylebone, £52; St. Peter's, Dulwich Common, and St. Dunstan's, £51; St. James's, Kidbrook, £141; St. John's Presbyterian Church, Forest-hill, £87; Clapham Parish Church, £58; St. James's, Piccadilly, £132; Holy Trinity, Sydenham, £120; Brixton-hill Wesleyan Chapel and Schools, £79; St. Marylebone Presbyterian Church, £58; St. James's, Paddington, £189; Trinity Church, Marylebone, £84; Lewisham High-road Congregational Church, £57; St. Mary's, Boltons, £68; St. Gabriel's, Pimlico, £109; St. Mary's and St. John's Churches, Putney, £87; St. Luke's, Redcliffe-square, £51; St. George's, Tufnell-park, £68; Brunswick Chapel, Upper Berkeley-street, £101; Mrs. C. Buxton, £100; Holy Trinity, Tulse-hill, £53; St. Columba, Pont-street, £100; Allhallows, Upper Thames-street, £50; Christ Church, Hornsey, £84; Christ Church, North Brixton, £53; St. Saviour's, Paddington, £74; Greek Church, £84; Allhallows, London-Wall, £50; Kensington Congregational Chapel, £72; St. Paul's, Upper Norwood, £57; St. Mary Magdalene, Paddington, £63; St. George's, Bickley, £74; Regent-square Presbyterian Church (Dr. Dykes), £137; Clapham Congregational Church, £80; St. Jude's, East Brixton, £63; Streatham Parish Church, £68; St. Mary's, Balham, £73; St. Margaret's, Lee, £82; St. John's, Notting-hill, £98; Brompton Church, £421; St. Thomas's, Portman-square, £117; All Saints', Clapham-park, £55; "Delta" (a further), £200; John Smith, Esq. (a further), £50; Earl of Rosebery, £50; St. Mary's, Bryanston-square, £107; Holy Trinity, Upper Chelsea, £196; St. Paul's, New Beckenham, £116; St. Peter's, Bayswater, £124; St. Mary Aldermary, &c., £83; Holy Trinity, Paddington, £216; Union Chapel, Islington, £151; St. George's, Hanover-square, £154; All Saints', St. John's-wood, £68; St. Paul's, Camden-square, £71; St. Michael and All Angels, Paddington, £192; Anonymous, £100; Church of the Ascension, Balham, £53; St. Thomas's, Westbourne-grove, £74; All Souls', Langham-place, £89; Immanuel Church, Streatham-common, £80; Christ Church, Mayfair, £83; St. Barnabas, Pimlico, £64.

The total amount received by the Secretary of the Fund up to the time of our going to press is about £28,500.

CAMBRIDGE MEDICAL GRADUATES' CLUB. — The annual dinner of the Cambridge Medical Graduates' Club was held at the Hotel Victoria, Northumberland-avenue, on Wednesday, June 29th, Mr. Timothy Holmes occupied the chair. The club on the occasion entertained as its guests the President of the General Medical Council, the President of the Royal College of Surgeons of England, and the Directors-General of the Army and Navy Medical Departments. The members and their guests present at the dinner numbered fifty-three; later in the evening most of those present adjourned to the conversazione of the Royal College of Physicians. The Cambridge Club is in a very prosperous condition, and now numbers over 200 members.

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THE LANCET.

LONDON: SATURDAY, JULY 2, 1887.

THE report of the Hydrophobia Committee has appeared at last, and, it must be confessed, its character supplies a sufficient reason for the delay that has occurred in its production. To consider the evidence that has been accumulated at the Pasteur Institute, and to form an opinion as to the alleged results, could not, indeed, have needed so long a time as a whole year; but to verify those results by independent investigation, to test the practical value of the inoculations as a means of preventing hydrophobia, must, it is evident, require a considerable time; and the Committee is to be congratulated on having attained a definite conclusion in the time they have taken.

The definite character of the conclusion reached will probably render the report a surprise to most members of the profession who have compared the divergent opinions that have been so freely expressed by men not ill qualified to judge, and have duly realised the difficulty of the investigation and the many sources of fallacy arising from the character of the facts themselves. It is certainly satisfactory that men so well able to weigh the evidence and to observe the facts, after having had the fullest opportunity of investigating the results obtained at the Pasteur Institute, should have come with one accord to an opinion so precise. Without doubt, their verdict is the most important yet pronounced upon the subject, and must go far to decide the question of the prophylactic value of the inoculations of PASTEUR.

The process itself was studied in Paris by three members of the Committee — Sir HENRY ROSCOE, Dr. BURDON SANDERSON, and Dr. LAUDER BRUNTON. A series of experiments were instituted after the return of these members by Professor VICTOR HORSLEY, while the other members of the Committee, Sir JAMES PAGET, Sir JOSEPH LISTER, Dr. QUAIN, and Dr. FLEMING, formed an opinion on the facts submitted to them. Those facts are fully stated in an appendix to the report, so that it will be possible for all persons who are interested in the subject to weigh the evidence and the conclusions. It can hardly be doubted that those who are competent to form an opinion will agree in the main with that expressed by the members of the Committee.

It must not be assumed that all parts of the report are of equal value. We have alluded to the sources of fallacy that lurk in the statistics of PASTEUR; the members of the Committee have taken due account of them, and have endeavoured as far as possible to avoid them. To eliminate them altogether is impossible, and the conclusions reached cannot have more than a very high degree of probability. But it is otherwise with the experiments instituted by the Committee: these are apparently free from all sources of error. They are not numerous, it is true, but their results are unequivocal, and seem to leave no room for doubt that the inoculation with the weakened virus of rabies confers an immunity from the disease. The inoculation with emulsion of the spinal cord of rabid rabbits preserved a series of dogs from rabies, although the most certain conceivable method of inoculation was employed—a bite from an animal in the acute stage of the disorder. In no case did the animal contract rabies, whereas of other unprotected animals bitten at the same time the majority contracted the disease. The experiments thus seem to leave no doubt of the efficiency of inoculation in rendering harmless a subsequent infection. They prove that the malady, as produced by the attenuated virus, is trifling, and they thus confirm two of the most important statements of PASTEUR. On the question whether inoculations, made after a bite has been inflicted by a rabid animal, confer the same immunity — a question of paramount importance — the original researches throw no direct light. But the confirmation of the conclusions of PASTEUR, in so far as they have been reinvestigated, is not without its significance, for it naturally increases the readiness to accept also those conclusions that have not been the subject of independent study. The statistics of PASTEUR have been subjected to a careful examination by the Committee, and the conclusion from the analysis is entirely in favour of PASTEUR'S method. A considerable number of cases were personally investigated, so far as investigation was possible after the lapse of a considerable time. The facts of these cases, the means employed to prevent infection—washing, cauterisation, &c.,—and the evidence as to the condition of the dog which bit the patients, are described in the appendix to the report. The conclusion drawn from these facts is that in many of the cases the dog was unquestionably rabid, and that a certain proportion of the sufferers would have died from hydrophobia if they had not been treated, and who, being treated, have not suffered from the disease. The conclusion that the method has saved a considerable number of lives, and that it is at present, and probably will be for long, the only mode of saving from death those who have been bitten by a rabid dog, affords strong support to PASTEUR'S conclusions, and, we need hardly say, must have most important practical results.

Nor is this all. By the opponents of PASTEUR it has been alleged that the dangers of his inoculation are scarcely less than those of the bites of rabid animals. It has been stated that many deaths have occurred in consequence of the treatment, and that some of the patients have actually been affected with paralytic rabies in consequence of the inoculations. On this point also the verdict is in favour of PASTEUR. It is, perhaps, doubtful whether this verdict rests on so firm a foundation as does that of the protective power of the treatment. The report confines itself to one of the cases of death after the treatment, the case of the man GOFFI, who was bitten at the Brown Institute and died in St. Thomas's Hospital. On this case the report throws a new and startling light. It will be remembered that the cause of death was spinal paralysis, and its connexion with rabies was denied. Mr. HORSLEY proves that the disease was paralytic rabies; the results of inoculations make the fact unquestionable. The treatment was certainly unsuccessful, and it is suggested that almost continuous intoxication may have prevented its success. Was the malady due to the original infection or to the "preventive treatment?" The Committee suggest the former

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as the probable cause, that paralytic rabies may be more common than is supposed, and that the disease known as acute ascending paralysis, or LANDRY'S paralysis, may be, often at least, paralytic rabies. If this conclusion be correct, it is strange that paralytic rabies should not be observed more frequently as the distinct sequel to the known bite of a rabid animal. It seems more probable that, if the death of GOFFI was the result of the bites he received, the form of the malady was determined by the influence of the inoculations. But the conclusion of the Committee seems to be that, although the strong virus formerly employed may have entailed some evil consequences, the method now employed is free from serious danger.

We have said that the report of the Committee can hardly fail to have important practical results. The Government has ordered the inquiry in response to a public demand, and, the verdict being so clear and strong, the establishment of a Pasteur Institution in this country seems now to be their clear duty. Whatever other effect the report may have, it will certainly compel increasing numbers of persons who have been bitten by dogs, rabid or not rabid, to seek what is said to be a certain safeguard against a terrible possibility. That they should have to go to a foreign country for the treatment, which the Government Committee consider some at least of the bitten persons will require, will be intolerable. The inevitable result of the report must surely be the establishment of a Pasteur Institute in this country, and after such an answer as the Government has received to its inquiries the task can scarcely be left to private benevolence.

THE movements in favour of granting degrees to London medical students are steadily being pressed forward, and some very important decisions in reference to them have recently been arrived at. The Colleges of Physicians and Surgeons have adopted the resolution of their delegates, declaring the inexpediency at present of holding any conference with the Councils of University and King's Colleges for the purpose of procuring powers to grant degrees in Arts and Sciences, and their decision to proceed conjointly, and independently of other bodies, with their endeavour to obtain the right to confer degrees in Medicine and Surgery. The delegates of the Royal Colleges have also submitted for approval drafts of a petition and Charter, and these, having also been passed by the Fellows of the College of Physicians and the Council of the College of Surgeons, will at once be laid before the QUEEN in Council. By the Charter, which is published in another column, power is sought to form a governing body of forty-eight persons—twenty-four from each College—to be called the Senate of Physicians and Surgeons, to whom shall be entrusted the framing of the necessary regulations and the authority to see that such regulations are complied with. The Council of the College of Surgeons is composed of twenty-four members, and these will, as elected, become the representatives of that College on the Senate, whilst twenty-four Fellows of the College of Physicians are to be chosen, three of them to go out of office annually, but to be eligible for re-election. We cannot but think that this eligibility for re-election is a mistake, for it will allow only a minimum of change, and the Senate will practically become a permanent body, devoid of a sufficient number of young members to enable it to readily adapt itself to changes in teaching and examination. An error similar to that committed by the founders of the University of London should have been avoided. The President of the Senate will hold office for two years, and will be in succession the President of the College of Physicians and of Surgeons respectively, whilst two Vice-Presidents will be elected annually from among the members of the Senate. Twelve members are necessary to form a quorum and the vote of the majority present is to be decisive. The degrees in Medicine and Surgery are to be conferred on any person who, "by passing the examinations formerly held by both of the Colleges separately, or by passing the examination held by the Examining Board of the two Colleges, or by passing any other examinations to be held by the two Colleges jointly or separately, has already acquired, or may hereafter acquire, the qualifications for registration under the Medical Act, and who shall have also complied with such further regulations (if any), or undergone such further examination (if any), as the Senate may from time to time see fit to impose or require." The past Licentiates of the College of Physicians and Members of the College of Surgeons will by this clause be placed on exactly the same footing as those who qualify in the future, and this just and far-reaching provision will secure a wide amount of sympathy among the members of the profession in favour of the movement. The questions of an additional examination or examinations and of a title are left open for future discussion, and are therefore omitted from the Charter.

The refusal to confer with University and King's Colleges has compelled those bodies to take separate action, and they will have the full support of the Association for promoting a Teaching University in London. The Councils of these Colleges have now agreed on asking for a joint Charter to found a new university in London on the lines of the Victoria University in Manchester, with power to confer degrees in Arts, Science, and Medicine. Every student must have pursued a course of study in a college in the university, and, for medical study, the other medical schools of London are to be included. A Teaching University, such as exists in Scotland and in the north of England, would then be available for London students. The discussion as to the advisability of applying for such a Charter led to the resignation from the Council of University College of those members who were most closely identified with the University of London, but these vacancies have now been filled up. Mr. ERICHSEN takes the place of the Earl of KIMBERLEY, and Sir R. N. FOWLER that of Sir JULIAN GOLDSMID; while Sir U. J. KAY-SHUTTLEWORTH, Dr. RUSSELL REYNOLDS, Messrs. BENSON, DIGBY, and ROMANES have become members of the Council. The application for a Charter will be at once made, so that the advisers of the QUEEN in Council will have the two requests before them at the same time. The division among the old members of the Council of University College evidently points to an active opposition by the supporters of the existing university to the formation of a new Teaching University, and this movement is in most danger from this quarter. The universities, as a body, the other professional corporations, and the provincial medical schools

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will all oppose the granting of a Charter which shall give the power of conferring degrees in Medicine and Surgery to the Royal Colleges of Physicians and Surgeons. As this opposition is based on various grounds, some of which are just and tenable, whilst others are merely selfish, we must again advise the appointment of a Royal Commission before whom the arguments for and against this shall be fairly urged and weighed, and this should be appointed at an early date.

THE *Spectator* has recently published a kindly article on the uses of medical etiquette and the amenities which regulate the profession, based on the recent judgment of Lords COLERIDGE and DENMAN, that the medical attendance purely by an unqualified assistant cannot be legally charged for. Our contemporary points out that English law very characteristically provides, not that men shall not take the advice of the unqualified, nor, as in other States, that the unqualified shall be prohibited from giving it, but only that such advice shall have no legal value. He thinks that this disadvantage or disability is fairly efficient. Ignorant and unqualified practitioners are a foil which sets off rational and scientific medicine. Their very ignorance may occasionally make a slight success for them easier than for an educated man, as Sir JAMES PAGET charitably thinks is the case with the bone-setters in exceptional cases. Such an admission is the very cream of charity, and must not be abused by being treated as an admission that generally ignorance is an advantage. The achievements of ignorance in the bone-setting line, taken as a whole, are a fraud, and sometimes a tragedy. It is gratifying to read in our contemporary such a vindication of the customs of professional modesty and etiquette, which do not permit medical men to forget that they are gentlemen, and which prohibit advertising, the disparagement of brother medical men, and all vulgar methods of attracting attention or seeking patients. In these days when some newspapers that ought to know better are ready to cater for those who forget such rules, and to receive money for their advertisements, it is pleasant to have to thank a contemporary for putting a just estimate on medical etiquette, which in the long run benefits the public quite as much as the profession. The *Spectator* dwells on the unseemly and injurious consequences that would result if the strict rules of professional ethics were relaxed, and medical men were permitted to imitate quacks in their boasting and advertising methods. "Given," it says, "keen competition and no moral restraints on a man's power to push himself by advertisement, and we should of necessity have the disgusting spectacle of men bidding against each other in order to relieve human suffering and to save life." This disgusting spectacle is, alas! occasionally seen, in spite of the rules of Colleges and the great unwritten law of the profession against such practices. The offenders chiefly from too great numbers in the profession occasionally appear painfully in practices at which they would have blushed. We do not think a qualified medical man distributes a circular through his neighbourhood without a feeling of the compulsion of want. However painful to say that such practices [illegible] shock in the ordinary professional mind, and to bring censure and discredit on those who resort to them. Even the Colleges occasionally still exercise their power and discharge their duty in punishing those who do so. It would be a great support to them if our lay contemporaries would imitate the *Spectator*, and expound to the public the value of a code of rules which excludes the arts of trade and the methods of business. We have no wish to restrict the liberty of patients. Patients have a right to consult whom they please, and to change their medical advisers if they see fit to do so, but they will make a woful use of their liberty if they forget the essential difference between a profession and a trade, or expect from their medical man the airs and arts of a tradesman, and change one who despises such arts for one who uses them. Medicine is not a profession that can be so used with advantage: but the very opposite. The best members of the profession best know that medicine has its limits; it cannot achieve the impossible or cure the incurable. Where pretence and boasting and disparagement of others begin, science ends. Men who are suffering from grave diseases, and are not all at once relieved, are apt to give ear to those who will promise immediate cures. They cannot be severely blamed if they do. But it is otherwise with the medical man who takes advantage of those who are willing to believe the impossible. The man who takes advantage of suffering to delude it and to profit by it is amongst the meanest of men, and it will be a bad day for the profession and a worse one for the public if the Colleges and the Medical Council ever cease to regard such men as guilty of conduct disgraceful in a professional respect.

The very progress of medicine, and its tendency to subdivision into specialties, render the preservation of its code of morals more important than ever. The public is helplessly at the mercy of its medical advisers, who have to report on facts of which the patients can often know nothing. The refinements of diagnosis, and the growing sensitiveness of the race under highly artificial conditions of existence, make honesty and perfect moral simplicity in the doctor qualities of prime value. Such qualities were prized in the time of HIPPOCRATES, whose great rules of professional life require medical men to practise their art with modesty, and to treat the sick with consideration and their brethren with respect. *A fortiori*, they are needed now.

THERE are but few aspects of the remarkable progress which has characterised the fifty years' reign of our Sovereign upon which we can look back with greater satisfaction than that which is identified with the influence of preventive medicine on the health of the public. Whether regarded from the scientific or the administrative point of view, the benefits which have accrued to the population of this country must be held to have been immense, and they are indicated alike in the lessening of mortality, in the increase of health and comfort, and in the diminution of the misery which so invariably follows on the prevalence of preventable disease. When the QUEEN first came to the throne there was no general system of registration of death and its causes; small-pox, typhus and other continued fevers, scarlet fever, cholera, and other epidemic diseases, were all but uncontrolled; except for the

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partial acceptance of the protection against small-pox which had followed on the great discovery of JENNER, there was no organised method of dealing with infectious disease, and even intelligent people were inclined to look to the heavens above and to the earth beneath, and to talk of meteoric and telluric influences, in seeking an explanation of epidemics. All this is now changed; we know that the diseases in question are essentially preventable, and a host of ardent workers are labouring in their various departments to control those elements of disease which heretofore wrought unrestrained mischief among the people. Step by step the country has been educated to appreciate the advantages of health; and as the lesson has been learnt, whether as the result of the labours of past or present teachers, or of prevalences of disease such as the cholera epidemics which occurred between 1849 and 1866, the laws of health have been embodied in statutes, a central health authority has been established, and every district throughout the country has been provided with an officer who is locally regarded as fitted to impart to others the information he possesses in that branch of medicine which deals with the prevention of disease.

Nowhere has the change been more marked than in regard to town life. Our cholera epidemics fastened upon the crowded courts and alleys where water, drainage, and all sanitary surroundings were foul; typhus settled itself firmly in those portions of our cities where there was dense overcrowding of houses on area and of people in houses, and where unventilated, dark, and unhealthy cellar dwellings abounded. As soon as these facts were appreciated, the remedy was applied on a scale which is wellnigh astounding; for, grumble as we may at the need for more rapid progress, it should not be forgotten that during the past ten years alone some sixty millions sterling have been raised for purposes essentially sanitary in their character. Unwholesome dwellings have been swept away by the thousand, filth-sodden towns have been sewered and have been provided with water from sources no longer open to suspicion of pollution, and house drainage has been improved on the widest scale. It is difficult to set out precisely what has been the effect of all these measures. But, taking continued "fever" as a type of that class of disease which is eminently controllable by such measures, we find that, whereas in the five years 1851-55 the death-rate per million living from that group of affections was 995, it has almost continuously fallen, until it is now but little over 290. Here alone the saving of life has been immense.

The promotion of vaccination by a State organisation has also had a remarkable effect upon small-pox. When Her Majesty's reign began, people were still dying of small-pox at the rate of nearly 60 per 100,000 per annum; now, and this in spite of ill-advised and ignorant attempts to prevent the general acceptance of vaccination as a preventive of that disease, small-pox only kills a tenth part of those who formerly fell victims to it. With measures of compulsory notification of infectious diseases, the provision of hospitals for the isolation of the sick, and regulations as to attendance at State-aided schools, great efforts are being made to control diseases, such as measles, scarlatina, and diphtheria, which still cause lamentable mortality amongst our infantile population. And as regards imported diseases, such as cholera, the nation, abandoning its trust in antiquated methods, such as quarantine, trusts more and more to the removal from our midst of those conditions which enable such infections to obtain a footing amongst us.

Much of the work which has led to these several administrative changes has been brought about by the medical department of the State under the guidance of its first and its present medical heads. But the labours of that department have by no means been confined to the perfecting of administrative measures. Scientific and skilled research has gone hand-in-hand with such work, and the results obtained have, as a matter of fact, formed the basis and ground of the administrative advice tendered. The prosecution of sanitary science in England has achieved some great successes. The discovery of the relation between soil-wetness and death from phthisis which was made over twenty years ago by Dr. BUCHANAN, the masterly work of Dr. BALLARD in searching out the connexion between milk and enteric fever in Islington in 1870, and the recent discovery by Mr. POWER and Dr. KLEIN of the connexion between scarlet fever in the human subject and the use of milk from specifically diseased cows, are instances of the sort of work which has made a permanent mark in the history of our sanitary progress. And a host of others have been sedulously labouring in allied directions; the study of micro-organisms and their connexion with infectious diseases having especially enlisted a number of workers, and having already done much to elucidate the question of the origin of infection.

We may, without undue boasting, confidently assert that nowhere has sanitary science made such progress as in this kingdom, and nowhere has a State been served by a body of workers more skilled or untiring. And yet on an occasion when the State had a remarkable opportunity publicly to recognise those who have served their country with merit and distinction, although it must afford universal gratification that a past master in the science of sanitation, Sir JOHN SIMON, has received the well-deserved honour of K.C.B., no member of our profession at present engaged in the active work of preventive medicine has received recognition by the bestowal of a titular honour.

THE College of Physicians is unable to determine whether leprosy is contagious or not. Those who believe that the exhaustive inquiry, in which the late Dr. GAVIN MILROY took so prominent and important a share, conducted by the College twenty years ago, had definitely settled the point, may be surprised at the above statement. The report of the Leprosy Committee then stated:—

"The all but unanimous conviction of the most experienced observers in different parts of the world is quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the diseased. The evidence derived from the experience of the attendants in leper asylums is especially conclusive upon this point. The few instances that have been reported in a contrary sense either rest on imperfect observation, or they are recorded with so little attention to the necessary details as not to affect the above conclusion. That leprosy is rarely, if ever, transmissible by sexual intercourse, when one of the parties has no tendency whatever to the disease, is the opinion of the great majority of the respondents who have had the largest opportunities of observation."

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Such a definite and well-founded opinion could not fail to carry weight with it; and there is no question that it did good service in helping to further dispel the ancient belief in contagion, a belief which had already largely died out. Nevertheless the question was not closed. In scientific circles it was decidedly reopened when HANSEN discovered in 1874 the bacillus lepræ—a discovery which has been repeatedly confirmed, and which has established the position of the disease in the same category as tubercle, syphilis, and glanders as an infective disease. But even this discovery does not of itself point to the disease being contagious in the ordinary sense, no more than the discovery of the tubercle bacillus established the contagiousness of phthisis. What it does do is to suggest the dependence of leprosy upon a specific virus, and the liability under certain conditions of its transmission from the sick to the healthy. Nor has the idea of contagion died out amongst those who are brought into daily contact with the disease. The circumstances which have reopened the question at the College of Physicians show this. A communication was addressed to the College by the Colonial Office, pointing out that very many medical men practising in the colonies were unable to assent to the views declared by the Leprosy Committee of the College that the disease is not contagious, and the Colonial Secretary desired to know whether the College still adhered to that opinion, and particularly whether measures for the isolation of lepers were justified. This communication was referred to a committee, who presented a report, which showed that the members of the committee were not unanimous in upholding the previous declaration of the College, and the report had to be drawn up in terms which left the question in a more ambiguous state than ever, although it affirmed definitely enough the reasonableness as well as the propriety of the foundation of State-aided leper asylums on grounds of humanity, quite apart from any doctrine of contagion.

The resolution arrived at by the College at the close of a rather desultory discussion was a right one, and perhaps under the circumstances unavoidable. It could not but be felt, in the light of the committee's report, that the subject of the contagiousness of leprosy was one which had not yet been finally determined; and having in 1867 investigated the subject so fully, the College of Physicians would have failed in a public duty if it had declined to renew its investigations with the added experience of twenty years. At the same time such an inquiry, to be effective, would be costly and prolonged. In the interest of the Colonial Empire it is desirable that the Government should furnish the funds to render the investigation a thorough one. It was thought a proper course to refer the report back to the committee, in order that a statement of the present position of the subject might be appended, together with the opinion of the desirability of a further investigation by the College under the ægis of the State.

We have already published the names of candidates for election to the Council of the College of Surgeons in the room of the retirement of certain of its members, and the desirability of electing only such candidates as are known to be in sympathy with the views of the constituency. We must express our regret only of the three retiring members of Council will not again come forward, and this one not by any means the senior of the three. Mr. WOOD, who does not seek re-election, doubtless has good reasons for retiring, and we must respect these reasons as valid. Sir SPENCER WELLS, who is coming forward for re-election, has made his mark as a surgeon; he has been twice elected to the Council, and has served the office of president. Surely he has had his share of office, and might now reasonably seek rest from his labours. It will scarcely, we imagine, be urged, even by his best friends, that his special knowledge of the affairs of the College or his administrative capacity is such that the Council would be seriously crippled by his retirement. Mr. HUTCHINSON is also seeking re-election. Besides being a most distinguished and many-sided man, he is in the full vigour of middle age; with him re-election presumably means nothing less than the presidency. We wish Mr. HUTCHINSON every success in his candidature, and the near realisation of his most natural and laudable ambition, the presidential chair, though this may not be accomplished until next year, as we believe there is a probability of the present President, Mr. SAVORY, being re-elected. As regards the other vacancies, no more fitting candidates could be found than Mr. COUPER and Mr. WILLETT. They possess the necessary knowledge of students and young practitioners, and are in sympathy with their aspirations and requirements. Moreover, they are men known for their advanced and liberal views on College matters; they have already given much thought and attention to what we may call "College politics," and would thus go to the Council with that knowledge (so few new members possess) which would fit them at once to deal with the questions that will come before the Council. Both Mr. COUPER and Mr. WILLETT are believed to be in general accord with the views put forth and approved by large majorities at the general meetings, and with which Mr. R. B. CARTER, another of the candidates for office, is notoriously not in accord, unless the events and reflections of the last six months have brought about changes in opinion which he has not yet had the opportunity of making public. The absence of provincial candidates is perhaps not unnatural at the present juncture. There are already four provincial Fellows in office, and many of the London Fellows (who form the staple of the voters under the existing rules of personal voting) think this a sufficiently liberal representation. By next year compulsory personal voting will probably have been abolished. We can hardly doubt that the relative proportion of town and provincial councillors will undergo marked changes within a short time, and that the provincial Fellows will secure for themselves more adequate representation than at present. Let us concern ourselves, however, with actualities—the coming election,—and seek to get the best men for our present purposes. Instead of seniors approaching the end of their career, with flagging interests, the Council ought to consist either of men engaged in teaching or in other ways in touch with students and their requirements, or of men from among the actual workers and toilers of the profession, personally conversant with the defects and deficiencies of the present professional organisation, and presumably, therefore, most competent to apply the remedies that may be needful for its improvement.

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Annotations.

"Ne quid nimis."

THE HENLEY REGATTA AND THE NEW BYE-LAWS.

WHEN last week we spoke of the bye-laws drawn up to prevent the contamination of the Thames water by the house boats and steam launches, we complained that ever since last February they have been waiting the sanction of the Queen in Council. This sanction, we were informed, might be given in three days, three weeks, or three months. It seems, however, that we have not called public attention in vain to this grievance, for no sooner had we announced our intention of dealing fully with the question than somehow or another the procrastination of the authorities was overcome and the Royal sanction obtained. The new bye-laws are published in last Saturday's *Gazette*. This experience is very similar to what occurred last year. The Thames Conservators were fully aware that the congregation of so many house boats at Henley endangered the water supply of London. They had, we believe, even drawn up a project for bye-laws to meet this grievance, but it was not till our report on the contamination of the Thames at the Henley regatta appeared that a serious effort was made to bring the matter forward. The project was taken out of its pigeon-hole and advertised. This, as we have already explained, elicited protests and necessitated some modifications, and under these circumstances the Royal assent could scarcely have been obtained before the month of March. This would have been time enough to alter the drainage of the house boats for the present regatta. Nothing, however, was done. No pressure, apparently, was brought to bear, and the affair remained dormant till once more we took the matter in hand. No sooner was this known than, with marvellous celerity, the Queen's assent was procured, and the new bye-laws were published—this, too, in Jubilee week. To say the least of it, the coincidence is very striking, and we may fairly congratulate ourselves on having manifestly contributed to bring about an important sanitary reform. Unfortunately, the publication of the bye-laws in the *Gazette* at so late a date can really only serve to disarm criticism. A new law cannot be enforced in a couple of days; but the fact that the boats are now for the most part collected at one spot will render it easier for the authorities to convey to all whom it may concern knowledge of what is expected in respect to the new sanitary regulations. This, we trust, will be done with the utmost promptitude and rigour. It is monstrous that the house boats of wealthy people who congregate at Henley merely in the pursuit of pleasure should be allowed to drain direct into the water which the greater portion of the inhabitants of the metropolis are obliged to drink.

HOSPITAL MANAGEMENT.

AN excellent institution in the east of London, which has for the past twenty years done so much good work—we mean the East London Hospital for Children,—has unfortunately been disturbed by an incident which, however regrettable in itself, will, we trust, be not without good result. At the last general meeting of governors, held about a month ago, Mr. R. W. Parker, who personally has worked without ceasing on behalf of the institution, drew attention to the fact that many of the lay members of the Committee were conspicuous for their absence at the business meetings. He was confirmed in this by other speakers, notably by the late chairman, Mr. Charrington, who intimated that he would not have resigned office had the attendance been more satisfactory. An addendum to the motion for the adoption of the report, calling on the Board of Management to take early steps to rectify this defect, was moved by Mr. Parker, and carried by the meeting. This is only what should be. If gentlemen take office on a hospital board, they should perform the duties entailed by that office; but we fear it is too often the case for members of such boards to be content to leave the direction in the hands of a few. This is much to be deplored, for not only does it appear to show a lack of interest in the working of the institution, but it throws a burden of responsibility upon the small number who have already devoted much time and energy to the affairs of the hospital. Lay governors have their duties as much as members of the medical staff, and we cannot wonder that anyone who has the welfare of his hospital at heart, and who sees it languish from the apathy of those who ought to be most active in its maintenance should seize the opportunity to remedy the grievance. Mr. Parker, however, was not contented with this, and had the courage, we had almost said the temerity, to renew the charge of absenteeism when the subject of the re-election of the treasurer, Mr. E. S. Norris, M.P., came up. In this he did not receive the same measure of support, and it is to be regretted that Mr. Norris was not present himself. That gentleman has, however, thought it fitting to indite a letter to a local paper which for discourtesy is as marked a sample of its kind as may be met with. To speak of the "attack" being made upon him by "a certain Mr. Parker," whom he has "no hesitation in denominating as the 'firebrand' of our Committee," is, to say the least, uncalled for. The profession is well acquainted with Mr. Parker, who has built up a reputation from the results of his untiring devotion to his duties at this very hospital, and he can well afford to pass the matter over in silence. As regards Mr. Norris, we do not say that his office of treasurer should necessitate his constant attendance at the meetings of the Committee, and as he has been long attached to the hospital it might be ungracious to dispense with his services because his other public duties call him elsewhere. But it was quite within Mr. Parker's right, and that of any member of the governing body, to impugn a state of things which he conceived to be detrimental to the progress and welfare of the hospital. There must be in the management of the institution questions of finance constantly arising, in which the advice and opinion of the treasurer are requisite, and it passes our comprehension to see how any gentleman can hold an office of that kind without keeping himself personally acquainted with the working of the institution of which he is so prominent a member; and when, on his own showing, his time is so much occupied elsewhere and his interests so divided, how can this knowledge be sustained?

EPIDEMIC SUICIDE.

EPIDEMICS of suicide are happily very rare in this country. We are not as a people, though proverbially grumblers, particularly discontented with our lives. In nationalities distinguished by the enforcement of military service as part of the duty of citizenship, life is so irksome that suicides are common. We venture to think that the conditions of living have more to do with suicide than beliefs or fatalism. It would, however, be a mistake to confound the mere prevalence of suicide in a district or class with epidemic suicide propérly so-called. It is possible that just as hysterical phenomena may extend by imitation from one person to another until the total number of individuals affected is very large, so the impulse to self-destruction may be propagated, although there is no sufficient cause for the prevalence of the act. This would be an epidemic of suicide. It would be interesting to ascertain whether genuine evidence in support of the hypothesis that self-slaughter is sometimes epidemic actually exists.

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IS SEWER AIR NOXIOUS?

IF there is one thing more than another of which sanitarians have hitherto felt sure, it is that the air of sewers is dangerous and sometimes deadly to human life. The faint, sickly odour is familiar to all of us, and have not most of us had examples of disease which to all appearance was directly due to the escape of sewer air into houses? We recall one instance which may be taken as typical. In a large London house, admirably built, and supplied with New River water, typhoid made its appearance in the nursery floor at the top of the house, and one of the children died. On inspection it was found that the ventilating pipe of a closet passed into and not through the roof, that the syphon trap was apt to get dry, and that sewer air was actually passing into the room where the children slept. Probably the majority of our readers could record similar experiences. It is true that objections have been raised to the theory, of which the most formidable is the alleged fact that men who spend a large part of their waking hours in sewers do not seem to suffer from it. To this the current answers are that the men are presumably strong and healthy, and, what is far more important, they are not exposed to the influence at night, when vitality is lowest. But now we are confronted by new experiments, too important to be ignored, which raise more serious doubts. At the request of a Select Parliamentary Committee which in 1886 was appointed to inquire into the drainage of the House, Professor Carnelley and Dr. Haldane of University College, Dundee, have made careful experiments upon the air of sewers. Their results were communicated to the Royal Society at its meeting on June 16th last, and they are certainly surprising. Examining it by various methods, they were unable to discover that it was much worse than the atmosphere outside, and in some respects it compared favourably with the air of close rooms. Comparing the air of the sewer with the air outside it at the same time, they found that the sewer air contained about twice as much carbonic acid and about three times as much organic matter as the fresh air, but much fewer micro-organisms. In small and ill-ventilated houses they found more carbonic acid, more organic matter, and far more micro-organisms than in the sewer air they examined; so that if these experiments were to be taken as final and conclusive, the inhabitants of a small room would improve their sanitary position by living in the atmosphere of a sewer. But of course the experiments are not conclusive, and the authors have done wisely in founding no sanitary conclusions upon them. They will even be dangerous if they lead anyone to regard with indifference the presence of what we must continue to consider as an insidious enemy. In regard to organic matter and micro-organisms, it is the quality and not the quantity which is of importance. A small quantity of strychnine is more dangerous than a large quantity of sugar, a single rattlesnake than a cartload of blind-worms, and yet both chemicals may be described as "organic matter," and both reptiles as "moving organisms." Our knowledge is as yet quite insufficient to enable us to judge of the quality of the organic matter, [illegible] which is present in sewer air, and we have [illegible] to believe that it varies enormously. We have [illegible] of evidence in support of the current [illegible] not lightly discard it. But at the same [illegible] thankful for any experiments as carefully [illegible] have been, for they are sure, sooner or [illegible] to our real knowledge. Moreover, we must [illegible] experience has brought into promi- [illegible] agent in the spread of disease which [illegible] namely, milk. It is of course [illegible] rate, of the outbreaks which [illegible] air may have been due to [illegible] but it is at least improbable that all can have originated in this way. In the fearful explosion of cholera at Newcastle-on-Tyne exceptional mortality was observed among those who lived close to open sewers or worked over the gully-holes of drains.

DR. THIRIAR ON THE TREATMENT OF FRACTURES OF THE FEMUR.

DR. THIRIAR, in an instructive clinical lecture to the Brussels medical students on the treatment of fractures of the thigh, pointed out the advantages of the telescope apparatus proposed and described by Professor Derobaix some seven years ago. This consists firstly of a starch bandage reaching from above the knee to the foot, provided with a stirrup and a cord, which passes over a pulley, and has a weight attached to the end in order to keep up constant extension; and secondly, of a femoro-pelvic starch bandage, which is applied two or three days after the first bandage, the upper part of which it covers so that the one may slide within the other in telescope fashion. When dry, the femoral portion is slit up. It can thus be opened and the seat of the fracture inspected at pleasure, and if necessary manipulated by the hands, while an assistant makes any required degree of traction on the leg. Afterwards it can be tightened up by straps and buckles with which it is provided, and the limb is then absolutely protected against all lateral or see-saw movements, while the patient can be moved as much as is necessary for purposes of cleanliness without endangering the rigidity of the fractured limb. By this means Dr. Thiriar believes better results can be obtained than by any other apparatus; and he publishes a list of thirty cases, in all but two of which there was either no shortening or so little that it did not amount to a quarter of an inch. In one of the two unsuccessful cases the patient was excessively unruly, and in the other no amount of manipulation appeared to reduce the deformity when first seen.

COMPULSORY VACCINATION.

THE President of the Local Government Board was questioned in the House of Commons last week as to whether he was aware that a house-to-house inquiry in sixty-five towns of England had shown that a large majority of the householders were opposed to compulsory vaccination, and whether the answers of those canvassed report 428 cases of death and 1996 cases of injury as due to vaccination. Mr. Ritchie, in his reply, stated that he was aware that a number of questions had been circulated by the Anti-vaccination Society, but he did not know how many persons had declined to fill up the forms, and he did not attribute any particular value to the answers received. The worthlessness of an inquiry conducted in this manner is obvious, and Mr. Ritchie acted wisely in disregarding such statements. Everyone knows that it is the habit of ignorant people, whose minds are poisoned by the statements of anti-vaccinationists, to attribute to vaccination every ailment from which a child may suffer subsequent to the operation. Thus, but a few days ago, we had experience of an outbreak of chicken-pox in a household, the cause of which was accepted by the inmates to be the previous vaccination of a baby a few days before these illnesses occurred. A further question which was raised, as to the deaths of 271 children which were registered in England and Wales as due to cow-pox and other effects of vaccination, gave Mr. Ritchie the opportunity of explaining that the children vaccinated during the period in which the deaths took place amounted to 3,800,000, and that he was informed by the Registrar-General that almost invariably in these cases of death some secondary cause was mentioned, and by far the

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most common of these secondary causes was erysipelas. Assuming for one moment that the certificates supplied to the Registrar-General correctly represented that vaccination and its effects caused death, it is comforting to know that erysipelas can be prevented by due care in the performance of the operation and in the subsequent management of the child. The recently issued instructions of the Local Government Board will assist in this direction, and every operator should caution parents as to the necessity for guarding their children against the risk of infection of erysipelas, either by exposure to other persons suffering from this disease, or by want of cleanliness. It is matter for speculation how many of the 3,800,000 children would have died from small-pox if they had remained unvaccinated—certainly many thousands, for small-pox used to spread over the country every four or five years and destroy a large proportion of children born since the preceding epidemic. This terrible loss of life has been prevented by vaccination, and it behoves every medical man to save an operation so potent for good from the discredit which is cast upon it so long as any deaths can be held to be due to its performance.

THE DETENTION IN WORKHOUSE HOSPITALS OF PAUPERS SUFFERING FROM SYPHILIS.

THE proverbial uncertainty of the law has recently been illustrated in a very striking manner. In 1867 the Act known as the Poor-law Amendment Act was passed (30 and 31 Vict., cap. 106), and among its other provisions were the very important powers conferred by Sec. 22:—"When there shall be in any workhouse a poor person suffering from mental disease or from bodily disease of an infectious or contagious character, and the medical officer of such workhouse shall upon examination report in writing that such person is not in a proper state to leave the workhouse without danger to himself or others, the guardians may direct the master to detain such person therein." In 1871, just four years later, the Royal Commissioners appointed to inquire into the Contagious Diseases Acts, 1866 and 1869, issued their report. Among the Commissioners were some experienced members of the Bar, including the chairman (the late Mr. Wm. Nathaniel Massey) and Mr. G. W. Hastings; the secretary, Mr. John Armstrong, was also a barrister-at-law. In the 53rd section of their report, page 16, the Act above quoted is thus alluded to:—"We are advised that the 30 and 31 Vict., c. 106, s. 22, which provides for the compulsory detention in workhouses of persons afflicted with contagious disease, includes syphilis, and we therefore recommend that, wherever there is a certified hospital within the union, any pauper afflicted with such contagious disease shall be removed to such hospital." Both the section of the Act and of the Commissioners' report appear plain enough, and although many persons held individual opinions that the Act referred only to such diseases as were indisputably infectious or contagious, such as scarlet fever, typhus, small-pox, &c., still the interpretation of the Act as just given was acted upon, and, until lately, no doubt existed as to the lawfulness of detaining paupers with syphilis. But the guardians of the Portsea Union having recently raised the question, a letter has been forwarded to them from the Local Government Board which effectually repeals this compulsory power, the law being thus defined:—"The Board direct me to state that in accordance with the promise which the President made to the deputation, a case has since been submitted to the law officers of the Crown for their opinion as to the powers of guardians under Section 22 of the 30 and 31 Vict., cap. 106, to detain in the workhouse persons suffering from syphilis. The law officers have given as their opinion that the provision in this section with reference to the detention in workhouses of persons suffering from bodily disease of an infectious or contagious character does not apply to persons in the workhouse suffering from syphilis in a contagious form, whether or not they are known prostitutes. According, therefore, to this opinion, guardians have no power under the statute before mentioned to direct the detention in the workhouse of the persons referred to." The effect, of course, will be that prostitutes will leave the workhouse uncured whenever they may feel disposed to do so. There would appear to be some sort of fatality at present in the various circumstances which are all conducing to the spread of syphilis. The closing of all the Government Lock Hospitals, the proposal to close the Westmoreland Lock Hospital of Dublin, the temporary closing of the Liverpool Lock Hospital, and now the abrogation of the compulsory powers recently enforced in workhouses,—all these tend to one result, for which it is to be hoped the public will be fully prepared—viz., the appearance of syphilis in an almost epidemic form. The medical profession have given warnings again and again, which have, however, passed unheeded. Probably some sensational article will sooner or later appear in some daily London paper similar to that which appeared seventeen years ago respecting the "Wrens of the Curragh," and with a similar startling effect. Or possibly some peer of the realm may deem the subject worthy of notice, and may call attention to the subject. Might it be possible this session to pass a short Act conferring the requisite power upon all boards of guardians?

HAY FEVER.

A PAPER on the subject of hay fever was read by Dr. John Roe at the recent ninth annual session of the American Laryngological Association (*Boston Medical and Surgical Journal*, June 9th). It was based on a study of forty-two cases—twenty-six males and sixteen females,—and of this number thirty-five had been practically cured. The plan of treatment was to cauterise the sensitive areas of the nasal passages, which in all cases were found diseased. It was pointed out that the condition of the larynx, pharynx, and bronchi must not be overlooked, and that not infrequently enlarged tonsils will keep up irritation in the turbinated bones. Thirty-one of the patients suffered from asthma. The conclusions arrived at were as follows:—1. All cases of hay fever have the initiative lesion in a diseased condition of the tissues of the nasal fossa. 2. All diseases of these tissues induce in the ganglionic centres connected with them an abnormal activity, which is reflected to other organs. 3. The sensitive areas in the nose are not found in any particular portion of the cavity, nor are there any zones which when irritated produce always the same manifestations. 4. The direction in which the irritation is reflected is always in the line of least resistance. Irritation in the same region may be reflected in one direction at one time and in another direction at another time. 5. The disease in the nose may produce disease in other portions of the respiratory tract, which may become independent centres of irritation. 6. The affection recognised as hay fever is due to local irritations brought in contact with the sensitive areas in the nose. 7. The affection is not *per se* neurotic, nor is the so-called neurotic condition of the person necessary to render him susceptible to local irritation applied to the air-passages. It is not necessarily associated with the nervous temperament. 8. The neurotic condition, which is often regarded as the cause of the hay fever, is often the result of the local irritation. 9. By careful and thorough treatment of the disease of the nasal tissue, combined with that of other portions of the respiratory passages below, which have become secondary sources of irritation, we need not fail to cure hay fever. In the

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discussion on the paper Dr. Sajous observed that he had often produced temporary benefit by the cautery, but attributed that to the fact that the cauterisation was too superficial. Since he had deeply cauterised he had cured the disease. Dr. Mackenzie of Baltimore did not think there was disease of the nose in hay fever, which he regarded as a neurosis, not to be cured by local treatment. Drs. Hooper and Solis Cohen agreed in the main with Dr. Mackenzie's view, the latter pointing out that the patients, besides being neurotic, were also often overworked, and had resorted to stimulants.

THE COMMITTEE ON THE ARMY AND NAVY ESTIMATES.

IN the examination of Mr. Knox, the Accountant-General to the War Office, before the Committee of the House of Commons, so far as we can learn from the imperfect newspaper reports, Colonel Nolan put a number of questions relative to the expense of the medical service, apparently with a view to get from Mr. Knox an opinion that the present system is expensive, and that the work might be done more cheaply. But the Accountant-General, while admitting the fact of the heavy expense, gave a very decided opinion that it could not be got rid of. The means of reduction at which Colonel Nolan pointed were the withdrawal of the right to retire after twenty years' service, and also an increase of pay after that period to induce officers to remain. But Mr. Knox, while admitting that this would be cheaper, did not believe it could be carried into practice. "The officers would not take it.....The medical profession desired the arrangement, and as the medical officers might not have been obtained, it was necessary to pay the price for the article." If the gallant Colonel will take the trouble to refer to the past history of the Medical Department, he may learn that the conditions of service to which he proposes to revert were those under which it came to a dead lock from want of candidates. No one who takes an interest in our soldiers would desire ever again to see the Medical Department brought to the deplorable condition from which it was raised by the reforms introduced by Lord Herbert, or even to that of a still later period (1878), when it was in so unsatisfactory a state that the Secretary of State for War deemed it necessary to suspend the usual advertisements for candidates, and to appoint a committee to inquire into the causes of discontent and report what measures were necessary to render the service once more popular (vide THE LANCET, Feb. 15th, 1879). But it may not be amiss to point out that, from the improved condition of the medical service, there has been a marked reduction in the sickness and mortality of the troops, which, totally apart from considerations of duty or humanity towards the soldier, implies a reduction of expenditure in replacing those who die and are invalided, and in the number of recruits required for that purpose. The latter, of itself, is a matter of importance at a period when it is necessary to raise upwards of 40,000 men annually to keep up the effective strength of the army That the medical service might be performed more cheaply as regards money expenditure we admit, but it would be at a serious cost to the country in the way of increased sickness and mortality and decreased efficiency. The experience of the late Egyptian campaign shows the position of the responsible head of the Army Medical Service to be one of great difficulty. The public cannot have forgotten the fierce attacks by the newspapers on the Department, because it had not provided trestle beds, whisks, mosquito curtains, cooking apparatus, medicines, and all sorts of medical comforts for an army disembarking at an unknown port, fighting a battle in the desert, and "rushing" the capital within a period of about three weeks. And now the financial reformers attack it on the score of the great expense involved in providing even the moderate, but necessary, supplies which were so decried. Surely our troops, called upon, as they are, to serve in all climates and often under circumstances very prejudicial to health, are entitled to thoroughly good and efficient medical and surgical aid, and this must be paid for. What appears to us to call for thorough investigation is the long list of general officers, the great expense of the military staff, and the state of the non-effective list of the combatant branches of the service. The commissariat, the transport, the military staff, and the very headquarters at the War Office, with its cumbrous staff of highly paid clerks, might all afford abundant materials for a judicious reduction of expenditure.

NASAL VERTIGO.

THE thesis might be maintained that irritation of any sensory area may give rise to vertigo; but the difficulty of proving to demonstration that such a proposition holds good would be very great. Hitherto the occurrence of vertigo as the result of a lesion in the nasal passages has not been generally accepted, and we doubt whether there can be any very special or causal connexion between a vertigo and a nasal lesion. In a few cases a connexion may be traced, but it is very possible that the nervous phenomenon, vertigo, is chiefly caused by the nerve weakness, the nasal lesion playing perhaps only the part of the "last straw." Dr. Joal, the latest writer on nasal vertigo, believing in its positive existence, asserts that the vertigo is a genuine reflex; that it ought to be ranged side by side with gastric, laryngeal, uterine (*sic*) forms; and that irritation of the branches of the trigeminal supplying the mucous membrane of the walls and septum of the nose is its cause. He thinks that the mechanism is one of cerebral anæmia brought about by the transmission of the irritation through the spheno-palatine ganglion to the vaso-motor nerves. The vertigo is especially induced by slight nasal affections such as result from inhalation of irritating vapours, snuff, &c. Acute coryza, hypertrophic chronic catarrh, mucous polypi, and catarrh of the retro-pharynx are other causes. These reflex effects are most marked in arthritic subjects. The vertigo may be the only symptom, or it may be accompanied by visual troubles, hemicrania, nausea, vomiting, great excitement, hypochondria, intellectual weakness, &c. The statement is also made that the vertigo ceases with the cure of the nasal affection which has caused it.

ELECTRIC LIGHTING ON RAILWAYS.

THERE are certain blunders of omission or commission in policy which appear inexplicable. One of these is the omission to light railway carriages by electricity, and another the recourse to gas and other highly dangerous appliances of illumination. The peril of travelling reservoirs of gas has been painfully illustrated of late. It is strange that any company has had, and still has, the hardihood to subject its passengers to the very grave peril which besets the use of gas in this way. More wonderful still is the neglect to use the motor force available for the self-generation and storing of electricity. Surely there would be no great difficulty in so adapting the necessary apparatus as to make the moving wheels of the carriage do the work of an engine. It is needless to emphasise this suggestion. There is, of course, nothing new in the idea, but it seems to be one of those very obvious matters which are seemingly too plain to be perceived, or in some way fail to impress that particular part of the mental constitution which we call the common-sense instinct. The task of providing trains which travel at night with special accumulators cannot be overwhelming. Those trains that travel by day, and only require lights for tunnels could, we imagine, be utilised to charge the accumulators required by night trains.

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DEATH BY ELECTRICITY.

M. D'ARSONVAL has been conducting some experiments for the purpose of preventing fatal accidents from the use of electricity. He has come to the conclusion that electrical currents are not dangerous until a power of 500 volts is reached, and he has devised an ingenious plan by which the extra current which occurs at the moment the current is broken, and which is the chief source of danger, may be annulled or neutralised. A V-shaped tube, made of an insulating material, is filled with mercury and is interposed in the main current. In order to close the main current a tap is turned and the machine is unprimed without giving an extra current spark. Or a glass tube is filled with mercury and dipped into a reservoir containing mercury. This tube is provided with a ground stopper, which not only suppresses the extra current, but interposes any resistance in the current. The invention seems to be original and ingenious, but unless considerable care be taken, even with its assistance, danger is still imminent. Another observation made by D'Arsonval is that extra currents from the dynamic electricity and alternating currents do not produce serious organic disruption of the living tissues like discharges of statical electricity. This, however, is not a new observation. The special disruptive and fatal effect of the statical discharge has long been known in this country, and was most fully brought out in Dr. Richardson's experiments on death by electric shock conducted in the Royal Polytechnic Institution in 1869. In those researches sheep and other animals were killed by the statical discharge, and the cause of death was shown to be due to the sudden expansion of gaseous parts of the blood and tissues, by which organic lesions of the most extensive kind were induced. In one of this series of experiments the skull of a dead animal was fractured by the statical discharge, and arborescent markings of external veins, distortion of large veins, rupture of the heart, ecchymosis, rupture of the stomach, and decomposition of the blood itself, from the same kind of discharge, were phenomena traced to disruption from gaseous expansion. At the same time the statical discharge does not always kill. It may simply stun, or cause a temporary anæsthesia, or produce a state resembling catalepsy, followed by recovery.

COAL MINES REGULATION.

THE recent debate in the House of Commons on the Coal Mines Regulation Bill, if it has not effected any great changes in the system of colliery management at present existing, has not, at any rate, been wholly fruitless of benefit to the employed. The amendment which provides that boys shall no longer be employed underground at an earlier age than twelve years marks a distinct improvement on the former arrangement, which fixed the limit at ten. Health and education will equally gain by the new restriction, and it cannot be urged with any real force that the boys will lose anything in point of technical experience by being kept out of the mines at an age when their mental and bodily powers have hardly begun to develop. The working time (fifty-four hours per week) is still, for such young boys, longer than we could wish, but serious difficulties at present prevent its reduction. As regards girls, who begin their duties at the pit's mouth at the same age as the boys, it has been proposed to fix the earliest limit at fourteen years. Certainly at that age and afterwards they would be fitter for their duties than before it; but as their work is less arduous than that of the boys, and no complaint is made on their account, it would seem that the uniform regulation referred to imposes no hardship upon them. Measures relating to the prevention of accidents were discussed at considerable length, and important suggestions were made respecting the disuse of gunpowder in blasting operations, and the education of miners in the art of "timbering," or supporting the walls and roofs of passages, in order to prevent falls of coal, to which many fatal accidents are due. Technical education is coming to be recognised as one of the crying wants of our time, and the suggestions we have referred to, and the facts upon which they are based, are enough to show that the miner is one of those who stand greatly in need of its advantages.

CONVERSAZIONE AT THE ROYAL COLLEGE OF PHYSICIANS.

ON the 29th ult. a conversazione was held at the Royal College of Physicians, the gathering, representative of every branch of the medical and surgical professions, being a large one. The guests were received by Sir William Jenner, Bart., K.C.B., the president; Dr. Habershon, the vice-president; Sir Dyce Duckworth, the treasurer; Sir Henry Pitman, the registrar; and the censors, Dr. Handfield Jones, Dr. Dickinson, Dr. Bristowe, and Dr. Andrew. The staircases and various apartments were tastefully decorated with flowers and palms, and the band of the Coldstream Guards was in attendance. Some interesting scientific preparations were on exhibition during the evening: notably a collection of bacterial cultivations and microscopic specimens by Mr. Edgar Crookshank; a new form of sphygmograph, invented by Professor Ludwig, by Dr. Lauder Brunton; and a diffraction spectroscope with concave grating of six-feet focus, ruled by Professor Rowland, by Dr. W. H. Stone. There were also a number of paintings and other works of art exhibited.

DRUGS, APOTHECARIES, PHYSICIANS, AND ROYAL PATIENTS.

WHILE ready to recognise that Sir William Gull in his recent deliverance on the independence of physicians and their Royal patients of drugs and apothecaries must not be taken too literally, we cannot forbear giving our readers the following delightful quotation from Mr. John Evelyn, to show how the lives that make history are affected and even saved by suitable medicines, in the introduction of which good apothecaries may have a creditable share:—

"1694.—29th Nov. I visited the Marquiss of Normanby . . . . . and had much discourse concerning the *Quinquina* which the Physicians would not give to the King, at a time when in a dangerous ague it was the only thing that could cure him (out of envy because it had been brought into vogue by Mr. Tudor an apothecary), till Dr. Short, to whom the King sent to know his opinion of it privately, he being reputed a Papist (but who was in truth a very honest good Christian), sent word to the King that it was the only thing which could save his life, and then the King injoined his physicians to give it to him, which they did, and he recover'd. Being asked by this Lord why they would not prescribe it, Dr. Lower said it would spoil their practice, or some such expression, and at last confessed it was a remedy fit only for Kings."

DISCOVERY OF DIAMIDE.

A VERY interesting discovery has just come to us from Germany. The author, Theodor Curtius, investigating diazo-acetate of ethyl, found that by the action of potash a yellow crystalline compound was obtained, which in its turn was changed by sulphuric acid into white crystals, which proved to be the sulphate of the long-sought base diamide N_2H_4. The important compounds called amides and amines contain, as is well known, the radical NH_2, formerly known as amidogen, which is the true analogue of hydroxyl, OH, and cyanogen, CN. This radical has at last been isolated, but, as in the case of the other normal radicals, the formula must

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be doubled, and the free compound is N_2H_4 or $NH_2.NH_2$. The base is easily obtained from its sulphate by the action of alkalies, and is a very interesting substance, about which we shall soon know more. It is a gas soluble in water and fuming with hydrochloric acid. Its solution is a base, and turns red litmus to blue, and yet it is in smell and in other respects different from ammonia. It is a powerful reducing agent, readily reducing Fehling's solution and nitrate of silver. Its salts are suddenly decomposed by heat, and yield nitrogen when treated with nitrous acid, which last reaction shows their true amidic nature. The further study of this most interesting substance will be awaited eagerly by all chemists.

JUBILEE ADDRESSES TO HER MAJESTY.

AT a Court held at Windsor Castle on the 27th ult., addresses were received by Her Majesty from deputations from the following, amongst other societies and corporations:—Royal College of Physicians of London (Sir William Jenner, President, and Sir Henry Pitman, Registrar); Royal College of Physicians of Edinburgh (Dr. George Balfour, Vice-President, and Mr. R. P. Ritchie, Treasurer); King and Queen's College of Physicians in Ireland (Dr. James Little, President, and Dr. J. W. Moore, Registrar); Royal College of Surgeons of Edinburgh (Dr. Argyll-Robertson, President, Surgeon-Oculist to the Queen in Scotland, and Dr. John Smith, Vice-President); Royal College of Surgeons in Ireland (Dr. Anthony Corley, President, and Mr. Henry Fitz Gibbon, Vice-President); and the British Medical Association (Dr. W. Withers Moore, President, and Sir Walter Foster, M.P., President of the Council). In the above list, it will be observed, the Royal College of Surgeons of England is not included. This may be accounted for by the fact that the address of the College was presented through the usual channel of the Home Secretary, the authorities being unaware that they might have had the same personal presentation to Her Majesty as the other corporations.

PROFESSOR HASSE ON UNIVERSITY REFORM.

IN a recently published paper on Desirable Reforms in German Universities, Professor Hasse of Breslau proposes that all professorial chairs should be vacated as the occupants reach the age of sixty-five; that the salary should, however, continue to be paid with little or no reduction; the ex-professor to be at liberty to give lectures still, but to be deprived of his seat and vote in the Faculty, and to be ineligible for any examinerships. Amongst other reforms desired by the Breslau Professor of Anatomy is a regulation preventing students from taking their Doctor's degrees before they have passed the State examination, as he knows instances in which men with such a *quasi* qualification have engaged in practice.

BOAT OWNERS AND BOATING ACCIDENTS.

A FEW days ago a young man while rowing on the Thames accidentally lost his life by drowning. He was evidently quite unable to row, and the unfortunate occurrence appears to have been directly due to his want of skill in this particular. While proceeding up the river in an outrigged boat against the tide, he suddenly stopped rowing with one hand, and he was thrown into the water. At the coroner's inquest upon this case several of the jury expressed their disapproval of the conduct of boat proprietors in letting out their craft without inquiry to inexperienced persons. We certainly agree with those members of the jury, that it is most unadvisable for anyone ignorant of the management of boats to make an essay in rowing under the conditions which proved so fatally unsuitable in this case, and also that it would be well for boat owners to ascertain, if possible, whether those who hire their boats can be trusted to navigate them. At the same time, the chief responsibility for an accident of this kind must rest with the too venturesome rower, and it would therefore be too much to expect that a proprietor should be bound by law to inquire into the boating qualifications of the public who resort to him. His duty is to provide a good boat, with any special information as to its management which may be called for, but the occupant alone can be held accountable for his temerity in using it when he should not.

THE MIDDLESEX HOSPITAL.

THIS hospital was closed on the 1st inst., and will remain closed for about two months, in order to allow of its being thoroughly repaired and the kitchen and laundry departments reconstructed. Surgical out-patients will, however, continue to be seen by the assistant-surgeons until the 15th inst., whilst the cancer wards and the midwifery department will still remain open. In connexion with the cancer department, it may be noted that a ward has now been entirely set apart for male cancer patients, with a day-room adjacent to it, the cost of such alteration being defrayed by a sum of money placed in the hands of Dr. Greenhow, consulting physician to the hospital, for this purpose. The new buildings in connexion with the hospital and medical school are also progressing actively, the nursing institution being nearly completed, and the new and handsome residential college for students being almost as far advanced. Mr. Leopold Hudson has been appointed warden of the college, which will be quite ready for occupation by the opening of the winter session.

AUSTRIAN HEALTH RESORTS.

The Times of June 22nd began publishing a series of articles "from a correspondent" on Austrian health resorts, which cannot fail to be of much interest to many who are contemplating an autumnal holiday to some continental inland watering-place. The gouty, the rheumatic, the dyspeptic, and the overwrought find in such a change relief and invigoration, which strictly medicinal treatment at home often fails to accomplish. It is not sufficient for such persons that their change should have a directly medical object, and be confined to drinking this or that natural mineral water, though this may form a very important element for the relief of their discomfort. But the air, scenery, elevation above sea level, as well as amusements and novel experiences of life, with facilities of travelling, are matters needing careful preliminary consideration, both by the doctor and the patient. The medical adviser has much difficulty in selecting the kind of place that is likely to be beneficial as well as agreeable to his patient. A large number of persons who go to continental watering-places need the one as much as the other. Numbers of persons can be equally well treated medicinally at any one of three or four places, though in some instances, no doubt, a particular place is best suited to a particular case; and this is a matter which medical opinion can best settle. But in other instances, where the appurtenances of medicinal treatment have to be considered, the patient may fairly have a voice in the selection, and he could scarcely do better than read the articles referred to in order to fit himself to exercise a right judgment in this respect; nor are the articles without their value to medical men. At the same time, it is important for the English public to bear in mind that there are in the British Isles health resorts that afford all the advantages enjoyed by continental spas, without the disadvantages, chiefly of an insanitary kind, which characterise very many of them.

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THE VETERINARY PROFESSION.

IN another column we publish a letter from a well-known veterinary surgeon (Mr. James Lambert), who has misinterpreted an annotation we published in our issue of last week on the veterinary and medical professions. Our annotation was written in opposition to certain statements reflecting on veterinarians. We can but refer him to the article itself, and we think that no useful object would be served in discussing the statements that he has made. But we must protest against his conclusion that the medical profession is not desirous of working with the veterinary in the study of disease; the intimate relation which exists between human and animal affections is, apart from other reasons, sufficient ground for a close alliance, and we observe with satisfaction that the Agricultural Department have called to their aid a medical pathologist. We have already expressed our opinion that a skilled veterinarian should be attached to the Medical Department of the Local Government Board, for it is by such co-operation that the best results will be obtained.

MEMORIAL PORTRAIT OF SIR WILLIAM JENNER, BART., K.C.B., M.D.

THE Executive Committee wish it to be known that the list will not remain open much longer. Intending subscribers are therefore requested to send their contributions to one of the treasurers (Dr. Charles J. Hare and G. D. Pollock, Esq.) without delay. A list of the subscribers, but not the sums contributed, will be published.

BOULTER'S LOCK.

SURELY it is time that a more serious attempt was made by the Thames Conservancy to prevent a scene such as that witnessed so often at Boulter's Lock on Sunday evenings. It is a disgrace to the river, as those who have been present can testify. Above the lock are crowded scores of boats, the occupants of which are anxious to get through, possibly in order to catch a train at Maidenhead. There is no order, each tries to get in when the doors are opened, and tries with might and main to get first, whilst those behind hang on those in front and completely stop progress. Steam launches push forward, and the planks of the smaller boats give way; the excited and angry owners shout and use strong language, ladies scream as they hear and see the sides of their boat staved in, and occasionally a man is thrown into the water. The lock-keeper does what he can, but that is little. The confusion is rendered worse by the shouts, jeers, and laughter of the crowd on the banks and sides of the lock. Hours are spent in this almost hopeless struggle, and we fear that before long, unless some remedy is found, there will be loss of life, as well as destruction of property. Are we to wait for the verdict of a coroner's court on some helpless pleasure-seeker before an attempt is made to prevent what must be regarded as little less than a scandal?

WHITECHAPEL DISTRICT.

THE District Board and the Board of Guardians of Whitechapel have memorialised the Metropolitan Board of Works to proceed without delay in dealing with the Bell-lane area, the conditions of which they regarded as a physical and moral danger and a great scandal to the whole metropolis, their spokesman, the Rev. Mr. Billing, stating that they were quite ready to suffer any loss which might be entailed by the removal of the houses and the consequent temporary loss of rates. The memorial was referred to a committee, and it may be hoped that the much-needed improvement will not long be delayed. The cost of the proceedings, which are taken under the Artisans and Labourers' Dwellings Improvement Acts, fall upon a general metropolitan rate, and the well-to-do districts of London bear their burden of the expense. There is a general desire that the present year should be marked by the social advancement of the people, and it is to be hoped that the Metropolitan Board will not hesitate to exercise the large powers that they possess for this purpose.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced: — Dr. Karl Damian Ritter von Schroff, formerly Professor of Pharmacology and Pharmacognosis in Vienna, at the age of eighty-four, at Gratz, the residence of his son Dr. Karl Ritter von Schroff, who is Professor of Materia Medica in that University. The deceased *savant* was the founder of scientific methods of studying and teaching pharmacology in Vienna, where he established the Pharmacological Institute, in which building so many important and valuable researches on drugs and on their action on the animal economy have been carried out by himself and his pupils. He held his professorship for twenty-four years, till, indeed, he was seventy years of age, since which time he had been living in Gratz with his son.— Dr. Joh. Pasternazki, *docent* of Mental Diseases and physician in charge of the department for Mental Diseases in the Ujasdowsches Military Hospital in Warsaw.

HOLYHEAD SANITARY ADMINISTRATION.

THE question asked in Parliament as to the sanitary condition of the Holyhead Rural Sanitary district, and as to the appointments of the officer of health and the inspector of nuisances, indicates that inefficiency on the part of the authority has been discovered, and, in all probability, this inefficiency is most marked in respect to the position which the authority have assigned to their officers. Why the report has not been published we cannot say; but we do know that Mr. Harvey, the reporter, is an expert in sanitary work, that he is a painstaking official, and that any advice he has given is likely to be sound. As regards the medical officer of health, we note, from the published list, that he holds office for Holyhead rural, Holyhead urban, Anglesey rural, and Beaumaris urban districts at a salary which can only have been assigned on the understanding that he was not expected to do much. Perhaps the refusal of the central authority to sanction the appointment of the inspector of nuisances is based on similar considerations of fee. If so, we hope the authority for this widely scattered district will not get their own way by bringing an imaginary grievance before Parliament.

VACATION CLASSES AT VIENNA AND BERLIN.

THE programme of medical courses of instruction at Vienna during the months of August and September has been issued. The number of such classes is now very large, and of their convenience for foreigners there can be no question. Most of them are complete within a month, meetings being held daily. Amongst them may be noted those on morbid anatomy (Dr. Adolf Zemann); pathological histology (Dr. Kolisko); bacteriology (Prof. Weichselbaum and Prof. von Frisch); medical diagnosis (Drs. von Frisch and E. Neusser, Drs. Bamberger and Lorenz, Drs. von Langer and Heitler, and Dr. Drozda); diseases of the organs of circulation (Dr. Bettelheim); diagnosis of brain and spinal cord diseases (Dr. Benedikt); and the pathology and treatment of nervous diseases (Prof. Rosenthal). There are also courses on forensic medicine, urinology, practical and operative surgery, ophthalmology (no fewer than seven different

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courses), gynæcology, laryngoscopy, otology, dermatology (Prof. Kaposi and Dr. Riehl), syphilis, &c. An even more complete series of post-graduate classes of a like kind will be held in Berlin, from the 26th of September to the end of October, of which the announcement will be found in the *Berliner Kliniker Wochenschrift* for June 27th, p. 483.

A MUNIFICENT GIFT: THE PROVIDENT DISPENSARY MOVEMENT.

AT the annual meeting of the Metropolitan Provident Medical Association, Sir Julian Goldsmid, M.P., presiding, it was reported that no new branches had been opened, but that the old ones had been successfully maintained. About half of the branches are self-supporting. The payments to medical men had amounted in 1886 to £1500, and for drugs to over £400. It is not said amongst how many medical men the £1500 were divided. The sum contributed by the members was £3000; that contributed by the committee to meet deficiencies was £214, or 7 per cent. It has been determined to recommend to local committees to make a charge of 1*d.* for the dispensing of every prescription. Mr. Bousfield announced that a Jewish gentleman, not resident in England, had given to the Association a donation of £3000 towards the establishment of provident dispensaries in memory of his son. We believe that the liberal gentleman in question is Baron Hirsch of Vienna, whose example is worthy of imitation.

THE REPEATED SERVICE IN WESTMINSTER.

WHATEVER criticisms may be made on the general features of the Jubilee celebration—and there is room for some,—it is very gratifying to notice that a sum not far short of £2500 was received from the Wednesday service, and very quickly divided amongst the medical charities of London—a third going to the Hospital Sunday Fund, a third to the Westminster Hospital, and a third to the Western Dispensary and the Hospital Saturday Fund jointly. Dean Bradley, in his letter to *The Times*, thanks all who have co-operated in the "service." We would add our thanks to the Dean himself for his share in such a use of the Abbey as has contributed a splendid contribution to a cause as meritorious as it is needy.

AN HONOUR DECLINED.

IT is indicated in the *Glasgow Herald* that Professor Gairdner has been offered, but has very courteously declined the honour of knighthood. We make no secret of our deep dissatisfaction, extensively shared by the profession, with the dispensation of Jubilee honours. Apart from the reasonable expectations of our own profession, the dispensation is exceedingly disappointing and unworthy of the occasion. We are glad, however, that Professor Gairdner has not been forgotten, for in him there meets all that is best in Scotch medicine.

SCARLET FEVER CONVALESCENTS.

[illegible] annual meeting of Miss Mary Wardell's Convalescent [illegible] those recovering from scarlet fever was held a few [illegible] under the presidency of Sir Risdon Bennett. [illegible] last year 158 patients have made use of the [illegible] children of all classes of the community. [illegible] payment, the terms for ordinary patients, [illegible] a week; for children, 10*s.* The Home is [illegible] on the top of Brockley Hill, near Stan[illegible] real want in cases to which all ordi[illegible] denied. In an age of great prac[illegible] few pieces of work more prac[illegible] Wardell's. There is still a debt on [illegible] is wanted to supply certain [illegible] for domestic purposes.

THE CROWN PRINCE OF GERMANY.

DR. MORELL MACKENZIE removed another portion of the growth in the larynx of His Imperial Highness on Wednesday last, and we are glad to know that he is satisfied with the progress of the case. The portion removed has been forwarded to Professor Virchow for examination.

INTERMEDIATE M.B. EXAMINATION.

THE Medical Faculty of King's College at their last meeting resolved to send a letter to the Senate of the University of London, pointing out the grave inconveniences which have been caused to lecturers engaged in summer courses by changing the date for the commencement of this examination from the fourth to the second Monday in July.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Professor Hertwig of Jena, has been nominated for the second Professorship of Anatomy.

Cracow.—Professor Adamkiewicz has been given the charge of the newly-established Institute for Experimental Pathology.

Naples.—Professor Vincentis, of Palermo, has been appointed Professor of Ophthalmology.

WE have to record the death, in his eighty-sixth year, of the Hon. Grant Ellcock Thomas, M.D., late, and for upwards of twenty years, President of Her Majesty's Council in the Island of Barbadoes, which took place at his residence in Barbadoes on the 10th ult. Not only in the island, where he had long been resident, but throughout the West Indies generally, no one was better known or more universally respected than Dr. Thomas. Upon his retiring from the office of President of the Council some ten years ago, he was offered a knighthood, an honour which, while gratefully appreciating the intention, he respectfully asked to be allowed to forego, mainly owing to his advanced years.

AT a conference of the Glasgow Medical Charities' Committee with the Medical Committee of the Charity Organisation Society on the 23rd ult., it was, after some discussion, resolved to hold a conference with the members of the boards of management of the medical charities of the city and of the parochial boards, for the purpose of discussing any points connected with the abuse of medical charity which may require elucidation, and for appointing a final and representative committee to take the most advisable steps in the way of instituting a definite and practicable system of restricting gratuitous aid to the needy and deserving poor.

HOFRATH DR. HOFFMANN having retired from the post of Director of the General Hospital, Vienna, Professor Böhm has been appointed to this most important office, the said hospital being, we believe, the largest hospital in the world.

THE editorship of the *Fortschritte der Medicin*, vacant by the death of Professor Carl Friedländer, who himself established this important and valuable journal, has been taken over by Professors Carl Weigert and Heinrich Unverricht.

PROFESSOR HUMPHRY has been appointed delegate from the University of Cambridge to attend the International Congress of Hygiene, to be held at Vienna in September.

DR. W. B. HADDEN has been elected assistant-physician to the Hospital for Sick Children, Great Ormond-street.

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PROFESSOR BILLROTH'S strength has been sufficiently restored to enable him to remove to his country house, St. Gilgen.

DR. JULIUS MICKLE has been nominated to deliver the Gulstonian Lectures at the Royal College of Physicians next year, and Dr. Dickinson the Lumleian Lectures.

ROYAL COLLEGE OF PHYSICIANS.

AN extraordinary Comitia of the Royal College of Physicians was held on June 27th, the President, Sir W. Jenner, Bart., in the chair.

The President announced that the Registrar and himself had attended at Windsor that afternoon by command for the purpose of presenting to Her Majesty the Queen the address of congratulation lately drawn up by the College.

Dr. Robert Saundby was admitted to the Fellowship of the College.

A report was received from the Committee of Delegates on the appropriation of the vacant ground on the Embankment, and after considerable discussion, mainly in reference to the size of the proposed lecture theatre, the report was adopted after amendment by the omission of paragraphs relating to that subject. The gist of the amended report will be found in the abstract of the proceedings of the Royal College of Surgeons, which appears in another column.

The College next proceeded to consider the report of the Committee of Delegates appointed by the two Colleges to consider the desirability and practicability of granting degrees in medicine and surgery to persons who have passed the conjoint examinations of the two Colleges. The subjects dealt with by the committee were:—1. The communication from the Councils of King's College and University College, London, inviting the two Royal Colleges to confer with committees of those Councils in order to combine, if possible, the objects of all four Colleges, and to make a united application to the Crown for power to grant degrees in arts, science, and medicine. 2. The mode in which application should be made to the Crown by the Royal College of Physicians of London and the Royal College of Surgeons of England for power to confer degrees in medicine and surgery. With respect to the first subject, the committee recommended, and the resolution was adopted by the College by a large majority, "That it is desirable that the two Colleges proceed, conjointly and independently of other bodies, with their endeavour to obtain the right to confer degrees in medicine and surgery, and that therefore it is at present inexpedient to hold a conference with the University and King's Colleges for the purpose of procuring further powers to grant degrees in arts and sciences." The second question embraced the text of a draft petition to the Crown for a Charter and power to grant degrees, and also a draft Charter constituting twenty-four Fellows of the College of Physicians, together with twenty-four members of Council of the College of Surgeons, a corporate body, to be entitled the Senate of Physicians and Surgeons, which "shall have power to confer on any person who, by passing the examinations formerly held by both of the said two Colleges separately, or by passing the examination held by the examining board of the said two Colleges, or by passing any other examinations to be held by the two Colleges jointly or separately, has already acquired, or may hereafter acquire, the qualifications for registration under the Medical Act, and who shall have also complied with any further regulations (if any) or undergone such further examination (if any) as the Senate may from time to time see fit to impose or require as a qualification for a degree, both or such one as the Senate may think proper of the following degrees—namely, the degree of Bachelor of Medicine and Bachelor in Surgery, and the degree of Doctor of Medicine." This portion of the report was also adopted, and referred back to the delegates to carry into effect.

A report was received from the Leprosy Committee in the form of a reply to a memorandum from the Colonial Office, in which the opinion of the College of Physicians was sought as to the contagiousness of leprosy and the advisability of segregating lepers. The report advised the formation of proper leper asylums for humane treatment of the victims of this disease, and considered this a proper matter for State interference; but as no definite opinion was expressed in the report upon the question whether the College adhered to the statement of its committee of 1867, to the effect that the disease was not contagious, it was, after much discussion, referred back to the committee, with an instruction to embody in it a suggestion to Government to undertake anew the investigation of the disease, in order, if possible, to determine this question.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an extraordinary meeting of the Council of the Royal College of Surgeons held on Monday, June 27th, the Minutes of the Ordinary Council of the 9th inst. were read and confirmed.

A letter was read from the Secretary of State for the Home Department reporting the presentation to the Queen of the address of congratulation from the Council to Her Majesty on the completion of the fiftieth year of her reign.

The third report of the Committee on the Extension of the College Premises, which was approved and adopted at the previous meeting, was confirmed. It contained the following recommendations:—1. That the library be enlarged by pulling down the house No. 39, Lincoln's-inn-fields, at present occupied as a residence by the conservator, and that the space thus gained be added to the library, in the manner suggested by the architect, at an approximate cost of £2500. 2. That the house No. 38, Lincoln's-inn-fields, now occupied as chambers on annual tenancies, which is in a most unsatisfactory condition, be also pulled down and be converted into a residence for the conservator. 3. That a pathological curator, the whole of whose time shall be at the disposal of the College, and who shall not be in practice, be appointed, at a salary of £500 a year; and that such assistance, involving a probable additional expenditure of £300 per annum, be employed in the pathological department of the Museum, as the Museum Committee may from time to time recommend to the Council.

A fourth report from the same committee was approved, adopted, and entered on the Minutes. In this report it was decided to advertise the office of pathological curator, with a view to filling up the post in November; the Museum Committee to frame the rules governing the duties of the office.

Mr. W. Morrant Baker was elected a member of the Court of Examiners in Surgery to fill the vacancy caused by the resignation of Mr. Lund.

On the motion of Mr. Heath, seconded by Mr. T. Smith, and carried, it was agreed that, for the present, this Council do not spend more than £50,000 of the Erasmus Wilson bequest.

The report of the Colleges' Land Committee, consisting of delegates of the two Colleges, on the question as to the desirability of utilising the vacant ground adjoining the Examination Hall for "scientific purposes," under the control and management of the two Colleges, and that the "scientific purposes" be in the first place the investigation and exposition of such branches of science connected with medicine and surgery as the two Colleges may from time to time determine, was approved, adopted and entered on the Minutes. It was briefly as follows:—1. That a central theatre for lectures and demonstrations should constitute a part of the proposed additional buildings. 2. That the central theatre should be built so as to contain seats for an audience of about 250 persons. 3. That the plan submitted by the architect be, in its general arrangements, adopted, it being understood that the theatre shall be constructed to contain about 350 persons, and that the side wings be proportionally enlarged. 4. That a subcommittee be appointed to investigate and report upon the best arrangements at present existing in scientific institutions in the construction of a lecture theatre and laboratories. 5. That the appointment of the subcommittee be left in the hands of the two presidents of the Colleges, and that the subcommittee be requested to report within four months of this date to the committee.

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ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

Copy Draft Petition for Charter and Power to grant Degrees.

TO THE QUEEN'S MOST EXCELLENT MAJESTY IN COUNCIL.

THE humble petition of the Royal College of Physicians of London and of the Royal College of Surgeons of England humbly sheweth as follows:—

1. Your petitioners, the Royal College of Physicians of London, are a corporation who, under an Act of Parliament, made and passed in the fourteenth and fifteenth years of the reign of his Majesty King Henry the Eighth, intituled the Privileges and Authorities of Physicians in London, and confirming certain letters patent, bearing date at Westminster, the 23rd day of September, in the tenth year of the reign of his said Majesty, were incorporated, established, and empowered by their then name of the President and College, or Commonalty of the Faculty of Physic in London, but are now known by the name of the Royal College of Physicians of London, and pursuant to bye-laws of the Corporation are governed by the president and Fellows of the College.

2. Your petitioners, the Royal College of Surgeons of England, are a Corporation incorporated or re-established and empowered under letters patent, bearing date at Westminster the 22nd day of March in the fortieth year of the reign of King George the Third; and further empowered by letters patent bearing date at Westminster the 13th day of February, in the third year of the reign of King George the Fourth, and by letters patent bearing date at Westminster the 14th day of September, in the seventh year of your Majesty's reign, whereby their present name was conferred on the corporation; and also, by further letters patent bearing date at Westminster the 18th day of March, in the fifteenth year of your Majesty's reign, and your petitioners, the Royal College of Surgeons of England, are now in accordance with the provisions of the said several letters patent, and their bye-laws and ordinances governed by a Council consisting of twenty-four persons elected by the Fellows of the corporation, and one of such twenty-four persons is the president of the Council and also president of the College.

3. By the Medical Act made and passed in the session of the twenty-first and twenty-second years of your Majesty's reign it was, among other things, enacted that any two or more of the Colleges or bodies mentioned in Schedule A to the said Act (which schedule mentioned along with others your petitioners the Royal College of Physicians of London and also your petitioners the Royal College of Surgeons of England) might with the sanction and under the directions of the General Medical Council, constituted by the said Act, unite and co-operate in conducting the examinations required for qualifications to be registered under the said Act.

4. Your petitioners under the provisions of the Medical Act have accordingly united and co-operated in a scheme constituting an Examining Board of the two Colleges in England and in making regulations for conducting the examinations required for the purpose of qualifications to be registered under the said Act, which scheme and regulations were approved and adopted by your petitioners the Royal College of Physicians of London on the 12th day of March, 1883, and by your petitioners the Royal College of Surgeons of England on the 29th day of April, 1883, and your petitioners have at their own expense caused to be erected and completed on or near the Thames Embankment, in the county of Middlesex, an Examination Hall for the purpose of conducting examinations, and examinations are now duly conducted there under the said scheme and regulations.

5. Your petitioners are desirous, and it is expedient in order to encourage proficiency in the Sciences of Medicine and Surgery, that your petitioners should be enabled to unite and co-operate not only in conducting examinations for the purposes of the Medical Act, but also for the purpose of conferring degrees in Medicine and Surgery on persons who, by passing the examinations formerly held by both of the said two Colleges separately, or by passing the examination held by the Examining Board of the two Colleges, or by passing any other examinations to be held by the two Colleges jointly or separately, have already acquired, or may hereafter acquire, the qualifications for registration under the Medical Act, and who shall have also complied with such further regulations (if any) or undergone such further examinations (if any) as it may be deemed proper to impose or require from time to time, and that for this purpose a Senate of Physicians and Surgeons should be constituted and incorporated, composed of an equal number of Fellows of each of the said two Colleges, with all such necessary or proper powers as your Majesty may graciously see fit to grant or confer.

Your petitioners therefore humbly pray as follows:—That your Majesty will be graciously pleased to incorporate the president for the time being of the Royal College of Physicians of London and twenty-three other persons to be elected from among the Fellows for the time being of the said College and also the president for the time being of the Royal College of Surgeons of England and all the other twenty-three members for the time being of the Council of the Royal College of Surgeons of England being Fellows thereof under the name and style of the Senate of Physicians and Surgeons, with perpetual succession and a common seal and power, by that name to sue and be sued, and with power to grant to persons who have obtained qualifications under the Medical Act and shall be otherwise properly qualified degrees in Medicine and Surgery, and with power, notwithstanding the statutes of mortmain, to take, purchase, and hold to them and their successors lands, buildings, and hereditaments, and with such further powers and subject to such provisions as your Majesty may think proper to grant or impose. And your petitioners will ever pray, &c.

Draft Charter.

Victoria, by the grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, to all to whom these presents shall come, greeting. Whereas the Royal College of Physicians of London are a corporation incorporated, established, and empowered under an Act of Parliament made and passed in the fourteenth and fifteenth years of the reign of his Majesty King Henry the Eighth, intituled the Privileges and Authorities of Physicians in London, and confirming certain letters patent bearing date at Westminster the 23rd day of September in the tenth year of the reign of his said Majesty, whereby certain physicians therein named, and all other men of the same faculty within the City of London and seven miles about, were incorporated and made one body and perpetual commonalty or fellowship of the faculty of physic by the then name of the President and College or Commonalty of the Faculty of Physic in London, but are now known by the name of the Royal College of Physicians of London, and, pursuant to the bye-laws regulating the corporation, are governed by the president and Fellows of the College. And whereas the Royal College of Surgeons of England are a corporation incorporated, or re-established and empowered, under letters patent bearing date at Westminster the 22nd day of March in the fortieth year of the reign of King George the Third, and further empowered by letters patent bearing date at Westminster the 13th day of February in the third year of the reign of King George the Fourth, and by our letters patent bearing date at Westminster the 14th day of September in the seventh year of our reign, whereby their present name was conferred on the corporation, and also by our further letters patent bearing date at Westminster the 18th day of March in the fifteenth year of our reign. And whereas the corporation of the Royal College of Surgeons of England are now, pursuant to the provisions of the said several letters patent and their bye-laws and ordinances, governed by a council consisting of twenty-four persons elected by the Fellows of the corporation, and one of such twenty-four persons is the president of the Council and also president of the College. And whereas by the Medical Act made and passed in the session of the twenty-first and twenty-second years of our reign it was, among other things, enacted that any two or more of the Colleges or bodies mentioned in Schedule A to the said Act (which schedule mentioned along with others the Royal College of Physicians of London and the Royal College of Surgeons of England) might, with the sanction and under the direction of the General Medical Council constituted by the said Act, unite and co-operate in conducting the examinations required for qualifications to be registered under the said Act. And whereas the Royal College of Physicians of London and the Royal College of Surgeons of England have, with the sanction of the General Medical Council, under the provisions of the Medical Act united and co-operated in a scheme constituting an examining board of the two Colleges in England, and in making regulations for conducting the examinations required for the purpose of qualifications to be registered under the said Act, which scheme and regulations were approved and adopted by the Royal College of Physicians of London on the 12th day of March, 1883, and by the Royal College of Surgeons of England on the 29th day of April, 1883, and the said Colleges have at their own expense erected and completed, on or near the Thames Embankment, in the county of Middlesex, an Examination Hall for the purpose of conducting examinations, and examinations are now duly conducted there under the said scheme and regulations. And whereas it is expedient in order to encourage proficiency in the sciences of Medicine and Surgery that the Royal College of Physicians of London and the Royal College of Surgeons of England should be enabled to unite and co-operate, not only in conducting examinations for the purposes of the Medical Act, but also for the purpose of conferring degrees in Medicine and Surgery on persons who by passing the examinations formerly held by both of the said two Colleges separately, or by passing the examination held by the examining board of the said two Colleges, or by passing any other examination to be held by the two Colleges jointly or separately, have already acquired, or may hereafter acquire, the qualifications for registration under the Medical Act, and who shall have also complied with such further regulations (if any), or undergone such further examination (if any) as it may be deemed proper to impose or require from time to time, and that for this purpose a Senate of Physicians and Surgeons should be constituted and incorporated, composed of an equal number of Fellows of each of the said two Colleges, with all such powers as are hereinafter conferred on such Senate. Now, know ye that we of our special grace, certain knowledge, and mere motion at the humble petition of the Royal College of Physicians of London and the Royal College of Surgeons of England do by these presents for us, our heirs, and successors, will, ordain, constitute, grant, and declare in manner following—that is to say:—

1. The following persons—namely, first the president for the time being of the Royal College of Physicians of London, and twenty-three other persons, being Fellows of that College, to be elected for the purpose in the same manner as the Fellows of that College are elected under the bye-laws and regulations of the said College for the time being in force; and secondly, the president for the time being of the Royal College of Surgeons of England, and all the other twenty-three members for the time being of the Council of the Royal College of Surgeons of England being Fellows of that College shall become, and from henceforth for ever hereafter shall be and remain by virtue of these presents one body, politic and corporate by the name of the Senate of Physicians and Surgeons, hereinafter in these our letters patent called the Senate, and by the name of the Senate of Physicians and Surgeons shall and may have perpetual succession and a common seal, with power to break, alter, and make anew the said seal from time to time at their will and pleasure, and by the same name shall and may implead and be impleaded before all manner of justices in all courts and in all manner of actions and suits, and shall be at all times for ever hereafter persons able and capable in law to take, purchase, possess, hold, and enjoy, and shall and may take, purchase, possess, hold, and enjoy, a Senate House and an Examination Hall, with their appurtenances, situate in the county of Middlesex, for the use and purposes of the Senate, and also any other lands, tenements, rents, or hereditaments, wheresoever situate, lying, and being, not exceeding the yearly value of £500 at the time of acquiring the same without incurring any of the penalties in any statute of mortmain, or anything in any statute of mortmain to the contrary notwithstanding.

2. Of the twenty-three persons first elected from the Fellows of the Royal College of Physicians of London to be members of the Senate three persons, to be determined among themselves by the Royal College of Physicians of London, shall go out of office on the first Thursday in July, 1888, and on the first Thursday in July in each following year until all have gone out of office, and when all the twenty-three members first elected have gone out of office, then the three members longest in office shall go out of office on the first Thursday in July in each year, and as between any two or more members who have been in office for the same period the Royal College of Physicians of London shall determine which of them shall go out of office.

3. Any member of the Senate being a Fellow of the Royal College of Physicians of London and going or about to go out of office shall be capable of re-election, and any member of the Senate being such Fellow may

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resign his office of member of the Senate by letter addressed to the president of the Senate, and upon the going out of office, resignation, or death of any Fellow, or any other vacancy in the number of Fellows of the Royal College of Physicians of London holding such office, including a vacancy caused by succession to office of president of that College, some other Fellow of that College shall be elected in his place by the Fellows of that College.

4. The president for the time being of the Royal College of Physicians of London shall be the first president of the Senate, and shall hold office for such period not exceeding two years, as the Senate shall at their first or any subsequent meeting determine, and on the first president going out of office, the next president of the Senate shall be the president for the time being of the Royal College of Surgeons of England, who shall hold office for such period not exceeding two years, as the Senate at their then next or any subsequent meeting determine, and afterwards the president for the time being of each College alternately shall be president of the Senate for such period not exceeding in each case two years, as the Senate at their next meeting after the succession of a president to office, or at any subsequent meeting, may determine.

5. The Senate may elect any persons not exceeding two of their number to be vice-presidents of the Senate.

6. The vice-presidents shall continue in office for one year from the first Thursday in July in each year, or for such period less than a year, or from such other date as the Senate may from time to time determine, and shall be capable of re-election.

7. The president may resign his office by writing under his hand addressed to the Senate, and any vice-president may resign his office by writing under his hand addressed to the president, and any such writing may be delivered to the secretary of the Senate or any member of the Senate.

8. At any meeting of the Senate the president, if in attendance and if not then one of the vice-presidents who is in attendance, shall take the chair, and in the absence of the president and both the vice-presidents, some other member to be chosen from the members present shall take the chair and act as president.

9. The Senate shall hold their first meeting within six calendar months from the date of these our letters patent in such place and at such time as shall be appointed by writing under the hands of the president for the time being of the Royal College of Physicians of London and the president for the time being of the Royal College of Surgeons of England.

10. The Senate may make such rules and regulations as to the times and places of subsequent meetings and the mode of summoning the same as to the Senate may seem proper, which rules and regulations shall remain in force until altered at a subsequent meeting, and in the absence of any rule or regulation as to summoning a meeting the president for the time being of the Royal College of Physicians of London and the president for the time being of the Royal College of Surgeons of England may by writing under their hands, addressed to each other member of the Senate, summon a meeting at such time and place as they think proper.

11. All acts of the Senate shall be decided by the votes of the majority of members present at a meeting of the Senate, and the chairman shall, in addition to his vote as member of the Senate, have a casting vote in case of equality of votes.

12. No business shall be transacted at any meeting of the Senate unless there are at least twelve members of the Senate present at such meeting.

13. Notwithstanding any vacancy in the number of the members of the Senate, the Senate may exercise all powers conferred on them by these our letters patent.

14. The Senate may appoint a treasurer and secretary, and such other officers (if any) as they think necessary.

15. The Senate shall have power to confer on any person who, by passing the examinations formerly held by both of the said two Colleges separately, or by passing the examination held by the examining board of the said two Colleges, or by passing any other examinations to be held by the two Colleges jointly or separately, has already acquired or may hereafter acquire the qualifications for registration under the Medical Act, and who shall have also complied with such further regulations (if any) or undergone such further examination (if any) as the Senate may from time to time see fit to impose or require as a qualification for a degree, both or such one as the Senate may think proper of the following degrees—namely, the degree of Bachelor of Medicine and Bachelor in Surgery, and the degree of Doctor of Medicine.

16. The Senate may demand and take from each person who offers himself for examination the following fees—namely, for the examination (if any) required for the degree of Bachelor of Medicine and Bachelor of Surgery a fee not exceeding ten guineas, and for the examination (if any) required for the degree of Doctor of Medicine a fee not exceeding five guineas, but shall not demand or take any fee for granting any degree.

17. The Senate may, from time to time, make and alter any bye-laws and regulations (so as the same be not repugnant to the laws of our realm, or to the terms and general objects of these our letters patent) touching the qualifications for degrees, and the granting of the same and any other matters to be done under the provisions of these our letters patent, and all such bye-laws when reduced to writing and under the common seal of the Senate, and approved of and countersigned by one of our principal Secretaries of State, shall be binding on candidates for degrees, and for all other purposes within the provisions of these our letters patent.

18. Provided that any bye-law or ordinance to be made by the Senate shall not be of any force until our approval thereof shall have been signified to the Senate under the hand of one of our principal Secretaries of State, or the same shall have been otherwise approved in such manner as shall be directed by us with the advice and consent of the Lords Spiritual and Temporal and Commons of our realm in Parliament assembled. And we do hereby for us, our heirs, and successors further grant unto the Senate that these our letters patent, or the enrolment or exemplification thereof, shall be in and by all things good, firm, valid, sufficient, and effectual in law according to the true intent and meaning thereof, and shall be construed in the most favourable and beneficial sense for the Senate, notwithstanding any non-recital, misrecital, or imperfect recital, or any other omission, imperfection, or defect whatsoever, in these our letters patent. In witness whereof, we have caused these our letters to be made patent.

Witness ourself at our Palace at Westminster this day of in the fiftieth year of our reign.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Northampton Urban District.—The corrected death-rate for this borough during 1886 was 17 per 1000 living; the infantile death-rate exhibited some decrease, being 155·1 under one year of age to each 1000 registered births. Scarlet fever was more than usually prevalent, having caused 24 deaths; but though efforts are made, by way of disinfection, prohibitions as to school attendance, and visits of supervision, to control the disease, yet nothing seems to be done in respect of hospital isolation. Indeed, the borough infectious hospital has been so contrived as to be largely deterrent instead of attractive to those who should resort to it in the interests of the health of the community. Typhoid fever mortality has fortunately fallen very low in Northampton; only 3 deaths were caused by that disease in 1886. Excellent sanitary work in connexion with infectious diseases, overcrowding, slaughterhouses, &c., was carried out during the year; but amongst the unremedied nuisances, there still remain 127 cases of filthy houses and 62 of faulty drainage. There are parts of Northampton where the housing of the poor must be a constant cause of anxiety, and it is evident that Mr. Cogan does not ignore the needs of the borough in this respect.

Ilkley Urban District.—The annual death-rate for 1886 was 13·4 per 1000 in this northern summer resort, and Dr. Scott states that such infectious disease as prevails is generally the result of importation, the infection being brought in by those who seek a change of air after illness. But the need for means of isolation is none the less recognised, and steps are being taken to procure a hospital. The site provisionally selected is not thought to be the best available, but it must be remembered that perfect sites are not often procurable, and unless there are serious medical or social objections the authority should not be too particular. The need for an extension of drainage is urged, and it is clear that Ilkley stands in want of this further provision. So, also, improvement is called for in the matter of refuse disposal.

Ealing Urban District.—The death-rate in this western suburb only reached 11·3 per 1000 last year, and no death occurred from either scarlatina, small-pox, or diphtheria. Diarrhœa was somewhat fatal amongst children, but not exceptionally so when compared with ordinary urban populations. The new isolation hospital came into use for the reception of seven patients, and public baths have been opened. Amongst the other sanitary improvements which have been provided, Mr. Patten speaks satisfactorily of the destructor, which is used for refuse and for the purpose of dealing with the sludge from the sewage tanks.

Swinton Urban District.—Mr. W. M. Jones, referring especially to measles, reminds his authority that with their open yards, with only one closet to every three houses, with the proverbial sociability of the labouring classes, and with no infectious hospital, he fails to see how, when infection is introduced, it can be prevented from spreading. He trusts that the Swinton, Mexborough, and Wath Local Boards will combine in providing the latter requirement. The privy system which obtains is faulty both in point of its method of construction and in quantity. Dryness of contents, secured by the exclusion of rainfall, slops, and surface soakage, together with systematic mingling of ashes and excreta, can alone justify the midden-privy system, and even then the capacity of the structures must be so limited as to ensure frequent removal of contents by the authority themselves. The death-rate for 1886 was 15·8 per 1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 4996 births and 3115 deaths were registered during the week ending June 25th. The annual rate of mortality in these towns,

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which had steadily declined in the preceding four weeks from 20·4 to 18·4, further fell last week to 17·6, and was lower than in any previous week since the end of June, 1886. During the twelve weeks ending with Saturday last the death-rate in these towns averaged 19·9 per 1000, and was 1·5 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 7·2 in Halifax, 10·5 in Derby, 13·0 in Hull, and 13·3 in Nottingham. The rates in the other towns ranged upwards to 26·7 in Huddersfield, 26·8 in Manchester, 28·4 in Oldham, and 30·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 489 and 501 in the preceding two weeks, further rose last week (mainly owing to the increased mortality from diarrhœa) to 512; they included 213 from measles, 127 from whooping-cough, 69 from diarrhœa, 43 from scarlet fever, 31 from diphtheria, 29 from "fever" (principally enteric), and not one from small-pox. No death from any of these zymotic diseases was registered during the week in Plymouth; while they caused the greatest mortality in Salford, Manchester, and Newcastle-upon-Tyne. The highest death-rates from measles occurred in Norwich, Huddersfield, Brighton, Manchester, Salford, Birkenhead, Oldham, and Newcastle-upon-Tyne; from whooping-cough in London, Birmingham, Preston, Cardiff, and Liverpool; and from scarlet fever in Newcastle-upon-Tyne and Blackburn. The 31 deaths from diphtheria in the twenty-eight towns included 19 in London 3 in Birmingham, 3 in Newcastle-upon-Tyne, and 2 in Liverpool. Small-pox caused no death either in Greater London or in any of the twenty-seven large provincial towns. Only three cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease, no new case having been admitted to these hospitals during the week. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 333 to 213, further fell last week to 184, and were 36 below the corrected weekly average. The causes of 74, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Portsmouth, Brighton, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sheffield, and Bristol.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·9 and 19·3 per 1000 in the preceding two weeks, rose again to 20·3 in the week ending June 25th; this rate exceeded by 2·7 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 14·6 in Perth and 15·8 in Leith, to 21·9 in Greenock and 34·2 in Paisley. The 507 deaths in the eight towns last week showed an increase of 24 upon the number in the previous week, and included 38 which were referred to whooping-cough, 20 to diarrhœa, 9 to measles, 8 to scarlet fever, 5 to diphtheria, 1 to "fever" (typhus, enteric, or simple), and none to small-pox; in all, 71 deaths resulted from these principal zymotic diseases, against 76 and 90 in the preceding two weeks. These 71 deaths were equal to an annual rate of 2·76 per 1000, which was 0·1 below the mean rate from these diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 32, 35, and 38 in the preceding three weeks, declined again last week to 38, and included 14 in Glasgow, 10 in Edinburgh, 8 in Paisley, and 3 in Greenock. The 10 deaths attributed to diarrhœa, of which 4 occurred in Edinburgh and 2 in Glasgow, corresponded with the number in the previous week. Those referred to measles were 1 below the number in the corresponding week of last year. The 9 deaths from measles were 4 below the number in the previous week, and included 5 in Glasgow, 2 in Paisley, and 2 in Greenock. Of the 8 fatal cases of scarlet fever, a decline of 2 from the number in the previous week was returned in Glasgow and 2 in Dundee. Three of the deaths from diphtheria were also returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 109 and 104 in the two weeks, further declined last week to 74, being 14 below the number returned in the corresponding week of last year. The causes of 64, or 12·6 per cent., of the deaths registered in the eight towns were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 31·2 and 26·7 per 1000 in the preceding two weeks, rose again to 27·6 in the week ending June 25th. During the twelve weeks ending on Saturday last the death-rate in the city averaged 28·7 per 1000, the mean rate during the same period being but 18·1 in London and 19·6 in Edinburgh. The 187 deaths in Dublin last week showed an increase of 6 upon the number returned in the previous week; they included 21 which were referred to measles, 4 to scarlet fever, 1 to diphtheria, 1 to whooping-cough, 1 to diarrhœa, and not one either to small-pox or "fever." Thus the deaths resulting from these principal zymotic diseases, which had been 21, 29, and 32 in the preceding three weeks, declined again last week to 28; they were equal to an annual rate of 4·1 per 1000, the rates from the same diseases being 3·1 in London and 3·0 in Edinburgh. The fatal cases of measles, which had increased in the preceding seven weeks from 6 to 18, further rose last week to 21. The deaths from scarlet fever, on the other hand, were fewer by 2 than the number in the previous week. The deaths of infants showed a considerable further increase upon recent weekly numbers, and those of elderly persons were also rather more numerous. Six inquest cases and 8 deaths from violence were registered; and 41, or nearly a quarter, of the deaths occurred in public institutions. The causes of 29, or more than 15 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

HAY ASTHMA.

To the Editors of THE LANCET.

SIRS,—As a severe sufferer for some forty-five years, perhaps a few personal experiences, as recalled by Sir A. Clark's lecture in your issue of the 11th inst., may not be unacceptable. My earliest recollections go back to school-boy days (aged eleven or twelve) of severe convulsive sneezing fits, some twenty-five or thirty acts in quick succession, in the summer months, and frequently in school hours, insomuch that I was suspected of causing them artificially and mischievously. Thence up to the age of fifty-six I suffered every summer. The attack commenced in May as slight catarrh, discharge and itchiness in nostrils and at inner canthi, sudden paroxysmal fits of sneezing, increasing in severity and frequency, some fifteen or twenty attacks daily, itchiness of nose and eyes becoming constant and almost unendurable, catarrhal conjunctivitis, hoarseness and sore throat supervening. The seizures mostly came on without warning and spontaneously, but a slight cause, a glare of sunshine or sudden breath of air, often evoked them. The alæ nasi, sore and chapped from friction, were intensely sensitive. The paroxysms were often cut short by an unusually violent convulsive effort to sneeze unexpectedly aborting. Hay or grass field invariably brought on an attack, otherwise climate or locality made little difference, except that during long sea voyages (round the Cape) I was free. My most painful reminiscences are of Manchester and Simla, than which no two climates can be more antithetic. At Mean Meer and Kurrache desert stations,

> "Where the bird dare not build, or insect wing
> Flit o'er the HERBLESS granite,"

I was as bad as at home.

The sequel is curious. At about fifty-six I became suddenly free, and have so continued, but with total absolute loss of all sense of smell, and consequent serious impairment of taste. As to heredity: for three generations, on both sides, I am the sole sufferer; but since last summer, the youngest of seven children, a lad of eighteen, has been seized. As to "nervous constitution:" in these instances I think it must be ignored. My own life has been active, more in the camp than in the study. My son is captain of his school's boating and football clubs. Though I consider myself free, yet perhaps I sneeze oftener than most people. A short time ago a gentleman asked me if I noticed anything particular in the room we were sitting in (a public reading room), as he himself never entered it without being attacked. There is a physiological puzzle in

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the fact that snuff, however pungent, will not affect the taker if his attention is taken up, and, as it were, kept moving by confederates.

Perhaps connected with loss of smell I may add there comes now and then a subjective unearthly, not unpleasant sense, passing into vertigo and momentary unconsciousness. I underwent various methods of treatment without any alleviation. I remain, Sirs, your obedient servant,

H. D. F.

THE PURITY OF DRUGS.

To the Editors of THE LANCET.

SIRS,—In the article on adulteration which appeared in your issue of June 18th, you say, in reference to the purity of drugs: "The manufacturer commands the situation, for the dispenser cannot analyse every drug which he dispenses." As one who has had some twenty years' experience in pharmacy, I beg to differ from you; and as I am now not in business, I hope I take an unbiased view. I consider the dispenser who cannot guarantee the purity of every drug which he dispenses, either because he has made it or because he cannot analyse it, is not worthy of the confidence of the medical man whose instructions he has to carry out or of the patient whose money he takes. There are, I maintain, many pharmacists, some of whom are only in a small way of business, who are prepared to guarantee personally every drug which they dispense. If they cannot do so they have no right to demand special remuneration. The "examinations of the Pharmaceutical Society" are intended to test a man's qualification for this duty, and the spirit of emulation and the encouragement he receives from the members of the medical profession prompt him to its performance. Manufacturers, I am sure, would not agree with you in thinking they command the situation. They are animated by the same spirit as their brethren in the retail, and will do all they can to advance pharmacy, but they do not and cannot relieve the pharmacist of his personal responsibility. A drug or chemical which is not what it is represented to be, but which has by some mischance come into the market, does not, as a rule, have a very long run; some careful pharmacist detects its deficiency, due notice appears in the *Pharmaceutical Journal*, and usually it is immediately withdrawn. As an example, I may mention the notice of "Drumine" in that journal of June 18th. The real nature of this so-called alkaloid was detected by Mr. A. E. Tanner, and physicians were saved a long physiological trial of a worthless article. In such cases as the above, I agree with you that prosecution is not needed, a warning is sufficient. In any case of wilful adulteration, by all means punish the delinquent with the utmost rigour of the law, but as a rule it is by some oversight that drugs are below par. No class of the community so much desire the purity of drugs as pharmacists, and they would hail with gladness any means likely to improve the present high standard of purity. The members of the medical profession have it in their power to do more to advance this high standard for drugs than any amount of legislation. Let them entrust the dispensing of their prescriptions to those pharmacists who are prepared to give a personal guarantee with every drug which they dispense, and they will find that the dispenser can analyse every drug which he dispenses.—I remain, Sirs, your truly,

Fellowes-road, N.W. W. H. SYMONS.

A THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—Several medical men in London and the provinces have determined to endeavour to form a "therapeutical society" in order to combat the present chaotic condition of the science. It is proposed that this society should not be representative of any particular school or theory of medicine, but be open to all qualified members of our profession. This proposition may appear somewhat startling to the older members of medical bodies, but it is considered that the "old order changeth, yielding place to new," and that the lines between so-called orthodox and unorthodox medicine have greatly changed their bearings. It will not be disputed by any of your readers that all members of our profession are actuated by one wish—viz., to cure or at least to diminish the sufferings of those who place themselves under their care. The various medical annuals that are published show what changes have taken place in treatment within the past few years, and the labours of Professors Ringer and Brunton have revolutionised the practice of medicine. It is further proposed that a "quarterly journal of therapeutics" should be published, edited by one or more well-known writers in this science. I have already obtained several names of medical men who are willing to assist in the formation of the society, and hope to be able to collect a sufficient number to call a meeting in October in order to arrange final details, to appoint officers, and to settle terms of subscription. If any of your readers would aid me in this matter by suggestions, or by sending in their names as willing to join the society when formed, they would greatly oblige. I am Sirs, yours faithfully,

A. GEORGE BATEMAN,

64, Longridge-road, S.W. Acting Hon. Sec.

THE VETERINARY PROFESSION AND PUBLIC HEALTH.

To the Editors of THE LANCET.

SIRS,—In an annotation in last Saturday's LANCET a lecture is given to the veterinary profession, and it is more than hinted that many of its members are inclined to look slightingly on scientific investigation, and at its conclusion a hope is expressed that the contagious diseases of animals may soon be as well differentiated as those of mankind are by the medical profession. May I be allowed, as a veterinary surgeon, to criticise our critics, and make a few remarks on the sometimes injudicious attitude of the medical towards the veterinary profession?

Let me begin by saying that we claim to be as scientific as the medical profession, and in proportion to our number to possess at least as many devotees of research. So far from being averse to scientific investigation, we gladly welcome it; but we should not be blamed because we do not at once accept the somewhat startling conclusions of Dr. Klein. We do not deride them, we wait for confirmation; and, with every disposition to assist his inquiries, we reserve our judgment.

As to the differentiation of the contagious maladies of animals, we claim to have made at least as much progress in that respect as has been made by the medical profession in human diseases; and we do not, as some of the medical profession do, every now and then make gratuitous attacks on what should be a sister profession in the daily press—attacks which (forgive me for saying so) almost invariably turn out to be ridiculously unfounded, and based on defective knowledge and information. I could give you numerous and laughable examples in this regard, dating from the time of the great cattle plague of 1865, and coming down to the present day.

If we may be, for once, quite good-humouredly, recriminative, we might point to what I will venture to call the very numerous *opprobria medicorum*, among which may be named phthisis, syphilis, cancer, pneumonia, diphtheria, rheumatism, tetanus, and a host of other maladies, of which the nature is not yet understood, and for which the treatment of the best medical authorities is so varied and contradictory as to show the thinking observer that the healing science is yet only on the threshold of knowledge, and that it has still far more to learn than it has thus far learnt since it first began to be rationally studied. Of course, I do not deny that in mine, as in all professions, some of the "old school" affect to look down upon scientific knowledge, but it is the same in the medical profession, which possesses many members who scoff at the germ theory of disease and deride the antiseptic treatment of wounds.

What we veterinary surgeons ask is, that before we are gratuitously attacked in medical and other journals by *medical men*, some inquiry as to facts should be made, and if it be then found that we are open to censure, we shall be treated with that measure of charity with which the medical profession can, in its own case, so ill afford to dispense. The enemies of the medical profession are numerous and powerful, and it seems a pity that it does not use greater efforts to work, so far as its interests allow, with the veterinary profession, which is one of its most loyal and unselfish allies. I am, Sirs, yours faithfully,

London, June 27th, 1887. JAMES LAMBERT, F.R.C.V.S.

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UBSTANTIVE *VERSUS* HONORARY RANK.

To the Editors of THE LANCET.

—Notwithstanding that the editor of the *British* *l Journal* has received two or three telegrams from th intry assuring him that "the officers of the Medical S India thoroughly agreed with him in his action on th tive rank question," I think that, were it put to the vo t would be found that the general opinion of the D ment is more in favour of the views expressed in the ed l note and in "A. M. D.'s" letter in your journal of M th, received here by last mail, than of those so per- si y upheld by your contemporary. I am not aware of ho he general opinion of the Department in India" was ar at by the gentlemen who sent the telegrams. Al gh I have made it a point to inquire, I have not yet m officer whose opinion had been asked. No doubt the gr ies at the different stations from which the tele- at (were sent, influenced a good deal by the senior officers to p places, were in favour of sending them; but it seems th that they took upon themselves a good deal more fo e circumstances of the case warranted in answering ca e Medical Staff in India." We require a rank for purposes; it is necessary to us as military officers, as have got it laid down by warrant, and our chief, Si mas Crawford, has expressed himself satisfied with it as id down. Let us, then, hope and endeavour to gain m and influence rather as physicians and surgeons than as orary majors." I am, Sirs, yours obediently,

June, 1887. M. S.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

NEWCASTLE ROYAL INFIRMARY.

er Majesty's command this infirmary is in future to be he Royal Infirmary for the counties of Newcastle-on- orthumberland, and Durham. The House Committee nfirmary has lately brought before the Sanitary Com- of our Corporation an exhaustive statement showing st aber of cases arising from drunkenness and violence Ty astle, and brought to the infirmary. The committee of hat these cases entail an annual cost of about £150, the Town Council to recompense the infirmary for th day, seeing that the council are responsible for the ance of public order and the health of the city. Th ter is to come up for further consideration, but I do as k that the council will entertain the proposal in a fa manner. Mr. Page, in a case of torticollis fol- lo obscure injury to the neck from a football ac has lately cut down on and stretched the spinal th nerve. I hope in a future letter to let you know s of the operation.

TYNE PORT.

meeting of the Tyne Port Sanitary Authority it ed that during the months of April and May there spected 1156 British steamers, 623 British sail- , 246 foreign steamers, and 203 foreign sailing ing a total of 2218 ships inspected. Notices or orders given to remedy sundry sanitary British steamers, 16 sailing vessels, 8 foreign 18 foreign sailing vessels, all of which had the exception of three, which are to be

IN THE COUNTY OF DURHAM.

County Asylum, Sedgefield, has been so over- the great influx of lunatics as to necessitate last week of 100 patients, 50 male and Lancashire County Asylum, Whittingham, Prestwich Asylum for Newcastle at Cox- gates full, and there is difficulty in any class admitted.

POISONING.

Newcastle last Saturday on the , who died after a short ill- deceased was engaged in the which lead is an ingredient, and while at work he was seized with convulsions and sickness, usual in these cases. The foreman of the factory contended that, as only a small quantity of lead was used in the manufacture of green paint, the occupation was harmless, but the evidence of Mr. Brown, surgeon, was very conclusive, as he found the characteristic blue line on the gums indicative of chronic lead poisoning, so that the jury on hearing this at once returned a verdict of "Death from the effects of lead poisoning."

Newcastle-on-Tyne, June 27th.

EDINBURGH.

(*From our own Correspondent.*)

CHALMERS HOSPITAL.

A VACANCY has occurred on the staff of this important institution in consequence of the resignation of Dr. Halliday Douglas, who has for more than a quarter of a century occupied the post of honorary physician to the hospital. Several names are already mentioned as those of probable candidates for the post, among them that of Dr. Geo. A. Gibson, secretary of the Royal College of Physicians of Edinburgh, lecturer on Materia Medica in the Extra-academical Medical School, and formerly for many years clinical tutor in the medical wards of the Royal Infirmary. Dr. J. Graham Brown is also said to be in the field as a candidate for the appointment, having already been connected with the institution in the capacity of resident surgeon some years ago. The office is one of great value from the opportunities of clinical observation which it affords. It differs, however, from similar posts in other hospitals in the absence of clinical teaching, which was specially provided against in the terms of foundation of the institution. It cannot therefore be looked upon as a component part of the Edinburgh teaching school; nevertheless, the value of the appointment in the direction indicated is such as to make it an object of ambition for men of such prominence as those mentioned, and for others whose names are not in the meantime so definitely spoken of as candidates.

THE JUBILEE HONOURS LIST.

While the sincerest satisfaction is universally felt at the added honours that have fallen to the lot of Sir Arthur Mitchell, K.C.B., and Sir George Macleod—honours that are felt to be no less becoming than they are well merited,—there has been a good deal of surprise at the abrupt termination of the list, which it was anticipated would have been somewhat lengthy. It is felt, however, that it is at present premature to give expression to any feeling of disappointment; but that it is more appropriate to consider the present list as an earnest of good things still to come, and to rejoice that places in the van of the expected marshaling of honours have been reserved for two so thoroughly worthy of that distinction.

EDINBURGH UNIVERSITY.

The final professional examinations for graduation in medicine are now in progress. Over 270 candidates have entered for the examination, and the oral part of the testing process occupies several hours each day. From the large proportion—three-fourths—of passes in the lists published up to the present, it would appear that the examiners are fortunate this year in meeting with a large average of well-prepared candidates for the degree. It is probable that August 2nd will witness the launching of over 200 fresh graduates on their voyage in search of professional success, each with the *imprimatur* of the Edinburgh Medical Faculty as the title-page of his professional log-book. Many of these graduates will doubtless find useful spheres in the colonies, from which, it is stated, fully one-third of our students are derived.

ROYAL HOSPITAL FOR SICK CHILDREN.

In consequence of Dr. Andrew's retirement by rotation from the staff of this hospital a vacancy occurs in the junior division of the honorary staff. Several candidates have presented themselves, and an energetic canvass is now proceeding in relation to the appointment. Among the competitors are Dr. John Thomson, formerly resident physician at the Great Ormond-street Hospital for Sick Children; Dr. Neal Paton, examiner in Physiology in the University

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of Edinburgh, and formerly a resident physician in the Sick Children's Hospital; Dr. Felkin, well known for his scientific observations in Central Africa; and Dr. Haig Ferguson.

ROYAL MEDICAL SOCIETY.

This ancient Society, which has been possessed of a Royal Charter for over a century, held a Jubilee banquet last week in honour of the fiftieth anniversary of Her Majesty's reign. It was largely attended, and the proceedings were loyal and enthusiastic throughout. A loyal and dutiful address to Her Majesty recently presented by the Society was read by Dr. Taylor, the senior President, when proposing the toast of the Queen, and at the same time a telegram was forwarded to Sir H. Ponsonby, expressing the loyal devotion of those present who had assembled to do her honour.

Edinburgh, June 28th.

DUBLIN.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS.

AN address from the Council on the occasion of Her Majesty's Jubilee will be presented at Windsor this week by the President of the College, Mr. A. H. Corley.

UNIVERSITY OF DUBLIN.

At the annual meeting of the Senate last week the following grace, proposed by the Provost and senior Fellows, was adopted:—"1. Ad Baccalaureatum in Arte Obstetricia nemo admittatur qui prius Baccalaureatum in Medicina non susceperit. Priusquam gratia ejus proponatur, Candidatus a Professoribus Medicis in aula publica solenniter examinetur, atque idoneus comperiatur. 2. Formula supplicandi pro gradu Baccalaureatus in Arte Obstetricia R. R. Cancellarie, totaque universitas supplicat reverentiis vestris N. N. ut Baccalaureatus in Medicina, una cum omnibus exercitiis et examinationibus per leges et consuedines Academiæ requisitis, sufficiat et ad respondendum in Arte Obstetricia." This is a new degree of Bachelor in Midwifery, which has become necessary by the passing of the Act of 1886. The University law required candidates for the degree of Master in Midwifery to be a Master of Arts, and by the grace now adopted it will be sufficient for the candidate to be a Bachelor in Arts.

JUBILEE HONOURS FOR THE PROFESSION.

The marked absence of any distinctions to members of the profession in Ireland, at all events up to the present, while honours have been conferred on their English and Scotch brethren, must be regarded with extreme disapproval. The bad taste shown by ignoring their claims to Jubilee honours can scarcely be disputed, and although a supplementary "Jubilee Gazette" has been talked of, the most sanguine can hardly imagine that the names of any Dublin physician or surgeon will be included in the list of honours.

THE SANITARY CONDITION OF THE DUBLIN BARRACKS.

For several years past the insanitary condition of most of the Dublin b arracks, more particularly the Royal and Richmond, has attracted considerable attention, in consequence of the repeated deaths from typhoid fever which have occurred among men and officers. The military authorities, however, persistently denied that the sewerage arrangements were in any way defective, and so matters have been allowed to go on up to the present. Lord Beauchamp, it is satisfactory to learn, has now drawn attention to the matter, and last week in the House of Lords moved for a return of all cases of febrile and respiratory diseases which have occurred in the Dublin garrison since Jan. 1st, 1881, and which, after some discussion, was agreed to. The argument of Lord Harris in objecting to the return, to the effect that the death-rate among the garrison was lower than that of the civil population, is altogether outside the the question, as it is evident that the mortality among lower classes in this city is inevitably much higher than among a picked body of men like soldiers. It appears that the Secretary of State for War, as mentioned by me some months since, has directed an examination of the sanitary state of the Royal Barracks by Sir Charles Cameron, Medical Superintendent Officer of Health for Dublin, and Dr. Grimshaw, Registrar-General for Ireland, in conjunction with the Principal Medical Officer, which examination is now being carried out.

MERCER'S HOSPITAL, DUBLIN.

On Saturday last the Vice-Chancellor fixed the hearing of a motion made by Mr. Edward Stamer O'Grady, a well-known Dublin surgeon, for an injunction to restrain the governors of Mercer's Hospital and Dr. C. F. Knight from removing him from the surgical staff of that institution. The case will be heard on Monday next.

HOSPITAL FOR INCURABLES.

The foundation stone of the new Victoria Jubilee buildings at this hospital will be laid on the 29th by His Royal Highness Prince Albert Victor. The buildings are to be on the pavilion system, and will include special accommodation for patients suffering from phthisis and other affections of the respiratory system. The wards will be sheltered on the north and east, and will be heated by hot-water pipes as well as by open fireplaces. Ventilation will be carefully attended to, and all modern sanitary arrangements adopted.

ADELAIDE HOSPITAL, DUBLIN.

The Hudson Scholarship this year has been awarded to Thomas E. Dunne, and the Hudson Prize to Christopher Healy. The Scholarship consists of a gold medal and £30, and the Hudson Prize of a silver medal and £10.

CASE OF CONGENITAL GOITRE.

There is at present in Mercer's Hospital, under the care of Dr. C. F. Knight, an example of congenital goitre. The patient is a boy about a fortnight old, and both lateral lobes are enlarged. The mother has suffered from goitre for the past two years.

PARIS.

(From our own Correspondent.)

THE SEQUESTRATION OF BARON SEILLIÈRE.

A WELL-KNOWN member of society, Baron Seillière, has been somewhat hurriedly transferred to the *maison de santé* (as lunatic asylums are more discreetly termed in France) of the celebrated Dr. Falret. A sharp controversy has arisen in the press in consequence of this sequestration, and many of the writers are loud in denouncing the state of the law on the subject, and in abusing all those concerned in administering it. Baron Seillière bitterly complains of the whole proceedings. He declares his family laid a plot to entrap him. "I may have been eccentric, I may have spent money freely, but many a man in my position has done the same. If I have made bad speculations, I have also made successful ones, and as I neither think, speak, nor write as a madman, I consider myself the victim of an unjustifiable attack." On the other hand, Professor Charcot, who has interviewed the patient on behalf of his family, declares him to be insane. As I have already hinted, the comments of the press upon mental physicians and their doings are far from complimentary; and although there is no doubt a great deal of exaggeration, some of the statements made are not entirely devoid of foundation. It is an aphorism amongst French alienists that any person in Paris presenting signs of excitement should, in the absence of a satisfactory explanation, be suspected of general paralysis. Not only are the Parisians privileged in counting in their number the highest percentage and the most eminent sufferers from the *maladie du siècle*, but it is said also that Paris has a special attractive influence for general paralytics as a class. Given, then, a person in a state of excitement, he would, if he had the misfortune to be examined by an expert, run a very fair chance of being sent to an asylum. Once there, any explosion of indignation would be taken as additional evidence of the necessity of the measure, and if the victim were not calmed by being cut off from the world, and soothed by the application of a *camisole de force*, no sane alienist would entertain any further doubt as to the nature of his case. The lawyers maintain, and this is the practical outcome of the whole matter, that the *affaire Seillière* shows the urgent necessity of a change in the present law concerning the insane. As it is, they say, once a man has fallen into the hands of the alienists, the machinery of the

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law is powerless to help him. He may, at the discretion of his keepers, be separated from the whole world, and even subjected to solitary confinement. Should those interested in his welfare think they have cause to complain, they are hardly able to obtain an independent examination. Those who have the patient in charge can refuse access to all except the expert commissioned by the courts in each particular instance; but as in lunacy practice the expert of to-day is often the alienist of to-morrow, the patient may benefit but little by such a consultation.

PASTEURIANA.

The Secretary of the Academy of Medicine states that the letter read by M. Peter some time back containing the unfavourable results of Cantini's inoculations, and purporting to have been written by Professor Tommasi, was apocryphal. In consequence of this letter M. Cantini had sent in his resignation as Member of the Royal Academy of Naples; but now that matters are explained, and it turns out that M. Peter was hoaxed, M. Cantini has, at the desire of his colleagues, withdrawn his resignation. M. von Frisch writes to the *Semaine Médicale* to claim the priority of the idea of testing the value of the preventive inoculations by previous intracranial inoculation. In his letter to the Vienna Society, which I mentioned last week, M. Pasteur declared that he had spoken of this to M. von Frisch, as he had to Professors Burdon Sanderson and Victor Horsley, and that it must be a slip of the memory on the part of M. von Frisch to attribute the idea to himself. In his letter to the Paris journal M. von Frisch denies this "in the most absolute manner." "If," writes he, "M. Pasteur will not allow that his pretensions are based upon an error of memory on his part, I shall be forced to repudiate with indignation this attack, so unjustifiable and so derogatory to my scientific honour." It is evident that the controversy is likely to enter into a still more acute period, and the report of the English experimenters, which is looked forward to with the greatest interest, would just now come at a most seasonable juncture. According to the official report of M. Labully, fifty-three persons were bitten by mad animals during the year 1886 in the department of the Loire. Of these twenty-six were treated at the laboratory without a death. One death took place amongst the remainder, but, according to the *Semaine Médicale*, none of those who underwent a mystic ceremony, in which an omelette plays an important part, have had reason to regret their confidence.

SALINAPHTHOL.

Salol is a compound body formed of salicylic acid and phenol, which is decomposed into its constituents in the intestine. Professor Lépine advocates the substitution for it of a new compound, obtained by M. Merk, and which has been called naphthol-salol, naphthalol, &c., and for which he proposes the name salinaphthol:

$$C_6H_4.OH.CO_2H + C_{10}H_7.OH = C_6H_4.OH.CO.OC_{10}H_7 + H_2O$$

Salicylic acid + β-naphthol = sali-naphthol + H_2O.

Like salol, the efficacy of the new drug depends upon its decomposition in the intestine by the pancreatic secretion, and it is therefore inert and unirritating in the stomach. The advantage claimed for it over salol is that when split up into its component parts there remains besides the salicylic acid, which is the therapeutic agent, a by-product, β-naphthol, which is less toxic and less absorbable than the phenol which results from the decomposition of salol.

WATER-SUPPLY OF PARIS.

The Municipal Council has decided that whenever it should be necessary (and this is nearly always the case) to distribute typhogenic drinking water to some quarters of Paris, the supply of bad water shall in future be made to these districts inhabited by the wealthy. It was added that this substitution shall, however, be subject to the approval of the sixth commission. As a general measure, it may be wiser to expose the richer and healthier quarters to the dangers of typhoid, than to induce it with certainty in those which are overcrowded, but it is to be hoped that no change will be allowed to be made without a notice being sent to every interested party.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The annual general meeting of this Society will be held at the rooms of the Medical Society of London on July 27th, under the presidency of Dr. F. Needham.

VIENNA.

(From our own Correspondent.)

PASTEURIANA.

SOME weeks ago the results of Professor von Frisch's experiments on rabies were published by him in a book entitled "The Treatment of Rabies." Professor von Billroth felt himself compelled to strengthen the authority of his pupil by an article in a Vienna newspaper, in which the Pasteurian mode of treatment of splenic fever and of rabies was wholly condemned, and the book of Professor von Frisch was eulogised as a work bestowing new prestige upon our Vienna school. According to Billroth's opinion, it has been proved by Professor von Frisch that the value of Pasteur's preventive inoculations in man and in animals is problematical, and that it is possible by Pasteur's treatment that thoroughly healthy persons may be artificially made rabid. The charges brought forward by Professor Billroth caused M. Pasteur to send a letter to the Vienna Society of Physicians refuting the statements of the former. This letter was read at the meeting of the Society on June 10th. To prove the value of his method in the prevention of splenic fever he alluded to the results obtained by his inoculations in France, as shown by the following statistics of inoculated sheep and cattle. The mortality of non-inoculated sheep is 10 per cent.

Year.	Sheep.	Mortality.
1882	29,3199	1·08 per cent.
1883	19,3119	0·77 ,,
1884	23,1693	0·97 ,,
1885	28,0107	0 90 ,,
1886	20,2064	0·75 ,,
Year.	**Cattle.**	**Mortality.**
1882	22,916	0·35 per cent.
1883	20,901	0·35 ,,
1884	22,616	0·37 ,,
1885	21,703	0·50 ,,
1886	22,113	0·28 ,,

In non-inoculated cattle the mortality amounts to 5 per cent. Referring to the claim of priority made by Professor von Frisch, and supported by Professor Billroth, M. Pasteur in his letter states that he had communicated personally to Professor Frisch during his stay in Paris the results of experiments on preventive inoculations in dogs infected artificially by subdural injections with street rabies, which had not then been published. The same communication was made at the same time to the members of the British Committee (Professors Burdon Sanderson and Victor Horsley) and to Dr. Gamaleia of Odessa, who on June 6th, 1886 (before Frisch's first communication), at a meeting of physicians of Odessa said: "It was shown by M. Pasteur that in some cases, even after subdural infection, the outbreak of rabies could be prevented." In reference to another statement of Professor von Frisch, M. Pasteur claimed success in preventing the outbreak of rabies in dogs subjected to subdural infection; and these experiments, repeated by Dr. Bardach of Odessa, gave also the best results in ten cases out of seventy-five. But these experiments were only made as an *argumentum a fortiori* for Pasteur's treatment; while Frisch maintained that the value of Pasteur's method could only be proved by subdural infection followed by preventive inoculations. The experiments of Frisch, states M. Pasteur, were carried out inexactly; and while he made his experiments on dogs, the experiments of Frisch were made on rabbits. Frisch also failed in consequence of the slow process of inoculations adopted by him. In closing his letter, M. Pasteur laid stress on the positive results of his experiments, showing that even after subdural infection the animals can be made refractory by inoculations. Professor von Frisch denied the statements made in Pasteur's letter. He said that Professor Billroth was right in asserting that Pasteur had made a *fiasco* with his preventive inoculations for splenic fever, as could be seen by the publications of the Berlin School and by the refusal of the English Government to introduce Pasteur's method into England. As regards the rabies question, he denied that M. Pasteur had made to him any communication on the subdural infection experiments, and endeavoured to refute the objections made against his experiments.

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DR. ULLMANN ON THE PREVENTIVE INOCULATIONS IN HYDROPHOBIA.

Dr. Ullmann, assistant of Professor Albert, has carried out Pasteur's treatment at the surgical clinics for some twelve months, during which time 118 persons have been treated. Of these, three persons died from hydrophobia; the others remained healthy. Dr. Ullmann is also carrying out experimental researches on animals, and at the last meeting of the Vienna Society of Physicians a preliminary note was read by him containing the following conclusions: (1) According to his experiments thus far, the animals do not succumb from rabies in consequence of preventive inoculations; (2) certain animals can be rendered refractory against rabies by preventive inoculations; (3) the statistics of preventive inoculations made by him in human beings are also favourable to the value of Pasteur's method.

THE PHOSPHATE OF LIME TREATMENT IN LOCAL TUBERCULOSIS.

Dr. Kolischer was at first of the opinion that it might be possible to produce calcification in tuberculous tissues by local application of strong solutions of lime. Strong solutions of calcic chloride, of carbonate of lime in water containing carbonic acid, and of neutral phosphate of lime in common salt solution, were used without result, till Herr Ernst Freund, who had some time ago discovered the presence of cellulose in tuberculosis, proposed to use primary phosphate of lime or calcium monophosphite, which is prepared by dissolving phosphate of lime in water, by slowly adding phosphoric acid. The following prescriptions are used:—

1. For injections (containing 1 per mille phosphoric acid): R. Calc. phosphor. neutr., 5·0 grammes; aq. destill., 500·0. Deinde sensim adde: acid. phosp. dil., 0·6; aq. dest. quant. suf. ad 100·0. 2. For impregnating the gauze (containing 1 per cent. phosphoric acid):—R. Calc. phosphor. neutr., 50·0; aq. destill., 500·0. Deinde sensim adde: acid. phosphor. q. s. ut fiat solutio perfecta, filtra. Adde: acid. phosphor. dil., 60·0 (120·0); aq. destill. q. s. ad 1000·0.

In torpid cases a stronger solution for impregnating the gauze is used, containing 120·0 grammes acid. phosphorici (instead of 60·0). As I am informed by Herr Freund, he recommended this solution as a result of chemical analysis of the blood of tuberculous persons, carried out by himself in Professor Ludwig's laboratory. It seems that phosphoric acid is the real active principle of this solution.

Vienna, June 11th.

THE SERVICES.

Surgeon-General T. W. Fox, M.B., has assumed the duties of Principal Medical Officer at Aldershot in succession to Surgeon-General J. Hendley, C.B., who is about to be placed on the retired list.

Deputy Surgeon-General R. A. Chapple has joined at Mhow from Bombay for duty.

WAR OFFICE.—Army Medical Staff: Deputy Surgeon-General Thomas William Fox, M.B., to be Surgeon-General, vice A. H. Fraser, retired (dated May 18th, 1887).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Staff Surgeon John Wood has been placed on the retired list of his rank (dated June 11th, 1887).

INFANTRY MILITIA.—5th Battalion, the Royal Munster Fusiliers: Surgeon-Major P. Enright, M.D., resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated June 25th, 1887).

ARTILLERY VOLUNTEERS.—1st Newcastle-on-Tyne: M. J. Wakefield, M.B., to be Acting Surgeon (dated June 25th, 1887). 2nd Volunteer (Sussex) Brigade, Cinque Ports Division, Royal Artillery: Surgeon R. V. Skinner resigns his commission (dated June 25th, 1887); Acting Surgeon H. Colgate, M.D., to be Surgeon (dated June 25th, 1887).

THE VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Surgeon Richard Lake resigns his commission (dated June 25th, 1887).

ON the 25th ult. a dinner was held in connexion with the Edinburgh Royal Medical Society, Dr. James Taylor, senior president, in the chair.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following candidates having conformed to the bye-laws and regulations, and passed the required examinations, had the Licences to practise Physic granted to them on June 27th:—

Brook, Henry Darville, St. Thomas's Hospital.
Chapman, Robert Hugh, St. Bartholomew's Hospital.
Cooke, Cecil Whitehall, St. Thomas's Hospital.
Feeny, James Aloysius, Cloudesley-square.
Gay, John, City of London Hospital, Victoria-park.
George, Henry, Harleyford-road, Vauxhall.
Grogan, Henry William, Camden-gardens.
Hawthorn, Herbert John, Malmesbury-road, Bow.
Heatley, William, London Hospital.
Hewan, John, Belgrave-road.
Jones, John, St. Bartholomew's Hospital.
Lewis, Benjamin Adam, Lichfield-road, Tredegar-square, Bow.
Mac Carthy, Ibar, Kempsford-gardens, South Kensington.
Pott, Francis Henry, Newland-street, Eaton-terrace.
Read, Bertram Thomas, St. George's Hospital.
Read, Henry George, Finsbury-square.
Roberts, Robert Herbert Mills, Harleyford-street, Kennington.
Rose, Percy, Guy's Hospital.
Saunder, Charles Stirling, Ledbury-road, Bayswater.
Scott, George Reynold Schofield, Ridge-field, North-hill-road, Headingly, Leeds.
Smith, E. Locke Cathcart, Blenheim-crescent, Notting-hill.
Tordoff, Sargen, Louis-street, Chapeltown-road, Leeds.
Vinter, Sidney Garratt, Monmouth-road, Bayswater.
Wigg, James, Hackney-road.
Wigmore, Arthur William, Inverness-terrace.
Wilson, Robert James, Endsleigh-street.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma were admitted Members of the College at an extraordinary meeting of the Council on June 27th:—

Adami, John George, Ashton House, Ashton-upon-Mersey.
Allan, James Hugh Brodie, Victoria-street, Montreal, Canada.
Anderson, Ernest Chester, The Chaplaincy, Bodmin.
Aveline, Henry Talbot Sidney, Park-place, Clifton, Bristol.
Benson, Alfred Hugh, Marchlands, Stoke Bishop, Bristol.
Brewis, Andrew Seymour, Eskdale-terrace, Newcastle-on-Tyne.
Brockway, Archibald Birt, Lambeth-palace-road.
Brook, Henry Darvill, Fareham, Hants.
Burns, Theodore Gilbert Alex., Montague-street.
Canney, Henry Edward Leigh, Belsize-avenue.
Clifford, Thomas, Thornhill-terrace, Sunderland.
Cooke, Albert William, Great Coram-street.
Cressy, Arthur Zell Claydon, Wallington, Surrey.
Dabell, Thomas James, Fernlea-road, Balham.
Day, Francis Wm. Henry Langston, Limpenhoe, Norfolk.
Deanesly, Edward, Albert-street, Regent's-park.
Edridge-Green, Frederic William, Belsize-square.
Ewbank, William Withers, Earl's-court-road, Kensington.
Feeney, John Aloysius, Cloudesley-square.
Fox, Frederic Geo. Townshend, Queen Adelaide-road, Penge.
George, Henry, Kirton-in-Lindsay.
Gill, Rainsford Foster, King Henry's-road.
Green, George Sydney, Kildare-terrace, Westbourne-park.
Halliday, Frederick Wm., Manor House, Bramley, Leeds.
Houghton, Philip Arthur, Lancaster House, Porchester-gate.
Heysted, Lionel Norton, Clapham-road.
Johnson, John Mountfort, Leek, Staffordshire.
Jones, Guy Carleton, Beaumont-street.
Jones, Henry John, Fawcett House, Kennington Oval.
Jones, Oswald Meredith, Landilo, South Wales.
Kanthack, Alfred Antunes, Granville-square.
Ker, John Errington, Royal-park, Clifton, Bristol.
Lang, George Herbert, Albert-street.
Leche, Arthur, Freeland-place, Clifton, Bristol.
Lush, Percy John Frederick, South Hampstead.
Mader, Pieter Johannes, Warrenden-park-road, Edinburgh.
May, William Page, Blackheath.
Nall, Joseph, Whaley-bridge, near Stockport.
Nixon, John, Corley, Northamptonshire.
Ord, William Wallis, Upper Brook-street.
Parker, Frederick William, Brussels-road, New Wandsworth.
Pearman, Thomas Edward Allaway, Sutherland-place.
Phillips, George Gordon Owen, Castletown-road.
Phillips, Herbert Charles, Gayton-crescent.
Poolman, Arthur Edward, Maze-pond, Borough.
Price, George Elliot, St. Owen's-street, Hereford.
Read, Bertram Thomas, Petersham-terrace.
Read, Henry George, Finsbury-square.
Rennie, George Edward, Lonsdale-square.
Rhodes, Harvey, Long-street, Middleton.
Roper, Herbert John, Clarendon-villas, Cleckheaton.
Routh, Charles Frederick, Church-terrace, Lee.
Rust, John, The Grove, Ditchington.
Saunders, Henry, High-street, Eton, Bucks.
Seagrave, George Henry, Lissington Manor, Wragby.
Staniforth, John William, Upperthorpe, Sheffield.
Thomas ohn Lewis, King-street, Brynmawr.
Thompson, Charles James, Montague-place, Poplar.
Tunstall, John Ogle, Brighton House, Olton, Birmingham.
Ward, Howard Percy, Stanwell.
Wheeldon, Frederick John, Stockport-road, Manchester.
Wisken, Charles, Hazethorpe, Heywood, near Manchester.
Wooldridge, Arthur Tyler, Winchester, Hants.

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The following gentlemen, having passed the required examinations, were admitted Licentiates in Dental Surgery of the College:—

Battersby, James, Market-street, Manchester.
Cater, Alfred Parker, Clifford's-inn, Fleet-street.
Frost, Abraham William, North-hill, Colchester.
Linnell, Percy Allison, Edge-lane, Manchester.
Lovitt, Robert James, Wells-road, Hampstead.
Petit, Charles Frederick Newton, Camden-street.
Read, Thomas George, Cavendish-square.
Robinson, Charles Cecil, Broadway, Streatham.
Rymer, James Francis (M.R.C.S. Eng.), Pevensey, Croydon.
Seymour, George, St. Augustine's-road, Camden-square.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At Examinations recently held the following out of the eighteen candidates who entered passed the first half of the examination for the Letters Testimonial of the College, under the old scheme regulations:—

Ninian N. S. Blackham, Daniel Connor, Walter B. Croker, William F. Dillon, Francis O'Mara, Daniel Power, and James F. McMonagle.

SOCIETY OF APOTHECARIES.—The following gentlemen having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received Certificates entitling them to practise as Licentiates of the Society on June 23rd:—

Archer, E. Richard Barnes, Donegal-terrace, Stoke, Devonport.
Black, George, Pembroke-road, Walthamstow, Essex.
Claremont, Constantine Cecil, Millbrook House, Hampstead-rd.
Green, George Sydney, Kelvedon, Essex.
Johnson, John Mountfort, Roche-terrace, Leek.
Owen, David, Fenwick-street, Hulme, Manchester.
Rhodes, Harvey, Long-street, Middleton, Manchester.
Ward, Howard Percy, Silverbeck, Hanwell, Middlesex.

The class list of the Arts Examination of the Society of Apothecaries has just been published. The total number of candidates, it appears, was 201. One candidate is placed in the first class, and 35 in the second. Of the remainder, 124 passed in one or more subjects, but not in all; and 41 failed to reach the required standard in any subject.

At the recent examination for the Prizes in Botany given annually to medical students by the Society, the successful candidates were the following:—

1. Helbutt Jacob Waring, St. Bartholomew's Hospital. Gold Medal.
2. Charles Arthur Kent, University College. Silver Medal.

Prizes in Botany also are given annually to young women under twenty years of age; of whom the successful candidates were the following:—

1. Sophie Margaret Fedarb, Whiteland's College, Chelsea. Gold Medal.
2. Ella Oswald, Regent's Park College. Silver Medal.

Six candidates were awarded certificates of merit.

THE recent Hospital Saturday collection in Hull has realised £286, against £311 last year.

THE TARIFF OF MODERN DRUGS.—The Spanish College of Pharmacists has appointed a committee to report upon the newer pharmaceutical preparations which are not included in the official tariff, in order that the prices at which they are dispensed may be definitely fixed.

AN inquest was held on the 23rd ult. at Colney Hatch Asylum upon the body of an inmate who had died from poisoning by carbolic acid, administered through a mistake of the dispenser. The jury returned a verdict of death by misadventure.

MEDICAL MAGISTRATE.—The Lord Chancellor has placed the name of Mr. H. J. Lloyd, L.R.C.P., &c., Ty'nycoed [illegible] upon the Commission of the Peace for the county of Merioneth, and was qualified at the Quarter Sessions held at Dolgelly on the 28th inst.

[illegible].—Mr. F. W. Alexander has been presented with a writing cabinet, a liqueur case, and an [illegible] by the officers and staff of the Mile-end Old [illegible] upon his resigning the post of assistant [illegible] institution.

[illegible] OF THE THAMES.—On the 29th ult., [illegible] Justice's Court, the grand jury found a true [illegible] Local Board of Staines for polluting the [illegible] of the town. The prosecutors are the [illegible] the Thames.

[illegible] has been presented to the [illegible]-Pharmaceutical Academy of [illegible] may be drained, as the [illegible] malarial fever which is so [illegible].

H.R.H. Princess Beatrice will present certificates to the Polytechnic classes of the St. John Ambulance Association on July 6th.

TRIESTE HOSPITAL.—£6000 has just been left to this institution by the deceased Herr Esser; £1000 of the legacy is to be applied towards building a Convalescent Home on the Kockelsberg.

SUPPOSED SUICIDE NEAR LEEDS.—On Wednesday morning last a man was found dead, with a bottle labelled "poison" by his side, on Calverley-moor, near Leeds. The deceased has since been identified as a member of a Volunteer Corps.

ON the 25th ult. the King of the Belgians paid a visit to the East London Hospital for Children at Shadwell, and on his departure from the institution expressed his satisfaction at the condition of the hospital, and announced his willingness to become a patron of the institution.

THE DROUGHT.—The prolonged drought is beginning to be inconveniently felt in different parts of the country. At Swansea the scarcity of water is such that the water committee are taking steps to utilise the water in a large disused colliery.

CHARING-CROSS MEDICAL SCHOOL.—On the 28th ult. Sir John Lubbock, M.P., presided at the distribution of medals, prizes, and certificates gained by the students of this school during the summer session of 1886 and the winter session of 1886-7. The annual report read by the Dean was of a highly satisfactory character.

HOSPITAL SATURDAY FUND.—At a meeting of the delegates of the Hospital Saturday Fund, held on Saturday evening at 41, Fleet-street, the Secretary reported that the recent street collection reached nearly £5000. The Dean of Westminster had forwarded £410, being one-sixth of the net proceeds of the service at the Abbey on the 22nd ult. on behalf of the London hospitals.

HOSPITAL AT TEHERAN.—The Shah of Persia has authorised the American missionaries to establish at Teheran a hospital in which, without regard to nationality or religion, all applicants for relief may be received for treatment. Dr. Torrence, physician to the mission, has been appointed director of the hospital, and the Shah has named him Grand Officer of the Order of the Lion and the Sun of Persia.

OPEN PRIZE COMPETITION.—The Medical Institute of Valencia, offers gold medals for the best works on the following topics:—1, Chorea; 2, Ovarian Tumours; 3, The Medicinal Plants of Valencia; 4, Any scientific subject at the option of the author. The essays, which may be written in English, are to be sent to the "*Secretario de Gobierno calle del Triador*," No. 11, by December 1st, 1887. The announcement of the results will take place on March 31st, 1888. The competition is open to medical men and pharmacists of all nationalities.

THE GOVERNMENT AND EDUCATIONAL GRANTS.—A deputation waited upon the Chancellor of the Exchequer on Thursday last to urge upon him their views on the subject of Government assistance to university colleges in England. They drew the attention of the Chancellor of the Exchequer to the fact that the local support given to university colleges in many of the largest centres of population in England has been inefficient, and they urged that these colleges have strong claims for Government aid to supplement local efforts, precedents for such grants being already established by the aid given to colleges in Scotland, Ireland, and Wales. It was pointed out that Wales, with three centres and an aggregate population within twenty miles of those centres of 452,000, enjoys grants of £12,000; Scotland, with five centres (1,260,000), £16,675; and Ireland, with three centres (400,000), £24,500; while England, with ten centres where local collegeges exist, with an aggregate population in the neighbourhood of nearly 12,000,000, receives absolutely nothing from Government. The claims of these colleges are based on their services in education in literature and pure science, higher technical instruction, and higher popular education. The deputation suggested that such grants should be applied partly in direct grants and partly in exhibitions. Mr. Goschen assured the members of the deputation of his deep interest in the educational question, and that their views would have every consideration.

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SAD ACCIDENT.—On Wednesday, whilst a party of nurses of the Leeds Infirmary were proceeding in waggonettes to Bolton Woods for their annual excursion, the horses attached to one of the vehicles became unmanageable, and the conveyance was upset. The majority of the occupants were thrown out. Five were seriously injured, and had to be conveyed as patients to the institution where they were accustomed to act as ministrants to the sick, whilst others sustained slighter injuries.

SWINE FEVER AND PLEURO-PNEUMONIA IN KENT.—The returns from the Kentish authorities on the 28th ult. show a further extension of swine fever, fresh cases having occurred at Crayford, Dartford, Teynham, and Tunbridge. During the last ten weeks pleuro-pneumonia has broken out at Cowden, and eighteen affected animals and three healthy animals that had been in contact with some so affected have been slaughtered, the sum of £292 having been paid to the owners in compensation. The compensation for the slaughter of animals affected with swine fever during the same period has amounted to £603.

MEDICAL NOTES IN PARLIAMENT.

Sanitary Condition of Dublin Garrison.

IN the House of Lords on the 23rd ult. Earl Beauchamp moved for a nominal return of all cases of febrile and respiratory disease which had occurred in the Dublin garrison since Jan. 1st, 1881, distinguishing in each case the barracks.—Lord Harris reminded the noble Earl that barracks were about to be erected on another site in Dublin, and £15,000 had been taken for that service in the estimates for the present year. As soon as the whole of the ground was obtained—there had been some legal difficulties with regard to a part of it,—cavalry barracks would be erected, and the Royal Barracks, Dublin, with regard to which there might possibly be some suspicion of insanitary condition, would be remodelled and used only for infantry. In the barrack annual estimates of this year a sum of £1089 was taken for specific improvements at the Royal Barracks, and £600 for various sanitary purposes in the Dublin barracks generally.—The Earl of Carnarvon trusted that the Government would apply themselves to remedy the insanitary condition of the Royal Barracks, the question being one of a most serious character.—Viscount Powerscourt agreed with the noble lord, the late Lord-Lieutenant of Ireland, as to the state of the Royal Barracks. He knew as a fact that the barracks in Dublin had for many years been in a very insanitary condition.—The motion was agreed to.

Dog Regulations.

In the House of Commons, in reply to Sir J. Commerell, Mr. Matthews stated that the rabies order of 1886 enabled local authorities from time to time to make regulations as they thought fit for the regulation of dogs. Such regulations, when made, only applied to the district of the local authority by whom they were made. The anomaly in the suburbs of the borough of Southampton, which were in the county of Hants, by which on one side of the street dogs might roam about unmuzzled and not under control, while on the other side of the street such liberty was an offence, was apparent, but there was no means of avoiding it, as he had no power to alter the boundaries of local authorities.

Coal Mines Regulation Bill.

The House went into committee upon this Bill, resuming the discussion of the amendment to Clause 8, the object of the amendment being to exclude girls from the operation of the clause, and so to prevent them from being employed. After a long discussion the amendment was rejected by 188 votes to 112. It was decided that no boy under twelve years of age nor girl under fourteen should be permitted to work. Other clauses, one of which rendered it compulsory for the owner, agent, or manager of every mine to keep a register of all boys, girls, and women employed in connexion with the mine, were passed, and progress reported.

On the 24th ult., the House again went into Committee on the Bill, and several clauses relating to the position and duties of the check weighers, the position of the shafts or outlets, the adequate provision of appliances for ventilation and apparatus for ascending and descending the shafts were adopted. A discussion then followed on the management of mines, which was not concluded at the hour when by the rules of the House the debate stood adjourned.

Vaccination.

On the 24th ult., in reply to Mr. Bradlaugh, Mr. Ritchie said that he was aware that in several towns, parts of towns, and villages, associations for the abolition of compulsory vaccination have issued forms in which questions have been submitted with reference to vaccination, but no precise information as to the mode in which the inquiry was conducted or in how many cases the persons applied to declined to fill up the forms distributed by those associations. No doubt the returns which have been made by the associations referred to represent that a considerable majority of those who have thought fit to fill up the forms have stated that they were opposed to vaccination. No one was more desirous than himself that vaccination should be performed with due care, and he might mention that revised instructions to vaccinators had been recently issued with a view to securing every requisite precaution in vaccination. For reasons which he had more than once stated in the House it was not his intention to propose a public inquiry.—In reply to Mr. Channing, Mr. Ritchie stated that he was aware that in some towns the provisions of the Vaccination Acts were not carried out in the same entirety as in others, but that was no reason why they should alter the law as it now exists. It was not his intention, in connexion with the Local Government Bill or otherwise, to propose any alteration of the existing law as to vaccination.

Holyhead Union.

In answer to Mr. Lewis, Mr. Ritchie said that it was the case that Dr. Harvey, who was acting as a medical inspector of the Local Government Board, visited the Holyhead Union with a view of reporting on its sanitary condition and the prevalence in the district of enteric fever and diphtheria. The Board had not declined to sanction the appointment of the medical officer of health, but they were clearly of opinion that he ought to devote more time to his duties than heretofore. Dr. Harvey is not now in the service of the Board, and since notice of the question was given Mr. Ritchie had been unable to communicate with him as to the precise time devoted to his inspection and the numbe of houses visited by him. There was no reason whatever to doubt that he devoted as much time to the inquiry as was necesary to enable him to ascertain the facts required to be reported to the Board as to the sanitary condition of the district. The sanitary authority have applied to the department for a copy of Dr. Harvey's report, and the Board on the 14th ult. furnished them with a full copy of so much of the report as referred to the sanitary condition of the district.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABELE, CHARLES JOSEPH, M.B., M.R.C.S., has been appointed Resident Medical Officer to University College Hospital.

ATKINSON, JOHN M., M.B.Lond., M.R.C.S., has been appointed Medical Officer for the Third District of the St. Mary Abbott's, Parish of Kensington, Union.

BARON, BARCLAY J., M.B., C.M.Ed., has been appointed Lecturer on Practical Pathology and Morbid Anatomy at the Bristol Medical School.

CARTER, G. A., M.D.Aber., L.R.C.S.Ed., has been appointed Medical Officer for the St. Chads District of the Lichfield Union.

DAVIDSON, J., has been appointed Public Analyst under the Food and Drugs Act for Dumfriesshire and the Burghs of Dumfries, Annan Sanquhar, and Lochmaben.

FAULKNER, WILLIAM COOKE, M.B., C.M.Ed., has been appointed Medical Officer for the Second District of the Eastbourne Union.

GABE, JOHN REES, M.R.C.S., L.S.A., has been appointed Medical Officer for the Third District of the Holborn Union.

GALLIE, C. P., M.B., C.M.Glas., has been appointed Medical Officer to the Camberwell Provident Dispensary.

GOODALL, E., M.B., B.S.Lond., has been appointed House-Physician to Guy's Hospital.

HUME, DAVID, L.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the North District of the Whitechapel Union.

JOHNSTON, DAVID, M.D.Aber., L.R.C.S.Ed., has been reappointed Consulting Physician to the Montrose Asylum and Infirmary.

JONES, JOHN TALFOURD, M.B. Lond., M.R.C.S., on resigning the Physicianship of the Brecknock County and Borough General Infirmary, has been elected Consulting Physician to that hospital.

JONES, THOMAS J., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the St. Weonard's District of the Ross Union.

LAWRENCE, SAMUEL, M.D.St. And., L.R.C.S.Ed., has been reappointed Medical Officer to the Montrose Asylum and Infirmary.

LEIGH, J. DICKINSON, M.B., C.M., L.R.C.P., L.R.C.S., L.F.P.S.Glas., has been appointed Resident Medical Officer to the Smithdown-road Workhouse, Liverpool, vice David Smart, M.B., C.M., B.Sc., resigned.

LESLIE, W. MURRAY, has been appointed Medical Examiner of Candidates under the School Board of London.

LYONS, ALFRED DE COURCY, M.B., C.M.Aber., has been appointed Medical Officer for the Seventh District of the Bedminster Union.

MANBY, E. P., M.B., B.C.Cantab., has been appointed Resident Obstetric to Guy's Hospital.

MARSH, FRANK, F.R.C.S., has been elected Honorary Surgeon to the Queen's Hospital, Birmingham, vice Furneaux Jordan, resigned.

METZGAR, C., M.R.C.S., L.R.C.P., has been appointed Resident Obstetric to Guy's Hospital.

NORMAN, F., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer to the Camberwell Provident Dispensary.

OSWALD, H. R., M.D., C.M.Edin., has been appointed Medical Officer to the Camberwell Provident Dispensary.

ROPER, H. K., M.R.C.S., L.R.C.P., has been appointed House-Surgeon to Guy's Hospital.

ROWELL, G., F.R.C.S., M.R.C.S., L.R.C.P., has been appointed House-Surgeon to Guy's Hospital.

STONE, VALENTINE, F.R.C.S.Ed., L.R.C.P.Ed., has been appointed Medical Officer to the Montrose Asylum and Infirmary.

TABOR, CHARLES J., M.B.Dur., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer for the Parish of Illogan, Redruth Union, Cornwall.

TAYLOR, A. S., M.B., B.S.Lond., has been appointed House-Physician to Guy's Hospital.

VILLANUEVA, F. HORTON, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Camberwell Provident Dispensary.

WASHBOURN, J. W., M.B., B.S.Lond., F.R.C.S., has been appointed Resident Obstetric to Guy's Hospital.

WILLIAMS, H. LLOYD, M.R.C.S., L.R.C.P.Lond., L.S.A., L.D.S.Eng., has been appointed Assistant Dental Surgeon to the Dental Hospital of London, vice Claude Rogers, M.R.C.S., L.D.S.Eng., D.M.D., promoted.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BRISTOL ROYAL INFIRMARY.—Obstetric Physician.

BRITISH MUSEUM.—Swiney Lecturer on Geology. Stipend £150 a year.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Clinical Assistant.

KENT COUNTY LUNATIC ASYLUM, Chartham Downs, near Canterbury.—Second Assistant Medical Officer. Salary £120 per annum, with furnished apartments, board, and attendance.

KILBURN, MAIDA VALE, AND ST. JOHN'S-WOOD GENERAL DISPENSARY.—Honorary Physician.

QUEEN'S HOSPITAL, Birmingham.—Casualty Surgeon. Annual honorarium £50.

SEDBERGH UNION.—Medical and Vaccination Officer for the Dent District. Salary £20 per annum, with vaccination fees.

SKIPTON UNION, North Riding of Yorkshire.—Poor Law Medical Officer for the Muker District, and Medical Officer of Health for the whole Union. Total emoluments about £107.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Physician.

SALFORD INFIRMARY.—Assistant House-Surgeon. Board, lodging, &c., but no salary.

SOUTHPORT INFIRMARY AND LOCAL DISPENSARY.—House-Surgeon. Salary £100 per annum, with board, furnished rooms, and attendance (but no stimulants).

TRURO UNION.—Medical Officer and Public Vaccinator for the District of St. Just. Salary £20 per annum, exclusive of the fees as allowed by the Local Government Board.

WESTMINSTER GENERAL DISPENSARY, Gerard-street, Soho, W.—Honorary Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

BENOLY.—On the 25th ult., at Kenninghall-road, Clapton, the wife of N. Benoly, M.D., L.R.C.P., of a daughter.

CHAMPNEYS.—On the 22nd ult., at Great Cumberland-place, the wife of Francis Henry Champneys, M.B., F.R.C.P., of a daughter.

CLAREMONT.—On the 21st ult., at Spring Vale, Green-road, Southsea, the wife of Claude C. Claremont, M.D., B.S.Lond., of a son.

JONES.—On the 22nd ult., at Shipley, Yorks, the wife of Herbert Jones, L.S.A., of a daughter.

JOUBERT.—On May 21st, at Calcutta, the wife of Surgeon-Major C. H. Joubert, of a son.

LEGGATT.—On the 19th ult., at Walton-place, S.W., the wife of Ashley Leggatt, M.B., of a daughter.

MASTERS.—On the 27th ult., at Rotterfield, Sussex, the wife of Alfred T. Masters, L.S.A., of a son.

NEWTON-CLARE.—On the 18th ult., the wife of E. S. Newton-Clare, M.R.C.S., L.S.A., Calne, Wilts, of a son.

RENTON.—On the 22nd ult., at Bowmont Lodge, Bruntsfield-terrace, Edinburgh, the wife of David Renton, M.D., Hon. Brigade Surgeon, of a son.

WOODS.—On the 18th ult., at Ebury-street, the wife of David Woods, M.D., of a son.

MARRIAGES.

COCK—FLAMANK.—On the 25th ult., at Holy Trinity Church, Exmouth John Cock, L.R.C.P.Lond., M.R.C.S., to Mary, eldest daughter of the late John Flamank, Esq., of Teignmouth, S. Devon.

JAMES—PHILIPSON.—On the 21st ult., at Christ Church, Plymouth, Charles Alfred James, M.R.C.S., L.R.C.P.Lond., to Annie Lucy, eldest daughter of the late Rev. W. Philipson, M.A., Rector of Bradley, Lincolnshire.

JOHNSON—ROBINS.—On May 26th, at St. Martin's-Church-in-the-Fields, by the Rev. F. C. Paul, John James Johnson, M.R.C.S.E., L.R.C.P.Lond., to S. Mary Robins, of Lausanne, Switzerland.

LONDON—PROWSE.—On the 23rd ult., at St. Mary's, Acton, Marcus Moore London, M.D., to Edith, daughter of the late James Prowse, of Wallingford.

MACKENZIE—CHRISTIE.—On the 15th ult., at St. Mark's Church, Surbiton, Surgeon A. W. MacKenzie, 5th Punjab Infantry, Punjab Frontier Force, to Jessie Thomson, eldest daughter of the late John Christie, of Forthbank, Stirlingshire.

POTTER—WILLIAMS.—At St. Stephen's, Paddington, by the Rev. Dr. Potter, Vicar of St. Luke's, Sheffield, father of the bridegroom, assisted by the Rev. Beresford Potter, Vicar of Wellesbourne, Warwick, brother of the bridegroom, John Hope Potter, M.R.C.S., L.R.C.P., of Cullompton, Devon, to Anita C. Williams, youngest daughter of the late J. H. Williams, Esq., of Glen Beuno, Carnarvonshire.

OBSON—CAMPION.—On the 20th ult., at Edinburgh, by the Rev. Alexander Mair, D.D., Briton Smallman Robson, M.B., C.M.Ed., of 42, Brighton-grove, Newcastle-on-Tyne, to Lizzie, daughter of the late Mr. John Campion, of Edinburgh.

DEATHS.

BRADY.—On the 23rd ult., at Greenhill, Derby, John Charles Brady, M.R.C.S., L.R.C.P.Ed.

CONOLLY.—On the 30th ult., at Wood-green, Charles Thomas Conolly, aged 55.

EAST.—On the 26th ult., suddenly, at Clarence-road, Clapton, Frederick William East, M.D., L.R.C.P., aged 28.

HALPIN.—On the 21tt ult., at his residence, Wicklow, Ireland, George H. Halpin, M.D., aged 66.

LINDEMAN.—On the 23rd ult., Sidney Herbert Lindeman, Army Medical Staff, aged 29.

LINDSAY.—On the 16th ult., of pneumonia, at 20, Clifton-road, Maida-Vale, W., William Vickress Lindsay, M.D., in his 40th year.

MORRIS.—On the 25th ult., at Hampton-park, Hereford, John Morris, F.R.C.S.Eng., D.L. and J.P. for City and County of Hereford, in his 73rd year.

THOMAS.—On the 10th ult., at his residence, Villa Nova, Barbados, West Indies, Grant Ellcock Thomas, M.D., late, and for twenty years, President of Her Majesty's Council in that island, in his 56th year.

WILSON.—On the 21st ult., at his residence, 320, Kensington, Liverpool, J. H. Wilson, M.R.C.S., M.K.Q.C.P.I., in his 66th year.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

APPLETON & Co., New York.

Transactions of the American Gynæcological Society. Vol. XI.: pp. 516, with Illustrations.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

Vaso-renal Change *v.* Bright's Disease. By J. Milner Fothergill, M.D.Edin. pp. 219, with Plates and Woodcuts.

BLACKWOOD & SONS, Edinburgh and London.

Introductory Text-book of Physical Geography. By the late D. Page, LL.D. Revised and enlarged by C. Lapworth, LL.D. Twelfth Edition. pp. 280, Illustrated.

BUREAU DU PROGRÈS MÉDICAL, Paris.

Manuel Pratique de la Garde-Malade et de l'Infirmière. Par le Dr. Bourneville. Tom. III. pp. 240—251—236, avec Illustrations.

Leçons de Clinique Chirurgicale, par Terrillon. Rédigées par M. le Dr. Routier. pp. 134.

L'Année Médicale, 1886. Publié sous le Direction du Dr. Bourneville. pp. 402.

CASSINO, S. E., Boston, U.S.A. TRÜBNER & Co., London.

A new Basis for Chemistry. By T. S. Hunt, M.A., LL.D. Cantab. pp. 165.

CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY, Marylebone-road, London.

Materia Medica, including Pharmacy, arranged according to the Synopsis of the Royal Colleges of Physicians and Surgeons of England for the first Examination. By J. Woodland, F.L.S., &c. 2s. 6d.

CHURCHILL, J. & A., New Burlington-street, London.

Hay-fever and Paroxysmal Sneezing, their Etiology and Treatment. With an Appendix on Rose Cold. By Morell Mackenzie, M.D.Lond. Fourth Edition. pp. 96.

The Mineral Waters of Vichy. By Dr. C. E. Cormack. pp. 375.

Vittel: Medical, Picturesque, and Anecdotal. By Paul Rodet, M.D. Paris. pp. 222, Illustrated.

CUPPLES & HURD, Boston, U.S.A.

Dermatitis Venenata: an Account of the Action of External Irritants on the Skin. By J. C. White, M.D. pp. 216.

GRIFFIN, C., & Co., Exeter-street, Strand, London.

An Introduction to the Study of Embryology. By Alfred C. Haddon, M.A., M.R.I.A. pp. 336, with numerous Illustrations.

HOWELL, EDWARD, Liverpool.

Aid-ology; or First Aid to the Injured in its Practical Part, Mechanical and Mental. By Lieut.-Col. C. B. Paris. pp. 106, with Illustrations. 1s. 6d.

LAUPP'SCHEN, H., Tübingen.

Die Psychischen Störungen im Kindes-alter. Von Dr. H. Emminghaus. S. 293.

LEWIS, H. K., Gower-street, London.

The Management of Pregnancy, Parturition, and the Puerperal State, Normal and Abnormal. By Paul F. Mundé, M.D. pp. 110.

Case-book for Practitioners and Students. Designed by A. T. Brand, M.D.

A Practical Treatise on the Diseases of the Rectum. By Alfred Cooper, F.R.C.S. pp. 180.

Guide to the Administration of Anæsthetics. By Henry Davis, M.R.C.S.Eng. pp. 52.

LIPPINCOTT, J. B., & Co., Philadelphia.

A Treatise on the Physiological and Therapeutic Action of Sulphate of Quinine. By C. F. Manson, M.D. pp. 164.

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LIVINGSTONE, E. & S., Edinburgh. BAILLIERE, TINDALL, & COX, London.

The Topographical Anatomy of the Child. By Johnson Lymington, M.D., F.R.S.E. pp. 75, with 14 Coloured Plates, and 33 Woodcuts.

LONGMANS, GREEN, & Co., Paternoster-row, London.

Elements of Physiological Psychology. By Prof. G. T. Ladd, Yale University. pp. 696, with Illustrations.

The Commonhealth: a Series of Essays on Health and Felicity for every-day Readers. By B. W. Richardson, M.D., F.R.S. pp. 336.

MACMILLAN & Co., London and New York.

A Course of Elementary Practical Histology. By Wm. Fearnley. pp. 363, with Illustrations.

The Climatic Treatment of Consumption. By Jas. Alex. Lindsay, M.A., M.D. pp. 228.

RENSHAW, HENRY, Strand, London.

Fairlie Clarke's Manual of the Practice of Surgery. Revised and partly rewritten by Andrew Clark, F.R.C.S. Fourth Edition. pp. 439, with 214 Engravings.

RIVINGTON, Messrs., Waterloo-place, London.

Animal Biology: an Elementary Text-book. By Prof. C. Lloyd Morgan. pp. 370, with Illustrations. 8s. 6d.

SAMPSON LOW, MARSTON, SEARLE, & RIVINGTON, Fleet-street, London.

Agriculture in some of its relations with Chemistry. By F. H. Storer, S.B., A.M. In Two Volumes. pp. 529—509.

SCOTT, WALTER, Warwick-lane, London.

Life of Charles Darwin. By G. T. Bettany. pp. 175—xxxi.

SHAW & SONS, Fetter-lane, London.

Transactions of the Epidemiological Society of London. New Series, Vol. V. pp. 170.

SIMPKIN, MARSHALL, & Co., Stationers' Hall-court, London. MENZIES & Co., Edinburgh.

The Scottish Sportsman and Tourist. By Robert Hall. pp. 559, with Illustrations. 1s.

SMITH, ELDER, & Co., Waterloo-place, London.

Von Ziemssen's Handbook of General Therapeutics. Vol. VI.: Electro-therapeutics; by William Erb, M.D. Vol. VII.: Therapeutics of Circulatory Derangements; by Prof. M. J. Oertel, M.D. pp. 732—276.

Dictionary of National Biography. Edited by Leslie Stephen. Vol. XI.: Clater-Condell. pp. 470.

A Treatise on the Theory and Practice of Medicine. By J. S. Bristowe, M.D., F.R.S. Sixth Edition. pp. 1269.

STOCK, ELLIOTT, Paternoster-row, London.

The New Religio Medici: Chapters on Present Day Subjects. By Frederick Robinson, M.D., F.R.C.P. pp. 172.

TRÜBNER & Co., Ludgate-hill, London.

Proceedings of the Society for Psychical Research. Part XI. pp. 665. 4s.

VEIT & Co., Leipzig.

Anatomische Untersuchungen am Menschlichen Rectum, und eine neue Methode der Mastdarminspection. Von Dr. W. J. Otis, aus Boston. Erster Theil: Die Sacculi des Rectum. Mit einem Holzschnitt und acht Tafeln.

Boarding-out as a Method of Pauper Education and a Check on Hereditary Pauperism; by Wilhelmina L. Hall, F.R.Met.S.—Journal of the College of Science, Imperial University, Japan, Vol. I., Part 2. Humanism v. Theism; by Robert Lewins, M.D.—A new Explanation of the Renal Troubles of Pregnancy and Labour; by A. F. A. King, M.D.—On the Modern Treatment of Urethritis; by G. R. Brewer, M.D. (Wood, New York). — Beiträge zur klinischen Chirurgie; herausgegeben von Dr. Paul Bruns; dritter Band, erstes Heft (Laupp'schen, Tübingen).—Sur le Traitement aseptique de la Phtisie pulmonaire; par Drs. A. Filleau et Léon-Petit (Doin, Paris).—A Questão dos Vinhos; pelo Dr. Campos da Paz.—The Influence of Sex in Health and Disease; by Jas. Jamieson, M.D. (Stillwell, Melbourne). —Picturesque Wales; edited by Godfrey Turner. 1s. 6d. — Zur Pathologie und Hydrotherapie der Lungenphthise; von Prof. Dr. W. Winternitz (Toeplitz and Deuticke, Leipzig).—Etudes sur l'Hydrothérapie: par le Dr. P. Glatz.—Untersuchungen über Heterogenese; von Prof. A. P. Fokker.—The Nature of Fever (Gulstonian Lectures); by Donald MacAlister, M.D., F.R.C.P. (Macmillan).—On Forecasting the Weather; by B. G. Jenkins (Hayez, Brussels).—Ague, or Intermittent Fever; by M. D. O'Connell, M.D. &c. (Thacker, Calcutta).—Ovariotomy at the Samaritan Free Hospital; by Mons. H. Varnier (Stott, London).—Die pathologische Anatomie und Physiologie des Joh. Bapt. Morgagni (1682-1771); von Kreis-Physikus Dr. F. Falk (Hirschwald, Berlin).—Common Infective Fevers and the Use of Disinfectants, with Notes on the Health of Children; by Wm. Squire, M.D. (Churchills).—Malarial Hæmorrhage; by O. F. Manson, M.D.—Index Medicus, Vol. IX., No. 5.—Income-tax, how to get it Refunded; by A. Chapman, Esq. (E. Wilson).—On Sore-throat; by J. Haddon, M.A., M.D. 1s.—Magazines for July: Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Good Words, Sunday Magazine, Scribner's Magazine. — Handbuch der Physiologischen Optik; von H. v. Helmholtz: vierte Lieferung (Voss, Hamburgh).—Intelligence in the Van; by Horace Dobell, M.D. (Wertheimer).

Medical Diary for the ensuing Week.

Monday, July 4.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

Tuesday, July 5.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 6.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Steavenson, Dr. Horrocks, and others.—Adjourned discussion on Dr. Walter Griffith's paper on Tubo-ovarian Cysts.—Dr. Matthews Duncan: Diabetes Insipidus in Women.—Dr. Champneys: (1) Some Causes of Retention of the Membranes; (2) Note on the Relation between the Position of the Placenta and the Insertion of the Cord.

Thursday, July 7.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—4 P.M. Report of Council. Professor Alex. Macalister: A Note on Some Common Errors in Descriptions of the Brachialis Anticus Muscle.—Dr. Brooks (Dublin): On the Short Muscles of the Pollux and Hallux of the Anthropoid Apes, with special reference to the Opponens Hallucis (with specimens).—Mr. J. Bland Sutton: A Critical Study in Cranial Morphology.—Messrs. Rickman J. Godlee and C. Stonham: Casts of Bronchi.—Mr. James Berry: Notes on the Anatomy of the Thyroid Body (with specimens).—Mr. W. Bruce Clarke: Apparatus for Mounting Specimens.—Dr. W. J. Collins: Anatomical Specimens.—Mr. Lockwood: Cases for Mounting Frozen Sections.—Professor Curnow: Abnormal Subclavian Artery (with specimen).

Friday, July 8.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Election of office bearers. Living and card specimens at 8 P.M. Mr. W. Spencer Watson: (1) Sequel to a case of Hæmorrhagic Glaucoma (with specimen); (2) Case of Serpiginous Nebula of Cornea.—Mr. Lawford: A case of Ophthalmoplegia Externa.—Mr. J. Hutchinson, jun., and Dr. Robinson: Case of Ophthalmoplegia Externa, with Autopsy.—Mr. Cross (Bristol): Sympathetic Ophthalmitis occurring after Evisceration.

Saturday, July 9.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 30th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
June 24	30·28	N.E.	56	54	96	65	54	...	Overcast
,, 25	30·26	E.	55	53	96	70	53	...	Overcast
,, 26	30·25	E.	56	53	...	62	50	...	Overcast
,, 27	30·22	N.E.	58	54	116	85	50	...	Hazy
,, 28	30·24	E.	62	57	105	74	56	...	Cloudy
,, 29	30·40	E.	66	60	101	74	60	...	Hazy
,, 30	30·47	N.E.	60	57	82	64	57	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

"A WORM IN AN EGG."

THE specimen (see THE LANCET, June 18th, page 1269), after being immersed in water for several days, was carefully examined. It had a superficial resemblance to a tapeworm, being about two inches and a half in length and a quarter of an inch in width at its posterior truncated extremity, there being, further, an appearance of a head at the opposite extremity. Moreover, it had an obscurely segmented character. The microscopic examination did not bear this surmise out; for it showed the mass to be quite structureless, and infiltrated with lime salts in its outer layers, which were laminated. It is much to be regretted that the specimen was not placed in a preservative solution as soon as it was obtained, as it had doubtless undergone considerable change from desiccation.

Dr. Wedgwood.—The Anchor line plying from Glasgow to New York offers to members of the profession return tickets to the United States capital for £20.

Surgeon and Apothecary might try bismuth, hydrocyanic acid, &c., and feed the patient frequently on small doses of iced beef-juice, milk, &c.

Mr. J. Lewtas.—In an early number.

INVERSION OF THE UTERUS.

To the Editors of THE LANCET.

SIRS,—Dr. Montagu Handfield Jones, in describing two cases of acute inversion of the uterus in THE LANCET of this week, considers that the cause of one of them was the shortness of the umbilical cord—i.e., fifteen inches. I doubt much if with this length of cord the cause he mentions could have operated. I have before me notes of two cases of short cord, in one of which the placenta was adherent high up in an elongated cornu, the cord measuring ten inches; in the other, with non-adherent placenta, it measured just nine inches and a half. In neither case was there any attempt at inversion. Indeed, in the first case the uterus was in a state of hour-glass contraction.

I am, Sirs, yours truly,

F. R. HUMPHREYS, L.R.C.P., &c.

Queen's-crescent, N.W., June 27th, 1887.

"AN URGENT CASE."

DR. GLOVER desires to acknowledge the receipt of £5 5s. towards the above case (THE LANCET, May 28th) from "W. M. B."

Mr. J. Botten.—Foreign diplomas are recognised in Turkey; but we believe some formality has to be gone through at the Military Medical School before the right to practise is fully and officially granted.

Public Vaccinator.—Unless our correspondent could show a very special and satisfactory reason for vaccinating in less than four places, he would not receive the grant.

M. Jones.—The piercing the ear may act as a counter-irritant.

THE JUBILEE BOOK OF THE CHURCH OF ENGLAND TEMPERANCE SOCIETY.

WE have just received a copy of this book, which is also a Guide-book to the bazaar now being held on behalf of the Society in the Duke of Wellington's Riding School, Knightsbridge. It is edited by the Rev. J. Grant Mills, M.A., Hospitaller of St. Thomas's Hospital, is profusely illustrated, and has been well produced by Messrs. Cassell & Co. Among the contributors are H.R.H. the Princess Beatrice, Professor Herkomer, A.R.A.; Mr. Lewis Morris, who sends an excellent poem on "Temperance," the temperance of the whole man; Edna Lyall, John Shorthouse, Mr. Molesworth, Mr. A. J. Caldecott, and Canon Ellison, who has written the history of the Society from its formation, a purely total abstinence society in 1862, to its present broad basis: "Union and co-operation, on perfectly equal terms, between those who use and those who abstain from intoxicating drinks." Special features of the book are the illustrations of the stalls, which all have reference to the diocese, county, or the various departments of the Society's work which they represent. At the end of the book there is a programme of the various entertainments to be held during the bazaar, but it will be of more than passing value as a guide during the week, from the interesting history of the Society which it contains, and its contributions from so many well-known artists and authors. The production reflects great credit on its well-known and energetic editor and those who have assisted him.

A Locum.—We think the practitioner should allow the *locum tenens* to retain the fee in such a case; but legally it is to be considered as belonging to the former. A *locum tenens* cannot be regarded as an independent practitioner.

Messrs. Woodhouse and Rawson.—A specimen of the apparatus should be forwarded for our inspection.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

To the Editors of THE LANCET.

SIRS,—I will thank you to be so good as to insert the underadded copy of a letter received from the Under-Secretary of State in your next issue of THE LANCET. I am, Sirs, yours very truly,

June 27th, 1887. J. HENRY RUTHERFORD, Secretary.

"Whitehall, 16th June, 1887.

"Sir,—With reference to your letter of the 18th ultimo, I am directed by the Secretary of State to acquaint you that he has laid before the Queen the application of the Governors of the Newcastle-upon-Tyne Infirmary for permission to adopt the title 'Royal' in the name of that institution, and that her Majesty has been graciously pleased to accede to their request, and to command that the infirmary be styled in future 'The Royal Infirmary for the Counties of Newcastle-upon-Tyne, Northumberland, and Durham.'

"I am, Sir, your obedient servant,

"GODFREY LUSHINGTON.

"The Secretary to the Infirmary, Newcastle-upon-Tyne."

"THE SILENCE OF DEAN MAITLAND."

IT will be interesting to many of our readers to learn that the author of the above work, which we noticed in our last issue, is the daughter of an old and much respected general practitioner in the Isle of Wight.

A Widow.—It seems probable that the unpleasant difficulty arises from some vagueness in the terms of the contract or understanding between our correspondent and her former medical attendant. A "consultation" used by a general practitioner may mean seeing a patient at the house of the medical man, as distinguished from a "visit" at the patient's house. We are not told in the letter sent us whether the charge for a visit in the original contract was to cover a visit to any number of persons, or only to one. These omissions make it impossible for us to advise dogmatically in the matter. A medical man is not generally asked for particulars, but he ought to be ready to give them when reasonable and courteous request is made. We should advise our correspondent to continue her efforts to close the account amicably. We see no good in publishing the letter, which, of course, is a one-sided statement.

Dr. G. Ria (Naples).—We regret that we cannot at present extend our exchange list.

R. M. B. should address his question to his ordinary medical attendant.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—At page 144 of my recently published "Treatise on Diseases of the Skin" there is an unfortunate printer's error. The first prescription on that page, marked with an asterisk, is for an arsenical mixture, and the dose is stated to be a tablespoonful. It should have been a *teaspoonful*. This mistake has been corrected in the copies still in the publishers' hands; but as there are no means of communicating directly with all those who have already purchased the book, I shall feel obliged if you will kindly intimate this correction in THE LANCET.

I am, Sirs, your obedient servant,

Glasgow, June 28rd, 1887. T. MCCALL ANDERSON.

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THE LEMON DECOCTION IN MALARIA.

THIS remedy has, besides its anti-malarial efficacy, distinct value as a tonic to the stomach. Its preparation is thus given by Dr. Tommasi-Crudeli, who first introduced it to the profession:—Take a fresh lemon; cut it in thin slices, rind and all; boil it in three tumblerfuls of water in an earthen pot which had not been previously used for culinary purposes; prolong the boiling till the liquid contents of the pot have been reduced to one-third—that is, to the volume of one tumbler. Pass the decoction through muslin, squeezing out the residue of the lemon, and let it cool for several hours. Let the whole be taken in the early morning, fasting. "The drink," adds Tommasi-Crudeli, "is rather bitter, but not distastefully so; it is easily taken by delicate women and children, and when it has reached the stomach it induces the pleasant sensation peculiar to tonic remedies." Its use is especially indicated in the tropics.

L.S.A.—Our correspondent's certificates were ample. He should complain of the remarks of the registrar of deaths to the Registrar-General. Benefit societies are entitled to ask for a copy of the death certificate from the registrar; but it is intolerable that he should disparage certificates on the faith of which he himself registers deaths. Medical men are surely entitled to different treatment from registrars.

W. W. is referred to our advertising columns.

THE GLASGOW LOCK HOSPITAL.

To the Editors of THE LANCET.

SIRS,—In your memoranda upon lock hospitals in your last issue you omit to mention that in addition to the Glasgow Lock Hospital for Females there is a ward containing fourteen beds set apart in this infirmary for the treatment of male patients suffering from venereal disease. These patients were formerly treated in the general wards; but, as this was obviously improper, a special ward was provided for them many years ago, under the charge of a male nurse. It is, so far as I know, the only place in the city for the treatment of this disease in males, and it seems to be sufficient, as it is seldom the beds are fully occupied.

I am, Sirs, yours truly,

M. THOMAS, M.D., Supt.

Royal Infirmary, Glasgow, June 27th, 1887.

CASE OF VOMITING PERSISTING FOR THIRTEEN YEARS.

To the Editors of THE LANCET.

SIRS,—I have under my care a case of obstinate vomiting which has been going on for thirteen years. It has been under the care of several physicians, but no benefit has been derived. I have tried all the usual remedies for such cases, but so far without success. Tongue red, papillæ prominent, nose retracted, pinched and haggard expression, bowels constipated. Commences in early morning, subsides towards midday. No history of alcoholism, cancer, or ulcer. I should be much obliged if any of your readers could favour me with any idea as to the line of treatment to be adopted.

I am, Sirs, yours truly,

June 19th, 1887. M.R.C.S. ENG.

"REMOVAL OF BREAST TUMOUR WITH THE AID OF COCAINE."

To the Editors of THE LANCET.

SIRS,—In answer to the note of Mr. Tandy, I beg to state that my sole object in claiming any priority was to elicit further correspondence on the subject, in order to ascertain the extent to which cocaine has so far been pushed, and with what results. As a matter of fact, the operation was performed on April 1st.

I am, Sir, yours faithfully,

Putney, June 24th, 1887. EDW. F. GRÜN.

COMMUNICATIONS not noticed in the present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Goodhart, London; Dr. Lindsay, Belfast; Dr. Savage London; Dr. Steavenson, London; Dr. McCall Anderson, Glasgow; Mr. Da Costa, Kingston, Jamaica; Dr. Thomas, Glasgow; Mr. Hulme, Birmingham; Mr. Marcus Gunn, London; Mr. Mansell Moullin; Mr. White, Wolverhampton; Dr. Macgregor, Wellington; Mr. J. Attfield, London; Dr. Beresford Ryley, London; Mr. F. R. Humphreys, London; Messrs. C. Griffin and Co., London; Mr. G. J. Monkton, London; Messrs. Street and Co., London; Surg.-Major Fleming, Edinburgh; Messrs. Robertson and Scott, Edinburgh; Mr. W. A. E. Waller, Rugby; Mr. R. Bruce Low, Helmsley; Mr. W. H. Symons, London; Messrs. Mottershead and Co., Manchester; Mr. Suchorowski, London; Messrs. Oliver and Boyd, Edinburgh; Mr. J. J. A. Raye, Dulwich; Messrs. Cassell and Co., London; Mr. Grün, Putney; Mr. Wedgwood; Messrs. Kegan Paul and Co., London; Mr. C. Williams, Norwich; Messrs. Burgoyne and Co., London; Dr. H. Dobell, Bournemouth; Messrs. Hooper and Co., London; Surg.-Major Hartley; Mr. C. E. Monro, Penge; Mr. J. Lambert, London; Mr. R. Davy, London; Mr. J. H. Rutherford, Newcastle-on-Tyne; Mr. B. Relton, Rugby; Mr. G. Wright; Mr. J. Lewtas, London; Mr. J. Chambers, Oldham; Messrs. Johnson and Co., Southport; Mr. A. Gray, Dalton-in-Furness; Messrs. Orridge and Co., London; Dr. O. F. Manson, Richmond, Va.; Messrs. Smith and Son., Manchester; Mr. C. H. Wells, London; Messrs. Blake and Co., Leeds; Mr. Bateman, London; Mr. Mitchell, Derby; Dr. C. S. Taylor, London; Mr. G. Padley, Swansea; Dr. Peregrine; Mr. H. C. Gillies, Brockley; Dr. Clermont, Paris; Mr. Marrack, Truro; Dr. S. Fenwick, London; Mr. Fiske, Dawlish; Mr. J. M. Richards, London; Mr. Stephenson, Kew; Dr. Reid, Staffordshire; Mr. Alcan; Dr. R. Lee, London; Dr. Chapman, Paris; Dr. Lettes, Dundee; Mr. Flint, Southampton; Mr. Hague, London; Mr. Purnell, London; Mr. Sell, London; Mr. Morgan, Kinnerley; Mrs. Browne, London; Dr. Bowen, Rangoon; Mr. Hollee, Westgate-on-Sea; Mr. Hyde; Mr. Griffith, Lampeter; Mr. Fox, Birmingham; Mr. Yates, Walworth; Mr. Geace, St. Andrews; Mr. Saunders, Manchester; Mr. Leighton, Cheltenham; Mr. Robinson, Sedburgh; Mrs. Warren; One of its Members; Anxious; Alpha; M. S.; M.B.; C. J. B.; A. De B.; C. L.; An Old Oxonian; A Scalpel; A Widow; Secretary, Bristol; Vita brevis, gloria æterna; J. G. O., Cranford; Optimus, Leeds; Lady Superintendent, Worthing.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Jennings, Coleford; Mr. Haigh, Wilton-under-Wychtwood; Messrs. Fannin and Co., Dublin; Mr. Vincent, Ryde; Mr. Wakefield; Mr. Fox, Bishop Auckland; Mrs. Theobald, Leicester; Mr. Huggins, Malvern; Mr. G. Lawson, London; Mr. Swinburne, Worthing; Messrs. Hewlett and Co., London; Mr. Baker, York; Mr. Tophop, Kensington; Mr. Mason, Chelsea; Mr. Dolbrasheow, Constantinople; Messrs. Reynolds and Co., Leeds; Mr. Townson, Chester; Mr. Miller, Cleveland; Dr. Belas, Bonchurch; Dr. Parkinson, Manchester; Dr. Dawson, Southbourne; Mr. Mitchell, Manchester; Mr. Hunt, Southampton; Mr. Burchall, Liverpool; Miss Gisnes, Maidstone; Mr. James M. Laing, Petersham; Nurses, Christchurch; Medicus, Midland; M. M., London; Locum, Bacup; W., Blackburn; D., Dublin; J. T. D., Dalston; Surgeon, Bolton; Liber; V. B., Bromley; L. W. H., Llanelly; C. Y.; J. B. B., Norwood; T. P. N.; B. S. R.; Surgeon, Highbury; Domas; J. T. H., Kennington; Medicus, Caersws; Alpha, Everton; Medicus, Sheffield; Dispenser; Medicus, Hackney; Alpha, Leicester.

Bristol Observer, Scotsman, Isle of Man Examiner, Willesden and Kilburn Herald, Colonial Standard, Hampshire Independent, Hong Kong Daily Press, Echo, Halifax (Novia Scotia) Morning Chronicle, Southwark Standard, Burton Chronicle, Glasgow Herald, Gl' Incurabili, &c., have been received.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Clinical Lecture
ON
DYSPNŒA, ESPECIALLY ON THE DYSPNŒA OF ASTHMA AND BRONCHITIS, AND THE EFFECTS OF THE NITRITES UPON IT.

Delivered in the Edinburgh Royal Infirmary, December 17th, 1886,

BY THOS. R. FRASER, M.D., F.R.S., F.R.C.P.E.,
PROFESSOR OF MATERIA MEDICA AND CLINICAL MEDICINE IN THE UNIVERSITY OF EDINBURGH.

GENTLEMEN,—In the study of disease in the wards of the infirmary your attention is very frequently drawn to the occurrence of dyspnœa, or difficulty in breathing. You have seen that it presents itself in various forms and degrees, in various conditions of the patient, and in connexion with many diseases. We have together studied several of its forms and varieties. We have seen it associated with disease of the heart, with morbid changes in the larger air passages, with pain in the thorax, and with diseases of the lungs; and it has been our endeavour to distinguish in each case any peculiarities in the phenomena which accompany it. We have seen, for instance, in cardiac disease, that it is associated with evidence of valvular lesions, or of dilatation of the heart, or of disease of the large bloodvessels that it is frequently paroxysmal, the paroxysms being induced by physical exertion or mental excitement, although even in the interval between each exacerbation it does not altogether depart; and that pain in the region of the heart or extending into the shoulders and arms is often one of its superadded miseries. In disease of the larger air passages, such as œdema or spasm of the glottis, constriction of the trachea, or paralysis of the vocal cords, we have several times observed that the great difficulty in respiration seems to occur during inspiration, which is laboured and prolonged, while the expiration is relatively brief and without effort. In thoracic pain of pleuritic or neuralgic origin, the attitude of the patient, and especially the modifications in posture and movement adopted by him, are almost sufficient to characterise the dyspnœa apart from the readily discoverable conditions by which the pain is induced. In asthma, the opportunities for investigating the phenomena have not been altogether favourable, as our cases have presented the peculiarity, which so frequently occurs in this disease, that the dyspnœa has made its appearance only during the night or early morning. Most of you, however, are familiar with the circumstances that in asthma the dyspnœa is characterised by loud wheezing sounds and great prolongation of expiration, that it is paroxysmal in its manifestation, leaving the patient free or nearly so from all symptoms of breathlessness in the intervals, and that no structural alterations have as yet been discovered to account for the intense distress which marks each paroxysm. On the other hand, examples of the dyspnœa of bronchitis have been abundantly presented to you for consideration. You have seen that it is associated sometimes with acute, sometimes with chronic inflammation of the bronchial tubes, that it very frequently occurs in patients suffering from emphysema, that it is often paroxysmal, and that it is accompanied with pain or uneasiness over the front of the chest, with a sputum that may be tenacious or frothy and watery, and with such auscultatory phenomena as rhonchi and sibilations, crepitations, and prolonged expiration.

While the dyspnœa in each of these conditions would supply abundant material for full and elaborate discussion, my intention to-day is to consider with you in further detail some of the phenomena presented by it in bronchitis and asthma only. I make this selection because our attention has been given in a more special manner during the last few weeks to a consideration of the breathlessness of these two diseases. I group them together because the dyspnœa frequently presents in them many points of similarity, and when it does so I believe that a large element in its production is an element operating in both diseases.

It is in pure (or nervous) asthma that dyspnœa assumes the most intense degree possible in disease of the respiratory apparatus. When the paroxysm occurs at night, the patient may go to bed feeling quite well, but is awakened from sleep by a feeling of suffocation. He sits up in bed in various constrained positions, or he is impelled to leave his bed altogether and walk about, resting now and again to recover strength. He struggles violently for breath; inspiration and expiration succeed each other rapidly for a short time; then expiration becomes brief, the chest seems to become rigid in full expiration, violent respiratory efforts are made, with but little change in the volume of the thorax, and the extraordinary muscles of respiration are brought into play with very inadequate results. After this state of distress has lasted for some time, it may be for hours, relief is obtained, and the patient returns to bed and usually soon falls asleep; but on many occasions this sleep may in a short time be again interrupted by a recurrence of the paroxysm. The great difficulty in asthma seems to be to expel air from the chest, and the expiratory muscles are strained to the utmost in the effort to accomplish this. If the condition of the patient during the period of dyspnœa be further examined, several other phenomena of significance are observed. The normal relationship between inspiration and expiration is found to be reversed, and in place of inspiration being longer than expiration, the latter seems sometimes to be two or three times as long as inspiration. The contrast with dyspnœa produced by constriction of the glottis or trachea, where inspiration is greatly lengthened in its duration, is therefore a very pronounced one. The diaphragm, further, is unduly low, the chest is expanded, and the percussion note is markedly resonant; while, on auscultating the chest, not only is confirmation obtained of the great prolongation of expiration, but every variety of dry râle is heard, snoring, creaking, and whistling sounds displacing each other in different parts of the chest.

Now, what is the cause of this intense dyspnœa? No anatomical lesions, as I have stated, have been found that are sufficient to account for it. It was explained by Willis, and subsequently by Cullen, Romberg, Salter, and others, as due to a spasmodic affection of the muscles and nerves of respiration, and especially of the muscles in the bronchi; and this explanation was generally coincided in for more than half a century. It has not, however, been allowed to remain in undisputed possession of the field, for at various times other and opposing explanations have been advanced. For example, Leyden considered that the asthmatic dyspnœa is caused by irritation of the vagus terminations in the bronchi produced by minute sharp-pointed crystals; but this explanation, after all, involves the production of a spasmodic constriction of the bronchi by reflex irritation. Wintrich denied that spasmodic contraction of the bronchi is possible, and maintained that the only explanation consistent with the phenomena is to be found in tonic spasm of the diaphragm, or of the diaphragm aided by the other ordinary muscles of respiration. Traube, Weber, and Sir Andrew Clark have ascribed the paroxysm to sudden congestive swellings of the bronchial mucous membrane, through the agency of vaso-motor nerves, the changes produced being likened by Clark to the swellings of the skin in nettle rash.

These views represent the more important of the contending explanations that have been advanced. It cannot be pretended that any single explanation has yet been established by the evidence that has been produced in its favour, although I think that the explanation which accounts for the essential phenomena of an asthmatic paroxysm by spasmodic contraction of the bronchial muscles is still the most generally accepted one. But while a spasmodic influence has thus been fully recognised in the production of the dyspnœa and of other of the essential phenomena of asthma, the existence of a spasm element in bronchitis has been but partially acknowledged. Indeed, so far as my acquaintance with the literature of this disease is concerned, spasm of the bronchial muscles is by the greater number of writers ignored as a condition that is ever, much less that is frequently, present. Bronchitis, however, resembles asthma in so far, at least, that in a considerable number of cases dyspnœa is frequently an important sym-

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ptom, and that rhonchi and sibilations are among the most significant of its phenomena. The production of these râles has generally been attributed to stenosis of the bronchial tubes caused by engorgement, or swellings, or puckerings of the lining membrane, or to deposits of adhesive mucus upon this membrane.

It cannot, gentlemen, be too frequently impresseed upon your consideration that the ultimate objects of all our observations, studies, and investigations in pathology and medicine are the relief of suffering and the cure of disease. These objects will be the more certainly accomplished, the more accurate is our knowledge of the conditions that produce the symptoms of the diseases. I am not without hope that an illustration of this almost self-evident proposition may be found in some facts bearing upon the causation of the dyspnœa in asthma and in bronchitis, which I shall now proceed to describe. Let me first remind you that there are several well-recognised homologies in the structure and nerve connexions of the bronchi and of the smaller blood-vessels. They both contain non-striped muscle, and both are innervated by partly independent centres distributed in their walls, and by nerves proceeding to and from centres remote from themselves.

Although the effects of pharmacological agents upon the functions of the muscle and nerves of bloodvessels have been elaborately studied, their effects upon the functions of these structures in the bronchi have been but little investigated. Among the most striking of the results that have been obtained by pharmacology in the study of the influence of agents upon the bloodvessels is the demonstration that various nitrites cause a dilatation of the bloodvessels by an action restricted to the bloodvessels themselves. It was suggested to me by this fact that light might be thrown upon the production of dyspnœa in asthma and bronchitis by examining how far the dyspnœa and some of its associated phenomena could be modified by the action of nitrites. It seemed to be of importance to include in this observation not only the influence upon the dyspnœa (for any influence on it alone might be explained by an action upon nerve structures remote from the bronchi themselves), but also the influence upon the associated phenomena which have their seat of origin, without doubt or ambiguity, in the bronchi themselves. The associated phenomena, to which I attach the greatest importance, are the dry râles, audible in these diseases when the chest is auscultated, and conspicuously present along with the dyspnœa.

The first observation I made with these objects in view was in 1880, on a patient twenty-two years of age, of markedly nervous diathesis, who had suffered from asthma for several weeks. The chest was auscultated during an asthmatic paroxysm of moderate severity, and it was found that cooing, whistling, and creaking râles were abundantly present. She inhaled during fifty seconds a few minims of nitrite of amyl. Two minutes after the inhalation had been commenced the râles had entirely disappeared and her breathing had become quite easy. In another minute the râles had returned and the breathing had become more difficult. After an interval of six minutes, when both the râles and dyspnœa were present in their original abundance and severity, she again inhaled nitrite of amyl, this time for thirty seconds, and in forty-five seconds after commencing the inhalation the râles had entirely disappeared and the breathing was perfectly unembarrassed. In five minutes afterwards, the original state of breathlessness, with its accompanying auscultatory phenomena, had returned. After an interval of ten minutes, nitrite of amyl was a third time inhaled, with essentially the same results as on the previous two occasions.

This observation showed in a very striking manner that nitrite of amyl very rapidly caused every sensation of dyspnœa to disappear. The coincident effects of the highest interest were that so long as the dyspnœa was removed, and only so long, were the cooing, whistling, and creaking sounds silenced, and so long also were there present those well-known modifications in the pulse characteristics which indicate dilatation of bloodvessels. Since this observation was made I have accumulated much evidence of a similar kind. In a few other cases nitrite of ethyl as well as nitrite of amyl were given by inhalation, but in the greatest number of the observations the administration was effected by the introduction of the nitrite into the stomach, and thus a much more prolonged action was obtained. In this manner, not only has the influence of nitrite of amyl and of ethyl been examined, but also that of nitrite of sodium and of the nitrite-acting substance, nitro-glycerine. Further, in several cases of severe asthmatic orthopnœa occurring during the night, remarkable alleviation, with coincident silencing of the râles previously abundant in the chest, were obtained in several observations made for me by Dr. Vaughan and Mr. Toft on patients in the wards.

In bronchitis accompanied with dyspnœa similar effects were also obtained. The dyspnœa was removed, and at the same time the previously existing dry râles disappeared. Let me illustrate this action of nitrites in two patients suffering from bronchitis, now placed before you. One of the patients has been in the wards for several weeks, and from previous experience I can confidently predict the changes that will occur. He has suffered at intervals during the last fifteen years from bronchitis, the lungs are emphysematous, and his chief complaints at present are breathlessness and cough with a rather adhesive and slightly frothy sputum of small quantity. The other patient was admitted into the hospital only yesterday, but I shall be much disappointed if the observation I shall immediately invite you to make on her should fail as an illustration. Her cough originated four months ago from a severe wetting. You observe that she has very obvious dyspnœa, and the sputum which I show you is large in amount, watery, and contains much froth. Both patients are suffering at the present moment from dyspnœa, and, as you have heard from the four members of the class who are examining the patients, two of whom are continuously auscultating the chest of each patient, there are now associated with the dyspnœa an abundance of snoring, whistling, and cooing râles. I now ask Dr. Jeffcoat, the resident physician, to give to one patient four minims of nitrite of amyl in a little water, and to the other two minims of a 1 per cent. solution of nitro-glycerine also mixed with a little water; and the gentlemen who are auscultating will at once inform us of any change in the sounds which they hear, while I have asked the patients to announce the first change which they experience in their sensations. It is only a very few minutes since the medicines have been given, and already you have heard, almost simultaneously, that silence prevails in the chests where before there was a continuous succession of sounds, and that both patients find that they no longer experience any dyspnœa.

The significance of the facts I have now brought before you in connexion with the influence of nitrites upon the dyspnœa of asthma and bronchitis, some of which you have yourselves assisted in observing, is almost self-apparent. They appear to throw light upon the production of the dyspnœa of asthma, and in doing so to confirm the conclusion otherwise arrived at by Biermer that the dyspnœa cannot find its chief explanation in spasm of the diaphragm. They appear also to show that this dyspnœa does not depend on suddenly produced and vanishing constrictions of the bronchial tubes, caused by swellings of a hyperæmic, herpetic, or urticaria-like character; for the means that have been successfully employed to control and terminate the dyspnœa are the very means which should, according to the theory which involves constrictions of this kind, be the most efficient for increasing and prolonging it. Relief of the dyspnœa and removal of the accompanying râles were simultaneously or nearly simultaneously produced by nitrites, whose action is to increase hyperæmia by dilating bloodvessels. As nitrites, however, lessen the contraction of non-striped muscle, it appears to follow that the râles which accompany the dyspnœa of asthma are produced by spasmodic contractions of the bronchial muscles, that the dyspnœa is mainly the result of spasmodic constrictions of the bronchial tubes, and that therefore the old doctrine which attributes the asthmatic paroxysm to spasm of the bronchi is in all probability the correct doctrine. In reference to their bearing upon the dyspnœa of bronchitis we have these facts to assist us: that whenever rhonchi and sibilations accompanying dyspnœa were removed by nitrites, the dyspnœa was also removed or lessened; but when the rhonchi or sibilations were unaffected the dyspnœa was not appreciably lessened. It could not be expected that in all cases of bronchitis the administration of nitrites would be followed by complete relief of the dyspnœa and complete removal of the auscultatory phenomena. In this disease dyspnœa is sometimes produced by mucus or other inflammatory products accumulated in the bronchial tubes, and rhonchi are sometimes heard which are caused by a viscous condition of these accumulated products, and even by accumulations of a similar kind in the

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threat. In such cases nitrites fail to give complete relief, and they fail to silence the abnormal sounds. That they should fail is a confirmation rather than a refutation of the opinion which I wish emphatically to state—that stenosis of the bronchi due to spasmodic contraction of the bronchial muscles is a frequent cause of the dyspnœa of ordinary bronchitis.

I have not obtained any facts that would justify the preference of any one of the nitrites because it possesses therapeutic advantages over the others in the treatment of asthma or bronchitis. There are, however, conveniences of administration which lead me to give a preference to nitrite of sodium and to nitro-glycerine. They are both extremely stable, and they can readily be given in solution, either by the stomach or by subcutaneous injection. These advantages are not possessed by nitrite of amyl and nitrite of ethyl, and even the latter substance in the alcoholic solution of the *spiritus ætheris nitrosi* of the Pharmacopœia is notoriously a very uncertain preparation. It is probable that the favour with which this preparation is, notwithstanding, regarded, is due not only to the action on the circulation which it shares with the other nitrites, but also to its previously unrecognised influence on dyspnœa, which is no doubt exerted when it is administered, as it so frequently is, in the treatment of bronchial catarrh. When the volatile nitrites are given by inhalation the effects are only of brief duration, but when they are given by the stomach the effects are similar in their relatively prolonged duration to those of the non-volatile nitrites. Nitrite of amyl, nitrite of ethyl, nitrite of sodium, and nitro-glycerine have each proved successful in my observations in relieving the dyspnœa of asthma and bronchitis. I believe they do so, gentlemen, by removing bronchial spasm, and the remarkable power which they possess in doing this will probably lead to their being more largely used than they hitherto have been in the treatment of disease. Where their administration is successful in removing the auscultatory evidences of such spasm, it is difficult to imagine anything more convincing of the beneficial influence that can be exerted upon the conditions of disease by pharmacological agents. The observer has presented to him a patient in whose thorax a continuous succession of varying sounds is heard. Within a few minutes after a nitrite has been administered, the endless succession of noisy breath accompaniments gives place to an almost complete silence, in which only the subdued quiet of normal respiration is heard, and at the same time, what to us is of even greater interest and importance, the distress of dyspnœa, or, it may be, the intense suffering and anxiety of orthopnœa, is entirely removed.

Lectures
ON
INJURIES OF NERVES.

Delivered at the Royal College of Surgeons,

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LECTURE III.—*(Continued.)*

TREATMENT OF NERVE INJURIES.

The proper and rational treatment of nerve injuries is essential is an accurate knowledge of their pathology. It is due to the want of this knowledge that the erroneous views as to nerve union and of the treatment requisite for success have to be attributed. To the opinions held on these points I shall now briefly refer, for they seem to me to

[illegible] of Galen "that nature was powerless to repair" held unlimited sway until the time of Haighton, and the experiments of these [illegible] the Philosophical Society's Transactions completely subverted the doctrines taught [illegible] surgeons experimented on dogs by [illegible] nerve on the one side only, and having kept the animals alive for a varying number of days, they demonstrated that division of the opposite nerve trunk was not sufficient to cause death, previous experiment having shown that a simultaneous section of both vagi was inevitably fatal. They therefore concluded that the one nerve must have been reunited before the second operation was performed. Swan, Fontana, Descot, and Prévost arrived at the same conclusions, and the result was a very general belief that nerves when divided were *inevitably regenerated*—a belief which led to a corresponding carelessness in the treatment of such injuries, and which has been widely prevalent up till the most recent times, not only in England, but also in France and Germany, where Flourens and Steinrueck upheld the theories started in this country. The investigations of Waller, Vulpian, and Philippeaux about the year 1852, brought a new light to bear on this subject, and formed the first step in the accurate pathology of nerve lesions. It was shown by these physiologists that the peripheral end of a divided nerve underwent degeneration, and that some months intervened before the nervous substance was repaired.

Theoretically, then, a corresponding time should always intervene before the nervous functions were re-established, and thus, though the theory of inevitable nerve regeneration was not relinquished, it was assumed that union never could take place by first intention. But the eyes of surgeons could no longer be shut to the cases which constantly came under their notice, and as experimental inquiry yielded to clinical observation, the fact was speedily established that in a large number of patients suffering from nerve lesions no union of any kind occurred. In this branch of pathology, however, as in many others, the discretion of pathologists speedily outran their wisdom, and the theory of "supplementary sensibility" and "supplementary motility" was, especially by French surgeons and physiologists, adopted to the exclusion of nerve regeneration, and more especially to that of reunion by first intention. In a former lecture I have discussed the probabilities and proofs in favour of union by this latter method, and also the evidence bearing upon the presence and amount of nerve anastomoses and supplementary sensation; I shall therefore take for granted that the possibility of immediate union is an established fact, and shall now pass on to consider the best means at our disposal for procuring the same.

Suture of nerves.—In order that any tissues which may have been divided by the surgeon or else by accident should unite as speedily as possible, it is plainly of the first importance that they shall be closely approximated. How should this approximation be maintained in the case of divided nerves? To this question there can be, in my opinion, but one answer —"By suture"; and the reason that this answer has not been given very many years ago is to be found in the erroneous views as to the probable results—e.g., tetanus, &c.—of the irritation which the stitches might set up, as well as in the mistaken ideas of nerve repair just alluded to. Putting aside the more than doubtful assertion that nerve suture was performed in the middle ages by Lanfranc, Guy de Chauliac, &c., the operation is said to have been performed by Arnemann in 1826 and by Flourens in 1828. At a later date it was practised in several instances by Dupuytren at the Hôtel Dieu. But although these cases are interesting from a historical point of view, the time when nerve suture came to be practised in surgery on a definite physiological basis is much more recent, and may be said to date from 1864, when Laugier, a French surgeon, sutured the ends of a recently divided median nerve. Laugier claimed that immediate union resulted, but whether this was or was not the case is not sufficiently clear. In 1865 MM. Eulenberg and Landois made numerous experiments on animals, and concluded that after suture not only does the peripheral end of the divided nerve degenerate in a manner precisely similar to that noticed when no sutures are used, but that the sutures themselves are absolutely harmful, producing neuritis and perineuritis, and may even give rise to suppuration and secondary abscesses in the lungs. These statements, combined with the ever-present dread of tetanus, naturally dissuaded surgeons from universally adopting such measures, and in 1868 Boeckel of Strasburg related a case in which, after division of the median at the wrist, there was a recurrence of sensation in two months, except in the index finger; no sutures had been used, and the author rather illogically concluded that they were never necessary. Some years later Le Dentu noted that bullæ occurred on the fingers after an attempt

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had been made to procure immediate union by suture of a recently divided median; this lesion he attributed to the irritation caused by the sutures, and not to the cutting off of the nervous influence. There can be but little doubt that this conclusion was an erroneous one, for as I have already endeavoured to prove, these trophic lesions are not of an irritative nature, and the bullæ were no doubt due to a failure of union by first intention, and not to the presence of the catgut. But the results obtained by Eulenberg and Landois are entirely different to those of other experimenters, some of whom in vain attempted to induce neuritis by means of setons and other irritants, and, what is of much more importance, amongst a large number of cases in which sutures were applied to human nerves these much-dreaded consequences were conspicuous by their absence. The result of further experience has thus come to be that, as far as any danger is concerned, no surgeon would hesitate to use the most obvious means of approximating the ends of a divided nerve, and would fearlessly insert as many stitches as might be necessary without any dread. But, putting the danger out of the question, is the patient any more likely to have the continuity of his nerve restored if the ends are sutured than if they are left to nature? To this I would answer most unhesitatingly in the affirmative, for, judging by accounts published by various authors and by my own observations, I can have no doubt but that in the vast majority of untreated nerve wounds either no union at all or but a most imperfect one can be expected. That the ends are sometimes united even if left to themselves is proved by some of the cases already narrated, but under these circumstances a primary union can but rarely occur, for the ends are but seldom in apposition, a state which is absolutely necessary for this method of healing. And again, in cases where primary union fails, by the time when degeneration and regeneration have occurred in the distal fragment, it very frequently happens that in the process of cicatrisation the nerve ends have either become adherent to the surrounding muscles and tendons, or else are widely separated by fibrous tissue, which forms an impenetrable obstacle to further attempts at reunion. These latter conditions, at any rate, can be obviated by the employment of sutures, and, even if union by first intention fails, the nerve is left in a much more favourable condition for subsequent regeneration than is otherwise the case. Now, the experiments by Glück proved very clearly that in fowls, rabbits, &c., the use of sutures was followed by a primary union of the divided nerve, and on these grounds an analogous result in man might fairly be expected. The records, however, of cases in which such treatment has been adopted supplies information of a much more valuable nature, and it is to the evidence afforded by such cases that I would rather direct attention.

Primary nerve sutures.—The operations which may be undertaken for the suture of divided nerves are conveniently divided into two classes: 1st, primary; 2nd, secondary. The operation of "primary suture" consists in stitching together the ends of a divided nerve either immediately after injury, or else very shortly afterwards—before, in fact, the process of healing of the wound has commenced. This operation should, in my opinion, be performed in every case of nerve injury in which it is possible. There are, of course, cases in which such an extent of nerve has been removed that it becomes a physical impossibility to bring the severed ends into apposition, and in such alone should the operation be omitted. I have no doubt that the operation of nerve suture is absolutely harmless, and that when the nerve ends are left unsutured union is most unlikely to occur at all, and at best is very imperfect. Lastly, that when the nerve ends are carefully sutured and maintained in apposition, a restoration of function is the most frequent result. Under this belief, I cannot agree with those surgeons who consider that in cases of clean-cut wounds sutures should not be inserted. I believe these are just the cases best suited for suture. M. Nicaise, in his article on Injuries of Nerves in the "International Encyclopædia of Surgery" says: "When the section is clean cut and simple, without extensive wound of the integument, then suture should not be resorted to unless the separation is considerable," and other surgeons, especially on the Continent, express the same opinion. I am perfectly convinced that such advice should not be followed. No possible harm can result from suture, and the prognosis of the case of a wounded nerve left to itself is most unsatisfactory.

The mode of application of the suture is a matter which has received much more attention than it really deserves. For a long time it was taught that the sutures should only be passed through the nerve sheath, and that it was dangerous to pass the needle through the bundles of nerve tubes themselves. This, again, was all due to theory, and gradually surgeons have learnt that the thought of danger is one with which they need not trouble themselves when considering the best method of fixing the separated nerve ends in apposition. I have myself passed sutures completely through human nerves, and have frequently seen them passed by others without the slightest evil result, and in the now numerous cases recorded in surgical literature the same treatment has been followed without a single recorded instance of any complication. The method which I would recommend is the following: A small needle armed with the suture should be passed completely through the nerve trunk at right angles to its long axis, about a quarter of an inch from the cut surface in each end, and in large trunks another suture may be passed at right angles to the first. These sutures should then be drawn tight until the opposing cut surfaces are brought into contact, and finally the edges of the sheath should be neatly stitched by three or four more sutures passed through it, so as to include within it all the cut tubules.

The material for suture.—The choice of a material for suture is naturally influenced by the same considerations as those which obtain in the similar operation of ligature of vessels, and just as in the latter it is advisable to use a tissue which will not act as an irritant and will be absorbed, so is a similar material indicated in the suture of nerves. In the majority of recorded cases catgut has been used, and I am inclined to consider that for small nerves carbolised catgut is the best material. In those cases, however, in which there is any unusual tension, or in which it is anticipated that, on account of any complication, it may be necessary to disturb the wound, I think that carbolised gut does not possess the proper amount of resisting power, and does not last a sufficient length of time. In such cases I should use by preference a more stable ligature, such as chromicised catgut, kangaroo tendon split into sufficiently small filaments, horsehair, or fine silk; I prefer the two former to the latter. After apposition has been obtained by suture, the limb should be fixed on a splint in such a position as to keep the injured nerve in a state of the least possible tension. The wound should be thoroughly cleansed, all sutures used should be first rendered aseptic, and every endeavour should be made to ensure healing by first intention.

The value of primary suture of nerves.—Clinical facts must furnish the basis on which an opinion may be formed as to the value of primary nerve suture. It is useless to argue from any other than a clinical standpoint. The investigations of experimenters on animals of various kinds possess a value of their own, but the conclusions arrived at in this way cannot possibly be directly applied to man. When we consider that after the section of the spinal cord of a pigeon there may be a complete restoration of continuity, when we are told that in a monkey three or four inches of nerve may be remade in as many months, the absurdity of applying to man the conclusions arrived at by experiment is very obvious. The cases of primary suture which have been observed by myself at St. Bartholomew's Hospital may be summarised as follows:—The median nerve was sutured on eight occasions, each time with success. The ulnar nerve was sutured eight times, of these, two cases were completely successful, two were partially successful, and three were failures. In one case primary suture failed, and a secondary suture seven months later was followed by complete success. The median and ulnar nerves were sutured at the same time in one patient, with success. The total number of cases observed by myself thus stands at seventeen. Of these, twelve were successful, two were partially successful, and three were failures. In two of these cases union by first intention without previous degeneration ensued. In each case the median nerve had been divided. In other cases some fibres appeared to unite by first intention, although the bulk of the nerve did not do so.

Cases already recorded.—I have found much difficulty in summarising the cases reported in medical literature, for in many the reports are too meagre, in others they are evidently inaccurate, and in some they are imperfect in important particulars. I have thus been compelled to classify a certain number as "doubtful successes," for although they are

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claimed as successful by their authors, it is not possible to accept them without doubt in the absence of important details. It is, of course, probable that in the majority of these patients there was perfect recovery; but I have thought it more satisfactory to include in the "successful" class only those about which there could be no doubt at all. The following list, I believe, includes practically all the cases recorded as late as the end of the year 1885:—

Of primary suture of the median nerve, six cases were "successful," six were "doubtful successes," five were partially successful, two were failures, and in one case the result was not stated—total, twenty. Of primary suture of the ulnar nerve, four cases were successful, four were doubtful successes, three were partially successful, and four were failures—total fifteen. Of primary suture of the musculo-spiral nerve, four cases were successful. Of primary suture of the radial nerve, one case was successful. Of primary suture of the median and ulnar nerves simultaneously, two cases were successful, two were "doubtfully successful," four were partially successful, and three were failures—total eleven. Of primary suture of the sciatic nerve, one case was partially successful. Of primary suture of the peroneal nerve, one case was a failure. Of primary suture of the post-tibial nerve, one case was partially successful. Total number of cases of primary nerve suture recorded up to December, 1885, fifty-four—viz., successful, seventeen; doubtfully successful, twelve; partially successful, fourteen; failures, ten; result not stated, one. These added to my own seventeen gives a grand total of seventy-one—viz., successful, twenty-nine; doubtfully successful, twelve; partially successful, sixteen; failures, thirteen; result not stated in one.

Now, at first sight it might seem as though such a summary as the above would give a very fair insight into the prognosis of cases of primary nerve suture. Yet I venture to say that in some respects it is unavoidably misleading. I well remember that when, some few years ago, I first interested myself in the question of nerve suture, I was inclined to form a somewhat low estimate of its value. I saw cases operated upon, and I saw them frequently leave the hospital without any material sign of nerve union, and with deformities resulting from trophic lesions, from contracted and atrophied muscles, or from ankylosed and painful joints. I was told that most of the cases operated upon were failures, and such indeed was my first impression. Further investigations, however, soon placed matters in a different light. I found that in almost all of the hitherto recorded cases nothing was noted of the state of the paralysed parts after a few weeks or months at the latest, and I therefore determined to keep my patients in sight, not for months, but for years. And whilst thus engaged in watching those who had been more recently operated upon, I also sought out other patients who had met with nerve injuries in past years. On examining many of the latter, I found that, as might be expected, most of those whose nerves had not been sutured at the time of injury were but little improved, Others had gradually recovered. In some of the latter the nerve ends had been sutured; in some this had not been done. But what most interested me was to find that in many patients who had subsequently completely recovered there had been a long interval of many months, or even of years, between the time of injury and the return of sensation or motion, and I saw at once that no case should be written down as a failure simply because the operation of suture was not followed by immediate success. It was with this impression that I continued to watch the various cases that I met with, and I believe that there is no other class of surgical injuries which so well repay clinical observation. So little has been written of them that they are constantly supplying surprises. Each case has its own peculiarities, each runs its own course, yet there are certain general rules which apply to all, and enable the surgeon to speak with tolerable confidence as to the final results of cases of nerve injury which have been treated by primary suture. If there is one fact more than another which stands out in the clinical histories of the patients who have been under my own observation, it is that after the failure of union by first intention, after trophic changes of many kinds, after complete atrophy and degeneration of the [illegible] recovery may yet be complete.

[illegible] regulate in these cases. The surgeon [illegible] have patience, and if the nerve ends have been properly and maintained in accurate apposition, it is to time that the final result must be left. Putting aside for the present the cases in which primary union occurs, I would refer to the period that elapsed in the various patients treated at St. Bartholomew's Hospital between the time of suture and of repair.

Of the six cases of successful suture of the median nerve, five months elapsed in the first case before any signs of union were apparent; in the second case restoration of function occurred within a few months; in the third case it occupied more than a year; in the fourth case about a year; in the fifth case about six months; in the sixth case there was no improvement for more than a year, and final restoration of function was not complete for one year more.

Of the two cases of successful union of the ulnar nerve, in the first at the end of a year the hand was clawed, the muscles atrophied, and the skin anæsthetic; it was not until three years later that restoration of function was complete and perfect. In the second case it was thought, after several weeks' waiting, that the ends of the sutured nerve had become separated, and they were exposed only to show an apparent union. The patient was discharged as a case of "failure," yet subsequently, many months later, function was restored.

In the case of successful suture of the median and ulnar nerves, the muscles wasted, the hand was paralysed, cold, and blue, and the skin was anæsthetic six months after the operation. In another year the hand was practically restored to its natural condition.

The facts are plain. When a nerve has failed to unite by first intention its lower end degenerates, and, again, regenerates in the way I have already described. That such regeneration is hastened by contact with the proximal end I have no doubt, but in the cases in which the muscles have atrophied and degenerated, it is evident that some time must elapse before they can be re-made. Motor functions, as a rule, take longer to return than do sensory ones.

Now, if it be conceded that years may elapse before return of function, it is evident that where the suture has only been performed a few weeks or months, hasty conclusions as to the final result should not be drawn. Keeping this in mind, let us turn to the other cases that I have detailed and placed under the heads of "partial success" and "failure." Of two cases of "partial success" after suture of the ulnar, one has only been performed three months, the other six. In each there was, when I last saw the patients, a considerable return of function, and I feel sure that each will further improve. Of the three cases of "failure," in one the wound sloughed considerably. In the other two, after lengthened intervals no union occurred. To these I shall again refer in discussing the "causes of failure," and would now turn to the cases of primary suture described by other authors, and already tabulated.

Without stopping to consider the cases recorded as "successes," let us briefly glance at the length of time the others—those of "doubtful success," of "partial success," and of "failure"—were kept under notice. Of the cases of median suture six, in which success was doubtful, were under notice respectively for two months, twenty-five days, two months, one month, a few days, and a few weeks. In five cases of "partial success" the times were eight months, a few weeks, several months, no time stated, and one month. In the two cases of failure no time is mentioned; the patients do not seem to have been under observation more than a few weeks at the outside. Looking at the cases of suture of the ulnar nerve, we find that of four cases of "doubtful success" the patients were seen for periods of six weeks, eighteen days, no time specified, and five weeks. Of three cases in which there was partial success, for two years, "some months," and one month. Of four cases of "failure" the patients were observed for three weeks, three weeks, one year and a half, and three weeks. Of cases of suture of the median and ulnar nerves, in two, in which success appears doubtful, the patients were under observation for "some weeks" and a year and a half respectively. Of four cases of "partial success," for ten weeks, three weeks, fourteen days, and three months. Of three cases of "failure," the patients were seen after six weeks, two days, and eight days respectively. In the case of the sciatic nerve the only patient was under notice for thirteen days, and there was then some improvement. The only patient on whom a primary suture of the peroneal was performed died sixty-five days later with gangrene of the thigh; the nerve ends were found separated. In a case of primary suture of the posterior tibial nerve, there was a partial restoration of function in four weeks.

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A consideration of these facts leads to the inevitable conclusion that the reports of these cases cannot be considered final. In the enormous majority of cases of failure or of partial success the time that had elapsed since operation was far too scanty to allow of reunion, supposing that union by first intention had failed. I am convinced that it would be a most grave error of judgment to conclude, because no restoration of function had occurred even as late as a year or more, that such was not possible. The cases observed by myself supply abundant proof of the correctness of this assertion.

Prognosis of primary nerve suture.—In considering the prognosis of cases of primary nerve suture, there are two chief questions to answer. First, what is the probability of restoration of function? Secondly, how long will it take for function to be restored?

With regard to the first question my own mind is clear. *The probability is that function will be restored.* I am quite convinced that if the nerve ends have been carefully coapted and kept in position, restoration of function will ensue in the great majority of cases. The instances I have given are my authority for this statement, for I have shown that in by far the greater number of failures, or of partial successes, the time which had elapsed when the cases were published was too short to permit of accurate conclusions being drawn. But, whilst I would thus give a good prognosis, I would at the same time warn the patient that some trifling inconveniences may remain permanently. Thus, in cases otherwise successful, I have noticed complaints of slight stiffness of the muscles or joints, of pain or aching when the weather changed, or when the parts were cold or wet. Other patients have complained that, though they had good tactile sense, nevertheless the parts felt, in a way that they could not explain, different from what they did before the accident, and it was evident that much of the delicacy of the sense of touch was permanently impaired.

The earliest signs of returning function are usually met with in relation to the sense of touch. The first thing the patient notices is that he can feel in a part previously anæsthetic. Just at first he does not localise properly—perhaps refers sensations from one finger to the other, or from a finger to the palm of the hand. And indeed this is only what might be expected if we consider that the several divided nerve fibres can seldom be united as before the injury, that the proximal end of a fibre which was distributed to the middle finger may become united to the peripheral end of one distributed to the thumb, and so forth. The patient has, in fact, again to educate his sense of touch in the way that all infants have to do. What has generally surprised me is the rapidity with which this education is completed, rather than the difficulties which at first present themselves. The return of the sense of touch, followed by that of pain and of temperature, affords further ground for promising return of muscular power. Will the atrophied and shrunken muscles regenerate (I am supposing some time has elapsed without improvement)? They will. Their power will return; their bulk will increase. Trophic lesions also will disappear, and the tissues will practically return to their normal state. Do any general conditions influence the prognosis? I think they do. I am of the opinion that prognosis is better in the young than in the old; best of all in children and young adults. I think I have observed that regeneration is more rapid in warm summer weather than in the winter time, when paralysed parts are liable to become cold and livid, with impeded circulation and lowered vitality.

The consideration of these points leads directly to the second question in the prognosis: How long will it take for function to be restored? This is not a question that can be answered directly. The first point for consideration is, What is the probability of union by first intention? For an answer to this I would turn to the cases already tabulated. In only two instances out of the seventeen under my own observation has union by first intention resulted. In each the divided nerve was the median. In three cases of suture of the ulnar nerve recorded by other authors,—namely, Boeghold, Bramwell, and Clark,—supposing the accounts to be accurate, there was union by first intention. In one case by Kraussold of suture of the radial, median, and ulnar there was a similar result. Thus, out of a total of seventy-one, there are but six cases of union by first intention, and of some of these I am bound to confess I have some doubt, for there are absolutely no details supplied of those by Bramwell and Clark, and but few by Kraussold. I should therefore conclude that union *by first intention* is not to be *expected* in any given case. And, supposing that such union does not occur, what time must elapse before recovery? This is a question quite impossible to answer. It may be weeks, months, or years; no one can tell. Recovery may be preceded by trophic changes, joint disease, and paralysis, or none of these may be present. But with regard to time I could not say more than that considerable improvement will probably occur within a year, and of this I would feel more certain in a young than in an old person, and where the wound has healed readily without much suppuration. I would give up no case as hopeless until the lapse of at least two or three years, and not then if any improvement was in progress.

Does the prognosis differ in the case of different nerves? This is a question I have often asked myself. I think it does. All the cases of suture of the musculo-spiral have been successful, and, although it is looking ahead a little, I would remark that a similar success has attended almost all the operations of secondary suture in the case of this nerve. I should therefore be the more inclined to give a favourable prognosis. Concerning the median nerve, I find that all eight cases seen by myself have been successful; while of twenty recorded by other authors only two are recorded as failures, and these may be explained by the short length of time they were kept under observation. With regard to the ulnar nerve, my impression is that motion never returns before sensation, and that of all paralysed muscles the interossei are the ones which are most slow to recover. I have not seen a sufficient number of injuries of other nerves to form any opinion as to their relative capabilities of repair, and, indeed, what I have just said in respect of the nerves of the upper extremity rather embodies my own somewhat vague impressions than forms any definite conclusions.

ON RELIEVING TYMPANITES BY PUNCTURE OF THE ABDOMEN.

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THE inconvenience of even moderate flatulent distension of the stomach and bowels, of which most people have personal experience, is so great that it may be easily understood, upon reflection, how highly distressing and painful, and indeed how fatal, excessive and unrelieved distension of the same viscera may prove (whatever the cause). For what is the point, the signification, of unwonted and protracted gastro-intestinal inflation? It means, of course, interference with the contraction, and, therefore the descent, of the diaphragm, the "great inspiratory muscle"[1]—i.e., interference with the movements of the lungs, and with the action of the heart which rest upon the diaphragm; and, no doubt, serious damage, by pressure on the various nerves, eminently the sympathetic system, and upon the bloodvessels as well in the abdominal[2] as the thoracic cavity.[3] The likelihood of unwonted pressure on the sympathetic system by over-distended stomach and bowels, and the consequent evils, will be apparent when one considers the relation of those viscera to the grand solar plexus and the various ganglia which exercise such important influence upon the circulation and upon the numerous secreting organs whose action, reflexly, on the heart is so conspicuous. This excessive gastro-intestinal distension has the significance of that paralysis, more or less complete, of the diaphragm which arises from lesion of the phrenic nerves, division of which,

[1] That chief or special agent by which the cage of the thorax is vertically increased, and by which also the transverse diameter of the lower part of the chest is found to be enlarged. The diaphragm was designated by the great Haller as a muscle "post cor, facile princeps."

[2] The movements of the diaphragm having great physiological influence on the functions of the abdominal organs.

[3] Interference with the contraction of the diaphragm is, probably, more disastrous in the man than in the woman, as in the former the thorax is ascertained to be dilated mainly by the descent of the diaphragm, whilst in the latter it is brought about considerably by raising of the sternum and the ribs. This difference has been attributed to the greater flexibility of the ribs of the woman, permitting their greater movement by the muscles.

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as we know, ere long produces death.[4] And, of course, interference with the inspiratory descending movement of the diaphragm, limiting the due and proper expansion of the chest cavity, quickly limits the exchange of the respiratory gases in the blood.

In a communication to the Transactions of the Provincial Medical and Surgical Association (vol. xii., 1844), my friend, Dr. Sibson, with whom, later on, I often worked, described the "changes in the situation and structure of internal organs" under various circumstances. After noticing the "terrible anxiety," "dyspnœa, and interruption of circulation" existing in cases wherein the circulating and breathing apparatus are thrust up by the diaphragm in many diseases of the abdomen, he remarks that the deadly symptoms are not due so much to the disease within the abdomen as to the clogging of the heart and lungs. One of the most graphic descriptions of the symptoms produced by extreme tympanites is given by a French writer (Mothe), to whom I shall allude later on. After enumerating the distressing eructations, the loud noises of the flatulence, and the pain following their cessation, the vomiting, the heat, the quick and strong pulse, this writer describes the laboured respiration, the impossibility of taking food, and the constipation, and he proceeds: "Successivement viennent les anxiétés, l'accablement, les défaillances, les extrémités froides," &c. Well may the symptoms connected with obstruction or occlusion of the bowels warrant the designation of "miserere mei," which it has obtained. Ambrose Paré declares that rupture of the bowel may be the result of over-distension by flatulence, and Dr. Church tells me he has seen the same resulting phenomena, most likely from there being ulceration of the inner surface. He observes: "There are few points in the practice of medicine of more importance than this—to remove or prevent flatulent distension of the abdomen." In 1848[5] Dr. Sibson pointed out that a highly distended stomach also pushes up the liver, which is so compressed between the stomach and diaphragm that "an additional amount of blood from the hepatic vena cava is directly thrown into the right cavities of the heart at the very time that the heart's action is embarrassed by the upward pressure of the stomach." The extent to which the diaphragm may be pushed upwards by abdominal distention is well illustrated by a diagram, which shows the upper convex boundary of the muscle to be behind the third intercostal space on the right side, and behind the fourth one on the left side. Dr. Sibson observes that when gastro-intestinal distension accompanies acute disease, such as peritonitis, it is often the immediate cause of death.[6] In 1873 that physician gave a clinical lecture at St. Mary's Hospital[7] on the "Influence of Distension of the Abdomen on the Functions of the Heart and Lungs."

Quite recently attention has been drawn, in THE LANCET,[8] to the subject of relief of such flatulent distension as I have mentioned, in puerperal cases, by means of puncturing the abdomen; but this method of procedure has been adopted in many instances of tympanites in connexion with other forms of disease than child-bed fever, with which both the physician and the surgeon have to do, and it is to their performances in [illegible] that I venture at this time to draw especial attention. The subject was mooted in the year 1871 in several communications to the *British Medical Journal*, soon after which I saw at least two cases in which death was apparently the direct result of unrelieved excessive tympanites (no other serious affection being discovered after death; [illegible], in fact, of "mors sine morbo"), which determined me not to lose any opportunity of suggesting relief in such cases, after all other means had been tried, by the simple and readily performed operation of puncturing the abdomen.[9] Somewhat later such an occasion presented itself in the case of a lady suffering from a tumour (eventually removed successfully) which, by pressure on the bowel, apparently, had produced such an amount of tympanites that the descent of the diaphragm was so incapacitated that life was seriously threatened. In the middle of the night intense dyspnœa, failure of circulation, and extreme prostration came on, when it seemed impossible "decantare loca dolentia," and nothing remained to be done but to give alleviation, if it might be, by puncturing the abdomen. Accordingly, Sir J. Paget was called in, who assented to the suggestion, and, by means of a fine trocar, punctured the prominent transverse colon in two or three places. This gave prompt and decided relief.[10] A large measure of very fetid gas was rapidly evacuated, continuing to rush out with a loud hissing noise for the space of some seconds.[11] The swelling of the abdomen at once subsided to a very considerable extent, thus averting at once collapse and destruction; in the ease procured to the patient, reminding me forcibly of the absolute and almost instantaneous repose, and not infrequently sound sleep, which follow the operation of tracheotomy in cases of croup or diphtheria. This personal experience aroused in my mind so great an interest in this operative procedure, that I resolved to make some excursions into our medical literature, and to ascertain what had been recommended or achieved in connexion with the matter—one, it must be allowed, of great practical importance.

I here propose to offer some fruits of my inquiries, and to set forth a "catena" of the main illustrations of the subject which I have encountered.

As no investigation into the history of any point of medical interest would be complete without reference to Sprengel's "Histoire de la Médecine," I find it there stated[12] that in 1617 P. Pigra, and, somewhat later, Ambrose Paré, recommended, in cases of strangulated herniæ, the process of pricking the intestine with a needle for the purpose of assisting the reduction. Later on, Corneille, Soolingen, P. Dionis, and Heister, at the beginning of the eighteenth century, did the same. It is possible, as Dr. Saunders (to whom I shall allude later on) suggests, that puncture for relief of tympanites may have been suggested originally by the necessity which the older surgeons felt themselves under, of puncturing strangulated bowels, which they did with round or triangular needles.

Commencing now with some of the older medical writers

[illegible] and Bowman's Cyclopædia of Anatomy and Physiology it is [illegible] (vol. ii., p. 5) that "if the phrenic nerves be divided in a living [illegible] great difficulty of breathing follows, the entire labour of respiration [illegible] thrown on the muscles which elevate the ribs. If the spinal [illegible] be divided above the giving off of the phrenic nerve, respiration [illegible] but not so if divided immediately below that point; and [illegible] Beclard could find no cause but a tumour of [illegible] nerves. I may say, in passing, that in the St. George's [illegible] Museum we have a specimen showing a phrenic [illegible] were, into two by the enlargement of a bronchial gland, [illegible] connected with an irregular dense mass containing much [illegible] matter." At the lower part of the specimen [illegible] of the nerve take their course through an enlarged [illegible] gland. The specimen was found in the dissecting-[illegible] Medical Gazette, vol. vii., 1848, p. 169.

[illegible] how to distinguish whether the stomach alone is dis-[illegible]

[illegible] Medical Journal, Aug. 2nd, 1873.

[illegible] the number for April 9th, 1887; by [illegible], April 23rd; and by Dr. Nesfield, [illegible]

[9] And the remembrance of my duties as curator of the Pathological Museum at St. George's Hospital, when having to superintend post-mortem examinations, supplies me with many instances in which pain and death might seemingly, according to more recent experiences, have been obviated by abdominal puncture.

[10] A French writer, when describing the successful issue of the operation, speaks of the relief obtained as "soulagement miraculeux."

[11] By way of demonstrating the power with which the gas was expelled through the trocar by the contracting intestine, I might adopt the expression of several writers, as well Latin as French, who constantly speak of the current of gas as being sufficiently strong to "blow out a candle." M. Mothe, to whom I allude elsewhere, after describing a case, writes as follows: "La ponction fut faite, et à peine la trocart fut-il rétiré, que l'air sortit impétueusement, et éteignit plusieurs fois la chandelle." It would seem that this experimental method of extinguishing a candle may at times cause a little consternation, as Sir W. Jenner has told me of a case operated on by Mr. W. Adams of Regent's-park in which the air passing through the trocar caught fire on the application of a lighted candle. And I have heard from him, and from others also, that it is known that stable boys have a trick of holding a lighted candle to the anus of horses and watching the gas which escapes taking fire. Indeed, serious fires in stables have been attributed to such tricks. I have also learnt that gas escaping from man by the same exit is at times inflammable. This, of course, suggests the question as to what may be the chemical composition of the gas liberated from the bowels which permits it to burn. Magendie and Chevreul examined the gases which were found in the large intestines of two criminals to consist principally of carbonic acid and nitrogen gas, with varying small quantities of hydrogen and carburetted hydrogen, and a small quantity of sulphuretted hydrogen. Laycock, in his work on the "Nervous Diseases of Women," alludes to the case of a lady who used to pass enormous quantities of gas daily from the stomach, which was found to contain 50 per cent. of nitrogen. The latest reliable analysis, I believe, of intestinal gases is that of Ruge (quoted in physiological works), who in 1862 found the gas of the large intestine in man to be tolerably constant after different kinds of food—nitrogen preponderating after the use of flesh, hydrogen after milk, and carburetted hydrogen after vegetable diet, a slight amount only of sulphuretted hydrogen existing. We have only to suppose, under disease or after certain kinds of food, a certain definite proportion of hydrogen and carburetted hydrogen to exist, and then the admixture would be inflammable. Professor Robertson, of the Royal Veterinary College, Camden Town (referred to elsewhere), tells me that the inflammability of flatus in certain states of tympany in the horse is well known, and that he has himself seen it lighted when escaping from the anus. In the case of a horse operated on by Barrière in 1783 (alluded to elsewhere) it is specially stated that the gas rushing out from the trocar caught fire from the lighted candle.

[12] Tome ix., p. 197.

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whose works I have found in our libraries, I will allude, firstly, to the observations of De la Font. In his "Dissertatio Medica de Hydrope Tympanite"[13] (Geneva, 1697), after quoting various authors on the subject, and especially controverting the opinions of Willis, that tympanites was convulsive in its nature (himself contending that it was fermentative), he alludes to its cure, if other means fail, by *puncture*. He also quotes Duretus as being in favour of the "compunctio seu punctura" in tympanites. In passing, I may say he alludes to the statement of Paulus Ægineta (a view held by many more recent writers), that by means of cupping glasses the air can be drawn through the walls of the abdomen, "per poros cutis," "et quasi incantamenti vice, ut loquitur Galenus."[14] The brilliancy of imagination which is here apparent is also shown by Galen, who thought that the ethmoid bone was pierced by holes in order to permit communication between the brain and throat, and for purging the brain from superfluities.

Boerhaave, writing in the early part of the eighteenth century upon wounds of the abdomen,[15] alludes to the necessity of puncturing the intestines with a needle to evacuate the air, and then observes: "Quod nihil nocet, quia quando intestina sunt difflata, tunc se retrotrahentia illas puncturas claudunt." And in his Aphorisms, writing of tympany as "dry dropsy," he says that it never cures, yet paracentesis has sometimes given ease.

About the middle of the same century, F. de P. Combalusier, in his "Pneumato-Pathologia, seu Tractatus de flatulentibus humani corporis affectibus," has a section entitled "Num peragenda in Abdominalis Tympanite Paracentesi," followed by another, "Cautelæ in Tympaniticorum paracentesi observandæ."

Later in the same century (1788), W. Trnka, in his "Historia Tympanitidis (Vindobornæ)," has a chapter headed "Paracenthesis," in which he presents and compares the views of many recent authors on the subject; and also one styled "Autlia Pneumatica," in which he suggests that with due caution an autlia (that is, a suction or air pump) might be applied to the anal orifice, for the purpose of drawing out the gas contained in the bowel.[16] In the former section, he refers to certain experimenters having found that in the case of those who had died with excessive tympanites (especially Ballonius),[17] upon piercing the abdomen with a very small instrument, air rushed out, and the whole abdomen suddenly collapsed, and who consequently asked, "An non viventi metu repentinæ mortis ista punctio fieri et potuit et debuit? Audendum hercle (ait) desperatis maxime rebus."

At the beginning of the present century, Callisen, a Danish author, in his "Systema Chirurgiæ," &c., in a section upon Tympanites, writes: "Exclusio aëris punctione abdominali simplici, insigna quidem levamine beare solet miseros." He then proceeds to say that the relief is not permanent, owing to the reaccumulation of air.

In 1812, M. Mothe, of Lyons, published a rather lengthy memoir on Tympanites, in a work called "Mélanges de Médecine et Chirurgie," in which, after enumerating seven varieties of tympanites (according to the classification of Sauvage's Nosology),[18] and quoting from many authors as to what was known of the disease (such as Lieutaud, Swart, Pomme, Levret, Litré[19]), and showing how they differed respecting the utility of abdominal puncture for its relief, he gives precise information as to its performance, the time and the locality most suitable for its use, and the kind of instrument to be used. He distinctly states that the over-distended bowel may recover its tone after the evacuation of the air, in the same way as the over-distended urinary bladder does, after relief has been obtained by discharge of retained urine. He concludes that in "essential" tympanites—that is, when the affection is not merely a symptom or accident of some grave disease—it would be in the highest degree inhuman and culpable, when other means have failed, to abandon the patient, and not to resort to puncture as a last resource.[20] And he quotes the practise of relieving tympanites in cattle (so often caused by eating wet "luzerne") by puncturing the abdomen, thus only preventing death.

In 1818, C. B. Zang, in a work published at Vienna, on Surgical Operations, has a chapter[21] in which he gives detailed notice of "Paracentesis Tympanites."

In 1835, Dr. Roche, writing in the "Dict. de Méd. et Chir.,"[22] though considering the operation to be a dangerous one, quotes certain cases which were attended by success. In the *Bulletin de l'Acad. Royale de Méd.*, 1843-44,[23] a case is related by M. Levret in which intestinal tympanites was cured by puncture of a part of the small intestine with a trocar of the size of a knitting-needle.

In the year 1845, Mr. Teale, sen., of Leeds, in his address before the Provincial Medical and Surgical Association, observed that paracentesis, by a fine trocar, of the intestine for tympanites had been successfully adopted by Sir H. Marsh and by M. Levret for its relief; and Dr. Littleton of Plymouth, in a communication later on, pointed out that about this time Sir P. Crampton and Mr. Cusack (of Dublin) had sanctioned the operation.[24]

In 1852 Labric published a thesis ("De la Ponction abdominale dans la Tympanite") in which he put together the various facts which he had met with in connexion with the operation, and gave his conclusions deduced from them. He recognises the two varieties of tympanites, peritoneal and intestinal, and gives their causes, symptoms, and treatment, quoting especially Chomel[25] and Piorry[26] as to the source of the gas in the former variety. He notices that the operation is often resorted to successfully by veterinary surgeons in the case of cattle on the point of death, after they have eaten large quantities of moist food, especially trefoil. He observes that in man not only does the operation, when necessarily resorted to, give relief to distressing symptoms, but that it renews to the distended and enfeebled intestine its contractile power, and enables it to discharge its contents, in the same way as in retention of urine the bladder's power of contraction is restored by drawing off the urine,[27] and as the contraction of the parturient uterus is facilitated by removal of part of its contained fluids. Labric quotes Levret and Maisonneuve as having seen a return of the peristaltic action of the bowel upon the free evacuation of flatus following puncture; and he remarks that peritonitis is almost the only accident which one has to anticipate from the intestinal puncture; and this, he observes, has caused many to look upon the operation with disfavour. This peritonitis, he says, does not seem to be owing to injury to the peritoneum by the instrument, but is the result of escape into the cavity of fæcal matter. In this he is supported by Jobert, who, in his treatise on Wounds of the Intestinal Canal, says that when sharp instruments penetrate directly the intestine without tearing it, the edges close, and the space produced by them disappears when the instrument is withdrawn; and he considers acupuncture of the bowels to be free from danger. In a case of typhoid fever in which the intestinal puncture was made to relieve tympanites, no traces of puncture in the walls of the bowels were ascertainable after death. He quotes Mérat, Paré, Law, and v. Swieten, who practised acupuncture of the bowels in

[13] In many of the old writers what we call tympanites was considered a form of "hydrops," and was often called "hydrops sicca" in opposition to "hydrops ascites."

[14] De la Font's remarks open a somewhat quaint way of evacuating the air from the distended bowels recommended by some—viz., the exhausting it by the rectum. He observes: "Sunt qui putant *fistulâ clysteris* in podicem immissa sine ullo liquore, et frequenter agitato instrumento illo impulsorio dicto magnam flatuum copiam educi, modo flatus in intestinis contineantur, vel *follis fabrilis* clausus ano adaptatur, et deinde elevatur, sic enim flatus in intestinis contenti, modo pertinax aliqua obstructio in ipsis non adsit, in follem vel fistulam clysteris prædictam impellentur, quæ omnia experiri licebit."

[15] See his Praxis Med.

[16] Dr. Laycock, in his "Treatise on the Nervous Diseases of Women," quotes Kerr as saying that Dr. Osborne and Dr. Graves had continued the practice of using the air pump for abstracting the gas.

[17] Heister Meroklinius. [18] Tome xi., Cachexies.

[19] Who stated that he had seen the colon so distended as to be equal to the thigh in diameter, and the whole intestine four times its ordinary volume.

[20] He would thoroughly endorse the views of Bacon, who blames physicians for not making the *εὐθανασία* a part of their studies, as quoted by the first Heberden and by Watson. Heberden, speaking of the duties of the physician, remarks: "They should try to disarm death of its terror; and if they cannot make him quit his prey and the life must be lost, they may still prevail to have it taken away in the most merciful manner."

[21] Theil iii., p. 308. [22] Tome ix., p. 9.

[23] Art. Tympanite.

[24] Brit. Med. Jour., November 4th, 1871. With regard to the practice of these eminent Irish surgeons I find it stated in a lecture by Dr. Houston on Modern Improvements, published in THE LANCET of Dec. 1884, that Sir H. Marsh was in the habit of relieving excessive distension of the abdomen from flatus, without any bad effect, by pricking with a small trocar; and that he knew a lady on whom Mr. Cusack operated several times in this way, in consultation with Sir H. Marsh and Sir P. Crampton, and each time with great relief. Of any association between these gentlemen and the operation I regret to say I can find no written record.

[25] Dict. de Méd. [26] Dict. des Sciences Méd.

[27] In a note to his memoir alluded to above, M. Mothe remarks that he knew a woman who had had retention of urine for fourteen days, during this time the urine only escaping by overflow. The bladder eventually entirely recovered its natural powers.

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cases of strangulated hernia. As a means of puncturing the abdominal walls, Labric recommends the trocar in preference to acupuncture, as by means of the cannula the gas may continue to escape; and he gives important surgical directions as to the mode of conducting the operation, incision of the skin being often required before the plunging in of the trocar. Considering what grave evils may be caused by excessive distension of the abdomen, the author gives a warning *against delay* in operating. Of course, he observes, if the distension is from gas in the ileum or stomach, an œsophageal or long intestinal tube may give relief. He has never seen any case of puncture for *peritoneal* tympanites, but quotes some instances from various sources.

In 1858 a case was published in the *Moniteur des Hôpitaux*[28] in which death, which seemed to be inevitable, was averted by puncture of the bowels, which were enormously distended by flatus, after other means had failed. Three or four litres of gas escaped by the puncture, with a loud noise.

In 1860 Dr. Olivieri published in the *Gazz. Lomb.* (29) a description of twenty cases which he had met with in Bolivia, South America, of acute tympanites caused by improper food, in which he had punctured the stomach. Of these, eight recovered, the others dying, "probably from not having been submitted to treatment until too late."[29] And in 1868 Bricheteau, after alluding to the discussion on the merits of the operation by Fonssagrives and Ripoli, reported in the *Bull. Gén. de Thérap.*, vol. lxxiv., p. 327, an interesting case in which Dr. Bouley had ordered it to be done at the Necker Hospital. The punctures were made on three separate occasions, and were attended by absolute relief to the patient and followed by free alvine evacuations.

(To be continued.)

ON LATERAL CURVATURE OF THE SPINE.

BY RICHARD BARWELL, F.R.C.S.,
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No. II.

IF in my last paper I made myself understood—if I made it clear how what at first is merely a muscular condition[1] gradually invades the ligaments, and then the as yet immature epiphyses of the spine producing deformation of the vertebræ—if, I say, this was made clear, it must be evident to all careful parents and to all trusted medical advisers that a periodical inspection of growing children should be made, more especially if those children be subjected to the high-pressure system of modern school teaching. Nor must it be thought that as long as parents do not observe a shoulder to be high or thick, a hip to protrude, or the dress to hang lower on one side, therefore all is well; a spinal curve, when visible through the clothing or detectable by a dressmaker's tape measure, is already sufficiently advanced to render treatment certainly prolonged, perhaps doubtful. The earliest signs of curvature are very subtle, only noticeable to the trained eye, and even by many of the profession not much accustomed to this special examination are—I must be pardoned for saying it—little understood. It will therefore be well to give, in the shortest words I can command, a description of these earliest symptoms. Firstly, of lumbar curvature, convex—let us assume to the right. The patient is placed with the back directly opposite a good light, cross shadows and reflections being avoided; the hair must be disposed on the head; the clothes removed, only a chemise and perhaps an under-vest retained, and these dropped to a level with the great trochanters; all embarrassment from tendency to slip lower, and all restless wringing of the body, must be avoided by [illegible] arrangement.[2] The surgeon, sitting behind her, finds that the knees are quite straight, the feet close together; then places his forefingers on the crest of the ilium at the side where the curvature is to be higher than the other. He will [illegible] if he arrange that the horizontal line of a dado or some piece of furniture crosses, at a greater distance from his eye, the figure at this level. Having settled one way or the other this point, he may recede a little, the better to take in the whole contour of the figure from the nape downwards, and will see that it is different on each side; on the convex side (in the case postulated the right) the side outline just above the ilium is full and rounded, while on the concave side the constriction of the waist is marked by a deeper excavation; the angle between the thoracic part and the iliac part of the body is on the right very obtuse, on the left much more acute; if the arms can be brought to hang evenly and perpendicularly from the body the triangular interval between them and the trunk is larger on the left than on the right side. Taken altogether, these changes in the side outline give to the whole figure the look as though the upper part did not stand straight over the lower part of the figure, but had been shifted over to the right. If now the surgeon direct his attention no longer to the outline of the figure, but to the surface, he will see that the sharper excavation on the left side of the waist marks itself also by a deeper indentation on the dorsal surface of the bone (see Fig. 5), and that it lies higher on the figure than the corresponding depression on the left, supposing any still to remain, as very early in the case there often does. Feeling for the line of the spinous processes, the surgeon may thus early find them still quite straight, because their rotation to the concave side will have compensated for their lateral deviation; but on feeling the parts on each side of that line he will find the muscles much harder on the convex than on the concave side; not, I believe, from any more powerful contraction, but because they are more supported, pushed backward, if one will, by the transverse processes. When these changes of form are observed, there can or should be no doubt as to the existence of a curve primarily lumbar, and treatment should be at once begun; but I am very far from saying that henceforth the child's life is to be devoted to persistent recumbency, or that she is to sacrifice her health by carrying on her back a heavy thing called a "spinal support"—falsely so called, because, whatever else it may support, it cannot so act on a deviated spine. On the contrary, I recommend, more especially for quite young patients, a treatment which makes very slight demands upon their time or comfort, but which after a little steady perseverance greatly modifies the curve, which in a certain period, commensurate with the severity of the case, will cure it; and which can have no injurious effect upon the health.

The particulars of this treatment are as follows. Firstly, let me refer to my previous paper. Fig. 1 represents a case of permanent pelvic obliquity from shortness of one lower limb; the spine is necessarily curved to the left. Fig. 2, from the same patient, shows how a block of commensurate thickness placed under the short limb corrects the pelvic obliquity, and therefore also the spinal curve; this latter correction was not, of course, obtained at once, but is the fruit of the plan carried on for some weeks. The deduction is obvious—viz., in every case in which by the means above described pelvic obliquity is detectable, to heighten the lower side of the pelvis until it is on a level, or in certain cases above the level, of the other side. But we need not stop there, for if pelvic obliquity can produce, as has just been proved, a lumbar curve, therefore an already existing curve can be counteracted by making the pelvis oblique—higher, that is to say, on the convex side. In early and slight cases the spine assumes, while this artificial pelvic obliquity is maintained, a perfectly straight line, or the curve may be actually reversed.[3] Older and severer cases cannot be thus immediately straightened, but they are very considerably corrected, and that correction is week by week confirmed and increased. Thus I order the heel of the boot on the convex side to be somewhat heightened, or rather arrange that the heels of the boots or shoes be broad and flat—really under the foot-heel, not pointed and in the middle of the foot, as is the present fashion; and I direct that one thickness of leather be taken from that on the concave, and that one be added to that on the convex side. Moreover, I order a hollow wedge of wood, made of two boards screwed together at one end and separated at the other by a cross-piece.[4] This wedge may be covered with plush or worsted

[illegible] Times and Gazette, p. 539.
[illegible] Society's Year-book, 1861, p. 213.
[illegible] that the muscles are primarily in [illegible] to my former paper for the explanation [illegible]
[illegible] webbing passed round the body and [illegible] I have found to be the simplest plan.

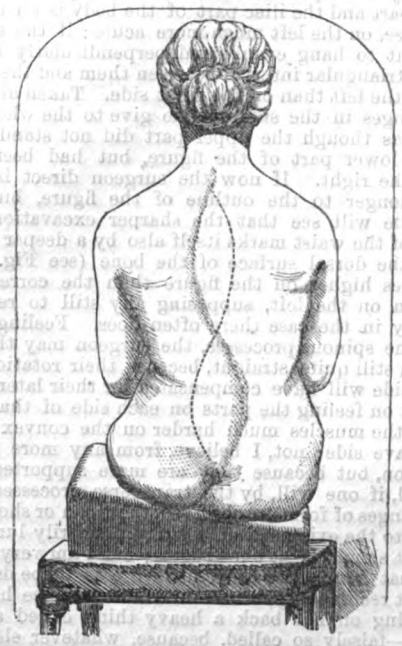
[3] In practice it is, as a rule, undesirable to reverse the curve, as thereby the ligaments are rendered, as it appears to me, loose and flaccid.

[4] The dimensions are 14 in. long, 11 in. broad; elevation at one end from 1½ in. to 2 in., according to the case.

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work. It is to be placed on the seat of a chair, and the patient sits on it with the higher side towards the convexity of the spine (Fig. 4), thus by degrees forcing the column to assume a straight line or a contrary curve. This cannot, however, be used in the first part of the case for very long at a time, but rather for several short periods during the

FIG. 4.

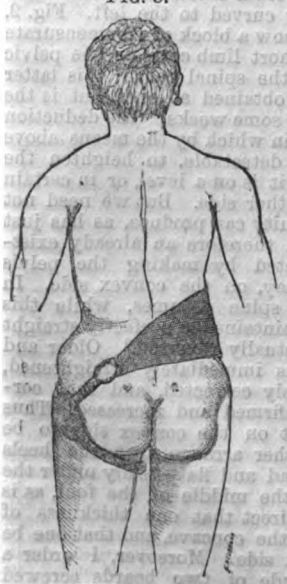


The dotted line represents the morbid curve, the shaded line that which the artificial pelvic obliquity tends to produce.

day. Hence it is convenient to let the patient sit on it during meals. For quite young subjects with commencing curves these methods often suffice.

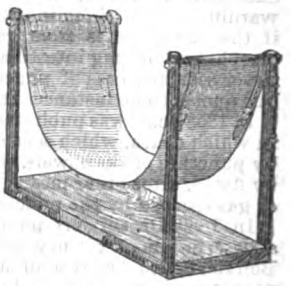
But in more developed cases some power which shall draw the convexity over to the concave side is required, and for this purpose I employ a device which I have named the *loin bandage*. It is in each instance made of coutil or moleskin, from a pattern which I myself cut to the patient's figure. The patient takes it off and puts it on by clasps (except the leg strap), its tension and balance being regulated by buckles provided with a simple mechanism that ensures to me their control. Elasticity is obtained by inserting, back and front, indiarubber rings an inch and a half in diameter, made of cord fully a quarter of an inch thick. (See Fig. 5.) This is not worn next the skin, as represented in the figure, but outside a combination garment, or, if drawers and chemise be separate, a slit in the side-seam of the latter allows the loin part to lie outside. I need only add that the hip pad should lie in the depression behind the trochanter, and in putting it on the back ring should be strained tighter than the front one. When the balance is arranged aright, the whole sits very comfortably, and does not show under the garments. A very small percentage of patients feel for a day or two the strap round the leg; they very soon lose the sensation, for there is really no tension on it, the force of the loin part acting at an acute angle with the direction of the leg strap. Rarely is any other device than those above named required, but in really severe cases two others may be added.

FIG. 5.



The *lateral swing* is a mechanism that I used for some years before giving any account of it. (Fig. 6.) Dr. Busch and I seem to have published it simultaneously. I chiefly use it in dorsal curvature, but also occasionally in lumbar. It is fourteen inches long by six broad and ten high; it should therefore be kept at the bedside, and when the patient retires for the night she lies in this for about twenty minutes, so that the convex side of the spine is slung up off the bed by the broad webbing, and must curve in the contrary direction. Again, in the morning, quite early, the maid or nurse can hand this into the bed, and the patient can lie and take an additional sleep in it.

FIG. 6.



The *loop girth* is simply a piece of broad webbing about four feet long, fastened by each end to a staple in the wall a little above the level of the patient's waist; she stands with the concave side towards the wall; the convex side is caught in the loop, the foot on that side being supported by a block from one to two inches high. When the girth is found to be properly secure, she places her clasped hands on her head and slowly bends over; then rises again and repeats this manœuvre several times, gradually increasing the number, as also the rapidity, of the movements, as custom renders them easier. Very few, if any, lumbar curves resist these combined remedies.

In my next paper the more difficult subject of dorsal curvature will be discussed.

CANCER OF BRONCHIAL GLANDS AND LUNG.[1]

BY M. A. BOYD, M.C.P. IREL.,
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IN bringing forward the subject of cancer of the bronchial glands and lung I am not calling attention to any new subject, but I think I may venture to assert it is a subject the importance of which cannot be exaggerated, and the difficulties in the diagnosis of which all physicians must admit. From the enormous amount of adenoid tissue within the thorax, and the well-known affinity cancer has for that structure, we should reason *a priori* that intra-thoracic cancer should be of not unfrequent occurrence, and from the marked similarity between it and phthisis, especially the so-called senile variety of phthisis, in many of its symptoms, the existence of the disease is, I am convinced, frequently overlooked. The characteristic symptoms that are said to indicate intra-thoracic cancer of either the mediastinum or glands, such as fixed pain in the chest, red-currant-jelly expectoration, and enlargement of cervical glands, are not present in a fourth of the cases, while symptoms that indicate phthisis are present in the great majority of them, and in some the presence of cancer is not even suspected until widespread infiltration of either the lung, pleura, or pericardium reveals its existence. Enlargement of one or more cervical glands when present, with symptoms of a tumour within the thorax, not aneurysmal, would be to us conclusive of the presence of cancer, but this evidence is more often wanting than not. The same remarks apply to the existence of pain, which is seldom present to any extent until symptoms of pressure on the large nervous trunks occur, and this is generally so late a symptom that all doubt as to the nature of the case is set at rest before pain becomes a prominent symptom. Red-currant-jelly expectoration is in my experience a very rare symptom. I am aware that in these assertions I am not in keeping with the generally received opinions on the subject, but unfortunately

[1] Read before the Academy of Medicine in Ireland, May 28th, 1886.

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every-day experience proves to us that generally received opinions are often erroneous, and we find often when it is too late that all the statements in standard works are not invariably to be relied on; especially so is the generally accepted one that cancer of the lung or mediastinum is generally secondary to cancer in other organs, so that our conclusions are unsatisfactory even where symptoms arouse our suspicion, and we look for its presence elsewhere—generally not to find it.

Cancer of the bronchial glands and lung, in my experience, nearly always begins as primary cancer in these situations, and very rarely as secondary infiltration from other parts, and where it is secondary there is generally well-marked engagement of the lymphatic system in other situations before it becomes intra-thoracic. The intra-thoracic situations where malignant disease is met are two—namely, the bronchial glands and the lung, and anterior mediastinum. The former situation is from a clinical point of view the most important, as malignant disease in these structures, simulates phthisis in a subacute form so closely that its differential diagnosis in some cases is almost impossible. From observation of a good number of cases I am convinced this is so, and a case of malignant deposit in the bronchial glands, infiltrating the lung, ending in ulceration and in the formation of cavities, is frequently set down as one of hopeless phthisis, a post-mortem on which would be of no interest, and all record of the frequency of the disease is in consequence entirely lost. With mediastinal cancer such an error is not so likely to occur, as, like other intra-thoracic growths, such as aneurysm, the symptoms are more the result of the pressure it exercises on the important vascular and nervous structures around it, and which attract attention long before infiltration of the lung and general cachexia show themselves. Added to this, the growth is more superficial and more easy to be recognised. With the former variety lung symptoms predominate; with the latter cardiac and vascular ones. Hæmoptosis appearing early, and being constant in its occurrence, would seem to be the most reliable sign, and was present in more than half of thirty-nine cases recorded by Dr. Risdon Bennett in his Lumleian Lectures on Intra-thoracic Cancer, and Dr. Walshe speaks of it as having occurred at some period in nearly all of his cases. When persistently present it affords evidence of the situation of the growth in the bronchial glands or in the lung itself, with pressure on the bronchial veins, as distinguished from mediastinal cancer, which latter, as Dr. Cockle remarks in his work, may afford no evidence of its existence until pressure symptoms, or infiltration of the surrounding parts, especially the pericardium or large vessels, indicate the presence of a tumour within the thorax.

I will now confine my remarks principally to the symptoms that indicate cancerous engagement of the bronchial glands and lung and their similarity to phthisis, and afterwards to those that indicate engagement of the mediastinum. I have mentioned hæmoptosis as a constant and oft-recurring symptom. Next in importance, as pointed out by Dr. Rossbach, would seem to be early congestion of the larynx, with aphonia, and without paralysis of the vocal cords, which latter symptom I will allude to afterwards as conclusive of mediastinal cancer. Spasmodic cough, with very little expectoration in proportion, as indicating early irritation of the bronchial nerves, frequently accompanied by dyspnœa and vomiting, is another early symptom. Next, dulness on percussion over some portion of the chest anteriorly; but this is not always present in the early stages of cancer of the bronchial glands, though it is the earliest symptom in mediastinal cancer. Feeble respiratory sounds on one side, bronchial râles, tubular breathing, prolongation of [illegible] sounds, and symptoms indicating [illegible] of the bronchial tubes, are frequently [illegible] difficulty in swallowing from pressure on the œsophagus, with cough and vomiting excited by the effort, [illegible] over the upper portion of the sternum, [illegible] drawn back, as pointed out by [illegible] describing the symptoms indicating [illegible] might be placed next in order. [illegible] one or the other side, containing [illegible] infiltration. This latter phenomenon [illegible] of intra-thoracic cancer, [illegible] of the pleural fluid as well [illegible] usually gives negative [illegible] the characteristic cells. [illegible] symptoms in advanced cases and in old people muco-purulent expectoration, emaciation, night sweats, and a moderately high temperature, we have a chain of phenomena that resemble phthisis.

When cancer begins in the anterior mediastinum there may be no cough whatever in the early stage, but there is marked retro-sternal dulness, with sense of resistance, and generally retro-sternal pain. Here pressure symptoms begin to show themselves early, as indicated by displacement of the heart, fulness of the veins in the neck, with cyanosis and œdema of the face and upper extremities, and later on dyspnœa, with stridulous breathing, aphonia, and paralysis of one or other of the vocal cords, as the vagus or recurrent laryngeal respectively get pressed on. Paralysis of one or other of the vocal cords, with symptoms of a tumour within the thorax in the absence of aneurysm, is regarded by Dr. Burney Yeo as absolutely diagnostic of malignant disease. Though the symptoms of cancer of the bronchial glands resemble phthisis very closely, we shall find in the signs occasionally features that raise doubts in our minds as to their being phthisical ones. The dulness on percussion is generally not apical, but lower down over the lung, and is elicited posteriorly opposite to the same situation in front, and is generally more extensive than in phthisis, when the disease is of some duration. There is also generally an absence of all crepitus, though bronchial râles and feeble inspiratory sounds, with prolongation of expiration, are present. When the bronchial glands are much enlarged and compress the bronchi, vocal fremitus and vocal resonance are both absent; and absence of all breath sounds with collapse or consolidation of the lung generally present a condition you will not find in phthisis, no matter how extensive the consolidation. Though many of the above symptoms are present in a good number of the cases of primary cancer of the bronchial glands, in some one of the symptoms will be most marked, and the first of the following cases illustrates the prominence of pleural effusion over all other symptoms.

John G——, aged thirty-eight, a bottle-blower by trade, was admitted into the Mater Misericordiæ Hospital on the 27th of July last, suffering from cough, dyspnœa, lividity of the face, and slightly bloody expectoration. He never had syphilis, rheumatism, or any other illness, though he drank hard at times, and was able to attend to his work, in which he was constantly exposed to draughts for a period of fourteen hours at a time. There was no history of malignant disease in his family. Three weeks before admission, while engaged at his occupation, he caught cold, which showed itself by prolonged rigor, sickness of stomach, and headache with feverishness; he also felt pain of a catching character in the right mammary region. He was confined to bed for a few days with these symptoms; but after this time was able to attend to his work again, experiencing only slight pain in the right side, cough, and shortness of breath. For a week before admission these symptoms became worse, and on admission he presented the following:—Lividity of the lips and face, with puffiness of the eyelids and prominence of the veins on the front of the thorax and also in the neck; no enlarged gland to be seen. His voice was hoarse and aphonic, and there was urgent dyspnœa, especially on exertion, with cough and bronchial fremitus over the chest. The patient seemed in no way emaciated, and did not suffer from night sweats. There was absolute dulness on percussion over the entire aspect of the right chest, except for an inch or two under the clavicle, where it was tympanitic; and behind, the dulness reached as high as the centre of the scapula. In front it encroached across the upper portion of the sternum to the extent of an inch or two beyond its left border, and here the dulness gave great sense of resistance. There was feeble inspiration through the right lung, with bronchial râles in both; and vocal fremitus and vocal resonance were both absent on the right side. The heart was feeble in its action, but not displaced, and no murmur was present either in it or the great vessels. From enlarged measurements of the right side and the above symptoms I considered there was fluid in the pleura, though I could not explain the symptoms of venous pressure from this alone, and could only conjecture there was a tumour within the thorax also. I aspirated the right pleura on the day after his admission, removing nine pints of fluid, the latter portion of which was bloody. After removal of the fluid the dulness was more distinct over the upper portion of the sternum, and could be defined. His dyspnœa was considerably relieved, and more air seemed to enter the

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right lung, cyanosis of the head and face, however, continuing, and the veins on the thorax showing more prominently. A week later his right arm and face became very swollen, and, recurring dulness over the right side indicating fresh effusion, I again tapped the pleura and removed six pints of bloody fluid. Some days after the second tapping his temperature rose, his dyspnœa increased, and dulness at the base of the left lung showed itself. Suppression of urine with delirium set in, and he died on August 18th. The post-mortem examination showed a large mass of cancer, both hard and medullary, infiltrating the bronchial glands and lung on the right side, beginning at the bifurcation of the trachea, and involving in its course the pleura, which was thickened, lymphy, and contained a quantity of bloody serum, and infiltrated the pericardium over the auricle, the superior cava of which it compressed. The left lung was congested throughout, and solidified around its main bronchi from recent inflammation.

The following case, in which symptoms of phthisis with difficulty in swallowing were the most prominent features, shows a different train of symptoms:—

James McC——, a waiter, aged thirty-seven, was admitted into the Mater Misericordiæ Hospital on Sept. 22nd last, complaining of cough, with muco-purulent expectoration mixed with blood, night sweats, emaciation, and symptoms of stricture of the œsophagus. The patient gave a good family history; there had been no phthisis on either side. He drank freely, taking as many as eight or ten glasses of whisky daily, undiluted. He had never suffered from any illness until six months before admission, when he noticed a difficulty in swallowing his food, accompanied by cough and vomiting, the food being arrested at a spot which he referred to the centre of the sternum. There was no pain at the place of constriction, and no sense of pressure or dyspnœa. He coughed up frequently considerable quantities of blood, bringing up nearly half a pint six weeks before admission, occasionally being jam-tinted or prune-juiced in colour. On examination the heart was found healthy; no murmur. There was no enlargement of the cervical glands. The throat was congested and the voice aphonic. Dulness was elicited over the upper portion of the sternum, extending to the subclavian space on the right side, with tubular breathing and bronchial râles, but no crepitus. There was no dulness posteriorly, the breath sounds being normal here. An œsophageal tube of the smallest size could be passed, and the stricture only admitted the next size up to the time of his death; all attempts to pass a larger one failed. After catheterisation liquid nourishment could be taken, but it always induced cough at first, ending in vomiting. The temperature throughout varied, rising occasionally from normal to 101·2°. His emaciation and night sweats increased, the tube being passed daily to allow of nourishment being taken until Oct. 17th, when the dulness over the upper portion of the sternum and right apex showed a marked increase, and on the 21st no tube could be passed, the attempts to do so causing considerable pain. Pulmonary congestion set in, and the patient died on Oct. 28th. I regret that in this case no post-mortem examination was allowed, as we should no doubt have found enlarged cancerous bronchial glands pressing on and constricting the œsophagus springing from the fork of the trachea, which would seem to be the most usual site for cancer in this situation to begin.

The next case, a washerwoman, aged fifty, was admitted into my ward in the hospital with feverish symptoms, pain in the left side, dyspnœa, wasting cough, and muco-purulent expectoration mixed with blood, which was constantly present. The patient was seen in my absence by the assistant physician, who diagnosed pleural effusion of the left side, with dulness on percussion at base, absence of vocal fremitus, and resonance. Though no dulness existed in the upper portion of the lung, there was complete absence of all breath sounds here, which seemed rather difficult to explain. The woman showed marked hectic flush, and dyspnœa existed out of all proportion to the pleural effusion. Her illness began about three months previously with pain in the left side, a cough that had existed for some months before, with blood-spitting; but the symptoms were not urgent until a few weeks before admission. There was dulness in front behind the upper portion of the sternum, extending to and becoming continuous with cardiac dulness, but the percussion over both apices was normally clear. The respiration was puerile at the right apex and over the right lung; but there was complete absence of all respiratory sounds over the left apex. The dyspnœa and orthopnœa were most troublesome, and the temperature remained high up to the time of her death, which occurred three weeks after her admission. The post-mortem examination showed dark-coloured serum in the left pleural cavity to the extent of two or three pints. The pleura and lung were adherent at its upper and anterior aspect, with a thickened mass of hard bronchial glands surrounding the root of the left lung, compressing the bronchi and bronchial veins. The lung itself was contracted to half its size, and puckered here and there from emphysematous lobules, and the upper lobes studded in places with cancerous nodules, both medullary and scirrhous, which spread in a radiating manner from its root; between these the lung was solidified and non-crepitant.

I may mention that in both these cases microscopic sections of the deposit showed the typical cells. And in the first two cases, though aphonia and congestion of the larynx were present, there was no paralysis of the vocal cords evident. I need not here allude to secondary cancer occurring in these situations, my object being to show that primary cancer is of the two much more frequent, and that in advanced cases it is likely to be confounded with phthisis.

The general conclusions I have come to with regard to the disease are as follows: That primary cancer of the thorax is of not unfrequent occurrence, generally appearing in hard drinkers, and the symptoms of it are developed apparently after catching cold. That it is to be found in two situations within the thorax—namely, the bronchial glands and the anterior mediastinum; and is of the mixed variety, scirrhous and encephaloid. That persistent blood-spitting is a very usual symptom in its growth, and indicates infiltration of the lung and pressure on the bronchial veins; and that the so-called characteristic red-current-jelly expectoration is a rare symptom. That fixed pain in the thorax is not always present, and when it is, it is more usual in the mediastinal form of the disease. That the disease is generally accompanied by aphonia and congestion of the larynx in its early stages, and by paralysis of one or other of the vocal cords in a later stage. That when in the bronchial glands it is invariably accompanied by symptoms of pressure on either one or other of the bronchi, or on the œsophagus, causing symptoms of stricture. That pleural effusion containing blood is very frequent on the side affected, and in its growth forwards from the root of the lung it involves the pericardium, and causes pressure on the superior cava or pulmonary veins. That when in the bronchial glands its later stages may simulate advanced phthisis very closely. That it may be occasionally distinguished from phthisis by its pressure symptoms on the bronchi, its dulness being more central and more extensive, with absence of crepitus and more urgent dyspnœa, while no bacilli are found in the expectoration. That malignant intra-thoracic disease is generally fatal in from two months to six, though Dr. Walshe gives the average duration as from three months to thirteen. In the cases I have just mentioned the disease was fatal in each case within seven months. I need not here allude to the difficulty in distinguishing between intra-thoracic malignant disease and aneurysm, where no murmur is present and pressure symptoms are the most prominent feature in the case. The difficulties of forming a differential diagnosis in such cases are indeed great—nay, sometimes almost impossible,—and we have mainly to rely on the evidence afforded by arterial disease elsewhere to assist us.

MOLLUSCUM FIBROSUM AND LARGE PENDULOUS FIBROMA;

REMOVAL OF GROWTH; RECOVERY.

By HENRY A. LEDIARD, M.D. Edin., F.R.C.S. Eng.,
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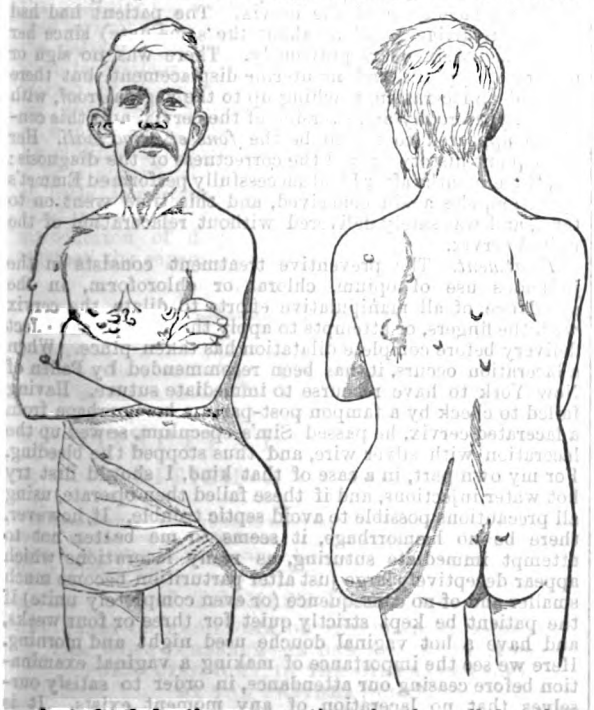
John G——, aged twenty-nine, labourer in a timber yard, was admitted into the Cumberland Infirmary on March 17th, 1886. The patient has never been what is called "quick," and his head has always been very large in proportion to his body. He has had none but ordinary illnesses, with the exception of bronchitis, from which he suffered for the previous three months. He has had from birth a tumour over the left hip, which continued to grow till he was twenty-four, when it ceased growing. In addition to this, he has developed numerous small tumours on various parts of the

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body, and he has never had any pain except when some of them have suppurated; but this has not occurred often.

On admission the patient was considerably emaciated and suffering from chronic bronchitis. Studding the upper two-thirds of his body were several tumours varying in size from a split pea to a chestnut, with the exception of the large one about to be described. They were all of them rounded and smooth surfaced, some moving freely beneath the skin, others adherent; many of them had a bluish tint. In two instances these tumours had suppurated and formed abscesses. There was one small tumour behind the left ear, of the size of a split pea; another on the right side of the neck, rather larger; there were several varying in size over the whole back, particularly about the sacrum; some were to be found on the arms and forearms, but none were seen below the trochanters. Situated over the left iliac bone was an enormous pendulous growth, hanging from the tissues about the left crest of the ilium and the left inguinal and lumbar regions. The tumour hung like a satchel, it was ten inches long and about fourteen inches broad at the base. Its surface was superficially ulcerated in patches or excoriated; it was of considerable inconvenience to the patient, but gave him no pain. (See engravings.)

After being under treatment for four weeks the patient's condition improved, the cough ceased, and the ulcerated



surfaces healed; the suppurations in the cellular tissue about the body had dried up, and he had gained flesh. On April 12th the tumour was removed under ether. In order to meet the expected hæmorrhage an iron clamp covered with leather was used, having been specially made by a local ironmonger for the case. It consisted of two long pieces of iron curved on the edge and fastened at pleasure at the two ends by two screws and nuts. The pedicle having been secured by the clamp close to the iliac crest, the tumour was amputated, and as many vessels as could be seen were tied. After this the clamp was a little relaxed, when many more vessels, seen by the spouting of blood, were secured, and the clamp was then removed. Considering the enormous number of vessels, very little hæmorrhage occurred, as the clamp proved most valuable. The lips of the wound were drawn together with silver wire and fishing gut, and the dressing consisted of a large wood-wool pad. On April 20th the drainage tubes were removed. A little suppuration had occurred here and there, but the wound was quite healthy. On April 30th the wound was almost entirely healed, and on measurement was found to extend to fourteen inches. On May 12th the patient went to the convalescent hospital at Silloth.

My thanks are due to our excellent house-surgeon, Mr. G. F. Smith, who was with us at that time, not only for the notes of the case, but also for the care he took in getting the clamp fitted. The patient was shown at the Carlisle Medical Society on Jan. 13th of this year. The wound had remained sound, and little or no deformity was visible, except the linear scar. The man was better able to do his work, but his intellectual deficiency was unaltered. The tumour weighed 6 lb., and has been placed in the Hunterian Museum of the Royal College of Surgeons (No. 373 C.). In structure it was soft and somewhat pulpy, though firm, and under the microscope was seen to consist of white fibrous tissue with spindle-shaped, oval, and round cells, with here and there some glandular tissue; there was, however, no evidence of any morbid activity of the sebaceous glands.

After the patient left the hospital I made some inquiries concerning his mental defect, and was told by his employer that he would do what he was told and was ordinarily useful, but would never make a skilled workman, as he had no ideas. I mention this because Hilton Fagge (vol. ii., page 745) draws attention to Hebra's remark that when molluscum tumours are numerous there is deficiency in mind and body. The engravings were made by Danielsson from photographs, and show the large tumour very well; but many of the small tumours were too minute to delineate, therefore only larger ones are represented.

Carlisle.

REMARKS ON THE

ACCIDENTS WHICH NOT INFREQUENTLY OCCUR TO PARTURIENT WOMEN.[1]

BY WILLIAM DUNCAN, M.D., F.R.C.S.,

ASSISTANT OBSTETRIC PHYSICIAN AND LECTURER AT THE MIDDLESEX HOSPITAL.

THE accidents of parturition on which I propose to make some remarks are—(*a*) laceration of the cervix uteri; (*b*) laceration of the vagina; (*c*) laceration of the perineum; (*d*) post-partum hæmorrhage. When we consider the wide extent of ground covered by these subjects, it is obviously impossible for me, in the short time at my disposal, to enter into them very fully; nor, indeed, is it necessary, in order to attain my object, that I attempt to do more than put forward the main points; but I wish to lay special stress on some, the importance of which, it appears to me, are not sufficiently recognised or appreciated.

1. *Laceration of the cervix uteri.*—This accident is one of the most frequent that occurs during parturition. Indeed, most likely some slight tearing takes place in almost every case, but this kind (as it speedily heals) is of no importance, except that it may, unless antiseptic midwifery is carefully practised, be the path by which septic material becomes absorbed, and either pelvic cellulitis or puerperal septicæmia be set up. Lacerations, on the other hand, which extend through a great part of the infra-vaginal cervix, or even up to the vaginal reflexion, have, in addition to the danger of septic absorption, both immediate and remote effects of great importance, which are far too frequently ignored, and even denied, by some experienced gynæcologists, but which I confidently assert from personal observation to be potential factors in the causation of puerperal and chronic uterine disease. Opinions differ as to the frequency with which these deep lacerations occur, and when occurring cause uterine disease; for there is no doubt that an extensive laceration sometimes exists in women who are apparently in perfect health. Emmet[2] says that 32·80 per cent. of all women under his observation who had been impregnated and had suffered from some form of uterine disease were found to have laceration of the cervix. Pallen[3] asserts that the condition exists in 40 per cent. of women with uterine disease. Goodell[4] states that about one in every six women with uterine disease has an ununited laceration of the cervix; whilst Mundé[5] found on examining 2500 parous women that 25 per cent. had well-marked laceration, but that only about 11 per cent. showed symptoms and required treatment. My own investigations have shown me that about 27 per cent. of all the mothers I examined had decided laceration, and about 6·5 per cent. required local treatment.

[1] Read at a meeting of the Cambridge Medical Society.
[2] Principles and Practice of Gynæcology. Third edition, p. 444.
[3] Mundé's Minor Surgical Gynæcology. Second edition, p. 435.
[4] Ibid. [5] Ibid.

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It is evident, therefore, that whilst this lesion occurs frequently during childbirth, only a comparatively small proportion of all the cases is sufficiently important from a pathological point of view to merit recognition as causing uterine disease; the proportion is, however, more than sufficient to call for our careful attention as to its preventive and curative treatment.

The causation of these lacerations is much disputed; some consider they occur more frequently when rapid dilatation of the cervix takes place, others that the opposite condition (tedious labour with rigid cervix) is the chief cause, and this certainly was stated to be the kind of labour in the great majority of the cases of extensive laceration which have come under my notice. Two other causes must be noted:—(1) that pernicious kind of meddlesome midwifery where an attempt is made to hasten the dilatation of a somewhat rigid cervix by sweeping one or two fingers rapidly round its inner surface, at the same time endeavouring to push the cervix over the head; and (2) the application of the forceps before full dilatation has taken place, and then the speedy delivery of the child. No doubt it is very tempting to one who is an adept in the use of the forceps, especially if he be overworked, to have recourse to a proceeding which will soon set free both his patient and himself; but I feel sure if he will make a careful digital examination about a fortnight later (as I maintain should be the invariable practice of every obstetrician), he will find a much larger percentage of torn cervices amongst those cases where, with the above mentioned condition, he has used the forceps than in those where he has administered some chloral or chloroform. On the other hand, I quite agree with Mundè[6] when he says "an experienced operator, by gently and gradually evolving the head and regulating its progress with the forceps, may even prevent a rupture both of the cervix and perineum." Now, whilst it is generally admitted that very few women are confined at term without sustaining some laceration of the cervix, there is great difference of opinion as to what percentage (if any) require operative interference later on. Dr. J. Henry Bennet,[7] in a paper read before the International Medical Congress in 1881 said "he thought the operation a totally unnecessary one, unless in some extreme exceptional case." This view is also held by some gynæcologists of experience, to whose opinions much weight should be attached. On the other hand, I am bound to say that the opposition to trachelorraphy is, as far as I know, limited to those who have never yet performed the operation, whereas it is viewed more or less enthusiastically by those who have practical experience of it. In the discussion which ensued on Dr. Bennet's paper there was an unanimity of opinion as to its value in suitable cases; and I think we are much indebted to Dr. Playfair[8] for being the first in this country to bring the subject in all its bearings into notice. Having performed the operation twenty-seven times, I can speak confidently as to the immense relief it affords in the vast majority of cases. I would here point out the great value of Sim's speculum, not only in the diagnosis of laceration of the cervix, but also in many other uterine diseases. Indeed, the ordinary tubular or Ferguson's speculum is worse than useless in those cases where laceration with ectropion exists, as it rolls in the everted edges of the torn lips, and thus the appearance resembles an ordinary (so-called) hypertrophy of the os." For the last few years I have discarded it altogether, except to demonstrate to my class the totally dissimilar and deceptive appearances seen on looking through it at well-marked cases of laceration, compared to those found on using the duck-bill, gently passing down the uterus with a vulsellum forceps, and then [illegible] the torn edges with a pair of tenacula.

The *immediate* results of a laceration may be either [illegible] or septic absorption. Cases of post-partum [illegible] occasionally occur where the uterus feels well [illegible] must then necessarily be due to [illegible] either of the cervix or some other part of the [illegible]. It is, unhappily, of not very uncommon [illegible] a woman's temperature, within a few days after [illegible] runs up with the usual febrile symptoms and pain in the lower abdomen or pelvis. On examination we find a cellulitic exudation in one or other broad [illegible] which either becomes absorbed after a time, leaving more or less permanent injury in the shape of flexions, adhesions, &c., or it goes on to suppuration. In other (and fortunately rarer) cases puerperal septicæmia, with all its accompanying grave dangers, sets in. Now, on examining a puerpera, in whom inflammatory symptoms have supervened, there will be found present (almost invariably) lacerations either of the cervix, vagina, vulva, or perineum; and these lesions, when carefully inspected, will be seen to have a sloughy appearance. Steurer,[9] on investigating an epidemic of puerperal fever at Strasburg, found diphtheritic patches on the vulva, and from these traced bacteria into the connective-tissue spaces, where their presence gave rise to cellulitis. From the spaces they entered the lymphatics, causing lymphangitis.

The *remote* effects of laceration depend on the extent of the injury: they may be *nil*, or we may have any of the following—namely, subinvolution going on to areolar hyperplasia of the cervix or whole uterus (so called chronic metritis), endometritis, cystic degeneration of the cervix, uterine displacements, chronic pelvic peritonitis and cellulitis, chronic ovaritis, sterility or abortion, and, lastly, it is said to predispose to epithelioma—a truly formidable list.

It is curious, as Mundé observes, that sterility and abortion should result from the same pathological process; but it is, nevertheless, true in some instances. One of my cases was a most interesting example of repeated miscarriages resulting from laceration of the cervix. The patient had had seven miscarriages (all at about the same date) since her confinement six years previously. There was no sign or history of syphilis, and no uterine displacement, but there was a deep laceration, reaching up to the vaginal roof, with much hypertrophy and eversion of the cervix, and this condition appeared to me to be the *fons et origo mali*. Her subsequent history proved the correctness of the diagnosis; for, three months after I had successfully performed Emmet's operation, she again conceived, and this time went on to term, and was safely delivered without relaceration of the united cervix.

Treatment.—The preventive treatment consists in the judicious use of opium, chloral, or chloroform, in the avoidance of all manipulative efforts to dilate the cervix with the fingers, or attempts to apply the forceps and effect delivery before complete dilatation has taken place. When a laceration occurs, it has been recommended by Pallen of New York to have recourse to immediate suture. Having failed to check by a tampon post-partum hæmorrhage from a lacerated cervix, he passed Sim's speculum, sewed up the laceration with silver wire, and thus stopped the bleeding. For my own part, in a case of that kind, I should first try hot water injections, and if these failed then operate, using all precautions possible to avoid septic trouble. If, however, there be no hæmorrhage, it seems to me better not to attempt immediate suturing, as many lacerations which appear deceptively large just after parturition become much smaller and of no consequence (or even completely unite) if the patient be kept strictly quiet for three or four weeks, and have a hot vaginal douche used night and morning. Here we see the importance of making a vaginal examination before ceasing our attendance, in order to satisfy ourselves that no laceration of any moment exists. It is obviously beyond the scope of this paper to enter into the treatment of old laceration of the cervix or of the conditions it may give rise to.

2. *Laceration of the vagina* may be of two kinds: superficial and deep. (*a*) *Superficial* lacerations occur very frequently, and are, as a rule, mere denudations of the mucous membrane, by the passage of the head. They afford facilities for the entrance of septic germs into the system, as seen by Steurer's researches, before alluded to. Their treatment consists in the antiseptic management of the puerperal state, as will be discussed later. (*b*) *Deep* lacerations may occur at any part of the vagina, but they take place most commonly at the lowest part in the structures which form the pelvic floor; they are very important from their ulterior consequences, and special attention has been drawn to them by Emmet of New York[10] and Schatz of Rostock.[11] Emmet considers the lesion to be a separation and tearing of the connective tissue and fascia of the pelvic floor. He says: "Under certain circumstances, in childbirth, the soft parts of the vagina are crowded up in advance, as the head passes along the floor of the pelvis. Laceration, if it occurs, does not take place in the posterior commissure of

[illegible]

[6] Op. cit. [7] Trans. Internat. Med. Congress, 1881, vol. iv., p. 337.
[8] Notes on Trachelorraphy or Emmet's Operation, Obstetrical Trans., vol. xxiv., p. 54.

[9] Hart and Barbour: Manual of Gynæcology, 3rd ed., p. 146.
[10] Principles and Practice of Gynæcology, 3rd ed., p. 366.
[11] Centralblatt für Gynäkologie, Band xi., Oct. 6th, 1883.

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the labia majora, but somewhere within the canal, and it is only as the shoulders escape that the rent is completed externally. The soft parts may be lacerated or not, but in many instances, before they are torn, I believe the fascia extending from the sulcus on each side becomes separated from its connexion with the vaginal outlet, and thus separation may take place without any external injury. We have then the condition I have compared to the mouth of a bag with a running string." Schatz says, "Hitherto neither the frequency nor the clinical significance of lacerations of the muscles of the pelvic floor has been sufficiently appreciated. In their connexions with displacements of the pelvic organs, and especially with prolapse, they are quite as important as, if not more important than, laceration of the perineum." The result of these lacerations is, as Schatz observes, that we not infrequently see cases of rectocele, cystocele, and prolapsus uteri, *where there is a fairly good perineum*, so that this structure, although it undoubtedly forms a small but strong part of the sacral segment of the pelvic floor, and thus aids in maintaining the pelvic organs in position, does not constitute, as was formerly supposed, the "keystone of the arch." My attention was specially drawn to these lacerations of the pelvic floor by Dr. Emmet, whom I have seen perform, in the New York Women's Hospital, his plastic operation on the posterior vaginal wall for their cure, and I have since then several times similarly operated, with great relief to the patients. With regard to immediate treatment (as these lacerations are usually associated with more or less tearing of the perineum), it becomes, as Emmet points out, even more important to operate immediately than it would be if the perineum were alone implicated. By closing a lacerated perineum just after delivery, if it be a superficial rent, the operation of itself would be of little importance, beyond lessening the danger from blood poisoning; but it gives the opportunity for the introduction of deep sutures, which may again bring together the separated muscular fibres of the vagina.

(To be concluded.)

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF PAPILLOMA OF THE BLADDER REMOVED BY THE WIRE ÉCRASEUR—IN ONE (MALE) BY SUPRAPUBIC CYSTOTOMY, IN THE OTHER (FEMALE) BY THE URETHRA; CURE.

(Under the care of Mr. SYDNEY JONES.)

THESE cases are good examples of the clinical history of vesical tumours of a simple kind, in which hæmorrhage of a definite character has been the most marked symptom. From the sex of the second patient an attempt was made (and successfully) to remove the tumour through the urethra rather than after suprapubic cystotomy, although it was of considerable size for passage along that canal. In each the growth was attached by a well-defined pedicle, and its simple character and complete removal will probably render the success of the treatment permanent. We are indebted for the following notes to Mr. Cecil W. Cooke.

CASE 1.—W. B——, male, aged fifty-four, a blacksmith, was admitted on March 21st, 1887, having previously been under the care of Dr. Phillips of Tickill, near Rotherham. Two years previously to admission he first began to pass blood occasionally with his urine. The attacks of bleeding used to last from four to six weeks, and would then pass off for about the same length of time. The intervals between these attacks have been gradually diminishing, and for the last six months he has always passed blood in his urine. The blood was generally mixed with the urine, but sometimes came afterwards, and sometimes there were clots, the passage of which caused pain. Otherwise there appeared to have been little or no pain in connexion with the symptoms. There was some increased frequency of micturition. During the last three months he had been losing flesh, was looking very anæmic, and getting much weaker.

On admission no calculus could be detected by the sound; something soft might be felt projecting from the right side of his bladder; microscopical examination showed some grouped cell growth. It was evident that the symptoms complained of by the patient were dependent on the presence of tumour. The patient was a stout man, with a deep perineum, and it was certain that an attempt at removal of any tumour would be much more difficult and unsatisfactory by the perineum than by a suprapubic cystotomy. An exploration through the perineum was not thought necessary or desirable, so that it was determined to perform at once a suprapubic operation. This was done by Mr. Sydney Jones on March 30th. Into the bladder ten ounces of boracic solution were injected; and into the rectum was inserted an oval indiarubber bag, which was distended with sixteen ounces of water. These injections were retained under the ordinary method. There was no difficulty in exposing the bladder uncovered by the peritoneum, nor was there any hæmorrhage worth notice. A vertical incision was made into the bladder; this incision enabled one easily to pass the forefinger, by which the interior of the bladder was explored. A fimbriated papillomatous tumour about the size of a walnut was at once discovered on the right side of the bladder, about, but rather above and in front of, the situation of the right ureter. The loop of a wire écraseur was carefully placed around the attachment of the tumour, and, fixed there by the left forefinger, was tightened by screwing with the right hand until the tumour fell off and was removed. The removal was found to be effected flush with the surface of the mucous membrane; and there was comparatively little hæmorrhage. The bladder was well washed out with boracic lotion. The upper part of the abdominal wound was brought together by sutures. The bladder was not sutured, but a large drainage-tube inserted. No catheter was inserted in the urethra. The wound was lightly covered with iodoform gauze.

March 31st.—A little tenderness about the abdomen made one think it desirable to remove the stitches.

April 4th.—The patient has been going on very well since the above note, and has had little or no pain. The bladder has been washed out with boracic lotion every day. The temperature has varied from normal to 101·6°.

9th.—During the last two or three days the patient has been passing a little urine by the urethra. The wound looks quite healthy, and his condition is improving.

18th.—Amount of urine increasing through the urethra, less through the wound.

23rd.—The patient improves steadily. Wound filling up; edges brought into closer apposition by strapping.

May 4th.—Since May 1st (about one month after the operation) the man has passed all his urine by the urethra; wound almost filled up.

10th.—The patient got up to-day. Wound now quite healed, and the man is well in every way. The anæmic condition, which was so evident on his admission, is quite recovered from. He left the hospital quite well a few days later.

The specimen is now in St. Thomas's Hospital Museum. It was examined by Mr. Shattock, and its structure was pronounced to be simple papilloma.

CASE 2.—F. M.——widow, aged fifty-eight, was admitted on May 23rd, 1887. About six years previously she first began to pass blood with her urine. At that time it continued for two or three days, and she saw no more of it for three or four months. The attacks of hæmorrhage have more and more frequently occurred; and on May 13th, ten days before her admission, she had a pretty severe and continuous attack, for which she consulted a doctor, who sent her into the hospital. Whenever she passed blood she suffered pain, but not at other times, and when clots were present she had frequency of micturition, amounting almost to a state of incontinency. The medical man whom she consulted, and who sent her into the hospital, sounded her and said she had a "tumour."

When admitted, the woman said that she had continuous

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pain, much worse when passing urine, not worse when moving about; that it was worse when the bladder had been emptied. However, on examination she seemed to have incontinence; there was continuous trickling from the urethra of slimy blood-stained urine. On May 28th Mr. Sydney Jones examined with a sound. There was no calculus, but there was a sensation of thickening in the posterior wall of the bladder. Microscopical examination of the urine showed blood-corpuscles, pus-cells, crystals of triple phosphate, amorphous phosphates, but no cell growth enabling one to arrive at a diagnosis of tumour.

On June 3rd the patient was put under ether; the urethra was dilated, and the bladder explored by the forefinger. A tumour was then felt, cauliflower-like, floating in the bladder, about the size of a Tangerine orange, and attached by a pedicle about half or three-quarters of an inch in length to the floor of the bladder, about an inch behind the vesical orifice of the urethra. The pedicle could be distinctly felt, and gave one the impression of being the thickness at least of an ordinary goose quill.

On June 8th the patient being again put under ether, Mr. Sydney Jones operated. The forefinger was passed through the dilated urethra into the bladder so as to feel the pedicle. A catch forceps was then passed into the bladder so as to secure the pedicle below the forefinger. The pedicle and tumour were then drawn forwards, and the noose of a wire écraseur was passed over the tumour and forceps, and a few turns of the screw readily detached the tumour. There was no hæmorrhage from the divided pedicle. The size of the removed tumour was less than when examined with its normal distension and vascularity. When removed it was the size of a walnut, and in water presented a beautifully villous character. Mr. Shattock, who described it as a charming specimen, looks upon it as simple papilloma. The specimen is in St. Thomas's Museum. The bladder was washed out well with boracic lotion, and a large-sized catheter was left for some hours in the urethra.

There is nothing to record in connexion with the after symptoms. The patient went on continuously well. Only on the night of the operation did her temperature reach 100°; afterwards it was normal. She left the hospital on June 27th, nineteen days after the second dilatation of the urethra and the removal of the tumour. On her discharge from the hospital there was no incontinence, no blood in the urine, and no pain.

The patient was again seen on July 4th, and was in excellent health.

Remarks by MR. SYDNEY JONES.—The above cases are of interest in that both presented the characteristic symptom, in the first place, of hæmorrhage without any additional symptom. In the first case there was in the later stages some frequency of micturition, but pain only during the passage of clots. He was rapidly going to the bad from loss of blood. In the second case, that of the woman, there was at first hæmorrhage; later on pain and incontinence, probably due to the attachment of the tumour, the pedicle of which was placed only a short distance behind the vesical orifice of the urethra, so allowing the tumour to be washed forwards and to obstruct the exit of urine. In the first case there could be no doubt of the existence of tumour. It was certainly the course to pursue to do a suprapubic cystotomy at once, without any preliminary perineal operation; and in any similar case I should at once follow the same course. The suprapubic operation enables one to expose the tumour in the best manner possible, and to use those means best adapted for its perfect removal. The bladder, too, is easily explored for any other growth. I do not consider, with the peritoneum well out of the way, and with free drainage subsequently provided for, that the suprapubic operation is a serious one. For tumours, I think, the suprapubic operation is the one to be selected. For stone, in my opinion, this operation should be selected for large calculi. The same objection exists against operating for vesical tumours through the perineum as for stone. In the case of the male above referred to, one month was occupied for the healing of the suprapubic wound. Suppose the operation had been done through the perineum, not less time in healing would have been occupied, and one would have had more difficulty in exploring and thoroughly removing the tumour. In the case of the woman, the tumour was so easily accessible through the dilated urethra, that no better operation could be suggested than that which was carried out.

SAMARITAN HOSPITAL FOR WOMEN, NOTTINGHAM.

A CASE OF NEPHRECTOMY FOR HYDRONEPHROSIS; REMARKS.

(Under the care of Dr. ELDER.)

A. S——, aged twenty-three years, single, was admitted on April 9th with a well-marked abdominal swelling on the right side. The following history was elicited. It is now seven years ago since first an aching pain in the right side, not constant but intermittent, was experienced by the patient. Machining, which occasionally had to be done in her occupation of dressmaking, or any unwonted and severe exertion, caused this discomfort, and its relief always followed resting. For several months this state of matters went on without affecting her general health, when suddenly and spontaneously it ceased and caused no further trouble for the space of three years and a half. Then an attack similar to the present came on and a "lump" on the right side now was recognisable. After a duration of three months this swelling disappeared as suddenly as it came. It had caused no particular symptom, but merely a sense of prostration. Again, six weeks prior to admission, the tumour rapidly reappeared, accompanied this time by pain, sickness, and slight constitutional disturbance. During this last invasion the patient has lost flesh, but otherwise her health is unaffected. When walking, standing, or lying on the left side a dragging, sickening sensation is complained of. There has never been hæmaturia or other unhealthy condition of the urine, and menstruation has been uniformly normal.

The objective signs were as follows: On the right side there was an irregularly-rounded, prominent swelling, insensitive and fluctuant, which when the patient lay on her back naturally fell into the right renal position, but which was freely movable, either by changes of recumbency on the part of the patient or in obedience to manipulation. It pretty well filled up the space between the ileum and the lower border of the liver. Evidently overlapped in front by the ascending colon, as manifested by the percussion note, in other parts it was quite dull. No pelvic or hepatic connexion could be made out, so the diagnosis lay between a floating kidney which had become hydronephrotic, or renal hydatids—the former being looked upon as the most probable one. The urinary secretion was plentiful, normal, and with a 2·4 percentage of urea.

On April 13th the tumour was aspirated behind the peritoneal reflexion and eighteen ounces of straw-coloured fluid withdrawn. This had a specific gravity of 1004, was very slightly albuminous, contained no hooklets, but showed a few crystals resembling urea nitrate. Within a few hours the swelling was as large as before and caused pain; so taking into account that renal extirpation in a patient otherwise healthy, and with the other kidney sound and able to perform the necessary compensatory function, is not so much more serious than a nephrotomy, this operation was decided upon and carried out on April 19th by the lumbar method. The comparative absence of peri-renal fat was noted at the time. The after progress of the case was one of uneventful progress towards recovery, the temperature only rising to 99° F. once, and this on the advent of a menstrual period. The patient left the hospital on June 5th with part of the wound not quite healed. The specimen removed showed the cyst to be composed of the upper part of the ureter and the pelvis and calices of the kidney, of which the greater part of the secreting tissue had become absorbed.

Remarks by Dr. ELDER.—The history of the above case points pretty clearly to its being an instance of a movable kidney becoming cystic owing to interference with the urinary flow, by reason of kinking and impermeability of the ureter. Intermittent hydronephrosis is thus explained—a condition which usually becomes permanent by virtue of the structural changes which take place in the walls of the ureter from the alternations of extreme tension and evacuation. This doubtless happened in my own case, thus explaining the repeated suddenness of the onset and disappearance of the swellings. Calculous impaction of the ureter, pressure from without by ovarian or malignant tumours, and bands of cicatricial tissue in the pelvis, are well-recognised causes of this pathological condition.

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With regard to the treatment of these cases, allow me to draw attention to a few statistics from Gross's monograph on Nephrectomy, published in 1885, and which includes all the cases of extirpation and allied operations obtainable from public and private sources up to date. Of six cases of aspiration, three were cured, two improved, and one died from some cause unconnected with the operation. Five cases were injected with tincture of iodine, of whom two were cured and three died. Of fifteen cases of puncture, twelve died, one was cured, and two had temporary relief. Incision with drainage in twenty-five cases cured twenty-one, and there were four deaths. Of these the mortality was most by the ventral operation. Of the twenty survivors (for some reason one is left out by the author), eleven have urinary fistula, of whom two have been relieved of this discomfort by a nephrectomy. Extirpation has been performed twenty-one times, with a total mortality of 38·09 per cent. Ten deaths were recorded out of seventeen ventral operations, and one of four lumbar. Gross, as the result of these investigations, recommends in the first instance aspiration of hydronephrotic tumours, then, if necessary, incision and drainage, in preference to the more serious operation of removal of the organ. It seems to me that, failing a cure by aspiration, a lumbar nephrectomy, in an otherwise good and young subject, is very little more dangerous than a nephrotomy, and is not followed by all the unpleasantness of a primary fistula, which, as we have seen, follows the majority of cases of incision and drainage. The present makes my fifth nephrectomy, with one death—the remaining three, previously reported in the pages of this journal, being in good health.

WOLVERHAMPTON GENERAL HOSPITAL.

ANEURYSM OF CORONARY ARTERY; RUPTURE; NECROPSY; REMARKS.

(Under the care of Dr. MALET.)

FOR the following notes we are indebted to Mr. Arnold Evans, house-physician.

J. D——, aged five, was admitted on Jan. 29th, 1887. He was a pale, emaciated, and feeble child, with scarcely sufficient strength to walk; he had three small unhealthy-looking sores, two on the face and one on the leg. His father, who brought him, said that for three weeks the child had suffered intensely from thirst and copious diuresis, the former being so distressing that he would even drink dirty water from puddle-holes in the road. Enormous quantities of urine were passed after admission, and a specimen examined was pale and clear; it had a specific gravity of 1002, and contained neither sugar nor albumen. The thoracic organs were examined, but nothing abnormal detected. When attempting to sit up in bed on the morning of Feb. 1st he complained of pain in the chest, then fell back and died almost instantaneously.

At the post-mortem examination the pericardium was distended with about five ounces of clotted blood, adherent to the walls of the heart. The ventricles were contracted and empty; valves competent and healthy. On removing the clots, a softened spot, surrounded by ecchymosis, was discovered in that part of the wall of the left ventricle which is overlapped by the appendix of the left auricle, the auricular appendix itself being discoloured externally, but its internal surface quite healthy. A probe passed along the left coronary artery from the aorta appeared at this softened point, and on dissecting out the artery it was found that its lumen at the above-mentioned point was increased and its walls attenuated, the aneurysmal dilatation thus formed being about the size of a pea. It was clearly from a rupture of this aneurysm that the hæmorrhage had occurred.

Remarks by Mr. EVANS.—Attention having been called to hæmo-pericardium in a recent issue of THE LANCET by Mr. J. W. Batterham, I have been induced to report the above case. Although hæmorrhage into the pericardium is of frequent occurrence from a variety of causes, it rarely happens that rupture of an aneurysm of the coronary artery occasions it. I have been able to find records of nine similar cases, a *résumé* of most of which by Dr. Crisp will be found in the twenty-second volume of the Transactions of the Pathological Society; in most of these cases, however, the subjects had reached an advanced age, and the chief interest of the case just recorded is centred in the age of the patient.

Medical Societies.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

An Improved System of Flush Closets for Small House Property.—The Powers and Responsibilities of Local Authorities in regard to Rabies.

A MEETING of this Society was held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Friday, May 20th, Dr. Alfred Hill, President, in the chair.

The Council presented the following report, which was adopted:—1. That the annual meeting be held at a date shortly preceding the October meeting, so as to enable the proposed amalgamation of the various societies to be completed and the officers for the ensuing session chosen from the reconstituted society. 2. That the dairies, cowsheds, and milkshops regulations as amended be issued.

The PRESIDENT referred to the loss the Society had sustained by the death of Dr. Iliff, and it was unanimously resolved that a letter of condolence be sent to the bereaved family.

The PRESIDENT read a paper on an Improved System of Flush Closets for Small House Property. After referring to the different methods of excremental refuse disposal and the disadvantages attending each, Dr. Hill explained his method by which slop water was utilised, which, being of higher temperature than water supplied by the mains, prevented pipes from freezing. The amount of water thus made available he estimated at fifteen gallons per day in a small house, or 150 gallons for a court or row of ten houses, a larger amount than is used in connexion with an ordinary closet supplied from a cistern. Slop water and surface water are conveyed to a tank which is constructed in two chambers, the first to arrest earthy and other solid matters, the second to constitute an automatic flushing tank, which, however, is only necessary in cases of one or two houses in which the quantity of water might prove insufficient. From this second tank the water is discharged into a horizontal glazed pipe, twelve by ten inches in diameter, in connexion with the sewer from which it is disconnected by a syphon trap, to which access is given by means of a man-hole. The closets are placed over this pipe, and beneath each seat is a perpendicular salt-glazed stoneware pipe connected with that below; the upper aperture of the perpendicular pipe is about seventeen by fifteen inches in its diameter, the lower twelve by ten inches. At the junction of the two the lower opening is received into a collar; the vertical pipe is so shaped that its posterior wall is perfectly vertical, while its anterior wall towards the lower end inclines in a straight line backwards and downwards, causing a narrowing of the lower aperture, to enable it to enter the collar or flange of the horizontal pipe; the latter is ventilated by a separate vertical pipe connected with it and running up the side of the house in a suitable position. Dr. Hill stated that this arrangement had the advantages of cleanliness and cheapness, and was being largely adopted in Birmingham.

Dr. WHITELEGGE, medical officer of health for Nottingham, read a paper on the Powers and Responsibilities of Local Authorities in regard to Rabies. In the first part of the paper the questions which present themselves to a local authority in considering its action in regard to rabies were examined from the point of view of the medical officer of health. These questions were stated thus:—1. Is rabies likely to become prevalent in the district? 2. By what means is it liable to be introduced and maintained? 3. What evidence is there of the utility of the preventive measures authorised by the Rabies Order of 1887, and the Dogs Act—viz., compulsory muffling and the slaughter of stray dogs? 4. What form should such regulations take? As bearing upon the first question, it was shown that before the number of known cases was such as to excite alarm, the disease must be already widely spread. Rabies could be detected with certainty, both by its symptoms and by the evidence attainable after death, but the great majority of cases doubtless occurred among vagrant dogs and other animals never coming under observation; and, apart from the fact that even the most characteristic symptoms were frequently overlooked by the owners of dogs, it was common for an affected animal to wander away from home in the earliest stage of the disease. The second question was answered by pointing out that the bite

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of a rabid animal was beyond doubt the cause of many cases, and could scarcely ever be logically excluded, even if not proved. The alternative theory of origin *de novo*, or even origin otherwise than from a previous case of rabies, was shown to be unsupported by evidence, and indeed opposed to the experience of other countries. The history of rabies in Sweden, Malta, Mauritius, Réunion, and South Africa proved that cases did not arise apart from the introduction of rabid animals. Thirdly, a brief account was given of the complete success of preventive measures in Sweden and Réunion, and of the immense reduction in deaths from hydrophobia in less isolated countries, such as Prussia, which had adopted the same measure. The statistics of Berlin and London were taken as examples of the suppression of rabies in large cities by such means. Finally, it was urged that the regulations, both for muzzling and for the slaughter of stray dogs, should be stringent and rigidly carried out for a sufficient length of time. As regards the advice to be given to a person bitten by a rabid animal, it was premature as yet to pronounce any final opinion upon M. Pasteur's procedure, but for present purposes the problem might be regarded as an alternative between accepting his treatment, and thus joining those of whom 2½ per cent. die with or without the horrible symptoms of ordinary hydrophobia, or rejecting the treatment and sharing the risk of those of whom not less than 16 per cent. die of hydrophobia. In many instances it was essential to determine with certainty the existence or non-existence of rabies in a given animal, where this could only be done by experimental inoculation. Not only was this forbidden by law as regards ordinary individuals, but there was in England no official institution to which application could be made, and it therefore became necessary to appeal to the charity of the Brown Institution. The history of rabies in Nottingham and the adjacent rural districts during the years 1885-6-7 was then referred to at some length, and the results of the application of muzzling regulations in the borough shown to be confirmatory of their value. A temporary suspension of muzzling led to a considerable increase in the number of known cases of rabies, followed by a rapid reduction upon the re-enforcement of the regulations. Statistical and other details were given of the fifty-nine reported cases of rabies. The means adopted for sending patients to M. Pasteur were described, and also the precautions necessary in order to obtain experimental verification of the diagnosis of rabies in cases of doubt. The spinal cords of seven presumably rabid animals had been forwarded to Professor Horsley for examination, with an affirmative result in every instance. Nine patients from the Nottingham district had undergone Pasteurian treatment, and all of these remained in good health. The only case of hydrophobia was that of a man who was bitten by a strange dog four months previously, during the abeyance of the muzzling regulations. In conclusion, it was pointed out that rabies could not be permanently stamped out except by the co-operation of neighbouring districts, and that in an island such as this only a determined effort was needed in order to banish for ever rabies and hydrophobia.

CAMBRIDGE MEDICAL SOCIETY.

AT the meeting on May 6th, the following communications were made:—

Abscess between the Spleen and Diaphragm, with Secondary Pyæmic Abscesses in the Liver.—Mr. M. GRIFFITHS read the notes of this case, a woman, aged twenty-two, single, who had been admitted into Addenbrooke's Hospital, under Dr. Bradbury, on Feb. 23rd last. Her father, mother, and one sister died in decline. She suffered occasionally from dyspepsia, but was fairly well till February 1st, when she had pain behind the sternum, but improved under medical attendance until Feb. 19th, when she had frontal headache and shivers; no cough. On admission, she was pale, and complained of pain in the left shoulder, loss of appetite, and weakness. The physical signs pointed to commencing consolidation at the apex of the right lung, and there was a friction sound with the heart. The temperature was 102·2° morning, 105·6° evening. Pulse 120. The urine contained some albumen. For the next few days she had much pain behind the sternum and an attack of dyspnœa, and on March 8th some dulness was noticed at the base of the left lung with bronchial breathing. The temperature was partially controlled for a day or two with antipyrin. But diarrhœa and great prostration came on, and she died on March 18th.

The necropsy revealed a large abscess, containing a pint of thick pus, situated between the diaphragm and the diaphragmatic surface of the spleen. The walls of the abscess were formed by the diaphragm and the capsule of the spleen. The splenic pulp was soft and diffluent. The heart was healthy; the kidneys slightly enlarged. There were a few recent adhesions over the front of the left lung, and collapse and pneumonic consolidation at the bases of both lungs, the left being firmly adherent to the diaphragm. The liver contained numerous small pyæmic abscesses.

On the Accidents which not infrequently occur to Parturient Women.—Dr. WILLIAM DUNCAN'S paper on this subject is published on another page.

Early Decidua from the Human Uterus.—Mr. WHERRY exhibited a complete decidual cast of the uterus and Fallopian tubal extremities. There was no ovum, nor spot where the ovum might have lodged. It came from a young, childless, married woman, with the following history: A year previously she had some menorrhagia and pain in the body, which was thought to be gall-stones. She recovered and was well and regular in her periods during twelve or thirteen months, when she missed two periods. She then rode twenty miles on a tricycle in one afternoon. This performance was followed in a few hours by a violent attack of vomiting and abdominal pain. All the signs of peritonitis appeared; then subsided in ten days, leaving some fluid in the abdominal cavity; menstruation then began and the decidual cast was expelled. She made a good recovery.

Reviews and Notices of Books.

The Student's Guide to Diseases of Children. By JAS. FREDK. GOODHART, M.D., F.R.C.P. Second Edition. Pp. 692. London: J. and A. Churchill.

Treatment of Disease in Children, including the Outlines of Diagnosis and the chief Pathological Differences between Children and Adults. By ANGEL MONEY, M.D., M.R.C.P. Pp. 560. London: H. K. Lewis.

Clinical Studies of Disease in Children. By EUSTACE SMITH, M.D., F.R.C.P. Second Edition. Pp. 318. London: J. and A. Churchill.

OF these three books, the first two go over the whole field of children's diseases, Dr. Angel Money mainly confining himself to treatment, Dr. Goodhart entering more fully on pathology and symptoms. Dr. Eustace Smith, after a general introduction on the peculiarities of the constitution of early life, and their modifying influence on disease, and after laying down rules for the clinical examination and treatment of children, devotes the rest of his book to the clinical aspects and pathology of certain diseases of the respiratory organs and of tuberculosis.

Dr. Goodhart's work, of which this is a second edition, gives in a short compass, a very clear and concise account of all the more important diseases of children, with their treatment. It is by no means a mere compilation, but contains the results of the author's own experience at the Evelina and Guy's Hospitals, and though intended as a student's manual, for which it is well adapted, it will be found equally useful by the practitioner who wishes to have in a small space the modern views on the pathology and treatment of children's diseases.

Of Dr. Money's work, which is essentially one on therapeutics, we can also speak highly. It gives a pretty complete exposition of the various methods of treatment which have been recommended by different authorities, and embodies the results of the author's experience at the Great Ormond-street Hospital. Avowedly with the intention of making his work as complete as possible, the author has introduced an unnecessary number of plans of treatment of a very dubious or even positively injurious nature; but his own recommendations are judicious and will meet with

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general approval, and it is satisfactory to see how great is the general agreement on questions of treatment of all three authors.

On the important subject of the artificial feeding of infants both Dr. Goodhart and Dr. Money give very full directions, and are in the main in accord. The great advance which has been made in a scientific preparation of artificial foods has rendered the bringing up by hand a much easier task than it was formerly. They both give the formula for the preparation of the artificial human milk, and speak highly of it, as it well deserves; and if its use could be introduced among the poor we should have much less of the marasmus which forms so large a part of out-patient practice at children's hospitals. Dr. Money rightly regards the plan of preventing the clotting of the casein of cow's milk by the addition of large quantities of alkali, as lime-water, to be unscientific, and much prefers the mechanical effect of barley-water and other glutinous substances.

With regard to points about which there is still more or less conflict of opinion, we may observe that Dr. Goodhart considers that there is a membranous laryngitis which is not diphtheritic, basing his opinion rather on the authority of others than on his own observation and arguments, which, indeed, support the other view. It is somewhat remarkable that while a membranous pharyngitis is almost always regarded as diphtheritic, even though no asthenic symptoms should be present, a difference of perhaps less than an inch in the position of the false membrane is sufficient to change the opinion as to the nature of the disease. Dr. Goodhart considers that diphtheria is at first essentially a local disease of the fauces, and that the constitutional symptoms are due to absorption of the poison from the local focus. He accordingly recommends forcible detachment of the membrane whenever it forms, and thorough local treatment by solvents and disinfectants. Dr. Money, though generally agreeing in Dr. Goodhart's views as to the pathology of the disease, disapproves of forcible detachment and solvents. If the views of the latter writer should be generally adopted, the practitioner and the attendants will have a difficult task to perform, and the little patients a terrible amount of suffering to go through, not only from terror, but also from severe pain, as these diphtheritic throats are often extremely sensitive. It must, however, be remembered that by whatever channels the diphtheritic poison finds entrance, by the time the false membranes have appeared there is always already a general infection of the system, and that the patient's danger, unless the larynx be affected, is not due to a layer of false membrane on the mucous surfaces. Moreover, although it is quite right to disinfect the membrane by local applications as far as it can be done without causing serious distress, it is a very doubtful proceeding to exhaust the patient's strength by a battle every two hours; indeed, to carry out the treatment with any real efficiency, still more frequent applications should be made. Neither of the authors notices the great relief which is given by cocaine where swallowing is very painful; sometimes, indeed, this will enable a child, who had previously resisted all attempts to give food, to swallow with comparative ease. With regard to laryngeal diphtheria, Dr. Money recommends early tracheotomy; Dr. Goodhart thinks the operation should be delayed as long as possible. We certainly should be disposed to agree with the former. When once it is evident that false membrane is present in the larynx of a child, nothing is gained by delay. In the treatment of empyema Dr. Goodhart objects to the method, now so common, of excising a piece of rib as a matter of course; and both authors are opposed to the practice of washing out the chest. Dr. Eustace Smith, on the contrary, recommends washing out the chest daily if any fetor be present. We are disposed to agree with the first two authors in regarding the persistence of fetor as an indication that the opening is insufficient.

Dr. Goodhart regards the acute febrile form of infantile paralysis as due to a general inflammation of the spinal cord, which rapidly subsides, leaving here and there patches which have been shattered by the storm. Other cases he considers with Dr. Buzzard to be due to a peripheral neuritis, and analogous to Bell's palsy of the face. He considers chorea to be a functional cerebral disease and not caused by embolism. Dr. Money regards it in the same way, and ascribes it to scattered discharges of nerve energy usually proceeding from the cortical motor centres, probably the result of defective nutrition of the nerve cells. Dr. Goodhart rightly attaches great importance to rest in bed, and ascribes the improvement which so often follows admission into a hospital to this cause.

A hypercritical reader might object to a few expressions or statements in both works, of trifling importance, but which in books intended especially for students it would be better to avoid. Thus Dr. Money uses the word "teichopsia" (p. 416) in such a manner as might well lead an unwary student who was ignorant of Greek to suppose it meant coloured vision. Again, by a printer's error, we find *tâche* cérébrale, which means something very different from what is intended. Dr. Goodhart adopts the barbarous form "leukæmia" instead of leuchæmia. At page 540 Dr. Money gives the incubation period of German measles as about a week; Dr. Goodhart, more correctly, as a fortnight or more. Dr. Goodhart only mentions generally that the glands in the neck are commonly enlarged in this disease, but does not describe their situation—a point of great importance in the diagnosis. Dr. Money rightly mentions the post-cervical glands, but neither author describes the most characteristic of all—namely, the gland over the mastoid process. Surely it is a libel on so innocent an organism as the bacterium termo to ascribe to it, as Dr. Goodhart does, the infection of diphtheria.

Dr. Eustace Smith's book is the second edition of a work well and favourably known to the profession. The chief alterations are in the chapters on croupous pneumonia, pleurisy, and tuberculosis. Of especial interest are the chapters on catarrhal pneumonia and fibroid induration of the lung, which are, however, practically unaltered; and perhaps in the present state of our knowledge as to the pathology of tubercle it might be objected that many of the cases described as catarrhal pneumonia and fibroid phthisis were really chronic forms of tuberculosis. The author describes catarrhal pneumonia as resulting in caseous deposits, which may themselves soften down or give rise to secondary tuberculosis; but it is now generally recognised that if a caseous deposit causes tuberculosis it must itself be tubercular, and most pathologists would regard a caseous deposit in the lung which softened down and caused ulceration as almost certain to be tubercular in its nature. The absence of any examination for the tubercle bacillus necessarily leaves the nature of many of Dr. Smith's cases doubtful; for whatever view may be taken as to the causal relation between the bacillus and tubercle, it is impossible now to doubt that it is a constant element in tubercle, and its presence or absence decisive as to the nature of the process. Although in some few points the pathology of parts of Dr. Smith's work appears to us a little behind the time, this does not detract from its great clinical interest and value, and it may be confidently recommended to the profession as well worth perusal.

Hay Fever and Paroxysmal Sneezing: their Etiology and Treatment. With an Appendix on Rose Cold. By MORELL MACKENZIE, M.D. Lond., Consulting Physician to the Throat Hospital, and late Physician to the London Hospital. Fourth Edition. J. and A. Churchill. 1887.

DR. MORELL MACKENZIE very opportunely publishes a fourth edition of his book on Hay Fever, which must be regarded as one of the most complete expositions of our knowledge of this curious complaint in our language, and which indeed has found translators in other languages. It is not a little surprising that so busy a practitioner should

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have found time to go so fully into the literature of this subject as Dr. Mackenzie has done. But it is not a case in which literature takes the place of experience, for both are *en évidence* in this book. The author shows, what is now indeed practically conceded on all hands, that hay fever depends in most cases essentially on pollen—though the particular pollen which gives rise to the disease in one case may not be the cause in another. Nor, indeed, is pollen always to blame. The late Dr. Flint had a peculiar exemption from all forms of asthma save when he slept in a strange bed, where the bed or pillows were of feathers; this was especially the case in inns and steamboats. In other persons the attacks are brought on by emanations from animals—as the horse, the rabbit, the cat, &c. But the hay fever class of cases is much the more numerous; indeed, so much so as to make them a special care to medical men. Dr. Mackenzie alleges that treatment is very useful, apart even from removal from the pollen-laden atmosphere, which is certainly the best course to advise. We must refer our readers for particulars to the book itself, but in the main he relies on soothing treatment locally, such as the application of cocaine, and on constitutional treatment which recognises the neurotic element in cases, especially the exhibition of the valerianate of zinc. In some instances, where there is hypertrophied tissue, more active local treatment is required, but the author does not regard coarse local disease as essential to hay fever, but rather as exceptional.

COLONIAL AND INTERNATIONAL CONGRESS ON INEBRIETY.

THE first Colonial and International Congress ever held on Inebriety and the Special Treatment and Legislation needed for the Diseased Inebriate took place at the Westminster Town-hall on the 6th inst., under the auspices of the Society for the Study of Inebriety.

The opening address was delivered by the President, Dr. Norman Kerr, who, after welcoming the members of the Congress, defined the disease of inebriety as a disease of the nervous system, allied to insanity, and characterised by an almost overpowering impulse to, or crave for, the oblivion of narcotism—a true intoxication mania, or, as he preferred to call it, narcomania. The disease assumed varied forms—periodic, constant, social, solitary. The form might be determined by complicating disease; thus there is the inebriety of insanity, of syphilis, of sunstroke, and of injury. The form might also correspond to the inebriant used—alcoholmania, opiomania, morphinomania, chloralomania, etheromania, chlorodynomania, and chloroformomania. Causes were predisposing and exciting. The chief predisposing causes were heredity, injudicious diet, bad hygienic conditions, sex, age, religion, climate, race, education, pecuniary circumstances, occupation, mental relations, temperament, &c. Of exciting causes some kind of nerve shock was the chief; others were accidents, disease, idleness and overwork, functional derangement, &c. The indications for sound treatment were (1) the unconditional withdrawal of the poison, immediate or gradual, according to its nature; (2) the removal, if possible, of the exciting cause; and (3) the reparation of the physical damage wrought by inebriety, the remedying of the pre-inebriate morbid condition and the strengthening of the moral control. After a warm tribute to American work for the inebriate, the president concluded by impressing on each member of the Congress the imperative duty of patience, of being content to inculcate a knowledge of the truth that many inebriates were diseased individuals and required medical and legal treatment in accordance with justice, and of hopefully looking forward to a future time, whether they lived to see it or not, when the truth would be acknowledged by the Church and by the State, and full justice would be done to the physical infirmities of the weakest and poorest of inebriates. Dr. Norman Kerr then left the chair, which was taken by the chairman of the morning sitting, Dr. Cameron, M.P., who briefly reviewed the law as regards inebriety and eulogised the work of the Dalrymple Home at Rickmansworth.

Dr. Norman Kerr laid before the Congress the result of a special inquiry into our colonial legislative provision for the victims of inebriety.

Dr. T. D. Crothers, in a paper entitled Inebriety and Inebriate Hospitals in America, reviewed the progress of the temperance movement in that country, the condition of the hospitals for inebriates and the work done by them, and the conditions of legal control of inebriates. He said that the history of the inebriate asylum movement in America was a repetition of every real advance in science, passing through three regular stages of growth—agitation, opposition, acceptance. It was now in the first and second stages. All investigation sustains the conviction that the time is not far distant when the inebriate will be taken from his home and on the street, and be quarantined in special hospitals, the same as if suffering from an infectious disease.

Chevalier Max Proskowetz de Proskowmarstorff stated that in Austria inebriety was increasing everywhere on a dangerous scale. The consumption of alcohol (taken as at 100 per cent.) was 6·7 litres a head in a population of 39,000,000; but in some districts 15½ litres was the average. In all Austro-Hungary there was an increase of nearly 4,000,000 florins in the cost for alcohol in 1884-85 over 1883-84. In 1885 there were 195,665 different places where liquors were sold. The national Parliament has been asked to establish homes for inebriates, and to cause the intoxicating nature of alcohol to be taught in schools.

Dr. N. S. Davis said that the conflict between the vice view and the disease view of inebriety was the result of a misapprehension of terms. A drinking parent begets a child with a degenerated type of organisation, rendering the latter liable to inebriety, as to convulsions or imbecility. Inebriety is a disease, inasmuch as it is a departure from health, persisting in certain cases after the immediate act of drunkenness is over.

Mr. Clark Bell, president of the Medico-Legal Society of New York, read a paper on the relation of Intemperance to Insanity. After reviewing the opinions of the most celebrated alienists of Europe, he said that we might safely assume that science recognises throughout the world the abuse of alcohol, not only as the greatest and most direful cause of insanity known to the race, but alcoholism in its various forms as a distinct type of insanity.

Dr. Lewis D. Mason, discussing the relation of disease to alcoholic inebriety, said that apart from those who take alcohol for social reasons, a large proportion take to it because they are diseased—first, as a stimulant cardiac primarily, then on the cerebral circulation; secondly, as an anæsthetic in painful or distressing diseases or conditions. Thus disease may be in a certain proportion of cases the underlying cause of the alcoholic inebriety, and alcohol by degeneration may produce disease which when established may produce and keep up habits of inebriety.

Rev. J. W. Horley read a paper based on his experience while chaplain of Her Majesty's prison, Clerkenwell.

Dr. Petithan, Liège, said that alcoholism in Belgium had augmented with frightful rapidity, and called for immediate and thorough action.

Mr. Axel Dickson said that in Sweden there were two asylums for inebriates. One is at Bic, under medical superintendence, where the charges can be paid only by persons of the middle class; the other is for working people at Törnas, the charges varying from £11 to £22 per annum.

Dr. Richardson explained the action of the heart and circulation in the inebriate classes by sphygmographic tracings, and demonstrated that there was a deviation from health in every stage of inebriety.

Surgeon-Major R. Pringle, M.D., read a paper on Homicidal and Suicidal Inebriety, Dr. Alfred Carpenter on the Meeting Place of Vice and Disease in the Inebriate, and Dr. Edward C. Mann, Brooklyn, U.S.A., on the Pathology of Inebriety.

Dr. Moeller stated that in Belgium they were agitating for interdiction of the inebriate, and for his seclusion in a special asylum for the treatment of his disease.

Dr. Joseph Parrish said that from 500 cases he had come to the conclusion that the majority were at the outset of the disease the subjects either of disease or accident, and had a tendency to periodical outbreaks.

In the evening a dinner, at which 250 guests were present, was held in the large hall.

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THE LANCET.

LONDON: SATURDAY, JULY 9, 1887.

THE holiday season is almost upon us. By common consent that large section of the population who have come to regard an annual holiday as the best means of mental refreshment and physical recuperation elect to take that holiday in the months of July, August, or September. This custom is capable of obvious explanation, and possesses certain definite advantages. Probably the desire to escape from the hot and dusty town to bracing coast and breezy heath originated the practice, and the growing popularity of sea-bathing, which can be enjoyed to greatest advantage at this season, has helped to stereotype and perpetuate it. Our social system is so complex that the habits of one class speedily react upon those of all the rest, and so it has come about that as summer wanes into autumn our vast social machinery begins to move a little more slowly, and many are able to enjoy some respite from the monotony of daily routine.

There are those who say that the usual autumnal holiday is a strategic error in the battle of health, and urge that, instead of leaving the shores of Britain when her gardens and meadows, her coasts and her mountains, are at their fairest, we should rather choose mid-winter or early spring as a time at which to escape from frost, and fog, and rain, to the sunny winter skies of southern lands. This argument is worth the attention of those who are free to choose their own time for their holiday, and can take distant flights to Algeria, Egypt, Madeira, or Teneriffe; but obviously this is an altogether exceptional class, and for the great majority of holiday seekers the prevailing custom rests upon a rational foundation. It is in summer and early autumn that the one short breathing space in the labour of the year can be turned to the most beneficial and pleasurable account without the necessity of undertaking distant and expensive journeys. It is not every holiday seeker who has

> "All the world before him where to choose."

For the overwhelming majority the choice is limited to some easily accessible locality within the bounds of the British islands, and there can be no doubt that in such cases the months of July, August, and September offer the maximum of advantage. There are some who, feeling the heavy stress of the winter's work, make a practice of taking a short spring holiday, and frequently take advantage of the interval at Easter for the purpose. No objection need be taken to this custom on the part of those who are simply overworked, but medical experience tends to show that a spring holiday is not without its special perils for those who are or have recently been seriously ill. The weather is apt to be then more than usually capricious. It is the east wind period, when too frequently the bright skies tempt to indiscretions which are speedily punished by the keen air and cutting blast. Travelling facilities are less ample than at a later period, and many of our health resorts are only beginning to awake from their winter torpor. On the whole, spring holidays must be recommended with caution, and in many cases the invalid, at any rate, will be better advised to remain in the enjoyment of the comforts of home until he can travel with greater security.

After the *when* of holidays, the next question is naturally the *where*. In the present article we shall confine ourselves to the needs of the family or the individual in whose case change of air is sought merely as an agreeable mode of rest and recuperation, reserving special cases for subsequent consideration. We may distinguish at the outset two classes of holiday: (1) the holiday which consists of a continuous and more or less prolonged residence at some single spot, and (2) the holiday tour, whether confined within the limits of the British islands or embracing a wider area. The therapeutic uses of these two types of holiday are worthy of some distinction. The former is evidently more suitable, as a general rule, for the extremes of life, for those who are much debilitated or recently convalescent, and for those persons who wish to carry out some special line of treatment at a selected sanatorium. The holiday tour, on the other hand, evidently affords more novelty, amusement, and instruction, and may be recommended to those who are fairly robust or whose ailments are "nervous" rather than organic. The great defect of the holiday tour is that, as a rule, too much is attempted in the way of sight-seeing. There is an excess of continuous fatigue, and not uncommonly health is injured rather than benefited. The tour with a crowd is open to grave objection, and should be positively prohibited to all whose main object in travelling is the restoration of physical vigour, impaired by over-work or disease. It is less within our province to point out the defects of this form of tour from the æsthetic point of view, but the spectacle of the average *bourgeois* tourist, introduced by easy arrangements to the wonders of the Louvre or the Vatican, irresistibly suggests the well-known saying about the impolicy of casting pearls before unsympathetic quadrupeds.

For continuous residence we have the choice of sea, mountain, and inland plain. Where the needs and tastes of children have to be considered, the first-named is rightly regarded as in general the most suitable. Children, with rare exceptions, love the seaside; the waves, the sandy beach, the seaweed, and the marine animals are to them a source of continuous delight. This joy in the ocean is the natural outcome of the physical benefit which usually accrues to the child by a residence at the seaside—a benefit which is very general, and specially marked in those who have any inherited or acquired tendency towards rickets, struma, or consumption. While seaside life is almost invariably beneficial to children, it does not necessarily follow that a bath in the sea shall be included in the daily programme. It is an admirable tonic to those who have a fairly sound constitution, and especially a vigorous circulation, but in all cases of delicacy it should be used with caution. Little harm will be done if the cardinal rule be kept in view that the sea bath does good when there is a speedy and sufficient reaction, but mischief if the reaction be imperfect or long delayed. It is also a safe rule not to insist upon bathing children who regard the process with lively aversion or alarm.

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We have in this country a splendid array of admirable marine resorts—Brighton, Eastbourne, Folkestone, Margate, Cromer, Scarborough, Skegness, Whitby, Ilfracombe, Tenby, Barmouth, Llandudno, Douglas, Bray, Portrush. Such are a few of the many which might be mentioned with commendation. Their physiological action may be recollected by the general law that the northern and eastern coasts are bracing the southern and western coasts more or less relaxing. Scarborough and Cromer are two of the most bracing English marine resorts, while Ilfracombe represents the opposite pole.

Of mountain resorts, in the strict sense of the term the British islands are almost wholly destitute, but such agreeable spots as Pitlochry in Perthshire and Llanberis in Carnarvonshire, although at only a slight elevation, afford the active pedestrian ample facilities for scaling heights where the desired air of the mountains may be obtained. The mountain resorts of the continent of Europe are numerous and famous. The Alps, the Pyrenees, the mountains of Auvergne, all contain delightful spots of world-wide renown, where a charming holiday may be spent amidst some of the most sublime scenes in nature.

In agreeable resorts of the third class—namely, inland resorts other than mountains—our own country is rich. Malvern, Cheltenham, Tunbridge Wells, Buxton, Matlock, Ilkley, Harrogate, Leamington, Woodhall Spa, Bath, Moffat, Crieff, and Strathpeffer form a goodly list, which might easily be increased. It will be remarked that many of the places on this list owe their celebrity in some measure to the possession of mineral springs, the revival of popularity of the British spas being no longer a hope only, but an accomplished fact. Bath is already reaping the reward of the active public spirit of her municipality, and Leamington is following so worthy an example. It cannot be doubted that the great popularity of the foreign spas is in many cases due more to their energy and ingenuity in catering for the wants and amusements of their patrons than to any decided natural superiority over similar resorts in Great Britain.

The holiday tour remains for consideration. Here the choice is limited only by time, cost, and individual taste. The Scotch highlands, the English lakes, and the wilds of Connemara afford ample scope for pleasant and health-giving tours, to which the only serious drawback is the extreme uncertainty of the weather in this changeable climate. It is matter for regret that the tourist so commonly insists upon getting over a good deal of ground, and is hence obliged to keep to the beaten tracks, where the facilities for locomotion are in full operation. Pedestrian tours of ten or fifteen miles daily offer far superior attractions for the stout walker to the stereotyped journey by rail, coach, or steamboat. To such persons may be commended the dales of Yorkshire, the green lanes of Warwickshire, the valleys of Wicklow, or the incomparable coast scenery of Devonshire, Cornwall, Antrim, and Donegal. The pedestrian, unless thoroughly inured to his work, must not exceed fifteen miles daily; he must guard against foot-soreness, and abstain from alcohol during active exertion.

For those who desire more distant flights Norway, Switzerland, the Rhine, the Tyrol, the Pyrenees, &c., offer unlimited scope and endless variety. It is a good rule in planning the itinerary of a tour to estimate carefully the time required to accomplish the contemplated round, and then to add one-third of that time in addition for rest, recuperation, and casual delays. In our next article we shall deal with the Invalid's Holiday.

THE wide publicity which was given to the outbreak of diphtheria which prevailed at Ealing in January last will be remembered. As the result of numerous representations, Mr. W. H. POWER was instructed by the Local Government Board to make inquiry into it, and his report, which is now before us, deserves careful attention from several points of view.[1] At an early stage of the disease Mr. PATTEN, the local medical officer of health, was of opinion that the diphtheria was in some way connected with the use of milk from a particular dairy, but neither he nor Dr. CORFIELD was able to detect the means by which this was brought about, whether as regards the sanitary state of the dairy or the health of the cows. The dairy owner, on the other hand, was able to show many points which went to raise doubt as to this view, and the case was admittedly one surrounded by many difficulties, for it involved investigation of a very limited but fatal outburst amongst consumers of over 1000 quarts of milk daily, the supply coming, in part, from other sources than the main dairy farm. On Mr. POWER'S commencing his investigation, circulars asking for information under a number of headings were issued throughout the district, and by the aid of such answers as were sent in it was found that households served by the suspected dairy had suffered to twenty times the extent of households having a different milk service, and so far as a "sore-throat" outbreak was concerned, this appears almost entirely to have been produced after the cause of the diphtheria had come to an end, but even then it was mainly amongst the customers of the dairy in question. The actual diphtheria outbreak was limited to seven days—i.e., Jan. 19th to 25th—and of those then attacked every one of the deaths occurred in persons consuming the milk under suspicion. It was also ascertained that antecedently to this outbreak of diphtheria there was some insignificant prevalence of sore-throat, most abundant amongst customers of the particular dairy, but not affecting them exclusively. Whilst the diphtheria was in progress sore-throat also prevailed, and this, too, amongst the same class of the population; and then, after an abrupt cessation of the diphtheria, came another sore-throat prevalence. The precise meaning of these various occurrences is discussed in detail by Mr. POWER.

At the same time Mr. POWER makes no secret of the imperfect results he obtained during the course of his inquiry. The Ealing case was a peculiar one. An intelligent officer of health was available, and the views which he held at the onset as to the cause of the disease have been confirmed; but notwithstanding this, "panic," Mr. POWER says, seized on the population, and they clamoured in the public press and elsewhere for an "independent" inquiry. There probably never was a case in which it was more necessary to get accurately at all the facts, negative as well as positive; and it may be stated at once that, so far as the implicated

[1] Mr. W. H. Power's Report on an Outbreak of Diphtheria in Ealing. London: Eyre and Spottiswoode. Edinburgh: Adam and Charles Black. Dublin: Hodges, Figgis, and Co.

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dairyman was concerned, every information was absolutely placed at Mr. POWER'S disposal. But out of nineteen medical practitioners personally urged by the Ealing Sanitary Authority to give information, it is stated that not more than eleven supplied facts of the sort asked for, eight sending either no reply at all, or refusing the names and addresses of their patients; and some of the private residents also refused information. Under these circumstances, Mr. POWER, after having at great labour put together a large number of extremely interesting facts, is obliged to conclude his report by stating that "questions further arising have not admitted of study on the present occasion, and consequently an opportunity has been lost of getting knowledge on this difficult subject." The aid which the Medical Department of the Local Government Board are able to give to communities affected with epidemic disease is necessarily limited by the small staff at their disposal, and by the necessity for doing such work as they undertake in a complete and exhaustive fashion. It seems, therefore, regrettable that they should not be furnished with the fullest possible information.

FATIGUE seems a simple word with a clear meaning, but how dark are the physiology and pathology of the subject is borne witness to by the elaborate researches of which it has been the centre, and the incompleteness of the solution of even its elementary problems. A thorough understanding of "fatigue" would include accurate knowledge not only of a physiological, but of a physical, chemical, and even psychological kind. Then, again, its influence as a means of treatment of disease or its effects on the already deranged organism is of interest to every medical practitioner. The most important branch of the question, however, relates to the nervous and muscular systems. In the process of getting fatigued, long before exhaustion sets in, what special parts of the neuro-muscular apparatus first become *hors de combat?* Many observers have endeavoured to elucidate this vital element of the question. Some of the latest consider the weakest link to be the peripheral apparatus, and the best researches at least support such an opinion. In his very interesting papers on Writers' Cramp and Allied Affections, contributed to the Royal Medical and Chirurgical Transactions, Dr. G. V. POORE has brought forward many facts connected with the living human body tending to support the hypothesis which locates the mischief in such cases in the peripheral apparatus. The experimental evidence adduced by Dr. AUGUSTUS WALLER is confirmatory of such a view, and, besides, is of a highly suggestive character. It is difficult to assign adequate reasons for the notion, but *a priori* we should expect that the points of junction of any apparatus would prove the weakest parts thereof. And so it apparently is in the neuro-muscular apparatus. The weakness appears to exist neither in the nerve cell of the motor cortex, nor perhaps even in the motor cell of the spinal cord, nor further down in the muscle itself, but rather in the junction between the pyramidal fibres and the motor cell of the cord and the similar place (the motor end-plate) in the muscle. An analogy between these two sites has been clearly drawn by Dr. GOWERS, who pertinently suggests that some agencies—disease as well as drugs—may paralyse the terminations of the pyramidal tracts in a similar way that curare, and perhaps other agents or agencies, destroy the function of the motor end-plate.

Another important point to be decided before we can be fairly considered to have any real knowledge of the nature of fatigue is the causation of the nutrition of these terminal organs—the actual conditions on which they depend for their existence as functional elements. All the information at present at our command would seem to show that the periphery is at the mercy of the centres; that the central motor cells can live and have their being without the aid of the terminal ramifications. And the evidence appears altogether opposed to the belief that any "mutual tension" exists between centre and periphery, though such a belief is entertained by Dr. BROADBENT and others. Easy as the matter seems of experimental demonstration, a further consideration clearly shows the vast difficulties in the way of settling even the simplest points in the problem. Dr. WALLER thinks there is evidence of a trustworthy character tending to prove that the nerve trunk lasts longer than the motor end-plate; that repeated stimulation of the latter causes its functional death before the disappearance of the function of excitability of the nerve. In the nature of things, a definite proof of this problem could only be ascertained by the employment of delicate instruments of research, whose indications, though accurate so far as they go, are yet liable to errors of interpretation. A deflection of the needle may be significant of the passage of a genuine impulse along the nerve which forms part of the circuit—the true negative variation; but accidental currents may cause confusion, and the phenomena attending the electrotonic state are not amongst the most simple in physiology. If matters are no better advanced in the sphere of neurology, what shall we say when we turn to the process of fatigue in other organs? Nor are the pathological manifestations sufficiently understood, a fact of which we are reminded by the work of ANGELO MOSSO, of Turin. He states that fatigue carried beyond the moderate stage, at which it is decidedly beneficial, subjects the blood to a decomposing process through the infiltration into it of substances which act as poisons—substances which, when injected into the circulation of healthy animals, induce malaise and all the signs of excessive exhaustion. That the chief cause of fatigue is the production of certain products and their action on the tissues is not a self-evident proposition, because it seems to be clear that any tissue excited unduly in a given space of time must become exhausted. And it is equally possible that fatigue as a sensation may be caused by the negative condition of diminished reconstruction as by the positive one of actual irritation by the products of metabolism. The facts at present ascertained would seem to prove that the negative and the positive states are both operative in the causation of fatigue.

THE 30th of June, 1887, "the day appointed" by their Lordships of the Privy Council under the Medical Act of 1886 and for certain purposes contemplated in that Act, is now past, and we may profitably devote an article to the consideration of the Act as a whole, and to the bearing of it on the future of the profession in the United Kingdom and its dependencies.

Perhaps the provision of the Act on which its promoters

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and admirers would most pride themselves is that which defines a Qualifying Examination for the future to mean an examination in *Medicine*, *Surgery*, and *Midwifery*. Hitherto *Midwifery* has been left out in the cold very much. In a court of law, for purposes of recovering charges for obstetric services, a midwife of the old order has been almost in as strong a position as an eminent obstetric physician, and even a little stronger, inasmuch as she was not hindered as he is by the bye-laws of his College from taking legal measures to enforce the payment of fees. Henceforth, in law, Midwifery is recognised as an indispensable part of medical education, without a knowledge of which no person shall be put on the Medical Register. Not only so, there must be also proof of knowledge of both Medicine and Surgery. Hitherto bodies were excused in law if they examined a man in one-half only of his profession—in Medicine or Surgery; now they must examine in all three subjects mentioned above. Of course this is as it should be. But the credit to the Act is not so great as it seems; for, as a matter of fact, nearly all the authorities have for some time been examining in all three subjects, though technically they, with one exception, conferred a diploma only in regard to one—Medicine or Surgery. The gainers will be chiefly the medical authorities and corporations, who will have a sort of excuse for charging a double set of fees for what is practically one examination, capable of being conducted by one body, which double set of fees will be of very unequal amount in different divisions of the kingdom, and in England and Ireland a very heavy charge for what is after all a minimum qualification to practise. The Act practically makes every corporation *per se* unable to give a complete and legal qualification, and so requires their conjunction or the appointment of assistant examiners by the Medical Council. In the former case both the conjoining corporations expect to be indemnified against loss of fees, and the luckless candidate will have in future to pay, as we have said, two Bodies for what could easily have been done by one. It remains to be seen whether the great disparity of fees charged by the corporations still left to compete with each other will operate injuriously on London schools or to the disadvantage of the public. We should have admired this much-praised feature of the Act if it had achieved a complete examination with more justice to the student and more security of moderation and equality of terms in the different divisions of the kingdom. It will be interesting to see if the conjunction and co-operation imposed on Corporations, which have hitherto cultivated the notion that a physician and a surgeon are essentially different and incompatible beings, will have any effect in widening the culture and the charity of each.

Another great feature of the Act of 1886 is the creation of Inspectors to secure the maintenance of the standard of proficiency in candidates at the said qualifying examinations. Three such inspectors, men of high character and fitness, have been already elected. Such a small number can scarcely do full justice to the work; but they will do their best; and if they give us a fair report on the Final Examinations, to which their present attention is to be restricted, they may well justify their existence. They will best do so by perfect frankness and independence. They come into office when the attention of the profession is directed to the disastrous rejections in practical subjects. They will perhaps tell us the explanation. The gift of a new lease to the Apothecaries' Societies is a feature of the Act which has already been fully discussed. The next change effected by the Act was a change in the constitution of the Council. Not only is there given for the first time a Direct Representation to the profession, but for the first time also a direct and independent representation to every Medical Authority. The half-representation of the Scotch universities has been removed; but they have no more voice in the Council than the Apothecaries of Dublin or the Faculty of Glasgow. We are not ungrateful for small mercies, but it would be absurd to affect satisfaction with so large a Council in which twenty bodies are so minutely and individually represented.

The recognition of Foreign and Colonial degrees by a nation which expects its own diplomas to be recognised everywhere was inevitable, and, if care be taken, need not injure either the public or the profession. The last, but by no means the least, feature of the Bill is the free importation of the Privy Council into the settlement of many questions affecting medical education and examination. Reports of inspectors of examinations are to be forwarded by the Medical Council to the Privy Council. And "if at any time it shall appear to the Privy Council" that the General Council is not doing its duty or maintaining a sufficient standard in the qualifying examinations, the Privy Council may notify their opinion to the Medical Council; and if the Medical Council fail to comply with any directions of the Privy Council, the Privy Council may supersede the Medical Council.

Such is the Act under which, "for better, for worse," the profession is to be regulated in the immediate future. It is badly drawn, and open to much criticism. But if the medical authorities which it recognises or creates do their duty in an unselfish way, perhaps the result may be better and juster than may have been anticipated.

Annotations.

"Ne quid nimis."

PROJECTED CHANGES AT THE COLLEGE OF SURGEONS.

SOME important changes, both in the College itself and in its *personnel*, were decided on at the last meeting of the Council. Among the latter we notice with pleasure that a pathological curator is to be appointed, whose whole time and service shall be devoted to his duties at the College. This is so wise a determination, and so obviously in the interests not of the museum only, but also in the interests of pathological anatomy, that it will be received with acclamation by the whole profession. The Council have done well to determine that this officer shall give his whole time, and shall not practise. We should be glad to know that he will be required to give lectures on surgical pathology, so as to keep the profession well posted in the latest interpretation of pathological facts. It would, perhaps, be too much to expect another series of lectures, such as those delivered by Sir James Paget many years ago and since published; they may nevertheless serve as a model towards which to aspire, and may help the future incumbent of the new office to shape both his

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work and his ways. Another duty, of hardly less importance, if we may venture to say so, should be the weeding out of old useless specimens. If this were done thoroughly, we are convinced that there would be little need at present to enlarge the museum. Hitherto, too much attention has been devoted to the acquirement of gross specimens; there are scores of tumours of different sizes and shapes which have no sort of value for a museum, and which, without the clinical history, are quite void of interest as well as of instruction. More attention should be given to the minute structure of such growths, and to the preservation of carefully made microscopic preparations. Acting on the recommendation of the Committee on the Extension of the College Premises, the Council have definitely determined to pull down the two houses immediately adjoining the College, the one to permit of an extension of the library, the other to serve as a residence for the conservator, after being suitably rebuilt. As regards the enlargement of the library, we quite feel that this may be a necessary step; and if it can be adequately accomplished "at an approximate cost of £2500," no very valid argument against the proposal can be made. As regards the rebuilding of No. 38, Lincoln's-inn-fields, "now occupied as chambers on annual tenancies," there is greater room for doubt. For besides the outlay on rebuilding, there will be the annual loss of rents. Then it is somewhat questionable whether the conservator need actually live on the premises. Many conservators would prefer to live out a little more in the country, and thus some valuable property would be at the disposal of the Council. We sincerely trust that these structural changes will satisfy the yearning for extension which seems to have overtaken the Council contemporaneously with the realisation of Sir Erasmus Wilson's great legacy. There are many other and far more important uses to which this money might be put, and these have been signified to the Council over and over again from many different sides—time alone will show with what result.

THE RELATIVE RANK OF ARMY MEDICAL OFFICERS.

IN the discussion which has taken place on the subject of the rank of army medical officers, nothing has struck us as being so remarkable as a suggestion offered by a contemporary as a "healing measure" by which the authorities might give evidence of their real desire to give satisfaction to the Army Medical Service. The suggestion is, "Let them restore this warrant [of 1858] in its integrity, and let future War Ministers set their faces firmly against all insidious attempts on the part of those who have more regard for their own class privileges and prejudices than for the best interests of the public service." Now let us examine what the practical results to the army medical officers would be of the restoration "in its integrity" of this Warrant. It would restore to them the duty of sitting as members of mixed boards, and as president when they happened to be the senior officer, instead of being, as at present, exempted from serving on such boards in any capacity; and it would also revive the extinct grade of assistant-surgeon. In exchange for these boons, if boons they can be called, it would deprive them of the right to retire with a gratuity at various periods under twenty years' service, of the right to retire on pension after twenty instead of twenty-five years' service; it would reduce the army rank of every grade of medical officer except surgeons-major under twenty years' service; it would lower the pay and retired pay of every grade, and would check the course of promotion by the return to the age of sixty-five years as the period at which medical officers of the administrative grades must retire instead of sixty years as at present, and by the abolition of the grade of brigade surgeons. That such a measure, if demanded by the department, might be acceptable to "Mr. Secretary Stanhope and his advisers" is possible, because it would carry with it a considerable money saving; but that it should be asked for by the department, or accepted by them as "a healing measure," is utterly beyond our belief. That the Warrant of 1858 was an acceptable measure, that it did much good, and was fully appreciated by the department, are well-known and undeniable facts; but since that date great and important changes have taken place in the army, and valuable concessions have been made to the demands of the profession on behalf of their brethren in the Military Service. Is it possible that an Act cancelling all these concessions and reverting to a state of affairs which was deemed satisfactory nineteen years ago would prove acceptable or "give satisfaction to the Army Medical Service"?

THE TREATMENT OF LUPUS BY INJECTIONS OF CORROSIVE SUBLIMATE.

DR. IGINIO TANSINI, of Lodi (*Gazzeta degli Ospedali*, June 12th), narrates the treatment of a case of lupus of the nose and face by means of repeated injections of corrosive sublimate. He began with a weak solution: corrosive sublimate 50 centigrammes, distilled water 100 grammes. This produced no reaction of any kind. A stronger solution—corrosive sublimate 1 gramme, distilled water 100 grammes—was then used. This produced some tumefaction and œdema in the neighbourhood of the punctures, and slight suppuration in some of them. Some fourteen or fifteen injections of a few drops were practised. Improvement soon became marked, and eventually all traces of the disease disappeared, the only marks left being those of the punctures in which suppuration had taken place. Dr. Tansini was led to try these injections by the following considerations:—1. That lupus is a form of tubercle. 2. That the bacilli are few and have no tendency to diffuse themselves. 3. That corrosive sublimate has proved certainly destructive to bacilli. He claims advantages for this method on account of lessened pain and disturbance and superior cosmetic results.

SUDDEN DEATHS.

SUDDEN deaths are almost necessarily frequent at times when the conditions of life change suddenly, or are especially changeful. It matters little to the result whether the change effected be for the better or for the worse, relatively. Thus it may be more favourable to the needs of a particular life that the temperature should be high than that it should be low, yet the change from cold to heat may be so rapidly effected as to throw upon the circulatory and transpiratory functions a strain which those parts of the organism which are concerned in the performance of the work required are unable to bear. In this way it happens that persons with unsound or weak hearts, or weak arteries, die suddenly when the temperature rises rapidly, although, if only there were no special strain consequent on the change, it would in itself prove advantageous to them. The converse is true, and without going into details which it is needless to particularise, it may be laid down as a proposition which cannot be disputed that at periods of seasonal change, and at times when the weather is so changeful as to produce great and rapid variations of temperature and pressure, sudden deaths are especially—we may even say *naturally*—likely to occur, and must, as a rule, be numerous. It cannot, therefore, be held to be surprising that the record of events of this class has been a heavy one during the past few weeks. The deductions to be drawn from the facts of the subject are—first, that a very

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large proportion of these calamities must be regarded as distinctly avoidable; and, second, in a considerable number of instances the difficulty of avoiding death would have been extremely small. In truth, it is little short of madness for persons who know themselves to be organically unfit, or weakly, to take exceptionally violent exercise—for example, in the cricket field—before the organism has had time to adapt itself to conditions which have been quickly changed. We are not now speaking of persons with recognised heart disease, who, of course, ought not to indulge in arduous sports at all. Our remarks are intended to apply to the cases of persons who, not being "diseased," are scarcely in robust health. It is strange that persons who escape for a few hours or days the monotony of a sedentary occupation generally set themselves, without preparation of any kind, to perform feats of muscular exercise which would severely tax the strength of those who are habituated to this sort of work. It seems to be forgotten that to suddenly change the mode of exertion is practically to call upon parts of the organism which are more than likely to be out of order and incapable of performing the task required of them, whether it be walking, climbing, playing games of muscular activity, or even exposure to more than an accustomed amount of excitement of any description. It is unwise—because unsafe—to assume that the brain or body generally will be able to do what is asked of it without preparation. It is for the most part out of small errors of self-management that great disasters to health and life are developed. It ought, therefore, to be remembered and impressed on holiday-makers of all classes that no unaccustomed exertion of any sort should be attempted without such care and preparation as a common-sense view of the matter suggests and enjoins.

HEALTHY HOUSES FOR THE LABOURING CLASSES.

THE proper accommodation of artisans and their families in town or country is an object still so far from attainment that almost every new suggestion relating to it is possessed of interest. The future of the country as a working and prospering unit is far more nearly connected with the healthy vigour of its native labouring population than with its natural products or its reserve of capital; and as strong muscular power cannot be reared in crowded homes planted in an unwholesome atmosphere, it behoves us to find for it those healthy surroundings which are so indispensable. In London and other great towns the work of providing suitable house room is fortunately making some progress. Much, however, remains to be done, and there is a good deal to be said for the contention of Lord Henry Bruce that this is a matter in which private enterprise, to be efficient, must be largely assisted by the various local authorities. He speaks, indeed, with special reference to London, but his remarks might be applied with more or less fitness to the case of any of our large towns. His complaint is that the Metropolitan Board of Works, while it has condemned many areas as insanitary, has remodelled very few; while, on the other hand, it has not forgotten the more attractive part of its functions, but has, perhaps, done it more than justice by opening up new streets and showy thoroughfares. It must be said in defence of the Board that its duties are manifold, and require a reasonable time as well as method for their execution. We must remember, also, that the demolition of slums is a gradual process, and implies a simultaneous provision of house accommodation for their occupants. Still, the fact that many thousands of families in the metropolis inhabit only one room ought to prove that there is need for increased activity; and it will not fail, we hope, to exert its full effect upon the mind of the Board and of the public. In rural districts a good deal has been made of the compulsory allotment of land to agricultural labourers. The project, if economically practicable, has certainly this in its favour—that it will help to stem that influx of the country population into towns which threatens, if continued, to drain the former of much of its best working material, while the close life of the towns must tell somewhat against the health of the in-comers. A modification of this system has lately been suggested by Dr. Downes at a meeting of the Essex Chamber of Agriculture with a view to improving the sanitary state of labourers' cottages. He proposes that rural sanitary authorities should be empowered to compel the sale of vacant land to cottage owners to be apportioned so that every such dwelling shall have attached to it a garden-plot of about one-eighth of an acre. The particular advantage claimed for this plan is that it will allow of more efficient removal of sewage than is now possible in the case of those small houses where underground drains are not used. The facilities for tillage, the greater supply of fresh air per house, and the consequent advantage with a view to isolation in case of infectious disease, are other reasons why the proposed arrangement, if it can be got to work, should prove satisfactory. The chief obstacle is the financial difficulty of securing to the purchasing owner a due return in rent for his outlay. We have not space to enter into this question, but it is so far satisfactory to know that the scheme is considered a practical one by the Essex Chamber of Agriculture.

TOMMASI-CRUDELI ON MALARIA.

THE last addition to the already voluminous bibliography of this subject is the elaborate "note" recently submitted by Dr. Tommasi-Crudeli to the Royal Academy of the Lincei, entitled, "Stato attuale delle nostre Conoscenze sulle Natura della Malaria e sulla Bonifica dei Passi Malarici" ("On the present State of our Knowledge as to the Nature of Malaria, and as to the Reclamation of Malarious Countries"). The paper is a reply to the author's many critics, and his fair and courteous tone is quite as remarkable as the trenchant force of his dialectic. Without entering into the arguments with which he seeks to remove objections, or to add confirmation to his position, we may admit that he has shown reasonable cause for adhering to the conclusions set forth in his now well-known treatise on the "Climate of Rome," reviewed in THE LANCET of October last. Even as a working theory of the origin of malaria and its remedy, it is not too much to say that his doctrine still holds the field, while he can claim the independent investigations of pathologists like Mosso of Turin as yet further reinforcing that doctrine. The concluding section of his paper refers to the treatment—the prophylaxis, rather—to be adopted in malarious countries, and he still holds to his belief in the preventive utility of arsenic, as "augmenting the mean resistance of the human organism to the invasion of the malarious ferment." Often enough he confesses this end is not obtained because in many cases the "specific resistance" has already sunk below the "mean resistance," either through defective or deleterious alimentation, or through long-continued depression, moral as well as vital, or through previous malarious attacks. Dr. Ricchi, medical supervisor of the South Italian Railways, and now of the Adriatic network, has, at the instance of Tommasi-Crudeli, set himself for some time to obviate these adverse conditions; and to aid the preventive virtue of the arsenic, he has prepared an aliment which has been found materially to answer that end. It consists of a powder, impalpable, soluble in water, in coffee, in broth, and such-like, prepared with the "sterilised" and desiccated blood of calves, and now known to commerce under the name of "Trefusia." The composition, quite accessible to the very poor, "has served," says Tommasi-Crudeli, "to render resistant to malaria those whose organisms, already deteriorated, were

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not susceptible of protection by the arsenical treatment alone." He further reiterates his confidence in the decoction of lemon as a prophylactic, and even as a remedy, in cases in which quinine and arsenic have failed. In testimony of this he adduces the experience of Professor Colasanti and of Drs. Taussig and Ferraresi of Rome, and of Dr. Shakspeare of Philadelphia, all of whom have noticed the efficacy of the decoction in every stage of malarious disease.

MORTALITY OF COTTON OPERATIVES IN OLDHAM.

IN an appendix to a valuable report recently issued by Dr. Niven, the medical officer of health for Oldham, on the health of that borough in 1886, the results are published of a preliminary inquiry into the effect of the cotton industry upon the health of the population in that town, more especially as regards the mortality from acute diseases of the respiratory organs and from phthisis. The inquiry is unfortunately beset with as much statistical difficulty as it is full of interest. Dr. Niven has attempted to gauge the influence of this occupation upon the mortality from the above-mentioned diseases by comparing the proportion between the deaths from these diseases among the total population of the town aged between fifteen and sixty years, with the proportion of such deaths at the same ages among persons engaged in the cotton industry. The conclusion at which Dr. Niven arrives, after what he holds to be ample allowance for possible sources of error in the application of his method, is that "the cotton operatives do not suffer more from phthisis than the general population, and that they suffer decidedly less from bronchitis and pneumonia." It will be eminently satisfactory if this somewhat surprising conclusion can be established as entirely trustworthy, but it is necessary to point out one or two obvious defects in Dr. Niven's method, which he will probably be one of the first to admit. In the first place, we find it difficult to see how, if Dr. Niven wishes to ascertain the effect of occupation in the cotton industry upon health, his object can be furthered by embracing in his inquiry the mortality statistics of the husbands, wives, sons, and daughters of cotton operatives. This might be desirable if the inquiry were one into class mortality instead of occupational mortality. Moreover, this extension of the inquiry considerably adds to its statistical difficulty, as the Census Report gives no clue to the numbers of persons *dependent upon* the cotton industry. The Census Report for 1881, however, states that 28,949 males and females were in that year actually engaged in "cotton, cotton goods manufacture," and Dr. Niven estimates the number engaged in the trade at 35,000 in 1886. Another source of difficulty inseparable from Dr. Niven's method is that of age distribution, which must differ very widely in the cotton industry from that in the general population. The partial correction for this disturbing influence by omitting all under fifteen and all over sixty is quite inadequate for the purpose, as the age distribution between fifteen and sixty must differ widely enough to render the conclusions of Dr. Niven of somewhat doubtful value. It should be borne in mind that the result of Dr. Ogle's investigations into the subject of the comparative mortality of males aged from twenty-five to sixty-five engaged in different industries during the three years 1880-82 differs considerably from that arrived at by Dr. Niven. Among men engaged in the cotton and linen manufacture in Lancashire, Dr. Ogle gives for phthisis a mortality figure of 272, against 220 for all males; while the respective figures for diseases of the respiratory system are 271 for the cotton industry and 182 for all males. It is needless to say that Dr. Ogle's figures are more in accordance with the general impression of the effects of cotton factory labour on health than are those of Dr. Niven. We shall look forward with interest to further investigation of the subject by Dr. Niven and other medical officers of health in towns where the population is mainly engaged in the cotton industry. It is necessary, however, that the disturbance due to varying age distribution of the populations dealt with should be fully and carefully guarded against.

OVER-PRESSURE AND TYPHOID.

M. PETER made a distinct contribution to the pathology of over-pressure in the striking paper he read on the 28th ult. before the Académie de Médecine. Having drawn a trenchant distinction between *sur-ménage volontaire* and *sur-ménage involontaire*, and reviewed the various injuries to which the developing school-boy is liable under the severe competitive ordeal to which he is nowadays subjected, he showed that the *courbature cérébrale*—the analogue of the *courbature musculaire*—may have fever not only as its sequela, but almost as its concomitant. Febrile disturbance, most frequent in the summer months, because at that season examinations and competitions are in full blast, may attain in the *surmené* to actual typhoid; for not only is there in these special cases a general rise of temperature, the thermometer often indicating as much as 39° and 40° C., but there are, as M. Peter has had occasion to remark, epistaxes and diarrhœas—symptoms which disappear with the cessation of the *sur-ménage*. This fever is well known, he says, in convents, where the ladies superior have learned to enjoin immediate relaxation of brain tension as the only remedy. M. Peter has noted cases in which one member of a young family, living under precisely the same conditions with the others, drinking the same water, eating the same food, and breathing the same air, has yet had to be treated by him for typhoid, the predisposing cause in the case being the long-continued pressure of preparatory study, a systemic nidus being thus developed, in which the *microbe pathogène* finds everything ready for its evolution. Many of his data have been drawn from the École Polytechnique, where he shows that, even more commonly than fever, phthisis is induced by the high-pressure life the pupils lead under conditions unfavourable to the renewal of healthy tissue. Having shown the unrelieved strain these young minds are subjected to, in view of the test examination, he dwells also on the muscular inaction, the rebreathed air, the constrained posture, and, last of all, the inadequate alimentation which is their portion: "At 6 A.M. a little black coffee and bread, and the first 'square meal' at 2 P.M.; in other words, seven hours' severe head work on an empty stomach. And the second meal does not take place until 9 P.M.—just," adds M. Peter, "when they are going to bed." It is difficult in these circumstances to resist his conclusions that the *lycées* and *écoles* of France are in urgent need of reform.

A PLEA FOR OUR HORSES.

THE sufferings of horses in the streets of London during the summer months cannot fail to excite feelings of compassion in the mind of every humane person. The increased strain upon them, from the slippery state of the asphalte and wood pavements, the state of thirst arising from the heat to which they are exposed and the sweating consequent on their exertions, are all factors which might, by judicious arrangements, be considerably modified. But there is yet another subject which cannot fail to excite feelings of indignation—the brutal cruelty of many of the drivers, who appear to make up for their own feelings of discomfort by lashing their horses and striking or kicking them when, through exhaustion, they are unable to do what their drivers consider a satisfactory amount of work. The interference of humane passers-by rarely leads to any satisfactory result, and they can hardly be expected to take all

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the trouble and give up the time necessary to have the offenders punished. But we think it is a point on which Sir Charles Warren might do good service by issuing orders to the police to take out summonses in all cases in which they see cruel treatment inflicted. We would also suggest to the owners of draught horses the duty of seeing that either the bearing rein be abolished, or that at least it be so used as not to be an instrument of torture, which it too often is in the hands of coachmen in the fashionable quarters of London.

ARSENICAL WALL PAPERS.

IT is well to give a note of warning that, in spite of utterances to the contrary, many of the gaudy-coloured wall papers are contaminated with arsenic to a not inconsiderable extent. It has been known that certain shades of green are made with arsenical pigments, and that "flock" papers with a rough surface are peculiarly dangerous from the liability of the flock to be rubbed off and disseminated as a fine dust in the air. This is so generally and so well understood that there can be but little sale for papers of the "green flock" type. An arsenical pigment is one in which the element arsenic enters definitely into the composition of the coloured compound. The green compounds of arsenic and copper and the yellow and red sulphides of arsenic are true arsenical pigments, and as such are especially dangerous. The danger is not limited to these gaudy colours, and it is well to be aware that arsenic acid is used in the preparation of many pigments which are not properly "arsenical." In these it is used as an oxidising agent, and is often imperfectly removed from the manufactured article. Arsenic acid is used largely in the preparation of "aniline pigments," and is often present in these pigments "as an impurity" caused by carelessness in manufacture; but whether arsenic be present by carelessness or intention is a matter which signifies little to the sufferer. It is well to remember that the colour of the paper is no guide to its being contaminated with arsenic. It is liable nowadays to be found in papers of all shades and tints. The pigment known as "fuchsine" is stated by Hoffman and Ludwig to be very commonly contaminated by arsenic, and they assert that of six specimens bought by them only one was found free from arsenic. In the same way the colour known as "magenta" is very liable to contain arsenic owing to the very free use of arsenic acid as an oxidising agent in the process of manufacture. In short, arsenic is so useful in the Arts in the production of pigments other than those which are essentially "arsenical," that the greatest caution is necessary before employing any coloured paper for decorative purposes. Happily the detection of arsenic is not difficult, and may be effected by persons possessing an elementary knowledge of chemistry. As a preliminary test, perhaps that known as Reinsch's test is most convenient. This consists in boiling portions of the suspected paper with distilled water, to which a fourth part of strong and pure hydrochloric acid has been added, and into which a slip of bright copper foil has been introduced. If arsenic be present, a greyish film will be deposited on the copper. This is not conclusive as to arsenic, as some other metals will also cause a film to be deposited on copper under these circumstances. As a confirmatory test Marsh's apparatus may be used. Hydrogen is generated by acting on *pure* zinc with *pure* distilled water and pure sulphuric acid. To the mixture is added a decoction of the suspected paper made by boiling with pure hydrochloric acid. If arsenic be present, arseniuretted hydrogen will be formed, which burns with a bluish-white flame and deposits a film of arsenic on a cold porcelain surface introduced into the flame. Certain confirmatory tests would be necessary to be sure that the deposit is not due to antimony. Antimony, however, is not a common impurity of pigments, and we shall not be wrong in advising that any wall papers which, when treated as we have directed, give a film on porcelain, should be at once discarded. If a wall paper which is already *in situ* be found to contain arsenic, it should be removed, or, if this be not practicable, it should be sized and doubly varnished, and the varnish should be renewed every year or so.

FEVER HOSPITAL ACCOMMODATION.

DR. TATHAM, medical officer of health for Salford, has presented to his authority an excellent report upon the hospital requirements of their district. Not infrequently sanitary authorities, in their desire to avoid expenditure, provide hospitals on sites which are insufficient when the increase of population necessitates the extension of the building. Dr. Tatham has properly pointed out that a site of ten acres of land should be procured, in a situation reasonably accessible to the bulk of the working classes, and has discussed in detail the manner in which this site should be utilised, and the character of the buildings which should be erected upon it. In instructing Dr. Tatham to lay before them a full account of the hospital which is required the sanitary authority have shown much wisdom, and in adopting his recommendations they will be able to congratulate themselves in being free from the risk to which some other authorities are exposed, of having to abandon the site when the growth of the town has rendered it insufficient for their purpose. It would be well if all sanitary authorities had the foresight of that of Salford. The planning and arrangement, and the details of construction, so far as they relate to health, are described in the report, and much judgment shown in the recommendations which are embodied in it. Salford will, doubtless, desire to possess an institution having all the advantages which the best medical knowledge shows to be necessary, and Dr. Tatham's paper will render them important service in this direction.

QUARANTINE IN THE RED SEA.

DR. ABBATE PASHA, the delegate of the Egyptian Government to the International Sanitary Conference of Rome, has just issued a paper on the "Neutralisation Quarantenaire" of the Suez Canal. Abbate Pasha's arrival in Rome seems to have been timed to prevent his doing anything more than present a memorial, which was never discussed, in which he maintained that the English proposal to allow of the passage of the Suez Canal without prior quarantine detention was the only reasonable solution of the difficulty, and he explained how this should be done by allowing the passage of vessels "in quarantine"—that is, without communication with the shores of the canal. In this respect his views were far in advance of those held by the majority of European delegates, and they were diametrically opposed to those of his Turkish colleague. His late arrival, which he naïvely explains as due to *raisons de force majeure*, was, under such circumstances, not altogether free from ambiguity; but not having had an opportunity of setting forth his views in detail at the Conference, he has done so in his present report. He strongly maintains that the present quarantine restrictions in the Red Sea are not only illusory, but ridiculous, and, as indeed must be generally admitted, in no way protective of the health of Europe. In some detail he sets out the administrative changes necessary to give effect to his views, and he proceeds to point out the advantages of allowing all vessels properly equipped from a sanitary point of view to pass the canal whatever illness may be on board, communication being sent to the ports of arrival, so that all needed measures of precaution may be at once prepared and set in motion. Far better, he

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says, to leave all doors thus open, than to close the entrance to the canal and go through a series of fantastic and useless performances which abound in cruelty to those who, whether sick or healthy, are, under the quarantine laws, set down in the deserts of Arabia. Dr. Abbate deserves the thanks of intelligent sanitarians for having thus publicly expressed views, the value of which is the greater on account of his long personal experience of the *tracasseries absurdes* now performed off Suez.

PUBLIC HEALTH IN AMERICA.

IN the address on State Medicine delivered before the American Medical Association, Dr. Rohé of Baltimore gave a summary of the progress that had been made in the knowledge of the means for preventing disease, and urged that the watchwords of the practical sanitarian of the future must be: "The compulsory notification of infectious diseases, the prompt and effective isolation of the sick and infected, and the thorough disinfection of all infected articles and sources of infection." He attributed to these three factors mainly the good results which had been obtained in many parts of America, leading to a reduction in Michigan of the number of deaths from scarlet fever of 338 per year. In Memphis, moreover, the general death-rate had fallen from 35 to 23·8 per 1000 of population, and in Chicago from 25·7 to 19·5 per 1000. In America, where the adoption of new thought is easier than in older countries, it may be anticipated that this progress will encourage all parts of that great continent to adopt similar means for the prevention of disease, and that the old methods of quarantine which Dr. Rohé condemns will give place to a more rational system. America evidently requires as active sanitary administration as other countries, and particularly with regard to food supplies, the results of analysis during one year in Massachusetts and New York showing that of the more common articles of food more than half the samples examined were adulterated, whereas the analysis of drugs gave results which were no better.

DIPHTHERITIC CONJUNCTIVITIS IN A YOUNG INFANT.

DR. COPPEZ of Brussels mentions in *La Clinique* a case to which he was called in consultation where an infant of nineteen days old had been suddenly attacked with true diphtheritic inflammation in both eyes—a circumstance extremely rare, even if not actually unique, as Dr. Coppez seems to think. He observes that von Graefe and Wecker have both stated that newborn infants are not liable to diphtheritic conjunctivitis, and though there are, he says, 120 cases of purulent conjunctivitis neonatorum annually in Brussels, of which at least a third present diphtheritic complications due for the most part to too zealous applications of caustic remedies, no case of veritable diphtheria has ever before been noted. Dr. Coppez does not at all believe that the pus from a case of purulent ophthalmia can cause purulent, catarrhal, or diphtheritic inflammation indifferently, as held by some authorities, for in all the numerous instances in which he has performed inoculation, as well as in those he has seen where it has been brought about by accident, he has invariably found the resulting inflammation to be purulent like the original affection. In the present case the child was weak and puny, having been brought up on the bottle; it presented, besides, a considerable patch of intertrigo; there was no syphilitic history. It was elicited that two days before the child was taken ill it had been out, and had been in a locality where there were several cases of croup. The eyelids were much swollen, and the skin was of a dark-red, contrasting signally with the rest of the face, which was very pale. It was a matter of considerable difficulty to evert the eyelids, and when this was accomplished the conjunctiva could be seen to be of a yellowish-grey colour dotted over with ecchymoses. There was no discharge at all, the whole surface being indurated and dry. The eyelids were remarkably hot. The treatment adopted was the frequent instillation of lemon-juice and the constant application of lint wetted with iced solution of boracic acid. For two or three days the local as well as general condition of the child gradually grew more alarming, and it became quite impossible to evert the upper eyelid; the cornea, too, had become dull all over. It was difficult to suggest any more active treatment; leeches were contraindicated by the debilitated condition of the child, calomel by the diarrhœa actually present, and mercurial inunctions by the diseased state of the skin. Locally, slitting up the external canthus and scarifications were thought of, but only to be rejected on account of their very questionable utility in diphtheritic ophthalmia, even in robust subjects of full age. It was decided, however, to add eserine applications to the other treatment. In two days' time, the instructions having been most conscientiously carried out, a manifest improvement had taken place, and in about a week more the child was convalescent, the cornea being perfectly bright and clear.

THE CHALMERS HOSPITAL, EDINBURGH.

THE directors of the Chalmers Hospital, Edinburgh, have offered the post of honorary physician to the institution to Dr. G. W. Balfour, who has accepted their nomination. He takes office in the room of Dr. Halliday Douglas, who recently resigned the appointment after many years' tenure of the post. Dr. Balfour is vice-president of the Royal College of Physicians of Edinburgh and consulting physician to the Royal Infirmary. His well-known contributions to medical literature and the honourable and leading position he has so long occupied among his professional brethren in Scotland are features that will render his appointment a popular one, while the general public may well be gratified that services so much appreciated while rendered in the Royal Infirmary are again placed within the reach of the sick poor through the medium of another charitable institution.

DRUNKENNESS IN SCOTLAND.

THE *Scottish Leader* is properly concerned at the drunkenness which still exists in Scotland. There are, it is stated, 40,000 persons a year in this part of the United Kingdom brought up on a charge of drunkenness, either as drunk and disorderly, or drunk and incapable—the police classification of such offences. Our contemporary, referring to a return just issued by Hansard, shows that 1213 of these cases occurred between Sunday morning and Monday morning, and 39,103 between Monday morning and the next succeeding Sunday morning. From the much less number of cases occurring on Sunday he infers the efficacy of the legislation which prohibits the sale of drink on Sundays. The grocer's licence still exists, and is the cause of intemperance of an insidious character to a great extent. Still, it is for the press and the pulpit to enlighten communities on this subject. Neither in Scotland nor in England have either of these powers been perfectly free to make effective onslaughts on this vice. Up to very late days, at any rate, there have been men of light and leading in Scotland who could claim membership in clubs where a minimum of ten tumblerfuls had to be drunk at a sitting. What surprise can we feel at vulgar people indulging when such scientific ignorance prevails among the leaders of society? To do the Church of England justice, in all its sections it is doing its share to modify and improve the old and coarse habits of society in this respect. And we

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believe the same is true in Scotland. But a deeper faith seems to tarry there, if not in the virtue, at least in the harmlessness, of its own favourite whisky. We are not aware of any medical authority for the belief that Scotch tissues are proof against Scotch drink. And the great authority of Sir Walter Scott himself for moderation is not to be forgotten. It is more than sixty years since he said, "Wine I seldom use when alone, and use instead a little spirit and water. I have of late diminished the quantity, for fear of a weakness inductive to a diabetes, which broke up my father's health, though one of the most temperate men who ever lived."

ANTHRAX.

AT the recent Gloucestershire Quarter Sessions the prevalence of swine fever and anthrax in the county was reported. The first outbreak of anthrax was at Thornbury; and at Poulton, near Fairford, where it had since appeared, it has unfortunately been accompanied by loss of life. A man who skinned the carcase of a bull which had died of anthrax was taken suddenly ill and died. Sir John Dorington, M.P., said that at Thornbury the entrails of one of the animals that died of anthrax were given to half-a-dozen pigs, and they all died. At Poulton ferrets were similarly fed, and they died. He wisely drew attention to the highly contagious nature of the disease, and the liability of infection by persons attending affected animals if they had any cuts or scratches on the hands. In connexion with this subject we learn of a death from woolsorters' disease at Keighley. The case was that of a labourer fifty years of age engaged at Dalton Mills, who was attacked on June 17th and died on the 23rd. In this case a malignant pustule appeared on the neck. The post-mortem examination was made by Dr. Dobie, with Drs. Hime, Rabagliati, and Bell, of Bradford, and they were unanimously of opinion that the case was one of woolsorters' disease. It was given in evidence at the inquest that during the day on which the man was taken ill he had been engaged with five or six others in removing wool from bales of English and Persian wool. No special precautions were taken to prevent infection, but it was pointed out that hitherto Persian wool had not been regarded as dangerous. The firm promised, however, to adopt the Bradford prophylactic regulations in future.

MATERIA MEDICA IN CHINA.

WE have received from Hong-Kong the first number of a book which promises to be of unusual interest—viz., "Notes on Chinese Materia Medica," conducted by Charles Ford, F.L.S., Ho Kai, M.B., and William E. Crow, M.P.S. The authors draw attention to the want of accessible information concerning Chinese drugs, and hope their labours may promote the identification of many of them. They make graceful reference to the work of others in the same direction, and, indeed, intend to stamp the identity of the plants dealt with by affixing the number originally awarded to the Pên ts'ao drugs by the late Daniel Hanbury. The present number deals mainly with gelsemium elegans, a drug which owes its importance to its frequent employment in criminal poisoning, suicidal or homicidal. After a very full description of the plant and its habitat, the root which is used in medicine is dealt with more particularly. It is stated to yield an alkaloid, belonging to the strychnine or tetanus-producing group. This alkaloid is said not to be associated with *gelseminic acid*, and not to bear the action of sulphuric acid at a temperature of 100° C. Although the drug is never used internally, being employed ordinarily only in the treatment of boils, ulcers, ringworm, and leprosy, yet its powerful properties appear to be widely recognised, numerous cases of criminal poisoning having occurred in Hong-Kong within the last few years. In some brief remarks upon a form of strychnos, it is curious to note that the Chinese appear to be unaware of the poisonous action of these seeds. Judged from this first fasciculus, the work promises in its complete form to be an interesting and valuable epitome of Chinese materia medica. The authors express their readiness to send specimens of drugs of doubtful origin to anyone desirous of prosecuting inquiries.

THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

IN his recent address as retiring President of the above Society, Dr. F. H. Alderson, after alluding to the satisfactory state of the Society, said that perhaps to the general practitioner the two most important events of the year were the accomplished fact of the direct representation of the profession in the Medical Council, and the inquiry initiated by Sir Andrew Clark as to the best means of providing medical attendance for the sick poor on a provident basis. One important result of direct representation had been to raise the question of limited pupilage, for Dr. Glover moved and carried at the very first meeting of the Council a resolution for a committee to consider the best means of increasing the practical element in medical education. Dr. Alderson attached much importance to this revival of pupilage, in a limited form, as a means of increasing not only practical knowledge, but good medical conduct and respect for the honourable methods of practice. He concluded his address by several suggestions bearing on pupilage, hospitals, the relation of hospitals to general practitioners, and of the latter to consulting and hospital surgeons and physicians. Finally, he urged the establishment of a night medical service for London and other large towns as in Paris.

MIDDLESEX HOSPITAL.

WE are glad to notice that a concert, under the immediate patronage of Her Majesty the Queen and many members of the Royal Family, is to be given on Wednesday next at the Royal Albert Hall in aid of the funds of Middlesex Hospital. The "Golden Legend" will be performed. Sir Arthur Sullivan will conduct his own work, and Madame Albani, Madame Patey, Mr. Edward Lloyd, and Signor Foli will take the principal parts, and will be supported by the choir of the Albert Hall Choral Society. An influential Ladies' Committee has been energetically working for its success, and has already obtained for it much support. We hear that there is a good demand for tickets, and it is to be hoped that a satisfactory balance will be handed over to the treasurers of the hospital.

PATENT MEDICINES.

THE enormous public importance of "patent medicines" can be estimated from the fact that during the financial year which has recently ended a sum of no less than £179,071 was contributed as stamp or label duty. Regarded simply as a measure of public credulity, these figures are sufficiently surprising; but a more serious aspect of the case remains—the question of the morality of the stamp duty. To the ignorant section of the public the stamp is generally supposed to imply some sort of official guarantee of the excellence, or at least the harmlessness, of the preparation so mystically enclosed; the consequence is, as the records of many coroners' inquiries show, that mistakes and misadventures are of frequent occurrence. Considering the great increase in the use of patent medicines, it is surely time that the stamp should be no longer used to cloak many substances which without it could only be dispensed in coloured bottles as poisons, with the usual restrictions regarding

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their sale. At present the only real information conveyed by the stamp is the strict compliance with the regulations affecting the sale of proprietary drugs; in other words, it is simply the indication of a commercial speculation, in which the Government goes shares with adventurous advertisers.

ARMY SURGEONS.

IN the House of Commons, on Monday last, Dr. Farquharson asked a question respecting a grievance of the Army Medical Officers to which we have repeatedly called attention—the difference of the system adopted with regard to the dating of the commissions in the Army, Navy, and Indian Medical Services (*vide* THE LANCET, Sept. 18th, Dec. 25th, 1886). It is one of the real grievances of the department; it is obviously unjust that entering the service under exactly the same conditions as regards qualifications and examination, the army medical officers should, during the whole period of their executive service, be junior to those of the Indian and Naval Services, who gained their appointments at the same time, and have certainly no equitable claim to obtain this precedence. We are far from satisfied with the answer given by Mr. Brodrick. Admitting the facts, he said that "whether the army surgeons experience any practical inconvenience from the antedate given to Indian and naval surgeons may be doubted." This is a point upon which the Financial Under-Secretary has no right to be in doubt. He has it in his power to obtain authoritative information from the head of the department, and he is bound in justice to the officers to use every means to remove what is felt and acknowledged to be a very real grievance. Mr. Brodrick gave it as his opinion "that the best way to remove the anomaly would be for the Admiralty and the India Office to follow, in future appointments, the practice of the War Office." This may be an exceedingly convenient way of answering a question, but it does not relieve the War Minister from the duty of seeing that officers are not treated with injustice. What steps have been taken by the War Office to rectify this "anomaly"? Have any suggestions been made to the heads of the other two services on the subject? and with what result? If not, or if they have been made without success, what does the Secretary of State propose to do to obtain just treatment for the army medical officers? We trust that Mr. Stanhope will repudiate the shelter of "doubt" put forward by Mr. Brodrick, and that he will ascertain through the Director-General the actual state of the case, and will adopt efficient measures to remedy a manifest injustice inflicted upon officers of a branch of that service of which he is the responsible head.

THE PUBLIC VACCINATOR FOR CARDIFF.

WE can feel much sympathy for local authorities who are jealous of the health reputation of their town, and who endeavour to maintain this reputation by active sanitary administration. We fail to understand, however, the action of the Vaccination Committee of the Cardiff Board of Guardians, who are reported in a local journal to have recommended that the public vaccinator for Cardiff, Mr. [redacted], should be deprived of his office because he has [redacted] a member of the Town Council with information [redacted] the existence of certain cases of small-pox in [redacted]. Statements, we understand, had recently been [redacted] a meeting of the Health Committee as to the [redacted] of Cardiff from small-pox, and their accuracy being [redacted] by some members of the corporation, one of their [redacted] sought further information from the public vac- [redacted] Whatever view the Vaccination Committee may [redacted] the propriety of the action of this gentleman in [redacted] to a member of the Corporation knowledge [redacted] we hold very strongly that there [redacted] to the existence of disease. If the guardians adopt the recommendation of their committee, Cardiff will be exposed to the charge of endeavouring to maintain its character for salubrity by methods which will not meet with public approval, and which will, indeed, lead the public to regard with distrust any statements that may be made in the future on this subject. When sanitary administration is effective, and when town authorities are honestly engaged in the duty of preventing disease, a plain statement of facts cannot possibly do injury. We believe, moreover, that were local authorities to publish every week a statistical return of the cases of infectious disease which have occurred during such period, considerable aid would be rendered to the progress of health administration in the country, and they would not suffer by such publicity; they would, indeed, be able to claim that they had nothing to conceal, and would thereby win public confidence. If we understand the Cardiff incident aright, this view is not sufficiently understood in that town, and we shall watch with some interest the action of the Board of Guardians in dealing with the report of their committee. Nothing can be more damaging to a town than that its authorities should be credited with the desire to conceal the existence of disease, yet the story published by a local journal points to this conclusion. Certainly the facts recorded there require explanation.

A CONSUMPTION HOSPITAL FOR EDINBURGH.

WE gather from articles in the *Scotsman* that there is some difference of opinion in Edinburgh as to the best use of a Jubilee Fund, which was to be devoted in one way or another for the benefit of consumptive patients. The writer of the articles pleads strongly for a consumption hospital for Edinburgh similar to those of London. A hospital, however, is but a poor part of the remedy for the misery of consumptive disease. We urgently need legislation to diminish the risk of certain callings which engender the disease, and to improve the homes of the poor, in which it grows as in a hot-bed. We also require a large charitable fund for the good of those threatened with, rather than actually ill of, phthisis. A timely voyage or change of air would do more for such cases than any mere hospital treatment, and is a form of charity that would be worthy of the Jubilee Year of Queen Victoria.

CHOLERA IN ITALY.

IN March last we drew attention to the existence of cholera at Catania, in Sicily. The outbreak was not severe, and at Rome its identity with the Asiatic disease was held in some doubt. From that date to the present time no further cholera intelligence has been received from Italy; but now comes news of a serious outbreak at Rocella on the Calabrian coast, and within a suspiciously easy distance of Sicily. Some panic has ensued, the inhabitants fleeing from the affected locality; and, according to a report dating from Naples on the 3rd inst., seventeen cases and nine deaths had already occurred. The latest news from Rome, however, is to the effect that the Calabrian disease, though of a suspicious character, is not cholera.

MILK SCARLATINA.

THE Royal Agricultural Society have been informed by the Privy Council that the inquiry concerning the infection of milk through an eruptive disease of the cow is now being prosecuted, and it is proposed that it should include all the questions which have been raised in Dr. Klein's reports and papers, and the Society are further told that they might assist by urging farmers to examine their stock frequently, and at once to give notice to the Agricultural Department of the existence of any eruption on the teats or udders of

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cows. We are glad to see that the subject is to be dealt with in a comprehensive manner; but probably the Hendon disease will only be able to be identified when further outbreaks of scarlatina due to milk infection have enabled its clinical characters to be better appreciated. When opportunity occurs, it is to be hoped that accurate drawings will be made of the affected udders and circulated amongst farmers. As yet the official reports on Dr. Klein's more recent work as to the relation between the cow disease and human scarlet fever have not been published, but we may anticipate they will appear in the next volume of the report of the Medical Officer of the Local Government Board.

MR. SPURGEON ON THE GROCERS' LICENSING SYSTEM.

MR. SPURGEON is nothing if not severe and sweeping in his denunciation of what he believes to be wrong. We do not sympathise with all his views on matters of social policy, but we believe he is absolutely right about the grocers' licensing system. It is one of the most mischievous of the facilities offered for the growth of the drink vice in this country. Multitudes of otherwise respectable women, in all classes of society, are led to indulge in the pernicious practice of drinking secretly, by the ease with which they can procure spirits and wine and beer while purchasing other household stores at the grocers. A great deal has been done and said with the purpose of inducing the Legislature to abrogate this system of licensing, leaving the sale of intoxicating drinks to the licensed victuallers and wine merchants, from whom what is bought must needs be bought openly; but no argument as yet adduced has been potent enough to counteract influences and to outweigh interests which would be affected by the withdrawal of licences from grocers. Whether further efforts may be successful remains to be seen. We fear they will not.

THE POLLUTION OF THE THAMES.

AT last there is some prospect that the right of local authorities to pollute the Thames will be tested in a court of law. The Staines Local Board have been repeatedly fined for allowing the sewage of their town to enter the river, but no other result has followed. Their action, which has thus been condemned, has been continued without intermission. The Thames conservators have now determined to prosecute the Staines Board, and the grand jury of the county of Middlesex have been summoned to the Lord Chief Justice's Court for this purpose, and have returned a true bill against this Board. These proceedings have not been taken too soon. The dangers to London water drinkers from the pollution of the Thames is a very definite one, and has been frequently insisted upon by ourselves. The issue of the trial which is about to take place will be awaited with some anxiety, for one of two conclusions is obvious—either the condition of the Thames must be improved so as to make it a safe source of supply, or a fresh source must be found.

NOTIFICATION OF INFECTIOUS DISEASES.

IN his annual report on the sanitary condition of Cardiff during 1886, Dr. Paine suggests the adoption of the dual system of notification of infectious diseases. He would make it a compulsory notification on the householder, and leave it as a voluntary one on the part of the medical attendant, who, whenever he notified, should receive a fee for his certificate. Dr. Paine evidently attaches importance to the medical aspect of notification, and he refers especially to the fact that such notification supplies definite information as to the nature of the infectious disease to be dealt with.

THE CROWN PRINCE OF GERMANY.

HIS IMPERIAL HIGHNESS continues to make a steady improvement. We learn from Berlin that the piece last excised by Dr. Morell Mackenzie, and submitted to Professor Virchow, is "shown even more clearly than the one removed by the previous operation to be a hard and composite wart, which had proceeded or grown out of a moderately irritated and thickened surface, while its base has not shown the slightest ground for assuming the existence of a new growth penetrating into the tissue."

THE CAUSE OF PUERPERAL ECLAMPSIA.

IN a recent number of the *American Journal of Obstetrics* (March and April, 1887), Dr. A. F. King enunciates the theory that pressure on the aorta and vena cava inferior, which he believes to be the cause of the renal troubles in pregnancy and labour, are due to the abnormal position of the fœtus in the latter part of pregnancy. This he believes to be normally the "dorso-anterior position of an oblique presentation"—i.e., the head normally lies not in the brim of the pelvis, but in the iliac fossa; in this position the shape of the fœtus is such as to avoid pressure on the great vessels. He does not believe that in primaparæ the head of the child is normally lower at the end of pregnancy than in multiparæ, and attributes its frequent low position to vanity, leading to tight lacing. This pressure on the great vessels leads to pressure in the renal and cerebral arteries, thus accounting for the renal troubles as well as the nervous condition. The paper, which is the result of much thought, fails to convince us, and will probably fail to convince others. It serves to show the unsatisfactory condition of our knowledge on this subject, but, like all thoughtful inquiry, should help, directly or indirectly, to put an end to this ignorance.

PUBLIC SERVANTS AND THE HOT WEATHER.

WE are glad to see that a committee has been formed to raise subscriptions for the purpose of recognising the services of the metropolitan police, "a body of men who, by their steady conduct in the performance of duty, have deserved well of their countrymen," and that it is proposed that such recognition should take the practical form of a seaside convalescent home for the sick and wounded of the police force. It is necessary, however, that those who are in health should also be cared for, and we would suggest to the Commissioner of the Metropolitan Police to follow an excellent example set elsewhere, notably at Brighton, and to allow his constables in this very hot weather to wear white instead of black helmets. It is satisfactory to observe that some of the railway companies now permit their servants to don light comfortable linen jackets in place of their ordinary heavy coats, and that occasionally postmen are to be seen wearing light sun-hats.

A CASE OF TRICHINOSIS IN BRUSSELS.

HITHERTO Belgium has been believed to have been free from trichinosis. A case has, however, recently occurred at the Molenbeek Hospital, and, being reported to the Minister of the Interior, M. Wehenkel was deputed to report on the matter. The patient was a German, and was born in 1811, but had lived in Belgium for many years. He seems never to have complained of rheumatic pains except in 1886, during which year it was remarked that his voice had become altered. He was known to have been very fond of American bacon. The man was admitted into the hospital on the 13th of June with a cyanotic skin, a thready pulse, an inaudible voice, and profuse diarrhœa, from which last he had been suffering for five days. He died the next day. At the necropsy trichinæ were found in all the muscles except

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the heart. The cysts had some of them undergone calcareous degeneration; others contained living trichinæ. No trichinæ were discovered in the intestinal canal. M. Wehenkel advised that the body should be destroyed either by incineration or by sulphuric acid. Professor Crocq, whose patient the man was, in an instructive clinical lecture on the subject, which is published in *La Presse Médicale Belge*, gives it as his opinion that the infection was due to American bacon eaten at least seven years before the acute symptoms appeared.

HOSPITAL SATURDAY FUND.

MR. ROBERT FREWER, Secretary to the Hospital Saturday Fund, calls our attention to an error in an annotation on this subject in our issue of the 25th ult. The workshop collection, it appears, does not take place until September, and the street collection for the present year has reached nearly £5000, instead of £145, as was stated by us. We were ourselves somewhat puzzled with the figures which came under our notice, but regarded them as an imperfect and temporary statement. We trust that the true report of Hospital Saturday, 1887, will show an eminently satisfactory result.

CHRONIC RHEUMATISM.

THE manifestations of simple chronic rheumatism are not unfrequently throughout a large part of their course more or less limited to one side of the body, and much capital has been made out of this fact in order to support the theory of the nervous origin of many forms of rheumatism. M. Cazalis is one of those who support this theory; he avers that in these cases pulmonary congestions and chronic bronchitis frequently affect only the lung of the same side of the body, the other lung and bronchi remaining free. The right side of the body enjoys the unenviable distinction of being affected more frequently than the left; and, according to M. Collin, rheumatic pleurisy is most common on the right side. M. Cazalis finds support for his contention in the greater frequency of deformity and deviation outwards of the right great toe in the cases in question; and also in the dextral hemi-laterality of megrim, chorea, and hysteria, due to arthritic causes.

MODERN FASHIONS.

POPPY RED, porcelain blue, royal blue, and mauve are, we are told, to be the favourite tints at French, and therefore at English, watering-places during the coming bathing season. Pink is discarded in favour of heliotrope, although the latter colour fades directly in the sea air, and assumes a dirty-brownish hue. Those who have weak eyes and yet sit much in the open air may remember that neutral and dull tints are less irritating than bright-red and saturated blue. The injurious effect of scarlet on the eye is demonstrated by the discomfort and irritation felt by those who are engaged for many hours daily in making soldiers' clothes. In most instances, however, it is not the light that comes from above that harms—nature has provided us in that respect with quite sufficient protection in the eyelids—but it is the glare that is reflected in bright sunlight from sea and land, as is abundantly shown by snow blindness.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

The deaths of the following foreign medical and scientific men are announced:—M. le Dr. Liouville, Deputy for the Oise, and *professeur agrégé* of the Paris Medical Faculty, from cardiac disease, at the age of forty-nine.—M. Caytan, [illegible], the oldest and most respected of the medical practitioners of Antwerp.

A GUNSHOT WOUND OF THE CLAVICLE.

DR. MANUEL S. SORIANO has recently brought before the notice of the Mexican Academy of Medicine an interesting specimen in the pathological museum under his charge of an old gunshot wound, where the ball penetrated the substance of the left clavicle and fractured the bone, but ensconced itself behind it, and, with the callus thrown out, forming a perfectly rigid structure, though some deformity remained; the man, however, lived for twenty years, and then merely applied for advice on account of some fistulous openings which had presented themselves. The surgeon who saw him proceeded to resect the bone, but the patient died from septicæmia in a few days' time. At the necropsy the bullet was found embedded in the bone.

LEAD POISONING FROM HOME-MADE WINES.

LAST year Dr. Donald Campbell of Calne brought under notice in an excellent report the fact that lead poisoning in and about Calne was being largely brought about by the use of home-made wines, which during the process of fermentation took up the lead contained in the glaze with which the local earthenware pans were coated. The publicity given to this method by which lead poisoning can be brought about does not appear to have sufficed to stop the manufacture of these wines in pans lined with a glaze containing lead, for, according to the recently issued report on the Upton-on-Severn rural district, Mr. J. S. Cowley finds the same results in progress there, the wine in question being mainly a home-made plum wine.

DYSPEPTIC VISUAL TROUBLES.

SUCH symptoms as tenderness of the globe of the eye brought on by the act of accommodation, associated with vertiginous attacks and intellectual torpor, or with scintillating scotoma, hemiopia, and photopsia, or even polyopia, sometimes supervene after meals, and have been ascribed to auto-intoxication by peptones the result of defective action of the liver; but these symptoms are far more common in neuropathic subjects, and the question must remain unsettled whether the dyspepsia may not be of as neurotic an origin as the other disorders, which are clearly of nervous kind.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—The Veterinary College was on the 29th ult. officially proclaimed by Dr. Lucius, the Minister of Agriculture, to have been raised to the rank of a Hochschule or University. The first rector is Professor Müller.

Brussels.—M. le Prof. Pigeolet has been elected President and M. le Prof. Kufferath Secretary of the Medical Faculty.

Cracow.—Dr. Rudolf Trzebitzky has been recognised as *privat docent* in Surgery.

Innsbruck.—The Professorship of Midwifery, vacant by the translation of Professor Schauta to Prague, has been filled by the appointment of Dr. Emil Ehrendorfer, *privat docent* in Vienna.

Lyons.—M. Albertin has been appointed Prosector for three years.

Montpellier.—A valuable library, together with the sum of 15,000 francs, has just been bequeathed to the Medical School by M. Bouisson, who desires that the monetary legacy shall be employed in erecting a suitable building for the reception of the volumes and for the expenses of printing a catalogue. In addition to all this, M. Bouisson has left 100,000 francs to found five annual prizes to be called by his name.

Munich.—The municipal authorities have promised to grant a site worth £15,000 between Findlingsstrasse and

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Krankenhausstrasse for a new surgical clinic as soon as the Government is prepared to build. It is estimated that the cost will amount to more than £30,000.

Poitiers.—M. Buffet-Delmas has been appointed for a period of nine years Supernumerary Professor of Anatomy and Physiology.

Prague.—Two schools for midwives are about to be established. The instruction to be given in German and Bohemian respectively.

Vienna.—Dr. Sigmund Lustgarten has been recognised as *privat docent* in Dermatology.

Würzburg.—July 6th is being celebrated by Prof. Kölliker as the seventieth anniversary of his birth, and as marking the completion of forty years' occupancy of the chair of Anatomy.

THE prizes at St. Mary's Hospital Medical School will be distributed by Sir Edward Sieveking on Thursday, July 21st, at 3 P.M. At the same time it is proposed to present Sir Edward Sieveking with a testimonial (on his retirement as senior physician), to mark the high esteem in which he is held, and in recognition of the great service he has rendered to the hospital and school. Subscriptions to this fund should be sent to the dean.

DR. VINCENZO SCIALPI of Taranto has issued a pamphlet dealing with the symptoms, prognosis, causes, and cure of cholera. Details as to the latter he reserves, desiring to submit them, for the purposes of securing an award, to the Italian Medical and Chirurgical Academy. Dr. Scialpi had experience of cholera both in 1854 and in 1884, but his views as to the causation of the disease are not those current in this country.

DR. ANTHONY COLLING BROWNLESS was on April 30th presented with an illuminated address from the office staff of the University of Melbourne, congratulating him on his accession to the honourable and responsible post of Chancellor of that institution. Dr. Brownless has for seven years acted as Vice-Chancellor.

IT is understood, states the *Daily News*, that the Queen has intimated her intention to confer a baronetcy on the Dublin physicians, Dr. J. T. Banks and Dr. H. H. Head, respectively.

THE governing body of the Bristol Royal Infirmary has resolved to elect, for the first time in the annals of the institution, an obstetric physician.

SEVERAL soldiers at the Curragh camp have during the recent hot weather died from sunstroke.

DR. HENRY GERVIS has resigned his post as Obstetric Physician to St. Thomas's Hospital.

PRESENTATIONS.—H. D. King, M.D., M.A., B.Sc. Edin., of the Limes, Linton, on the occasion of his leaving that town to settle in Sudbury, was presented by his friends and patients in the neighbourhood with an illuminated address and a silver salver, an antique tortoiseshell tea-caddy being at the same time presented to Mrs. King, and a spade guinea to the doctor's son.—Dr. Octavius Jepson has been presented with a handsome marble clock and vases by the officials of the City of London Lunatic Asylum, Stone, Dartford, on the occasion of his resigning the post of medical superintendent, which he has held for the past twenty-three years.

MEDICAL MAGISTRATE. — Mr. Charles J. Jones, M.R.C.S. &c., Tonypandy, has been placed on the Commission of the Peace for the County of Glamorgan.

REPORT
OF
The Lancet Commission
ON THE
POLLUTION OF THE THAMES AT THE HENLEY REGATTA, 1887.

THE Henley Regatta proved this year a brilliant success. The presence of the Prince and Princess of Wales, together with several other members of the Royal Family, helped to attract a highly fashionable throng. The fact that the aquatic carnival followed so closely on the celebration of the Jubilee imparted to the fête an aspect of exceptional rejoicing. Extensive illuminations, both on the shore and on the water, further contributed to attract increasing thousands of visitors. The weather also was remarkably fine—indeed perhaps too fine, for the heat was somewhat overpowering; yet behind all this glitter and gaiety lurked a cruel suspicion that evil consequences might possibly arise. The long-continued drought has made the water of the Thames fall very low. It is therefore more than ever necessary that the reduced volume of water should be kept exceptionally clean. This we had hoped would be done by the enforcement of the new bye-laws rendering it illegal for house boats and steam launches to drain direct into the Thames. It has, however, already been explained that these bye-laws were not gazetted before the Saturday previously to the race. This only allowed the following Monday and Tuesday for the carrying out of the new regulations. Of course nothing was done. Indeed the numerous occupants of the house boats whom we questioned were not even aware that any alteration had been made. So the dangers of last year have had to be encountered again this season. In the present instance the risk is aggravated by the fact that the water is much lower; on the other hand, there is as yet no extensive cholera epidemic in Europe. At the time of the last Henley Regatta, it will be remembered, cholera was very prevalent in Italy, and it was quite possible that some travellers from the south—persons who, for instance, had wintered in Italy and in an incipient stage of the disease—might then have returned to England in order to be present during the regatta. The patients would probably have resorted to one of the closets on a house boat before the true nature of their complaint was ascertained. Thus the choleraic dejections would have been drained into the drinking water used in London. How far the specific germ might have grown and multiplied to a sufficient extent to produce an epidemic in London we are unable to say. The consequences, however, would be so appalling that the risk, if ever so slight, should, at any cost, be avoided. Nevertheless, this has not yet been done.

On the day before the regatta we proceeded to Henley, to investigate the present state of affairs. A great number of house boats and launches had already assembled. On the course we counted sixty-six house boats and thirty-nine steam launches; but there were some more on the other side of the bridge. It was no easy matter to ascertain the condition of the house boats. In several instances the occupiers or owners were absent; in other cases there were so many ladies on board that we were obliged to postpone our questions as to the drainage. Nevertheless, we succeeded in obtaining information on a sufficiently large scale to arrive at a definite conclusion. We found that on four boats there were earth-closets. Two boats had been altered since last year, probably in anticipation of the new laws. The other two boats were newly built, had not been on the water before, and were therefore free from the error of construction of the older craft. On the other hand, we found eighteen house boats with closets on board that drained direct into the water. The occupier of another boat refused to answer our questions, so we may fairly conclude that in this case also the drainage was conducted direct into the water. Thus, of the twenty-three house boats we were able to visit, there were not more

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than four that possessed earth-closets. Alteration in view of the new law had only been made in two instances, and in eighteen cases drainage into the Thames was admitted. We may therefore conclude that the great majority of the house boats still drain into the water, and the same may be said of those among the launches that possess closets. Among the boats draining into the Thames must be specially noticed the starting boat. This is an exceptionally large craft. It contains saloons and a large upper deck, entirely covered with chairs, and each seat was let for the modest fee of five shillings. At least a hundred persons must have gone on board this boat; and all had access to the closet that communicated directly with the drinking water of London. That the Thames Conservancy could not apply the new law to all the house boats in the two days it possessed for action we readily admit. But the boat on which the committee meets, and which is moored opposite the winning post, is so much of a public institution that here, at least, an earth-closet could have been introduced within the two days. This boat was the headquarters of the Thames Conservancy officials during the race. From this point they started to clear the race-course; here they returned immediately the race was over. A few words, a little gentle pressure, would have sufficed to remove the scandal, instead of allowing the boat of all others, which was the most seen, the most frequented, to remain, as in times gone by, a source of infection to all London.

The Thames Conservators, acting according to the suggestions we threw out last year, have, however, effected one notable improvement. They have brought down two scavenger boats which go up and down the Henley race-course late in the evening and early in the morning. All the refuse from the house boats and launches, together with the soil from the few earth-closets that exist, are collected by these floating scavengers and brought to shore at Henley. The carts belonging to the Henley Local Board remove the same to a shoot situated about a mile out of the town. While we were at Henley some complaints were made concerning the landing of this refuse, and perhaps a more appropriate and solitary spot might have been selected for this somewhat unpleasant operation. Not a few persons connected with house boats also expressed strong opinions against the earth-closets, a remedy which they qualified as worse than the evil it is sought to cure. This, however, is evidently a partial statement. An earth-closet, if properly managed, would not cause any nuisance whatever; and, even if it does produce some slight unpleasantness, this would only affect the occupants of the house boats, whereas draining into the Thames compromises the interests of all London. No one is obliged to live in a house boat, but several millions of people find it necessary to live in London.

When the races were over we inspected the river, looking carefully between the house boats and the various creeks, where the refuse generally accumulates. The result was eminently satisfactory. Up to Friday evening, in any case, the scavenger boats had done their work well. Certainly there was a great deal of green stuff floating on the surface of the water, but on examination it proved to be, for the most part, the vegetation of the Thames itself broken up by the many boats collected within close compass during the last few days. The proportion of cabbage stumps, salad leaves, and other edible vegetables was very small. There was a formidable array of corks and empty bottles floating and jostling together in commemoration of recent rejoicing; but we failed to detect the offal, the fish-bones, the pieces of bad meat, the stale fruit, the lobster shells, and the dead fish noted last year. Even faded nosegays seem for the most part to have been reserved for the scavenger boats, and were no longer allowed to float down the Thames as melancholy mementos of forgotten gallantry. There were, however, a large number of pieces of bread, perhaps thrown in by beggars, who do not approve of relief given in kind. It is not yet known how much refuse has been removed by the scavenger boats, but to judge from the improved aspect of the river, the quantity must have been considerable.

These are notable improvements, though the worse danger still remains; but we are assured by the Thames Conservators that they will carry into effect the new bye-law suppressing all closets that drain into the river. Let us hope that not a day will be lost in applying the new regulations. Though the house boats are no longer gathered together in such large numbers on one spot, they are still, for the most part, inhabited, and the pollution of the river therefore continues. Further, the scavenger boats will not follow the house boats as they leave Henley. There is nothing to prevent the occupants of the latter from resuming the practice of throwing offal and other refuse into the water, unless it be the knowledge that the new bye-law applies to all offensive matter as well as to sewage. The circular drawn up by the Thames Conservancy to this effect should therefore be distributed without a moment's loss of time to the occupants as well as the owners of the house boats, and a conviction obtained for the very first offence proved. The Thames Conservancy have always protested that they did not create the grievance, that they were most anxious to remove all cause of complaint, if the law would only empower them to act. They now possess the necessary power, and it is to the interest of every inhabitant of London that they should protect the water we drink from daily, hourly contamination. The great majority of house boats and steam launches floating about on the Thames above the intake of the London water supply still drain into the river. The weather is hot; this is the season for epidemic diseases; not a moment must be lost to put an end to the danger we have often denounced, and, we trust, not in vain.

Pharmacology and Therapeutics.

WARNINGS ABOUT THE USE OF ACETANILIDE.

Two articles have recently appeared in the Hungarian medical journal *Gyógyázat*, in which the profession is warned that acetanilide, or antifebrin as it is called, though it is not without value, is an uncertain, and indeed a dangerous, antipyretic. Dr. Géza Dulácksha finds, after giving the drug a prolonged trial in the hospital, that small doses may bring down fever, but that in some cases even three-grain doses produce violent sweats, prostration, and hæmorrhage or cyanosis. It does not appear to him to exert any favourable action on the course of the disease itself, being thus inferior to salicin, resorcin, and ichthyol. If given at all in fever, its action requires to be very carefully watched. In certain neuroses, however, Dr. Dulácksha has found it very useful, and as the doses required were smaller, he is disposed to recommend its employment in such cases, as it appears to be free from danger. In a case of severe trigeminal neuralgia, in which quinine, gelseminum, and morphia had produced but little improvement, three grains of acetanilide were given night and morning without effect; seven grains and a half were then ordered, divided into ten powders, one to be taken every two hours. This produced a great improvement, and after ten days of this treatment the cure was complete. No unpleasant effects beyond some nocturnal perspiration showed themselves. Two other cases, where severe pain was associated with meningo-myelitis and syphilitic tabes respectively, which had been treated in various ways unsuccessfully, were greatly benefited by acetanilide, no unpleasant effects being produced. Dr. Biro gave acetanilide in eighteen cases of various kinds including typhoid, croupous pneumonia, pleurisy, polyarthritis, tuberculosis, and phthisis, in doses varying from a grain and a half to forty-five grains per diem, and was much struck with the uncertainty of its action, an effect being sometimes produced by a grain and a half, while at others ten or eleven grains had no effect at all. Most of the patients complained of chilliness, while cyanosis and irregularity of pulse occurred in several cases. In one case, where seven grains and a half had been taken, there was a severe rigor followed by cyanosis, sweating, and an irregular, thready pulse, the symptoms being so alarming that recourse was had to brandy and hypodermic injections of ether. In another case, in which acetanilide had been given for eleven days, similar symptoms presented themselves, together with clonic spasm of the lower extremities, reminding one of the symptoms in anilin poisoning. Altogether, Dr. Biro thinks that the evil effects of acetanilide are so great that it cannot be recommended for general adoption.

ANTIPYRIN.

Two Scandinavian physicians have recently written on the use of antipyrin, the apyretic properties of which they unreservedly admit to be the rule. Some exceptions, however, were observed. Thus Dr. Wetterdal of Upsala found in one case a rise of temperature during the first hour after

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a thirty-grain dose of more than 1° F. Rigor and collapse never occurred in any of his cases. Copious sweating, however, was observed at times, over which atropine exerted no control. A rash with bluish-red spots on the face, as described by Wising, was also occasionally noticed. In some cases cinchona was advantageously combined with antipyrin. Dr. Laache, who made a special study of the action of antipyrin in phthisis, found that, though as a rule it brought down the hectic very satisfactorily, in one instance it produced, at first at least, a contrary effect, the temperature rising very markedly after a thirty-grain dose. It afterwards fell gradually, reaching a point decidedly below the normal. Simultaneously with the rise a rash appeared, and the patient complained of a burning sensation in the mouth and eyes and along the œsophagus. Curiously enough, the patient had previously taken antipyrin for a longer period without having experienced any unpleasant effects. The sample could not well have contained any poisonous admixture, as other patients took it with impunity.

INGLUVIN.

Dr. Paul Mohr of Cologne, writing in the *Allgemeine Medicinische Central-Zeitung*, mentions some cases in which he found this preparation give good results when all other treatment had failed. In a very troublesome case of tabes mesenterica, in which nourishment of every description was invariably vomited, the very first dose produced a marked effect. About four grains were ordered to be dissolved in liquid nourishment three times a day, and in a few days' time food of various descriptions could be retained without difficulty. In two other cases somewhat larger does—i.e., five grains four times a day—were employed with equal success. One was a case of delirium tremens, and the other one of severe dyspepsia associated with entozoa, the patient being utterly unable to retain the nauseous medicine necessary for the destruction of the worm. By means of ingluvin this condition was remedied, and the entozoon (a tænia solium) got rid of, a complete cure resulting.

NEUTRAL HYDROCHLORATE OF QUININE.

Neutral hydrochlorate of quinine is soluble in its own weight of water, and therefore possesses many advantages over its basic ally, which dissolves in twenty-two times its weight of water. M. Clermont prepares the neutral salt by mixing one equivalent of neutral sulphate of quinine (548 grammes) with two equivalents of dry chloride of barium (208 grammes), after having dissolved them in a sufficient quantity of water; the moisture is then evaporated below 100° C., and the neutral hydrochlorate is left behind. A solution of this ought not to have a caustic taste.

SANTONIN.

The chemical constitution and the physiological action of this anthelmintic have just been made the theme of fresh investigation by Coppola and other Italian pharmacists. Their results have been embodied in three separate papers submitted a month ago to the Accademia dei Lincei, and will shortly appear in the "Atti" of that society. Tommasi-Crudeli contributes a note on these results.

TREATMENT OF TOOTHACHE DUE TO DENTAL CARIES.

Dr. Popoff, writing in the *Russkaya Meditsina*, states that he has succeeded in relieving toothache caused by caries of the teeth by making the patient rinse the mouth every half-hour with a dessertspoonful of a 20 per cent. solution of permanganate of potash, taking care to hold the liquid in the mouth for some minutes.

HEALTH OF THE IMPERIAL JAPANESE NAVY.

THE special reports upon the improvement in the scale of diet in the Japanese navy for the years 1883 and 1884 afford some very interesting information bearing on the influence of diet upon health, and especially upon the prevalence of kakké (*beri-beri*) in that service. From a table in the second report it appears that the deaths, on the average of the six years 1878-83, in a force of 4887, amounted to 17·29 per 1000, and of these 8·39 per 1000 were from kakké. The Director-General of the Medical Service, Takaki Kanehiro, F.R.C.S. Eng., being struck with this high rate as compared with that of European and American navies, instituted an inquiry into the causes of this fatal disease, and came to the conclusion that it depended, in great measure at least, on the quality of the food supplied to the men. A scheme for the improvement of their diet was prepared, and came into operation in 1884. The practical result was an immediate reduction in the general death-rate, which, on the average of the two years 1884-85, was only 7·49. This great decrease was chiefly in the deaths from kakké, which during the first period averaged 8·39, and in the last two years were only 0·64 per 1000. But the beneficial results of the increased and improved scale of diet were not confined to the reduction of the death-rate, they are manifest also in the cases treated. The returns do not give the number of these prior to 1883, but in that year they are stated to have been 3235 per 1000 of the strength; in 1884 they were reduced to 1864, and in 1885 to 992.[1] These ratios somewhat overstate the amount of sickness, as the compiler of the returns has fallen into the error of adding the number on the sick list at the beginning of the year to the cases orginating during the year; but for the purposes of comparison they are sufficiently correct. The mean daily sick per 1000 of strength in 1883 was 121, in 1884 it was 84·5, and in 1885 it was still further reduced to 52·25. From 1878 to 1883 the cases of kakké averaged 324 per 1000 of strength annually, in 1884 they were 137, and in 1885 only 5·9; but even this does not fully represent the gain, for of the 5·9 no less than 4·6 were cases under treatment at the beginning of the year; those occurring during the year, therefore, were only in the proportion of 1·3 per 1000 of strength. The improvement in health, however, as shown by the reduction of cases, was by no means confined to kakké. It was very marked in diseases of the digestive and respiratory systems (the classes giving rise to the highest ratios of cases), and diseases of the eyes were reduced to one-half the previous amount. In 1883 the average daily amount of food issued to the petty officers and seamen was 50·37 oz., of which 25·78 were rice, 9·56 vegetables, 4·85 fish, and 2·18 meat. In 1884 the total amount was increased to 78·38 oz.: the rice to 32·16, vegetables to 12·41, fish to 6·56, and meat to 8·02; and milk and tea were added. In 1885 a further modification took place, the total amount being raised to 85·81 oz.; the rice was reduced to 18·45 oz., 8·85 oz. of wheat and 8·48 oz. of bread being substituted; meat and fish remained nearly the same, but vegetables were increased to 17·89 oz. and the milk was raised to about a pint and a quarter daily, with some modifications in subsidiary articles of the ration. It would be interesting to know whether the army was dieted on the same meagre scale as the navy, and whether the same improvements were introduced into it with similar results. It is very satisfactory to find the medical officers of the Japanese navy devoting so much attention to the health conditions of the men entrusted to their care, and following up the results of their investigations with so much success. It would be a great advantage in these reports if the numbers who died or have been invalided from each class of diseases were given in the tables, instead of merely the ratio per 100 of cases, as it would render the data much more available for purposes of comparison. In the second report—that for 1885—the summary of the report on the health of the English navy has been reprinted from our columns, to serve as a standard of comparison for the Japanese navy.

In the Chinese man-of-war now lying in the Tyne it appears that several cases of kakké occurred during the voyage to England, of which one died in the Red Sea, and another when passing through the Suez Canal. When the ship arrived in the Tyne there were fifteen or sixteen cases on board, of which three were sent to the Newcastle Infirmary, where two of them died, and a third death occurred on board the ship. As the men had a great objection to being sent to the hospital, Dr. Slater was engaged to attend the cases, and so far all have done well. He is stated to have treated them with nourishing diet, and to have protected them from cold. The success which has attended this appears to bear out the views of the Director-General Takaki Kanehiro as to the cause of the disease in the Japanese navy. It would be interesting to get a detailed statement of the dietary on board the *Yoo Nan* from the time of her leaving China till her arrival in the Tyne.

[1] We find it necessary to call attention to an error in the letterpress of the first report. At page 2 the strength and the number of cases are stated to be for "the 16th year of Meiji" (1883), while the figures quoted are those for the year 1884, as shown in the tables.

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HONOUR TO A VETERAN ANATOMIST IN RUSSIA.

ON April 30th, at 11 A.M., the Anatomical Theatre of the Imperial Medico-Chirurgical Academy of St. Petersburg was the scene of a lively and noteworthy gathering of physicians, surgeons, students, and deputies from numerous learned societies, lay and medical, from every part of Russia, to congratulate Professor Wenzel Gruber upon his having held the professorship of practical anatomy for no less a period than twoscore years. During that time Dr. Gruber, besides having instructed, examined, and passed 8000 medical students in practical anatomy, has himself dissected, or superintended the dissection of, upwards of 30,000 bodies. His talents, when Hyrtl's demonstrator in Prague (from 1844 to 1847), having been noticed by the late Prof. Pirogoff, he was invited by the eminent Russian surgeon to St. Petersburg, where he at once received the appointment of Demonstrator of Anatomy at the Imperial Medico-Chirurgical Academy. Gruber, like the late Goodsir of Edinburgh, belongs to a race of students whose sole object in life is the pursuit of their favourite science irrespectively of all difficulties, and to whom worldly pelf presents no attractions. To Gruber the discovery of a new muscle (however insignificant its size), of an anomalous bifurcation of the tiniest arterial twig, of the capricious course of some barely detectable nerve, or of a bursa which had successfully eluded the penetrating eye of former anatomists, afforded more pleasure than would have done the possession of the fattest of the flesh-pots of Egypt. Outspoken and rough at times, Gruber has, however, managed to gain universal respect and love for his honesty, disinterestedness, and kindness of heart. Though apparently indifferent to everything that has not some bearing on anatomy, he is a keen observer of human nature, which he looks at from under thick eyebrows and through large tortoiseshell spectacles. His serious, concentrated look is often lighted up by the pleasantest of smiles, while under an exterior that seems to preclude the idea of a joke or laughter there lurks a fund of dry, at times irrepressible, humour. But to return to the demonstration of which Gruber himself was the subject on April 30th. From various parts of the world there were eighty telegrams sent to the veteran anatomist, while upwards of twenty gorgeously illuminated and bound addresses from different societies congratulated him on the completion of his fortieth year of professorship. A large gold medal, struck in his honour, was presented to him, while a copy of it in silver was struck for and presented to Mrs. Gruber. On one side of the medal are the Christian and family names of Gruber, and below a very good likeness of him; the finely-shaped oval head, the high and full brow, the thick, bushy head of hair, and the rounded and beautifully chiselled chin are admirably portrayed by the sculptor. The reverse of the medal presents, in its centre, the large Roman numerals XL.; below the inscription is 1847—1887; while above is written: "To the teacher of 8000 Russian surgeons." A splendid album, containing upwards of sixty original paintings in oil and water-colours, was presented to him by some of the first artists in Russia. The Emperor created him a Knight of the White Eagle, one of the highest of Russian orders. Indeed, there was no end of telegrams, addresses, memorials, and speeches—all tending to show how deeply respected and beloved Gruber is, alike by colleagues, pupils, and the public in general. So remarkably prolific a writer is Gruber that during forty-three years, the number of his published anatomical memoirs and pamphlets exceeds 540—a proof that the anatomists of a bygone age were generous enough to leave something for their followers to do and discover. Although honoured by the Tsar of Russia, the Minister of War, the Town Council, and literary and artistic societies throughout the country, the embassy of Austria, of which country he is a native and subject, was conspicuous by its absence. Gruber was met and loudly cheered by the young, honest, and lusty voices of hundreds of medical students who waited for him in the corridors of the academy and in the street, and who triumphantly carried him to his home shoulder-high. Gruber thanked them at his door with tears in his eyes, and told them that all he had striven to do during his life was to work and be honest, and if they all did the same he was sure they would succeed in whatever they undertook.

HOSPITAL SUNDAY FUND.

THE following are among the principal amounts received at the Mansion House during the past week on behalf of the Hospital Sunday Fund:—Christ Church, Lancaster-gate, £801 6*s.* 7*d.*; St. Stephen, South Kensington, £193; Portman Chapel, Baker-street, £154; Christ Church, Westminster-road, £57; Eaton Chapel, Eaton-square, £54; St. Alban's, Streatham-park, £67; St. James's, Marylebone, £90; St. Peter's, Vere-street (corrected), £247; St. Gabriel's, Pimlico (corrected), £89; St. Peter's, Eaton-square, £542; St. John's, Wilton-road, £86; Kensington Parish Church, £372; Christ Church, Kensington, £103; St. Stephen's, South Kensington, £193; St. Martin-in-the-Fields, £114; Rosslyn-hill Unitarian Church, Hampstead, £91; Trinity Presbyterian Church, Notting-hill, £62; St. Anne's, Soho, £61; Holy Trinity Chapel of Ease, Wandsworth, £50; St. John the Evangelist, Blackheath, £50; St. James's, Norlands, £63; Holy Trinity, Sydenham (corrected), £123; Wanstead Meeting House, £60; West London Synagogue of British Jews, £232; S. C., £100; St. Mary, Aldermary (corrected), £83; St. John, Paddington, £175; St. Augustine, South Kensington, £85; St. Stephen, Paddington, £100; St. John's-wood Presbyterian Church, £85.

The total amount received on behalf of the fund up to the time of our going to press is rather over £35,000.

VOLUNTEER AMBULANCE INSPECTION.

BY request of the Principal Medical Officer of the Northern Military District, Surgeon Sullivan, M.S., recently made an inspection in camp at Beverley of the bearer company attached to the 2nd Volunteer Battalion, Yorkshire Regiment. The company consisted of fifty non-commissioned officers and men, with three surgeons—viz., Surgeon-Major J. W. Taylor of Scarboro', and Acting Surgeons W. T. Colby of Malton and R. Bruce Low of Helmsley. After a careful inspection of the men, the various movements in stretcher drill were gone through. Twenty-three recruits were then examined in elementary anatomy and surgery, as well as in bandaging and the improved methods of lifting and treating the wounded. The inspection and examination were very thorough, lasting nearly three hours. At its close Surgeon Sullivan spoke highly of the men as to their drill and their knowledge. He said he would send in a very good report, and expressed astonishment at the amount and extent of the proficiency displayed by the bearers.

On Saturday the official inspection of the battalion took place. The inspecting officer, Colonel Barratt, commanding the 19th Regimental District, who has in previous years shown great interest in the ambulance movement, requested the bearers to treat various injuries indicated by himself men from the combatant ranks being supplied for the purpose of illustration. Colonel Barratt questioned the bearers regarding the injuries and their treatment, and afterwards stated that the men fully stood this practical test as to their efficiency. He addressed the bearers, and complimented Surgeon-Major Taylor on the evident proficiency of his men. The bearer company marched past with the battalion at the conclusion of the regimental inspection.

The formation of regimental bearer companies would seem to solve some of the difficulties which many surgeons feel in trying to promote the efficiency of the Volunteer Medical Department. The Volunteer Medical Staff Corps appears to be confined to the large centres of population, and every difficulty seems to be put in the way of getting official recognition. Dr. Taylor's men are all efficient Volunteers as well as bearers. They have passed all their drills, including even musketry. In this way they are doubly efficient, and deserve a double recognition from the military authorities.

PERILS OF SHAVING.—A case of some interest, as suggestive of a danger not generally recognised, has just been heard and decided in the Brighton County Court. A carpenter sued a barber for £5 damages, in consequence of having, as he alleged, contracted a skin disease in the process of undergoing shaving in the shop of the defendant. The decision was in favour of the plaintiff for the amount claimed.

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Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

South Shields Urban District.—In commencing his report in 1886, Dr. Campbell Munro states that the mean death-rate for the borough during the decade which has just closed indicated an annual saving of life amounting to 31 per 10,000 living, as compared with that of the previous decade. During 1886 the death-rate was 20·5 per 1000, and the deaths under one year only amounted to 134 on each 1000 registered births. As regards infectious diseases, the borough isolation hospital did excellent work, no less than 137 cases being admitted, and of these 120 were scarlatina patients. The deaths were only as 1 to every 17·1 cases admitted, a result which is especially satisfactory to Dr. Munro, who has taken upon himself the administrative charge of the institution without remuneration. A considerable part of the year has been devoted to improving the houses of the poor, and Dr. Munro says that the red-tapeism connected with action under McCullagh-Torrens' Acts is such that he will never again resort to them, preferring procedure under Section 97 of the Public Health Act. Satisfactory proceedings were taken in connexion with some Tyne alkali works; and as to milk pollution, such measures as were adopted were aimed, not against retailers, but against the more culpable wholesale dealers, and in every case the action was successful.

Maidstone Urban District.—Mr. M. A. Adams, F.R.C.S., gives the death-rate for the borough as 17·5 per 1000 during 1886. Scarlet fever was somewhat prevalent. Eighty-eight cases came under notice, and of these no less than fifty-eight were received into the new isolation hospital, as to which the report has only praise and satisfaction to record. In like manner 4795 articles were disinfected, this being done free of cost. The need for extending the public water service is shown by the fact that of three samples of well water analysed not one was fit for use, and it is stated that many remain which are highly dangerous. Amongst other improvements effected, we are glad to note the paving of courts and alleys, a proceeding sadly wanted in a vast number of our towns and cities. The year was one without special sanitary incident, but it was marked by steady progress in regard to hygiene.

Marylebone.—Under the name of "Sanitary Chronicles" Mr. Wynter Blyth issues a monthly record of work in this parish, and these supply much of the information which goes to make up the annual record. During 1886 the birth-rate was 25·6, and the death-rate 19·7 per 1000; the mean duration of life for the whole parish being 44·5 years. Considerable improvements as to dwelling accommodation are steadily in progress, artisans' dwellings taking the place of insanitary property. So, also, the leases of great estates are falling in, and this involves extensive repairs or re-erections. Under the Sanitary Acts 2048 orders were issued during the year, and only sixteen owners were summoned for neglect. Amongst tenemented houses, 901 have now been put on the register, and it is believed that but few of the class of houses intended to be dealt with under the law as to houses let in lodgings now remain which are not under control. In 1200 instances extensive improvements in house drainage were effected during the year, and, speaking generally, a large amount of good work was done as the result of nuisance inspection.

Liverpool Urban District.—One of the most satisfactory records contained in Dr. Stopford Taylor's recent annual report is that relating to the mortality from "fever," which since 1866, when typhus was largely prevalent, has fallen with fair annual regularity from 1523 deaths to 198. It is a great pity that the deaths thus tabulated all appear under the meaningless head "fever," except as regards an epidemic of relapsing fever in 1870-72; but this is, perhaps, to some extent, brought about by the terms used in registering deaths. Thus, of the 198 "fever" deaths in 1886, 7 were said to be from gastric fever, 85 from typhoid, 48 from enteric fever, 3 from continued fever, 1 from low fever, 47 from typhus, 3 from fever, and 1 from relapsing fever. As to typhus fever, the disease still clings to Liverpool, and we regret to notice the continued practice of occupying cellar dwellings. Typhus will never be eradicated from Liverpool until much more has been done in improving the dwelling accommodation of the lower classes, and in securing ample means for isolating the disease. The beginning made in the latter direction is excellent in its way, but when we compare Liverpool and its present proposals, and Glasgow with hospital grounds of thirty acres in extent, we have greater hopes for Glasgow in the matter of typhus than we have for Liverpool.

Peterborough Urban District.—Dr. Paley reports that of the cases of enteric fever which were not imported there was a definite local cause ascertainable in nearly every case. Such an experience should lead to increased energy in the matter of inspection, for the value of true sanitary work is mainly shown in the removal of these conditions before, and not after, preventable disease has been brought about. Privy nuisances are especially adverted to, and we have already commented on the question of refuse removal in connexion with the report of the inspector of nuisances. The annual death-rate for 1886 was 17·8 on the population for 1881 and 16·4 on the estimated present population.

Peterborough Rural District.—In this rural area Dr. Paley records a death-rate of 14·5 per 1000, and he strongly endorses the advice given by Mr. Spear of the Local Government Board as to the need for scavenging and refuse removal by the authority themselves in the more populous parts of the district. He says that the question is rather one of organisation than of expense, and only needs the instruction of the authority to carry it into effect.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6114 births and 3207 deaths were registered during the week ending July 2nd. The annual rate of mortality in these towns, which had steadily declined in the preceding five weeks from 20·4 to 17·6, rose again last week to 18·1. During the thirteen weeks ending on the 2nd inst., the death-rate in these towns averaged 19·8 per 1000, and was 1·4 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 9·4 in Derby, 12·5 in Portsmouth, 12·5 in Halifax, and 12·9 in Sunderland. The rates in the other towns ranged upwards to 24·6 in Blackburn, 27·9 in Newcastle-upon-Tyne, 28·1 in Preston, and 29·2 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 489, 501, and 512 in the preceding three weeks, declined again last week to 486, notwithstanding the greater fatality of diarrhœa; they included 156 from measles, 136 from whooping-cough, 110 from diarrhœa, 38 from scarlet fever, 22 from "fever" (principally enteric), 22 from diphtheria, and only two from small-pox. No death from any of these zymotic diseases was registered during the week in Derby or in Halifax; while they caused the greatest mortality in Manchester, Norwich, Birkenhead, and Newcastle-upon-Tyne. The highest death-rates from measles occurred in Oldham, Huddersfield, Manchester, Norwich, Birkenhead, and Newcastle-upon-Tyne; from whooping-cough in Norwich, Sheffield, Liverpool, Blackburn, and Nottingham; and from scarlet fever in Bristol, Birkenhead, and Blackburn. The 22 deaths from diphtheria in the twenty-eight towns included 13 in London and 2 in Manchester. Small-pox caused two deaths in Cardiff, but not one in Greater London or in any of the twenty-six other large provincial towns. The mortality from diarrhœa somewhat exceeded the average for the season. Only one case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease, no new case having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 333 to 184, rose again last week to 199, but were 21 below the corrected average. The causes of 65, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Plymouth, Wolverhampton, and Derby. The largest proportions of uncertified deaths were registered in Salford, Sheffield, and Leicester.

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HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·3 and 20·3 per 1000 in the preceding two weeks, declined again to 19·5 in the week ending July 2nd; this rate exceeded by 1·4 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 14·6 and 16·9 in Aberdeen and Edinburgh, to 23·3 in Greenock and 28·2 in Paisley. The 487 deaths in the eight towns last week showed a decrease of 20 from the number in the previous week, and included 43 which were referred to whooping-cough, 18 to diarrhœa, 7 to scarlet fever, 7 to diphtheria, 6 to measles, 3 to "fever" (typhus, enteric, or simple), and one to small-pox; in all, 85 deaths resulted from these principal zymotic diseases, against 90 and 71 in the preceding two weeks. These 85 deaths were equal to an annual rate of 3·4 per 1000, which was 0·7 above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 48 and 38 in the preceding two weeks, rose again last week to 43, of which 16 occurred in Glasgow, 9 in Edinburgh, 9 in Dundee, and 4 in Greenock. The 18 deaths attributed to diarrhœa, of which 7 were returned in Glasgow and 3 in Dundee, showed an increase upon the numbers in recent weeks, and were 2 above the number in the corresponding week of last year. The 7 fatal cases of scarlet fever showed a further decline from recent weekly numbers; they included 2 in Dundee. Of the 7 deaths from diphtheria, showing an increase upon the low numbers in the previous two weeks, 4 occurred in Glasgow and 2 in Edinburgh. All the 6 fatal cases of measles were returned in Glasgow; and the death from small-pox occurred in Aberdeen. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 109, 76, and 72 in the preceding three weeks, rose again last week to 80, and were 3 above the number returned in the corresponding week of last year. The causes of 85, or more than 17 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 26·7 and 27·6 per 1000 in the preceding two weeks, further rose to 29·4 in the week ending July 2nd. During the thirteen weeks ending on Saturday last the death-rate in the city averaged 28·7 per 1000, the mean rate during the same period being but 18·0 in London and 19·4 in Edinburgh. The 199 deaths in Dublin last week showed a further increase of 12 upon the numbers returned in the preceding two weeks; they included 30 which were referred to measles, 5 to diarrhœa, 3 to whooping-cough, 2 to "fever" (typhus, enteric, or simple), and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 32 and 28 in the preceding two weeks, rose last week to 40, and exceeded the number in any previous week of this year; they were equal to an annual rate of 5·9 per 1000, the rates from the same diseases being 2·8 in London and 2·8 in Edinburgh. The fatal cases of measles, which had increased in the preceding eight weeks from 6 to 21, further rose last week to 30, and exceeded the number in any previous week of this year. The deaths from diarrhœa, whooping-cough, and "fever" also showed an increase upon the numbers in the previous week. The deaths of infants had declined, whereas those of elderly persons somewhat exceeded the number in the previous week. Six inquest cases and 5 deaths from violence were registered; and 61, or nearly a third, of the deaths occurred in public institutions. The causes of 24, or more than 12 per cent., of the deaths registered during the week were not certified.

TASMANIAN MORTALITY STATISTICS.

The Government statistician for the colony of Tasmania (Mr. Robert M. Johnston) has recently issued his return of the vital and meteorological statistics for the year 1886. Vital statistics relating to our Australian colonies, especially their mortality statistics, are full of interest for comparison with those of England and Wales. Their interest and value would, however, be far greater if we could be assured of the approximate accuracy of the civil registration of births, deaths, and marriages in our several colonies. Tasmania has the reputation of being one of the healthiest of our healthy Australasian colonies, and the statistics of the return just to hand fully corroborate this impression. This colony, with an area of rather more than 26,000 square miles, had last year an estimated population of only 135,501 persons. The recorded birth-rate of this population was equal to 34·2 per 1000, ranging from 36·8 in the chief urban districts (Hobart Town and Launceston) to 32·7 in the country districts. It may be noted that the birth-rate in the colony steadily increased from 30·2 in 1877 to 35·7 in 1884, since which it has somewhat declined again. It would be useful to know whether these differences may be attributed to varying accuracy of registration or to variations in the proportions of women at the child-bearing ages. The death-rate in the colony in 1886 was so low as 14·6 per 1000, showing a further decline from the rates in recent years. In the absence of official information on the point, it is fair to assume that the registration of deaths in recent years is at any rate fully as accurate as in past years. It is, therefore, very satisfactory to note that while the mean death-rate in the first five years on record (1856-62) was 17·2 per 1000, it did not exceed 15·7 in the last five years (1882-86). The return before us contains a singular defect (probably due to oversight) in its statistics bearing upon the mortality in 1886 in various parts of the colony. The death-rate in the year per 1000 of the mean population is given as 5·30 in Hobart Town, 3·33 in Launceston, and 5·95 in the whole of the country districts, while in the whole colony, as before stated, it is said to be 14·58. It would appear that by an oversight the rates given for the subdivisions of the colony are the proportions of deaths in each district to the *whole* population of the colony; these figures being, of course, valueless as a test of comparative mortality. It appears from the facts given in the table that the *true* death-rate per 1000 of the population of Hobart was 23·5, and that of Launceston 23·8; these are too high for rates in colonial towns, which should be free from the unhealthy areas which raise the death-rates of cities in the Old World. The death-rate in the Tasmanian country districts in 1886 would appear to have been as low as 9·4; this low rate may probably be partly due to defective registration in sparsely populated districts. It is unsatisfactory to find that "fever," principally enteric or typhoid, is more fatal in Tasmania than in England and Wales. The deaths in 1886 included 47 from this cause, of which 25 occurred in Launceston, 9 in Hobart Town, and only 13 in the rest of the colony. The mortality from the other principal zymotic diseases was decidedly below the English average. Infant mortality from all causes, measured by the proportion of deaths under one year to registered births, was 105 per 1000, comparing most favourably with the rate of infant mortality in England and Wales; it should, however, be noted that, while in the country districts the proportion was only 73 per 1000, it was more than twice as high (152 per 1000) in Hobart Town and Launceston, the chief urban districts. It is evident from these figures that the sanitary condition of the principal Tasmanian towns is not what it might be and ought to be.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Surgeon-General John O'Nial, C.B., has been granted retired pay (dated June 14th, 1887).

INDIA OFFICE.—The Queen has approved of the following promotions made by the Governments in India:—Surgeon-Major William Roe Hooper (dated March 31st, 1887), and Surgeon-Major John Richardson (dated April 29th, 1887), of the Bengal Medical Establishment, and Surgeon-Major A. Nickson Hojel (dated April 1st, 1887); Surgeon-Major Peter Stephenson Turnbull, M.D. (dated April 1st, 1887), and Surgeon-Major H. Cook, M.D. (dated April 2nd, 1887), of the Bombay Medical Establishment, to be Brigade Surgeons. This cancels the promotion of Surgeon-Major Hojel, from April 2nd, 1887, notified in our columns on May 21st, 1887.

ADMIRALTY.—The following appointments have been made:—Surgeon Penrose J. Barcroft, to the *Malabar* (dated July 2nd, 1887), and Surgeon William R. White, to the *Duke of Wellington*, additional (dated July 2nd, 1887).

ROYAL NAVAL ARTILLERY VOLUNTEERS (Bristol Brigade). Charles A. Wigan, M.D., M.R.C.S., to be Surgeon (dated July 4th, 1887).

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ARTILLERY VOLUNTEERS.—1st Gloucestershire: J. Lidderdale, Gent., to be Acting Surgeon (dated July 2nd, 1887).—3rd Volunteer (Kent) Brigade, Cinque Ports Division, Royal Artillery: John Irvine Boswell, M.B., to be Acting Surgeon (dated July 2nd, 1887).—Richard Joseph Bryden, Gent., to be Acting Surgeon (dated July 2nd, 1887).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Duke of Cornwall's Light Infantry: Surgeon R. C. M. Pooley, M.D., is granted the honorary rank of Surgeon-Major (dated July 2nd, 1887); Thomas Baxter Carlyon, Gent., to be Acting Surgeon (dated July 2nd, 1887).—1st Dorsetshire: Acting Surgeon W. A. E. Hay, to be Surgeon (dated July 2nd, 1887).—1st Dumbartonshire: William Drysdale, Gent., to be Acting Surgeon (dated July 2nd, 1887).—1st Volunteer Battalion, the Essex Regiment: St. Clair Brockway Shadwell, Gent., to be Acting Surgeon (dated July 2nd, 1887).—4th Volunteer Battalion, the South Wales Borderers: Surgeon and Honorary Surgeon-Major Robert Smythe resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated July 2nd, 1887).—3rd Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Lieutenant J. F. Arlidge is appointed Acting Surgeon (dated July 2nd, 1887).

THE VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Philip Henry Whiston, Gent., to be Surgeon (dated July 2nd, 1887).

Correspondence.

"Audi alteram partem."

THE POSITION OF MEDICINE IN THE STATE.

To the Editors of THE LANCET.

SIRS,—Now that the Jubilee week has come and gone, and the list of those deemed worthy of honour is open to our study, it seems a fit time for the medical profession to take stock of the estimate formed of it by the ruling coterie in the State. "Honour a physician with the honour due unto him" has come down to us from nearly 3000 years ago as embodying wisdom, and now in this marked year of our era we have an opportunity of testing how far these ancient opinions on the healing art are recognised under our so-called advanced civilisation. I take the list of honours as a fair index for guidance. The occasion was a special one, and furnished an opportunity for making up any leeway. The profession has not been passed by either as sufficiently weighted with awards or as unworthy of recognition, but duly considered and value assessed; and though the healing art is noble, second to none, and in the opinion of some self-sufficing, yet like other callings some of our members have accepted gifts from the "fountain of all honour," sinking their professional title in that applicable to the rank bestowed; and hence our profession, as to the nation's estimate of it, is fairly gauged by the distributions awarded its members. All professions, judging by acts, accept the honour as something above, and added to, that derived from themselves. What, then, does an analysis of the list reveal as bearing on our present subject?

Excluding promotions in the navy and army and those nursing sisters decorated with the Royal Red Cross, there are about 272 individuals deemed worthy of recognition, and among them we number twelve, six belonging to the civil segment and six to the services, a ratio of 4·4 per cent. Taking the navy and army as expressive of a calling the very opposite to the healing art, we find a ratio of 40 per cent., the medical departments among them reaching only to five. We have no place among the six peers and thirteen baronets; and among the knights commencing with Pryce Jones, Esq., and terminating with mayors of different towns, we have three out of thirty-three. Of the civil division of the Order of the Bath, its highest grade passing us by, we get two out of twelve K.C.B.'s, none out of thirty-one C.B.'s; and in its military division, giving us a similar omission in the highest grade, we have three out of forty K.C.B.'s, and three out of sixty C.B.'s. The Order of St. Michael and St. George, among sixteen colonials, give us one—an M.D. of Ottawa. Hence the healing art is deemed honourable by the State at a percentage of 4, one-tenth of the value of the fighting force; it is not worthy to take a place in the highest grade of any order in existence in our country; its level is with the trades; and former experience repeats the present. The medical profession has no high-paid and titled appointments as the church and law, and hence, acting on the principle advanced in the army, that the combatants are entitled to honours in a higher ratio than medical officers on account of the smallness of the pecuniary remuneration, we should have an excess as compared to others, and this makes the invidiousness of our present position more pronounced. Thus this Jubilee year finds us lowly rated and lowly graded in the bestowal of distinctions; it finds no small number of our military members smarting (rightly or wrongly) under a sense of degradation and unfairness; it finds several in our lower ranks who in the struggle for existence are working for a pittance barely, if at all, above the artisan class. Surely there is food here for reflection and occasion for reasonable discontent, irritation, and a desire at least (to use your own words) for "redress of what is felt to be a grievance," if nothing more.

Does the cause of offence lie in our calling, in ourselves, or in the power that honours? The first may be dismissed, though it must be said that it places the sufferer only under an obligation; its influence is personal rather than general; it is not obtrusive; it makes no appeal to the emotions of the mass as an army does in a victory gained, or as politics in a great liberating measure passed; in its public work it is preventive and silent in working, unseen by the many, not demonstrative; and hence its value and influence are easily overlooked in this busy world and thrust aside. Again, its members are not recruited from the upper strata, from the moneyed or influential ranks—rather from the medium or lower middle class as a rule. They come under the category of self-made men; they have little time or desire or means for social matters; they do not come much under the cognisance of those capable of influencing the inner circle surrounding the throne except as units. Nor are they potent politically. Their main power resides in the position their special education gives them in the world of intelligence, and their influence is probably best seen in those who carry their medical education into other spheres of work than in those who practise the healing art. Again, in the distribution of honours, it would appear, judging by the results, not to be based solely on professional work, the selection, the outcome of a responsible body having the necessary knowledge. In the civil section several have been distinguished by Royalty after services personally rendered; and in the military section seniority has generally determined the result, and the awarder has been the military, not the professional head. Hence it would seem that our calling is not one to prominently thrust itself under the nation's recognition; its members, as a rule, lack the social or political influence to impress the fountain from which honours flow, and the system of awarding leaves much to be desired. These points, however, furnish no excuse for the poor distinction that the medical profession has hitherto enjoyed. Surely the State should have no favouritism in professions or callings, all (if honourable) should stand on the same basis, and awards in ratio to numbers should be mainly based on selection made by the respective heads acting in council.

I presume that the profession regard the present condition as one far from congratulatory. We want to extend our influence socially and politically; we want to raise the standard of our profession, increasing its value and power in the State. Most of us tend to undermine our power by the ease with which we gratuitously give our professional services. We want our ranks recruited more, if possible, from the upper middle stratum, and especially to guard against the numerical swamping of the profession by the entrance of more than can be properly provided for. This is unquestionably a great rock ahead, increasing competition and the struggle for existence not probably affecting those in the first rank or those of middle age, but vitally touching those about, or in the future, to enter, and increasing the numbers earning a miserable pittance, degrading in tendency, besides reducing the influence of the profession as a whole, and allowing the State to fill its posts with men at a lower rate. It is certainly the best for all that this severe competition for work and its pay should be prevented, that entries should not be double the vacancies as at present; and to this end it would seem well that the Colleges should use their authority, and by raising the required standard increase the difficulties, so diminishing the number passed

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in, while augmenting the value of the passed professionally and socially. Both of these points we want, if the profession is to have due weight in the State, and such are the thoughts which have passed through the brain of

July, 1887. ONE OF ITS MEMBERS.

"ACUTE EPIGASTRIC PAIN IN PUERPERAL ALBUMINURIA."

To the Editors of THE LANCET.

SIRS,—I beg to enclose extracts from a private letter recently received from Dr. Goss, giving additional evidence of the value of the symptom I alluded to in a recent issue:—

"Roxbury, Boston, Mass., U.S.A., April 28th, 1887.

"MY DEAR SIR,—In the report of a case of 'Acute Epigastric Pain in Puerperal Eclampsia,' published in THE LANCET of the 2nd inst., you do me the honour to refer to a case published by me in the *Boston Medical and Surgical Journal* in 1884. Towards the close of your article you say: 'The above cases, five only in number, are all I have been able to meet with.' It may interest you to know that since the publication of my case others of a similar nature have been observed in this vicinity. In the *Boston Medical and Surgical Journal*, vol. cxi., Dec. 18th, 1884, p. 580, Dr. C. F. Withington gives an account of the malady in question, and in vol. cxiii. of the same publication, Sept. 24th, 1885, p. 299, the late Dr. F. H. Lombard published a case reported to the Boston Obstetrical Society. ..... In spite of all reasonable care, the presence of renal trouble will sometimes escape our notice till a catastrophe occurs. Dr. Lombard reported that the urine of his patient had been examined monthly up to within a fortnight of her decease, without discovering any abnormality, and there was nothing in the condition of my patient to lead me to suppose her situation to be critical. The renal affection must be at times very rapid in its development, and the microscopical examination of the urine in both Dr. Lombard's case and my own confirms this statement. The urine resembles that often found in the acute nephritis of scarlet fever.

"Trusting, &c. ..... Yours, very truly,

"FRANCIS W. GOSS.

"John Phillips, Esq., B.A., M.B., M.R.C.P."

I may also say that I have received letters from two other practitioners detailing single cases in which this very important and too-little noticed symptom was well marked.

I am Sirs, yours truly,

Harley-street, W., July 6th, 1887. JOHN PHILLIPS.

"A DOCTOR'S INCOME."

To the Editors of THE LANCET.

SIRS,—My good friend Dr. Paget Thurstan, who is better qualified than many hospital physicians, has succeeded in raising a lively discussion on this—to us doctors—most interesting question. Permit me, as a man who knows the world better I suspect than some of my brethren, to make a few remarks on the subject. The general public care little what a doctor does or is, provided they know his name well; they draw no distinction between consultants so-called and general practitioners, and, most naturally, we should do the same in their place—get the best advice at the lowest fees. Again, hospitals, clubs, and dispensaries offer good treatment at low fees the public will accept all they can get, and as much more. Our medical brethren in general quite forget that clubs do not exist to provide medical treatment; their primary object is to supply their members with so much per week in sickness, and certain benefits at death. The medical attendance is thrown in in a secondary kind of way. Now, as long as twenty practitioners offer themselves for a club surgeoncy, as long as club doctors holding the highest qualifications, are ready to go *twelve miles* to see club patients, speak of facts—the public would be lunatics to offer more than the 2*s.*, 4*s.*, or 5*s.* generally paid for medical attendance. So no wonder at young men taking such work as they can get at present practice and are glad of anything to do, but I do wonder at eminent men offering themselves. A [illegible] surgeon to a great provincial [illegible] to his death many clubs. I do [illegible] he held forty clubs. Again, [illegible] neighbourhood several rich people, [illegible] the local doctors have gone as in-patients to London hospitals of late years. As long as great hospitals compete for inmates and gladly receive any and all comers, the public naturally think (if they trouble themselves at all in the matter) that the staff are remunerated somehow and sufficiently. One remedy would be for our great consultants to resign their hospital appointments earlier in life; a second, a more systematic weeding out of hospital patients. At this moment there are several poor sufferers in my neighbourhood whom I would gladly send away for severe operations, but they cannot face the cost of the journey; at the same time rich shopkeepers, large farmers, and prosperous business men, who can get up to town, are eagerly received again and again. Moreover, I must demur to the singular statement that consultants are a different class to general practitioners. The distinction between barristers and solicitors will not continue; public opinion is against it. Consultants are not always better qualified or more competent than general practitioners. With the exception of part of the staff of certain London hospitals, there are hundreds of consultants (so-called) whose education, diplomas, and standing are precisely the same as those of good general practititoners. One of our local club doctors is a London University scholar. The corporations can do nothing; Parliament cannot and will not interfere; and as for the Medical Council, what right has it to interfere? Combination will effect nothing. Our leading men must protect themselves from downward competition, and our younger men must have more self-respect.

I am, Sirs, yours truly,

June, 1887. AN OLD OXONIAN.

A THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—I sincerely hope that the scheme of a Therapeutical Society, as mooted by Dr. A G. Bateman, will be carried out to a successful issue. To general practitioners, intimately concerned as they are with the actual and immediate treatment of disease, such a society would be of inestimable value. As a matter of fact, a great number of practitioners scan the medical papers with avidity that they may pick up any therapeutical crumbs which perchance might fall from those in high places, and truly they are, as a rule, but crumbs, the feast itself generally consisting of pathology or etiology. In other words, the science of therapeutics has not received the same amount of attention as other branches of medicine have, and is still, as your correspondent states, in a "chaotic condition," from which, however, a Therapeutical Society would go far in helping it to emerge. Trusting that the idea may be taken up with the enthusiasm it deserves, I remain, Sirs, yours truly,

Hastings, July 7th, 1887. J. STENSON HOOKER.

VANS AND INFECTION.

(*From a Correspondent.*)

AN outbreak of measles has been traced at Grantham to some travelling showmen and hawkers who attended the fair recently held in the town. The case affords a good illustration of the danger to the public health which results from the extremely unsatisfactory character of our sanitary system so far as it affects our nomadic population. This question was discussed at considerable length during the sittings of the Housing of the Working Classes Commission two years ago. It was then shown that the van population—under which generic term was included that numerous class who inhabit movable dwellings, whether vans or tents—were subject to no sanitary regulations whatever. A magisterial decision, that a van was not a house, had been upheld by the High Court, with the result that none of the enactments which regulated the inhabitants of houses affected this vagabond section of the community. In some parts of the country, it is true, where van towns had sprung into existence, some attempts had been made to cope with the difficulty. At Woodford, for instance, where the squatters ejected from Epping Forest made a settlement, the local board succeeded in compelling them to have a supply of water. But it is doubtful whether this was a legal proceeding, and the settlement, of course, still re-

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mained independent of the bye-laws of the board. And this was the state of things all over the country. As to the condition of these people, it was shown to be admirably adapted to breed pestilence. Cases of typhoid fever and small-pox were frequently occurring among them, vaccination, owing to their migratory habits, being unknown, while they furnished instances of overcrowding of the worst type. An attempt was made, it will be remembered, to bring vans within the Canal Boats Act, but the House of Commons committee reported against the proposal, and Mr. George Smith of Coalville, has since been indefatigable in urging the necessity for a "Movable Dwellings Bill." It is, however, in the meantime, of considerable importance that it should be remembered that sundry of the recommendations of the Royal Commission with regard to vans and tents were carried into effect by the Housing of the Working Classes Act, 1885. That statute, for instance, extended the Public Health Act, 1875, and the Sanitary Act, 1866, so as to include any structures used for human habitation. It declared, in so many words, that if any tent, van, or shed were so overcrowded as to be injurious to the health of the inmates, it should be deemed to be a nuisance. Sanitary authorities and nuisance authorities were further empowered to make bye-laws for promoting cleanliness in this class of dwellings, and for ensuring their being kept in a habitable condition and preventing the spread of infectious disease by those inhabiting them. Any person duly authorised by a sanitary authority or by a justice of the peace was enabled, if he had reasonable cause to suppose either that there was a contravention of the provisions of the Act or bye-laws or that any person was suffering from any infectious disorder, to enter any such structure between the hours of six in the morning and nine in the evening, and any person obstructing him in the performance of this duty was liable on summary conviction to a fine of forty shillings. From all this it will be seen that pending further legislation there is plenty of authority under the Act of 1885 for taking all necessary precautions to prevent infectious diseases being introduced into towns by this means. It is true that the commissioners expressly limited their recommendations to those cases in which van towns were located near populous places, and did not propose to interfere with the nomadic population. But there is no such limitation in the words of the Acts which apply equally to travelling vagabonds and settlers. The Grantham authorities intend, it is said, to inspect caravans in future before they are permitted to enter the town; and, as we have shown, they possess full authority to carry out such a precaution. Bye-laws which have been framed under the Act have been carried out to much good purpose in Battersea and Wandsworth and in a few other districts, but in comparison with their obvious utility these provisions of the statute have been so little used that it may be doubted whether their existence or effect are generally known. It is certainly of the first importance, in view of its influence upon the public health, that no pains should be spared to render the itinerant masses amenable to sanitary regulations, and it therefore seems to be very desirable to call attention to the existing statutory powers in that behalf.

MANCHESTER.

(From our own Correspondent.)

ROYAL INFIRMARY.

A DEATH from hydrophobia has recently occurred in the wards of the infirmary; the patient had been bitten by a dog a month previously in one of the outlying districts of the town. It is not long since another death took place in a patient at the opposite side of the city. It is satisfactory to note that the authorities are now enforcing the regulations for the proper control of all dogs throughout the city. Jubilee Day passed without any very serious accident happening; a few minor casualties were brought in, together with one or two persons suffering from the effects of the heat or alcohol, or the two combined. A catastrophe caused by the sudden falling of some business premises furnished some half-dozen patients recently, when two persons were killed. This unfortunate affair has had the good effect of directing attention to the need for increased supervision by the authorities, not only of new buildings, but over alterations of existing premises. Another case under treatment in the infirmary has been of interest, not so much from the nature of the accident as from the manner in which it was inflicted. A man at one of the theatres became so carried away by the acting that he jumped from the gallery on to the stage to render assistance to the heroine against the evil designs of the villain of the piece, in attempting which he broke his leg and had to be taken to the infirmary.

PRESENTATION TO DR. WATERS.

At the annual meeting of the Lancashire and Cheshire branch of the British Medical Association, held at Stockport, a presentation was made to Dr. Waters of Chester, consisting of a service of silver plate, in token of recognition of his services in connexion with the work entailed by the last piece of medical legislation. Subsequently the members proceeded to the Jubilee Exhibition at Old Trafford, where they dined and spent an exceedingly pleasant evening together. While speaking of the exhibition, it may be remarked that, owing to the occurrence of various accidents &c., amongst the huge numbers of visitors to this most successful of exhibitions, the committee have engaged the services of a qualified surgeon to be always on the spot, and many of the employés and attendants have been undergoing a course of "ambulance lectures."

MANCHESTER DEATH-RATE.

THE LANCET of June 25th contains a short article on the high mortality prevalent in Manchester, both during the last year and for some years past. The health authorities here are certainly not ignorant or unmindful of this unsatisfactory position of our city among the large towns of the country, but there are one or two facts which ought to be borne in mind when comparing Manchester with other places. In the first place, the density of the population is greater here than in any other town except Liverpool; and secondly, and perhaps of more importance still, Manchester, as represented by the municipal boundary, is, as far as the resident population is concerned, almost a city of cottages and poor property, and contains in excess that section of the community amongst whom the highest death-rates always prevail. The large warehouses and business premises contain no residents.

THE MAYOR.

The comparatively sudden death of the Mayor (Mr. Alderman Curtis) just before the Jubilee rejoicings was deplored by all. It is certain that had he lived he would have received the honour of knighthood, as has the Mayor of the neighbouring borough of Salford. For many years Mr. Curtis took much interest in the management of the affairs of the Royal Infirmary, and held the position of chairman of the Convalescent Hospital at Cheadle, where he will be much missed.

OWENS COLLEGE.

June 17th was "Associates' Day" at Owens College, when a large number of visitors assembled in the chemical theatre to hear the annual report, &c. The Council have elected twenty-one graduates to the associateship —i.e., eight in science, one in medicine, and five in arts of the Victoria University, three in science and one in medicine of the London University, two in arts of the Cambridge University, and one in arts of the Oxford University. Many old medical students in the College during the years 1873 to 1877 will learn with regret of the early death of Mr. J. B. Perrin, who during that time was demonstrator of anatomy. He was himself a Manchester student, and afterwards held posts in London at King's College and in the College of Surgeons, prior to his appointment here, since resigning which he has had a large practice at Leigh, near Wigan.

June 28th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE WATER SUPPLY OF NEWCASTLE.

IN view of the present dry season the water supply of the city of Newcastle has lately come to the front, and a meeting of the special committee of the Corporation has recently been held on the subject. It was mentioned that the new reservoir at West Hallington might be soon completed, which would give a storage of 700,000,000 gallons. It was

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shown at the meeting that the water supply to Newcastle and Gateshead is about 15,000,000 gallons daily, of which 11,000,000 gallons are drawn from the water stored in the reservoirs and 4,000,000 gallons from the Tyne. The company, seeing that owing to the dry weather the quantity of water in store was rapidly decreasing, got the pumping engines at Wylam ready for use a month since, and a fortnight ago commenced pumping from the Tyne, and this water is delivered by a separate system of pipes to manufactories, and does not mix with the water supplied for domestic use. At the present time about 4,000,000 gallons per day are being pumped from the river, the pumping power being equal to 6,000,000 gallons a day. The quantity of water in store in the reservoirs on the 29th ult. was more than 1,000,000,000 gallons, which is equal to a supply of about 120 days, so that the people of this district need not fear a water famine.

THE DURHAM COUNTY ASYLUM.

A long report has been presented from the visiting justices of the Sedgefield Asylum respecting the crowded condition of that establishment. The visitors had anticipated that the institution might answer its purposes for some years longer without further additions under ordinary circumstances, but the action of the Sunderland guardians in demanding that all their chronic insane should be admitted into the asylum had upset their calculations, and, in consequence, they had been compelled to enter into arrangements for the reception by another asylum of 150 patients from Sedgefield for two years. The visitors regretted this, as the duty of an asylum appeared to them to be the *cure and treatment* of insanity rather than the custody of the insane. In view of this state of matters the visitors made various suggestions, one of which was the erection of a new asylum in the northern part of the county of Durham for 500 patients, at a cost of £75,000.

THE BLIND POOR OF NEWCASTLE AND GATESHEAD.

On Saturday last the Society for the Home Teaching of the Blind were enabled by the kindness of friends to convey the blind poor of Newcastle and Gateshead, to the number of about 170, in brakes, for a day's outing in the Armstrong Park, where they were supplied with refreshments and entertained with music; not only this, but the men were measured in the Park for trousers and the women for dresses, as a Jubilee gift from the kind friends of the Society. The blind guests were conveyed home to their several houses without a single accident to mar the day's enjoyment.

THE LEEDS WORKPEOPLE'S JUBILEE GIFT.

The workpeople of Leeds have contributed £500 as a Jubilee offering, which is to take the form of an ambulance carriage for the Leeds Hospital. It is to be constructed to carry four stretchers, two with wheels and two slung from the roof. The interior is convertible by loose cushions and backs into suitable beds. It is to be light enough for one horse to draw it short distances; a pole and bar for a pair of horses is also supplied complete, with easy springs and indiarubber axles, sun blinds, lamps, and all the latest improvements.

Newcastle-on-Tyne, July 4th.

DUBLIN.

(From our own Correspondent.)

UNIVERSITY OF DUBLIN.

At a meeting of the University last week, the degree of Doctor of [illegible] (*honoris causâ*) was conferred upon William Tennant Gairdner, Sir James Paget, Sir Thomas Spencer Wells, Sir John Simon, and Edward Waters.

JUBILEE HONOURS.

It is stated that the list of Irish Jubilee honours will not be announced publicly for three or four weeks; and in the interval perhaps the Government may see the folly and injustice of refusing to medical men in this country what has been granted to their brethren in the sister country. Rumour has it that at least two [illegible] will receive distinctions in honour of the [illegible] trust that the statement may be [illegible]

JUBILEE WARDS: NATIONAL CHILDREN'S HOSPITAL.

The two new Jubilee wards, styled respectively "Victoria" and "Albert Victor," which were inaugurated last week by H.R.H. Prince Albert Victor, are now open for the reception of patients. On Monday last the twenty-four beds were for the first time utilised. Although the hospital is situated in the city, the situation is very open, and, so far as ventilation and light are concerned, nothing could be better than it possesses in these particulars. A sum of £2000 is required, of which about £1000 has already been subscribed. I am confident that the energy and enthusiasm of Mr. L. Hepenstal Ormsby, the surgeon to the hospital, will succeed in enlisting the sympathies of the charitable, and obtain for a valuable institution the amount still required.

MERCER'S HOSPITAL.

On Monday last the Vice-Chancellor had before him the case of Mr. Edward Stamer O'Grady, an eminent Dublin surgeon, against the governors of Mercer's Hospital and Dr. C. F. Knight, in which he sought an order restraining the defendants, until the hearing of the action, from removing the plaintiff from his position as surgeon and governor of the hospital. Defendants asked for an adjournment, which was agreed to, an undertaking being given by them not to take the action which was sought to be restrained, pending the hearing of the cause. Certain of the governors who dissent from the board were also represented by counsel. There is a probability that the case may not be heard during the present sittings.

EPIDEMIC OF MEASLES IN DUBLIN.

For the past three months measles has been very prevalent in Dublin, and the number of deaths from this affection unusually numerous. For example, during the last five weeks the deaths from measles have amounted to eighty-four, as contrasted with four deaths during the first twelve weeks of the present year.

A child seven years of age died in the Waterford Workhouse last week from sunstroke.

Dublin, July 5th.

MEDICAL TRIAL.

PALMER *v.* MALLET.

IN the Chancery Division of the High Court of Justice, this case came before Mr. Justice Chitty. It raised a question of importance to the medical profession. It appeared that the defendant, a medical practitioner, had in 1885 entered into an agreement to act as assistant to Messrs. Palmer and Hall, two medical practitioners practising together in partnership at Newtown, Montgomeryshire. Messrs. Palmer and Hall having dissolved partnership and continued practising in Newtown separately, the defendant entered into the service of Hall, and the plaintiff, Palmer, complained that this was a breach on the defendant's part of the agreement, which was to the effect that the defendant should not directly or indirectly, or either alone or in partnership with or as assistant of any other person or persons, or otherwise, set up or carry on the profession of a surgeon, &c., at or within ten miles of Newtown, without the consent in writing of Hall and Palmer, their executors, administrators, or assigns. The defendant submitted, *inter alia*, that the agreement was a contract with Palmer and Hall jointly, and not a several contract with the plaintiff Palmer, and that the partnership being at an end he was at liberty to disregard the agreement. Mr. Romer, Q.C., and Mr. Alan Stewart appeared for the plaintiff; and Mr. Aston, Q.C., and Mr. Yate Lee for the defendant. Mr. Justice Chitty said that, in his opinion, the plaintiff could sue on the agreement without joining Hall, and granted an interim injunction restraining the defendant from acting in the way complained of. On the application of the defendant, the operation of the injunction, with the consent of the plaintiff, was suspended for a month.

BLIND EDUCATION.—Mr. H. Warmington, a blind young gentleman, has passed the "previous" examination in Cambridge University, obtaining a first class in part 1 and in part 2, and a second in the "additional subjects." Mr. Warmington was educated in the Worcester Blind College.

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THE COLLEGE ELECTION.

THE voting at the above election, which took place in the Library of the Royal College of Surgeons on Thursday afternoon, the 7th inst., resulted as follows:—

Mr. Jonathan Hutchinson ...	120,	including	0	plumpers
Mr. Alfred Willett...	106	,,	27	,,
Sir T. Spencer Wells, Bart. ...	77	,,	2	,,
Mr. R. Brudenell Carter ...	67	,,	14	,,
Mr. John Couper	59	,,	6	,,

Mr. Jonathan Hutchinson and Sir T. Spencer Wells, Bart., were therefore duly re-elected, and Mr. Alfred Willett was elected to the vacancy caused by the retirement of Mr. John Wood.

There appeared to be less interest in the election than is usual; only 199 Fellows recorded their votes. One paper only was declared invalid from informality.

There was the usual exhibition of pathological specimens and preparations illustrative of human and comparative anatomy which have been added to the museum during the past year. Most of these are of special interest.

Medical News.

UNIVERSITY OF OXFORD.—At a congregation held on the 23rd ult. the following degrees were conferred:—

DOCTOR IN MEDICINE.—George Alfred Buckmaster, Magdalen.

BACHELOR IN MEDICINE.—William Wallis Ord, University; John Arkle Waring, New; Frank Sorell Arnold, Percy John Frederick Lush, and Lovell Drage, Christchurch; Ernest Le Cronier Lancaster, St. John's; William Williams and Charles Hubert Hands, non-collegiate; Frederick William Andrewes (Fellow), Pembroke; George Lindsay Turnbull, Magdalen.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following having passed their final examinations for the Letters Testimonial of the College under the old scheme regulations have been admitted Licentiates:—

James Burke, James Cahill, William J. Corrigan, Isaac Duncan, William V. Furlong, Nicholas John Gossan, William J. Mullany, Vincent Nash, Henry F. C. Pilcher, Matthew J. Dingley, Henry M. Rainsford, James M. Tidmarsh, and Benjamin P. Young.

Nineteen entered, one was absent, and five were rejected.

The undernamed have been admitted Fellows:—

F. A. B. Daly, A.M.D. | D. D. Redmond.

UNIVERSITY OF DUBLIN.—The following degrees were conferred last week by the Chancellor of the University:—

BACHELOR IN SURGERY.—Walter James Buchanan, Joseph Chambers, John Galwey Cooke, Parke Shaw Dobson, George Faris, Harry Fayle, John Hugh Roberts Glenn, St. George Gray, Christopher James Healy, Robert William Henry Jackson, Rev. Henry Simpson Lunn, Patrick Colley Pounder, Samuel William Robinson, Henry George Smeeth, John Henry Du Bedat Whaite, Charles William Henry Whitestone.

BACHELOR IN MEDICINE.—Henry Kingsmill Abbott, Samuel William Allworthy, William Sydney Bagot, Joseph Chambers, James Clarke, Thomas Willoughby Cole, John Galwey Cooke, John Cuffey, Edwin Lindsay Dunn, Harry Fayle, Edward Barrington Ffennell, Dionysius Lionel Fitzgerald, William Samuel Tomkins Foley, St. George Gray, Charles Grey-Edwards, Christopher James Healy, Robert Warren Herrick, Wensley Moore Jennings, John Freeman Knott, Thomas William Gordon Kelly, George Lane Mullins, Samuel William Robinson, William James Weir, Charles William Henry Whitestone, Humphry Worthington.

MASTER IN OBSTETRICS.—Hugh Woods.

DOCTOR IN MEDICINE.—Robert Samuels Archer, Arthur Wyndowe Willert Baker, Henry St. John Brooks (*stip. cond.*), William Morton Harman, Rev. Henry Simpson Lunn, Henry Brougham Pope, Richard Blayney Wrightson.

SOCIETY OF APOTHECARIES.—The following gentlemen having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates entitling them to practise as Licentiates of the Society on June 30th:—

Anderson, Ernest Chester, Chaplaincy, Bodmin.
Creasy, Arthur Zell Claydon, Hayesden, Wallington Surrey.
Doidge, Maurice John, Lifton, Devon.
Miles, Charles Henry, Stantonbury, Bucks.

ON the 29th ult. a concert was given at Exeter in aid of the funds of the Devon and Exeter Hospital.

THE first annual celebration of the Leeds Hospital gala was held on the 2nd inst., and proved highly successful.

THE annual general meeting of the trustees of the Salop Infirmary was held on the 18th ult. The business transacted was mainly of a formal character.

NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—The tenth block of houses of this hospital will be inaugurated by H.R.H. the Princess Beatrice on July 21st next.

MR. WILLIAM P. BAIN, late medical officer for the East District of the Poplar Union, has after forty years' service been granted a superannuation allowance of £121 per annum.

ON the 3rd inst. the annual demonstration of the friendly societies in Sunderland took place, the collection on behalf of the medical charities of the town resulting in the receipt of a highly satisfactory amount for distribution.

THE existence at Leicester of several dogs suffering from rabies has been brought to the notice of the local police authorities, many of the inhabitants having been attacked by the animals.

VACCINATION GRANT.—Mr. J. B. Emmerson, public vaccinator for the Stotfold district of the Biggleswade Union, has been awarded the Government grant for efficient vaccination (first time).

THE AFTER-CARE ASSOCIATION for poor and friendless female convalescents on leaving asylums for the insane will hold its annual meeting on Thursday next, at 3 P.M., at 83, Lancaster-gate, Hyde Park, Dr. Hack Tuke in the chair.

ADELAIDE HOSPITAL, DUBLIN.—The following prizes have been awarded:—Hudson Scholarship: Gold medal and £30, Thomas E. Dunne. Hudson Prize: Silver medal and £10, Christopher Healy. Medical Prize: C. W. Healy. Surgical Prize: R. J. W. Mawhinny.

ON the 28th ult. Mr. James Shaw, of Ardwick, near Manchester, was found dead in his house, which he occupied alone. The cause of death, which had occurred about ten days before the discovery of the body was made, was due to valvular disease of the heart.

UNIVERSITY COLLEGE, LONDON.—On Saturday, July 2nd, the Council of the College made the following appointments:—Dr. W. J. Williams, F.R.C.P., Professor of Midwifery; Dr. H. Charlton Bastian, F.R.S., Professor of Medicine; Dr. W. J. Mickle, F.R.C.P., Lecturer on Mental Diseases; and Dr. W. R. Gowers, F.R.S., a Professor of Clinical Medicine.

CASES OF POISONING.—Nine children living at Pollokshaws, near Glasgow, were on Tuesday last seized with illness of an acute character, in consequence, it is supposed, of having picked up and eaten portions of a white substance, possibly arseniate of soda, which they mistook for alum. Two of the children have since died, the others are recovering.

THE Howard Association have issued an appeal for assistance to enable them to publish widely in the course of next year three works, which their secretary, Mr. Tallack, has prepared, bearing on prison discipline, and the treatment and prevention of crime. The works embody important facts, figures, and observations collected by the society during the past twenty years.

SANITARY INSTITUTE OF GREAT BRITAIN.—At the anniversary meeting to be held on Thursday, July 14th, at 3 P.M., Sir Douglas Galton, F.R.S., will present the medals and certificates awarded to the exhibitors at the exhibition held at York, after which ceremony an address will be delivered by Dr. G. V. Poore, entitled "The Shortcomings of some Modern Methods of Sanitation."

BEQUESTS.—The late Captain Douglas, formerly of the Scots Fusilier Guards, has bequeathed £500 to the Westminster Hospital, £200 to King's College Hospital, £200 to the Home for Sick Children, Great Ormond-street, and £300 to St. Mark's Hospital, City-road.—Mr. Richard Kemmis has left £100, and the Countess Dowager of Pembroke £100, to Sir P. Dun's Hospital, Dublin.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—At a meeting of the committee of management of this hospital, held on the 2nd inst., it was reported that during the half-year ending 30th ult. 1027 in-patients had been admitted, 750 discharged as improved, 28 as no better, and 7 at their own request; 234 remained on the books. The number of out-patients treated during the same period was 72, and of these 34 were discharged as improved. The financial report was satisfactory.

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DR. NAISMITH, whose services to the Ayrshire Yeomanry Cavalry as instructor in ambulance drill for mounted troops were specially noticed by the inspecting officer, Colonel Lord Ralph Kerr, at the recent review of the regiment, has improvised a stretcher made with four swords and a piece of canvas, the swords, two on each side, being fastened at the centre by two simple clamps, carried in the pouch belt.

CITY PROVIDENT DISPENSARY AND SURGICAL APPLIANCE ASSOCIATION.—The tenth anniversary dinner of the supporters of this charity was held on the 29th ult., the Earl of Dartmouth presiding. During the ten years of its existence there have been 27,257 attendances at the dispensary and 2056 visits paid at homes. In the surgical appliance branch upwards of 7400 instruments have been supplied. During the evening the secretary announced subscriptions amounting to about £280.

EAST SUFFOLK AND IPSWICH HOSPITAL.—The anniversary court of the governors of this institution was held on the 29th ult., when it was reported that 712 in-patients had been admitted, against 707 in the preceding year, and 4423 out-patients, against 3998. The ordinary revenue account showed an excess of expenditure of £370 over the income, which, added to an adverse balance in the previous year of £209, left a deficiency of £579. The report was adopted, and the court was adjourned for three weeks in order to allow the board of management to report as to the propriety of electing an assistant house-surgeon to the institution.

MEDICAL NOTES IN PARLIAMENT.

Supply of Drugs to Prisons.

IN the House of Commons on the 30th ult., in reply to Mr. Picton, Mr. Matthews stated that in April, 1886, tenders were invited for the supply of drugs and sundries to Her Majesty's prisons; that the accepted tender was at the rate of 12½ per cent. discount off the list of prices supplied by the department; that one of the rejected tenders was at the rate of 20 per cent. discount; and that the firm sending in the lower tender had been in the habit of supplying several great hospitals, and furnished testimonials of competency and trustworthiness from upwards of thirty well-known medical men in various parts of Great Britain and Ireland; and that the reason assigned for the payment of a price 7½ per cent. higher than that for which the drugs could have been obtained was that it was held, and very reasonably, by the medical inspector of the department that contractors who have been tried and tested as supplying pure drugs should be preferred unless some considerable advantage was to be gained by not doing so. The difference of price referred to in the question would not for the whole of the prisons amount to more than £95. He saw no reason to interfere with the practice of the department, which was, he believed, similar to that followed in other public departments and large hospitals.

The Vaccination Acts.

In reply to Mr. C. Hanning, Mr. Matthews stated that he was not prepared to advise any special mode of treatment for persons imprisoned under the vaccination laws.

The Medical Staff in India.

On the 1st inst., Sir W. Forster asked the Under-Secretary of State for India whether it was the case that an executive officer of the medical staff in India, who officiated for less than one month as deputy surgeon-general in the absence of the deputy surgeon-general on sick leave or furlough, received no allowances for the period, although he performed the duties in addition to his other duties; whether in such an instance the "half-staff" of the appointment reverted to the State; whether the acting officer would be held pecuniarily liable in the event of loss of stores or other mistakes; whether officers officiating on the military (combatant) staff in a similar way would draw the "half-staff" for broken periods; and why the difference was made in the case of the medical officers.—Sir J. Gorst replied that the Secretary of State had not yet obtained the official information from India which was necessary to enable him to reply to this question. It had been asked for.

Dispensary Doctors in Ireland.

On the 4th inst., in reply to Mr. T. Harrington, Mr. A. J. Balfour stated that it was usual to select as constabulary medical attendant the dispensary officer of the district when he was found to be the most eligible, but not otherwise. The rule giving a doctor a certain priority of claim to the medical charge of the police situate within his dispensary district was cancelled in 1883.

Army Medical Officers.

The following is the text of the question put a few days ago by Dr. Farquharson, and of the answer by Mr. Stanhope:—Whether the Secretary of State for War is aware that considerable dissatisfaction exists in the Army Medical Department as the result of recent examinations for promotion from the rank of Surgeon-Major to that of Brigade Surgeon; whether it is the case that the unsuccessful competitors heard for the first time after their failure that they were not to be allowed a second chance, but must be passed over when their time for promotion came; whether this rule applied equally to combatant officers; and whether, in consideration of the fact that several medical officers of long service and proved capacity presented themselves for examination on the recommendation of the Director-General, and under unfavourable conditions, in the belief that a second opportunity would be afforded them of satisfying the requirements of the Board, he will consider whether he cannot relax the rule in their favour.—Mr. Stanhope, in reply, said, "I am not aware that there is considerable dissatisfaction, but I have understood that certain Surgeons-Major have felt aggrieved at not being allowed a second chance, although it does not appear that they had any right to expect it. Promotion to the rank of Brigade Surgeon is strictly by selection, and the fact of passing the examination does no more than remove the presumption of disability for promotion. The selection would be made from those Surgeons-Major of marked ability who had passed the test; and it is to be inferred that if any officer required more than an examination before he could prove his ability, it is unlikely that he would be selected as of conspicuous ability for the higher rank. The case of combatant officers is altogether dissimilar."

On the 4th inst., Dr. Farquharson asked the Secretary for War whether it was true that the commissions of army surgeons were dated after leaving Netley, whereas surgeons in the Indian army and also in the navy had their commissions dated—the Indian surgeons from the day of joining at Netley, and the naval surgeons from the day of joining at Haslar; whether this gave both Indian and naval surgeons an advantage of four months' seniority over the army surgeons who passed the same competitive examination at Burlington House with them; and whether he would undertake to do away with this distinction between the medical officers commissioned for duty in the three public services of the Army, Navy, and India.—Mr. Brodrick said that the facts were as stated. Whether the army surgeons experience any practical inconvenience from the antedate given to Indian and naval surgeons might be doubted. He thought that the best way to remove the anomaly would be for the Admiralty and the India Office to follow in future appointments the practice of the War Office.

On the 5th inst., Dr. Farquharson asked the Secretary of State for War whether he would take means to ascertain the ground of the present feeling of discontent among the medical officers of the army with their anomalous position, which, they allege, affords them neither relative nor substantive rank in the army; and whether he would enable them collectively to state their grievances to him and to suggest the desired remedies.—Mr. E. Stanhope said that he had already received a deputation from the civil branch of the medical profession on this subject, and that it would be a breach of military discipline for military medical officers to unite in any collective expression of complaint.

Water-supply at Albany Barracks, Parkhurst.

On the 5th inst., in answer to Dr. Cameron, Mr. E. Stanhope stated that the ordinary water-supply of Albany Barracks, Parkhurst, is derived from the surface water of an adjoining forest, but after being collected the water is passed through ample filtration beds. This water has been repeatedly analysed, and after filtration pronounced good and wholesome, but recently, from the long drought and other causes, the supply has become insufficient and of inferior quality. In April there were three cases of typhoid fever, and in the absence of any other known insanitary condition it is supposed that the water was the cause of the outbreak. The pipes of the Carisbrooke Water Company pass the barracks, and temporary arrangements for a supply from their main have been entered into. The question of the future supply will be carefully considered.

Surgeon-Major Sandford Moore.

In reply to Dr. Robertson, Mr. E. Stanhope stated that the Medical Director-General and the Medical Board had reported that Surgeon-Major Moore's ailment (loss of vision) was aggravated by his service.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BREESE, THOMAS T., M.B., C.M.Aber., has been appointed Medical Officer for the Puddletown District of the Dorchester Union.

CONWAY, DANIEL, Lic. Surg. Dub., has been elected Medical Officer to the County Tipperary Dispensary, vice Douty, deceased.

DUNLOP, SHULDHAM H., M.D., M.Ch. Roy. Univ. Irel., has been appointed House-Physician to the Belfast Royal Hospital, vice Caldwell, resigned.

EMMERSON, J. B., M.D.Durh., M.R.C.S., has been promoted from the Stotfold to the Biggleswade District of the Biggleswade Union.

HARGRAVE, HERBERT J., M.B., C.M.Aber., has been appointed Medical Officer for the First District and for the Workhouse of the Risbridge Union.

JAMES, ALFRED, M.R.C.S., L.S.A., has been appointed Medical Officer to the Biggleswade Union Contagious Diseases Hospital, and to the Biggleswade Union Workhouse and Infirmary, vice C. P. Stevens, F.R.C.S., L.S.A., resigned.

JONES, H. R., M.B., B.C., B.A.Cantab., B.Sc.Lond., has been appointed House-Physician to the Liverpool Royal Infirmary.

NESBITT, ROBERT ARCHER, L.R.C.S., L.R.C.P.Ed., has been elected Medical Officer for the Donaghadee Dispensary District, vice Stuart, resigned.

NOAD, ERNEST, M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Beerferries District of the Tavistock Union.

PIRIE, JOHN, M.B., C.M.Ed., has been elected House-Surgeon to the Whitehaven and West Cumberland Infirmary, vice Harris, resigned.

READ, H. G., M.R.C.S., L.R.C.P., L.S.A., L.D.S.Eng., has been appointed one of the Dental Surgeons to the Metropolitan Free Hospital.

ROECKEL, W. J., F.R.C.S.Eng., M.B., B.S.Lond., has been appointed Honorary Surgeon to the Bolingbroke Home Hospital, Wandsworth-common, S.W.

WARKE, C. L., L.K.Q.C.P.I., has been appointed House-Surgeon to the Liverpool Royal Infirmary.

WILLIAMS, C. L., M.B., C.M.Edin., has been appointed House-Surgeon to the Liverpool Royal Infirmary.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CAPE COPPER MINING COMPANY, South Africa.—Assistant Surgeon. Earnings about £300 per annum; lodgings free, but no rations.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Clinical Assistant.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary £70 per annum, with board and lodging.

FEMALE LOCK HOSPITAL, Harrow-road, W. — House-Surgeon. Salary £100 per annum, and board and lodging.

HARTLEPOOLS HOSPITAL.—House-Surgeon and Secretary. Salary £60 per annum, with board (exclusive of beer, wine, and spirits), lodging, and attendance.

PENRITH UNION.—Medical Officer. Salary £38 per annum, with extra fees for iurgical operations, midwifery, and vaccination cases.—Vaccination Officer. A fee of 3s. in respect of each case of successful primary vaccination.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Physician.

SEDBERGH UNION. — Medical and Vaccination Officer for the Dent District. Salary £20 per annum, with vacoination fees.

YORKSHIRE COLLEGE, Leeds. — Professor of Anatomy. — Demonstrator of Anatomy. Stipend £150.

Births, Marriages, and Deaths.

BIRTHS.

BROWNE.—On the 5th inst., at Norland-place, W., the wife of J. W. Browne, M.B., of a son.

COLES.—On the 4th inst., at Sydney House, Sutton-court-road, Chiswick, the wife of Donald Coles, M.D., of a son.

DRAGE.—On the 6th inst., at Hatfield, Herts, the wife of Lovell Drage, M.A., M.B., B.S.Oxon., of a son.

PHELPS.—On the 26th ult., at Ashford, Kent, the wife of Philip Phelps, M.R.C.S., of a son.

PHIPPS.—On the 7th ult., at Cape Town, the wife of Surgeon H. V. A. Phipps, Army Medical Staff, of a son (stillborn).

MARRIAGES.

BEALE—HANSON.—On the 27th ult., at St. Saviour's Church, Paddington, W., Thomas Miles Beale, M.R.C.S., to Maud Agnes Hanson, of Elgin-avenue, Maida-vale, W.

DERRY—HART.—On the 30th ult., at St. James's Church, Notting-hill, W., Bartholomew Gidley Derry, M.R.C.S., L.R.C.P.Lond., to Constance Georgina, fourth daughter of Mr. Henry Hart, of Norland-square, London, W.

DOBSON—WAY.—On the 5th inst., at St. Stephen's Church, Ealing, Leonard Charles Talbot Dobson, M.B.Lond., to Florence Sydney, daughter of T. E. Way, of Stanmer, Castlehill.

FENWICK—MANSON.—On the 6th inst., at the Church of St. Bartholomew-the-Less, City of London, by the Rev. Thomas Swan, M.A., Vicar of Thoroton, assisted by the Rev. William Ostle, M.A., Hospitaller and Vicar of the Parish, Bedford Fenwick, M.D., M.R.C.P., to Ethel Gordon Manson, younger daughter of the late David Davidson Manson, and of Mrs. Storer, of Thoroton Hall, Notts.

GEOGHEGAN—DEALY.—On the 5th inst., at St. James's Church, Kidbrooke, Alfred Osmond Geoghegan, M.D., Medical Staff, to Maud, sixth daughter of John R. Dealy, Esq., of Walton Lodge, Blackheath, Kent.

PLIMMER—ADERS.—On the 30th ult., at Norwood, by the Rev. S. A. Tipple, Henry George Plimmer, M.R.C.S. Eng., L.S.A. Lond., F.R.M.S., to Bertha Helena Aders.

THOMSON—STROMEYER.—On the 29th ult., at Holy Trinity Church, Twickenham, David George Thomson, M.D., to Melina Louise, fifth daughter of Charles Stromeyer, of Strawberry-hill, Twickenham.

DEATHS.

BARTLET.—On the 4th inst., at Ipswich, Alexander Henry Bartlet, M.D., F.R.C.S., in his 87th year.

CONOLLY.—On the 30th ult., at Church-hill-villas, Wood-green, Charles Thomas Conolly, L.R.C.S.I., L.S.A., aged 55.

CRICHTON.—On the 28th ult., at his residence in Maule-street, Arbroath, James S. Crichton, M.D.Ed., L.R.C.S.Ed.

POTTER.—On the 1st inst., at Cullompton, Devon, Samuel Reginald Potter, B.A., M.B., L.M.R.H.D., second son of the late Rev. L. Potter, Rector of Dromard, Co. Sligo, Ireland, aged 60 years, thirty of which he practised at Cullompton. Friends will please accept this intimation.

SHARPLEY.—On the 4th inst., at Louth, Lincolnshire, suddenly, Thomas Sharpley, M.D., M.R.C.S., Coroner for the parts of Lindsey, aged 55.

WRIGHT.—On April 27th, at 2, Carlton-terrace, Wynyard-square, Sydney, N. S. Wales, from apoplexy, Ellen, beloved wife of Horatio G. A. Wright, M.R.C.S.Eng., L.S.A.Lond., aged 59.

WRIGHT. — On May 10th, at 2, Carlton-terrace, Wynyard-square, Sydney, N. S. Wales, after many years of patient suffering, Annie, beloved daughter of Horatio G. A. Wright, M.R.C.S. Eng., L.S.A.Lond., aged 35.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 7th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 1	30·41	S.E.	62	58	119	80	56	...	Hazy
,, 2	30·26	W.	72	63	103	81	59	...	Hazy
,, 3	30·18	W.	75	67	122	91	62	...	Hazy
,, 4	29·96	W.	75	67	127	91	64	...	Fine
,, 5	29·92	N.	68	58	106	71	58	·06	Cloudy
,, 6	30·26	N.E.	60	54	111	75	54	...	Cloudy
,, 7	30·14	W.	68	63	123	79	59	...	Fine

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

URGENT CALLS AND THE CENSURE OF JURIES.

AT an inquest in Bradford lately the jury were very severe on the medical man summoned for not attending before the death of the patient. Only medical men know how misleading often is the account given of cases, and how often it errs in conveying an exaggerated notion of the case. Only they, too, can realise how difficult it is to decide between two urgent calls. The coroner in this instance remonstrated with the jury, who toned down their verdict considerably. We have no wish to apologise for undue delay in fulfilling a promise to see a patient. Rather we would urge increased promptitude, and where cases cannot be seen immediately, to refer them to other medical men.

Mr. H. A. Allbutt.—It is well and seemly for medical men, as a general rule, to act as substitutes for each other in unexpected emergencies. Such amenities increase the respect of medical men for each other, and that of the public for the profession. But the general rule will not cover all cases; and we are not prepared on the strength of an *ex parte* statement to say that the gentleman was not entitled to act independently.

A Victim.—We do not give medical advice. The ordinary medical attendant should be consulted.

W. S. W.—The licence is not accepted anywhere for the purpose name.

THE PROPOSED REGISTRATION OF FOREIGN DEGREES.

To the Editors of THE LANCET.

SIRS,—There are some points in connexion with the above subject to which I should like to draw attention. First, it seems reasonable to suppose that no Englishman would go abroad for his degree if he could get one as easily at home. Secondly, he would not seek such a degree unless he believed that at least in the eyes of the public it implied some professional superiority over his untitled brother practitioners. Assuming this to be correct, it would follow that his brother practitioners, and through them their British licensing bodies, would be injured. Also, it seems only reasonable that any supervision which the General Medical Council considers necessary for the British qualifying bodies should apply with at least equal force to those of foreign countries; and I would earnestly urge that it must be unjust to register any foreign degree, unless in the opinion of the General Medical Council it implies a higher professional knowledge than any British qualification which does not confer a similar degree. I am, Sirs, yours faithfully,

July, 1887. BRITTON

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EDINBURGH UNIVERSITY.

THE Dean of the Faculty of Medicine of the University calls our attention to an inaccuracy of date of graduation given in our correspondent's letter last week. That ceremonial is always held on the 1st of August (except when that day falls on a Sunday), and not on the 2nd of that month, as stated in the letter referred to.

J. M. F.—While we sympathise with our correspondent, we do not think anything would be gained by a reference to a discussion which took place three years ago, and which we noticed very fully at the time. Slowness in promotion is an inevitable occasional result of the system adopted in our army, but we do not see how it can be avoided, except at a cost which we fear no Minister would feel justified in proposing to Parliament, or which, if proposed, would be sanctioned.

H. F. P.—Béclard died on February 16th last, and a sketch of his life and labours was published in THE LANCET of Feb. 19th. His chief work was entitled "Traité de Physiologie Humaine," which has reached the seventh edition.

General Practitioner will find an answer to his question in our last issue, page 50.

W. G. D. is thanked.

CLIMATE AS A THERAPEUTIC AGENT IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—It is with considerable interest that I have read Dr. Alexander Lindsay's article in THE LANCET of April 30th. Among the dry inland resorts Dr. Lindsay mentions that the Orange Free State is probably the best, but states certain drawbacks. My object in writing is to make known a town which enjoys all the climatic advantages of the Free State, and which is free from the objections against it mentioned by Dr. Lindsay. I mean the town of Aliwal North, which is the terminus of the Eastern System of railways of the Cape of Good Hope. It is in rail communication with the port of East London, distant some 400 miles, which is a great advantage to invalids proceeding up country. It stands at an altitude of about 4500 ft. It has excellent hotels, and living in them is cheap (about 10*s.* 6*d.* per diem). In the neighbourhood are fine hot mineral springs. It is pleasantly situated on the Orange River, which there forms the boundary between the colony and the Free State. It was only a month ago I met a clergyman there, who had come out to die, returning home after twelve months' residence in Aliwal, as he stated, "a new man." South Africa is not fashionable as a health resort; but I feel convinced that Aliwal has but to be known to be appreciated.

I am, Sirs, yours truly,

W. J. P. ROWE,
Maseru, June 3rd, 1887. Medical Officer, Basutoland.

TORQUAY AND ITS WATER-SUPPLY.

Dr. Karkeek, medical officer of health for Torquay, writes: "Just at this time, when so many towns are driven to great extremities for want of water, Torquay is enjoying the constant supply system, with plenty for street, garden, and sanitary purposes, and enough stored in its reservoirs to last until Christmas. The town has spent enormous sums in procuring a large supply of pure water, and now it is reaping the advantages of its judicious expenditure."

Anxious.—It is not our practice to answer communications from laymen, especially when they involve charges against medical practitioners which rest on *ex parte* statements.

Dr. H. W. Phillips.—We cannot decide until we see the paper.

VOMITING PERSISTING FOR YEARS.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent who has treated unsuccessfully a case of vomiting for thirteen years, I beg to state that I have had a similar patient under my care at the St. George's Dispensary for many years, whom I have treated with partial success with koumiss (alone) as food, sherry as a stimulant, and ingluvin, from five to ten grains, before each meal between thin slices of bread-and-butter, or in a spoonful of water.

I am, Sirs, yours truly,

Richmond-terrace, S.W., July 4th, 1887. HENRY SUTHERLAND.

HOW TO TAKE CASTOR OIL.

The Monthly Magazine of Pharmacy quotes the following suggestion as to taking castor oil from a French source:—"Take a half-glass of frothy, sparkling beer, mix the dose of oil with it, and whip it up so as to make it froth strongly. The oil thus becomes intimately mixed with the froth, and if only the latter is drunk, he says, neither the taste of the oil nor that of the beer is perceived."

Curious.—Mr. Crookes appears to have found that seven, or perhaps nine, kinds of atoms are present in the substance known as yttrium. Other illustrations of the hypothesis of the same observer will be found described in an article which appeared in our impression of the 25th of February last.

Mr. J. M. Lund.—Some comments on the case will be found in THE LANCET of April 2nd last.

THE ABUSE OF BROMIDE OF POTASSIUM.

DR. GRELLETY, writing in *Le Practicien*, mentions that he has frequently met with cases where diabetics, a class of persons who, as he remarks, are especially prone to read medical literature bearing on their malady, having discovered that bromide of potassium has been highly recommended in diabetes, have commenced to prescribe this drug for themselves, and have taken enormous quantities, thus doing themselves a great deal of harm. Dr. Grellety is convinced that a good many of the boils which are met with in diabetic patients, and which are generally attributed to the disease, owe their origin rather to the prodigious doses of bromide which the patients have been taking surreptitiously. He remarks that M. Bernier is in the habit of always prescribing arsenic combined with bromide in the proportion of a drop of liq. arsenicalis to each drachm of bromide, in order to neutralise the undesirable tendency of the latter to produce cutaneous affections. He concludes by advising all practitioners before prescribing bromide to examine carefully into the condition of the patient's skin, circulation, digestion, and kidneys; and, if he find evidence of deficient transpiration or any urinary trouble, to proceed with great caution. Again, it is well to endeavour to obtain information as to whether the patient has ever taken bromide, and, except in cases of urgency, small doses only should be given at the commencement.

Mr. John J. A. Ray.—We can understand our correspondent feeling hurt at the letter he forwards us, and we quite believe that he acted in good faith in printing the testimonials and list of operations, &c. The form of the latter is, however, somewhat startling, and hardly to be approved in connexion with an application for an assistantship or locum tenency.

Alpha.—The case is weak. We would not recommend legal proceedings.

"PHOSPHATE OF LIME TREATMENT IN LOCAL TUBERCULOSIS."

To the Editors of THE LANCET.

SIRS,—In your Vienna correspondent's report, on the 2nd inst. (p. 44), of the above treatment he omits to state that in the prescription No. 1 for injections the solution *must* be sterilised. There is also an omission of a line from the formula. After the words "Deinde sensim adde" should follow "Acid. phosphor. q. s. ad solution. perfect. filtra; adde: Acid. phosphor. dil., 0·6," &c. (*Wien. Med. Pr.*, Juni 12, 1887, p. 839). Herr Ernst Freund says: "The solutions which Dr. Kolischer used as injections were, in accordance with his wish, most carefully sterilised. The acid phosphate of calcium having been separated into phosphoric acid and secondary phosphate of calcium (which itself separates) by means of boiling, a considerable precipitate in the solution No. 1 was apparent during the process of sterilising, which, however, after standing several hours at the ordinary temperature of the room, again dissolved." (*Op. cit.*)

I am, Sirs, your obedient servant,

New Cavendish-street, W., July 4th, 1887. WM. MARTINDALE.

"LE SCALPEL."

WE have to congratulate our Belgian contemporary on having completed its fortieth year. *Le Scalpel* is published at Liège under the able editorship of Dr. A. Festraerts, and always takes up a strong position on behalf of the profession when it is in danger of being imposed upon. It also speaks with no uncertain sound on the high standard medical men are bound to maintain in a moral as well as in a scientific sense.

Mr. A. W. Stirling (Grays).—An abstract of the thesis would no doubt be interesting. It should not exceed three columns in length.

A MIDWIFERY CASE.

To the Editors of THE LANCET.

SIRS,—On May 3rd last I attended Mrs. B—— in her seventh confinement. On the birth of the child's head I discovered that the cord was twisted once round its neck, and on trying to bring it over the head I found that I could not on account of its shortness. The pains were very strong. Fearing inversion of the uterus or sudden detachment of the placenta from the uterine walls, I asked the patient to cease bearing down. At the same time the head and shoulders, which were born, were kept firmly back. I then called for a pair of scissors, and divided the cord, previously tying the end next the umbilicus. Had I not acted promptly in this case the placenta might have been either forcibly torn from its attachment, and thus have caused post-partum hæmorrhage, or inversion might have occurred. I did not measure the cord.

I am, Sirs, yours very truly,

Peckham, July 2nd, 1887. ED. T. YEATES, L.R.C.S.I., &c.

ONE EFFECT OF CHEAP QUININE.

IT is said that the present low price of quinine and cinchona has caused the collection of the bark in Guayaquil to be so unremunerative that this industry has been almost given up there.

C. M.—The holder of the degrees mentioned has no legal entitlement to styled "Dr."

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Virchow, Berlin; Dr. H. Sutherland, London; Mr. Sydney Jones; Dr. Hassall, Lucerne; Mr. Lockwood, London; Dr. Farquharson, M.P.; Dr. J. W. Ogle, London; Dr. Thudicum, London; Mr. Slater, Newcastle-on-Tyne; Dr. Fraser, Edinburgh; Mr. Horsburgh, London; Mr. Bilton Pollard, London; Mr. Etherington, London; Mr. Lascelles Scott, London; Dr. Leith Napier, London; Dr. Julius Pollock, London; Mr. Bland, Colchester; Miss Forest, Nottingham; Messrs. Brinsmead and Co., London; Dr. R. Lee, London; Dr. J. Shaw; Messrs. Mason and Co., Bristol; Dr. H. W. Phillips, Bolton; Messrs. Mottershead and Co., Manchester; Dr. G. Harley, London; Messrs. Wilkinson and Son, Brighton; Mr. H. W. Burke, Singapore; Messrs. Greenwood and Co., Manchester; Mr. J. G. Laffan, Wyndham, W.A.; Dr. Sinclair Thomson, London; Mr. T. Holmes, London; Mr. Kilvington, West Hartlepool; Mr. Yeates, Peckham; Mr. Frewer, London; Dr. Norman Kerr, London; Mr. G. H. Williams, Lockwood; Mr. J. D. Greenlees, Stone; Mr. Karkeek, Torquay; Dr. Lediard, Carlisle; Dr. J. Phillips, London; Rev. E. L. Hicks, Manchester; Mr. F. M. Pierce, Manchester; Mr. A. B. Kelly, London; Mr. Martindale, London; Mr. W. Anderson, London; Mr. A. W. Stirling, Grays; Dr. Armstrong, South Shields; Dr. J. O. Sinclair, Edinburgh; Mr. J. S. Hooker, Hastings; Mr. Morgan, Stafford; Mr. Harbord, Leeds; Mr. Woodhead, Huddersfield; Mr. Fraser, Plymouth; Mr. Somerville, Edinburgh; Mr. Lee, Exeter; Mr. Wardley, Buxton; Dr. Liveing, London; Mr. Birchall, Liverpool; Mr. Alcan, Paris; Mr. Skelton, Sheffield; Mr. Robinson, Sedburgh; Mr. Scott, Manchester; Mr. Taylor, London; Mr. Stone, Westgate-on-Sea; Mr. Moore, Bradford; Mr. Woodcock; Mr. J. L. Mitchell, London; Briton; M.D., London; Doctor, Sheffield; J. B.; A. H. D.; Prospectus, Southsea; Medicus, Sheffield; An Unqualified Assistant; M.D., Norwood; D.D., London; M.B.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. MacKay, Eske; Mr. Pinn, Derby; Dr. Humphreys, London; Messrs. Lee and Martin, Birmingham; Mr. Somerville, Lexham; Mr. Plimmer, Upper Norwood; Mr. Geddes, London; Mr. Guest, Melsonby; Messrs. Harris and Co., Birmingham; Miss Jones, Chelfont St. Peters; Messrs. Read and Co., Bristol; Mr. Macintosh, Edinburgh; Messrs. Richards and Co., London; Dr. Fussell, Brighton; Dr. Page, Hartlepool; Mr. Van Praagh, London; Mr. Gant, London; Dr. Gunn, Chicago; Mr. John Ward, London; Mr. Thompson, Watton; Mrs. McCall; Messrs. Blake and Co., Leeds; Dr. J. Vinarjah, Jamkhandu; Messrs. Steel and Jones, London; Dr. White, Malmesbury; Mr. Atkins; Messrs. Kilner and Co., London; Dr. Needham, Gloucester; Messrs. Warren and Co., Bristol; Mr. Jones, Treherbert; Captain Blount; Mrs. Forest, Nottingham; Dr. Aubin, St. Helier's; Mr. Hoggatts, Smallheath; Mr. Briggs, Cambridge; Mr. Horner, Teignmouth; Messrs. Johnson and Co., Southport; Mr. Potter, Collumpton; Messrs. Maclachlan and Co., Edinburgh; Mr. Entwistle, Manchester; Mr. Laban, West Bromwich; Dr. Munro, Oldham; Mr. Harris; Dr. Parsloe, High Hampton; Mr. Fewster, Hull; Mr. Elliot, Carlisle; Messrs. Porteous and Co., Glasgow; Mr. Youldon, Whitechapel; Messrs. Fox and Co., Glasgow; Mr. O'Connor, London; Mr. Darlaston; Mr. Walker, Derby; Mr. Hornibrook, London; Mr. Hadding, Leicester; Siward, London; A. H., Ipswich; Secretary, Exeter; Medicus, Hammersmith; W. D., Leicester; Surgeon, Ramsbottom; F. K., London; X. Y. Z., Hackney; O., Burningham; Matron, Ventnor; G. P., Leeds; Stentor, Bradford; W., Blackburn; M.D., Norwood; Cara; Sister A.; Delta; Secretary, Chelsea; Skit, Edinburgh; Holiday, London; T. O. W., Penmaenmawr; Theta; Sterling, Bayswater; H. R., London; M.D., Battersea; W. H. L., Blackburn; L.R.C.P.; Locum, Liverpool.

Ayr Observer, Melbourne Age, Glasgow Evening Times, Haddingtonshire Advertiser, Vanguard, Kingston Express, Sydney Morning Herald, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 12.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, July 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, July 15.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 16.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Lectures ON INJURIES OF NERVES.

Delivered at the Royal College of Surgeons,

BY ANTHONY A. BOWLBY, F.R.C.S. ENG.,

SURGICAL REGISTRAR AND DEMONSTRATOR OF SURGICAL PATHOLOGY AT ST. BARTHOLOMEW'S HOSPITAL, HUNTERIAN PROFESSOR OF THE ROYAL COLLEGE OF SURGEONS.

LECTURE III.—*(Concluded.)*

TREATMENT OF NERVE INJURIES.

Causes of failure of primary suture of nerve.—I have already expressed my opinion that "if the nerve ends have been carefully coapted and kept in position, restoration of function will ensue in the great majority of cases," but I have no doubt that in some instances no such restoration occurs. The causes of failure are more than one, but those on which I would lay most stress are "sloughing of the nerve ends" and profuse suppuration in the wound. The deleterious effects of sloughing are so obvious that I need not enlarge upon them. It is evident that if portions of the nerves are destroyed union is not to be expected. This sloughing was the probable cause of failure in a case of ulnar suture at St. Bartholomew's Hospital, and also in the case of suture of the peritoneal nerve recorded by Iefremowsky. In cases where suppuration is profuse, portions of nerve may be destroyed by ulceration, and even if they escape this fate they are liable to be strangled and compressed by dense scar tissue, as in a case recorded by Busch-Madelung. But not only may the nerve ends be destroyed by the suppuration, the sutures which hold them in apposition may likewise be liquefied, and thus the ends may become separated. I am inclined to think that this accident most probably occurred in the two cases of failure of suture of the ulnar observed by myself, but it is quite possible that pressure by scar tissue may have caused the continuance of the paralysis. The treatment of cases of failure of primary suture is sufficiently clear. In any case where sufficient length of time has been allowed to elapse without restoration of function, the nerve should be exposed at the seat of injury. If its continuity is not interrupted, it should be freed from scar tissue, then thoroughly stretched to free the individual fibrils yet more. If the ends have become separated from any cause, the operation of "secondary suture" should be performed as described in the following pages.

Treatment of complicated wounds of nerves.—In connexion with this subject I shall allude but briefly to two complications: 1st, cases in which the nerve ends are much lacerated and contused; 2nd, cases in which the ends cannot be brought into contact. With regard to the first, the proper treatment, in my opinion, would be the resection of such an amount of nerve as seemed too much damaged to recover, followed by stretching of the proximal and peripheral ends and fixation by suture. That the most satisfactory results may follow such treatment, a case I have already mentioned of a wound of the median nerve supplies ample proof. Here there was a great deal of laceration of the soft parts, and I found it necessary to remove about one inch of nerve which had been almost completely separated from both the upper and lower ends. I did not meet with any material difficulty in bringing the cut surfaces into apposition, and, after fixing the hand in a flexed position on a splint, the case resulted in union by first intention. The second complication I have mentioned is much more serious, for where the ends of the divided nerve cannot be brought into apposition on account of too extensive loss of nerve substance, the prognosis cannot be very favourable. Létiévant has recommended that one of two operations should be performed. First, that the peripheral ends should be sutured to a freshened surface of some neighbouring [illegible], that the proximal end should be [illegible] sufficient extent, a cross section [illegible] the nerve at the highest point [illegible] carried, and then that the split portion should be turned down and placed as a sort of graft between the [illegible]. I am not aware that either of these operations has ever been put into actual practice, but should view each with but little favour. The second suggestion especially seems to be of more than doubtful value, for the split portion would really be completely separated from each end, and in my opinion would probably slough. In a case where an inch or two of nerve had been destroyed and I was unable to bring the ends into apposition, I should pass sutures through them, and bring them as close as possible by the aid of stretching and of position. In this way further retraction would be prevented, and the two cut surfaces would, at any rate, be fixed in the same plane. I have already detailed cases where union has occurred after excision of several inches of nerve independently of suture, and although I should not give a favourable prognosis, I believe that such treatment would afford the best prospect of recovery. Some experiments by Vanlair[1] are of interest in connexion with this subject. This author details how he resected three centimetres of the sciatic nerve of a young dog, brought the ends as near to one another as possible with sutures, and enclosed them in one of Neuber's decalcified bone drainage tubes. The wound healed readily, and four months later an examination of the seat of injury showed a reunion of the divided nerve. It is evident that the only value this treatment possesses is derived from the fact that the cut ends of the nerve are prevented from becoming adherent to the surrounding tissues, or compressed by the cicatrix.

Secondary suture of nerves.—The operation of secondary suture is performed at some time after the infliction of the original injury, generally in cases in which no attempt has been made to secure primary union of the divided nerve. It may be performed either before the wound has healed, or else after it has cicatrised. The indications for such an operation are afforded by the presence of symptoms pointing to the conclusion that a nerve has been divided, and has not united. These symptoms I have already alluded to and described in detail, and will only point out that, as I have already insisted, it is not sufficient to examine the sensation alone of parts supplied by the nerve in question—the conditions and electrical reactions of the muscles are of as great if not of greater importance. With respect to the advisability of performing this operation, I would say in its favour all that I have already said in connexion with "primary suture." In all cases in which a surgeon believes that a divided nerve has not united it is his duty to attempt the suture of the separated ends. In performing the operation it is of prime importance that the parts should be as bloodless as possible, and to obtain this end the use of Esmarch's bandage is most advisable. The limb having been exsanguinated, an incision should be made through the scar in the line of the wounded nerve, the ends of which must be carefully sought. Very frequently these ends have become separated by a considerable interval, and it is frequently necessary to prolong the wound to a much greater extent than originally appears necessary. The upper end is usually the more easily found, for it is not atrophied, and its bulbous extremity is frequently very prominent. The latter is generally closely adherent to the surrounding scar tissue, and from this it should be carefully but completely separated. The search for the lower end is sometimes very tedious and difficult. It is often much atrophied, and is liable to be displaced from its normal situation by contraction of the neighbouring scar tissue. When any difficulty is experienced, it is best to search for the nerve below the seat of section, and having found it at a place where it is not hidden or dragged aside, to trace it thence to the scar. From the latter it must now be separated in a similar manner to the upper end. The extremities of the cut nerve having been thus exposed, the next question to arise is as to the amount which should be resected. On this point I am very clear. The section of the upper end should be carried through the uppermost part of the bulb, close to the normal trunk. At this point there are numerous young nerve fibres, and the tougher tissue of the bulb affords an excellent hold for the sutures. In dealing with the lower end it should be remembered that its whole length is in the same condition of degeneration or of regeneration throughout. Manifestly there can then be no good done by cutting off successive sections in the hope that the cut surface may look more healthy than that which is seen on the first resection. All that should be done is to cut away the extreme end, which, being matted

[1] Archiv. de Phys., 1882, vol. x. p. 595.

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with fibrous tissue and compressed by the surrounding scar, is very likely to contain no nerve tubules or elements of any kind. It is seldom necessary to remove as much as a quarter of an inch, and, however unhealthy the section may look, no good is ever to be gained by a further sacrifice. The nerve ends should be as little pinched or bruised as possible, and after section should not be held by forceps. If it is necessary to use the latter, they should be fixed in the sheath. In cases in which there has been much separation of the cut ends an additional inch or more may be gained by a thorough stretching of each extremity. When this is done, it is often advisable to remove the Esmarch's bandage, for if this be applied immediately above the seat of operation, it will tend to greatly limit the amount of length to be gained by stretching. As to the material for suture and the best method of passing sutures, I have nothing to add to that which I have written in treating of the subject of primary suture.

Summary of cases of secondary nerve suture.—The value of the operation of secondary suture can only be judged by a clinical study of patients, and by reference to recorded instances. Time does not permit me to describe in detail the clinical features of the various cases I have watched, or to do more than tabulate the records of other surgeons. For the present, therefore, I must ask you to accept this summary.

The following cases of secondary suture were performed in St. Bartholomew's Hospital up to December, 1885:—

Median nerve: Successful, 1; partially successful, 4; failure, 1—total, 6. Ulnar nerve: Successful, 2; partially successful, 5; failure, 3—total, 10. Musculo-spiral nerve: Successful, 1. Median and ulnar nerves: Partially successful, 1. Grand total, 18—viz.: Successful, 4; partially successful, 10; failures, 4.

Cases of secondary nerve suture recorded in surgical literature up to December, 1885:—

Fifth cervical nerve: Successful, 1. Median nerve: Successful, 3; partially successful, 5; failure, 3—total 11. Ulnar nerve: Successful, 5; partially successful, 1; failure, 3—total, 9. Musculo-spiral nerve: Successful, 11; greatly improved, 3; failure, 2—total, 16. Radial nerve: Successful, 1. Median and ulnar simultaneously: Successful, 1; partially successful, 2; failure, 3—total, 6. Median and radial simultaneously: Partially successful, 1. Sciatic nerve: Successful, 1; improved, 1; failure, 1—total, 3. Popliteal nerve: Improved, 1. The above cases give a grand total of 49, of which 23 were successful, 14 partially successful, and 12 failures.

If the cases recorded by myself be added to those recorded by other authors, the totals will read thus: Successful, 27; partially successful, 24; failures, 16—total, 67.

In drawing up the above summary I have been very careful not to include amongst the "successful cases" any but those in which there appeared to be either a complete or almost complete restoration of function. Many of the St. Bartholomew's cases which I have placed under the head of "partially successful" might with almost equal fairness have been placed under the first heading, and I have no doubt that in time they will deserve such promotion. In the cases recorded by other authors I have often had much difficulty in deciding whether to place the case under the "successful" or "partially successful" class. I have in cases of doubt generally placed them under the latter; but where the details are few, and where, as is often the case, the return of sensation alone is noted, it is impossible to accurately estimate the value of the individual operation. But although I have taken all the care possible in this summary, as in that of cases of primary suture, the table, like the [illegible] is misleading. The cause in each is the same. [illegible] of the first things that strikes one on a consideration of the cases noticed by myself is the considerable [illegible]me that frequently elapsed between operation and [illegible] improvement. More especially is this the case [illegible] with the restoration of muscular power. This is a point of such importance that I shall venture to still further analyse the reported cases.

Of the cases of secondary suture of the median nerve at St. Bartholomew's, in the one recorded as a success the latter was not attained for more than four months and a half after the injury. In the two cases of successful suture of the ulnar nerve nearly two years elapsed in each before restoration of function was perfect. In the one case of suture of the musculo-spiral power did not commence to return for three months, and almost a whole year elapsed before motor power was perfected. In the cases of secondary sutures, in which successes have been recorded by other surgeons, the time that elapsed in several cases before complete restoration resulted was, respectively, one year, two years, a year and ten months, a year and a half, one year, two years, three years, one year and a half, &c. In many cases a much shorter time was requisite, but these instances are sufficient to show that because restoration of power is not complete after a few months this is no reason for considering the case a failure, or for supposing that further improvement will not take place. All that I have said on this subject, when writing of primary suture, applies here equally well, and I would now point out that, with these facts to work upon, a further investigation of the cases recorded by myself and others must result in the inevitable conclusion that in many of the cases which are included amongst those of "failure" or of "partial success," a further improvement was to be expected, and would probably ensue.

Thus, if we look at the cases I have placed under the heading of "partially successful," we shall find that of my own those of median suture were only under observation for nine months, eight months and a half, five weeks, and five months respectively. Those of ulnar division for four months, two years, one year, one year and a half, and six months. That of the median and ulnar simultaneously for a year and a half. All these patients are still under observation, and from the way in which they all have improved and continue improving I confidently anticipate a favourable termination. In the cases of suture of the ulnar nerve, in one there was no sign of improvement for a year and a half (after that it was rapid), in another none for a year, whilst in the case of "improved" in the suture of the median and ulnar nerves there was no change for a year and three months, and then rapid restoration of power. Seen in this light the cases in which only a partial success or else a failure is recorded by other surgeons assume a very different aspect.

Of the "partially successful" cases those of median suture were under observation for only twenty-six days, one year, several weeks, six weeks, and seven weeks respectively. That of ulnar suture for five weeks. Those of musculo-spiral suture for two and a half months, ten weeks, and two months. Those of suture of the median and ulnar for seven months and for five weeks. That of the sciatic for a doubtful time. That of the popliteal for three years. Of the cases of "failure" recorded by other authors, those of median suture were kept under notice for eight weeks, a few weeks, and in the third case for no special time mentioned. Those of suture of the ulnar for two months, a doubtful period, and for eight months respectively. Those of musculo-spiral suture for twenty-six days and for a short time. Those of suture of the median and ulnar simultaneously for six months, three months, and a few months. That of the sciatic nerve for one year. Thus of all these cases of recorded "partial success" or "failure," but one—and that a "partial success"—was observed for more than a year, whilst most of the others were not seen for more than a few weeks after suture. It is not possible to consider these results as final. I have shown that in cases kept under notice for a sufficient length of time recovery may ensue where failure has been expected. Of the cases that I record most were discharged from hospital but little better than on admission, yet in almost all—in all, in fact, but two—improvement ensued at a later date.

Most of what I have just written is, as I said at the commencement, in reference to the return of motor power, and if we consider that at the time of suture the muscles were in most of these cases in a state of advanced degeneration and atrophy, I think that the long time required for restoration is only what might be expected. The nerve has to be rejoined, and after that the muscle has to be remade. This restoration of muscle is, indeed, one of the most marvellous evidences of recuperative power ever met with in the human body. Muscles, of which there scarcely appears to be any remains, may be entirely restored in bulk and in power. It is wonderful that this occurs at all, and that it should occur rapidly is not to be supposed.

In the cases in which sensation returns, the most varying times are required for its restoration. In some cases there was restoration of sensation within twenty-four hours of operation, and in others within two or three days. In some again, sensation did not return for many months; in others it required a year or more for its further development. It is very noticeable that in some of the St. Bartholomew's

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cases, as well as in a few of the others, a rapid return of sensation after operation was followed by an equally rapid loss after a few days of hope.

How is this rapid return to be accounted for? It has been noticed to occur at almost all times after section at intervals of a few weeks or of many months. For my own part, I do not doubt that it implies a restoration of continuity between the divided ends of injured axis cylinders. Either some of the latter have not entirely degenerated, or, as in the cases observed by myself, they have again regenerated. This is, in my opinion, the only rational explanation. French authors, on the other hand, believe that the return is due to some reflex changes which ensue in the other nerve trunks as the result of the section of the bulbous extremity of the proximal wounded end. What these changes are they do not suggest, much less prove, and, for the present at least, I shall continue to be sceptical as to their existence. It has been argued that it is not possible to explain restoration of sensation by a re-establishment of continuity of the divided axis cylinders if you do not find the said axis cylinders in the resected portion of the peripheral end. At first sight this appears plausible. It is nothing more, and I certainly would not be prepared to say that because I could find no axis cylinders in a tag-end about one-eighth of an inch in length therefore they did not exist. I can conceive nothing more difficult than to search for such remnants of nerve tissue in the end of a wasted nerve mingled with the products of inflammatory action. The only rational explanation of a return of function after secondary suture is that it is due to a reunion of the divided axis cylinders, difficult as this may be to explain, in view of the probable condition of degeneration of the peripheral end.

How then shall we explain the not infrequent disappearance of the recently restored sensation? My own experience is that this disappearance is usually coincident with the establishment of suppuration or of inflammatory swelling about the wound, and I consider that in such cases the recently united nerve ends become separated for the time by inflammatory exudations. This lost sensation may again return and in time become perfected.

There is, however, another point of considerable interest yet to be noticed—namely, the rapidity with which regeneration sets in after the ends have been reunited. Looking at what we know of the changes occurring in the periphery of a divided nerve, we might almost be led to expect that, in the most favourable cases, the nerve suture would but place the divided ends in a favourable position for union to occur after such a time as is required for the processes of degeneration and regeneration to be completed. But the cases before us show very clearly that the reunion of the proximal and peripheral ends hastens most materially the reparative changes in the latter, so that instead of a year or more being required for the restoration of the nervous function, this is often re-established within a few months of the operation, even when the latter has taken place long after the original accident, and, consequently, at a time when the peripheral fibres are supposed to be in their most degenerate condition. The exact manner in which this is brought about has not yet been demonstrated, but I should suppose that the increased rapidity of repair is simply due to the reunion of the nerve fibres with their centre of nutrition. There can be no doubt that at the time of suture the nerve fibres may be in an extremely degenerate condition, the myeline being destroyed and many of the axis cylinders absent, and yet that symptoms of union may occur within the first twenty-four hours, as in the cases to which I have alluded.

Prognosis of cases of secondary suture of nerves.—Speaking generally, I believe that the prognosis of cases of secondary nerve suture is that great improvement is almost certain to follow, and that success is to be expected in the majority of instances. I believe that this prognosis is justified by the histories of the cases I have mentioned. Naturally, perhaps, I am influenced greatly by the conditions of the patients I have myself observed, and when I have seen one after another improve, often after a year or two of paralysis and of deformity, I am inclined to think that if the nerve ends are still in contact there is yet hope for all. I have already endeavoured to explain the occurrence of many of the reported cases of failure, and shall again refer to this subject. As to the length of time that may be required for this restoration of function, nothing definite can be said; but where there is great muscular atrophy the surgeon may feel sure that a rapid restoration of power is a physical impossibility. I would give up no case until after several years. As in cases of primary suture I believe that restoration is both more rapid and more perfect in the young than in the old, that it is more rapid in warm weather than in cold, and that certain nerves—the musculo-spiral especially—are more prone to unite than are others. I would refer for further evidence to what I have already said on the subject of primary suture. In the case of secondary suture, however, a question has to be considered that does not arise in the case of suture of recently divided nerves. It is, What is the influence of the length of time that elapses between the injury and the suture? I confess that, at first, I was disposed to think that the length of time exercised more influence than I am at present disposed to attribute to it. Nevertheless, I still believe that it may in certain cases materially influence the result.

As I have already pointed out, the peripheral end may be in varying stages of regeneration or degeneration at the time of suture, and although it might perhaps be expected that a corresponding difference in the rapidity of union could be established, and though I myself had expected to find such a difference, I cannot say that my expectations have been realised. It certainly cannot be said that reunion follows more rapidly after suture performed a few weeks from the injury than after the same operation some months after section. Neither is the reverse true. I believe that a careful study of the recorded cases will show that, within at any rate the limits of a year, the time after injury at which suture is performed does not materially influence the subsequent rapidity or perfection of the union. My own experience is not yet sufficient to allow me to state definitely whether regeneration of muscle is to be expected in patients on whom the operation of secondary suture has been performed more than a year after the original injury. I have, however, seen two cases, in addition to those I have summarised above, in which marked restoration of sensation has followed upon secondary suture performed respectively two years and four years after the nerve was first divided. Both of these cases are yet recent, and muscular power is not at present definitely improved, but I am not prepared to say that it will not yet return.

Of the cases published by other authors, in one suture was performed fourteen months after injury; the case is recorded as a failure, but the patient was only kept under observation for three months after operation, so this report cannot be considered final. In one case the operation was performed after two years and a half. This, again, was a failure, but the patient was only observed for twenty-six days. In one case secondary suture of the sciatic was performed nine years after injury, with resulting improvement. In one patient a restoration of sensation followed suture of the median fourteen years after injury. The case was reported by Tillaux seven weeks after operation, and no improvement in muscular power is noted. In the latter case it is important to observe that the peripheral end was much atrophied, and further that in the resected portions no nerve elements were found, though on the latter fact I do not lay much stress. These are the only four cases in which suture was performed more than a year after injury.

The question then arises, Will the function of the muscles be restored if suture is performed at any length of time after injury? That restoration can occur in cases operated upon as late as a year after section there can be no doubt; but the published cases of suture after this time being only four in number are scarcely sufficient, nor are they reported with sufficient detail to allow of a definite answer. This much at any rate may be said: In no case has complete restoration of function yet ensued when operation has been delayed more than a year; that complete restoration is impossible I will certainly not pretend to say, but I may draw attention to certain facts which are, I think, opposed to such a belief.

In an earlier part of these lectures, in the section devoted to pathology, I have shown that some at least of the nerve fibres in the proximal end degenerate after section, and have given my reasons for believing that after the peripheral end has become in part regenerated it may again degenerate if union with the proximal extremity does not occur. It is, of course, possible that even after this, reunion with the proximal end may result in another regeneration, though such appears at least doubtful. At what period of time this second degeneration occurs I cannot say, and for my evidence in support of this theory I must refer to the section on pathology. But whilst a degenerate condition of the lower end may possibly prevent the success of secondary

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suture there is another condition, altogether apart from that of the nerve itself, which has been overlooked by other writers, but which, I think, is of far greater importance.

It has been noticed by Dickinson and other writers that, in cases of amputation of the limbs, atrophic changes ensue after the lapse of years in the spinal cord; and Vulpian has further demonstrated that similar changes occur if instead of amputation the nerve trunks of the extremity are divided. Now, the changes that are described include serious destruction and atrophy of various parts of the spinal cord, and more especially of the large motor cells. These cells are the trophic centres of the muscles, and once they are destroyed it is very doubtful whether they can again be reformed. For this reason I think that after many years of solution of continuity of a nerve, it is most improbable that motor power can be restored by the operation of secondary suture. That there may be some return in sensation I can believe, and indeed the case by Tillaux seems to put this question out of doubt; but further evidence is required before any definite time can be assigned beyond which suture is useless. Meantime, I would never refuse to perform the operation merely because theoretically a good result seemed improbable.

Causes of failure of cases of secondary nerve suture.—In dealing with the causes of failure of primary suture of nerves I have already stated my opinion that this is frequently due to sloughing or extensive suppuration in the wound. The same causes may also prevent success in secondary suture. In the only case of secondary suture of the median, under my own observation, which resulted in failure, the wound, and probably the nerve, sloughed. In those cases where there was much suppuration union was generally more tardy. In a case recorded by Mr. Pye of secondary suture of the ulnar, the cause of failure was found to be the compression of the nerve by scar tissue, and after the latter had been separated, restoration of function was rapid. This case is quite analogous to that recorded by Busch-Madelung of a similar operation with a similar result for a case of primary suture of the musculo-spiral, in which the functions were not restored. The giving way of the suture also may undoubtedly cause non-union, and thus we find that all the causes of failure present in cases of primary suture may also bring about a similar result in those of secondary suture. The treatment also of cases in which secondary suture has not resulted in union is similar to that I have recommended in cases of failure after primary suture. The sutured nerve should be exposed. If its ends have become separated they should again be sutured. If the nerve is compressed by cicatricial tissue, or is unduly adherent, it should be freed from pressure and stretched.

Treatment of cases in which the resected nerve ends cannot be brought into apposition.—In a certain number of cases of old nerve injury it is impossible to bring the ends into apposition on account of their extreme retraction. Such a condition is fortunately not a common one, for the operation of stretching, followed by careful attention to position, is usually sufficient to overcome the retraction. I have never seen it necessary to abandon an operation from this cause alone. The question is, nevertheless, one of much importance for the few patients who may be in such an unfortunate position, and various remedies have been suggested. First, there are the two suggestions of Létiévant, to which allusion has already been made in dealing with the question of treatment of recent nerve wounds, where much nerve substance has been removed by injury. The treatment alluded to as recommended by this surgeon consists in either suturing the lower end on to a freshened surface on a neighbouring trunk, or else in splitting the upper end, and turning down a portion by way of a graft. Although I do not think that such treatment is to be recommended in cases of recent wounds, where by other means union may be obtained, yet I am not disposed to altogether condemn either of these methods in dealing with a case in which all attempts at union have failed, and in which the parts are left in a hopelessly crippled condition. Of the two suggestions I should prefer to practise the latter, as it does not involve any interference with neighbouring healthy nerve trunks.

The next suggestion is that the space between the separated end should be filled by "grafting" into it a portion of fresh nerve taken from an animal. The operation of nerve grafting and transplantation has been experimentally performed by Gluck and Johnson, and according to them with success. As far as I am aware there are only two cases on record of this operation having been performed on man for the relief of injury. The first case is recorded by Tillmans in the *Berlin. Klin. Wochen.* of June 8th, 1885. The patient was a woman aged twenty-two, in whom the median and ulnar nerves had been divided. On the operation for secondary suture being performed, the divided ends were found to be separated four and a half centimetres. The operator therefore grafted portions of nerves between the resected ends. Sensation began to return at the end of four weeks, and motility at the end of nine. The other operation was performed by Kaufmann. In a case of paralysis of the musculo-spiral, following on an injury to the nerve in an operation for removal of dead bone from the humerus, Kaufmann practised on Dec. 28th, 1880, the operation of nerve grafting. After having freed and refreshed the two ends of the musculo-spiral nerve there was left a separation of more than four centimetres. In order to free the gap, he transplanted a portion of the sciatic nerve of a dog. In the middle of the following February it was still impossible to pronounce on the result of this operation.[2]

In the following case the separation of the resected ends was overcome in another way—namely, by resecting a portion of the humerus, and so shortening the arm; the case is recorded of Bergmann.[3] The patient was a lad, aged fifteen, who had been severely wounded in the right upper arm by a circular saw. The wound had healed in about ten weeks, but the boy had lost all power of motion, and all sense of touch in his right arm and hand. An operation was performed in which the divided nerve was exposed, and it being found impossible to bring the ends together, two inches of the humerus were resected. The case has not yet been recorded by the operator, and it is not mentioned in the *British Medical Journal* which nerve was divided, or what was the result.

With regard to the question of the best operation to perform in any case occurring in actual practice, I may say that I do not consider it advisable to perform so severe an operation as resection of a portion of bone in order to bring the divided nerve ends into apposition. Neither am I at all favourably disposed towards the grafting of portions of nerve from animals. I believe that in most cases the best thing to do would be to resect the ends, to bring them into as close apposition as possible, and then to enclose them in a Neuber's decalcified tube. If I did not do this I should follow Létiévant's advice, and turn down a piece of the proximal end after splitting it, in the manner I have already described.

Clinical Lecture
ON
THE JAUNDICE OF INFANTS.

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GENTLEMEN,—From the earliest records which we possess of the study of medicine we find that jaundice has at all times been a most interesting subject, while the most careless observer must be arrested by the striking appearance of the person affected. The circumstance that jaundice is not in itself a disease, but merely a symptom depending on a great variety of causes, presents the careful and scientific physician with problems of surpassing importance; for until in any given case he can unravel the cause of the jaundice he must feel that both his prognosis and treatment may be entirely at fault. As you have seen at this Children's Hospital and at the Royal Hospital, jaundice may be met with at all periods of life. It is, however, to that form of jaundice which occurs among infants that I wish to-day to direct your attention, a subject about which your ordinary text-books give you but scanty information. My remarks will be based on the experience I have gained in this hospital and in private practice during the past six years. I propose to say a few words about the various

[2] Rev. de Sci. Méd. vol. xxiv., 1884, p. 305.
[3] British Medical Journal, 1884, vol. ii., p. 1065.

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varieties of infantile jaundice, and the line of treatment to be adopted in each. Let me first, however, draw your attention to a condition of matters met with in the new-born child to which, I think unfortunately, by some the term "icterus neonatorum" has been applied. On the second or third day after birth, on visiting your lying-in patient, you will sometimes be told in alarm or in wonder that "the baby has the jaundice," and in confirmation of this statement you will be asked to look at the yellow colour of its skin. If, however, you observe with care you will note that the conjunctivæ of its eyes are white, and on inspecting the diapers you will see neither pipeclay motions nor stains of high or saffron-coloured urine; in a word, there is no evidence of jaundice present except the apparent yellowness of the skin. Those of you who have taken out your midwifery cases know that at birth the surface of the infant's body is covered with a white or yellow adhesive coating—the vernix caseosa—which is composed of sebaceous and epidermic cells and fat. If you have not already observed this circumstance, note carefully at the first opportunity you have the condition of a new-born infant's skin from which this vernix caseosa has just been washed off. You will see that it is of a rosy-red colour, and in a short time, if with your finger you press the skin so as to empty the small superficial bloodvessels, you will see a distinct trace of a yellow colour which gradually increases. This begins on the second or third day, lasts about a week, and is generally gone about the tenth day. You will as a rule observe that this apparent yellowness is most marked just in those places where the redness has been greatest. Now there is one point in reference to this form of pseudo-jaundice which is worth noting. As you are aware, the usual plan is to tie the umbilical cord as soon as the child has breathed freely, but the experiments and observations of Budin,[1] Schücking,[2] Engel,[3] and others have shown that if you delay ligaturing the funis until all pulsation has ceased the child will receive a certain quantity of blood, which by early tying would be left in the placenta. Further, by adopting this method children are more vigorous and active. They lose less weight immediately after birth, and subsequently are said to increase in weight with greater rapidity than those children in whom early torsion of the cord has been practised. The advantage of the late ligature of the funis is very marked in premature children, as it has been ascertained that the mortality in their case with the adoption of this practice is only one-half what it is when the cord is tied early. During the past two years I have, in my obstetric practice, adopted the plan in all cases (except in a few where, owing to the mother's condition, it was necessary to expedite the delivery of the placenta) of waiting until all pulsations in the funis have ceased before putting on the ligature, having been convinced by the observations and experiments of the authors I have mentioned, as well as by the practice of the continental lying-in hospitals, that such a method is better for the child than tying the cord as soon as it cries or breathes freely. Since adopting this practice I have met with more of these cases of apparent jaundice, which is, however, in no way detrimental to the child, and which is probably due to changes in the circulation of the skin and gradual disintegration of the abundant blood cells. The fading of the rosy redness which comes on soon after birth in its gradual changes leaves behind it a yellow tinge, like that seen in a vanishing bruise.

We now, gentlemen, come to the discussion of real jaundice in infants; and the cases I have seen in this hospital and in private practice are sharply divided into two classes: in the one, the jaundice, as a rule, is mild and the children recover, while in the other group the jaundice becomes more intense until the fatal termination. I have met with several cases where the discolouration of the skin, conjunctivæ, and the white motions with high-coloured urine have been present, this condition of matters, lasting from about a week to ten or twelve days. The children seemed to suffer little, and many of them were first-born children. [illegible] that exposure to cold or a vitiated [illegible] cause of the disease, and in support of [illegible] Bhottinda Lying-in Hospital jaundice [illegible] Paris foundling hospitals nearly all suffer from it, the reason being that in the former hospital they are properly cared for, while in the latter the air is bad and the children are exposed to cold. As to the exact causation of this mild form of jaundice we are still in the greatest doubt, because fortunately the children, as a rule, recover; and consequently autopsies are rare. Different observers have given very diverse explanations. While Virchow thinks this form of icterus is due to a gastro-duodenal catarrh, Frank believed it is the prolonged retention of the meconium which is the cause. Cohnheim held that the bile secretion was increased rapidly after birth to such a degree that it could not be eliminated, while Frerichs taught that it was due to changes in the hepatic circulation. An explanation put forward by Birch-Hirschfeld is accepted by some as accounting for the jaundice. This observer has shown that the vessels in the notch of the liver, and also for some distance within that organ, are surrounded by a layer of fibrous tissue. This gets œdematous and becomes swollen, when, owing to a prolonged or difficult labour, there is interference with the hepatic circulation, and by its compression gives rise to obstructive jaundice. I mention these various theories, but do not think that any one will cover all the cases. There is a ready method by which you can tell whether the jaundice is real or apparent. If a piece of white linen fastened round the child's loins be coloured yellow, then you may be sure it is a case of true jaundice.

I will now ask you to consider the very important group of cases where the jaundice gradually deepens and the infants die; and the following cases are types of the various conditions which may give rise to fatal jaundice.

CASE 1.—I show you to-day a small, shrivelled, miserable-looking infant three weeks old. You see it is intensely jaundiced; its eyes and skin are yellow, and in the upper half of its body note the presence of some purpuric spots. You also see blood oozing from its mouth. The umbilicus is normal. You see its diaper is stained a yellow hue. Its mother tells us that at birth it was healthy-looking, but at the beginning of the second week its skin and eyes "turned yellow," its motions became white, and its water high coloured; and all these symptoms have gradually deepened. It is a full term child, but the mother has had a premature baby, and from what she tells us of her having had a sore throat, rash, and falling off of the hair, there is a clear specific history. We look upon the jaundice here (especially from the history) as being due to some form of syphilitic inflammation or growths compressing the bile-ducts (the peri-pylephlebitis of Schüppel), and our prognosis is of the worst kind. (This child died twenty-five days after birth.)

CASE 2.—I will now give you the notes of a very interesting case of a child which I saw some years ago. When born it was noticed to be of a yellow hue, and this has gradually got more marked. The urine was jaundiced, and the mother said "there was something wrong with the way it passed its water." The motions were always white. The child was bottle fed and had not thriven, and within the last two weeks before my visit it had passed blood-stained mucus by the bowel. It was an only child, and there was no specific history. There had never been any bleeding from the umbilicus. The child when I saw it was small, more like a month than a three months' baby, emaciated, and deeply jaundiced. There was no enlargement of the liver to be detected, nor of the hæmorrhoidal veins. The foreskin was retracted. No urethra was to be seen in the glans or body of the penis, but on its under surface, close to the scrotum, there were two small apertures, one on each side of the middle line. On attempting to pass a filiform bougie into one of these the child voided a quantity of deep saffron-hued urine. There were no spots on the body or sores around the anus, and the child did not snuffle. The umbilicus was natural looking. The child died in two days after I saw it. Now although most unfortunately no post-mortem examination was made, I have little doubt that the jaundice in this infant was due to some congenital stricture in the bile-ducts, from the following facts—(1) the progressively deepening jaundice; (2) the gradual emaciation; (3) the presence of an evident malformation (hypospadias); (4) the intestinal hæmorrhage; (5) the absence of syphilitic history.

CASE 3.—An infant, three weeks old, was seen by me in the out-patient room of this hospital at the beginning of the present session. The woman (its aunt) who brought the baby said its mother had taken ill with a "shivering" three days after the birth of the child, and had been unwell ever since and "unable to give it drink." A week

[illegible] ligature du cordon ombilical? [illegible] Obstétrique et Gynécologie, 1886.
[illegible] Berlin. Klin. Woch., [illegible] für Gynäkol., 1885.

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after birth the child first became yellow, and the colour had got worse, the aunt says, up to the time she came to the hospital. It passed blood per anum, and had been vomiting almost constantly for a week before I saw it. The child, which was very puny, was completely jaundiced. The tongue was dry, the abdomen swollen and painful, temperature 101°, and a mixture of blood and pus welled from the umbilicus. Subsequently I learned that the mother had been ill with puerperal fever, and at a later period I admitted her into my ward at the Royal Hospital, where some of you saw her, with pelvic cellulitis. The child died ten days after it was first brought to the hospital. In this case the jaundice was due to umbilical phlebitis, caused by the same poison, probably, as that which infected the mother.

Now, gentlemen, these three cases are, as I have said, types of the conditions which I have met with as causing fatal jaundice in infants. 1. Syphilitic growths and inflammation. 2. Malformation of the bile-ducts. 3. Umbilical phlebitis. In reference to the second type, it is a curious but well-observed fact that this condition of matters (as pointed out long ago by Dr. Cheyne) is liable to appear in successive children of the same family, an important factor in diagnosis. I am aware of a case where three successive children in one family have died of jaundice caused by malformation of the ducts. Further, bleeding from the umbilicus sometimes is noticed in these cases; and you will remember, I hope, that this umbilical hæmorrhage is of bad prognostic import, as when it occurs the fatality is more rapid. I show you here a chromo-lithograph of a liver from a case of congenital malformation of the ducts. You see it is of a deep olive-green colour, and is in a cirrhotic condition. It is probable that the cirrhosis is secondary to the obliteration of the ducts, as Dr. Wickham Legg has shown that tying the bile-ducts of an animal will in time give rise to a somewhat similar condition of the liver. Dr. Legg thinks that this cirrhotic condition prevents the blood circulating through the liver, and in consequence it passes along the line of least resistance, from the left portal vein to the ductus venosus, and thence to the umbilicus, where the imperfectly healed vessels of the umbilicus yield to the increased arterial pressure, and hence oozing of blood takes place.

Let me say a word in conclusion as to treatment. In the simple form of true jaundice in infants you will see that the bowels are kept regular, and a mixture of a little soda and taraxacum juice will generally bring matters right. In malformation of the bile-ducts no treatment is of any use, while in those cases in which there is a specific history small doses of grey powder should be tried, and the parents should be brought under a mercurial course, so that if there be any more children the virulence of the syphilitic poison may be destroyed or lessened. The prevention of umbilical phlebitis is best done by the employment of antiseptics in midwifery, this form of infantile jaundice being unknown in those lying-in hospitals where rigid antiseptic midwifery is practised.

ON RELIEVING TYMPANITES BY PUNCTURE OF THE ABDOMEN.

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(*Continued from page 59.*)

IN 1869, Dr. Braxton Hicks recorded four cases, in the Transactions of the Obstetrical Society,[1] of puncture of the abdomen for flatulent distension; and he alludes to the discussion of the question which had lately taken place in Paris when this treatment was commended, twenty cases, he observes, of the procedure having been included in the paper read. (I have not as yet been able to find any further account of this discussion.) Dr. Hicks says he thinks there is not much risk of extravasation into the peritoneal cavity, as if the smallest exploring trocar be used the tissues of the bowels are rather separated than cut, so that the opening is closed as soon as the instrument is withdrawn. He alludes to extreme tympany as one of the dangers of peritonitis, as pressure of the gas on the sympathetic and the tension of the tissues they supply must add to the collapse and vomiting.

[1] See pp. 47-53.

In 1869, also appeared a case, in the *British Medical Journal* of Aug. 20th, described by Dr. Davey (then of Bristol), of tubercular peritonitis in a child for whom paracentesis was performed by Mr. Salmon of Thornbury, for relief of painful distension by flatus. Large quantities of fetid gas were let out, with great ease to the patient, and this gas continued from time to time to pass off until the death of the child ten days afterwards. It was found, after death, that ulcerative communications existed between the bowel and the peritoneal cavity. Dr. Davey quotes from the *Medical Press and Circular* of April 7th, 1869, two cases in which Dr. Fonssagrives of Toulouse[2] had lately punctured the abdomen several times with marked success, when the patients were in extreme peril from tympanites.[3] He also states that he was informed by Mr. N. Leigh, veterinary surgeon at Bristol, that he had often performed this operation with a trocar or pocket-knife, chiefly on cows, more rarely on horses, and with good results.

In 1869, Dr. Clifford Allbutt of Leeds recorded in the *Practitioner*[4] the case of a man with pneumonia attended by faecal obstruction and most painful and extensive tympanites with hiccough, in which, after the unsuccessful adoption of other remedies, he had the abdomen punctured by Mr. T. P. Teale, who plunged a No. 1 exploring trocar into the distended transverse colon, "by which," he says, "a large quantity of highly offensive air was let out, and then again into the descending colon, with the same result. The abdomen became quite soft, the greatest relief followed, and the patient soon sank into sleep." Shortly afterwards the bowels recovered their activity. The patient sank from the pneumonia. Post-mortem examination showed no trace of peritonitis, nor "had air entered into the peritoneal cavity." No traces of the punctures which had been made could be discovered, except on the surface of the bowel. After dilating on the good effects of such a painless operation giving great and ready relief by emptying the bowel and allowing it to contract upon, and expel, accumulated faeces, Dr. Allbutt remarked that if the medical attendant, on an emergency, has not a fine trocar at hand he may use the needle of his morphia syringe.

In the same year (1869) Mr. Thomas Smith communicated to the Clinical Society[5] the particulars of a case of ruptured intestine, in which the bowel was punctured for relief of distension by flatus. This was done by a fine trocar through the linea alba, half-way between the pubes and umbilicus. "The effect of the puncture was immediate, and the relief to the boy's suffering very great. A large quantity of offensive flatus escaped, the vomiting was less urgent, and he soon afterwards fell asleep. Three hours after the puncture the bowels acted freely, not having before been moved since the accident, seven days previously." Mr. T. Smith quotes a case, from the *Bulletin Gén. de Thérapeutique* for 1867, of obstruction of the bowels, in which, as a last resource, the small intestine was punctured with a fine trocar. A large quantity of gas escaped, and on the same day the bowels acted twice. Fifteen days afterwards, and again later on the puncture was repeated, and on each occasion with the same good result. He also quotes M. Laforgue of Toulouse, who had employed puncture for tympanites in two cases.[6] In one case the puncture was repeated six successive times with great advantage.

In 1870, Dr. H. Wathen, then of Fishguard (now of Clifton), communicated a case to the *Practitioner*,[7] in which a woman with acute peritonitis, accompanied by distressful tympanites, had the puncture performed. A No. 1 trocar was plunged, firstly into the transverse, then into the descending, and lastly into the ascending colon. Relief was at once afforded. The patient, however, sank the next morning.

In the following year (1871) Sir Risdon Bennett (then Dr. Bennett) communicated to the *Practitioner* of Feb. 1871 a short paper on Mechanical Means of Relief in Certain Cases of Inflammatory Effusions, founded on a highly interesting case of peritonitis, which he had seen at Christiania, wherein large quantities of inflammatory products were withdrawn from the abdomen by trocar, and a drainage tube was long worn,[8] and in which also the colon had been punctured for tympanites, apparently, in the patient's view, preserving

[2] See Gibson. [3] Quoted from L'Union Médicale.
[4] February number, p. 109. [5] Trans., vol. ii., p. 64.
[6] L'Union Médicale, Oct. 23rd, 1867. [7] Vol. v., p. 252.
[8] The natural evacuation of purulent fluid through the umbilicus in cases of peritonitis (analogous to the process which sometimes occurs in pleurisy) has been several times observed. Such cases are mentioned by Dr. West in his Lectures on the Diseases of Infancy and Childhood. (Third edition, pp. 88 and 506.)

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life by relieving the accumulation of flatus. Dr. Bennett, in addition to very valuable suggestive remarks on the case, showed that he was quite in favour of puncturing for excessive tympanites, and believed that great advantages were likely to be derived from its practice, though it was "not devoid of danger."

In 1871, Dr. Wathen communicated a paper to the *British Medical Journal* (Oct. 21st), in which he gathered together some of the English cases of which I have given an abstract, and registers another—a case of dysentery in the practice of Mr. Thomas—wherein puncture of the ascending and transverse colon was performed with the best results. Dr. Wathen alludes to the puncturing of cattle for tympanites, as used by graziers, and concludes with the following remarks: "When I picture to myself the immense distress and suffering present in an intensely tympanitic patient, whatever may be its cause, and then recall to mind the ease and quiet, if not anything more, which we are enabled to afford our patient by what I am bound to describe as a simple, harmless, and painless operation, I feel drawn to the conclusion that it is a proceeding not only justifiable, but urgently demanded at our hands." In a letter which I received in April last from Dr. Wathen, he says that he has not had further occasion to puncture the abdomen for tympanites; but that he had been called upon, along with Dr. Howard of Newport, Pembrokeshire, to puncture a large hernia several times with the view of reducing its size." Subsequent to Dr. Wathen's communication, Dr. Saunders, resident physician at the Devon Asylum, sent a memorandum to the *British Medical Journal*,[10] in which he gives an interesting *résumé* of what had been advanced by authorities in the last century regarding the proceeding in question. To this communication I have elsewhere alluded.

In the same year (1871) the same journal (Nov. 4th) contained the details of a case, related by Mr. Brown of Ealing, of a boy suffering from tubercular peritonitis. Collapse came on in spite of remedies; but entire recovery followed puncture of the abdomen, which was performed on two occasions by means of a small trocar, liberating large quantities of fetid air, followed by a drop or two of pus.

In the year 1873 (February), Dr. H. C. Cameron read before the Medico-Chirurgical Society of Glasgow[11] a paper on what he termed "Colo-puncture." In this he described the case of a man who, after an operation on the leg, had rigors, and pain and swelling of the abdomen. As the abdominal distension became extreme, after fruitless resort to other means, puncture of the colon was performed; and this had to be done on eight separate days,[12] with the greatest relief and at the urgent desire of the patient, who got well, no increase of the peritonitis taking place. When the over-distension of the bowel arises from mechanical obstruction, Dr. Cameron thinks that the operation has, very often, many advantages over the use of the long tube passed into the bowel. It is, if properly done, he says, not more risky, inasmuch as some danger, and often difficulty and great discomfort, attends the use of the tube, and its success is by no means uniform. The undesirability of repeating the passing of the rectal tube is great. Dr. Cameron closes his paper by indicating the precautions necessary to be taken in performing these operations—viz., that the cannula should fit very accurately around the collar of the trocar, that the trocar be of sufficient length—that is, three or four inches long—that any amount of pressure on the abdomen should be avoided (for fear of squeezing out fluid from the bowel), that the puncture should always be at the most prominent part of the abdomen as the patient is lying.[13] In the discussion upon Dr. Cameron's paper, Dr. Lyons said that, in a case of his, fæcal matter was found, on post-mortem examination, in the peritoneal cavity, but that this might have escaped after death. Dr. Buchanan had, since 1819, seen half a dozen cases of puncture for tympanites. He advocated the plan of puncturing the bowel with an aneurysmal needle threaded with wire, withdrawing the needle, and leaving the wire as a loop inside the bowel, which could be moved daily, thus allowing escape of the gas and avoiding the necessity of repeated puncture. Dr. E Watson doubted the advisability of puncturing the abdomen in cases of inflammation. At a later date,[14] Dr. Cameron suggested colo-puncture in a case of intestinal obstruction arising either from paralysis of the walls of the bowel or from bands of lymph (of nine months' standing), under the care of Dr. McGown, which was completely successful. In this case liquid fæces, which were escaping through the trocar, were washed back by tepid water. Three hours after the operation the bowels had copious relief, and the patient recovered quickly. In the discussion at the Glasgow Medico-Chirurgical Society upon this case, Dr. Glaisher and Dr. J. Coats said they had performed the operation. In a private letter Dr. Cameron informs me that he has performed the operation in many cases of over-distension by flatus. He considers that, when done with proper precautions, it is quite devoid of danger, and in many cases is very useful. He remarks that "gas seems occasionally to exist in compartments in the intestine, even in cases in which the entire abdomen appears greatly and uniformly distended. "I suppose," he says, "sharp bends and turns of the gut may thus subdivide the gas into separate collections. At all events, it often happens that, immediately on the withdrawal of the trocars, gas whistles through the cannula with as much force as might blow out a taper, but in a minute or two stops, even although much tightness and distension continue. In such cases I do not hesitate to puncture in a second spot." He tells me of the case of a lady five months pregnant having obstruction of the bowels, which were enormously distended, no evacuations having taken place for five days, which he lately punctured in two places. He observes that "only a small quantity of gas escaped, still she soon began to pass flatus 'per anum'; a movement of the bowels followed, and she recovered. At the time of the operation she was within a very measurable distance of death." In another case, obstruction of the bowels following fracture of the leg, Dr. Cameron punctured on two successive days, and, as a result, flatus began to be passed per rectum; the bowels were moved, and the man got well of the obstruction. He died of pneumonia later on, and at the post-mortem examination it was found that there had been intussusception of the bowel.

In 1876 an interesting case was published in THE LANCET[15] by Dr. Finch of the Leicester Borough Asylum, showing the use of the aspirator in relief of excessive tympanites attended by vomiting, constipation, and abdominal pain, which seriously embarrassed the heart's action. The instrument was introduced half way between the pubes and umbilicus, and a large amount of flatus withdrawn, with immediate good result. Two days later the patient was worse as to vomiting, &c., and she appeared to be moribund. As a last resource the aspirator needle was again used, being passed into the cæcum, when a large quantity of gas and a little feculent fluid escaped. Action of the bowels followed, and there was no further use for the puncturing. No inflammatory action arose, and the patient recovered.

In 1877, Dr. Godlee brought three cases before the Clinical Society of London,[16] in which gas was contained in the peritoneal cavity, without any perforation of the bowel existing. These were adduced as drawing attention to an incident which may happen in the course of the operation of colotomy. In one case there was ulceration of the colon, in the second one colotomy was performed, but the amount of gas which was met with in the peritoneal cavity for a time prevented

[illegible] With regard to the procedure of getting rid of flatus in strangulated hernia, here and elsewhere alluded to, Dr. Cameron (referred to later on) offers an objection—viz., that "if it do not succeed, and an operation becomes necessary, the free handling of recently punctured gut might possibly lead to unpleasant consequences." On this point, also, I will quote Mr. Bryant, who, in a Clinical Lecture on Intestinal Obstruction (see Medical Times and Gazette, April 20th, 1872, p. 455), stated that his objection is much against puncturing the bowel in cases of hernia, when distended with flatus, owing to the risk of escape of fæces or fluid, though he had resorted to it in two cases of ileus with immense advantage. He mentioned that at Guy's Hospital the operation had been done more frequently than at any other institution; and that Mr. Stocker, "who had had more clinical experience than almost anyone in London," has always spoken favour of it. He quoted the case of an old man with strangulated hernia, in which the operation of pricking the bowel four or five times successfully performed. Mr. Dent, of St. George's Hospital, says that he has "a strong disbelief in the utility of puncturing the bowel in tympanites," thinks that in strangulated (external) hernia the distension appears to constitute the chief difficulty of reduction; "puncture does not enable the gut to be reduced more than a slight division of the stricture, and therefore inflicts a needless wound." The late Mr. Tatum, a former colleague of mine at St. George's Hospital, was in the habit of puncturing the intestines when, owing to the difficulty of reducing the strangulated hernia, they could not be returned. [illegible] Medical Journal, May 1878, p. 989. [illegible] not obtained, as the instrument did not [illegible] to one possible source of failure in the opera-

[10] Nov. 18th, 1871.

[11] To meet the risk from fluid being squeezed out of the bowel, it is suggested that a small syringe should be used with warm water to wash back any fluid fæces which may exude through the trocar.

[12] Glasgow Med. Journal, 1880, p. 444.

[13] October 7th.

[14] Transactions, vol. x., p. 115.

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the colon being found, as the peritoneum was protruded by the gas in the cavity. In the third case (as in the second) colotomy was performed by Mr. Heath.

In 1879, Mr. G. Brown brought before the same Society[17] a case of typhoid fever, in which an accumulation of odourless gas took place in the peritoneal cavity, without any perforation of bowel occurring. Puncture, with absolute relief to urgent symptoms, was resorted to; the pulse fell at once from 50 to 36, and the heart regained its natural position. This change enabled a greatly distended condition of the urinary bladder to be recognised. Mr. Brown's account contains some interesting speculations as to the origin of the gas formed within the peritoneal sac.

In 1879, Dr. Broadbent described in the *British Medical Journal* (Sept. 27th) a case of intestinal obstruction, owing to the pressure of a pelvic tumour, successfully treated by repeated puncture of the small intestine by means of a long aspirator needle. He mentions some necessary precautions to be observed in performing the operation.

In 1884, Dr. Hunter brought before the Obstetrical Society of New York[18] a case in which, following a subsequent peritonitis, tympanites was so urgent that the patient appeared moribund. The use of the long rectal tube proved insufficient for relief, and the abdomen was punctured by a long hypodermic needle, when gas escaped, and continued to do so for half an hour. The patient recovered. The gas was not offensive, and had accumulated in the peritoneal cavity. In the discussion, Dr. Nicoll, Dr. Murray, and Dr. Polk related cases showing the good results of the operation. In a subsequent meeting the latter gentleman quoted another case in which death was averted by the operation.

Quite recently Mr. W. Furner brought before the Brighton and Sussex Medico-Chirurgical Society[19] two cases of abdominal puncture for flatulent distension. In both instances fæcal escape took place; and in one case it was found, after death, that it was the small intestine which had been pierced.

(To be concluded.)

ON INHALATION AND THE LACK OF PRECISION IN THE METHOD OF USING IT;

WITH A DESCRIPTION OF DR. ISOARD'S "SULFHYDROMÈTRE."

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CONTINUING my tour of inspection of continental spas, it was my good fortune to visit Allevard in the lovely highlands of Savoy last September, and in the hope that I may be able in some slight degree to contribute towards our knowledge of "healing springs," I submit the result of notes taken at Allevard, together with translations from those of Dr. Isoard.

1. *On inhalation and on the lack of precision in the method of using it.*—The inhalation of the gaseous constituents disengaged by sulphurous mineral waters has gained in the therapeutic treatment of diseases of the respiratory passages a rank which is now no longer disputed. Clinical observations have proved its value. The superiority of this method is the result of the double action that it allows the sulphurous vapour to exercise on the organ. The first, which is entirely local, is due, as is now well known, to contact with the very sensitive mucous membrane of the bronchi; the second, which is general, resembles that of water taken in drinking, and is the result of its absorption by the lung and subsequent diffusion over the whole system. But even if no doubt be thrown on the power of this treatment, yet we must acknowledge that it is applied under very defective conditions. Neither doctor nor patient has any means of determining the intensity of the treatment pursued. It is graduated, indeed, simply by calculation of the time of remaining in the inhalation rooms. Yet nothing could be more uncertain than this determination. Numerous experiments made with test papers, either entrusted to patients or placed in different parts of the room, or by a standard sulphydrometer for water, have shown that there are considerable differences in the quantity of mineral constituents diffused in the atmosphere.

Dr. Isoard found in two experiments a degree of sulphuration four times greater in the one than in the other; and yet at Allevard, where the method was first used, nothing was neglected to ensure the inhalation all its power; the arrangement of the rooms leaves nothing to be desired; the water which feeds them is subjected to a system of spraying and evaporation, which releases from it nearly all the gas it holds in suspension. The reason of this variation lies in the fact that the chemical composition of the atmosphere can be altered by causes which an irreproachable arrangement could not foresee. I will confine myself to quoting the most evident: (1) certain barometric conditions favour or impede the disengagement of the gas contained in the waters; (2) the proportion of sulphurous vapour mixed with the air of the room varies according to the number of patients in the room and the time which has elapsed since the beginning of its action.

2. *Consequences of irregularity of treatment.*—The variation in the degree of impregnation of the air intended for inhalation being recognised and its principal causes pointed out, it is necessary to indicate the inconveniences, even dangers, to which those who undergo it are thereby exposed. All the gases given off by sulphurous waters have not the same therapeutic importance nor the same harmlessness. Carbonic acid and nitrogen, for example, only increase the proportion of these same elements which enter into the composition of ordinary air; and even if their action on the animal economy can sometimes be profitably employed, yet it may be said that it is not sufficiently powerful to necessitate a rigorous system of dosing. But the same remarks do not hold good of sulphuretted hydrogen, a very powerful gas, to which the inhalation owes its curative properties, and which standardises the therapeutic richness of all sulphurous waters, since therein lies the resultant of all the decompositions of the various substances which are dissolved in the waters. The absorption of this gas by the pulmonary passages is preceded by an energetic action on the tissues with which it comes in contact before being assimilated into the blood. This local action shows one of the most remarkable therapeutic properties of the gas—namely, that which is due to the slight excitatory movement to which it gives rise, and whose resolutive action on lesions of the respiratory organs is nowadays well known and established. But this excitatory or inflammatory movement requires the greatest vigilance. The limit may easily be passed. Congestion, even hæmorrhage, may result from the unseasonable or irregular administration of a remedy otherwise very valuable. There is therefore an absolute necessity of giving this mode of treatment the degree of precision which it lacks, a defect which is very often the only reason for hesitating to try it. The number and duration of the sittings give altogether insufficient indications of the quantity of sulphuretted hydrogen absorbed. Some patients believe they can be guided by the intensity of the characteristic odour liberated by the water. This proceeding gives rise to the same errors. The odour of the water does not give a measure of its degree of sulphuration. It would be more logical to take as a guide the observed physiological effects. But everybody cannot gauge them to the same degree, and their manifestations are not absolutely constant. Yet an analysis of the air of a hall, every time it is to be used, is out of the question. That would necessitate the construction of a small inhalation room for every patient. What is absolutely indispensable is not an analysis giving the exact quantity of sulphuretted hydrogen diffused in the atmosphere, but a method capable of indicating in a visible manner, evident to everybody, the variation in the degree of sulphuration of the atmosphere intended for inhalation; in fact, a kind of registering apparatus by means of which every patient can follow the graduation of his treatment.

3. *Mode of using Dr. Isoard's sulphydrometer.*—Dr. Isoard says: "The process which I propose to employ seems to me to fulfil all the conditions," which we have discussed above. "It consists simply of an application of the means I have used to find out the irregularities I have mentioned. The test papers, impregnated with a solution of a salt of lead, take in contact with the sulphuretted hydrogen a tint which is the more intense the longer the exposure is continued, as the degree of sulphuration of the atmosphere is high. It seemed to me natural to take the shades which correspond to the time usually given to the sittings, and to exactly reproduce them in unalterable colours, forming a gradation of tints through all of which the test papers have to pass, and to give the gradation thus obtained a form easy of com-

[17] Transactions, vol. xii., p. 235. [18] Ibid., June 3rd.
[19] British Medical Journal, May 5th, 1887.

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parison. Moreover, the scale of shades has been determined in a room set apart at my disposal for this special purpose. The quantity of the water was carefully ascertained and also the amount of sulphuretted hydrogen it contained. No patient was allowed in the room during the experiment. The tints, then, have been obtained in an inhalation room acting under the most regular conditions. They have been arranged on a card pierced with two longitudinal slits to admit of the application of the test-paper opposite the shade one wishes to obtain. The greatest care has been given to the reproduction of these tints, to the choice of paper, and the preparation of the solution with which it is impregnated. The indications which this table can furnish will have a character of precision, which a measurement of the time passed in the room cannot give.

"Of course it must not be required of a process like this to furnish with the exactitude of a laboratory instrument the quantity of sulphuretted hydrogen in the air in milligrammes—that is, moreover, not necessary. But this apparatus, placed in the room beside the patient, or affixed to his clothing, undergoing simultaneously with him the action of the air he breathes, informs him whether he ought to prolong or shorten his stay, and gives him a protection against the disappointment of an illusory treatment and the unpleasant surprises of one too strong. The mode of using it is so simple that everyone can do it. The shade of the test paper must coincide with the one which has been assigned to the patient on the graduated table. This comparison is much facilitated by applying to the apparatus a narrow, thickish piece of paper, pierced with an opening, across which the juxtaposed tints are compared. The sulphuretted hydrogen acts with most intensity on the edges of the paper. It is the middle portion that should be compared with the table. To regulate the intensity of the treatment according to the degree of sensitiveness of the paper, it suffices to know that tint No. 1 corresponds to the shortest sitting usually prescribed (about three minutes).

"All that I have said refers to *cold* inhalation, the one usually practised and whose use requires the most care. It is so called because the rooms thus used are supplied exclusively with cold mineral water, and thus have a temperature differing but little from that of the open air. But there is another kind of inhalation, the *tepid* or *temperate* inhalation. It differs from the first in that the rooms assigned to it, and the mineral waters also, receive a jet of steam from ordinary water, which, while partially condensing, raises the temperature of the room to about 28° C. or 30° C. (= 82° F.—86° F.). This condensation gives rise to a light spray formed of very minute drops, whose part an ingenious theory has well explained. These minute drops dissolve the gas given off by the mineral water on account of the temperature and pressure forming a spray of chemicalised water in so fine a state of division as no pulverisation could produce, and thus penetrates, with the sulphurous element, into the finest ramifications of the bronchi.

"It is evident that this treatment, which has its special indications, is nothing but a simple application of thermal hydro-therapeutics. One thing which distinguishes the tepid inhalation is the fact that the sulphuretted hydrogen coming by this process in contact with the mucous membrane of the bronchi has a more feeble local action on it. Everyday experience proves, indeed, that a length of time can be given to the sittings for tepid inhalation which would be dangerous for cold inhalation. The sulphydrometer, since it does nothing but faithfully show the variations of the degree of sulphuration of the atmosphere, can be used in all the rooms assigned to the two kinds of inhalation. In the tepid inhalation rooms, however, the shade corresponding to the shortest, which is taken as the starting point, should be one degree higher than in the cold inhalation rooms, on account of the greater tolerance of the action of the gas, which I have mentioned, and the greater sensitiveness of the test papers in a humid atmosphere. The name of sulphydrometer, given to an apparatus which does not accurately determine the dose of sulphuretted hydrogen, may seem pretentious to some; to me, however, it seems justified. Nevertheless, I should be glad if only its title is criticised, if its utility is recognised, and if a kindly reception is accorded to my modest efforts towards a therapeutic [illegible] which has stood its tests, but whose results will become certain when scientific and precise methods of [illegible] are employed for its application."

The [illegible] at Allevard are of the same character as those of [illegible], being at a higher elevation the air is more bracing. They are beneficial in rheumatic and gouty ailments, sciatica; particularly beneficial for throat affections and delicate children. The majority of persons who resort to Allevard labour under affections of the organs of respiration. I have had demonstrated to me the great benefit derived from the Allevard treatment in lymphatic tubercular subjects, cases of chronic laryngitis, asthma, and pulmonary or laryngeal affections. Dr. Nièpce (the medical inspector of the baths) speaks highly of Allevard as a health-resort for children, especially if suffering from chronic pharyngitis and enlargement of the tonsils. Allevard is not two hours further than the now fashionable Aix-les-Bains, on the same line of rail, and we get a fresher air, away from excitement, excessive luxury, and their accompanying expenditure. The fame of mineral waters is a thing of slow growth, and of no great permanence when gained; many highly esteemed by the last generation are now wholly disused. I feel confident that the more Allevard and the medical treatment there are known, the higher it will rise in public esteem.

Ladbroke-grove, W.

TRACHEOTOMY AND INFLATION IN THE TREATMENT OF A STILLBORN CHILD.

BY CHAS. SCOTT WATSON, M.D.

THE treatment of stillborn children is so unsatisfactory in some cases that I make no apology for publishing the following unsuccessful case, in which the ordinary treatment was supplemented by tracheotomy and inflation of the lungs.

Mrs. H——, aged twenty-nine, was confined of her second child (a boy) on Jan. 5th, 1887. Her first child was born two years and a half ago, after a severe instrumental labour, and lived four days. Concerning the confinement, in which I attended her, the following points may be mentioned:—I was called to her at 5 P.M. on the 4th, she had been in labour since 2 P.M., the os was the size of a shilling, the membranes intact, and the vertex presenting in the first position. At 7 P.M. the os was fully dilated and the membranes were ruptured. The head entered and stuck in the brim of the pelvis, and at 2 A.M. on the 5th forceps were put on and delivery easily effected. On the delivery of the head the mouth and throat were cleared of mucus, and the child made one or two ineffectual attempts at inspiration. When delivery was completed, which occurred without any unusual delay, the child was pale and flaccid, but its heart was beating strongly, at the rate of about 60 a minute, and at intervals of a quarter of a minute or so it made a single strong inspiratory effort, in which the chest walls were sucked violently inwards, but no air entered the lungs. The usual means of resuscitation—slapping, sprinkling with cold water, artificial respiration, &c.—were used without result. I then made several attempts to pass a catheter into the larynx by the mouth, but failed, and last of all tried insufflation from mouth to mouth with pressure backwards on the trachea, without producing any good effect. By this time the child was cold, and evidently at the point of death. The inspiratory efforts, always ineffectual, still occurred, but so feebly and at such long intervals that each appeared likely to be the last, and the heart was scarcely to be felt beating. As it seemed that nothing was to be gained by simple persistence in the foregoing treatment, and as the symptoms pointed to some obstruction to the entrance of air into the lungs, tracheotomy was rapidly performed. There was no bleeding. A No. 7 male gum-elastic catheter was then passed into the trachea and air blown down it. During these insufflations it was found necessary to hold the child's mouth and nose, and also the edges of the wound, tightly round the catheter, to prevent air escaping at these openings; but in spite of all the nurse and I could do some air always did escape. Expiration was produced by pressure on the chest. As each of these acts caused a bubbling noise in the air passages, the action of the catheter was reversed, and about a drachm of mucus and meconium was sucked up into its tube and so got rid of. The spontaneous inspirations still continued at long intervals, but now of course drew air into the chest, and the heart's action soon began to improve. After this artificial respiration had been persevered in for about half an hour, each spontaneous deep respiration was followed by five or six rapid shallow ones, and in about an hour after its birth the child was breathing freely, moving its limbs, and crying when the wound was

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closed. During the day it did well, taking some brandy-and-water, and breathing almost constantly through the mouth and nose. It was only in an occasional very deep respiration that the edges of the wound in the trachea were forced and a little air escaped. At 8 P.M. I put in three stitches, nearly closing the skin wound, and at the same time showed the nurse how to remove them if any dyspnœa should occur. At 1 A.M. (6th) the child coughed and struggled a little, and although the wound was opened the breathing became weaker, and ceased about half an hour later.

Permission was obtained for examination of the lungs and air-passages only. The lungs, trachea, and larynx were removed together. There was a little emphysema of the loose cellular tissue behind the œsophagus at the level of the larynx. The larynx was clear. The operation wound divided the crico-thyroid membrane, the cricoid cartilage, and the two upper rings of the trachea. The upper and middle lobes of the right lung were fully expanded, the lower lobe only partially. In the left lung a little patch at the apex and a strip along the free margin of the upper lobe alone contained air; the rest, including the whole lower lobe, was in its fœtal condition. On the posterior surface of both lower lobes there were a few subpleural ecchymoses. When the whole preparation was put into water the right lung floated, the left sank. On attempting to inflate the lungs with a Higginson's syringe, it was found impossible to do more than slightly expand the parts that already contained air till a small opening accidentally made in the left bronchus was closed, when they inflated readily and fully. The nozzle of the syringe just fitted the trachea.

I think the case encouraging because the atelectasis, which appears to have been the cause of death, is, I believe, to be accounted for by the imperfect apparatus I employed. A No. 7 catheter which does not fit the trachea, and therefore makes it necessary not only that the edges of the wound should be held tightly round it, but also that the mouth and nose should be kept closed against the escape of air, is not a good instrument for artificial respiration. The effect of such an escape was shown in the failure of the attempt to inflate the lungs post mortem until the opening in the bronchus was closed. During life I was never able to keep the mouth, nose, and wound air-tight, and therefore think that this escape of air during inflation was the main cause of the poor expansion of the lungs. In another case I should guard against it by using a nozzle that would plug into the trachea—e.g., that of a Higginson's syringe. This, with the adjacent piece of tubing, might be detached from the ball and inflation made by blowing down it.

Tufnell-park, N.

BILATERAL PARALYSIS OF THE DILATOR MUSCLES OF THE GLOTTIS, WITH SUBSEQUENT PARESIS OF THE CONSTRICTORS.

BY PERCY KIDD, M.D., F.R.C.P.,
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SINCE the time when paralysis of the crico-arytenoidei postici muscles was first actually observed with the laryngoscope by Professor Gerhardt in 1863,[1] this condition has attracted much attention. Subsequently, cases were recorded by Morell Mackenzie, Riegel, Penzoldt, Semon, Rosenbach, Paul Koch, and others, and the list continues to swell steadily. Nevertheless, until recently the impression has prevailed that this form of laryngeal palsy is decidedly uncommon. Within the last few years a very different opinion has been expressed, and evidence is accumulating in favour of the view that the dilator muscles of the glottis, or abductors, are specially liable to paralysis.

It may be well here to give a short abstract of the work done on this subject in recent times, as most of the papers are only to be found in German periodicals.

Dr. Morell Mackenzie, in his work on "Diseases of the Throat and Nose," published in 1880, speaking of laryngeal affections due to disease of the brain, says: "The laryngeal symptoms vary greatly; in some cases the nucleus of one recurrent nerve is completely destroyed, and we have loss of power of all the muscles acting on one vocal cord, whilst in others the nuclei of the adductor or abductor filaments may be alone involved; hence sometimes there is merely hoarseness or loss of voice, whilst in others there is great stridor in breathing."[2] Again, we read, a few pages further on: "Experience has shown that the abductor filaments are more often pressed on than those going to the adductors. The reason of this is not at all obvious; it may be that the abductor filaments are more superficially situated than the adductors, or it may be that the adductors receive an increment of nerve force from the superior laryngeal nerve; the fact that the arytenoideus or central adductor certainly receives some filaments from this nerve supports the latter view. But whatever the cause may be, it is undoubtedly true that pressure on the recurrent nerve, if not complete, is more apt to affect the abductor than the adductor filaments."[3] The second quotation seems to show that Dr. Mackenzie had modified the opinion expressed previously.

Dr. Ottomar Rosenbach and Dr. Felix Semon made still more important contributions to the subject, and arrived at somewhat similar conclusions independently. The former writer drew an analogy between the abductors of the vocal cords and the abductor muscles of the body generally, and maintained that just as the abductors are more prone to undergo paralysis from nervous affections than the adductors or flexors, so the dilator muscles of the glottis are more liable to become palsied than the constrictors or adductors, when pressure is exerted on the recurrent laryngeal nerves. Rosenbach suggested that the movement of the vocal cord towards the middle line, which sometimes occurs in cases of bilateral abductor paralysis, on deep inspiration, is the result of a perverse or paradoxical innervation of the constrictor muscles, and is not due, as some have said, to atmospheric pressure. These views were founded on a case of carcinoma of the œsophagus, in which both recurrent nerves were involved, without any implication of the larynx itself. Bilateral abductor paralysis was followed by complete paralysis of both vocal cords.

Dr. Semon went still further, and argued for a specific vulnerability of the abductor nerve fibres, whatever the disease and wherever it might be situated, from the origin of the motor nerves of the larynx in the medulla oblongata down to their peripheral termination. According to this view, whether the disease be of a degenerative nature affecting the medulla oblongata—e.g., tabes dorsalis,—a new growth or aneurysm involving the nervous filaments in their course to the laryngeal muscles, the result is the same. In the early stages of interference with the motor nervous mechanism, the dilator muscles are the first to become paralysed. If the lesion be progressive, the adductor muscles subsequently become involved, and the final result is complete paralysis of the adductors as well as the dilators. This generalisation, based upon a considerable number of cases of central as well as peripheral disease, was first enunciated by Dr. Semon in a foot-note to his German translation of Dr. Mackenzie's work, published in June, 1880, though the remarks were written in 1879. It is true that Rosenbach brought forward his theory in November, 1879, but it was not till January, 1880,[4] that it appeared in print. It is unnecessary here to enter into the question of priority, which Rosenbach has argued recently[5] with some warmth, for his statements are sufficiently answered by a previous paper of Dr. Semon's.[6] There seems to be no reason to doubt that these authors had arrived at their conclusions quite independently. Objections have been taken to these views by Schnitzler, Solis-Cohen, and others, but the cases which have been adduced to support these objections are not free from considerable doubt, as will be seen from a perusal of Dr. Semon's paper last referred to. A far more serious attack on Rosenbach and Semon's doctrine was made by Dr. H. Krause of Berlin.[7] This author, on the strength of an experimental study of the results of irritation of the laryngeal nerves in animals, strove to show that most of the cases hitherto described as paralysis of the dilators of the glottis were really due to a primary neuropathic contracture of the constrictors or adductors. Krause's experiments may be divided into two-

[1] Virchow's Archiv, Bd. xvii.: Studien und Beobacht. über Kehlkopflähmung.

[2] Vol. i., p. 426. [3] Ibid., p. 440.
[4] Breslau Aertzl. Zeitschrift.
[5] Virchow's Archiv, Bd. xcix., p. 190.
[6] Berlin. Klin. Wochenschrift, 1883, No. 46. Sep. Abdruck, S. 7, 8.
[7] Virchow's Archiv, Bd. xcviii., Heft 2, p. 294.

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groups. In the first electrical stimulation was employed, whereas in the second class he subjected the nerves to a process of gentle but prolonged pressure. Electrical stimulation (*a*) of the peripheral end of one recurrent nerve was followed by closure of the glottis, the corresponding vocal cord coming over the middle line to meet its fellow, which remained motionless, although a slight simultaneous inward movement of its arytenoid cartilage could be observed. This last fact is explained by Krause in the light of Exner's researches, which show that not only is the inter-arytenoideus muscle supplied both by the superior and inferior laryngeal nerves, but that each lateral half of the muscle receives almost as many branches from the nerves on the opposite side as from those on the corresponding side of the body. Krause notes a curious fact at this point—viz., that closure of the glottis ceased on the occurrence of inspiration in spite of the persistence of electrical excitation. (*b*) Irritation of the central end of the superior laryngeal nerve, when its external branch remained intact, gave rise to firm closure of the glottis, and also to sphincter-like narrowing of the aditus laryngis. (*c*) Stimulation of the central end of the vagus was followed by a movement of abduction on the part of the opposite vocal cord.

In the next series of experiments the following method was employed. A catgut violin string, softened in water, was very carefully passed under the nerve on each side without damaging it, and was then tied in a loose loop. A small cork was then gently inserted into the loop so as to press slightly on the nerve. Soon after this operation, vibratory twitchings were noticed when attempts were made at adduction, although the excursions of the cords remained perfect, and the glottis continued to dilate freely and with regularity. Subsequently stridulous breathing developed, but soon passed off; and twenty-four hours after the operation the animal breathed quietly and normally. Notwithstanding this fact, a laryngoscopic examination now showed that the vocal cords were fixed firmly in the middle line, leaving only a minute fissure between their cartilaginous portions posteriorly, as is always the case during closure of the glottis in dogs, the animals operated upon. If, as sometimes happened, the cork slipped out of the loop, the vocal cords as a rule showed no impairment of their excursions in either direction, although the nerve already presented evidences of inflammation. When any restriction of the movement of the cords did occur, opening of the glottis was not more interfered with than closure. If the cork was again inserted, tonic contraction reappeared. The same results were obtained by compression of the peripheral ends of the divided recurrent nerves. Compression of the vagus trunk was followed by fixation of the corresponding cord in the position of quiet inspiration. The condition persisted, and the observations could be repeated for a period of from two to five days, after which time total paralysis of the vocal cords ensued.

At the post-mortem examination the nerves were found in various stages of inflammation. Many of the fibres of the crico-arytenoidei postici showed slight opacity and indistinct striation, whereas the adductor muscles were quite free from any change. During rigor mortis the glottis was seen to be closed, the vocal cords lying close together. Krause considers that the median position of the vocal cords was due to the slight irritation set up by the pressure of the cork, giving rise to a tonic contracture of the adductor muscles. He bases this opinion on several points—e.g., the persistent character of the affection of the glottis, the anatomical evidences of inflammation presented by the nerves, the development of the same affection when the experiment is conducted on the divided nerve, the identity of the effect produced whether electrical stimulation or pressure be employed, and the closed condition of the glottis during rigor mortis. The apparent limitation of the contracture to one group of muscles is explained by the preponderance of the adductors over the dilators, which he thinks is [illegible] proved by the position of the glottis after death. [illegible] the latter part of the article he maintains that the larynx is only required for phonation, and offers a hindrance [illegible] which is only removed by the action of the [illegible] postici. This action represents a reflex [illegible] of continuous stimulation of the vagi. [illegible] of these muscles reaches its maximum [illegible] but does not entirely cease during [illegible] in the degree of abduction accom- [illegible] inspiration being due to the elasticity of the vocal cords. Krause is not satisfied with explaining the results of his own experiments in this way, but endeavours to show that the majority of cases of abductor paralysis recorded by various observers could be more easily explained on the hypothesis of a neuropathic contracture of the adductors.

In an excellent abstract[8] of Krause's paper, Professor B. Fraenkel makes some important criticisms on these views. He points out that a primary neuropathic, as distinguished from a paralytic contracture, is a very rare affection, and has not yet been experimentally produced. A contracture of this kind develops very slowly, whereas in Krause's experiments it is said to have been established within twenty-four hours. Moreover, it is impossible to follow Krause when he attributes the degenerative changes in the postici muscles to the contracture of their antagonists, the adductors, considering that the post-mortem examinations were made at the latest within five days after the operation. The whole argument turns on the preponderance of the adductors, which Krause assumes. The position of the glottis described as constant during rigor mortis, should it be confirmed, is not decisive as to this point. We are told that the closure of the glottis, which results from electrical stimulation of the recurrent nerve, ceases on the occurrence of inspiration, although the stimulation is maintained. How is this to be explained if we assume that even during forcible inspiration the adductors are still predominant?

If, on the other hand, it be granted that during forcible inspiration the preponderance of the adductors is arrested, it is difficult to understand how apposition of the vocal cords can be the result of a contracture. The hypothesis of a contracture merely adds to the mystery of the question. Now, the condition in man recognised as abductor paralysis is no contracture, the vocal cords are lax, not tense, and on phonation they can be seen to be put on the stretch. When phonation ceases they relax in virtue of their elasticity and diverge slightly, but the muscular contraction of the postici required to produce external rotation of the arytenoid cartilages is wanting, and consequently the glottis remains a mere chink. Again, the fact that this affection occurs whether pressure be exerted on the recurrent laryngeal or on the trunk of the vagus, shows that it is unsafe to draw conclusions from Krause's experiments on animals. Lastly, Professor Fraenkel quotes some experiments made by Zederbaum[9] on the results of pressure on nerves, which prove that the application of the clamp is at once followed by loss of reflex excitability of the nerve, though the motor irritability remains. On removing the clamp, the reflex excitability is completely restored. These experiments suggest a clue to the solution of the present difficulty; for if we regard the peculiar stimulus on which the tonus of the crico-arytenoidei postici depends as equivalent to reflex irritability, the immediate effect of pressure on the motor laryngeal nerves would be loss of reflex irritability of the postici, the motor excitability of the vocal cords in other respects being still preserved.

Seifert[10] records three instances of laryngeal paralysis occurring in patients with other signs of lead poisoning, which he attributes to the influence of lead. In one there was paresis of the arytenoideus proprius, in another complete paralysis of one recurrent nerve, and in the third the vocal cords were in the median position, and there was œdematous swelling over the arytenoid cartilages. In the last case he had an opportunity of a post-mortem examination, and found the postici muscles greatly atrophied. No information is given of the condition of the crico-arytenoid articulation. Seifert considers that these cases show that different laryngeal muscles may be picked out by the poison, in opposition to the views expressed by Semon.

An attempt was made by Simanowski[11] to elucidate the question by a careful microscopical comparison of the nerve terminations of the dilator and constrictor muscles of the glottis with those of the red and pale muscles of the extremities in the sense in which a distinction has been drawn by Ranvier and Krause. Simanowski found that the abductors correspond with the red muscles, and the adductors or constrictors with the pale muscles of Krause. The subdivisions of the nerves are shorter, thicker, and more numerous in the pale muscles, longer and more delicate in the red muscles. The motor end plates are very numerous in the former, but scanty in the latter.

[8] Internat. Centralblatt f. Laryngologie, Oct. 1885.
[9] Archiv f. Physiologie, 1883.
[10] Internat. Centralblatt f. Lar., April, 1885 (Abstract).
[11] Ibid., Feb. 1886 (Abstract).

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In a dissertation published at Leyden,[12] Dr. G. D. Cohen Tervaert raises objections to Krause's views, believing that pressure on motor nerves nearly always causes paralysis, not spasm. He finds as the result of the examination of a large number of dead bodies at the hospital in Leyden that Krause's statements as to the position of the glottis post mortem are incorrect, the glottis being open at its posterior end in every case. He mentions a fact pointed out by Professor MacGillavray, that it is necessary to puncture the trachea or divide it before the thorax is opened, as otherwise the collapse of the lungs forces air through the glottis, and may interfere with the observation. This writer accepts the idea of a paralysis of the abductors, but considers that Semon's explanation is insufficient, considering that no unequivocal case has yet been recorded of paralysis of the postici passing into complete paralysis of the recurrent laryngeal nerve. Attention is directed to the fact that the postici are the only dilators of the glottis as compared with the greater number of muscles that close the glottis. The apparent proclivity of the dilators to disease is to be explained in the light of Exner's observations, which prove that whereas many of the muscles of the larynx are supplied by both superior and inferior laryngeal nerves, the postici are almost entirely innervated by the recurrent branch, and are therefore more liable to suffer when this nerve is diseased than the adductors.

Krause's views were also subjected to a severe criticism by Rosenbach,[13] but the arguments adduced by him are much the same as those of Fraenkel.

At the meeting of the Laryngological Section of the Association of German Naturalists and Medical Men, held at Berlin in September, 1886,[14] the question was reopened by Dr. Semon. In the discussion that followed Krause reasserted his position. Remak maintained that the dispute could only be settled by clinical and pathological experience, not by experiments on animals. A persistent primary contraction of the adductors was only conceivable on the hypothesis of a reflex origin. Moreover, irritation of purely motor nerves gave rise to clonic spasms, not to tonic contracture. Meschede referred to a case of bilateral abductor paralysis he had cured by injections of strychnia, which could hardly be explained on the contracture theory. Dr. Semon, in his reply, pointed out that the idea of a reflex contracture could not be entertained in Krause's experiments, for the same median position of the vocal cords was obtained whether the cork was fastened to the peripheral end of the recurrent nerve or to the undivided nerve. If the fact should be established that a primary neuropathic contracture could be produced under similar conditions in the case of other nerves, he would be convinced, not otherwise. Several other cases have been recorded recently[15] which bear on this point, but I have only mentioned some of the most important contributions to the subject, as it would exceed the scope of the present communication to quote and discuss all the papers lately published.

(To be concluded.)

REMARKS ON THE

ACCIDENTS WHICH NOT INFREQUENTLY OCCUR TO PARTURIENT WOMEN.

BY WILLIAM DUNCAN, M.D., F.R.C.S.,

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(Concluded from page 65.)

3. *Laceration of the perineum* is, as Dr. Fordyce Barker says,[1] "an accident of parturition, which has occurred in the practice of the best obstetricians, and cannot always be prevented; but I believe that a thorough appreciation of the conditions under which it is liable to happen, and a judicious and timely use of means appropriate to each special condition to avert the danger, will render the accident a very rare one." Dr. Barker gives the following conditions as likely to produce it:—(*a*) A very straight sacrum; (*b*) a vulvar orifice more or less at right angles to the pelvic outlet; (*c*) an unyielding perineum; (*d*) extreme smallness of vulva; (*e*) a large fœtal head; (*f*) occipito-posterior and face presentations; (*g*) incomplete flexion; (*h*) very rapid or very tedious labours; (*i*) excessive irritability of patient; and (*j*) unskilful or instrumental interference. When once a laceration has begun, its extent depends, *pari passu*, on the rapidity with which the head and shoulders are delivered, being greater the quicker delivery is effected. Perineal laceration may be followed by hæmorrhage or septic poisoning; and, later on, owing to the partial destruction of the pelvic floor, rectocele and cystocele may occur, and these, in their turn, be followed by uterine prolapse, or other displacements of the pelvic viscera, with their accompanying evils. Now, what may we consider to be the best means of preventing perineal laceration? For my own part I have no faith in supporting the perineum, as I fail to see how it can be of use. Believing, as I do, that the majority of ruptures are due either to a too forcible and rapid expulsion of the head, or to a premature extension taking place before the nape of the neck is well under the symphysis pubis, so that the occipito-frontal, instead of the shorter sub-occipito bregmatic diameter, passes through the vulvar outlet, my mode of treatment is as follows:—When the head has come down on to the perineum, having well lubricated this structure with carbolised vaseline, I endeavour to regulate the rate at which the head distends it, and to maintain flexion by placing the fingers of the left hand towards the bregma, and those of the right on the occiput, and in this way am able, I think, to frequently stave off a rupture; if, however, notwithstanding this procedure, laceration seems impending, I make lateral incisions in the outlet, and, in not a single instance, in which I performed this simple operation of episiotomy, has the perineum itself given way, nor has there been any trouble subsequently from the incisions, which unite perfectly after the insertion of one or two catgut sutures. Since advocating this method, in a paper published in THE LANCET in 1884, I have only had occasion to incise the perineum laterally five times, but in each case with a successful result. However, since reading a paper by Credé on "Single Lateral Incisions for Perineal Ruptures,"[2] I am bound to admit that, in all probability, the double incision is unnecessary. (A good abstract of this paper appears in the Year-book of Treatment for 1885, from the pen of Dr. Champneys.) Credé thus describes the method in which the operation is performed at Leipzig. "One blade of a pair of strong straight scissors is inserted flatwise, between the vulva and head, about an inch from the fourchette; then, when the acme of the pain has passed, a cut is made outwards towards the tuber ischii (half to one inch long), and either through the skin, or through skin and muscle. It is important not to cut at the height of a pain, otherwise, owing to the rapid advance of the head, extensive laceration may take place; whereas, if performed as the pain is passing off, we can better regulate the extent of the incision, and the suffering is less than when the pain has quite passed away." Credé advises that the incisions be closed with silk. From an analysis of 2000 cases he gives the following table:—

I. PRIMIPARÆ (997).		
Lateral incisions	259 = 25·9	per cent.
Spontaneous ruptures	104 = 10·4	„
Rupture in spite of incisions ...	29 = 2·9	„
Perineal injuries ...	392 = 39·2	„
II. MULTIPARÆ (1003).		
Lateral incisions...	12 = 1·2	per cent.
Spontaneous ruptures	24 = 2·4	„
Rupture in spite of incisions ...	0 = 0	„
Perineal injuries ...	36 = 3·6	„
III. PRIMIPARÆ AND MULTIPARÆ (2000).		
Lateral incisions...	271 = 13·5	per cent.
Spontaneous ruptures	128 = 6·4	„
Rupture in spite of incisions ...	29 = 1·4	„
Perineal injuries ...	428 = 21·3	„

He sums up as follows: "Very rarely, and only in very unfavourable and exceptional cases, does laceration follow

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[12] Internat. Centralblatt f. Lar., Sept. 1886 (Abstract).
[13] Virchow's Archiv, Bd. xcix.
[14] Internat. Centralblatt f. Lar. (Abstract), Jan. 1887.
[15] Internat. Centralblatt f. Lar., Aug. 1884, April, July, Nov. 1885, Feb. 1886, Jan., Feb., and April, 1887.
[1] The Puerperal Diseases, 4th edition, p. 40.
[2] Archiv für Gynäkol., Band xxiv., S. 148.

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incision; the oftener incision is practised the rarer are lacerations; complete ruptures are abolished; the lying-in is far more favourable after incision than after laceration. Incision prejudices recovery inappreciably or not at all; the vulva is not really damaged. Incision does not favour infection; the pain is trivial, and pain is saved by shortening the most painful stage of labour; by relieving pressure it helps to avoid sloughing."

In the event, however, of laceration taking place, I maintain that it is our bounden duty to bring the lacerated surfaces together by means of deep sutures, even though the tear be slight, and *a fortiori* when it is extensive, in order not only to lessen the risk of septic absorption, but to obviate ill effects, which may necessitate a secondary perineoraphy later on. My mode of procedure is the following: The patient lying on her left side with the legs well flexed; the nurse with one hand on the abdomen aids uterine contraction, and with the other raises the right knee well away from the left. A piece of sponge the size of an orange, and wrung out of an antiseptic solution, is passed into the vagina, in order to prevent blood trickling down and obscuring the rent; then the left forefinger is inserted into the rectum, and *the posterior vaginal wall pulled forward* so as to expose the whole extent of the laceration. This is now cleansed of all clots and sponged over with an antiseptic solution; then two or three sutures (I prefer wire, but silk or silkworm gut will do) are passed deeply, with a well-curved needle set in a handle, so as to include all the laceration; the two sutures nearest the anus are now twisted, then the sponge withdrawn from the vagina and the remaining suture rapidly secured. The sutures are left in for a week, the vagina kept free from discharge, in the manner to be mentioned presently. The bowels are kept quiet for five days, if the laceration be extensive, and especially if it involve the anal sphincter; but if it be slight, or there be any special indication for doing so, a mild dose of castor oil or other aperient may be given on the second day. Chloroform as a rule is unnecessary, unless the patient be very nervous; if administered at all, it must be given to the surgical degree. I would add that it is far more important for a practitioner to carry to every midwifery case some needles with wire or silk than a bottle of ergot.

4. *Post-partum hæmorrhage.*—Although this is a not uncommon accident of childbirth, it is in the fullest sense a preventable one, and only occurs frequently under one condition—namely, when the third stage of labour has been mismanaged. I cannot do better than quote Playfair's words on the subject.[3] "I believe that if this lesson were driven into the mind of the practitioner that every case [of midwifery] is to be treated as if hæmorrhage were about to occur, then it would be of the rarest possible occurrence. If I hear of a man who is always having hæmorrhage amongst his patients, I feel myself justified in concluding that that man either does not know or does not practise the proper management of the final stage of labour." My own experience leads me to endorse these words, for although the fact that, in an attendance upon just a thousand labours, not a single case of flooding occurred may be due to good fortune, I am disposed to attribute it to one's routine method of conducting each case. "When the child is about to be born, I get the nurse to spread both her hands over the uterus, to follow it up as it is being emptied, and to maintain firm pressure without intermission for a single instant after delivery until I relieve her; this I do after having separated the child, placed it comfortably aside, and washed my hands. I then slip my hands under those of the nurse, and, grasping the uterus (which almost invariably feels well contracted), I gently knead it, making pressure downwards and backwards towards the sacrum; the placenta is expelled usually in a few minutes by the *vis à tergo*; and under no circumstances whatever is the slightest traction made on the cord." This method, it will be seen, is very different from that advocated during the last few years by Credé, and which has become so widely adopted. He says: "It is chiefly important to utilise exactly the moment, and no time for pressure with the hand. The hand should be softly laid upon the uterine region; [illegible] stroking movements over the largest [illegible] of the uterus are made until a contraction [illegible] sets in, grasping with the outspread [illegible] one hand is insufficient with both hands) the uterus, and, at the moment when [illegible] seems to have reached its greatest energy, press [illegible] the fundus and walls of the uterus in the direct[illegible] hollow of the sacrum. To press upon the uterus during absence of a contraction, in order to remove the placenta, is entirely wrong, and does not fulfil its object." Credé says that the most advantageous, and at the same time perfectly harmless, period for the expression is the third or fourth contraction, which occurs about five minutes after birth; and he asserts that if after the lapse of half an hour the placenta has not been delivered, he regards the case as pathological and demanding manual intra-genital aid.

With regard to the curative treatment of post-partum hæmorrhage, I shall only remark that emptying the uterus of all clots, followed by the injection of hot water into its cavity, and of ergotine into the gluteus muscle, will prove sufficient for most cases, and that, considering the dangers attending the use of perchloride of iron injection, this should only be had recourse to in the most desperate cases; and, lastly, the frequent subcutaneous injection of ether will sometimes obviate the necessity for transfusion.

Such are the few remarks I have ventured to bring forward on some of the accidents to which parturient women are liable; but seeing that almost all the cases of septic poisoning occurring in puerperal women, and resulting in either pelvic cellulitis, pelvic peritonitis, or puerperal fever, are due to infection from without (hetero-infection), and few, if any, to auto-infection, I cannot refrain from laying stress, before concluding this paper, on the immense importance of the systematic adoption of strict antiseptic measures in the conduct of every midwifery case, not only on the part of the practitioner, who, as a rule, only touches the genitals during parturition, but more particularly on the part of the nurse. Assuming, then, that the sanitary arrangements, both of the lying-in chamber and of the house in which it is situated, are perfectly sound, I venture to suggest that every obstetric case should be conducted somewhat as follows:—The medical attendant, before visiting his patient, ought to feel confident that he does not carry in his clothes the means of infection. Before making a vaginal examination the hands should be thoroughly washed with carbolic soap-and-water, using always a nailbrush, and then the forefinger smeared with some antiseptic. (I always use a 1 in 500 solution of corrosive sublimate in glycerine.) The vagina is to be washed out before the birth of the child with a warm solution of either 1 in 40 carbolic acid, or 1 in 2000 sublimate.[5] For the five days following delivery the vagina is to be washed out night and morning with a 1 in 2000 sublimate solution, and from then until the lochia have ceased with a solution of half the strength. Any perineal laceration should be sutured, and in any case where it has been necessary either to apply the long forceps or to insert the hand into the uterine cavity, this latter should be washed out by means of a double pipe,[6] and then a 30-grain iodoform bougie passed well into the uterus. The nurse should take precisely the same precautions as the practitioner with regard to her hands before attending to her patient. She should be careful to remove all soiled linen from the room, and to keep the catheter and the vaginal pipe immersed in a basinful of 1 in 40 carbolic or 1 in 2000 sublimate solution. If every woman's lying-in were to be conducted on the lines above indicated, it seems to me we should very rarely meet with that fearful malady, puerperal fever.

[illegible] Int. Congress, 1881, vol. iv., p. 387.
[illegible] Gynækologie, 1881, p. 284.

[5] Messrs. Calvert of Manchester have made an elegant 20 per cent. carbolic soap, with case for carrying in the waistcoat-pocket; and also a granulated phenol, which is readily soluble in warm water without any deposit. Professor Helferich has invented sublimate tampons, the contents of each one of which, dissolved in two pints of water make a 1 in 1000 solution.

[6] Messrs. Down Bros. of St. Thomas's Street, S.E., have made a very good one for me.

DONATIONS.—Baron de Hirsch, in memory of his son, Lucien de Hirsch, who had a large racing establishment at Newmarket, has in consequence of the breaking-up of that establishment devoted the proceeds, amounting to £12,000, to public charities, amongst which are the following:—Metropolitan Provident Medical Association, £3000; London Hospital, £1000; Rous Memorial Hospital at Newmarket, £1000; Children's Hospital, Great Ormond-street, £500; and North-Western Hospital, £500.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ORIGIN OF TUMOURS BY REVERSION.

BY HARRY CAMPBELL, M.D., B.S. LOND., M.R.C.P.,
ASSISTANT-PHYSICIAN AND PATHOLOGIST TO THE NORTH-WEST LONDON HOSPITAL.

THE interesting communication of Dr. Gresswell on the above subject has suggested the following brief remarks.

I have been inclined for some little time past to regard certain new formations as reversions—of limited patches of tissue—to an ancestral type, notably the enchondromata, myxomata, sarcomata, and the new formation occurring in consequence of inflammation—namely, granulation tissue—including, of course, the granulomata. It must not be forgotten that the reversion of which Dr. Gresswell speaks is not the ordinary reversion which occurs during the embryological development of an organism, but the reversion of a fully evolved and specialised tissue to one of remote ancestral type. That such a fully-developed tissue may thus revert is a well-recognised fact. Dr. Maudesley points out that during the cerebral disturbance which heralds an attack of insanity, the moral faculty—namely, that mental element which has been last acquired, is generally the first to go. This shows a reversion of cerebral tissue to an ancestral type. It is well to bear in mind that the tissues of a fully-developed organism have many potentialities which only need fitting opportunities to display themselves. These consist in modifications of cell environment. A good example of such latent capacities is afforded by disease, atrophy, or removal of the ovaries or testicles, when the organism tends to take on the characters of the opposite sex. This shows that each sex contains potentially the actualities of the other, and similarly the most highly specialised organism contains the potentialities of remote ancestral actualities which display themselves under modifications of cell environment.

As regards tumours, the nature of this environment is known in certain instances, as in the granulomata; parasites enter the tissues, and so disturb the cell environment that they can no longer maintain their high grade of specialisation and revert in consequence to an ancestral type. The malignant tumours have, I believe, a like parasitic origin; but there is no need here to adduce arguments in favour of this view. Now, sarcomatous tissue is distinctly of an ancestral type; one cannot, however, speak so positively of the carcinomatous. In epithelioma, however, we see changes allied to embryological ones. The squamous epitheliomata originate by an involution of the epithelium, such as occurs in the development of all open glands (even the liver is thus developed); but in this instance the inverted cylinders have no lumen, nevertheless the manner of development is that of a crude form of gland. In the cylindrical variety we have a higher effort, for a distinct lumen is developed. I cannot compare the other carcinomata to any embryological or ancestral tissue through dearth of knowledge; but let us bear in mind that the affected tissues must possess the potentiality of this mode of growth, and whence, it may be asked, have they this power? I should not be surprised if one of wide histological knowledge could throw light upon the subject on the lines laid down by Dr. Gresswell.

Guilford-street, W.C.

SUPRA-PUBIC LITHOTOMY.

BY CHARLES WILLIAMS, F.R.C.S. ED.,
SURGEON TO THE NORFOLK AND NORWICH HOSPITAL.

GEORGE J——, a farm labourer, aged eighteen, was admitted into the above institution in May, 1886. He had suffered from constant irritability of the bladder from the age of two or three years, and from well-marked symptoms of stone for twelve months. Of late the vesical pain had been excessive, and had greatly impaired his health. He was thin and worn, stooped much, and was inclined to have his left hand constantly in his trousers-pocket, grasping his penis—a sure sign of stone in the bladder. There was no indication of kidney impairment. The lithotrite gave evidence of a rough stone of about an inch and a half in diameter.

June 25th.—Hypogastric lithotomy was performed, the bladder having been injected with six ounces of boracic acid solution through a No. 9 silver catheter, known as Brodie's, which was retained and held by my colleague, Mr. Crosse. This proceeding rendered the rectal bag unnecessary, and proved to be a sure and safe guide to the viscus, which I was enabled to open without difficulty. The stone was extracted without trouble, and a medium-sized rubber tube placed in the lower portion of the wound. The vesical incision was brought together by means of several catgut sutures, and the abdominal wound closed by six carbolised silk sutures. The patient was placed on his side in bed, and with a small basin was enabled to catch the urine as it ran through the drainage tube.

Two days later redness and tension were noticed around the wound; some sutures were removed and a teaspoonful of pus escaped. On the fourth day the tube was removed, and on the fifth the urine passed per urethram.

On July 31st the patient left the hospital in excellent health, the wound soundly healed. The stone weighed 509 grains, and consisted of uric acid.

Norwich.

NOTE ON THE ADMINISTRATION OF OPIUM.

BY A. G. AULD, M.D.

THERE are few drugs more commonly prescribed than opium, and it is certain there is none more abused or more carelessly combined. Of its numerous official preparations it cannot be said that their individual actions are free from the disagreeable after-effects which characterise that of the pure drug. The problem is to get all the good effects of the drug, and yet to obviate the resulting headache, sickness, and loss of appetite caused by arrestment of the secretions of the alimentary canal. This, of course, refers to medium doses. Belladonna or atropia have for long been given in combination with opium, but in these respects the result has been mostly a failure, the reason being that while the actions of these drugs on the central nervous system are to a certain extent antagonistic, their actions on the alimentary secretions are much the same. For some time I have given opium in combination with ether with good results, ether being one of the most powerful secretion stimulants we know. I generally prescribe equal quantities of tincture of opium and spirit of ether, and though not claiming for this a specific effect, think it a good and most useful mixture.

Wick, N.B.

SEVERE CASE OF ACUTE GLOSSITIS.

BY BERNARD RELTON, M.R.C.S., L.S.A.

AT 1.30 A.M. on May 29th I was called up to go immediately to see a man, a painter by trade, aged about thirty, whose "tongue was so swollen that he was being suffocated." On interrogating the messenger, I learnt that the patient had had a heavy supper of oysters, cucumber, onions, and whisky at 11 that evening, and shortly afterwards his tongue and neck began to swell rapidly, and that he was now almost choked. I went to the man immediately, and found him sitting up in bed with his mouth wide open, and protruding from it a red mass which completely filled up the aperture of the mouth, while the unfortunate man was gasping for breath and appeared almost moribund. Seeing the danger he was in, I determined to make free incisions into the tongue; but on pulling down the lower lip I found the floor of the mouth so very swollen and œdematous, and the immensely swollen tongue pushed up so high, that I freely punctured with a "Paget" knife the swollen tissues beneath the tongue, from which a considerable quantity of serum rapidly oozed out. I was now able to get the handle of a spoon on the dorsum of the tongue, and pressed it down hard, so as to give him a better chance of breathing, and this made him very sick. The vomited matter, more than a pint in quantity, consisted of improperly digested food, and smelt strongly of onions. He now began to breathe much better and in the course of ten minutes, or even less, he was able to move his tongue, which before was

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quite impossible, and soon after he was able to close his mouth. The submaxillary glands, which on my arrival were greatly swollen on the right side, and looked like a huge submaxillary new growth, now began to subside, and half an hour after entering the house I left, leaving the man out of danger, although still breathing with difficulty. I called again about 9 A.M., and found the patient sitting up in bed. On asking him how he felt, he replied, "I am quite well now; it was those oysters poisoned me." On asking him how he could tell, he told me that when he swallowed them they had a nasty coppery taste, which he noticed again directly the vomiting came on.

When I was at St. Thomas's Hospital I saw two cases of acute glossitis, but in neither of them were the symptoms to be compared in severity with the above. I may add that, besides the puncturing, I applied hot water fomentations to the neck, and inhalation of steam after the vomiting, but I do not consider they had anything to do with the successful issue of the case.

Rugby.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

UNIVERSITY COLLEGE HOSPITAL.

SCIRRHUS OF THE PANCREAS, CAUSING INTESTINAL OBSTRUCTION; COLOTOMY; DEATH; NECROPSY.

(Under the care of Mr. MARCUS BECK.)

THIS case is unusual in many respects; it is not common to find scirrhus affecting the pancreas as a primary growth. When malignant disease affects that organ it is mostly as an extension from a neighbouring part, such as the stomach. Here there can hardly be a doubt, from the careful examination made after death, that the disease commenced in the pancreas, and produced the symptoms of intestinal obstruction by extension to the colon. It is well known that malignant stricture of the bowel is by far most common below the descending colon (Brinton, 60 per cent.), and therefore the indication where the position of the stricture is doubtful, is either to perform colotomy, as in this instance, on the left side, proceeding after failure to a similar operation on the right side, or to perform abdominal section, and after the discovery of the seat of obstruction, proceed to the opening of the bowel above the position of the disease, in the most convenient situation. The course adopted will vary in different cases, and in the practice of different surgeons, but where the seat of obstruction is probably in the large intestine, most would proceed in the manner adopted with success by Mr. Beck. For the following notes we are indebted to Mr. W. B. Ransom, dresser to the case.

James B ——, a cabdriver, aged fifty-seven, was admitted into University College Hospital at 2 P.M. on June 11th, 1887, with a history of complete intestinal obstruction since June 1st. On the 30th of the previous month he felt some discomfort in the abdomen, and lost his appetite. The next day (May 31st) he passed two small hard lumps of fæces, but nothing since that date in spite of the repeated administration of jalap, castor oil, and enemata. On June 1st he vomited some white slimy matter, but that was the only occurrence of sickness. The next day he was seized with violent cramp pains all over the abdomen, which on the evening of that day became much swollen. The pains continued up to the time of admission into the hospital. During the eleven days of obstruction he was fed on gruel and milk.

On admission the patient lay in a prostrate condition, and complained of severe pains shooting all over the abdomen. The abdominal walls were considerably and uniformly distended, and were tympanitic both in front and in the flanks. No intestinal movements could be seen, but some rumbling was felt. No special tumour could be detected by the touch, and nothing was discovered in the [illegible] pulse was full and strong, and no cardiac bruit [illegible] The patient had slight scalding pain during mi[illegible] The urine was high-coloured, acid, sp. gr. 1040, fr[illegible] sugar and albumen, but contained an excess of uric [illegible] The previous history gave no evidence of syphilis, typ[illegible] fever, or dysentery. There was an obscure history of [illegible] acute attack of abdominal pain, vomiting, and intestinal obstruction in 1856, when the patient was a soldier in the Crimea. For the last three years he has been habitually costive, the bowels being only opened by the use of jalap. There was no family history of cancer.

From the history of the attack and the distension of the flanks, it was thought that the seat of the obstruction was in the large intestine, probably in the sigmoid flexure, and accordingly two hours after admission Mr. Beck performed left lumbar colotomy. But when the descending colon was opened neither gas nor fæces escaped through the incision, although the abdominal tension caused the gut to protrude through the wound. The finger inserted into the colon could not reach the seat of obstruction. The wound was therefore stitched up, covered with iodoform wool, and the patient turned over and the ascending colon opened. From this incision a large quantity of gas and liquid fæces immediately issued, and when the patient was returned to bed he at once expressed his sense of relief.

On the next day, June 12th, a free discharge of liquid fæces continued from the right colotomy wound, and the patient felt comfortable. Temperature at 11 A.M., 99·4°. The wound on the left side was found to be fairly clean, and was covered up with iodoform wool and collodion. During the next two days, however (13th and 14th), this wound became foul, and showed a brownish discharge of fæcal appearance and smell. The sutures became loose, and the wound gaped widely by the 16th. Temperature at 11 A.M. on the 14th, 101·8°. This discharge from the descending colon ceased to be fæcal by the 18th, but a considerable quantity of white mucus continued to escape. The abdominal distension and tenderness became by this time very slight, and the appetite returned. The fæces continued to escape from the right colotomy wound, but became more solid. Improvement continued up till the 21st, and the patient slept well, and was able to eat meat. During these days there was no great rise of temperature—e.g., on June 20th, at 11 A.M., the temperature was 99·4°; at 7 P.M., 100·4°; but after the 21st it was never below 100°. The abdominal pains returned, and the patient, though apparently drowsy by day, hardly slept at all during the night. On the night of the 26th he vomited three or four times, bringing up food and bile-stained fluid. He was also at times somewhat delirious. On the 27th, at 11 A.M., the temperature was 103°, and the vomiting was twice repeated. After having some brandy he seemed easier, and at night slept better, being only sick once. Temperature at 11 P.M., 102·6°. On the morning of the 28th he seemed better, got shaved, and smoked two pipes between 7 and 8 A.M., but before 9 A.M. he died. Temperature at 5 A.M., 101·2°.

The suddenness of the death, when the patient was fairly comfortable, and to all appearance distinctly better, was a remarkable occurrence, which the necropsy failed to explain, while the changes observed post mortem rendered further remarkable the slight amount of discomfort experienced by the patient since the operation.

Necropsy, twenty-six hours after death.—The intestines were found to be matted together by a thin layer of yellow lymph, and to be in many places adherent to the abdominal walls. One large and several small perforations were seen in the small and large intestine, but all were closed by adhesions. The peritoneal cavity contained neither fluid nor fæces, and there was no special inflammation round the colotomy wounds. The sigmoid flexure and descending colon on being opened proved to be empty and free from tumour or stricture; but at the splenic flexure the colon was much constricted, and the mucous membrane puckered into numerous folds. Otherwise the interior of the colon at this spot presented no abnormality, but on section through the puckered region the muscular coat of the colon was found to be continuous with a hard, dense, white mass, which bound it down to and extended into the tail of the pancreas, the spleen, and the left kidney. To the naked eye the growth appeared to extend into the pancreas for about an inch, but only into the capsules of the kidney and spleen.

Microscopical examination of the growth showed it to be a scirrhous cancer affecting chiefly the last inch of the tail of

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the pancreas. Normal pancreatic gland tissue was found in its immediate vicinity. The capsule of the spleen and a thin layer of the splenic pulp were completely destroyed at the place of contact with the growth, the stroma of which contained broken-down blood pigment (hæmatoidin?) in the region which had invaded the spleen. A portion of the cortex of the kidney was destroyed, and in the zone in front of the growth there was great infiltration of leucocytes and signs of degeneration of glomeruli and tubules. The invasion of the colon by the cancer cells was mostly limited to the muscular coats, but here and there the submucous coat was penetrated, and at these points the mucous membrane was so infiltrated with leucocytes as to appear on the point of ulcerating into the lumen of the gut. But at no point was there any proliferation of the epithelial cells of the colon, while the cells of the tumour throughout showed the typical arrangement of scirrhous cancer, and in the substance of the pancreas were continuous with masses of normal gland cells, with which they were almost identical in appearance. There was thus no room for doubt that the growth originated as a carcinoma of the pancreas.

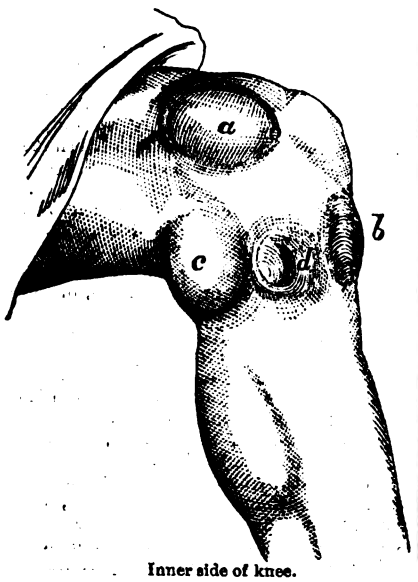
LEEDS GENERAL INFIRMARY.

MULTIPLE ABNORMAL SYNOVIAL CYSTS AROUND THE KNEE.

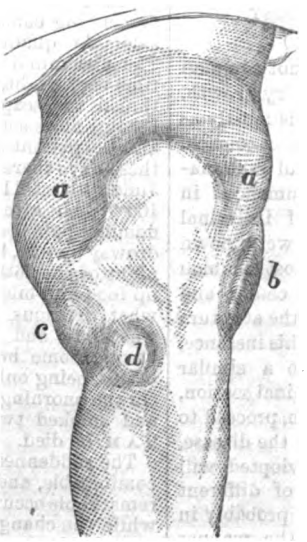
(Under the care of Mr. A. W. MAYO ROBSON.)

THE following case was reported and the drawings made by Mr. W. B. Russell, B.A.

J. P——, aged fifty-three, was admitted on March 23rd, 1886, complaining of pain and stiffness of the left knee. The patient, an out-door labourer, exposed to cold and wet, had for eight years suffered from rheumatic pains in both knees. About eight months before admission, without apparent cause, a swelling formed about his left knee, accompanied by considerable pain and lameness; the leg also became swollen as far as the ankle. He was treated as an out-patient by means of Scott's dressing and elastic bandage, which relieved him, but there had been swelling around the knee ever since, and lately the pain and lameness had increased.



Inner side of knee.



Front view.

a. B. under vasti. *b*. B. under biceps. *c*. B. under semi-membranosus. *d*. B. under sartorius.

On admission there was much swelling around the left knee, which was flexed to an angle of 150°, and could not be extended without pain. The swelling was markedly fluctuating in four distinct parts. (See diagrams.) 1. Above and on each side of the patella, extending under the vasti, was a large fluctuating sac, which did not cause a bulging below the patella when pressed on. 2. Above the head of the fibula, in connexion with the biceps tendon, was an oval, well-defined swelling the size of a [illegible] and tender on pressure. 3. On [illegible] semi-membranosus was an [illegible] tuating sac, which was rather smaller than *b*. 4. In front of *c*, and extending a little lower and more forward, was a sac less tense than the others, and evidently communicating by means of a small opening with *c*, for the fluid could be pressed back so as to make the sac *c* more tense. The internal saphena vein was somewhat varicose, especially above the knee. The knee jerk could be tried with difficulty owing to the swelling, but when obtained the leg remained extended for a few seconds. The other reflexes were normal. He could stand with his eyes closed. The patient was well in every other respect, and got on so comfortably with a Thomas's splint that he would not have any active treatment, and was at his own request made an out-patient.

Remarks by Mr. MAYO ROBSON.—That the case above recorded is an unusual one is proved by the fact that several of my colleagues had not seen a similar one. In the thirteenth volume of the St. Bartholomew's Hospital reports is a paper by Mr. Morrant Baker on several cases of a like nature, in which he comes to the following conclusions:—"1. That in cases of effusion into the knee joint, and especially in those in which the primary disease is osteo-arthritis, the fluid secreted may find its way out of the joint, and form by distension of neighbouring parts a synovial cyst of large or small size. 2. That the synovial cyst so produced may occupy (*a*) the popliteal space and upper part of the calf of the leg, or may (*b*) be evident in the calf of the leg only, projecting most, as a rule, on the inner aspect of the leg as a small defined swelling, not approaching within three or four inches of any part of the knee joint. 3. That however large the synovial cyst may be, fluctuation may not be communicable from it to the interior of the knee joint; but the absence of such fluctuation must not be taken to contraindicate the existence of a connexion between the joint and the cyst. 4. That the synovial cyst may be expected to disappear after a longer or shorter period without leaving traces of its existence, even on dissection of the limb. 5. That the cyst should not be punctured or otherwise subjected to operation, unless there appear strong reasons for so doing, inasmuch as interference may lead to acute inflammation and suppuration of the knee joint. 6. That most often the disease in the knee joint will be found to have begun some time before the appearance of the secondary synovial cyst; but sometimes the patient's attention may be first drawn to the latter, or the cyst may seem for a long period the more important part of the disease." With such recorded experience I felt that there were only two courses open to me in treating a patient over fifty, these being amputation or palliative means; and as the latter answered so well, the patient took the responsibility into his own hands, and elected to be relieved with his limb on. I have seen abnormal synovial cysts in close and intimate connexion with other joints—e.g., ankle, wrist, shoulder, and in one case with the back of the hip joint, but in no example have I found them so extensive or producing so much deformity and lameness as in the case related, which, though differing in several points from Mr. Morrant Baker's recorded cases, is evidently essentially of the same nature.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.

GASTROSTOMY IN A CASE OF MALIGNANT STRICTURE OF THE ŒSOPHAGUS; DEATH; NECROPSY; REMARKS.

(Under the care of Mr. J. LIONEL STRETTON.)

J. M——, aged fifty-seven, was admitted on July 22nd, 1886. He complained of difficulty in swallowing and regurgitation of food; he could not swallow any solids. There was [illegible], and a large œsophageal bougie passed easily, meeting with some slight resistance opposite the cricoid cartilage. He was ordered milk *ad lib.* and four ounces of [illegible] daily; the bougie to be passed once or twice a week.

Aug. 5th.—The difficulty in swallowing has increased, the

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effort apparently causing spasmodic stricture. The bougie meets with more obstruction in the cricoid region, and a hardened feel is apparent internally. Ordered to have two pints of milk, two eggs, and four ounces of brandy injected daily. He has lost flesh considerably.

His condition continued to get worse; he was becoming rapidly thinner, and the tubes for the injection of the milk had gradually to be reduced in size.

Oct. 1st.—Nothing larger than a No. 10 catheter can be passed. This does not cause much pain, and the nourishment is injected through it.

15th.—The patient is now unable to get up, but still takes nourishment freely by injection.

20th.—The difficulty is much increased, and it is doubtful if the catheter passes the stricture. To be fed on nutrient enemata. Ice and brandy by the mouth.

23rd.—After consultation with his colleagues, Mr. Stretton decided to perform gastrostomy.

The usual incision was made and the stomach stitched to the edges of the wound, the peritoneum being included in the sutures. No opening was made in the stomach. The operation was well borne. He was ordered a grain of opium every four hours, and to be fed with nutrient enemata. In the evening he was quite comfortable and free from pain. Temperature 99·6°; pulse good.

24th.—Temperature 98·4°; pulse regular and of good volume. Is taking nourishment well by the bowel.

25th.—Has had a fair night. Temperature 99·6°; pulse good. Complained of slight pain.

26th.—4 A.M.: He became very weak, and could not retain the enemata. 11 A.M.: At Mr. Stretton's visit he was found to be exceedingly prostrate. It was determined as a last effort to open the stomach and inject some brandy-and-milk, but before this procedure could be carried out he passed away, apparently from exhaustion, quite free from pain.

Necropsy.—Body much emaciated. On opening the abdomen the stomach was found to be adherent to the abdominal walls adjoining the external wound, the stitches intact, and there was some local peritonitis and flakes of lymph. The stomach, which was much retracted, was removed, together with the adherent abdominal wall and the œsophagus. In the course of the œsophagus there was a growth about the size of a small walnut just below the level of the cricoid cartilage, which only allowed the passage of a blowpipe. The other organs were healthy. No enlarged glands were discovered.

Microscopic examination by Professor Barling showed the growth to be a spheroidal-celled carcinoma of the scirrhous variety, with typical alveolar structure.

Remarks by Mr. STRETTON.—The above description of the growth will probably account for the failure of treatment by bougie, which would be more likely to afford relief in the softer varieties of carcinoma and epithelioma more commonly met with in this region. The operation was only undertaken as a last resource, with the full consent of the patient, who stated that he would rather die under it than continue his miserable existence. I feel confident that had it been undertaken earlier the result might have been otherwise; but we, as the patient, were wishful to try all other means first. In future cases when there is no marked relief by bougie treatment, I should not hesitate to urge the operation at a much earlier date before the powers are so much diminished.

PRESENTATIONS.—Mrs. Wardroper has been presented with a handsome silver coffee and tea service, with salver and the following inscription: "This salver, with accompanying service, was presented to Mrs. W. W. Wardroper, on her resignation of the matronship of St. Thomas's Hospital, by the present and present probationer nurses of the Nightingale Fund Training School, over which she has presided from the beginning, for twenty-seven years, as a grateful appreciation of the inestimable services rendered by her to the profession of nursing, and as a token of regard and esteem. June, 1887."—The Master of the Jubilee Victoria 1895 of the Ancient Corporation of Canterbury, last week presented the Recorder of Kingston (Mr. Henry George Sadler) with a handsome marble time-piece, on the occasion of his marriage with Mr. Henry Octavius Preston, [illegible]

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Ophthalmoplegia. — Quinine Amblyopia. — Sympathetic Ophthalmitis occurring after Evisceration.

A MEETING of this Society was held on Friday, July 8th, Mr. Jonathan Hutchinson, F.R.S., Vice-President, in the chair.

Mr. JONATHAN HUTCHINSON, jun., read the notes of a post-mortem examination of a case of Ophthalmoplegia Externa and Interna. The patient had been in the Bancroft-road Infirmary under the charge of Dr. Robinson, who furnished the clinical notes of the case. There was considerable defect of vision, due to nearly complete paralysis of the oculo-motor nerves of the right eye; persistent pain in the forehead and temple was complained of, and there was some proptosis and congestion of the lids. At the necropsy there was found a chronic inflammatory process about the right cavernous sinus, which had produced inflammation of all the nerves in its wall, the lumen of the sinus had become obliterated, there was partial obstruction of the internal carotid artery, and the apex of the right temporo-sphenoidal lobe was firmly adherent to the adjacent dura mater. The lesion was most probably due to syphilitic poison, the cause of the patient's death being cellulitis round a specific ulcer of the leg. He referred to two cases of unilateral ophthalmoplegia externa and interna, in which the symptoms were precisely similar to those of the present case; these were treated with potassic iodide, and each made a good recovery. He suggested that these cases were also due to syphilitic inflammation about the cavernous sinus, and laid stress on the fact that the sixth nerve (lying furthest away from the wall of the sinus) being involved the latest and to the least extent, and also the involvement of the ophthalmic division of the fifth nerve (shown by severe frontal pain or anæsthesia) pointed to this view of the pathology rather than to central nuclear degeneration. In another case there was internal ophthalmoplegia with ptosis, and the lesion was probably of cerebral origin. He related also a case of double ophthalmoplegia interna in a young man. In the whole of these cases a distinct history of syphilis was obtained, or there was good reason to suspect its presence. Where the lids were congested together with proptosis one should suspect disease involving the cavernous sinus, and in these cases the condition of the retinal veins should likewise be noted.—Mr. J. B. LAWFORD gave the history of a case of double ophthalmoplegia externa. The patient was a man sixty years of age, who, apart from trouble with his eyes, was quite healthy. For ten years he had had almost complete ptosis. The eyes moved scarcely at all in any direction. The fundus of each eye was normal, and there was no paralysis of the intraocular muscles. No history of syphilis could be obtained, and there was no sign of cerebral or spinal mischief.—Mr. HUTCHINSON pointed to Mr. Lawford's case as typical of the symmetrical form of external ophthalmoplegia, and such cases usually remained in this condition without extension or complication. When syphilis was the cause, the disease usually was symmetrical in its whole course, and usually also cerebral in position. He quoted a case much like that of Mr. Lawford's which had remained in almost the same condition for twenty years. The patient was in good health, but there was a previous history of syphilis, and he applied too late for treatment to be of benefit. He referred to another case, that of a young lady in good health, where there was no suspicion of syphilis, and in whom the disease was very gradual. In another case in which recovery took place to a surprising degree the primary cause seemed to be an injury. In tabes dorsalis it was not unusual to find paresis of a single ocular nerve, the disease progressed very rapidly, was usually asymmetrical, and was nearly always recovered from. Such cases were due more probably to a syphilitic neuritis than to central disease. He had known in such cases recovery to be spontaneous. There was yet another class, separate from the rest, in which the disease was equal on both sides, progressed very gradually, all the muscles being affected, and recovery rarely or never following. The interest in his son's case lay in the fact of the rarity of syphilitic phlebitis. He thought it would be a convenience to give the two groups of cases different names,

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though he was unprepared at the time to suggest new terms. He briefly related the particulars of another case in which the lesion was unilateral, and the cause an aneurysm of the internal carotid pressing on the cavernous sinus. He inquired, in conclusion, whether there were any definite symptoms (apart from orbital periostitis or neuritis) by which thrombosis of the cavernous sinus could be diagnosed.—Dr. MULES alluded to a case of general miliary tuberculosis in a young married lady. She developed symptoms of internal and external ophthalmoplegia, first in one eye and then in the other, and died with symptoms of basic meningitis.—Mr. MACKINLAY agreed with Mr. Hutchinson that in tabetic cases with unilateral ophthalmoplegia recovery often followed without the administration of iodide of potassium.—Dr. ORD said that in his experience the unilateral cases were very commonly curable, whilst the symmetrical ones obstinately resisted treatment.—Dr. SIDNEY COUPLAND referred to the paper he had read earlier in the session on thrombosis of the cavernous sinus. He was glad to find that the observations of Mr. Hutchinson, jun., bore out the remarks he then made. Where the sinus was diseased, in the greater number of cases the other side was affected later on. He believed that a considerable number of these cases was due to disease of the sinus.—Dr. ANDERSON was inclined to think that there was a form of unilateral external ophthalmoplegia which was of cerebral origin, and incurable. He believed the following symptom would prove of value in diagnosis: When the lid of the affected side was raised, the sound one drooped to a corresponding amount, and rose when the drooped eyelid was allowed to fall. He had seen one case in which the healthy lid closed when the affected eye was covered.—Mr. HUTCHINSON, jun., in reply, could not be sure that in his case the disease originated in the sinus. It might have commenced there, and it certainly involved early the structures in its neighbourhood. He could not be sure about the condition of the retinal veins. He thought it would be very difficult to arrange the cases in classes for a fresh nomenclature.—Mr. LAWFORD was inclined to think that in his case the disease was of wide extent and of central origin.

Mr. NETTLESHIP related two cases in which Temporary Amblyopia had followed the internal administration of Quinine. One of the patients had an idiosyncrasy to the drug, which even when administered in small doses caused gastric disturbance, and on two occasions previously had brought on temporary failure of vision. The second case he called a good classical instance of quinine amblyopia.—Mr. DOYNE inquired whether any alteration in the calibre of the arteries had been noticed. He had found the arteries very much contracted in a case of quinine amblyopia, afterwards the discs became whitened, though ultimately the sight became fairly normal.—Mr. NETTLESHIP, in reply, believed the arteries were always small during the stage of amblyopia. He did not know of a single case of complete permanent blindness from this cause, though in some cases which recovered the fields were small and the arteries constricted.—Mr. HUTCHINSON alluded to the great interest of the subject of visual lesions dependent on food or drugs. He quoted a case in which it was clearly proved that coffee had caused temporary deafness.

Mr. CROSS related two cases of Sympathetic Ophthalmitis occurring after Evisceration. G. R——, aged forty, came with a wound of the left eyeball over the ciliary region, but free of the cornea, occupied by slight choroidal protrusion. The iris was inflamed, the pupil tied, the lens had escaped. The wound had been made ten days before, and vitreous had escaped. Seventeen days after the accident evisceration was done antiseptically under the spray, and a glass vitreous introduced. The operation relieved pain, was followed by considerable swelling of the lids, and discharge. In a week he was quite comfortable. Conjunctival chemosis, somewhat resembling hæmorrhoids, continued for some time; as this subsided, the glass ball was seen exposed. There was scarcely any discharge, and no discomfort. Nothing was complained of or suspected in the right until seventeen days after the operation, when the patient had dull vision and discomfort in the eye. Two days later there was distinct sympathetic ophthalmitis. The ball was removed at once, leaving the sclerotic a rigid hollow cup, which moved freely like the opposite eye. Secretion was retained. The eye was much inflamed and painful for a fortnight, and he left five weeks after removal of the ball, some circumcorneal injection and irritation remaining. Mr. Cross had recently seen him again, and the eye was perfectly normal; there was not even uvea on the lens.—J. L., aged fifty, was seen three months after a wound of the right cornea. The cornea and eye were chronically inflamed; there was iritic prolapse. The other eye was quite healthy. Evisceration and metal vitreous. Considerable inflammatory swelling and discharge lasted a week. Twelve days after the operation the ball was exposed through a small fistula; it was at once removed. In ten days the patient left. In a few days he returned, saying that after a short exposure to sunlight on the day he left, he found the sight impaired. Vision $\frac{20}{40}$ J. 4; slight circumcorneal injection; sluggish pupil, which yielded to energetic atropisation, leaving slight uvea; vitreous hazy; distinct neuro-retinitis; very red, without exudation or hæmorrhages. Gradual improvement followed. In this case the sympathetic ophthalmitis showed itself twenty-one days after operation and four months from the injury. The symptoms subsided after ten weeks' treatment. These cases were considered to be analogous to those of sympathetic ophthalmitis occurring after and in spite of enucleation, and not caused directly by the operation. A case was quoted where a child aged thirteen years had her eye removed sixteen days after a corneal wound. Forty-two days after the injury, and twenty-six days after removal of the eye, slight sympathetic ophthalmitis came on, but recovered after two months' treatment. He considered that enucleation was very superior to evisceration when sympathetic ophthalmitis threatened; it more thoroughly removed the exciting disease, gave earlier and more complete physiological rest, and thus tended without delay to resolution of the morbid process where this might have advanced beyond the part removed. There was a special danger from the incomplete inclusion of the artificial vitreous. A septic fistula might result from imperfect healing, or, later on, from wearing out of the conjunctiva between the false eye and the artificial vitreous.—Dr. MULES said that nothing was claimed for evisceration over enucleation in regard to sympathetic ophthalmitis. He did not remember to have read of other cases in which this sequence existed. He thought the first case should be looked upon as one simply of iritis, for recovery had followed in ten days without descemetitis, whereas sympathetic serous iritis was always a slow process. He knew of no clinical distinction between non-traumatic serous iritis and sympathetic ophthalmitis. There could be no doubt that the second case was one of sympathetic ophthalmitis developing late. In cases of this kind in which there was much pain he had found great benefit follow the use of the horsehair drain and the ice bag.—Mr. DOYNE considered it to be bad surgery to practise evisceration in cases of tumour of the eyeball.—Mr. BRAILEY had seen many instances of sympathetic ophthalmitis which had run a mild course and subsided rapidly and completely. He did not consider descemetitis essential, and the dots were frequently absent. He had obtained good results in many cases of evisceration, but he had not put in a glass ball. He regarded choroiditis as a contra-indication to the performance of the operation.—Mr. MCHARDY looked upon these cases as instances of true sympathetic ophthalmitis. There must sometimes be an early stage and mild form of that disease. He attributed Mr. Cross's success to the fact that he removed the exciting cause.—Mr. CROSS, in reply, said that evisceration was a valuable operation in certain suitable cases, but it should not be performed where there was sympathetic ophthalmitis. In his cases the globe had not entirely healed, and he thought the wound thus left had something to do with the causation of the sympathetic disease.

The following living and card specimens were exhibited:—Mr. Spencer Watson: (1) Sequel to a case of Hæmorrhagic Glaucoma; (2) A case of Serpiginous Nebula of Cornea. Mr. R. N. Doyne: A new Optometer.

The annual general meeting was held at 9.30 P.M. The report of the Council was read. There are now 205 members of the Society, twenty-five of whom are non-resident. There had been fourteen admissions and three deaths since the last annual meeting. Reference was made to the fact that Professor Zehender of Rostock had delivered the last Bowman lecture, and that Mr. Henry Power had kindly undertaken to deliver the next. A large number of donations had been made to the Library, amongst which must be mentioned a series of von Graefe's Archives, presented by Mr. James Dixon of Dorking. The annual report of the treasurer was presented.

The following officers and Council were elected for the year 1887-88:—President: John Whitaker Hulke, F.R.S.

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Vice-Presidents: Mr. Jonathan Hutchinson, F.R.S.; Dr. George Johnson, F.R.S.; Mr. E. Nettleship; Dr. D. Argyll Robertson (Edinburgh); *Mr. Priestley Smith (Birmingham); and Mr. T. Sympson (Lincoln). Treasurer: Dr. William M. Ord. Secretaries: Mr. Seymour J. Sharkey and Mr. Robert Marcus Gunn. Other Members of Council: Dr. John Abercrombie, Dr. W. A. Brailey, *Mr. Edgar A. Browne (Liverpool), Dr. Sidney Coupland, Mr. Walter Edmunds, Mr. H. E. Juler, Mr. William Lang, Dr. J. B. Lawford, *Mr. M. M. McHardy, Mr. A. Stanford Morton, Dr. P. H. Mules (Manchester), and Mr. J. B. Story (Dublin). Librarian: Mr. W. Adams Frost.

The gentlemen whose names are marked with an asterisk (*) were not in the Council, or did not hold the same office, during the preceding year.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, July 6th, Dr. John Williams, President, in the chair.

Dr. STEAVENSON showed a number of instruments used in electrolysis, including a set of electrodes, &c., as used by M. Apostoli of Paris.

Dr. HORROCKS exhibited a specimen of Chronic Endometritis with microscopical sections.

Dr. W. S. GRIFFITH showed a drawing and section of a Uterus in which a "contraction ring" was well seen. It was removed shortly after a labour terminated by Cæsarean section.

Dr. LEWERS showed a Fibroid Tumour removed from the anterior vaginal wall.

Dr. GALABIN exhibited two specimens of Uteri removed per vaginam for supposed malignancy. Under the microscope the appearances of one were those of ulcerative endometritis, the other was a case of round-celled sarcoma. The former patient recovered, but the latter died.

Adjourned discussion of Dr. Griffith's paper on Tubo-ovarian Cysts.—Mr. DORAN considered that Dr. Griffith's definition of a tubo-ovarian cyst was sound enough for practical purposes. The term "ovarian cyst" was, however, vague, as the nature of cystic disease of the ovary, other than that kind for which ovariotomy was performed, was very uncertain. In any form of obstruction of the tube, such as that which led to cystic dilatation, the uterine end was probably closed by swelling of the mucous membrane. Mr. Doran then exhibited several specimens. The Fallopian tube was very rarely diseased in true cystic tumour of the ovary. In one specimen, where the tube was inflamed and bound down to the surface of the cyst, the ostium was patent and the fimbriæ unaffected. Another series of specimens showed the most frequent origin of tubo-ovarian cysts —namely, chronic inflammation of the uterine appendages, whereby the tube and ovary became bound together, and ultimately underwent cystic degeneration, their dilated cavities communicating by the same process as was observed in the septa of multilocular cysts. Many observers made out that the obstructed ostium opened again into the cavity of the cystic degenerated ovary, but that was exceptional. The congenital form was very rare; but Paltauf's case, recently reported in the *Archiv für Gynækologie*, was probably of this kind. A woman died of peritonitis after attempted abortion; a fœtal cyst was found behind the uterus, which communicated with the dilated Fallopian tube, so that there was a free channel from the uterine cavity found through the tubes and cyst back into the [illegible]. The parenchyma of the ovaries was flattened, but contained healthy follicles. This condition could hardly have been caused by disease; it was a congenital malformation; but Dr. Paltauf's memoir required study. Congenital tubo-ovarian cysts, and that kind where the fimbriæ [illegible] to a cyst on the surface of the ovary, were exceptional; as a rule, a tubo-ovarian cyst was one of the forms of [illegible] caused by chronic disease of the appendages. Mr. Doran remarked that whatever might be the true [illegible] of the formation of so-called tubo-ovarian cysts, which [illegible] beginning in the Fallopian tube or the [illegible] these structures were apt to become [illegible] when they were in contact, and he believed [illegible] of such union was frequently the ovary.—[illegible] explained.

[illegible] *Pregnancy and Labour.*—[illegible] two cases of the disease. One [illegible] persistent, and in it there were eleven pregnancies. He narrated other two cases in his own practice, and in one of these there were [illegible] nancies during the currency of the disease. Diminution the quantity of urea secreted appears to be of importance in it. Similar cases of greatly reduced secretion of urea, with feelings of weakness and sickness, Dr. Matthews Duncan has observed in women not pregnant or recently delivered.

The Mechanism of the Third Stage of Labour.—Dr. FRANCIS H. CHAMPNEYS dealt with Part 4 of this subject under the heading "Some Causes of Retention of the Membranes." Having referred to the description of the process given in a former paper, the author showed that the "plane of least resistance" for separation of the membranes is in the decidua, generally in the ampullary layer. Any change which renders this more tough, or which renders any other layer more friable, will alter this "plane of least resistance." Thus, undue friability of the chorion, or less firm adhesion between chorion and amnion than between the layers of the decidua, will determine a separation of the chorion and amnion. The early separation of the lower pole of the ovum tends to guard against a common defect—viz., failure of separation (retention) of the membranes round the os internum. Rupture of the membranes at the proper time is an essential part of the proper mechanism. The proper time is, in nature, when the os is about three to three and a half inches in diameter, and has a projection of three-quarters to one inch. Premature rupture will prejudice the separation of the lower pole of the ovum. Too late rupture tends to produce prolapse of the bag, which is usually accompanied by giving way of the chorion and advance of the amnion alone. Undue or relatively undue toughness and elasticity of the amnion are equivalent to a tardy escape of the waters. As regards the removal of the membranes by traction of the descending placenta, the author remarked that the membranes as a whole owe their tenacity principally to the amnion; the adhesion of the amnion to the chorion is no doubt one of the safeguards against retention of the chorion. Thus, any disorder of the first process of the mechanism tending to separate the two ovuline membranes predisposes to retention of the chorion. An analysis of ninety cases bearing on the matter was given. The conclusions were: 1. That the mechanism of the detachment and expulsion of the membranes is a complex act in three stages. 2. Timely rupture of the bag of membranes is an essential part of the proper mechanism, and too early or too late rupture alike predispose to retention of the chorion. 3. Disorder of any of the three stages in the mechanism tends to prejudice the whole process. 4. Among allied conditions may be mentioned too early or too late rupture of the membranes, prolapse of the bag of membranes, prolapse of the membranes (amnion) after delivery beyond the vulva; separation of the membranes found on examination of the placenta; retention of a ring of membranes round the lower pole of the uterus; retention of the whole chorion. The practical conclusions were: 1. The membranes should generally be preserved till the os is fully dilated. 2. After this they are not only (in ordinary cases) useless, but they—that is, the persistence of the amnion—favour the retention of the membranes. 3. They should, therefore, be ruptured when the os is fully dilated. 4. In vertex cases, if the head has settled over the os uteri, the advance of a smooth, sausage-shaped protrusion of membrane points to advance of the amnion alone, which favours retention of the chorion. 5. Separation of two membranes not only points to adhesion of the chorion, but renders its subsequent removal more difficult. 6. This axiom may be formulated: "When the membranes advance low in a vertex case, look out for retention of the chorion."

The Relation between the Implantation of the Placenta and the Insertion of the Cord.—Dr. Champneys also submitted a note on this subject.—In his work, "Accouchemens Laborieux" (suite p. 110, *et seq.*), Levret makes the following statements:—That the insertion of the umbilical cord into the placenta varies as the insertion of the placenta on the uterine wall. If the placenta is central, the cord is centrally inserted; if the placenta is excentrically planted, the cord is inserted nearer to the lower edge; if the placenta approaches the lower uterine orifice, the cord is inserted to its edge ("battledore placenta"), and, indeed, to its lower edge. This is given without corroborative facts, as an *ipse dixit* of Levret; but it still survives though more than 130 years old, and has even (at least in part) been endorsed by the writers of some of our most recent books. Under these

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circumstances the author thought it worth while to put the matter to the test. If it prove true, it is so remarkable a fact that it should be accounted for; if it be false, the sooner it is relegated to the proper place for unauthorised statements and *ipse dixits* the better. The following analysis of 188 cases treated in the General Lying-in Hospital is offered as a solution of the question. The patients number 188, but as one of them bore twins the number of placentæ is 189. The table contains the class of insertion of the cord, states whether its insertion was up or down, and gives the measures from which this is derived. The next two columns give the position of the placenta in the uterus; the last two columns give the position of the insertion of the cord in the uterus. It will be seen that there is no order or proportion apparent in any of these relations. As regards the position of the cord:—

Insertion of cord.	Direction of point of insertion.							
	Up.		Down.		Midway.		Not noted.	
Central ...	17	...	18	...	17	...	4	
Lateral ...	46	...	54	...	16	...	1	
Marginal	7	...	5	...	—	...	—	
Velamentous	1	...	1	...	2	...	—	
	71	...	78	...	35	...	5	
Total		...	...	189				

Levret's dictum, therefore, has no foundation in fact.

The PRESIDENT, in opening the discussion on Dr. Champneys' series of valuable papers, did not think that late rupture need cause retention of the membranes.—Dr. MATTHEWS DUNCAN valued highly this series of papers. He would have preferred protrusion or expression of the membranes to prolapse, as bearing a truer meaning. He was not inclined to adopt any rule of interference by rupturing the membranes at a certain stage of the dilatation of the external os, regarding all kinds of interference as undesirable, except when distinctly called for. He did not regard the site of rupture of the membranes as a sufficient basis for a statement of the height of the placental insertion on the uterine wall. He thought Dr. Champneys had disproved Levret's dictum as to insertion of the cord.—Dr. CHAMPNEYS, in reply, said that when he spoke of late rupture of the bag of membranes, he did not refer so much to time, but to a certain point in the process, that after the bag was hemispherical its dilating power ceased, and it could not advance without rupture of the chorion, and if this took place the amnion advanced alone and peeled itself off the chorion, which then was often left behind. He used the term "prolapse" of the bag as an exact translation of the technical German for this occurrence, and to avoid mistake had placed the term in brackets in the paper. He thought the method adopted for determining the seat of the placenta was the best we possessed, and that the errors in a large number of cases would not be sufficient to invalidate general conclusions.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

AT a meeting of the members of this society on June 7th, after the report of the Council had been adopted,

Professor MACALISTER read a paper on Some Common Errors in Descriptions of the Brachialis Anticus Muscle. This muscle was chosen, not because the descriptions of it were more inaccurate than those of the other muscles, but because it was convenient for the purpose in view—namely, to exemplify the general incorrectness of anatomical descriptions. The paper concluded with a correct account of this muscle; and Professor Macalister said he proposed to consider others in a like manner.—Mr. STONHAM drew attention to the appearance of the tendon of the brachialis anticus, and said it was of surgical importance.—Professor THANE said text-books were likely to benefit by this mode of criticism, and asked questions, to which Professor Macalister replied.

Dr. BROOKS of Dublin then read a paper on the Short Connexion Muscles of the Pollux and Hallux of Anthropoid Apes (see next column), and in the discussion which followed Professors Macalister and Thorne took part.

Mr. SUTTON then read a paper entitled a "Critical Study in Cranial Morphology." It was claimed that upon anatomical, morphological, and embryological grounds the dura mater ought to be considered the original skull wall, and that therefore the ganglia of the fifth, facial, and eighth nerves were extra-cranial. The relations of various nerves to the subcranial arches were next reviewed.—Mr. LOCKWOOD said he had found that the facial nerve and internal carotid artery had the relations to the skull which Mr. Sutton described, and, although he had not seen more than two ossific centres in the malar bone, nor three which had been described in the lower jaw, yet he thought there was much to be said for the first part of Mr. Sutton's contention.—Professor THANE also doubted the existence of more than two centres in the malar bone.—Professor MACALISTER could not find as many centres in the lower jaw as Mr. Sutton described.—In reply, Mr. SUTTON promised to bring specimens to the next meeting.

Mr. BERRY then read a paper on a ligament which, on either side, suspended the thyroid gland to the cricoid cartilage.—Professor HUMPHRY agreed that Mr. Berry's specimen showed a pair of strong ligaments.

The following specimens were shown:—Mr. Rickman J. Godlee and Mr. C. Stonham: Casts of Bronchi. Mr. Jas. Berry: Suspensory Ligament of Thyroid Gland. Dr. W. J. Collins: Abnormal Aortic Arch. Professor Curnow: Subclavian Artery passing in front of Scalenus Anticus. Mr. Lockwood: Cases for Mounting Frozen Sections.

ACADEMY OF MEDICINE IN IRELAND.

Dissection of Plantar Arch from Dorsal Aspect.—Varieties in Origin of Phrenic Nerve.—Anthropoid Apes.

AT a meeting of the Subsection of Anatomy and Physiology, held on May 5th,

Dr. BROOKS showed a dissection of the Plantar Arch from the Dorsal Aspect of the Foot. This dissection was performed by removing the three middle metatarsal bones from above.

Dr. BROOKS read a paper on the Varieties in the Mode of Origin of the Phrenic Nerve, with some notes on nerve variations in the superior extremity.

Dr. BROOKS also read a paper on the Short Muscles of the Pollux and Hallux of Anthropoid Apes, with special reference to the Opponens Hallucis. The author remarked that the number of distinguished anatomists who have written on the structure of the anthropoid apes might make this paper appear a work of supererogation, were it not that very material differences occurred in their writings, more especially in regard to the small groups of muscles which he proposed to describe. The labours of von Bischoff, D. J. Cunningham, and others had shown that the names usually applied to the thenar muscles of the human hand conveyed an altogether erroneous idea of their morphology; he therefore adopted the following names for the short muscles of the thumb: *abductor* and *opponens pollicis*, as ordinarily described; *flexor brevis pollicis*, consisting of a radial and an ulnar head—*radial head*, as described by Gray and Ellis; *ulnar head* = the *interosseus volaris primus* of Henle—a small deeply-placed muscle arising from the base of the thumb-metacarpal bone and inserted into the sesamoid bone, at the ulnar side of the metacarpo-phalangeal articulation of the thumb; *adductor pollicis*, consisting of three parts—(*a*) a *slip* attached to the radial sesamoid bone of the thumb (regarded by Quain as part of the radial head of the flexor brevis pollicis); (*b*) *adductor obliquus* = the so-called *inner head of the flexor brevis*; and (*c*) *adductor transversus* = *adductor pollicis*. After describing the short thumb muscles of the chimpanzee, orang, and gibbon in detail, the author concluded that the pollicial muscles of the gibbon differ from man—(1) in the proximal position of the adductor; (2) in the part-insertion of the adductor into the metacarpal bone of the thumb; (3) in the prolongation of two of the short muscles (adductor and flexor brevis) to the ungual phalanx; and (4) in the greater relative development and more palmar position of the true ulnar head of the flexor brevis. The orang differs from man chiefly in its very feeble opponens. The opponens is very human in its character in the other two apes. The ulnar head of the flexor brevis is less developed in the orang than in the gibbon, but is still large in comparison with the interosseus primus volaris of man, and much more palmar in position than the latter muscle. In the chimpanzee all the thumb muscles are excessively human, but the ulnar head of the flexor brevis has suffered a still further reduction,

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than in man, being here reduced to a fibrous rudiment. After referring to the works of Vrolik, von Bischoff, Duvernoy, Huxley, Church, Champneys, Hartmann, and others, the author proceeded to describe the short muscles of the hallux, in which the principal interest centred in the opponens hallucis. He had only found an opponens hallucis, derived from the tibial head of the flexor brevis hallucis, and therefore homologous to the opponens pollicis, in the orang; it was absent in the chimpanzee and gibbon (he had not had an opportunity of examining the gorilla). In all three anthropoids, however, he had found some fibres of the abductor hallucis inserted into the metatarsal bone of the hallux, and these would come under Professor D. J. Cunningham's definition of an opponens—viz., "any intrinsic muscle of the foot which is inserted into the shaft of a metatarsal bone" (Zoology of the *Challenger*, vol. xvi., p. 137). The opponens hallucis described by Hartmann in the gorilla, chimpanzee, and gibbon is probably of this nature, as in the gibbon he describes an opponens "to which a large fan-shaped adductor is attached.

Malformation of the Shoulder Joint.—Capillary Transudation.—Fracture of the Skull.

At a meeting of the Pathological Section held on May 13th, Dr. E. H. BENNETT exhibited a specimen of Malformation of the Shoulder Joint. It was a form of malformation or disease that he had never seen before, and the only way in which he could read it was that it was not congenital, nor the result of a fracture or dislocation, but a condition brought on by the action of a burn, the cicatrices of which existed on the limb and near the joint. The limb belonged to a slender man of middle age. It was dissected in the School of Physic, and had previously attracted attention in consequence of deformities that appeared in the fingers, the result of burn contractions. The little finger was burned towards the ulnar side, and its extremity had been lost; and the finger next it had suffered similarly, but to a lesser degree. The cicatrices were not such as to produce large webs or great deformities, but the end of one finger was completely destroyed, and there were marks upon the limb of burning of the skin. These were the only circumstances that threw light on the question of the cause of the deformity. It was noticed before the dissection was made that the shoulder joint, although not completely fixed, was limited in its range of motion. There was nothing abnormal in the muscles, except that at those of the dorsum scapulæ were to some extent wasted; all the muscles were otherwise good. The condition of the shoulder joint was curious. On clearing away the soft parts on the outside of the joint, Dr. Bennett found what at first sight appeared to be the head of the humerus directly underneath the muscles, without any capsule, while the upper part of the humerus was distorted and bent. There was no disease of the scapula or glenoid cavity; on the contrary, everything there was normal. The length of the fibrous capsule was very small. The appearance as of a head of the humerus which the specimen presented, looking at it from the outer side, was fallacious. On turning the specimen, it was seen that the head of the humerus was half buried in an ossified capsule, while the remaining half of the capsule was free, soft, and flexible, and received the attachments of the capsular muscles normally on the axillary side. There were no deep cicatrices involving the muscles, and the tendons and joint had been in no way affected except by the skin contraction. It was hard to account for this condition of the capsule and the extraordinary limitation of the ossification of it to the outer side. On the inside the cartilage of the joint was perfectly normal. He had not made any section through it, because he did not think it would reveal much. The head of the bone was greatly distorted in position. He did not think there had been any fracture of the bone, but believed that the flexion of the upper part of the bone and distortion of the head of it had been produced by the limited range of movement resulting from the superficial cicatrices.

Mr. STORY exhibited an apparatus intended to illustrate an experiment of Körner upon Capillary Transudation. In reply to questions, Mr. Story said that the experiment of Körner was published in 1873; but in spite of the vast amount of work that had since been done in connexion with glaucoma, no one seemed to have noticed its importance till Bürabacher and Czermak had taken up the subject in their paper in the December (1886) number of Graefe's Archives.

Dr. HEUSTON exhibited the Skull and Brain of a ge man, aged sixty, who had fallen from a window in flagged area on his head, a distance of twelve feet. Aft the accident he presented no evidence of serious lesion for five days, when symptoms of cerebral irritation began, eventuating in hemiplegia of the left side of the body on the tenth day, when he died from paralysis of the muscles of respiration. The skull presented a fracture occupying the posterior portion of the right parietal bone, which included a somewhat quadrilateral area, the enclosed portion of bone being further broken into three portions, the upper of which was depressed, while the two lower were elevated at their junction. From the posterior-inferior angle of this fracture a fissure extended through the masto-occipital and petro-occipital sutures to the jugular foramen, from which a fracture extended into the foramen magnum posterior to the occipital condyle. An extensive clot was also found occupying the position of the fracture, and also filling the posterior fossa of the skull between the dura mater and the bone; the dura mater in this situation presented a laceration an inch in length. The right cerebral hemisphere presented a laceration at the junction of the occipital with the temporo-sphenoidal lobe, extending obliquely upwards and backwards for an inch and a quarter, and being half an inch in breadth. The inferior aspect of the right lobe of the cerebellum showed a laceration occupying the biventral lobe half an inch in length.

Reviews and Notices of Books.

Leçons sur les Auto-intoxications dans les Maladies. Par Ch. BOUCHARD. Recueillies et publiées par le Dr. P. LE GENDRE. Paris: F. Savy. 1887.

PROFESSOR BOUCHARD has made the subject dealt with in this course of lectures delivered at the Paris Faculty of Medicine his own, and there is no gainsaying that it is a subject abounding in interest and novelty, and at the same time of very great importance. It constitutes an attempt to unravel the hidden processes of disease by the demonstration that a large proportion of the symptoms of disease depends upon the operation of materials obnoxious to normal nutrition, whether such poisons be introduced from without or be the accumulated products of metabolism retained within the organism by failure of the eliminatory organs.

The key to the last-named source of "intoxication" is to be found in the composition of the urine, which has been studied by Professor Bouchard from the point of view of its "toxicity," with so much care and elaboration that he is enabled to give numerical expression to the degree of toxicity possessed by this product of excretion. It is singular to read these values in terms of the amount of living animal matter destroyed by a given quantity of urine, but it is not easy to detect any fallacy in the argument, whilst it furnishes us with a new point in the estimation of toxic action. The study of the toxicity of urine in general, and a comparison of the degrees of toxicity at various times and in various conditions, is followed up by an analysis of the constituents concerned in these effects. Hitherto, with one or two exceptions, it has not been found possible to isolate these constituents, which, having different physiological actions, must be presumed to differ in chemical composition. Most of them are organic but not alkaloidal; some are soluble in water, others in alcohol—urea is one and potash another; whilst a third resides in the colouring matters of the urine; but more than this it is not possible to affirm. By physiological analysis it is, however, possible to infer the existence of at least seven different agents having toxic powers in the urine. There is a diuretic substance — this is probably urea—which is characterised as the most powerful of known diuretics. Secondly, there is a narcotic, and thirdly, a sialogenic substance, neither of which has been isolated chemically. Then there are two products one organic the other mineral, which induce convulsions in the animal acted upon by them; there is no doubt that the mineral substance

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having this action is potash. Then there is a body that is signalised by its powerful myotic action, causing marked contraction of the pupil; this may be found in the colouring matter. Lastly, there is an agent that depresses bodily temperature. The phenomena of uræmia—of which the various theories propounded are in turn discussed by the author—are well explained by the action of some or all of these toxic agents retained in the blood through the failure of the kidneys to eliminate them, and the predominance of one class of symptoms over another may be due to the relative preponderance of one or other of these poisonous constituents.

The toxicity of urine being established, the next step in this physiological inquiry is to determine the sources whence the urine receives the several toxic agents. The blood, the tissues, the intestinal canal, the bile, are therefore each studied in this relation, with experimental proof of the facts advanced. The sum of all these researches is to place first in the rank of toxic animal products mineral substances, especially potash, whether derived from food or from tissue metabolism; next in importance come the products of intestinal putrefaction, ammonia being among the chief; and thirdly, the organic products of metabolism, with which may also be classed the small quantity of bile that is absorbed from the surface of the intestine. Although of necessity these materials all pass through the blood, yet in health the blood has a feeble toxicity as compared with the urine, in which these products accumulate prior to their discharge from the body. It is shown that the urine may be deprived of some of its toxicity by arresting intestinal putrefaction—in other words, by intestinal antisepsis; for which purpose Professor Bouchard assigns most value to the use of charcoal and of naphthalin; and accordingly we find attention to such measures urged in the treatment of uræmia, to which he devotes other lectures. Indeed the subject of auto-intoxication through the intestines, whether in constipation or ileus, is one which cannot fail to have been present in the mind of every physician; but the extension of the same idea to gastric dilatation is more novel, and in some respects very startling. It is, however, a subject which Professor Bouchard deals with in an exhaustive manner; so that, if he does not convince, he at any rate suggests ideas which give a wider meaning to the term dyspepsia, and to the results that may accrue from it. The catalogue of maladies attributable, on his reasoning, to dilatation of the stomach through the absorption of poisons into the blood is a lengthy one. It requires a considerable effort to accept the notion that albuminuria, nodular rheumatism, osteomalacia, certain skin diseases, and many other affections have an etiology in common in derangement of the normal processes of digestion. At the same time it must be confessed that it is just on this subject of etiology that we are most ignorant, and any reasonable hypothesis which can be shown to be based on facts is not to be lightly set aside. Professor Bouchard has maintained his thesis in spite of opposition and ridicule, and is confident that time will show that his conclusions are just.

The doctrine of intestinal auto-intoxication is further advanced in explanation of some of the phenomena of typhoid fever, where the value of intestinal antisepsis is urged, combined with general antisepsis—i.e., the administration of drugs directed against the typhoid virus, the use of graduated baths, and a regulated diet. From this subject the lectures pass to the discussion of the toxicity of bile and the effects of retention of bile on the system. It is shown that were it not for the elimination of the colouring matters by the urine and their fixation in the tissues, jaundice would speedily have a fatal issue, for the biliary colouring matter is highly toxic. The bile salts also act deleteriously by destroying muscular tissue and blood corpuscles, thus setting free mineral and organic matters, notably potash, the poisonous effects of which have been demonstrated. In malignant jaundice these toxic agents exert their full power, because, owing to the liver itself being profoundly deranged, there is no formation of urea, and the kidneys are deprived therefore of the influence of their natural diuretic, and the elimination of the biliary poisons is thus prevented. Diabetes and cholera are also discussed from the same point of view, and it is shown that in the latter we have not only to contend against the primary action of the choleraic virus, but also with uræmia.

We can warmly commend these lectures to careful study. They cover, as we have intimated comparatively new ground, and they do this in a manner at once so clear and detailed as to carry the reader with them. But apart from this, they suggest lines of thought in the problems of pathogeny which are well worth maturely considering and putting to the test of observation.

Abdominal Surgery. By J. GREIG SMITH, M.A., F.R.S.E., Surgeon to the Bristol Royal Infirmary, late Examiner in Surgery, University of Aberdeen. London: J. & A. Churchill. 1887.

MR. GREIG SMITH'S book will undoubtedly be useful. It is a careful attempt to describe all the various operations which are generally grouped together as abdominal, and by reference to its pages much time that would otherwise have to be devoted to looking up scattered articles will be saved. The book opens with a chapter on the Diagnosis of Abdominal Tumours, which is followed by a description of the general conduct of abdominal operations and of the after-treatment of the patients. In this chapter the influence of Mr. Lawson Tait's teaching upon the author is very evident. Then follow several chapters devoted to the special operations upon individual abdominal organs. Among these the urinary bladder is not included. We can quite appreciate the reasons which led Mr. Greig Smith not to describe supra-pubic puncture or incision of the bladder as an "abdominal operation," especially as they are extra-peritoneal. But as the suture of a rupture of the peritoneal aspect of the bladder promises to be the best mode of treating this injury, and as it is so similar in its *technik* to enterorraphy we should suggest to Mr. Greig Smith to include it in any future editions of the work.

The whole work is clearly written and carefully done. Authorities have been diligently consulted, and so far as we have noticed all descriptions are accurate. Divergencies of opinion are fairly given, and arguments are advanced with ability. The author has striven to portray the present position of abdominal surgery, and in the form analogous to a text-book, rather than to draw from his own experiences only for his facts. We consider his book a success and anticipate for it a favourable reception.

ST. JOHN AMBULANCE ASSOCIATION, SCARBOROUGH.—During the past winter two detached classes of first aid to the injured have been held, one for men and one for women. The lectures were fairly well attended, the joint classes numbering 34; of this number 26 presented themselves for examination, all of whom received certificates. Lectures were also given at Gantom and were very well attended, each class numbering 30. Thirty-eight candidates from the two classes presented themselves for examination, and 32 received certificates. A single lecture on the restoration of the apparently drowned was also given at St. Thomas' schoolroom to the fisherman, and was well attended. The classes were instructed by Mr. W. H. Beverley, L.R.C.P. Lond., &c. of Scarborough, and examined by Mr. E. Atkinson, F.L.S., &c., of Leeds.

TRICHINOSIS IN CARTAGENA.—*El Siglo Medico* states that there have been a number of cases of trichinosis in Cartagena, and that up to the present time no less than twenty-three persons have died of the disease.

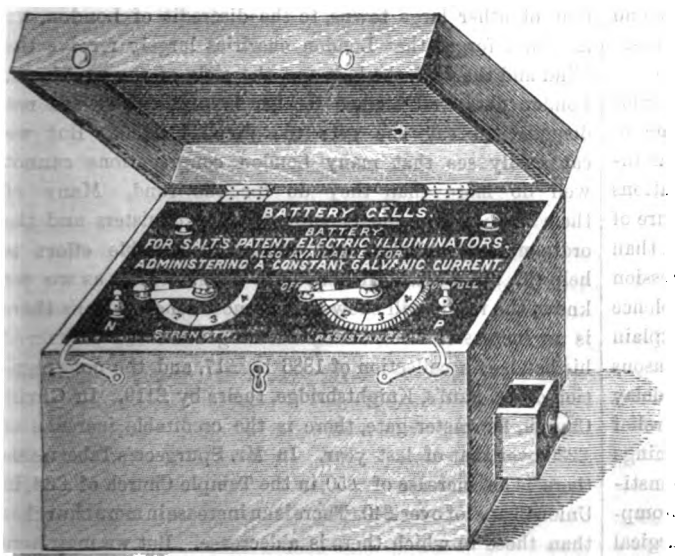
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New Inventions.

NEW MEDICAL BATTERY, ILLUMINATORS, AND CAUTERY.

THE battery depicted below appears to be likely to obviate many of the objections hitherto raised to the use of electricity in medicine on account of its alleged "unmanageableness." Its primary object is to develop the electric light in many convenient forms; but it can also, with but little modification, be applied for galvanisation, faradisation, and cauterisation. The battery (Fig. 1) consists of four improved Leclanché's cells, the elements being zinc and carbon, with some oxide of manganese, excited by dilute sal ammoniac; they are connected together as single cells, with power of selecting any number; they are enclosed in a neat box, measuring 7 in. high, 11 in. long, and 6½ in. deep, and having a drawer for the conducting wires and various appliances required. Metal sockets, marked N and P, receive the ends of the wires, which are sufficiently long to admit of the battery being placed at a convenient distance, and the number of cells employed is controlled by a selecting

FIG. 1.



lever on the left of the surface plate, while more accurate graduations are established by moving a second lever acting on a resistance coil more or less to the right. By the provision of suitable rheophores, this battery can be used, so far as its range extends, for galvanisation in the same manner as ordinary galvanic batteries, its [illegible] electro-motive force being equivalent to about eight [illegible]'s constant current battery. By the addition [illegible] with adjustments, faradisation also can be [illegible] also a small platinum loop with switch can [illegible] ught to a white heat, so as to be readily [illegible] minute cauterisation. The conductors are of [illegible] wire, carefully insulated with silk, and [illegible] ience through the greater part of their [illegible] s to be used with the above are small [illegible], composed of minute glass beads, con- [illegible] of carbon connected with platinum wires [illegible] r along the shafts of the various instru- [illegible] nal extremity, where they terminate in [illegible] the reception of the conducting wires [illegible] ery. These instruments are for the [illegible] or three patterns, and each is furnished [illegible] switch for cutting off or admitting [illegible]

the current at will. The first (Fig. 2) is the lamp in simplest form, and consists of a shaft of celluloid, 8 in. long, covered at its further extremity with the small incandescent lamp referred to, half sunk in a cup-shaped receptacle which protects the user's eyes from undue tension, while at its hither end is a small spring connector not shown in the drawing, which when pressed by the thumb completes the circuit and displays the light. This instrument serves for examinations of the ear and nose, with or without a speculum, and is adapted for the use of dental surgeons. The second is used for examining the vagina or rectum through a tubular speculum of any available size. In this the lamp, which is similar in construction to the one just described, but much more slender in the shaft, is attached to an expanding ring which adapts itself readily to any size of speculum, clinging slightly to it, so as not to be displaced by accidental movements. The lamp and ring are slid along the speculum to its extremity, so that its rays are concentrated precisely where they are required, and the mouth of the speculum is not blocked up by clumsy apparatus which obstructs the observer's view and impedes the employment of cautery or other instrument. The third pattern (Fig. 3) is intended to be used chiefly for the

FIG. 2.



FIG. 3.



examination of the palate or larynx, though it will also serve for inspecting the vagina by depressing it. It consists of a celluloid spatula, bearing a lamp at its further end half sunk in a cavity of its substance, so as to present only the most trifling elevation above its surface. The wires of this lamp are conducted to the commutator in a deep closed groove along the edges of the spatula, and it will be seen that the instrument can be used as a tongue depressor as well as an illuminator. The heat evolved by these lamps is inappreciable. Mr. T. Partridge Salt, Corporation-street, Birmingham, is the inventor and manufacturer of these instruments.

NURSERY DIAPERS.

WE have received from Messrs. Barton and Co., Towel Manufacturers, Congleton, some specimens of Turkish nursery napkins for children's use. They appear to us to be well adapted for the purpose in view, as they are soft and absorbent, and easily cleaned by being soaked, which all napkins should be, in cold *soft* water. The napkins in question are made in two convenient sizes—23 in. by 23 in. and 27 in. by 27 in.

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THE LANCET.

LONDON: SATURDAY, JULY 16, 1887.

IT is too soon to state with exact precision the sum of the Hospital Sunday Collection for 1887; but it is possible to guess that it will not very materially differ from that of last year. It will not be large enough to satisfy the great wants of the hospitals, or the large views of those who maintain that the united churches of London should be able easily to raise £100,000. But it will still be a large collection, and will represent much good will on the part of the religious communities of the metropolis. The exceptional nature of the year, as the Jubilee of Her Majesty's great reign, may yet tell in favour of the great institutions in which the sick find help and refuge in the day of their calamities. It may well be that some generous hearts are still exercised in devising liberal things that shall make the year more glorious still, and bring joy to the hearts of anxious treasurers; but so far as at present appears there will be no conspicuous increase in the church collections, and there may possibly be a slight falling off. We will not deny that we feel some regret at this fact. We have no sympathy with certain of our contemporaries who, some of them claiming to speak in the name of charity and philanthropy, seem to find a certain satisfaction in the limitations of this collection, and who speak as if the utter failure of the institution would be rather a gratification to them than otherwise. These are strange sentiments to find expression in organs which are supposed to appeal to the benevolence of the public. One such contemporary labours to explain if not to justify such sentiments. Amongst other reasons he adduces a very far-fetched one, "the absolute delay which some persons suffer who require the immediate relief afforded by surgical appliances." Whatever the shortcomings of the Hospital Sunday Fund, and, like all other human institutions, it has its faults, it has had much praise for the promptitude with which, so long as its funds last, it supplies surgical apparatus, and many a person wanting an artificial limb, or an elastic stocking, or a surgical boot has had occasion to bless the Hospital Sunday Fund, or rather the minister of the church or chapel who contributed to it. Another excuse for criticising the Hospital Sunday Fund is almost equally invalid—viz., the views of one or two members of the Council as to the action, or rather inaction, of certain hospitals in reference to the local meetings for promoting the Hospital Sunday Fund. To found on them any argument for the decline of the fund is to build on a very infirm basis. The rules of the fund are the work, not of the Council, but of the constituents in annual meeting assembled in December. It will be time enough when the constituents alter the rules to object to them. Meantime, they are admittedly fair, and give the Council no authority to interfere in the internal administration of hospitals. We have read a statement by Mr. JOHN BIDDULPH MARTIN, treasurer of the Charing-cross Hospital—one of the hospitals complained of by Sir EDMUND CURRIE for want of interest in the local meetings. Mr. MARTIN, on the strength of very imperfect newspaper reports of what happened at the meeting in May, speaks of the "Committee" (Council) "endorsing and publishing the opinions of its honorary secretary, and thus doing injustice to the hospital." Mr. MARTIN expresses full appreciation of the benefits hitherto derived from the Hospital Sunday Fund. We therefore feel sure that on reflection he will see that he is at least premature in the charge which he brings against the Council. Sir EDMUND CURRIE is one of the truest and most hardworking friends of hospitals and of the Hospital Sunday Fund; still Mr. MARTIN will find at the December meeting that his views will be duly and fairly considered.

The collection for 1887 will, we repeat, be not materially different from that of 1886, and the Jubilee so far has not added to the fund. It may do so even yet. But let us not give way to too much disappointment if it does not. The Jubilee calls have been legion. And we may easily expect too much of the churches. We forget that they have great expenses to bear, that not a few of them have private charities of their own to support, and that their members still are the chief private contributors to our great hospitals. When we compare the Hospital Sunday Fund of London and that of other large towns, to the discredit of London, we must not forget that London charities largely receive the blind and the deaf, the halt and the sick, of the provinces. London gets well blamed for her luxury, and we are not disposed to say she gets too much blamed. But we can easily see that many London congregations cannot well do more than they do for the fund. Many of them have a struggle to support their ministers and the ordinances of religion, and yet make a noble effort to help the hospitals. All honour to them. So far as we yet know, the result will show that in most congregations there is an increase. Even Canon Fleming contrived to exceed his handsome collection of 1886 by £17, and the congregation of St. Paul's, Knightsbridge, theirs by £119. In Christ Church, Lancaster-gate, there is the creditable increase of £236 over that of last year. In Mr. Spurgeon's Tabernacle there is an increase of £50, in the Temple Church of £64, in Union Chapel of over £40. There is an increase in more churches than those in which there is a decrease. But we may here remark that although St. Jude's, South Kensington, does not quite reach its last year's total, its vicar, the Rev. Dr. Forrest, is to be congratulated that the falling off is merely nominal, and that it still maintains a foremost position. With such facts, and with all the distractions and expenses of this London season, it is clear that the fund has lost nothing of the goodwill of the religious community, even if we have to recognise that there are limitations to the amount of support to hospitals to be expected from this quarter.

THE invalid is obviously under restrictions regarding both the *when* and the *where* of his holiday from which the ordinary holiday seeker is free. Exigencies of health may compel a holiday at any season, and render imperative a careful choice of locality to meet the special needs of each individual case. The subject being, however, much too wide for proper treatment within the short space of a single article, we shall select for consideration one case only, and that perhaps the commonest of all—namely, the case of the individual who, apart from serious organic disease, finds

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himself somewhat out of health, and desires to gain the maximum of advantage by his annual holiday of a month. Such persons may be dyspeptic or "nervous," complaints of want of appetite and disordered sleep being among the most frequent, or they may have some slight throat affection, or complain simply of "weakness," and unfitness for the ordinary routine of life. It is in such cases, in which experience usually proves the impotence of drugs, that change of air, scene, and habit works some of its most remarkable and beneficent results.

Some practitioners, impressed with the great benefit accruing from change of air, are disposed to regard the change itself as the one essential point, and exercise little care in repect of the locality to which their patients repair. In some cases this negligence may be harmless, but in others it is fruitful in mischief. The climates of sea, mountain, and plain differ too profoundly in their meteorological features and physiological action to be recommended indifferently, and a patient who benefits by one of these types of climate may be seriously injured by another. Take the case of insomnia, for example. In the milder cases any change may do good, but in the severer cases sea air and mountain air are often alike injurious. A quiet sheltered inland resort suits such cases best in the first instance, and as convalescence proceeds this may be advantageously exchanged for some more bracing resort, such as Buxton or Harrogate. We know of a patient who suffered from severe insomnia, and was advised to try Llandudno, where the stimulating sea air greatly aggravated his trouble. On removing to the quiet valley of Llanberis, under the shelter of Snowdon, he obtained immediate relief. This fact is the more worth bearing in mind, as in thoroughly healthy people sea air usually conduces to sound sleep.

As a general rule, neurotic patients of all kinds should be prohibited from resorting either to the seaside or to high elevations. Their symptoms are commonly aggravated by all stimulating climatic conditions, and they benefit most by sheltered inland resorts, either of the plain or some mountain valley. The sufferer from neuralgia comes under this rule. At the favourite health stations of the Riviera—Cannes, Nice, Mentone, San Remo, &c.,—it is a common experience to find neuralgia much aggravated on arrival, but speedily alleviated by removal inland.

The case of the dyspeptic deserves the most careful consideration both from its frequency and from the marked benefit which so often accrues from a well-planned holiday. Here, again, a distinction must be drawn between the [illegible] and the graver cases. The former may benefit by almost any change; the latter will be injured unless the change be wisely ordered. In serious cases of dyspepsia, especially if there be hepatic derangement, the seaside is [illegible] as a general rule, the best change being [illegible] to such resorts as Ilkley or Crieff, where the air is [illegible] without being unduly stimulating. Dr. CLIFFORD [illegible], in his well-known Gulstonian lectures upon [illegible], states truly that a week or two of bracing [illegible] will restore to its normal condition a tongue [illegible] drugs—soda, gentian, podophyllin, and [illegible] have failed to clean. Dr. ALLBUTT draws [illegible] conclusion that such cases are often pure [illegible]. We must here, however, content ourselves with pointing out the great benefit derived from inland moderate elevation in cases which, for the present, we must still describe as "dyspeptic."

We have dwelt upon the disadvantages of sea air in certain cases, and we must strongly protest against the too common practice of the profession in ordering patients indiscriminately to the seaside; but the cases are not few, or unimportant where sea air is one of the most potent remedies within our reach. It is excellent in struma, in rickets, in many cases of early consumption. It is an admirable tonic and restorative to many persons who are simply overworked and "out of tone." It is often the most efficient means of completing convalescence after acute disease, but in this case great care must be taken not to recommend it at too early a stage. Sea air is for *late*, not for *early*, convalescence. On the other hand, as already pointed out, sea air is often hurtful to neurotic and dyspeptic cases. It is also frequently injurious to sufferers from cutaneous maladies. We may give, for example, the case of a patient who for ten or twelve years has suffered intermittently from dry eczema of the fingers. The disease is kept perfectly in check by occasional doses of arsenic so long as the patient resides inland, but on the various occasions on which she has removed to the seaside for the sake of her family, the disease has never failed to make its reappearance. There is one fact in reference to sea air about which there can be little question, and which no doubt largely accounts for its popularity—namely, that while calling for careful discrimination in all cases of disease, it may be freely recommended to most persons in average health, with the assurance that it will probably make those better who are already well.

Mountain air finds one of its most important applications in the case of fagged brain-workers who retain a fair amount of energy and are free from much nervous irritability. To such it often acts as an excellent tonic and hypnotic, stimulating appetite and digestion, luring back sleep, and fulfilling the function of perfect remedy in a species of ailment which is particularly unresponsive to medicinal agents. The point of discrimination in such cases is the presence or absence of nervous irritability, its presence being a bar to the recommendation of high mountain air, and calling rather for some quiet inland resort of moderate or low elevation.

A type of person who may derive great benefit from his annual holiday month is the *bon viveur*, the man who habitually eats and drinks too much, who never walks a yard that he can help, and who is on the high-road to gout, Bright's disease, or fatty degenerations. It is for such persons that the plain diet, early hours, regulated exercise, and copious imbibitions of mineral waters of a well-regulated spa work a veritable miracle in a very brief space of time. It is hardly necessary now to insist that in such cases the matutinal, ante-prandial, and evening potations of mineralised water are only one, and probably not the most important, element in the cure. The vital point is that the *tout ensemble* of life and treatment at a good spa constitutes a most efficient remedial agent, and one which the profession as a whole would do well to recognise habitually as part of the ordinary machinery of practice, instead of according it a kind of half contemptuous tolerance. No doubt hydropathy has been,

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and still is, in some measure allied with quackery, but we can accord it its just place and recognise its real utility, while protesting that its claim to be regarded as a complete system in itself is wholly invalid.

A few general considerations regarding the invalid's holiday may appropriately conclude this article. The place and time having been carefully chosen, attention should be directed to such questions as sight-seeing, exercise, diet, amusement, &c., which are all sure to engage largely the attention of the holiday maker, and on which medical advice may be of essential value. The lethargic individual must be encouraged to make his holiday a time of increased activity; the patient who habitually lives at too high pressure must be warned that his holiday will fail at all points if it fail to afford adequate opportunities for rest; the dyspeptic must be instructed how to guard against indiscretions in food without adopting a practice of modified starvation; the man of one idea, whose heart remains in his study or his consulting chamber, must be tempted to try some unwonted amusement or to essay the cultivation of some new hobby. It would be a serious error to regard such points as trivial and beneath the attention of the physician. On the contrary, they lie at the very root of successful holiday making, and no regard for the proper selection of locality will compensate for their neglect. A holiday misses one of its chief charms and most valuable uses if it does not rest the jaded mind, give fresh play for the sympathies and imagination, and rejuvenate the flagging interest in things outside the narrow groove of everyday life. This it is capable of doing. This it will do if its objects and methods are properly studied and correctly apprehended.

MR. FRANCIS GALTON, whose researches into family history for scientific purposes have already attracted much attention, has published in the *Fortnightly Review* for July an analysis of the returns he has received relating to temper. We differ from the author in his expressed opinion that the data relating to 1981 persons may be regarded as "an adequate number for many deductions;" but he has nevertheless done good service in drawing attention to the subject, and we cannot but look forward with great interest to the time when Mr. GALTON'S further researches will enable people to answer definitely the two questions in regard to which he now speculates on for them. The first inquiry will be, Do good-tempered parents have, on the whole, good-tempered children? and, Do bad-tempered parents have bad-tempered ones? Mr. GALTON'S answers to the first proposition are: "I have forty-three cases where both parents are recorded as good-tempered, and twenty-five where they were both bad-tempered. Out of the children of the former, 30 per cent. were good-tempered and 10 per cent. bad; out of the latter, 4 per cent. were good- and fifty-two per cent. bad-tempered. This," continues the author, "is emphatic testimony to the heredity of temper. I have worked out the other less contrasted combination of parental temper, but the results are hardly worth giving. There is also much variability in the proportion of the neutral cases." We do not for a moment suppose that any physiologist entertains the least possible doubt as to the fact that temper is hereditary. It cannot be otherwise. What is loosely called "temper" depends as directly upon and is in fact a property of the organism—not simply of the cerebrum but of the body as a whole—as tone and timbre are properties of a vocal apparatus or, indeed, of a lifeless musical instrument. Education, training, and collateral influences, of course, qualify the development of individuals as well as families, so that there may, and must, be "much variability" as to the results presented in special cases; but it is, nevertheless, a fact which cannot be questioned, that such general properties as temper are as distinctly hereditary as the organism is itself the outcome of transmitted specialities of material and development. This is admitted by all, even by those who are not prepared to go so far as most of us are compelled to go in the contention that those particular tendencies which culminate in modes of life and action are also hereditary and transmitted, the good or bad tree producing good or bad fruit according to its nature, and the seed which springs from it partaking of its essential character. Mr. GALTON is, doubtless, right in his conjecture as to the rule that good-tempered parents tend to produce good-tempered children, but there is very much more than he seems to take into account in the effect of modifying influences derived from, or exerted by, the respective families of the parents. The resultant of a combination of two forces is not one *plus* the other, but something differing from both and the outcome of the antagonism of contradiction not less than of the influence of affinities acting and reacting upon and from each. The second question in regard to which Mr. GALTON speculates is intended to be the converse of the first—namely, "Do good-tempered families of brothers and sisters have on the whole good-tempered ancestors, and bad-tempered families bad-tempered ones?" In reply to this he says:—"I have 46 good-tempered families, with an aggregate of 333 parents, uncles, and aunts; and 71 bad-tempered families, with 633 parents, uncles, and aunts. In the former group 26 per cent. were good-tempered and 18 bad, in the latter group 18 were good-tempered and 29 were bad, the remainder being neutral. These results," he adds, "are almost the exact counterparts of one another, so I seem to have made good hits in framing the definitions. More briefly, we may say that when the family is good-tempered, as above defined, the number of good-tempered parents, uncles, and aunts exceeds that of the bad-tempered in the proportion of 3 to 2, and that when the family is bad-tempered the proportions are exactly reversed." The general conclusions at which Mr. GALTON arrives are that "great range and variety of temper" are to be found "among persons of both sexes in the upper and middle classes of English society." On the whole, he thinks the women are a little better tempered than the men, but there is not much difference between the sexes in this respect, since about 45 men are recorded as good-tempered for every 55 who are bad, and, conversely, 55 women are good-tempered for 45 who are bad; and that there is a great admixture of good and bad varieties of temper in the same family, albeit temper is undoubtedly hereditary. "Also," Mr. GALTON concludes, "although it exerts an immense influence for good or ill on domestic happiness, it seems that good temper is not especially looked for, nor is ill temper especially shunned, in marriage selection." This last remark, with which the article ends, is another way of stating the familiar proposition that men and women are not drawn together by similarities but

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rather by the attraction of opposites, as positives and negatives. However undesirable this may appear to be from an ethical or economic point of view, it is beyond question the law of natural selection.

IT is not a little strange that the great Temperance Movement, with its vast literature and the multifarious discussions to which it has given rise, has as yet made no notable contribution to the department of vital statistics. In some measure this is probably due to the circumstance that the effects of an excessive use of alcohol are so obvious and so obviously disastrous that no statistical presentation of them could possibly intensify their argumentative effect. It needs no tabular view of collected facts to prove that habitual drunkenness involves constitutional ruin. But total abstainers are by no means content nowadays to rest their case upon the admitted results of intemperance. It is an opinion devoutly held and widely diffused that the habitual use of alcohol, even in the most moderate quantity, is actually deleterious. The scientific grounds of this view are at present very incomplete, and the ascertained facts of a fragmentary and inconclusive character. It is here that a mortality table representing the experience of that large community which shuns alcohol would be particularly valuable. Not only does the subject furnish a battle-ground to moralists, but it is also of practical and pressing importance in a variety of ways. The almost universal practice of life assurance has given a direct pecuniary value to every circumstance of individual health or habits, which has any bearing upon the duration of human life, and thus the profession of abstinence has come to be an item in the purely commercial relations between the Life Assurance Companies and their assured. While in this and the like ways the question of the effect of alcohol upon human longevity has come to have a universal interest, it has received for some of the continental legislatures a singular and even painful importance at the present time. France, which used to enjoy an enviable reputation for temperance, has, within the past ten years, retrograded sadly in this respect. The number of shops for the sale of alcohol, in proportion to the numbers of the population, is almost half as large again in France as in England; that is to say, where there are seven such shops among ourselves there are ten in France. But it is not only in the quantity of alcohol consumed, but also in the kinds selected, that deterioration has been registered within the past decade, and it is stated on the authority of a Commission recently appointed by the [illegible] to inquire into this subject, that all the familiar consequences of alcoholism are terribly apparent in the [illegible] statistics of to-day. Belgium, again, would seem in [illegible] to be in even a worse plight than France. [illegible] proportion of liquor shops is more than double [illegible], and the consumption of alcohol has reached [illegible] and a half per head of the population, [illegible] children being all enumerated. Thus, [illegible] the influence of alcohol upon vitality [illegible] ways to a position of command- [illegible] importance; and the Life Assurance [illegible] have at command much of the [illegible] Mortality tables are constructed. [illegible] company which cultivates business among total abstainers is accustomed in its [illegible] report to give the expected and the actual mortality in abstaining and general sections respectively into which [illegible] is divided. The last report states:—"Expected claims in the Temperance Section, 271; actual claims, 171. In the General Section 354 claims were expected; the actual claims were 337." These figures would appear to show that the total abstainers do enjoy a very pronounced advantage in point of longevity. But several considerations at once arise to cast doubt on the premisses. What becomes of members who pass out of the Temperance Section? Do they pass into the General Section? If so, it is plain that the favoured section must be relieved of a certain proportion of its burdens at the expense of the General Section, and there is some reason to believe that this is the case with the Society in point. Another circumstance that needs elucidation before any conclusion can be come to as to the significance of these figures is the age distribution through the two departments and the table by which they are tested. Thus it is plain that, in respect both of the consequences involved and the present sources of information, a strong case exists for investigation, and we hope that public spirit, or private interest, or both combined, will before long lead some competent persons to undertake the much-needed operation.

IN an article on "The Holiday Season" which appeared in our last number, we referred to the natural advantages enjoyed by many health resorts situated on our own coast, and included among the number the town of Margate, the climate of which is well known for its bracing qualities. It is this week our duty to speak of Margate in a different sense, and to show how, notwithstanding the benefits which nature has conferred upon her, the local sanitary authority have, by their negligence, rendered the place distinctly undesirable for occupation by those who are seeking to improve their health by change of locality. The condition of Margate will be best understood by the perusal of the report of Dr. DAVID PAGE, Medical Inspector of the Local Government Board, which that Board has just issued. The occasion of Dr. PAGE'S visit to Margate was the increasing mortality from typhoid fever in the borough. Margate has, indeed, for a number of years lost some of its inhabitants from "fever"—the deaths in each year from 1877 to 1885 numbering from one to six, which increased in 1886 to as many as nineteen. This rapid development of fever was necessarily viewed with alarm, and especially as the medical officer of health, Mr. KNIGHT TREVES, ascribed its spread to a probable pollution of the general water supply of the town.

Dr. PAGE says that the water supply of Margate is obtained from a well at Tivoli, on the south-west inland boundary of the town, sunk in the chalk to a depth of fifty-three feet, while an additional supply is derived from a well sunk in the Dane valley. The Tivoli well is that especially open to suspicion, being situated at the edge of a strip of grassy marsh land, which is traversed by a "foul stream, little else than a stagnant ditch," receiving at the lower part of its course drainage from various premises, including a steam laundry, stables, dung-hills, and an unknown number of cesspools behind Marine-

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terrace. One danger to the well is from a possible back flow of this stream, a circumstance which had indeed been observed, and to check which some attempt had been made by the provision of a penstock; but this is not all, for Dr. PAGE remarks, "a populous neighbourhood entirely dependent upon drainage into cesspools is growing up in the vicinity of this well, and, incredible as the statement may read to those who know the dangers of contaminated water, I have to state that during the present year a row of a dozen houses has been built within seventy feet of the pumping well, the houses having no other means of excrement disposal than into separate cesspools sunk into the chalk for a depth of twenty feet." It is enough to say, in conclusion, on this point, that there is ground for suspicion that one of the adits of the well approaches to within a few feet of these premises.

If the fact that these cesspools were made with the consent of the Sanitary Authority were not sufficiently blameworthy, they have allowed numerous waterclosets to be supplied directly from the mains without the intervention of any cistern or service-box. Margate indeed is apparently expected to thrive under conditions which no active sanitary authority would tolerate, but this will be better understood when the sewerage of the town is considered. Such sewerage as exists is described as fragmentary, for few sewers exist, and the chief of these, owing to defects, becomes choked at times, leading to the flooding of basements and courts. For the majority of houses cesspools are provided—holes in the chalk, containing offensive matter, which the authority leave to be removed at the cost of the householder. Dr. PAGE tells how, rather than incur this expense, tenants will often leave their houses, or throw their slops out through their back doors in order to lessen the pressure on their pits. It is to these conditions that Dr. PAGE attributes the prevalence of typhoid fever.

Enough has been said to show that the condition of Margate is a standing danger to the inhabitants and to every visitor who goes there; the Town Council cannot plead they are without warning. In 1849 more than 120 persons died of cholera. In 1850 the sanitary condition of the town was condemned by the General Board of Health. As long ago as 1873, Dr. GWYNNE HARRIES of the Local Government Board reported that the medical practitioners of the place stated that fever, diarrhœa, and low types of disease were constantly present in the town, and that infants and visitors suffered most from these kinds of sickness. The registers of deaths themselves, he pointed out, afforded no satisfactory index of disease, "visitors sickening of any disease, the onset of which is gradual, return home as soon as they recognise its approach; dying at home of disease with which they were infected in such a town as this, their deaths fail to appear in evidence against it." In 1880 THE LANCET sent a commissioner to Margate, and as a result of his inspection we published an account of its sanitary state, which showed but little improvement had taken place since it was the subject of Dr. GWYNNE HARRIES' report. The town was then, as now, honeycombed with cesspools; such sewerage as existed was faulty to a degree. The water-supply was even then regarded as liable to contamination, and the high death-rate among children indicated the unhealthy conditions under which the inhabitants lived. These evils have still continued; yet Margate is allowed to offend in this manner, apparently trusting to the fact that the official reports of its own health officer are not sufficiently read by the large number of persons who desire to enjoy the fresh breezes which are to be found on this part of the coast.

We trust that the action of the Local Government Board in placing their report on sale, and in thus enabling every inhabitant and intending visitor to peruse it, will teach the town of Margate that there is no economy in neglecting to obey the most elementary teaching of sanitary science, and that the ultimate effect of the report will be to render Margate really worthy of her exceptional natural advantages.

Annotations.

"Ne quid nimis."

THE COLLEGE ELECTION.

THE result of the election of members for the Council of the Royal College of Surgeons is very interesting. Everyone will congratulate Mr. Hutchinson on the large number of votes (none being plumpers) which he received, while the comparatively small number of votes polled in favour of Sir Spencer Wells' re-election may be taken as an endorsement of what we felt it to be our duty to hint at last week—viz., that he should have made way for a younger man. Mr. Willett's success this year will more than compensate him for his unsuccessful candidature last year. His advent to the Council brings with it a man already well up in College matters, and one who has made himself acquainted with what is going on among the Fellows and Members outside the College. Mr. Willett has taken an active share in the proceedings of the Association of Fellows, and, unless we are greatly mistaken, he will strengthen that section of the Council which would unite the College and its constituents at large into a more homogeneous body than they are at present. A noticeable feature of the present election is the small number of voters—less than 200 having taken part in the election. It would thus appear that the exclusive privilege of voting, which the Council at present regard as one of the highest functions of the Fellowship, is not so very highly prized, or surely a greater number would have come forward to exercise it. Doubtless the Association of Members, in presenting their memorial, will point out this fact to the Lord President of the Council. It should be another argument in favour of widening the constituency, with a view to a more adequate representation in the Council of the various elements of the profession.

ADDITIONS TO THE HUNTERIAN MUSEUM.

From the annual report of the Conservator of the Hunterian Museum it appears that the additions to the pathological department during the last year number 121 specimens, besides teratological specimens and calculi. Among them is the complete articulated skeleton of a man affected with osteitis deformans. There is a large and valuable addition to the collection of drawings and photographs, by Mr. Jonathan Hutchinson, Mr. Oliver Pemberton, and the photographs accompanying the Jacksonian Prize Essay. Mr. F. Eve has prepared an appendix to the Pathological Catalogue; this contains descriptions of nearly 400 specimens, and completes the catalogue up to the present date. "The nucleus of a series of specimens for examination purposes has been formed." The revision of the whole series of specimens is completed. In the department of Comparative

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Anatomy there have been received, amongst others, five skulls from the Hindu-Kush district of India, and new skeletons of birds; whilst the College has purchased a fine specimen of the egg of the Œpyornis maximus (or roc). Several dissections of important parts have been added. These, which are extremely good, keep up the high reputation of the College, and will be most useful to the student. Altogether the additions to the museum are quite as interesting and instructive as in former years, and will fully repay a visit.

SCARLET FEVER AND INSANITARY CONDITIONS.

ACCORDING to a report of a subcommittee of the Sheffield Health Committee, the sanitary condition of the village of Crookes deserves the attention of the corporation. Scarlet fever has been epidemic there, and the Sheffield authority have made inquiry into the possibility that the night-soil which is deposited in the neighbourhood is the cause of the outbreak. They have not come to this conclusion, but have found in the village abundant reason for the rapid spread of any infectious disease from house to house; and they comment in condemnatory terms on the want of proper drainage and the arrangements of middens and on the crowded cottages of the place, and say that the remedy lies in the improvement of sanitary matters in and about the cottages, in getting rid of the middens, in doing away with drains under houses and cesspools in the yard and close to inhabited houses, in providing means for disinfecting infected houses, and in the immediate removal of infected cases to the borough hospital. Until these suggestions are adopted they fear there can be no hope of arresting infectious disease in Crookes when it arises. Scarlet fever has also been prevalent at South Normanton, cases occurring in a house of one room, which was described as a filthy hovel and not fit for habitation; in this one room several persons lived, and the ventilation of the place was most imperfect. The sanitary authority have given instructions for the necessary measures to be taken under the Public Health Act.

THE CONTINUED DROUGHT.

THE absence of rain is causing serious inconvenience in all parts of the kingdom. On June 27th the Liverpool Water Committee had under consideration the report of their engineer, which stated that the total volume of water in store at Rivington had diminished in a fortnight by 232,000,000 gallons, a member of the committee pointing out that in one of the suburban districts, Blundellsands, the want of sufficient water had been very severely felt in consequence of the supply being cut off for some hours each day. In Wales several works are stopped for want of water, and it is feared that, should the drought continue, six thousand operatives will shortly be thrown out of work at Llanelly and the Rhondda Valley. In Swansea water is being searched for in streams and private wells, the town supply having failed. Attempts have been made to supplement the town supply by pumping from disused colliery workings, and, it is said, also from old wells closed years previously because the water was said to be undrinkable, and with the result that the 100,000 inhabitants of the town receive but one-third of the necessary supply. In Ireland the crops are suffering, and in some places it is stated the cattle are dying from heat and scarcity of water. In the north of England rain has fallen, but more is urgently needed. The effects of the drought upon health will probably be [illegible] later. The damage to crops and the failure of [illegible] will undoubtedly have its influence in producing [illegible] the necessity which has been found [illegible] obtaining water from improper sources [illegible] lead to an increased prevalence of enteric fever. But one of the greatest benefits of rain is its power of cleansing the air and earth, and it may be anticipated that an increased diarrhœal death-rate will be found in those towns where this disease is usually prevalent in the summer. On the other hand, the heat of the weather is probably responsible in some part for the absence of small-pox. It is now two months since a single death from this disease was registered in the metropolitan district, and the cases that have occurred have been trifling in number. The effect of heavy rainfall at the conclusion of the drought will be watched with interest, for it may be expected that watercourses will be especially polluted at that time.

THE TREATMENT OF FIBROID TUMOURS BY ELECTRICITY.

FOR many years electricity has been used in the treatment of the diseases of women, and for the last twenty years various attempts have been made to render it valuable in the treatment of fibroid tumours. This has been tried in America, Germany, and France, in the last-named country more especially by Dr. Apostoli, who claims a degree of success not obtained by any other operator. He attributes his success to two facts—the method of operation and the strength of the current. He introduces one pole into the cavity of the uterus when possible; failing this, he forces it into the substance of the tumour, the other pole he places on the abdomen of the patient. The strength of the current employed by Apostoli is much greater than that which has been hitherto employed by others, and he prevents cauterisation of the skin of the abdomen by the use of an electrode of large area made of a material of low conducting power. The uterine pole is used to cauterise and to cause absorption. Absorption is said to be brought about by electro-chemical action upon the tissues of the tumour, contraction and lessening of the blood supply, and coagulation. The means employed are said to be safe, comparatively painless, and successful in the hands of Apostoli. It is as yet too soon to form a definite judgment upon the method, for in other hands it has often failed, has caused serious illness, and even proved fatal. At the same time it cannot be questioned that in certain cases it has proved of great service. It has been followed by diminution of the hæmorrhage and improvement in the general health, diminution in the size of the uterus, and early menopause. Should it prove to possess half the advantages which are claimed for it, it will be a great addition to our present methods of treating fibroid tumours of the uterus.

POOR LAW ADMINISTRATION.

INQUIRY has just been made by an inspector of the Local Government Board into the circumstances attending the suspension by the Brighton Board of Guardians of one of their district medical officers. It is difficult to read the evidence, which is published *in extenso* in the *Sussex Daily News*, without a feeling of astonishment that the time of a Local Government Board inspector, of the Board of Guardians, and of a number of other persons, should be wasted by an examination into complaints as frivolous in character as could be brought against any public officer. The medical officer's manner had, it seems, been displeasing to certain persons, and, as a result, six so-called charges were deemed worthy of investigation. There is no point in the whole inquiry that is of any public interest, the gravest accusation being that of irritability of temper. A large number of the well-known members of the medical profession in Brighton gave evidence in favour of the medical officer, and bore witness to his professional ability, his courtesy to those about him, and his kindness to his patients, and the conclusion of the case is sufficiently

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obvious. Tho only lesson which can be learnt from the whole case is the necessity for medical men who are not possessed of the most perfectly even tempers to avoid poor-law practice.

THE ADDRESS IN MEDICINE AT THE AMERICAN MEDICAL ASSOCIATION.

DR. JOHN S. LYNCH of Baltimore, in his capacity of President of the Section of Practice of Medicine at the recent meeting at Chicago, glanced at several recent discoveries, "or pretended discoveries," in therapeutics. His address did not profess to be exhaustive, but there was a free expression of personal experience and opinion on current subjects which has its value to a practical audience. He extolled antipyretics: "As I grow older and my experience enlarges, I become more and more convinced that fever is the lethal agent which destroys life in almost every disease in which that functional derangement is present." Hence his praise of antipyretic remedies, amongst which he yielded the palm to antipyrin as very soluble in water, and rarely exciting nausea. Since beginning to use it in November, 1884, he has not seen a single person die of enteric fever, scarlatina, or measles, only one of croupous pneumonia (seen too late); and the duration of life in phthisis, he thinks, is very nearly doubled by it. Of course, this is a very imperfect statement. We should require to know how many cases of such diseases Dr. Lynch has seen. "The dose should be about one gramme, repeated at first every hour until three doses have been taken, and afterwards every three or four hours." On the subject of cardiac stimulants, he reports that he has not experienced the valuable properties attributed to strophanthus, and says it is hardly possible that we shall ever find a better remedy for all cardiac lesions than digitalis, which combines the two valuable properties of energising the heart and stimulating the action of the kidneys at the same time. On the momentous subject of phthisis, which disease is probably more fatal to the human race than war, pestilence, and famine combined, he was rather severe on Koch's bacillus, and still more so on Bergeon's treatment of it. He did not deny that the bacillus existed and was a factor in the case; but he attached far greater importance to hygienic conditions as both more powerful and more controllable. After having given Bergeon's treatment a fair trial, he had nothing to say in its favour. He gave two instructive cases—both men—to show that one may carry a caseous mass in the lungs for years, and yet, with great attention to hygienic surroundings, enjoy good health, or even attain a fair longevity.

DIAPHRAGMATIC HERNIA.

A COACHMAN, aged thirty-seven, was admitted into St. Thomas's Hospital, under the care of Dr. Ord, on July 7th, with symptoms of intestinal obstruction. He was conscious, but intensely collapsed; temperature 98°; pulse 136; abdomen greatly distended, especially in the region of the transverse colon, and perfectly motionless, over-resonant, and rigid. He died in the afternoon in a delirious condition. At the post-mortem examination, there were signs of old pleurisy on the left side; whilst through the left side of the diaphragm projected a portion of the splenic flexure of the colon, with a piece of omentum. The adhesions round the neck of this hernia were firm and old. The large intestine above this hernia was distended, below collapsed. He had first complained of a sudden twisting abdominal pain whilst lying on the grass on July 1st. Vomiting commenced next day, rapidly becoming offensive. He was stated to have been a healthy man, having never been troubled with constipation for more than two days. Had drunk freely.

ALBERT VON KÖLLIKER.

SELDOM have honours been more worthily bestowed than on the great Würzburg anatomist and teacher, who on Wednesday, the 6th inst., reached his seventieth birthday and the fortieth anniversary of his academic work. Preparations had for some time been on foot for the celebration, and the University authorities and the Burschenschaft combined to make it a brilliant success. In the forenoon of the day the *Jubilar* (as the Germans call him) received the congratulations of the rector and the Senatus, and his former and present pupils thereafter tendered him a magnificently bound collection of scientific works, in testimony of their gratitude and goodwill; while illuminated addresses, on the part of the medical faculty and of the Medico-Physical Society (founded by himself forty years ago, and of which he is permanent honorary president), were also presented to him in terms of cordial greeting. The Medico-Physical Society of Erlangen, followed by a distinguished succession of anatomists from Germany and nearly every European country, and, lastly, by civic functionaries of every degree, waited on him to offer their salutations. Telegrams and letters also came in at short intervals all through the day in testimony of the affectionate goodwill of their signatories. Professor von Kölliker was deeply moved and gratified by the whole demonstration, so varied and so significant in its expression. In the evening a great banquet in his honour was held in the Hotel Schwan, and among the company were the Senatus Academicus, the leading members of the medical profession, the Fellows of the Medico-Physical Society, and a numerous representation of students and friends. Toasts and speeches, grave and gay, sped the hours delightfully, and far on in the night the guest of the day was serenaded by the Vocal Union and honoured with a torchlight procession by the students. On the 7th a special entertainment was given by the Burschenschaft to their veteran teacher in the Platz'schen Garten; and on Friday the 8th the Professor invited all his old students, friends, and colleagues to a *Frühschoppen* in the Julius-spital Pavillon. Throughout the three days' proceedings the reciprocity of good feeling was equally honourable to guest and to entertainers, and will long be remembered among the social annals of the University of Würzburg.

THE CLEANSING OF PUBLIC PONDS.

THE continued hot weather, as might be expected, is bringing into prominence various weak points in the machinery of sanitary administration. Among other matters, attention has been recently directed to the impure condition of the ponds in Victoria Park, which, like other pieces of artificial water in the metropolis, are regularly frequented by bathers, and in which, owing it is said to some leakage, the water has not been changed of late so thoroughly as it ought to be. A part of the consequent pollution is no doubt attributable to the custom of bathing, but this is no reason why that custom should be discontinued. Especially in such a season as this, it is most necessary that every due and possible provision should be made for the cleansing of those members of the community to whom a morning bath in their own crowded homes is an impossible luxury. The ponds referred to are for this purpose invaluable to many a poor but cleanly-disposed Londoner, and it would certainly be unfair to deprive any one such of his time-honoured right of immersion, simply because he leaves the water a cleaner man than he entered it. The state of the ponds, however, calls for a remedy. The leak we have mentioned is to be amended as soon as possible; but it has been questioned, with some reason, whether, though it be made good, the gradual renewal of the water in the pond once a day, as now arranged, is sufficient to ensure the

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purity. Natural lakes, it is true, are self-purifying on the same principle, while much if not all the refuse which enters them and sinks to the bottom is used up as food for water-plants, fish, and other aquatic animals. It may be doubted, however, if the smaller of these ponds could be so easily cleansed if they were commonly used as bathing-places, and certainly some of their kind in London parks are neither so extensive nor so fully stocked with water plants and the like as to enable them to dispense with the occasional services of the scavenger.

THE "UNIVERSITY COLLEGE GAZETTE."

THE issue of this magazine for the 11th inst. is an illustrated one, intended especially for the use of medical students. It contains excellent illustrations of the Yates ward, the hospital, the college, anatomical and pathological museum, library, Flaxman gallery, Wakley Convalescent Home, &c., and, under the head of "Past Worthies," includes an interesting though brief account of the career of James Wakley, M.D., the late Editor of this journal, whose portrait, and that of the late Dr. Wilson Fox, are by no means the least meritorious of the illustrations. Alluding to the Wakley Convalescent Home, with grounds of eight acres, at Longcross, bequeathed, together with a sum of money in aid of its maintenance, by the late head of our editorial staff, to University College Hospital, the *Gazette* states that the Home will be opened shortly for the reception of nine adults and two children, all of the male sex. This limitation as to sex is necessitated by the present arrangement of the house, but it is hoped that before long it may be possible to enlarge the Home, and so get over this difficulty.

CARL VOGT.

FROM Geneva a correspondent writes: "Medicine was conspicuously represented on the evening of Wednesday, the 6th inst., when the grand hall of the University was filled with a gay and distinguished audience to celebrate the jubilee of the Professor of Natural History and Geology. Carl Vogt is now seventy years of age, and forty of these have been spent in the Geneva school, which his scientific and teaching powers have done so much to make famous. The academic orator on the occasion was M. Pronier, a student in medicine, and very happily did he acquit himself of the task of conveying to the veteran *savant* the gratitude of the younger members of the school for the advantages they had reaped from his able and inspiriting prælections. A beautifully designed and executed set of mantelpiece ornaments in bronze was then tendered to Professor Vogt as the special gift of his pupils. Then, in the name of the Senatus Academicus, the rector, M. Pierre Vaucher, congratulated their septuagenarian colleague on a longevity which afforded every prospect of being extended, to the great benefit of the University of which he had for forty years been so great an ornament. This address was also followed by a special gift—an album containing photographs of Professor Vogt's brother professors, including some who had already passed away. Then the Minister of Public Instruction, M. Carteret, concluded the proceedings by a succinct and appreciative account of Carl Vogt's career, and congratulated him, as the author of the 'Zoologische Briefe,' on having won the ear of the non-academic world for discussions of purely scientific interest. Professor Vogt replied, not without emotion, and in admirable taste. He told his audience that till well on in life he had been divided between the rival claims of two favourites, Science and Politics, and though science had gained the day, he never ceased as a citizen, and even as a *savant*, the attentions from time to time paid to her more bustling sister. To the attention of the latter he had worked for [illegible] of the former he was still working for enlightenment. As a teacher it had been his special care not to burden his pupils with facts, but rather to show them the cosmic relations of these, and how they ought to be taken up and handled. Success in science, as in every other intellectual walk, would wait on those who pursued it with all the might at their command. To his masters, Liebig and Valentin, the great chemist and the great physiologist, he owed whatever special training he had brought to his academic work—work which had been materially aided by the civic authorities, and reinforced by his brother professors. Under such support the University of Geneva would improve on her past record, brilliant as that had been. After the guest of the evening had resumed his seat, amid rounds of applause, an adjournment was made to the Brasserie Rohrer at Plainpalais, and there, till a late, or rather an early, hour, under the genial presidency of Professor Gosse, Dean of the Faculty of Medicine, the proceedings took a less formal and much more lively turn—toast and song alternating, with intervals of pleasant general conversation between. Master, pupil, municipal authority, and plain citizen, to the number of about 300, renewed their congratulations to their guest, who once more made his acknowledgments the occasion of happy reminiscence and kindly counsel."

THE INFLUENCE OF SEX IN HEALTH AND DISEASE.

IN the *Australian Medical Journal* for April 15th, 1887, Dr. Jamieson discusses this complicated question within the narrow limits of an introductory lecture. His argument is, briefly stated, that women are more highly organised than men, as proved, not only by moral superiority, but also by intuitive perception, superior grace of form, relative absence of abnormalities, relative absence of idiocy, higher vitality, and comparative immunity from various diseases. We confess that the author has failed to convince us, and that the facts are better explained, in our opinion, by more "brutal" and less transcendental considerations: moral superiority (which is capable of debate), by comparative seclusion from the struggle for existence and its temptations; intuitive perception, by the very absence of the habit of minute reasoning; superior grace of form, partly by sexual selection, but partly by arrest of development; relative absence of abnormalities is not true of *all* abnormalities; relative absence of idiocy, by smaller heads at birth. The question of comparative probability of living at different ages has been many times debated, and seems to depend mainly on greater evolution of the nervous system, and the burden of life in males, and parturition in females. The article is well written, and we do not forget the maxim: "*Audi alteram partem.*"

FRUIT IN SUMMER.

IN spite of the cold winds which prevailed during April and May, the fruit crop thus far has been fairly abundant, and we are not without signs of a moderate rainfall, which ought to ensure for the season at least an average yield. That this is in itself a fortunate circumstance it is needless to assert, and yet it surely implies along with much advantage a considerable risk to the public health. Let it not be thought that we seek to disparage the value of fruit as an article of diet. If ripe and sound, there is every reason why the great majority of people should partake of it freely. Though persons of markedly gouty or rheumatic temperament require to be somewhat sparing in its use, and others with a dysenteric tendency much more so, while diabetics must regard it, in most of its forms, as a forbidden dainty; still its general utility as a stimulant of digestion, a light food, and an aid to the regular action of the bowel, are beyond question. In order to reap the full benefit of its use,

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however, one or two facts must be kept in view. We must remember that much depends upon its kind and everything upon its quality. Thus the helpful stimulation afforded to the mucous membrane of the stomach by subacid fruits may be turned to good account when the appetite is jaded, as in some atonic cases of dyspepsia. The same slight acidity is valuable in cases of chronic constipation, and acts partly by its chemical attraction for the intestinal juice and partly as a stimulant of intestinal contraction. Other kinds of fruit, again—such as the banana, which abounds in starch—have a distinct nutritive value. The same is true of nuts, in virtue of the albumen, fat, and starch which they contain, but here the question of digestibility comes in, and it cannot be said to have found in the case of man a completely satisfactory solution. As regards quality, the cardinal properties of ripeness and soundness cannot be too strongly insisted on. Fruit which is still unripe is practically a chemical irritant, and in its degree a poison. That which is passing the stage of ripeness is likewise an irritant, and owes its effects to the chemical products of decay or the germ poison of putrefaction. The question of the treatment of such effects need not now occupy us, but enough has been said to remind our readers that some degree of care is needful to enable them to enjoy the produce of the fruit harvest, and that with due care they have nothing to fear.

THE MIDDLESEX HOSPITAL.

WE are pleased to be able to state that the performance of the "Golden Legend," conducted by the composer, Sir A Sullivan, at the Albert Hall on the 13th inst., on behalf of the above institution, was very successful from every point of view. As a musical treat it certainly left nothing to be desired. The singing of Madame Albani was, as usual, superb, and she was most ably supported by Madame Patey, Mr. Edward Lloyd, and Signor Foli. We understand that Sir A. Sullivan had nothing but praise to bestow upon the efforts of the band and orchestra. Dr. Stainer ably presided at the organ. Owing to the garden party at Hatfield, Her Majesty and many of the Royal Family were unable to be present, but his Royal and Imperial Highness the Crown Prince of Germany, who honoured the performance with his presence, evinced the keenest interest throughout, and afterwards expressed his pleasure at having been present on the occasion. We hear that, after all expenses are paid, a considerable sum will be paid over to the hospital exchequer.

THE MUD BATH TREATMENT IN THE CRIMEA.

DR. PHILIPOVICH, who has for many seasons been in the habit of employing the Crimean mud baths in the treatment of patients suffering from various kinds of affections, has just published an article on the subject in the *Russkaya Meditsina*, in which he gives notes of several cases of an interesting nature. His general opinion is that the mud baths may safely be employed in the case of weak anæmic subjects with as much advantage as in those of a robust habit. He does not consider tabes dorsalis a bar to their use, some cases of the kind while in the earlier stages having been very much benefited by this treatment, the nutrition having been improved and the pains decreased. Cardiac patients may be ordered mud baths, but care should be taken that the temperature is not too high, and that the duration of the baths is not too prolonged. In syphilitic cases mercurial inunctions may advantageously be ordered simultaneously with the course of baths; and under these circumstances Dr. Philipovich finds that a far smaller quantity of the mercurial is required than when the inunctions are not combined with mud baths. He has remarked that although the treatment usually shows its effects at the time, there are some cases in which no improvement is apparent for some weeks afterwards, when, perhaps, the patient getting disgusted with the failure of medical men to relieve his sufferings, has betaken himself to quack remedies, which then not unnaturally come in for the credit of having effected what scientific medicine was powerless to do. The classes of cases in which these mud baths are mainly employed are those of rheumatic and rheumatoid pains, neuralgias and syphilis. The results in the case of rheumatic affections seem to have been most encouraging, as out of forty-six such cases thirty-seven are stated to have been completely cured, or, at all events, entirely relieved from pain, while only nine failed to obtain any marked benefit. Of five cases of sciatica three were more or less nearly cured. Of three cases of migraine one was greatly benefited, one slightly so, and the third not at all. Fifteen cases of debility, consequent on serious diseases, came under treatment; of these ten received marked benefit. There were fifteen syphilitic cases; here mercurial treatment was invariably combined with the baths, and very satisfactory results, as a rule, obtained.

SCARLET FEVER IN SCHOOLS.

A FEW cases of scarlatina having occurred among the boys at Christ's Hospital, the warden of that school has written to the boys' parents giving them the opportunity of removing their sons should they think fit, but not recommending the dispersion of the school. The disease is, the letter states, of a mild type, and none of the patients have presented any serious symptom. The action of the school authorities is in every sense of the word a proper one. It states the facts exactly and without any concealment, and leaves each parent to do what he thinks best in his boy's interest. Probably the majority will desire to leave their children where they are, especially if they have other children at home who have not already suffered from scarlet fever. The letter rightly calls attention to the danger of placing boys returning from school under these circumstances with susceptible persons, and mentions the period of time during which each pupil after leaving school should be regarded with suspicion. Christ's Hospital has set an excellent example to other similar institutions.

A BLUNDER AT LIVERPOOL.

WE had hoped that, with the action which is now being taken in Liverpool to provide two non-pauper fever hospitals, the era of mismanagement with respect to infectious diseases was coming to an end; but a resolution which has just been passed by the Hospitals Committee, to the effect that patients are to be charged two guineas, one guinea, or ten shillings a week, coupled as this is with a reminder of the compulsory powers as to repayment under Section 132 of the Public Health Act, constitutes a blunder of the greatest magnitude. If repayment is deemed desirable in certain cases in order to satisfy the consciences of those who enter the hospital, the announcement should have been made just in the opposite way to that in which it has been done. In the first place, the public should have been informed that, since the hospital has been provided and will be maintained for public purposes at the cost of the public, the public will have the right of entry to their own hospital free of cost; and this the more so because everyone who enters will, by removing from amongst the community a source of danger, be conferring a benefit on his or her fellows, and all such persons should be received into the ordinary wards and receive the ordinary fare free of cost to themselves or to their friends. Every other plan always has failed and must still fail. Indeed, there are many hospitals the expense of building which has been a mere waste of public money, because sanitary authorities, having first spent the rates to

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the extent of some thousands in making hospital provision, have next deterred the sick from entering by wanting to get back a few paltry pounds from those availing themselves of the public provision which has been made. We therefore sincerely hope that Liverpool will rescind this unfortunate resolution, and so remove the greatest hindrance to the proper protection of the public by means of isolation in hospital. There will always remain a certain number of people who will wish to have private rooms and superior accommodation. This should always be paid for; and we understand that, even whilst charging a minimum of three guineas a week, the authorities of the London Fever Hospital cannot meet the demand made upon them for this class of accommodation. But a charge of this sort is a very different thing from a hint at a charge upon the occupants of ordinary wards. True, all authorities say they intend to remit the fee if the patients are poor; but this does not meet the case. It is when the disease is first heard of that there must be an absence of all hindrances if speedy isolation is aimed at, and this can only be effected by making a hospital which belongs to the public free to the public.

CHOLERA IN ITALY.

As we surmised last week, the outbreak of cholera at Rocella, in Calabria, doubtless had its origin by conveyance from the neighbouring island of Sardinia. The cholera rumours of the past week are numerous, and amongst them is a statement to the effect that Catania, on the eastern coast of Sicily, and which was affected in March last, remains the centre of the epidemic. According to one report, there have been two hundred cases in Catania, a hundred and forty proving fatal, and the garrison being severely affected. The disease has also appeared at Caltanisetta and Messina, but only to a trivial extent. At Rocella cases continue to occur. From Paris comes also a report of cases in the island of Sardinia, but Cagliari remains free as yet. The occurrence of cholera in Sicily has led to a large influx of people into Naples, and the authorities there feel that since they are only at the beginning of their sanitary reform, this immigration is by no means unattended with risk.

ELECTRIC LIGHTING ON RAILWAYS.

IN reference to an annotation on this subject which appeared in a recent issue, we are informed that the London, Brighton, and South Coast Railway Company have already ten trains lighted by electricity, and a proposal is now under consideration for lighting the whole of the trains in this manner. The first two trains were tried and tested in every way for two years, and it was the great success of these trains which led to the late extension of the system. The Brighton company has received an offer from the company which holds the patent to light every train and carriage on the line for the same cost as that entailed by the old imperfect oil-lamps, so that the objection of expense is now at an end. The trains, it appears, are popular, and the light is so great a convenience to the passengers that it is to be hoped we shall speedily see the general adoption of so beneficial a system.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:— Don F. Benjumeda, Professor of Clinical Surgery in the Faculty of Medicine of Cadiz, and well known in Spain as a brilliant operator, especially in stone cases. He was seventy-two years of age, and had held his professorship forty-three years. — Dr. Victor Adolf Richter, Ordinator of the Alexander Hospital, St. Petersburg, at the age of sixty-nine.

THE HEALTH OF THE CROWN PRINCE.

HAPPILY there is little to report of the Crown Prince, in whose health the people of this country take so deep an interest, and what little there is is all in the right direction. His Royal Highness's voice, which a week ago was rather hoarse, has now become clear and almost normal in tone, and the condition of the larynx, to all appearance, continues quite satisfactory. The double indication of healthy appearance and returning normal function in the vocal cords is a matter of sincere gratification to all concerned. There is no foundation for the rumour of the Crown Prince's intention to go to Cauterets; such a proposal has never been entertained. We print elsewhere a translation of Professor Virchow's report on the nature of the portion of the laryngeal growth last removed by Dr. Mackenzie.

PROPOSED CHANGE IN FRENCH PROVINCIAL MEDICAL SCHOOLS.

THE provincial medical schools in France are to be shorn of their accessory professorships—that is to say, of their chairs of physics, chemistry, and natural history, the instruction in these subjects being intended to pass entirely into the hands of the professors of the faculties of science. The change is not to be made in a sudden manner, but gradually, the chairs as they fall vacant not being filled up. The proposed change is meeting with a chorus of disapproval from the provincial schools, whose members do not at all relish the idea of such a curtailment of their respective staffs from mere motives of economy. They say that the science required by medical students, as well as by pharmaceutical students, who in many of the schools are taught with them, is different both in kind and in extent from that required by those whose profession is to be purely scientific, and who are preparing for the higher degrees of doctor or licentiate in science, and that if this change is carried out either the medical or the science students, or both, must necessarily suffer. Again, it is pointed out that it is most inopportune, at a time when medicine is every day becoming more scientific, to crush several centres of medico-scientific research, which are constantly yielding good fruit.

THE JAMAICA MEDICAL SERVICE.

THE Government of Jamaica have passed a law compulsorily fixing the scale of fees for medical men in the Government service. We do not know what this scale may be, nor do we know whether any special reason was urged on behalf of this act of legislation, but certainly it requires justification. No doubt it is well that there should be some agreement as to what is proper remuneration for medical service under different circumstances, and the profession in Jamaica might conveniently follow the example of the Manchester Medico-Ethical Association in adopting a scale which would guide them on this point, but such a course is very different from the enforcement by Government of a tariff which is not fixed by the profession. We would strongly recommend all medical men proposing to enter the Government service of Jamaica to consider the position in which they will be placed in regard to their practice.

RURAL ISLE OF WIGHT.

WE are glad to see that the *Morning Post* has added one to the many warnings we have given as to the dangers to health which are so abundant in the rural area of the Isle of Wight. We have on several occasions pointed to the persistent neglect of the rural sanitary authority to act on the advice either of their own health adviser or of the staff of the Local Government Board. For six years little or nothing has been done to mend matters; polluted water, absence

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of drains, and prevailing nuisances still remain; and the rural sanitary authority were recently selected in a Government blue-book as a type of inefficiency and mal-administration. Our contemporary indicates that the money aspect of the question may come to be the most potent, when visitors learn where conditions inimical to health abound. Some of the towns in the island,—such as Ryde, Ventnor, and Shanklin—have taken some action. Even West Cowes, with its sad need for drainage, its bad bye-laws, and crowding of houses, has done something. But there are so many parts of the island which should be avoided, that we would counsel any who are intending to visit it to get the report of the Medical Officer of the Local Government Board on cholera measures, which was issued last year, and from that volume to find out where they may go with safety.

FOREIGN UNIVERSITY INTELLIGENCE.

Gottingen—Professor Wolfhugel has been appointed an extraordinary member of the Sanitary Board.

Havana.—A laboratory for bacteriological research and for Pasteur's anti-hydrophobia treatment has just been established.

Leipsig.—Professor de Bary, who had been invited to come to Leipsig, has decided to remain at Strassburg.

Marburg.—The name of Professor Gasser of Berne is mentioned in connexion with the vacant chair of the late Professor Lieberkuhn. Professor Nasse has just celebrated his eightieth birthday.

THE Council of the Recreative Evening Schools' Association have resolved to carry on their work in the ensuing winter on an extended scale, and to enable them to do this successfully an appeal for personal help has been sent to all the centres of scientific training in London. The services of at least fifty volunteer teachers are required, and we may express the opinion that to many scientific students the experience in teaching thus gained would be valuable. The work done by the Association is most excellent, and one deserving of every encouragement. Any information will be supplied by the secretary, J. E. Flower, M.A., at the offices of the Association, 37, Norfolk-street, Strand, W.C.

IN reference to the announcement made in our last issue respecting the post of obstetric physician at St. Thomas's Hospital, we may state that the resignation of Dr. Gervis does not take effect until October next. He will then have served the hospital for twenty-eight years—sixteen years as assistant-physician and twelve as full physician. His retirement is due to the pressure of his private engagements, and from a desire not to prolong his connexion with the hospital beyond the time when he can serve it with unimpaired health and energy.

THE following summary of the degrees conferred at the University of Cambridge during the academical year 1886-87 has been published:—Doctors in Divinity, *jure dignitatis*, 2; Doctors of Law, 2; Doctors of Medicine, 8; Doctors in Letters and Science, 7; Doctors of Music, 2; Bachelor in Divinity, 1; Masters of Arts, 351; Masters of Law, 27; Master of Surgery, 1; Bachelors of Medicine, 49; Bachelors of Surgery, 23; Bachelors of Music, 6; Bachelors of Arts, 577; Bachelors of Law, 36. The honorary degrees conferred were LL.D., 6; Litt.D. & Sc.D., 3.

WE regret to learn that a severe outbreak of typhoid fever is prevailing at Warrington. As yet the cause is somewhat uncertain, but it is locally held to be due to defective conditions of drainage.

TWO of the members of No. 6 Company (Wolverhampton) in the 1st Bucks Rifle Volunteer Corps are suffering from typhoid fever, attributed by Dr. Symington to drinking water out of a horse-trough at Slough on the 22nd ult., when the Volunteers went to form a guard of honour to Her Majesty. It is hardly expected that either of the sufferers will recover.

THOSE of our readers who are interested in anthropology will be glad to learn that the General Congress of German Anthropologists meets at Nürnberg from the 8th to the 12th August. The picturesque city, full of varied interest, will be *en fête* for the occasion, and the organising committee have arranged excursions, to which ladies will be specially invited.

AMONG the classes at the third annual International Photographic Exhibition which is to be held in October, we notice that one, Class XII., is open to members of the medical and other learned professions for clinical studies, micro-photographs, photo-micrographs, natural history specimens, &c.

NOTE ON
RECENT FRENCH LIVER LITERATURE.

BY GEORGE HARLEY, M.D., F.R.S.,
EX-PROFESSOR IN UNIVERSITY COLLEGE, LONDON.

WHILE within the last decade English medical literature has teemed with all kinds of books—originals and compilations—on diseases of the liver, the continental press has issued but very few general treatises on that organ, though many special papers on hepatic subjects have appeared in its periodicals. It was therefore with some degree of curiosity that I sat down to read the 880-paged volume which has just emanated from the pen of Dr. Cyr,[1] the curiosity being materially enhanced by my knowledge of the fact that he may justly be regarded as a representative French writer on hepatic affections, seeing that he has already published separate monographs on Cirrhosis, Biliary colic, the Periodicity of Hepatic Symptoms, as well as an admirable little book on Calculous Affections of the Liver. Not unnaturally, therefore, I was led to expect that in this general treatise of his I should find at once and the same time a clear and concise epitome of all the recent French literature on liver disease—a hopeful expectation in which I have assuredly been in noway disappointed. Such being the case, I shall now briefly place before the readers of THE LANCET some of the more important of the gleanings from Dr. Cyr's volume. It is perhaps all the more advisable to do so, seeing that many English practitioners entertain the idea that, as severe liver diseases are much more frequently met with in this country than on the European continent, they have but little to learn from the writings of their continental *confrères* on hepatic affections. This idea is, however, erroneous; for though it is an undoubted fact that from the widespread existence of our great national vice—an over-indulgence in the use of alcoholic stimulants,—as well as our close Imperial connexion with the tropics, the medical practitioners of Greater Britain see, as a rule, far more examples of liver diseases having an inflammatory origin, and consequently also a much greater number of the secondary forms of hepatic affections springing from them—to wit, abscesses, chronic atrophies, cirrhotic ascites, &c.—than other European practitioners, it is, nevertheless, the fact that our continental *confrères* have, probably, even more opportunities of both studying and treating the very large group of liver diseases generally included under the heading "constitutional." Such, for example, as all the varied forms of syphilitic liver affections, as well as the tuberculous, cancerous, amyloid, and other kinds of hepatic tissue degenerations. Consequently, in a systematic treatise on liver diseases like the one now being considered,

[1] Traité Pratique des Maladies du Foie. Par J. CYR, Médecin Inspecteur adjoint des Eaux de Vichy. Baillière et Fils. Paris, 1887.

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cannot fail to learn many things that are not alone novel, but likewise many things that are useful in a practical point of view.

With these preliminary observations, I now proceed to give a sketch of Dr. Cyr's opinions. The first sixty pages of his book need not detain us, as they are entirely devoted to the anatomy and physiology of the liver, with which I presume all my readers are sufficiently well acquainted to admit me at once to pass on to the practical part of the volume, which commences with an interesting chapter on the symptomatology and diagnosis of hepatic affections in general. In this chapter Dr. Cyr wisely, I think, impresses strongly upon the reader that a jaundiced tint of the skin is by no means necessary to prove the existence of a grave, or even of an incurable, form of liver disease; for, as he says, jaundice may not only be totally absent in the case of hydatids as well as of abscesses, destroying almost the whole of the normal hepatic tissues, but a yellow tint of the skin may be almost equally conspicuous by its entire absence in rapidly fatal forms of malignant liver disease. In fact, his independent observations entirely confirm the opinions I published some years ago, derived from a careful comparison of hospital statistics, which strikingly pointed out the up till then unappreciated fact that ninety-four out of every hundred fatal cases of hepatic cancer are unaccompanied by any distinctly icteric tint, either of the skin or conjunctivæ. Jaundice therefore, contrary to the popular and generally entertained opinion, though a frequent, cannot in any case be regarded as an essential symptom of grave liver disease.

In the chapter on hepatic abscesses I find enumerated the following differential signs in order to facilitate the diagnosis of the exact seat of the suppuration: (Firstly) When the abscess is located in the front convex part of the liver, he says that there is dyspnœa, in addition to marked pain, radiating towards the chest and shoulder, while there is only exceptionally any jaundice present; whereas, when (secondly) the suppuration is limited to the central part of the organ, there is more or less absence of local symptoms, both of the liver itself and neighbouring organs—pleura, lung, stomach, and intestines,—but decided jaundice when the abscess is large. While, again, if the suppuration be limited to the under concave surface, there is (thirdly) an entire absence of all thoracic symptoms, with, at the same time, marked stomachic troubles in the shape of uncontrollable vomiting, more especially when the lobe of Spigelius happens to be the seat of the abscess. The direction of the pain in this case, too, is different; for instead of its radiating up towards the shoulder, it radiates downwards in the direction of the groin.

Dr. Cyr likewise gives an interesting table of statistics of 563 cases of abscess of the liver, collected from various sources, showing the relative frequency of their different modes of termination, the calculated results being as follows:—In 55 per cent. the patient died without the abscess either having burst or been opened; 14·9 per cent. were opened by operation; 10·5 per cent. spontaneously burst into the lung, 7 per cent. into the peritoneum, 5·5 per cent. into the pleura, 1·9 per cent. into the colon, 1·6 per cent. into the stomach and duodenum, and 0·7 per cent. into the bile ducts; while in the whole 563, three opened into the vena cava, two into the pelvis of the kidney, and one into the pericardium.

On the subject of cirrhosis, on which the author has a right to speak with authority, I find that he considers that a chronic atrophying condition of the liver is always ushered in by dyspeptic symptoms—a loss of appetite and distaste for food, accompanied by thirst. Morning sickness is also not uncommon, and the efforts at vomiting are occasionally distressing; the ejected matters being either sour or bitter according to the proportion of gastric juice or bile mixed with the phlegm in them, which is usually very abundant. He further calls attention to the frequency with which hæmorrhages are met with in advanced cases of cirrhosed liver, even fatal hæmorrhages. From his calculations bleedings appear to occur in the proportion of thirty-eight in atrophic and forty in hypertrophic cirrhosis. Although he thinks complete cure is rare in cases of chronically hardened liver, yet he admits that cases of recovery are much more frequently met with nowadays than formerly. And this he attributes mainly to the fact that within the last few years it has become the fashion to entirely abandon the use of alcoholic drinks during their treatment. In the early stage of cirrhosis he strongly advocates the administration of alkaline mineral waters, and that of Vichy in particular. He also recommends, combined with the employment of drugs, the free use of local counter-irritation, even going so far as to counsel the use of the cautery. One of the worst signs which can manifest itself in a case of cirrhosis he regards as that of an augmentation of jaundice, which is not infrequently accompanied by febrile symptoms and an increase of ascites, both of which are unfavourable complications. To the cirrhosis resulting from syphilis he gives special attention evidently regarding it as a most dangerous form of liver affection—and that, too, even when it is unaccompanied with either jaundice or ascites. In this view of the case I think he will be supported by all who have made liver diseases a special study. As might be expected, the two therapeutic agents he most relies upon in the treatment of syphilitic liver disease are mercury and iodide of potassium. I may mention that Dr. Cyr believes that there are a far greater number of varieties of cirrhosis of the liver than we have the least idea of in this country. He says, indeed, that he could easily describe ten or even eleven. I will not, however, attempt to follow him in this endeavour, but merely remark that among other varieties he prominently describes one as that of fatty cirrhosis—cirrhose graisseuse,—which he again subdivides into two varieties, an atrophic fatty cirrhosis and a hypertrophic fatty cirrhosis, which, however, in my humble opinion, might with more propriety be regarded as merely different stages of one and the same form of disease, the hypertrophic being the mere prelude to a subsequent atrophic condition of liver.

The next point which appears to me well worthy of the consideration of all those in the habit of treating liver diseases are his observations on the relative mortality arising from the spontaneous bursting of hepatic hydatid cysts. The following table gives in a clear and condensed form the gist of Dr. Cyr's calculation:—

In cysts bursting into the peritoneum			90	per cent. are fatal.
,,	,,	,, pleura	80	,, ,,
,,	,,	,, bile ducts	70	,, ,,
,,	,,	,, bronchial tubes	57	,, ,,
,,	,,	,, stomach	40	,, ,,
,,	,,	,, intestines	16	,, ,,
,,	,,	,, through abdominal walls	10	,, ,,

While as regards treatment the author, like all others of the advanced school of thinkers, advocates the early puncturing and evacuation of the contents of the cyst, as being at one and the same time the easiest and speediest means of effecting a cure.

Speaking of puncturing hydatids reminds me that I have not referred to Dr. Cyr's special chapter on the surgery of the liver, where, at page 180, he discusses the subjects of hepatic phlebotomy in dangerous cases of acute hepatitis, and puncturing of the distended liver's capsule in the congested indurated stage of the so-called hypertrophic cirrhosis, about which so much discussion took place in our medical journals last year. His remarks under this heading are highly important, and well worth the careful perusal of all who take an interest in hepatic surgery.

This brief sketch of the present state of French liver literature, imperfect though it be, is, I think, sufficient to show that our continental brethren (who I consider are ably represented by Dr. Cyr) are keeping themselves abreast with the rapid advances which are monthly—I might almost say weekly—taking place in the special department of liver pathology and therapeutics.

Harley-street, W.

THE CROWN PRINCE OF GERMANY.

THE following is the full text of Prof. Virchow's report upon the portion of the laryngeal growth removed on June 29th by Dr. Mackenzie. The report is dated July 1st, 1887, and appears in the *Berliner Klinische Wochenschrift* for the 11th inst.

"I received to-day at noon by special messenger from General Physician Dr. Wegner a sealed jar containing the small morbid growth which has been quite recently removed from the larynx of His Imperial and Royal Highness the Crown Prince. The specimen, which was in absolute alcohol, was entire and well preserved, although somewhat shrivelled. It presented a flattened base of a long oval outline five millimetres long and three millimetres broad, whence a hemispherical highly-granulated surface bulged to the height of slightly more than two millimetres. This latter

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surface had a faint reddish-grey appearance, whereas the base was of a dark-bluish-black, apparently due to the action of an iron preparation, for on being moistened with hydrochloric acid the colour rapidly cleared up and disappeared, leaving behind a faintly yellow surface, which, on the addition of a drop of ferrocyanide of potassium solution, became a deep blue. Even the pale unstained portion of the convex surface gave the same reaction to a less degree. It must therefore be admitted that the iron had affected the whole of the upper surface, but that it was only the parts which were concealed that retained the bluish-black colour, whilst the exposed parts had faded; further that, although the wall had overlain the somewhat flattened base, yet its black colour gave the idea that this part had been similarly exposed to the action of external agents as other parts. Further examination showed that the flattened base was made up in great part of loosely aggregated rounded club-shaped papillary outgrowths, whilst traversing the central part of the base, and following closely its long axis, a small whitish line barely one millimetre in width existed in the line of incision, which was completely concealed by the papillary growths in the vicinity.

"Microscopic examination showed in even a more marked manner than on the former occasion that the surface of the excised portion was wholly beset with papillary outgrowths of very various sizes. It was only in the immediate neighbourhood of the cut surface that a small uninjured zone was found, of quite smooth continuous superficial tissue. In the papillæ, laminated and superficially flattened, large and hard epithelia were seen which composed by far the greatest part of the structure of the new growth; the connective tissue basis was thin, delicate and vascular. No peculiarities of cell formation were noticed. The surface of section consisted of an irregular, soft, and slightly vascularised tissue. Deep tissue layers have not been removed this time as at the first, and still more at the second operation. Neither glands nor nerve trunks were visible. The section seems to have been carried close to the surface, so that only a portion of the mucous membrane was involved in it. Therefore, on this occasion, there was only a little tissue present, and that not easy to treat, whereon an opinion could be based as to the condition of subjacent parts. This tissue did not in any part exhibit an alveolar structure, nor any epithelial deposit or ingrowth. It consisted of delicate connective tissue, which increased towards the surface, but not in the other direction, and in part contained proliferating elements. Nowhere did this proliferation attain the character of independent centres of growth. The excised portion has therefore to a greater extent than that removed at the last operation, the character of a hard compound wart growing on a moderately irritated and thickened surface, and its base does not favour in the slightest the opinion that it is a new growth invading the tissues."

(Signed) R. VIRCHOW.

JUBILEE ADDRESSES OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

ADDRESS PRESENTED TO HER MAJESTY THE QUEEN IN PERSON AT WINDSOR BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

To Her Most Excellent Majesty, the Queen of Great Britain and Ireland, Defender of the Faith.

MOST GRACIOUS SOVEREIGN,—We, your Majesty's loyal subjects, the President and Fellows of your Majesty's College of Physicians of London, approach your Majesty with feelings of profound attachment and dutiful allegiance, to offer our sincere and heartfelt congratulations on the occasion of the Jubilee year of your Majesty's reign. We desire to express our deep appreciation of the benefits which we, in common with all the subjects of your Majesty, have derived from the long and auspicious rule of your Majesty in these realms. We thankfully recognise the great advances that the arts and sciences have made under the fostering care of our Gracious Queen, and we desire especially to thank your Majesty for the constant protection that legitimate medicine has, throughout the fifty years that are now past, invariably received at your Majesty's hands. We thank Almighty God that your Majesty has been permitted to exercise for so long a period so beneficent a sway over your dominions, and we earnestly pray that your Majesty may yet live many years to rule this great nation with wisdom and power, and to reign, as your Majesty has ever done, in the hearts of your subjects.

Sealed and signed on behalf of the College,

WILLIAM JENNER, President,

June 27th, 1887. HENRY A. PITMAN, Registrar.

THE HUMBLE ADDRESS OF THE PRESIDENT, VICE-PRESIDENTS, AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To Her Most Excellent Majesty, Victoria, Queen of Great Britain and Ireland.

MAY IT PLEASE YOUR MAJESTY,—We, the President, Vice-Presidents, and Council of the Royal College of Surgeons of England, humbly desire to express to your Majesty, in this year of its Jubilee, our grateful sense of the blessings we have enjoyed under your Majesty's long and prosperous reign. No student of our history can fail to recognise the many and great advantages that have been secured to us by science, by the arts, and by legislation during the last fifty years, and we venture to say that in no department of knowledge has there been greater progress than in the science and art of surgery. But we are conscious that, however much of our happiness may be due to the general advancement of civilisation, very much also we owe to the great personal influence for good your Majesty never fails to exercise on all occasions in which the welfare of the country and of your Majesty's people is concerned. We pray that your Majesty may be long spared to reign over us, so that for many years to come the people of your dominion may continue to be blessed by your Majesty's life and example.

In witness whereof, we, your Majesty's loyal and dutiful subjects, have caused the Common Seal of the College to be hereunto affixed this day of , 1887.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Stratford-on-Avon Combined Districts.—For a fourteenth year Mr. G. H. Fosbroke presents a report on the districts included in his combination; these being the Stratford and Evesham urban and the Stratford, Alcester, and Evesham rural districts. On the whole area the death-rate was 14·6 per 1000, it being highest—namely, 17·5—in the Alcester rural district, where some excess of measles, scarlatina, and diphtheria occurred. All available measures were taken by way of school closure, isolation, and disinfection to stay the spread of these diseases; and having regard to the difficulty of taking successful action under Section 126 of the Public Health Act, we are glad to record a case in which a person was convicted and fined for wilfully exposing her child whilst in an infectious state from scarlatina. But as regards disinfection, the means available in the district are very imperfect, and when it is remembered that this was one of the first rural districts that successfully established an infectious hospital, it is not very creditable to find that the neighbourhood is still without any proper apparatus for dealing with infected articles. Evesham has been satisfactorily supplied with water, and the experience of the town deserves recording. After having had a firm footing in the place, typhoid fever has, on the completion of the waterworks, been banished from the town. The voluntary system of notification of infectious diseases works well, were it not for a single medical man who declines to report. Last year Mr. Fosbroke inquired into 247 cases, and the assistance which the notification affords him is stated to be very great. Since 1875 the Alcester sanatorium has received 702 patients, and of these 634 have been cases of scarlatina. As to the age of the patients, 480 were under ten years of age; a statement which must altogether refute the contention that parents will not allow their children to be separated from them when sick. The Evesham urban and rural districts have also combined in the erection of an excellent hospital; and these districts generally have to thank

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Mr. Fosbroke for the initiative he took some years ago in the matter of effectually protecting the public against infection by means of isolation.

Birmingham Urban District.—In 1874 the death-rate for this borough was 26·8 per 1000, but since then it has been almost steadily declining, and last year it was 19·6. Infant mortality was somewhat considerable during 1886, the large proportion of children who failed to attain to one year of age being the result of an unusual fatality in diarrhœa. And even 27·7 per cent. of the births failed to reach five years of life. These and other matters relating to the vital statistics of the borough are discussed in considerable detail by Dr. Alfred Hill, who is able to show that in one important respect—namely, in the "fever" death-rate, a very remarkable and steady diminution has taken place during the past sixteen years. In 1870 that rate stood at 0·63 per 1000 in Birmingham; now it stands at 0·15. In the general body of the report Dr. Hill discusses the best plan of drainage and watercloset for the labourer's class of dwelling, and useful diagrams are annexed to show the details of the scheme proposed, and which in principle are excellent. Automatic flushing of drains forms part of the scheme, and we shall be glad to learn from future reports that such flushing, when effected with the sewage itself, has answered the expectations set on it. In the borough infectious hospital only two cases of small-pox were received; but, on the other hand, the cases of scarlet fever isolated reached 428. At the disinfecting station 5826 articles were dealt with. Chapters are included in the report giving details as to meteorology, current sanitary work, and such like matters, and included in the latter work we find a record of two thousand cases of disconnexion of sink pipes. Work of this class and on this scale must steadily tend to the reduction of disease and to the general improvement of the health of the community affected.

Ulverstone Urban District.—This town of 10,000 inhabitants had a heavy death-rate of 22·8 per 1000 in 1886, the rate being largely augmented by a severe epidemic of measles, which caused 18 deaths. Then, again, there were 14 deaths from so-called croup of the non-spasmodic type. This latter is not a satisfactory feature in the year's returns. Good water is everywhere available, but some of the inhabitants obtain supplies from dangerous sources, and disease of a low type exists amongst them. Such cases should be dealt with. There is also still some cesspool drainage to which, according to Dr. Thompson, serious defects attach.

Ulverstone Rural District.—In this rural district the death-rate was 15·1 per 1000 during the past year. Scattered cases of typhoid fever were met with in connexion with the use of polluted water, the pollutions being brought about by [illegible] into wells and springs from filthy surroundings, but the [illegible] villages an efficient supply by gravitation has been [illegible]. Incidentally Dr. Thompson refers to an [illegible] made on premises where ensilage was used. [illegible] emanating from the house where the cattle were [illegible] decidedly nauseating, and he thinks that the effect [illegible] as an article of diet ought to receive the serious [illegible] agriculturists and others. At Allithwaite the [illegible] of drainage still stands over.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

[illegible] of the largest English towns 5788 births [illegible] were registered during the week ending [illegible] annual rate of mortality in these towns, [illegible] 17·6 and 18·1 in the preceding two weeks, [illegible] week to 19·6. During the thirteen weeks [illegible] death-rate in these towns averaged 19·8 [illegible] 1·4 below the mean rate in the corresponding [illegible] the ten years 1877-86. The lowest [illegible] last week were 11·4 in Nottingham, [illegible], 14·5 in Halifax, and 14·8 in Wolverhampton, [illegible] the other towns ranged upwards to [illegible] 19·2 in Birkenhead, 26·9 in Newcastle-[illegible] Preston. The deaths referred to the [illegible] in the twenty-eight towns, which [illegible] the preceding two weeks, further [illegible] owing to the increased mortality [illegible] included 267 from diarrhœa, 152 from [illegible] cough, 54 from scarlet fever, 27 [illegible] enteric), 22 from diphtheria, and only two from small-pox. No death from any of these zymotic diseases was registered during the week in Huddersfield, whereas they caused the greatest mortality in Manchester, Blackburn, Leicester, and Preston. The highest death-rates from diarrhœa occurred in Leeds, Preston, and Leicester; from measles in Oldham, Salford, Newcastle-upon-Tyne, and Birkenhead; from whooping-cough in Liverpool, Birmingham, and Birkenhead; from scarlet fever in Blackburn; and from "fever" in Preston. The 22 deaths from diphtheria in the twenty-eight towns included 11 in London, 2 in Portsmouth, 2 in Birmingham, and 2 in Manchester. Small-pox caused 2 deaths in Sheffield, but not one in Greater London or in any of the twenty-six other large provincial towns. The mortality from diarrhœa only slightly exceeded the average for the season. Only one case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease, no new case having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 184 and 199 in the preceding two weeks, were last week 189, and were 17 below the corrected average. The causes of 62, or 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Blackburn, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Sunderland, Bradford, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·3 and 19·5 per 1000 in the preceding two weeks, further declined to 18·8 in the week ending July 9th; this rate was 0·8 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 16·9 and 17·0 in Aberdeen and Paisley, to 23·0 in Leith and 26·6 in Perth. The 469 deaths in the eight towns last week showed a further decrease of 18 from the numbers in the previous two weeks, and included 46 which were referred to whooping-cough, 22 to diarrhœa, 8 to scarlet fever, 4 to diphtheria, 2 to "fever" (typhus, enteric, or simple), 2 to measles, and not one to small-pox; in all, 84 deaths resulted from these principal zymotic diseases, against 90, 71, and 85 in the preceding three weeks. These 84 deaths were equal to an annual rate of 3·4 per 1000, which was 0·4 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 28 and 43 in the preceding two weeks, further rose last week to 46, of which 11 occurred in Glasgow, 10 in Dundee, 9 in Edinburgh, and 7 in Greenock. The 22 deaths attributed to diarrhœa, including 6 in Glasgow, 5 in Edinburgh, 3 in Dundee, and 3 in Greenock, showed a further increase upon recent weekly numbers, but were 2 below the number in the corresponding week of last year. The 8 fatal cases of scarlet fever exceeded the number in the previous week by one, and included 3 in Edinburgh, 2 in Dundee, and 2 in Aberdeen. The deaths referred to diphtheria, measles, and "fever" showed a further decline from numbers returned in recent weeks; 2 from diphtheria were returned in Glasgow. Deaths resulting from acute diseases of the respiratory organs in the eight town, which had been 72 and 80 in the preceding two weeks, declined again last week to 76, but were 2 above the number returned in the corresponding week of last year. The causes of 57, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 26·7, 27·6, and 29·4 in the preceding three weeks, declined again to 26·6 in the week ending July 9th. During the thirteen weeks of last quarter the death-rate in the city averaged 28·7 per 1000, the mean rate during the same period being but 18·0 in London and 19·4 in Edinburgh. The 180 deaths in Dublin last week showed a decline of 19 from the numbers returned in the previous week; they included 36 which were referred to measles, 5 to whooping-cough, 3 to diarrhœa, 2 to "fever" (typhus, enteric, or simple), one from diphtheria, and not one either from small-pox or scarlet fever. Thus the deaths resulting from these principal zymotic diseases, which had been 28 and 40 in the preceding two

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weeks, further rose last week to 47, and exceeded the number in any previous week of this year; they were equal to an annual rate of 6·9 per 1000, the rates from the same diseases being 4·3 in London and 3·6 in Edinburgh. The fatal cases of measles, which had increased in the preceding nine weeks from 6 to 30, further rose last week to 36, exceeding the number in any previous week of this year. The deaths from whooping-cough also showed an increase, while those from the other zymotic diseases scarcely differed from recent weekly numbers. The deaths of infants showed a further decline, and those of elderly persons were also less numerous than in recent weeks. Five inquest cases and 8 deaths from violence were registered; and 51, or more than a quarter, of the deaths occurred in public institutions. The causes of 17, or nearly 10 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Surgeon-General John Hendley, C.B., has been granted retired pay (dated June 21st, 1887); Surgeon-Major Isaac Hoysted, F.R.C.S.I., has been granted retired pay, with the honorary rank of Brigade-Surgeon (dated June 20th, 1887).

ADMIRALTY.—The following appointments have been made:—Surgeon Henry Harries, to the *Duke of Wellington;* Surgeon John B. B. Triggs, to the Jamaica Hospital; Surgeon Charles W. Hamilton, to the *Excellent;* and Surgeon William G. K. Baines, to the *Thalia.*

ENGINEER VOLUNTEERS.—2nd Cheshire (Railway): Thomas Castley Bailey, Gent., to be Acting Surgeon (dated July 9th, 1887).

RIFLE VOLUNTEERS.—4th Cheshire: Acting Surgeon John Keay, to be appointed Second Lieutenant (dated July 9th, 1887).—5th Cheshire: Acting Surgeon Walter Needham resigns his appointment (dated July 9th, 1887).—1st Dorsetshire: Acting Surgeon W. H. Williams, M.D., resigns his appointment; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated July 9th, 1887).—20th Lancashire (2nd Manchester): Arthur Henry Smith, Gent., to be Acting Surgeon (dated July 9th, 1887).

Correspondence.

"Audi alteram partem."

MORPHINOMANIA.

To the Editors of THE LANCET.

SIRS,—The interesting paper of Dr. Oscar Jennings in THE LANCET of June 25th, on the relief of the morphia craving by sparteine and nitro-glycerine, opens up a wide field of hitherto uncultivated therapeutics. The mental and bodily suffering of the morphia *habitué*, during his periods of privation, has its analogue in many allied pathological states. That cerebral and systemic ischæmia of the circulation is the explanation of these complex sufferings is rendered probable, not only by the action of remedies known as vascular stimulants in removing the *plateau*, seen in the sphygmograms of such patients, but also by the successful clinical results, generally obtained by giving vaso-dilating remedies with cardiac tonics in cases where there is pronounced cerebral anæmia, and cases where there are indications of exhaustion of the respiratory and the vaso-motor centres.

The outcome of intemperance in morphia, alcohol, chloral, cocaine, and other like stimulants, is the hyper-dilatation of all the peripheral bloodvessels. This starves the brain and other nerve centres, destroys for the time the physiological hyperæmia, which is a necessity of normal neural activity. These drugs, which in small doses stimulate the vaso-motor centres, in large, or repeated small doses, assume an antithetic *rôle* and induce paresis; thus the urgent necessity of constantly repeating the dose. "A hair of the dog that bit him" is the gospel of the weak-brained, tremulous drinker, and the morphia *habitué*, and he finds that life is only possible to him by spurring his weak nerves by morning drams. The *modus operandi* of these remedies, whose therapeusis depends greatly on their undoubted action on the circulation, is rather complicated. Thus, a drug like morphia may become a vaso-constrictor or dilator according to dose, or, like cocaine, it may show this dual action irrespective of dose, or, like ergot, it may act directly on the bloodvessels or on the cord. But whether these vaso-motor remedies act directly or reflexly, through accelerating fibres or inhibitory nerves, the most important point in reference to this and other forms of ischæmia is the behaviour of the veins in the abdomen. These, partaking of the general paresis, suffer undue dilatation, receive more than their share of blood, and as the blood when in the veins is useless for purposes of nutrition or function, it follows that ischæmia of the general circulation is apt to arise under the prolonged or the habitual use of these stimulants.

Dr. Jennings very clearly points out the two factors in the complex suffering of the morphinomaniac, recommending sparteine in the peripheral and nitro-glycerine in the cerebral or mental phases. Of sparteine I have no experience, but can fully endorse all that has been urged in favour of nitro-glycerine as a vascular stimulant. Besides this, it stands boldly out as one of the quickest and best cardiac tonics. This action on the heart, and at the same time its dilating power over the arterioles, render the peripheral circulation vigorous, and is just the remedy, of all others, one would expect to act well in cases of vaso-motor paresis. But it wants help in its action, for in paresis of this kind there is already great dilatation of the peripheral bloodvessels; and, indeed, it is because certain blood areas are increased at the expense of others that the symptoms take the form they do. These symptoms are those of utter exhaustion of the respiratory and vaso-motor centres, similar, but in an aggravated degree, to those feelings and sensations popularly known as nervous exhaustion. It is interesting to note that the more prominent of these symptoms—the yawning, the sweating, the tremulous and engorged hands and feet, the quick pulse and shallow breathing, the mental depression and moral weakness—are common to each and all of these drugs which to many have become a daily curse. As might be imagined, the intemperate, whether in morphia, alcohol, chloral, or other luxuries, are always prone to seek "other fields and pastures new" in their self-indulgence; and the latest and perhaps the worst form of this kind of intemperance is cocainism. In small doses cocaine is a true vascular stimulant, and acts like an ordinary tonic. In large doses its action is decidedly twofold: it stimulates the brain, giving for a short time vigour and strength to the intellectual faculties and almost destroying the sense of muscular fatigue. At the same time it dilates to an enormous extent the peripheral arterioles, as made evident by the full bloodvessels and constant sweating. Here be it observed this latter phase of acute cocainism resembles in its purely somatic state that obtaining in morphia privation or alcoholic starvation. The cerebral exaltation does not last long, and very soon the peripheral misery is pronounced, and this is why cocaine is so dangerous, not only as an aid in the cure of morphinomania or chronic alcoholism, but even as a tonic in nervous debility. My clinical experience in cases of morphia or alcoholic paresis has led me to much the same line of treatment as that of Dr. Jennings. But with the nitro-glycerine I give strychnine, ergot, or minute doses of digitalis. The "nitrite-acting substance"—nitro-glycerine—of itself is not sufficient, and a little tension help is obtained by the addition of digitalis, ergot, or strychnine. It is not merely the partial anæmia of the brain, or the mere blood fulness in the peripheral arterioles, which is to be removed, but it is the sluggishness of the peripheral current and the excess of blood in the venules and larger abdominal veins that give the somatic or peripheral misery felt by all, or most, patients suffering from deprivation of their accustomed stimulant. The excessive sweating, so marked and constant a symptom, is evidently due to the hyper-venosity of the blood and the consequent imperfect tissue change, and in strychnine we have a remedy which, besides stimulating the vaso-motor centre, increases the excitability of the respiratory centre and thus prevents, according to Brunton, the accumulation of carbonic acid. The whole mystery of this induced ischæmia is, therefore, paresis of the vaso-motor and respiratory centres, from habitual over-stimulation resulting in an almost pathological lowering of blood pressure in those vessels carrying the nutrient and oxygenated blood; hence

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the patient feels for the time as one feels after a serious bleeding. In shock we have, according to Goltz's experiments, paralytic distension of the great veins. Here we have a kind of chemic shock, extreme central and peripheral malaise, the brain deficient as to its physiological congestion, the capillaries handicapped by a pathological venosity. I am, Sirs, yours truly,

JAMES MORE, M.D.

Rothwell, Northamptonshire, July 11th, 1887.

"SURVIVANCE AFTER GUNSHOT WOUNDS OR OTHER INJURIES OF THE HEART."

To the Editors of THE LANCET.

SIRS,—The circumstances under which I ask you to publish a further statement of cases of this kind are simply these: I received a letter through your office on the 2nd or 3rd of May last from Dr. P. O'Connell of Chicago, with whom I had no previous acquaintance, who, after some complimentary allusions to my paper under this heading that had appeared some short time previously in your pages, intimated that if I would send him my address he would send me in return some references or abstracts of similar conditions he had himself collected. The result is given below, and as this gentleman has expressly desired that his communication should appear in THE LANCET, I send it to you accordingly, and ask, nay, respectfully urge, you to accept and publish it on his and my behalf.

I am, Sirs, your obedient servant,

Anriol-road, W., June, 1887. W. CURRAN.

Wounds of Heart not immediately Fatal.

In the *American Journal of the Medical Sciences* for May, 1829, p. 263, is recorded the case of a lad, aged fifteen, "who was shot in the chest and lived for sixty-seven days. On post-mortem, three shots were found lying loose in the cavity of the right ventricle and two in the right auricle." In the same journal for August, 1829, p. 307, Dr. John Redman Coxe refers to several cases in which life was continued for various lengths of time. I think several cases are recorded in Holmes' System of Surgery, second edition, vol. ii.; and in Fisher's Tables, p. 602, are given three cases, one of which lived ten weeks with a bullet in the cavity of the left ventricle, while another lived "some years" with a ball in the cavity of the right auricle.

Velpeau, in his Treatise on Surgical Anatomy, second edition, vol. i., p. 604, gives a case of extensive wound involving the right auricle, the patient living nine years.

Ollivier (d'Angers), in the "Dict. de Méd.," 1834, t. viii., gives a summary of about sixty collected cases, twenty-nine being wounds of the right ventricle. All except two lived not less than two days.

Dr. Babington ("Medical Records and Researches," p. 59) gives a case of bayonet wound (transfixion) of the heart in the region of the tricuspid valve, the patient living twenty-four hours.

Dr. C. F. Dudley (*New York Medical Archives*, March, 1871) reports a case of wound of the right ventricle, the ball being found within, the patient dying on the fifth day. He walked to his room after being shot, was carried by rail to New York next day, a distance of 162 miles, and was with difficulty prevented from going to a dance on the evening of his arrival in New York.

On November 3rd, 1875, M. Tillaux (*Gazette Hebdomadaire de Méd. et de Chirurg.*, of November 12th, 1875) exhibited to the Surgical Society of Paris the heart of a woman who lived eighteen days with a bullet, seven millimetres in diameter, in the cavity of the left ventricle.

In the *American Journal of the Medical Sciences*, July, 1876, p. 295, is given the case of a boy, aged fifteen, with "pistol wound of the heart, the ball passing through both ventricles and right auricle, and lodging at the root of the right lung: death thirty-eight months afterwards." The bullet, found at the necropsy, was conical, ¾ in. long by ¼ in. diameter. This case was originally published by Dr. P. S. Conner in the *Clinic* for May 27th, 1876.

The *New York Medical Record*, December 14th, 1878, has the case of a young man, aged eighteen, with a "pistol-shot through right ventricle, septum, and aorta; ball lying in left ventricle; sudden death on the fifty-fifth day." The bullet, from a Smith and Wesson revolver, was $\frac{32}{100}$ in. calibre.

The *American Journal of the Medical Sciences*, October, 1879, p. 569, contains a case of pistol shot where "the bullet had penetrated the pericardium anteriorly, passed through the muscular tissue of the wall of the left ventricle, 1 in. above its apex, and passed out of the pericardium posteriorly. The furrow in the wall of the ventricle was an inch and a half long, and a quarter of an inch deep, and the edges of the wound were ragged and everted.' The ball, $\frac{38}{100}$ in. calibre, did not cut entirely through the wall of the cavity of the ventricle, as it held water. The man lived thirteen days.

In the "Medical and Surgical History of the War of the Rebellion," part first, Surgical Volume, pp. 530 and 531, are recorded four cases (the fourth case being a doubtful one) where the patients survived a considerable time. The first of these "survived for fourteen days a wound of the right auricle by a round musket ball." "The next case refers to a patient who lived an hour and a quarter after a perforation of the right auricle and left ventricle by a conical pistol ball." "The third is an example of perforation of the left auricle and left ventricle by a pistol ball. The patient lived forty-six hours after the reception of the injury, although the case was complicated by wounds of the abdomen and axilla." I have given you only the headings of these three cases. Each was verified by careful post-mortem examination. In the fourth case, the patient survived two and a half years a supposed musket-ball wound of the right auricle. The attendants and reporters, who made post-mortem examination, declare most positively they found the cicatrix. There is a paucity of details concerning the wound, and it is possible, if not probable, that they (the reporters) mistook the *maculæ albidæ* of Rokitanski for the cicatrix.

One remarkable case of incised wound of the heart is given at p. 534 of the same volume. "After clearly dividing the sternum" (the gladiolus) "the blade" (of a sheath-knife) "had traversed the mediastinum and freely opened the right auricle." The man "expired in about eight minutes."

If you can put your hand on the volume just mentioned, you will find it a storehouse of information on this interesting subject. The reporter of my last reference was tiger-hunting in India. I quote from an article in Frank Leslie's popular monthly, June, 1885, p. 749, column 2. "Afterwards, upon opening this tiger, we found that it had been shot *through the heart*, and had actually run full half a mile after receiving the mortal injury—one of the most remarkable incidents of the tenacity of animal life that ever came under my notice." P. O'CONNELL, M.D.

Chicago, June, 1887.

HAY FEVER.

To the Editors of THE LANCET.

SIRS,—Considerable attention is now being directed to the subject of hay fever. The time of the year when this distressing malady is seen being the hot months it may interest your readers to peruse the following case:—

A. B——, aged forty-three, born of healthy parents; father died at sixty-five years of age, mother living and in "good health of mind and body," aged seventy-six years; has three sisters and one brother, all alive; remembers suffering from hay fever for the past thirty-six years; the symptoms manifesting themselves with great regularity in all parts of the world—West Indies, East Indies, continent of Europe, Egypt, and the Soudan, no climate making any difference, and no matter how great the heat or dust; no symptoms of the disease except in the months of May, June, July, and part of August. The paroxysmal sneezing, the intense itching of the eyes, nose, roof of the mouth and fauces, with the erysipelatous blush on the back of the throat, the deluge of clear watery fluid which runs from the nose and eyes, forming the chief symptoms which attract the attention, have always been preceded by considerable gastric and hepatic disturbance—in fact, a veritable visceral neurosis, which the attack of hay fever when it comes on gives much relief to. At all times of the year the nose has for the past twenty years been a source of trouble, dry crusts forming which have required to be removed either by violent blowing of the nose or by picking away with the finger-nail. Frequently this produced considerable bleeding from the nose, which always gave a feeling of relief. There has been always a considerable infliction of the septum nasi, but no disease was ever known to be present. About January of the present year a round cleanly-punched hole, ulcerating all round its edge, was discovered in the anterior part of the cartilage of the septum nasi, and since then the nose has required the use

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of the pocket-handkerchief but very little, no hard crusts form, and though the usual symptoms of gastric intestinal irritation have been present to a considerable extent, yet up to the present the local manifestation of hay fever has been absent. There has been an occasional fit of sneezing following the irritation of the nasal mucous membrane by a camel-hair brush, but the so-called functional erectile action of the turbinated tissues is far less than it used to be—in fact, it appears as if the sensitive area which produced the sneezing, itching, and watering of the eyes and nose has been destroyed, and with its destruction the distressing train of symptoms known as hay fever. If this be correct, we can now understand the benefit obtained in relieving the symptoms by deadening the sensitive area by cocaine, nitrate of silver, and such like applications, and may be induced to proceed deeper to the entire destruction of the *materies morbi*.—I am, Sirs, yours faithfully,

July 11th, 1887. J. PERCIVAL HUNT, M.D., F.R.C.S.I.

THE THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—It is with much pleasure that I have to report that the suggestion made in your columns *in re* the Therapeutical Society has met with warm approval. I have received none but letters of congratulation and the list of members is filling up rapidly. I hope that by the end of next week a strong and representative executive council will have been formed, and then a circular will be issued to members of the profession giving more details, and supported by names of well-known men, which will carry more weight with it than the one already issued with my signature alone. Arrangements have been already made to print and publish a quarterly therapeutical journal, with probably a weekly supplement, for members only. No subscriptions are due from any present joining members until the first general meeting, and of course no expense will be incurred by any beyond the annual subscription. I write this in answer to many inquiries as to when and to whom subscriptions are to be paid. I have to thank you for the courtesy with which you have allowed me to use your columns and valuable space, and trust that the Society will meet with the approbation of yourselves and numerous readers.

I am, Sirs, yours truly,

A. GEORGE BATEMAN,

Longridge-road, S.W., July 11th, 1887. Acting Hon. Sec.

EAST LONDON HOSPITAL.

To the Editors of THE LANCET.

SIRS,—My attention having been called to an article in your last number under the heading "Hospital Management," in which it is stated that my resignation of the chairmanship of the East London Hospital for Children and Dispensary for Women was owing to the irregular attendance at the meetings of the Board of Management, I beg to say that I resigned in consequence of finding myself at issue with the Board on the question of the demolition of an existing building and the erection of a new and very expensive out-patient department. It is true that I felt, and still feel, that had there been a full meeting of the committee at which the resolution to which I have adverted was passed, the result might have been different, and, in my opinion, more practical. I deprecated at the late annual meeting of the governors of the charity any and every thing that might be construed as a reflection upon my friend Mr. Norris, to whom the East London Hospital owes so much, and whose retirement from the treasurership would be all but universally regretted.

I am, Sirs, yours obedient servant,

Mayfield, Chislehurst, July 7th, 1887. THOS. CHARRINGTON.

THE TOWN COUNCIL OF ST. PETERSBURG AND THE MEDICAL SOCIETIES.—The Town Council of St. Petersburg having been requested to grant a piece of ground in Semenoff's-place as a site for a building for the meetings of the various medical societies, as well as for a dispensary for out-patients and for a surgical hospital, has refused to make the grant. The *St. Petersburger Medicinische Wochenschrift* remarks in connexion with this subject that it is not the first time that the municipal authorities have refused a site for a projected hospital which would have been a boon to the inhabitants.

LIVERPOOL.

(*From our own Correspondent.*)

CELLAR DWELLINGS IN LIVERPOOL.

REFERRING to the notice of the Liverpool medical officer of health's annual report in last week's LANCET, it should be stated that the difficulties in abolishing cellar dwellings are very great. These dwellings are clung to with quite as much tenacity as those of "flats" in Scotch towns (which have their sanitary drawbacks), and so long as they are not situated beneath a certain statute level they cannot be pronounced illegal. When times improve and trade revives there will be more encouragement to capitalists to build suitable and sanitary dwellings for the working classes, then the latter will be in a better position to pay increased rents for better accommodation.

INFECTIOUS HOSPITALS ACCOMMODATION.

Referring to the subject of means for isolating fever cases the difficulties are peculiarly great. Liverpool is more densely populated than any other city, and a large number of people are compressed into a comparatively small space than elsewhere. Moreover, the distance from any part of the city to a suburban site is considerable, even taking the nearest point, and, unfortunately, the residents in these localities are not at all inclined to welcome an infectious diseases hospital amongst them. The wonder is that the authorities have been able to make so excellent a beginning as they have.

REMOVALS TO MORTUARIES.

During the last year there were fifty-one bodies removed to the mortuaries provided by the Council under justices' orders on the certificate of the medical officer of health. It is greatly to be regretted that those of the lower classes of this city who are limited to two, or it may be even one room, do not avail themselves of the ample opportunities afforded them of removing their dead to the mortuary, instead of keeping them for days in their midst. This unwillingness to have dead bodies removed prevails extensively amongst Roman Catholics, and as speedy burial is not always practicable, it would be a great advantage if their bishops and clergy would publicly encourage such removal.

SANITARY WORK IN LIVERPOOL DURING 1886.

Some idea of the vast amount of work done by the sanitary authorities here may be judged by the following figures:—The medical officer of health had notices of 453 cases of infectious disease, of which 234 were small-pox, 68 fever, 1747 scarlatina, 1690 measles, and 183 diphtheria. Out of a total of 1147 of the above which were removed to hospital 917 were effected by the sanitary officers. The number of houses disinfected was 2062, and that of privies certified for conversion into waterclosets was 409. As an illustration of the care with which the Adulteration Act has been put in motion, it appears that out of 952 samples submitted for analysis only 9 were found to be unadulterated. Unwholesome meat to the extent of nearly 58 tons and fish exceeding 50 tons in weight were seized and destroyed. The amount of fines and costs was £70; and this is only a small proportion of the work done.

Liverpool, July 12th.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

A ROYAL WEEK FOR NEWCASTLE.

THIS is to be a Royal week in Newcastle. To-day the Prince of Wales with his sons is to arrive in our city; he is to stay four days, visiting the Royal Agricultural Society's show, which is held here after a lapse of twenty-four years. The Prince is also to visit the Royal Mining and Engineering Exhibition, and the far-famed Elswick works, with which Lord Armstrong has been so long and honourably associated. On the last occasion of the Royal Society's show, the attendance was enormous (exceeding 114,000, I believe), and it is to be hoped that the present one will be at least as successful. So far, everything promises well. Up to this there has been a large arrival of visitors. The weather, too, is fine, and warm, with a rising barometer.

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NORTHERN VOLUNTEERS' COMMISSARIAT.

The Newcastle *Daily Leader* speaks of the great improvement there has been of late years in the way our Volunteers are treated at the annual inspections and reviews, and instances that at a review held at York twenty years ago, the only rations served out to some of the men were nine ounces of pork-pie, a pint of beer, and an ounce of tobacco, although they were away from home for more than twenty-four hours, much of which time was spent travelling in cattle-trucks, dressed only in their thin uniforms, at a season of the year when the air was cold morning and evening.

DROWNING CASES IN THE NORTH.

Every day for the past week there has been a sad record in our daily papers of young lives lost in bathing. On one day no less than six fatal accidents of this nature were recorded. In the great majority of the cases the same heedlessness is to be noticed: the persons lost were unable to swim, ventured into dangerous places, or even did not know how to bathe; for instance, in one of the cases a young man, aged twenty-seven, after bathing ran races with his companions in the fields by the side of the river for more than an hour, and then went into the water again in a highly heated and exhausted state, when he sank to rise no more. The lecture on the Methods of Restoring the Apparently Drowned, given last week by Dr. Hinshelwood, house-surgeon at the North Riding Infirmary, was most opportune. His lecture was given before the Middlesborough Amateur Swimming Club, and he succinctly explained the Marshall Hall, the Silvester, and also the American system known as Howard's. He was assisted in his demonstrations by Dr. Bateman, while Mr. Weddell, the superintendent of the baths at Middlesborough, gave examples of the safest and most expeditious methods of rescuing drowning persons from the waters. The lecturer and his assistants received most enthusiastic votes of thanks from the audience. Such lectures at this season are most valuable.

SUNDERLAND WORKMEN.

The workmen of Sunderland are proverbial for the honourable interest they take in support of their local medical charities. Last week they had their annual demonstration of friendly societies, and had the usual procession to the Avenue Theatre, where a service was held in aid of the infirmary, the Monkwearmouth and Southwick Dispensary, as well as the Sunderland and North Durham Eye Infirmary. The procession, it was noticed, was considerably larger than last year.

DEATH OF DR. ANDREW BOLTON OF NEWCASTLE.

Many old students and practitioners will regret to hear of the death of Dr. Bolton, which took place at his residence in Newcastle on Friday last. Dr. Bolton was best known as house-surgeon to the Newcastle Infirmary, which post he held for many years. He was also one of the secretaries of the Newcastle and Gateshead Pathological Society. About fifteen years ago he resigned his post at the infirmary and commenced private practice, and at once met with very great success. Dr. Bolton, who was in his fifty-seventh year, has left a widow and three children, and was attended in his last illness by Mr. Lightfoot.

Newcastle-on-Tyne, July 11th.

EDINBURGH.

(From our own Correspondent.)

MEDICO-CHIRURGICAL SOCIETY.

At the last meeting of this Society a large number of interesting cases and specimens were exhibited. Professor Grainger Stewart exhibited a patient in whom a bronchiectasis had been cured by excision of ribs and drainage; and Dr. Byrom Bramwell, a case of athetosis and hemiplegia, apparently the results of an injury at the time of birth. Among the pathological specimens was an enormous renal tumour exhibited by Dr. Lundie. Dr. James Ritchie showed a series of specimens of wall papers containing arsenic, giving an account of the clinical features to which they had given rise in each case. To each specimen was attached a reddened tube showing the amount of arsenic obtained from a square inch of each of the papers. This was a very appreciable amount in some of the cases. It was worthy of note that none of the papers exhibited possessed a green colour. They were mostly, but not exclusively, of the cheaper types of wall paper frequently put in bedrooms or nurseries, and there was nothing about their appearance to excite suspicion. Dr. Bramwell showed a series of sphygmographic and cardiographic tracings from a case of aortic regurgitation, in which a presystolic murmur was audible in the mitral area, and in which there is believed to be no mitral stenosis. In describing this case, he gave an interesting account of the theories of the production of the murmur in such cases, specially commenting on that held by the late Professor Austin Flint. Dr. Bramwell also showed a series of slides, photographs, and drawings illustrating cerebral syphilis. A series of casts were shown by Mr. Hare, illustrating the surgical topography of the cranium in regard to determining the position of the fissure of Rolando in the living subject.

THE LINGUAL TONSIL.

Dr. McBride, at the same meeting of the Medico-Chirurgical Society, read a paper on the "Hypertrophy of the Lymphoid Tissue of the Tongue as a cause of Throat Symptoms." He was able to cite a series of typical cases of enlargement of this "lingual tonsil," and gave a clear account of the symptomatology, pathology, and treatment of the condition.

STIFF GREAT TOE IN ADOLESCENTS.

Dr. Cotterill then read a long paper on the above subject, dealing with the various theories of the causation of the condition. His own view is that the lesion consists in a partial relaxation of the tarsal arch, associated with the wearing of too tight and too short boots.

ROYAL HOSPITAL FOR SICK CHILDREN.

It is understood that the directors of this institution are contemplating the advisability of placing a surgeon permanently on their staff and of developing the surgical side of the hospital both as regards treatment and clinical teaching. It is possible therefore that the expected election of an assistant physician may be postponed indefinitely, since, if the addition of a surgeon and assistant surgeon be made to the staff, it will be large enough to undertake the work of the whole institution without further addition.

Edinburgh, July 12th.

ABERDEEN.

(From our own Correspondent.)

THE CITY HOSPITAL.

DR. FASSON'S report on the City Hospital has been in the hands of the Town Council for some time, and while several of the suggestions made for the improvement of the present buildings have been adopted, the most important alterations and additions recommended are still under consideration. At present the hospital consists of four detached pavilions, a "reception block," an administrative block, mortuary, laundry, and engine-house, &c. The pavilions are separated from each other by walls 7 ft. high, and these, Dr. Fasson suggests, should be taken down because they impede the free circulation of air round the buildings. Each pavilion contains a large ward for twelve beds, with ample cubic space and superficial area, and a small ward in which there are three beds, but in which there ought to be only two. The ventilation is said to be imperfect, "inasmuch as that while there are on the roof-ridge two archimedean cowls and two ventilators opening into the chimneys for the extraction of the impure air, there are no inlets for fresh air." There are windows on either side of the ward, but Dr. Fasson says: "Cross-ventilation by open windows is valuable, but not equally safe at all seasons of the year, nor in all weathers, nor, indeed, at all times of the twenty-four hours in a day. It cannot be depended upon for maintaining an equable temperature throughout a ward, and ..... may become a source of danger to the patients." He recommends the making of inlets below each window at the floor level, the air to be allowed to enter either direct or through "an inverted Tobin tube," placed outside the building, and the amount of air entering to be regulated by sliding doors on the lower inlets; in addition, it is suggested that fresh air might be admitted by placing a fillet of wood below the lower sash of a window, raising it about three inches,

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and thus leaving a space between the two sashes. The heating arrangements are bad, and the pavilions being built of concrete, the walls are thin and absorb damp, so that it is almost impossible to keep the ward sufficiently warm and comfortable. To remedy this Dr. Fasson suggests the building of "a wall of single brick, inside, with an air space of some three or four inches between it and the concrete," while the walls should not be plastered, but covered with Portland cement and finished with a coat of parian; "this with three coats of paint, the last being of varnish-paint, presents a smooth polished surface," which can be washed and easily kept clean. As a means of heating, steam is recommended, because it would not only furnish all the heating power required, but would become an important factor in perfecting ventilation. The bath and latrine accommodation is condemned—the bath because it is fixed and otherwise unsuitable, and a portable one mounted on a frame with indiarubber tired wheels is recommended; and the waterclosets should be replaced by some approved "wash-out' pattern. The flooring of the wards is condemned, because the planks have all become warped, the seams are open, and the floors are very dirty. Dr. Fasson recommends the careful closing of the seams, painting with three coats of varnish, and the frequent application of turpentine and bees'-wax. He thinks the small ward in each pavilion ought to be reserved for the accommodation of "paying patients." He also recommends a special arrangement for the disinfecting of patients as they leave the hospital. His plan is to have a room divided into two compartments, in the one the patient takes off all hospital clothing and then passes into the second compartment, where he has a bath charged with some disinfectant, and dressing in clothes already disinfected he then leaves the hospital without again coming in contact with anything or anyone in the ward. The "reception-block" is condemned, and it is shown how it might be altered so as to accommodate eight beds, which would be available for sporadic cases of typhus and small-pox.

HEALTH OF THE CITY.

The Public Health Committee met on the 6th inst., and in Dr. Thomson's report, which was before them, it was stated that while in May the death-rate was 23 per 1000, in June it fell to 17·43. No cases of small-pox had been reported since June 28th, and it was hoped that the outbreak had been effectually checked. Of the sixteen persons affected, one, a medical student, died. In the City Hospital at the end of June there were fifty-nine cases, twelve of these being small-pox and the remainder chiefly cases of scarlet fever. During the month 145 cases of zymotic disease were reported, and of these nine terminated fatally. The committee were highly pleased with the general improvement in the health of the city.

THE ABERDEEN UNIVERSITY.

The summer session closes on the 15th inst., and the professional examinations begin on Saturday, the 16th. The first competition for the George Thompson Scholarship of £100 a year, tenable for two years, took place last week. There were three candidates, and the successful one has been declared to be Mr. James Johnstone, who has had a brilliant career at the Aberdeen University. The subjects chosen by the three candidates for examination were midwifery, and the diseases of women and children, physiology, and pathological anatomy.

Aberdeen, July 12th.

DUBLIN.

(From our own Correspondent.)

THE CONJOINT SCHEME BETWEEN THE TWO COLLEGES.

THE first professional examination under the new Conjoint Scheme between the College of Physicians and the Royal College of Surgeons took place last week. A very large number of candidates presented themselves, and the rejections were extremely numerous. It is stated that all the ladies who competed were rejected, either at the papers set or the *viva-voce* part of the examinations. It is rumoured that a re-examination will be applied for.

THE DEATH-RATE OF DUBLIN.

At a meeting of the Dublin Town Council last Monday, allusion was made to the comparatively high death-rate of this city. The Registrar-General in his weekly reports, it was pointed out, gave the social position of the various classes who had died during each week. There was, however, one class with reference to which, it was urged, he made no calculation—namely, the social position of the persons who die in the workhouse. The deaths in the Dublin workhouses were about 150 per 1000 persons, which is much higher than in English institutions of a similar kind. The death-rate also among children under one year of age was very high, and Sir Charles Cameron, medical officer of health for Dublin, had recently stated that, with the exception of Manchester, a large manufacturing city, the mortality among children under one year was higher than in any other city in the United Kingdom. A resolution was adopted that the Registrar-General be requested to bring out in his weekly return the proportion, according to their social position, of the persons who die annually in the workhouse. Sir C. Cameron, in a recent report on this subject, has conveyed some wholesome truths. He says: "With our present underfed, poorly clothed, and badly housed working population, we can hardly expect that the death-rate from all causes can be reduced to that of the prosperous cities of England. It is, however, some consolation to reflect that in 1886 we had the lowest mortality since death registration commenced in Dublin; that our zymotic death-rate was well below the average in English towns, and that our general mortality was less than the average general mortality of the chief continental cities. The mortality due to constitutional diseases is, however, still excessive in Dublin; but the measures for lessening it must be sought for in the domain of political economy, as well as in that of hygeia. Just in proportion as the people are well-fed, well-clad, and well-lodged, will they, by reason of their higher vitality, be able to resist the assaults of both constitutional and infective diseases."

Dr. Oakshott's salary (assistant medical officer, Cork District Lunatic Asylum) has been increased by £25 per annum.

Dublin, July 12th.

BELFAST.

(From our own Correspondent.)

THE ROYAL HOSPITAL.

DR. CALWELL, house physician, having resigned, Dr. Dunlop, who was house surgeon, has been elected in his place, and Dr. Powell, Demonstrator of Anatomy in the College of Surgeons, Dublin, has been appointed house surgeon. At the meeting of the Board of Management, at which these elections took place, several of the members present spoke in the highest terms of Dr. Calwell and Dr. Dunlop. I understand that the former was presented on Saturday with a beautiful study table and chair. The following inscription is on the table:—"Presented to Dr. Calwell by the students of the Belfast Royal Hospital, July 4th, 1887." Dr. Calwell is commencing practice in Belfast. Miss Bostock, an English lady from the vicinity of Leeds, has been elected lady superintendent of the Throne Convalescent Hospital. There were a large number of candidates. There will be an election shortly of a matron for the Royal Hospital.

THE BELFAST HOSPITAL FOR SICK CHILDREN.

The intern part of the hospital is at present closed while alterations in, and new arrangements of, the drainage systems are being carried out. It is hoped that everything will be complete next month. The fund for building the Convalescent Home in connexion with the hospital is steadily increasing. It has been kindly arranged that a refreshment tent shall be placed in the Royal Botanic Gardens, and that the profits shall go to this fund. The Board of Management and the medical staff of the Children's Hospital have memorialised the Senate of the Royal University to recognise this hospital as an institution from which the Royal University will receive certificates for attendance on diseases of children, on the grounds that it is the only hospital in Belfast which is entirely devoted to the treatment of diseases of children, that there are forty-five beds and a large extern department, that there is a attending staff of six, and that, although hitherto unrecognised by the University, students of Queen's College, Belfast, have attended in large numbers every year since

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1875. I understand that the Belfast Ophthalmic Hospital also asks for recognition.

NORTH OF IRELAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

The ninth annual meeting of this Branch was held in the Royal Hospital on July 7th, and was very largely attended. Mr. Fagan, F.R.C.S.I., the president, read a paper on "Intestinal Obstruction," and advocated early laparotomy. For the ensuing year Dr. Palmer (surgeon to the County Infirmary, Armagh) was elected president, Dr. Browne (Belfast) and Dr. Dunlop (Holywood) vice-presidents, Dr. Gray (Castlewellen) treasurer, and Dr. Byers secretary. Several interesting contributions were brought before the meeting, and in the evening thirty-two members dined together in the Royal Avenue Hotel, where, under the presidency of Mr. Fagan, and the vice chairmanship of Dr. Palmer, a very agreeable evening was passed.

COUNTY ANTRIM INFIRMARY, LISBURN.

It is announced that Sir Richard Wallace, Bart., has given £200 for improvements to be effected in the co. Antrim infirmary, which is situated in Lisburn. It has been decided to have a new accident and emergency ward, and wire mattresses are to be substituted for the straw ones previously in use in the infirmary. Mr. G. St. George, surgeon to the infirmary, has arranged for a children's ward on the ground floor, and has obtained from friends £30 towards this very useful object.

BELFAST MEDICAL STUDENTS' ASSOCIATION.

At a meeting of this Association, held on Monday, I understand that attention was drawn to the fact that 180 medical students have signed a petition asking that the Union Hospital should be amalgamated with the Royal Hospital for clinical teaching, and a small sub-committee was appointed to look after this matter. Further, it was decided to draw the attention of the Senate of the Royal University to the fact that, although a very large number of Belfast students go up to the examinations, there is only one examiner (Professor Redfern) at the M.B. from Belfast. The students think that if in the future some of the Belfast teachers apply for examinerships in the Royal University, this fact should be recollected.

TERRIBLE TRAGEDY AT RATHFRILAND.

One of the most appalling tragedies that has ever happened in the north of Ireland took place on Saturday in the vicinity of Rathfriland, county Down. It seems that a man, who two years ago was an inmate of a lunatic asylum, armed with a formidable weapon used for trimming hedges set out from Rathfriland about 5 o'clock on Saturday morning, and murdered two women, and so savagely attacked an old man and an aged woman that little hope is entertained of their recovery, as they are at present in an unconscious condition. Several other people whom he met on his journey had narrow escapes. He then rushed into a lake, and coming out of this he entered in a nude condition a house where a woman was dressing her child. Raising his weapon, and exclaiming "Will I? Will I!" he observed two goats in the yard, which he killed. He then betook himself to the lake again, where with great difficulty he was captured. For some time previously it had been observed that the man was in a strange condition, and on Friday it was said he threatened to take his own life.

Mr. Robert Archer Nesbitt, L.R.C.P., L.R.C.S.Ed., has been appointed dispensing medical officer of Donaghadee, in the room of Dr. Stewart, J.P., resigned.

Belfast, July 12th.

PARIS.

(From our own Correspondent.)

THE ANTI-RABIC METHOD.

The report of the English Commission is a great triumph for M. Pasteur, and, with the exception of M. Peter, who still remains refractory to the inoculation, all opposition to the method has momentarily ceased. The last two sittings of the Academy of Medicine have been almost entirely taken up with this question, and notwithstanding two new deaths from rabies after inoculation communicated by M. Peter, M. Pasteur has declined to recognise the competence of the clinical professor either in matters of experiment or of clinique. The occasional failures are overborne by the statistics of the inoculations, and these have not only been proclaimed anew by Professor Brouardel, but have also been endorsed by M. Villemin and Professor Charcot. It is somewhat odd that if M. Peter is incompetent to judge in the matter because he has never made experiments, M. Pasteur should seek the consecration of his method from a body of gentlemen who are nearly all similarly incompetent.

PROFESSOR GERMAIN SÉE ON ANTIPYRIN.

Professor Germain Sée has made a further communication to the Academy of Sciences on the treatment of pain by antipyrin. He now advises that the drug be administered by hypodermic injection in doses of half a gramme in the same quantity of water. The injection is followed by a disagreeable feeling of tension, which lasts a few seconds; and, when this passes off, the pain, whatever may be its cause, at once remits. It has the great advantage over morphine of giving rise neither to vertigo nor vomiting; nor does it produce either the somnolence or the artificial stimulus which lead to morphinomania. Lastly—and this is the great point—to its sedative effect it adds a curative action, which morphia does not possess. The diseases for which Professor Sée would more especially recommend the substitution of antipyrin for morphine are numerous—acute rheumatism, acute gout, herpes zoster, lumbago, ataxia; also in hepatic and nephritic colic, angina pectoris, and acute asthma. "But there is no morbid condition in which it does not advantageously replace morphia; and as we gather experience we shall see antipyrin used in its stead, and so become the preservative against chronic morphia poisoning." The enthusiasm of M. Sée for his favourite remedy is certainly refreshing, but I venture to think that his practical acquaintance with the morphia habit is, to say the least, restricted. Comparatively few of those who have drifted into morphinomania began their injections for the relief of pain, and even should antipyrin possess the virtue claimed for it by Professor Sée, it will not prevent the dangerous coqueting with morphia which has led many able overworked men to adopt it ultimately as an habitual stimulant.

TREATMENT OF PARALYSIS AGITANS BY MASSAGE.

M. Berber has used massage for the relief of paralysis agitans. He states that by increasing the circulatory activity in the muscles it removes their stiffness, facilitates movement, and causes a disappearance of trembling. He advises the *séance* to be commenced by ordinary massage of the muscles and muscular groups, taken up between the thumb and fingers. After a few minutes this should be followed by what he terms flagellation with the ulnar edge of the hand. In a certain number of cases the operation is to be followed by faradisation.

Paris, July 15th.

Obituary.

ALEXANDER H. BARTLET, M.D., F.R.C.S.

DR. ALEXANDER HENRY BARTLET, whose death, at the ripe age of eighty-seven, occurred on the 4th inst., at his residence in Ipswich, obtained his professional education at St. Thomas's and Guy's Hospitals. He obtained the licence of the Society of Apothecaries of London in 1821, the membership of the Royal College of Surgeons of England in 1823, was elected an honorary Fellow in 1844, and took the degree of Doctor of Medicine at King's College, Aberdeen, in 1859. In 1823 Dr. Bartlet commenced practice in his native town (Ipswich), and, having been previously elected surgeon to the local dispensary, was in 1825 appointed surgeon to the county gaol. In the establishment of the East Suffolk Hospital Dr. Bartlet took warm interest, and when in 1836 the honorary surgeons were elected he stood at the head of the poll. To this institution he remained attached over forty years, and when advanced age dictated the necessity for retirement the governors appointed him consulting surgeon to the institution. Dr. Bartlet was well known and highly respected throughout the district in which he resided.

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JOHN MEENAN, M.D., M.CH.

WE regret to have to announce the death of another of the younger members of the medical profession in Belfast. Dr. Meenan was the second son of the late Mr. P. Meenan, Spring Farm, Antrim. He commenced and completed his classical studies at H. Malachy's College, Belfast, where he highly distinguished himself, and gained the respect of his professors and the affection of his fellow students. He then studied in Queen's College, Cork, and at the Carmichael School of Medicine, Dublin, where he was a prizeman and medallist in the Practice of Medicine, Chemistry, and Medical Jurisprudence. He graduated in the Royal University in 1885, and in the same year became a Licentiate in Midwifery of the Rotunda Hospital. For some months he was resident surgeon in the Mater Infirmorum Hospital, Belfast, and was subsequently appointed assistant physician. He commenced practice two years ago, and was rapidly gaining a large *clientèle*. Two weeks ago he was seized with an attack of rheumatic fever (from which he had often suffered before), which was complicated with pneumonia. He gradually got weaker, and died on Sunday last.

Dr. Meenan was a man of kindly disposition, and was possessed of great social qualities. He was deservedly popular among his out-patients and professional friends, as well as among the poor whom he looked after at the hospital with which he was connected. The burial took place on Tuesday.

FREDERICK EAST, M.D. (DURHAM), &c.

IN the sudden death of Dr. Frederick East, at the early age of twenty-eight, Clapton has lost one of its best practitioners and one whom it could least afford to spare. Dr. East commenced his medical career at the London Hospital ten years ago, and very soon was looked upon as one of its most distinguished students. After taking the College of Surgeons and College of Physicians' diplomas and the Apothecaries' licence, he graduated at the Durham University, and obtained the gold medal for his M.D. Graduation Thesis in 1883. Almost immediately after commencing practice in Clapton, Dr. East turned his attention to sanitary subjects, and it is chiefly in his connexion with the River Lea Purification Association that his name will be kept green amongst the inhabitants of north-east London. He became secretary to the Association, and it was without doubt mainly through his indefatigable efforts and perseverance that Parliament was induced to legislate finally in the matter.

Dr. East was a member of the Society of Medical Officers of Health, and also held the Cambridge certificate of sanitary science. As boy and man he gave promise of great things, and, though cut off at such an early age, his young life has already borne good fruit, and much of his work must continue to do so in the days that are yet to come. An excellent practitioner, hard working and thoroughly honest in all he did, he possessed all the capabilities for a very successful career. As a true English gentleman, he will be missed by all who knew him.

MEMORIAL PORTRAIT OF DR. WILSON FOX.

First List.

Sir W. Jenner, Bart.	...	£21 0	Dillworth Howard, Esq.	...	£5 5
Sir W. Gull, Bart.	...	5 0	Morris Lewis, Esq.	...	1 1
Sir J. Paget, Bart.	...	2 2	Dr. A. Money	...	2 2
Dr. Barlow	...	2 2	Dr. M. Murray	...	2 2
M. Beck, Esq.	...	2 2	Dr. F. Penrose	...	1 1
Dr. Brace	...	5 5	B. Pollard, Esq.	...	1 1
W. Poole-Collyns, Esq.	...	2 2	G. Pollock, Esq.	...	5 0
G. Dodgt, Esq.	...	5 5	Dr. Poore	...	2 2
Dr. A. Duncan	...	2 2	Dr. Russell Reynolds	...	10 10
Dr. Dyson	...	2 2	Dr. Ringer	...	2 2
J. E. Erichsen, Esq.	...	2 2	Dr. F. Roberts	...	2 2
S. Evans, Esq.	...	2 2	Dr. Turle	...	1 1
Mrs. Dillworth Fox	...	30 0	H. B. Tuson, Esq.	...	1 1
R. J. Godlee, Esq.	...	2 2	Dr. Walshe	...	5 5
Dr. Gowers	...	2 2	Dr. H. Weber	...	2 2
C. Heath, Esq.	...	2 2			

W. R. Gowers, M.D., 50, Queen Anne-street; T. Barlow, M.D., 10, Wimpole-street, hon. secs., by whom further contributions will be gratefully received.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council, held on Thursday, the 14th of July, Sir T. Spencer Wells, Bart., and Mr. Hutchinson, were readmitted members of the Council; and Mr. Willett took his seat as the newly elected member. The minutes of the last meeting of the Council were read and confirmed.

Mr. Morrant Baker was introduced and admitted as an Examiner in Surgery.

The regulations recommended by the Museum Committee, relating to the duties of the Conservator and Pathological Curator respectively, were read, approved, and adopted, and will be published with the advertisement of the new office.

Mr. James Blake Baily was elected Librarian of the College.

Letters were read from Messrs. Hutchinson and Bryant resigning their positions as Examiners in Surgery. The appointments will be filled up at the meeting in August Mr. Bryant is eligible for re-election.

A letter was read from Mr. W. Morrant Baker resigning his appointment as Examiner in Physiology for the Membership and Fellowship examinations. This resignation will take effect in November next, after the examination for the Fellowship.

A letter was read from Sir Henry Pitman with reference to the extraordinary meeting of the 29th ult., at the Royal College of Physicians.

The President was authorised to nominate members of the Council as a sub-committee, referred to in the College's Land Committee.

A letter of the 8th instant was read, addressed to the President from the Secretaries of University College and King's College, London, forwarding, by direction of the councils of those Colleges, a copy of a petition which has been presented to Her Majesty in Council by the two Colleges, commending the petitioners' prayer to the attention of the President, and expressing their hope that it will meet with the co-operation and support of this College. This was acknowledged, and the secretaries were referred to the resolution arrived at by the two Colleges to proceed independently.

The following appointments were made:—The Joint Professors of Surgery and Pathology: Messrs. Bryant and Barker (subjects of lectures not determined). The Professors of Comparative Anatomy, Physiology, and other subjects: Mr. C. Stewart (subject not determined); Mr. C. B. Lockwood (on Development of the Organs of Circulation and Respiration, including the Pericardium and Diaphragm); Mr. W. H. H. Jessop (on the Pupil and Accommodation); Mr. J. Bland Sutton (on Evolution in Pathology); Mr. W. W. Cheyne (on Surgical Bacteric Diseases); the Arris and Gale Lecturer, Mr. R. Marcus Gunn (on Certain Points in the Anatomy of the Eye). The appointment of Erasmus Wilson Lecturer was postponed until after the appointment of the new Pathological Curator in November. Mr. F. S. Eve was appointed Pathological Curator for a further period of six months under present conditions.

Mr. W. S. Savory was re-elected President of the College for the third time, and Mr. Bryant and Mr. T. Smith were elected Vice-presidents.

The members of the following committees were appointed:—Museum, Library, General Purposes, Jacksonian, Auditors, and Nomination.

The next meeting of the Council will be held on Aug. 4th.

BETWEEN Ramsgate and Dumpton, on the 5th inst., a lad, while bathing, lost his footing, and would have been drowned had not Dr. Gabb, of Guildford, who happened to be on the beach at the time, plunged into the sea and brought him ashore in an unconscious condition.

ON the 7th inst. Her Royal Highness the Duchess of Albany opened three new wards in the National Hospital for the Paralysed and Epileptic, constructed as a memorial to the late Duke of Albany, in Queen-square, Bloomsbury.

CAUSES OF EXEMPTION FROM MILITARY SERVICE.—Notice has recently been given by the Spanish authorities that ringworm and pelada will henceforth be considered as causes for rejecting men as recruits.

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Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND. — At recent meetings of the Examiners the following was admitted a Fellow of the College:—

Mc Creery, Benjamin Thomas, Army Medical Staff.

COLLEGE OF PHYSICIANS IN IRELAND.—At the July examinations the following obtained licences in Medicine and Midwifery of the College:—

MEDICINE.—Edward Lloyd Aherin, George James Burke, Eugene Byrne, William Edward Corbett, Norbert Sydney Durrant, Daniel Henegan, Francis Blake Knox, John Irwin Moore, Robert Garven Nesbitt, J. Joseph O'Connell, Reginald Rygate, Reuben Turner, Ninian Wildridge Woods.

MIDWIFERY.—Eugene Byrne, Thomas Carr, Edwin Tyrrell Cummings, Alfred Russell Darley, Norbert Sydney Durrant, John Irwin Moore, Robert Garven Nesbitt, Reuben Turner, Ninian Wildridge Woods.

At a special Examination held on June 27th and following days the undermentioned obtained licences in Medicine and Midwifery:—

MEDICINE.—Benjamin Badcock, John Joseph Byrnes, Thomas Carr, Oswald Herbert Edwards, John Augustine English.

MIDWIFERY.—Stafford Mouritz Cox, John Augustine English, Richard Blayney Wrightson.

The following has been admitted a Member:—

Bewley, Henry Theodore (Exam.).

THEIR Royal Highnesses the Duke and Duchess of Connaught opened, on the 13th inst., a new children's ward in connexion with the Westminster Hospital.

DR. VAUGHAN, on the 13th inst., in the absence of Lord Cross, distributed the medals and prizes gained by the students at Guy's Hospital Medical School.

THE ceremony of formally opening the new Hull and Sculcoates Dispensary was performed by the Mayor, on the 6th inst.

THE Paisley Police Commissioners have approved of plans for an addition, at a cost of £4000, to Paisley Infectious Diseases Hospital.

THE "Founder's Day" of the Hospital for Incurables, Putney, was celebrated, on the 5th inst., by a réunion of the friends of that institution.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of the fund, held on the 12th inst., Sir W. R. E. Smart, K.C.B., M.D., Inspector-General, in the chair, the sum of £80 was distributed among the several applicants.

THE annual inspection of the Leavesden Asylum by the managers of the Metropolitan Asylum District took place on the 9th inst. The visitors expressed their satisfaction with the condition and management of the institution.

ON the 4th inst. the Marquis of Lorne formally opened the National Smoke Abatement and Health and Home Exhibitions, which have been arranged within the Albert Palace at Battersea.

ROYAL MEDICAL COLLEGE, EPSOM. — "Founder's Day" was celebrated at Epsom College on Wednesday, July 6th, and in consequence of the exceedingly favourable weather the visitors were very numerous. On the platform, the head master, the Rev. W. Cecil Wood, M.A., was supported by Sir Joseph Fayrer, M.D., K.C.S.I., Sir Edward H. Sieveking, M.D., Mr. J. Lumsden Propert (son of the founder), Dr. George C. Jonson, Rev. E. W. Northey, M.A., Rev. R. Ewing, and Dr. John H. Galton. The distribution of prizes took place in the large schoolroom, which had been most prettily decorated by the boys for the occasion, the ceremony being interspersed with the customary speeches, scenes, &c. The proceedings closed with the singing of the "Carmen Epsomianum," after which cheers were called for the Council, the ladies, the masters, and Mr. Powles, one of the masters about to leave. The popularity of this gentleman was evinced by the vociferous and hearty way in which the boys responded to the last-mentioned call. A move was next made to the grounds, where, under the trees, refreshments had been tastefully laid out. A selection of music played by the Epsom band was highly appreciated, and greatly helped to enliven the proceedings in the open air.

MEDICAL NOTES IN PARLIAMENT.

Prisoners under the Vaccination Acts.

IN the House of Commons on the 11th inst., in reply to Mr. Channing, Mr. Matthews stated that it is in accordance with the existing law and prison rules that prisoners under the Vaccination Act should be ordered to pick oakum, but prisoners sentenced to simple imprisonment without hard labour cannot be placed on the treadwheel, and can only be employed on labour of the lightest description. There are no special rules for prisoners under the Vaccination Acts. It is the sentence which governs the treatment, and the same sentence involves the same treatment whatever may be the Act authorising it.

Foreign Paupers in England.

On the 12th inst., in reply to Mr. Agg-Gardner, Mr. W. H. Smith stated that the question of restricting the importation of foreign paupers was under the consideration of the Government. It was a question of much difficulty, and he was unable to fix a time when it would be possible to legislate upon it.

Ventilation in the House.

Mr. Bond, on behalf of Colonel Hambro, asked the First Commissioner of Works whether he was aware that there was a cellar in the House of Commons, the superficial area of which was 18 ft. by 12 ft., into which no natural light or fresh air could enter, or foul or heated air from the gas, which was always burning, could escape from, except through the doorway, which opened into a passage lit with gas and was nineteen yards from the external atmosphere, and that in this cellar, the temperature of which was seldom below 80°, three men in the employment of the House had to work at a dirty and laborious occupation on an average of fifteen hours a day throughout the session; and whether he would take immediate steps to have this cellar closed as a work-room.—Mr. Plunket, in reply, stated that the cellar to which his attention had been called was really a scullery used in connexion with the kitchen and the members' dining-room, and was in a convenient position for that purpose. He had inquired into its sanitary condition, and while he found that the drainage had been quite recently renewed and was in an excellent condition, the ventilation was undoubtedly in a bad state. There was, however, an air shaft from the ceiling which had not been used for some time. This shaft has now been put in use, with the result that a considerable current of air was now passing through the room.

Police Uniforms.

In reply to Mr. Quilter, who asked whether the Government would consider the desirability of supplying to the police a helmet of a lighter colour, and something in the nature of a blouse for wear on duty during the summer months, Mr. Matthews stated that the Chief Commissioner was in favour of the present system of clothing, thinking that in a variable climate like ours there was more danger from wet and cold than from heat. He was not, therefore, prepared to advise any change.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BENSON, ALFRED, M.A., M.B.Oxon., M.R.C.S., has been appointed Medical Officer to the Paddington Provident Dispensary, vice W. V. Lindsay, M.D., deceased.

BOXALL, FRANK, M.R.C.S., L.R.C.P., L.S.A., has been appointed Resident Medical Officer to the St. Pancras and Northern Dispensary.

CARTER, GRAHAM A., M.D. Mar. Col. Aber., L.R.C.S. Ed., has been appointed Medical Officer for the St. Chad District of the Lichfield Union.

COX, B. OWEN, L.R.C.P.Ed., L.R.C.S.Ed., L.F.P.S.Glas., has been appointed Junior House-Surgeon to the Westminster Hospital.

HARRIS, ALFRED, M.B., C.M.Ed., has been appointed Medical Officer for the Croxton District of the Thetford Union.

MORTON, JOHN, M.B.Lond., M.R.C.S., has been appointed Medical Officer to the Guildford Post Office.

MOXON, WILLIAM, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer of Health for Matlock.

OWEN, R. CHAMBERS, M.R.C.S., L.K.Q.C.P., L.M., has been elected Assistant Surgeon to the Liverpool South Dispensary, vice Mitchell, resigned.

PERKINS, W. H., Ph.D., has been appointed Professor of Chemistry in the Heriot-Watt College, Edinburgh.

WALSH, ROBERT W., M.R.C.S., L.S.A., has been appointed House-Surgeon to the Clinical Hospital for Women and Children, Manchester.

WOOD, FREDERIC C., L.S.A., has been appointed Ambulance Surgeon to the Liverpool Royal Southern Hospital.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL HOSPITAL.—Resident Medical Officer. Salary £130 per annum, with residence, board, and washing.—Two Assistant House-Surgeons. No salary, but residence, board, and washing will be provided.

BRISTOL ROYAL INFIRMARY.—Obstetric Physician.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary £70 per annum, with board and lodging.

FEMALE LOCK HOSPITAL, Harrow-road, W. — House-Surgeon. Salary £100 per annum, and board and lodging.

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GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Senior and Junior Resident Officers. Salary £100 and £80 per annum respectively, with apartments and board.

HARTLEPOOLS HOSPITAL.—House-Surgeon and Secretary. Salary £60 per annum, with board (exclusive of beer, wine, and spirits), lodging, and attendance.

LEEDS BOROUGH HOSPITALS.—Resident Medical Superintendent. Salary £150 per annum, with board and residence.

LONDON FEVER HOSPITAL, Liverpool-road, N. — Assistant Resident Medical Officer. Salary £120 a year, with board.

NORWICH FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Resident Medical Officer. Salary £220 per annum, increasing £10 per annum for three years.

RIPON DISPENSARY.—Resident House-Surgeon and Dispenser. Salary £100, with furnished apartments, coals, and candles.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor. — Assistant Resident Medical Officer. Small honorarium.

WESTMINSTER GENERAL DISPENSARY, Gerrard-street, Soho, W.—Honorary Surgeon.

YORKSHIRE COLLEGE, Leeds. — Professor of Anatomy. — Demonstrator of Anatomy. Stipend £150.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 6th inst., at Malling-place, West Malling, Kent, the wife of James Adam, M.D., of a son.

ALLEN.—On the 12th inst., at Oak Lodge, Stanmore, Middlesex, the wife of W. Hamilton Allen, M.B., of a son.

BARR.—On the 8th inst., at 1, St. Domingo-grove, Liverpool, the wife of James Barr, M.D., of a daughter.

BURTON.—On the 5th inst., at Lichfield-street, Burton-on-Trent, the wife of Leonard Burton, L.R.C.P.Lond., M.R.C.S., of a son.

COUNSELL.—On the 8th inst., the wife of Herbert Edward Counsell, M.R.C.S., L.R.C.P., of a daughter.

DUKE.—On the 5th inst., at Pevensey-road, St. Leonards, the wife of Edgar Duke, M.R.C.S., of a daughter.

LANCASTER.—On the 28th ult., at Neston Lodge, Lewisham High-road, St. John's, S.E., the wife of H. F. Lancaster, M.D., of a daughter.

MACKIE.—On the 12th ult., at Alexandria, Egypt, the wife of James Mackie, M.B. Aber., L.R.C.S.Ed., C.M.G., of a daughter.

ROSS.—On the 7th inst., at 9, Pavilion-parade, Brighton, the wife of Douglas M. Ross, M.B., M.R.C.S., of a son.

THIELE.—On the 13th ult., at Peshawar, India, the wife of Surgeon H. Thiele, M.S., of a son.

WILSON.—On the 2nd inst., at Sparrows Herne, Bushey, Herts, the wife of Daniel Wilson, M.D., of a son.

MARRIAGES.

ARCHER—BEVILLE.—On the 6th inst., at St. John's, Notting-hill, Herbert Ray Archer, M.D.Lond., to Rosita Evelyn Elizabeth, only daughter of the late Charles Wallace Beville, Esq., of the 12th Bombay Native Infantry.

LAUNIA — LUSHER. — On the 7th inst., William Benjamin Launia, M.R.C.S., to Mary Louisa, younger daughter of Edward Lusher, Esq., of Montreal, Canada.

LUNN—MOORE.—On the 12th inst., at the Parish Church, Middleton, the Rev. H. S. Lunn, M.D., to Ethel, eldest daughter of the Rev. Canon Moore, LL.D.

MACGREGOR—REDDIN.—On the 6th inst., at St. Mary's, Poole, Dorset, Donald MacGregor, L.R.C.S., L.R.C.P.Ed., to Harriette, younger daughter of the late Edmund Reddin, Esq., of Albury House, Clapham, Surrey.

MOUAT-BIGGS—TICKELL.—On the 5th inst., at Christ Church, Cheltenham, by the Rev. Morley B. Saunders, M.A., of Bristol (uncle of the bride), assisted by the Rev. E. A. Tickell, M.A., of Ulrome, Yorkshire, and the Rev. C. V. Childe, Vicar of Christ Church, Charles E. F. Mouat-Biggs, M.R.C.S., L.R.C.P., of Malmesbury, Wilts, to Mary Louisa, only daughter of Commander Tickell, R.N., of The Lypiatts, Cheltenham.

ROCHE — JOHNSON. — On the 5th inst., at Holy Trinity Church, Folkestone, Surgeon-Major A. W. Roche, Army Medical Staff, to Louisa Mary Johnson, only daughter of the late Sir Henry F. F. Johnson, Bart.

WEARING—COMER.—On the 7th inst., at St. Margaret's, Anfield, Richard Wearing, M.D.Ed., to Helena Blanche, younger daughter of George Comer, of Larkfield, Wavertree.

DEATHS.

IRWIN.—On the 11th ult., at Buttermere, Cumberland, Henry R. Irwin, of Darlington, Surgeon, aged 47.

SMART.—On the 10th inst., at 65, Craven-street, Birkenhead, Bath Charles Smart, M.D., F.E.S., late of Strangeways, Manchester, aged 49. (Interred at Bidston Cemetery.)

STEVENS.—On the 11th ult., at the Episcopal residence, Philadelphia, U.S.A., the Right Reverend William Bacon Stevens, M.D., D.D., LL.D., Bishop of Pennsylvania, in the 72nd year of his age.

WRIGHT.—On April 27th, at 2, Carlton-terrace, Wynyard-square, Sydney, N. S. Wales, from apoplexy, Ellen, beloved wife of Horatio G. A. Wright, M.R.C.S.Eng., L.S.A.Lond., aged 59.

WRIGHT. — On May 10th, at 2, Carlton-terrace, Wynyard-square, Sydney, N. S. Wales, after many years of patient suffering, Annie, beloved daughter of Horatio G. A. Wright, M.R.C.S. Eng., L.S.A.Lond., aged 35.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 14th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 8	30·08	S.	73	64	124	85	60	...	Hazy
,, 9	29·92	W.	67	64	120	79	64	...	Cloudy
,, 10	29·73	S.W.	69	65	125	81	59	·03	Cloudy
,, 11	29·89	W.	69	66	116	80	61	...	Cloudy
,, 12	30·01	W.	69	64	121	81	63	·02	Hazy
,, 13	29·80	W.	70	69	126	85	63	...	Bright
,, 14	30·00	W.	67	62	101	73	61	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

DOES THE ACT OF 1886 GIVE COMPLETE QUALIFICATION TO ALL REGISTERED PERSONS?

Enquirens.—Clause 6, like many other parts of the Medical Act of 1886, is somewhat ambiguous. But in connexion with the repeal of the corresponding clause (31) in the Act of 1858, it does seem capable of the construction put on it by our correspondent. At the same time saving Clause 24 must be taken into account, and would seem to leave the privilege of practitioners registered before the appointed day *in statu quo*.

Dr. Tizard.—The fact may be mentioned more conveniently in a notice of the annual report on the health of the district.

Dr. John Caddy.—The discourse appears to have but a very faint bearing on medicine.

Mr. Mould is referred to a general notice at the head of this column.

THE PORTRAIT OF SIR WILLIAM JENNER.

To the Editors of THE LANCET.

SIRS,—I am convinced that, as usual, you spoke the voice of the profession in your remarks on the proposed presentation to Sir Wm. Jenner of his portrait by Mr. Holl and its replica to two colleges. That the profession will respond to the opportunity thus given, manifesting their admiration and esteem for the distinguished President of the College of Physicians, there cannot be a doubt. I have, however, a suggestion to offer which I venture to think will meet with the approval of physicians and surgeons generally, but more especially of those who practise in the provinces, and may therefore not have an opportunity of seeing either the original or the portrait as often as they could desire. It is that to each subscriber a photograph of the picture should be presented. May I take the liberty of making this suggestion through the columns of your highly valued journal? I am, Sirs, yours very faithfully,

Park-street, W., July 5th, 1887. A. B. KELLY.

SPORTS AND SPOILERS.

To the Editors of THE LANCET.

SIRS,—Can nothing be done when the United Hospital Sports come round next year to keep the ground free from bookmakers and worse? The "two to one bar one" fraternity were in full attendance at Stamford-bridge this year, and carried on their trade in the most open manner, though without any actual shouting, or any of their usual paraphernalia. Surely this is as avoidable as it is out of place at a meeting of the kind. I offer no suggestion, but I think it should be publicly known.

I am, Sirs, yours faithfully.

July, 1887. LATIN GAMES.

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PHOTOGRAPHS OF THE LATE DR. MOXON.

Philo Pilo.—Unfortunately there is no very good photograph of this physician, whom we all miss so much. Two photographs were taken by Mr. Barraud of Oxford-street, and he still has the negatives. The one representing Dr. Moxon standing was taken for the Medical Congress group.

Mr. W. Blake Marsh.—By the new French regulations great difficulties are thrown in the way of English and other foreign medical men wishing to practise in France, it being now compulsory for such to take the M.D. of the University of France at Paris, or at one of the provincial Faculties of Medicine. In Italy authority to practise can be more easily obtained; generally, we believe, without any examination in the case of medical men with English qualifications. Our correspondent should apply to Her Britannic Majesty's Consul at Rome.

Mr. E. T. Yeates.—The card is in very bad taste, and would justify remonstrance, if not refusal of professional amenities.

THE PROPOSED REGISTRATION OF FOREIGN DEGREES.

To the Editors of THE LANCET.

SIRS,—I notice in your issue for July 9th a letter on the above subject. The arguments of the writer are plausible, but a little consideration reveals in them several flaws. Take the following statement, for instance:—"It seems reasonable to suppose that no Englishman would go abroad for his degree if he could get one as easily at home." I grant this; but there are many reasons why an Englishman may find a foreign degree more easy to obtain other than the intrinsic easiness of the examination, which "Briton" appears tacitly to assume to be the only reason. Suppose, for instance, his parents reside at a foreign university town, it would obviously be more convenient to take his degree at that university. Suppose that expense is an object, and that he can only afford that degree which will cost him least, why should the Medical Council refuse to acknowledge the only degree which he can afford to obtain? One can scarcely reside at Oxford or Cambridge at an expenditure of less than £200 a year, whereas one can easily live in London with an income of £100. The expenses, therefore, of a candidate for a degree at Oxford or Cambridge will be £200 a year for three years, plus £100 a year for two years' study at London; in all, £800. The expenses of a candidate for a foreign degree are £400 for the four years' study in London. Here I do not take account of the fees; but, even supposing that they are not much greater in England than abroad, the total expenses of an English degree are nearly twice as much as those of a foreign one. But the expense may not be the sole objection to residence at an English university; it may be inconvenient from other causes, and it is unquestionably the inconvenience of the residence which drives so many medical men to take their degrees abroad, and not that the examinations themselves are intrinsically easier. And even if an Englishman with a foreign degree were wrong in assuming that it "implied some *professional* superiority over his untitled brother practitioners," the public would be right in thinking that it implied a superiority of another kind, a superiority in pluck and determination, which has impelled him not to allow himself to be beaten by the difficulties placed in his path, but to persevere in the endeavour to obtain from a foreign country those rights which have been denied to him in his own. To say that the registration of foreign degrees would "injure" anyone is no argument whatever against their registration; or, if it be so, the injury done to their holders by the present system is equally an argument in favour of their registration. "Briton's" last argument cuts both ways. If it be "unjust to register any foreign degree, unless it implies a higher professional knowledge than any British qualification which does not confer a similar degree," surely it must be equally unjust to refuse to register a foreign degree which implies a higher professional knowledge than a British qualification which does confer a similar degree.—I am, Sirs, yours faithfully,

July, 1887. E. OSBORNE FOUNTAIN, B.A.Cant., M.D.Brux.

Mr. Edward D. Buss.—Our correspondent is a little hard on the letter specified. These minor points of practice may profitably be the subject of report from time to time.

An.—We are not aware that the point has been definitely decided, though the current belief is in favour of the affirmative view.

THE CLIMATE OF ILFRACOMBE.

To the Editors of THE LANCET.

SIRS,—Allow me to take exception to a remark in your article on the Holiday Season in your last issue. Speaking of the various seaside places you say: "Scarborough and Cromer are two of the most bracing English marine resorts, while Ilfracombe represents the opposite pole." It is an error to suppose that the climate of Ilfracombe is relaxing, as anyone who has experienced the delicious and invigorating breezes during the last six weeks, when the country has been scorching under the rays of an almost tropical sun, can easily testify. If the freedom from frost and snow in winter and the bracing breezes of our summers were more known, the beauties of this charming place would be even more appreciated than they already are.

I am, Sirs, yours obediently,

Ilfracombe, July 11th, 1887. FREDK. A. BIRD.

THE PROSPECTS OF THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—It would be most desirable in the interests of parents, guardians, and aspirants to the medical profession, to place before them a plain statement of facts regarding it as a means of obtaining a livelihood. I will therefore, with your permission, proceed to discuss the subject as briefly as possible.

The lay and professional journals often contain glowing accounts of Royalty laying foundation stones, ornate presidential addresses, and allusions to peerages for the profession. The consequences are that the public are deceived, and hundreds allured to enter it when it is already disastrously overcrowded. People imagine that a youth has only to enter its portals and his future is made. Visions of baronetcies, wealth, and all its concomitant comforts float before him. The profession thus receives annually an excessive number of intending practitioners for the majority of whom the vital question will be, not whether they will refuse a knighthood or accept a baronetcy, but whether they may be able to exist.

We may assume a case which is typical of hundreds. A young man, after a cost of time and money equivalent to, say, £500, finds himself doubly qualified. How shall he dispose of his services to the best advantage? He may apply for an assistancy, which is very often most difficult to obtain. He will find hundreds with more experience and interest, possibly many with more agreeable appearance and address, so that months may elapse before he receives employment. If he be successful, he will but too often realise a miserable existence. He will possibly have plenty of responsibility, drudgery, and censure for a salary somewhat higher than that received by his employer's coachman. He may desire an appointment as a ship surgeon, and here the same conditions are almost essential to success. In the majority of cases he will be informed that they are "full up," and of the remainder no hope of immediate employment will be offered. If he be fortunate, he might receive as salary from £5 to £8 per month without any prospect of promotion.

A Poor-law appointment is almost inaccessible to a beginner. Experience, residence in the locality, interest with members of the Board, and in Ireland possibly acceptable religious and political tenets are indispensable qualifications. The income derived both from appointments and private practice in poor districts is often scarcely sufficient to provide a respectable maintenance, while the duties are harassing in the extreme. The military and naval services can only provide for a few of the best educated of the many who annually swell the Medical Register, while hospital appointments are much sought after, difficult to obtain, and are only temporary.

The subject of private practice may next be considered. It is only to be gained by prolonged individual effort or the hazardous plan of purchase. A man may travel the whole country, and in every eligible place he will find numerous opponents more experienced, better known, possibly more skilful, and already established. If he be unable to purchase a practice he must necessarily incur great expense in establishing one and supporting himself while doing so; for years may elapse before his professional income equals his expenditure. If purchase be the means selected difficulties have still to be encountered, patients may be introduced but not necessarily transferred, many circumstances often operating to alienate their patronage.

And lastly, the prospects generally are most discouraging. The profession, already fearfully overcrowded, is annually becoming more so, quackery, patent medicines, provident associations, and clubs, all on the increase, complete the list of reasons why the profession of the future will be but a gaunt and melancholy shadow of what it was in the past as regards its dignity and emoluments.—I am, Sirs, yours truly,

May 27th, 1887. PRO BONO PUBLICO.

Germist (New York).—The paper is by Manfredi, and it was recently presented to the Accademia dei Lincei by Dr. Tommasi-Crudeli, who appended to it some considerations of his own. Its exact title is "Dell' Eccedenza del Grasso nell' Alimentazione dei Micro-organisms Patogeni, come Causa di Attenuazione della loro Virulenza: Saggio di Vaccinazione contro il Carbonchio" (On the Excess of Fat in the Alimentation of Pathogenic Micro-organisms as a Cause of the Attenuation of their Virulence: an Attempt at Vaccination against Charbon).

V. (Liverpool).—We regret we cannot comply with our correspondent's request.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Alder Smith, London; Mr. C. Williams, Norwich; Dr. Tate, Nottingham; Dr. Attfield, Watford; Dr. L. Marshall, Nottingham; Sir J. Sawyer, Birmingham; Dr. Boyd, Dublin; Dr. Savage, Birmingham; Dr. Percy Boulton, London; Dr. Moullin, London; Mr. Squire, London; Mr. Davies, Little Bedwell; Mr. Clark, Dovercourt; Messrs. Beal and Son, Brighton; Messrs. Dawson Bros., Montreal; Messrs. Waltham and Co., Stockwell; Mr. Adlock, Manchester; Mr. Mitchell, Newton Heath; Messrs. Bennett Bros., Salisbury; Messrs. Kegan Paul and Co., London; Miss Shaw, Westgate-on-Sea; Messrs. Higham and Co., Hyde; Dr. Steel, Baden; Mr. Poole, Dudley; Messrs. Reynolds and Branson, Leeds; Mr. Burgess, Manchester; Mr. Hunt, Barton

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LETTERS, *each with enclosure*, are also acknowledged from—Dr. Davies, Bridgend; Dr. Fraser, Totness; Mr. Sotheran, York; Messrs. Austin and Son, Clifton; Mr. Brockelbank, Islington; Messrs. Macfarlane and Co., London; Mrs. Smart, Birkenhead; Messrs. Maythorn and Son, Biggleswade; Mrs. Anderson, Portishead; Messrs. Masters and Co., London; Mrs. Thomson, Louthborough; Messrs. Schweitzer and Co., London; Dr. Kerr, London; Dr. Mills, Norwich; Messrs. Slinger and Son, York; Mr. Hockenhall, Chester; Mr. Coltman, Leicester; Dr. Dugan, Castle Eden; Mr. Hodgett, Birmingham; Mr. Rawlins, Manchester; Mr. Salmon, London; Mr. Menier, London; Mr. Cook, Lowestoft; Mr. Davies, Cheltenham; Dr. Tayler, Penge; Mr. Irving, Battermere; Mr. Coleman, Brighton; Mr. Frost, London; Mr. Lee, Exeter; Mr. Martin, Horsham; Dr. Marshall, Atherton; Mr. Groves, Dorchester; Mr. Wheeler, Manchester; Mrs. Jones; Messrs. Deighton and Co.; Mr. Hamar, Stoke; Mr. Parry, Bagilt; Dr. Adams, West Malling; Mr. Pimm, Derby; Dr. Deeley, Sherborne; Messrs. Smith and Son, Manchester; Mr. Schacht, Clifton; Mr. Williams, Mountain Ash; Mr. Briggs, Corbridge; Dr. Lyon, Fencehouses; Messrs. Condy and Co., London; Mr. Haywood, Liverpool; Mr. Hartley, Huddersfield; Dr. Boreham, Ilfracombe; Arnold, Edinburgh; M.D., Bristol; C. A. B., Canterbury; Matron, Ventnor; J. K. L.; E. B. J.; Lady Superintendent, Bath; Practitioner; Treasurer, Rotherham; Trioeps, Liverpool; C. H., Cheltenham; Matron, Bedford; Chirurgus, West Brighton; W. S. F., Peckham; Matron, Canterbury; Medicus, Clay Cross; H. F., Barnstaple; W. V. N., Streatham; Medicus; Lex, New Swindon; Veritas, Brighton; Doctor, Birmingham; Perseus, Edinburgh; A. B., Southampton; Surgeon, Grimsby; Beta, Edinburgh; X. Z.

University College Gazette, Essex Telegraph, Manchester Guardian, Echo, Newcastle Daily Chronicle, Sydney Morning Herald, Light, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 19.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, July 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, July 22.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 23.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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SHORTCOMINGS OF SOME MODERN SANITARY METHODS.

Delivered at the Anniversary Meeting of the Sanitary Institute of Great Britain on July 14th, 1887.

By G. V. POORE, M.D., F.R.C.P.

GENTLEMEN,—I have been for some years so strongly impressed with the shortcomings of one of the chief methods of modern sanitation that I felt bound, when the Council of the Sanitary Institute did me the great honour of requesting me to deliver the annual address, to choose for my subject that which was uppermost in my mind. The principal aim of sanitarians has ever been, and ever will be, the securing for the masses of the people the two chief necessities of life—pure air to breathe, pure water to drink. Whether or not we are able to secure these two necessaries depends very largely upon the method which we adopt for the treatment of putrescible refuse, and it is on this point, and on the modern fashion of mixing putrescible refuse with water, that I propose to address you.

It may be well to remind you that all dead organic matter is putrescible, and, when I speak of putrescible matter, I mean all organic matter, inclusive of excrement. Nature moves in a circle, animals feed on each other and on vegetables, vegetables feed on the dead bodies of animals and vegetables, and on the solid and gaseous excrements of animals. Animal and vegetable life are complementary, and mutually support each other. This is a law of nature, and when I make this assertion I feel I run no risk whatever of being contradicted. The laws of nature are inexorable—i.e., they are not to be set aside by human prayers—not even by that best of all prayers, labour. Those who disobey the laws of nature, or who enter into a contest with her, are sure to be worsted in the end. If we fight with nature we court calamity. I have elsewhere compared those who fight with nature to Sisyphus, who, according to the old mythology, was condemned in the lower world to a never-ending contest with the force of gravity—

> With many a weary sigh and many a groan,
> Up the high hill he heaves a huge round stone;
> The huge round stone resulting with a bound,
> Thunders impetuous down, and smokes along the ground.

By means of great expenditure of time and money, we may wage for a period with nature a war which may be apparently successful. The war can never be really successful, it will never terminate; nature in the end will assert her eternal sway, and crushing defeat must be our lot.

As the inevitable destiny of putrescible matter is to become the food of vegetables, a destiny which we can delay at the most only for a brief period, our proper course in dealing with it is clearly not to attempt to prevent or even to delay the inevitable. Such a course is to disobey the laws of nature, to fight with her, and court ultimate defeat. Our wiser plan is to help nature in her work, and thus win her smiles. It has been the wise custom in all ages of the world to dispose of putrescible matter by burial in the earth. Dead bodies have in all ages been buried, and the greatest of all lawgivers and sanitarians, Moses, whose likeness rightly takes the place of honour in this room, gave most explicit directions that excremental matters should be treated in the same way. This is a not unimportant fact, and although we do not in this country follow the whole of the Mosaic law, nevertheless that law is so pregnant with marvellous wisdom that we ought not to discard any item of it without first questioning ourselves most strictly as to our unwillingness in so doing. The latest advances of modern science seem to show that in this particular Moses was absolutely in the right.

It has been shown, I think, conclusively that the decomposition of organic matter, whether in the earth, air, or water, is brought about by minute fungoid organisms, the growth of which has the effect of resolving the highly complex organic compounds into solid debris or gaseous bodies, which can be absorbed by the roots of plants. Now, when putrescible matter is buried in the earth, it undergoes decomposition without the occurrence of putrefaction—that process which is at once offensive to the senses and dangerous to health. This is effected by means, mainly it is supposed, of mould fungi, which produce oxidation of the organic bodies. If sufficient air has access to the pores of the soil, and if sufficient moisture be present, the nitrogen takes oxygen to form nitric acid, which, combining with the bases, forms soluble nitrates, and the carbon also combining with the oxygen forms carbonic acid, which, combining with the bases, forms carbonates. The best account which I have been able to find of the active organisms which are ever present in the soil is in a paper by Professor Wollny[1] of Munich, which was brought to my knowledge by my friend, Dr. E. F. Willoughby. These organisms are so incalculably numerous that their activity must be exceedingly widespread. Koch found enormous quantities, even in winter, in the soil not only of crowded places like Berlin, but in that also of remote fields. At the observatory of Mount Souris 750,000 were found in a gramme of earth, and at Genevilliers from 850 to 900,000.

If the action of the microbes be checked by antiseptics, the vapour of chloroform, or heat (100° C.), the chemical changes in the earth cease. That the formation of nitrates and carbonic acid from organic matter in earth to which air has access is due to microbes has been proved by direct experiment. When, however, organic matter is mixed with earth, and air is admitted in sufficient quantity or entirely excluded, the decomposition is of another kind; and, besides small quantities of carbonic acid and carburetted hydrogen, there is formed water, ammonia, free nitrogen, and a great quantity of a black carbonaceous peat-like matter (the so-called sour humus). Schlösing found that the nitric acid in the soil disappeared when the air was replaced by nitrogen. The kind of organism seems to vary with circumstances. As long as air is freely admitted, the mould-fungi (*Schimmelpilze*) preponderate; and when air is excluded, the schizomycetes (*Spaltpilze*) increase. The formation of nitric acid in organic earth mixtures depends on the amount of oxygen which is present in the air admitted. Thus Schlösing found by experiment that the formation of nitric acid varies as under:—

	Per cent.				
Oxygen	1·5	6	11	16	21
	Milligrammes.				
Nitric acid...	45·7	95·7	132·5	246·6	162·6

The nitrification which took place with a limited supply of oxygen was due probably to the air already mixed with the earth before the experiment began.

Millor and Boussingault have shown that no nitrification takes place in thoroughly soaked earth to which little air has access, and that when oxygen is absent the nitrates in the earth are reduced. The formation of carbonic acid also depends upon the admission of air (containing free oxygen), but some carbonic acid is formed even though all air be excluded.

	Per cent.			
Oxygen in air	6	11	18	21
	Milligrammes.			
	Pure N.			
Carbonic acid	9·3	15·9	16	16·6	16

Nitrification is assisted by a moderate amount of moisture. It attains its maximum when the moisture reaches 33 per cent., and above and below this the process of nitrification and formation of carbonic acid is hindered. Temperature has a great influence on oxidation in the earth. It reaches a maximum, with a temperature of about 50° C. (120° F.), and stops at 55°. Oxidation goes on most quickly in the dark.

Thus, oxidation depends not only on the presence of the organisms, but also on the presence of other factors, such as suitable aeration, suitable moisture, suitable temperature. These factors may all be suitable, or some may suit and others may not suit the oxidation process. The decomposition of organic matter in the soil is governed by that factor which is at its minimum.

The process of decomposition is much influenced by the physical condition of the soil, as, e.g.—(*a*) permeability for

[1] Ueber die Thätigkeit niederer Organismen im Boden: Deutsche Vierteljahrschrift für öffentliche Gesundheitspflege, vol. xv., 1883, p. 705.

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air and water, (*b*) nature and permeability of subsoil, (*c*) slope, (*d*) aspect, (*e*) warmth dependent on aspect, mineral composition, colour and moisture and nature of the crop. Barren soils are warm, while those covered with green crops are cool. That the variations of the ground water have a bearing on the oxidation processes cannot be doubted, when we reflect that the soaking of the upper layers of the earth is much influenced by the height of the ground water. When all the layers of earth are soaked, putrefactive processes, through the medium of schizomycetes, take place. When the ground water falls, and the air again enters the pores of the soil, the growth of those organisms is favoured which assist in the oxidation of the soil. All changes which organic matter undergoes in the earth are thus seen to be brought about, almost exclusively, by the life of lower organisms, the activity of which is ruled by the same natural laws which govern the growth of higher plants. There can be no better illustration of the true economy of nature than this action of the microbes in the soil on the conversion of organic matter into soluble salts and gases which serve as food for plants.

The growth of the microbes depends upon the concurrence of those conditions which by experience we all know to be favourable to the growth of higher plants. There must be a good supply of free oxygen, sufficient, but not too much, moisture, and a summer temperature. In well-tilled ground, broken up so as to admit air to its pores, and in a "fine growing season," in which sunshine alternates with showers, this process of oxidation is at its maximum. The microbes are active beneath the surface, manufacturing plant food from organic matter, and the favourable conditions above soil and below cause a vigorous growth of crops. When, on the other hand, the weather is unfavourable, and when, in consequence of excessive cold, excessive drought, or excessive wet, crops are not developed as they should be, the microbial life is also checked, and the change of the organic matter is delayed, and it is stored up for future use in more favourable seasons. This is the explanation apparently of the fact well known to farmers, that the effect of organic manures is more permanent than that of the so-called artificial manures which at present are so much in vogue. The organic manure remains entangled in the soil, and is not readily washed out of it in winter when the temperature is low, or even in unpropitious summers. It cannot be washed out until microbial growth has changed it into soluble salts; and when this change takes place, which it does in "good" weather, the roots of the growing plants seize hold of the ever-forming soluble salts and appropriate them to their own use. In fact, the farmer who uses organic manures, from the farmyard or elsewhere, need trouble himself very little with agricultural chemistry or experiment. He may feel certain that if he buries his organic manure *directly it is produced*, it will not be wasted. It will not give off ammonia to the air, nor will the juices be washed away by rain to the same extent as when it is left above ground to be a nuisance. There seems to be no doubt whatever that all heaps of manurial matter which give off ammonia and other gases to poison the air, and perhaps do more serious mischief which we "know not of," are allowing valuable matter to escape, which ought to be undergoing oxidation in the earth. There can be no doubt whatever that to the agriculturist stink means waste; and it is to be hoped that when the bucolic mind has imbibed this great and important truth, the country will be more evenly pleasant than it is.

The reason why farmers allow putrescible matter to fester in heaps appears to be, (1) that the matter has to wait until land is clear and circumstances permit of its being dragged to the fields; and (2) that when the matter is thoroughly rotten and most offensive, a more rapid and visible result is produced, notwithstanding that the total result is probably less than if the matter had been applied to the ground at once. It is certain that putrescible matter intended for manure must waste more above ground than when buried immediately beneath it. Rich farmers are now building sheds over their yards to prevent the access of rain to the manure, and are providing tanks for the reception of liquid which drains away. This involves a very great expense, and it is at least doubtful whether the result is better than that got by the immediate application of such matters to the soil—a process which involves no extra expenditure of any kind,—a most important matter, because the only acceptable test of good husbandry is the balance sheet. Mr. Warington, F.R.S., in his valuable little book on "The Chemistry of the Farm," says: "The most complet return to the land would be accomplished by manuring i with the excrements of the men and animals consuming th crops" (p. 28); and again, "Farmyard manure is a 'general manure; that is it supplies all the essential elements of plan food. ..... The effect of farmyard manure is spread over considerable number of years, its nitrogen being chiefl present, not as ammonia, but in the form of carbonaceou compounds, which decompose but slowly in the soil." Th immediate return is often less than when artificial manur consisting of soluble nitrates and phosphates, is used; bu the important point seems to be that the return is tolerabl sure to come in the long run.

The late Prof. Voelcker, in the article "Manure" in th Encyclopædia Britannica, gives an interesting table of th experiments of Sir John Lawes and Dr. Gilbert, spreadin over a period of twenty-four years, in which is shown th effect of different manures on crops. The most successfu results with artificial manure were got by applying nearl 1400 lb. weight per acre of mixed ammonia salts, super phosphate, and sulphates (potash, soda, and magnesia With this manure there was an average production o 37½ bushels of wheat, weighing on an average 59 lb. pe bushel, and multiplying these two figures together we ma say that the production of wheat averaged 2212·5 lb. Th production of barley averaged 41½ bushels, weighing 53⅜ lb and multiplying these figures we may say that the averag production was 2588 lb. Where the land was manured wit fourteen tons of farmyard manure the average production o wheat was 35½ bushels, weighing 60 lb., giving a figure o 2115 lb., and of barley 48⅜ bushels, weighing 54⅜ lb., givin a figure of 2650 lb.

Thus farmyard manure, when used for wheat growing gave a yield of 97 lb. less than when the best artificia manure was used, and when used for barley growing i gave 62 lb. more than when artificial manure was used These figures are certainly not such as should discourag us in the use of farmyard manure, especially when w remember that the average agriculturist is not likely t apply his artificial manures with the knowledge and judg ment of Messrs. Lawes and Gilbert, and that in the use o farmyard manure it is not easy for him to go very wrong Again, farmyard manure is stuff which *must* be used, whil chemicals are things which *must* be bought, and need to b analysed when bought.

It is a great mistake to suppose that farming is in an way comparable to a chemical experiment. In experiment conducted in the laboratory the chemist is able to contro *all* the conditions of the experiment; but in farming th condition which above all others influences the result viz., the weather—cannot be controlled. When chemica manures are used with judgment and applied at the righ moment, and when the weather is favourable, there is n doubt that the result is often surprising and gratifying. Whe however, the weather is unfavourable, when the drought so great that the chemicals cannot be dissolved, or when th rain is so heavy that they are washed out of the soil, th result is not encouraging. If organic manures are used, the do not waste in bad seasons, and much remains in the groun for next year's crop. The farmer, however, who appli chemicals in a bad season gets neither crop nor residuum manure for next year. Mr. Warington says that "farme have a prejudice in favour of the latter (i.e., organi manures, but it is clear that the quickest return for capit invested is afforded by the former class" (i.e., inorganic Surely we have no right to blame the farmers for their pr judice, which seems to be in all respects reasonable. Th doctrine has obtained in this country of late years that it good economy to waste all our home-grown organic manur and to import chemicals from South America for the purpos of agriculture. This is a strange doctrine; but as most our farmers are now too near bankruptcy to pursue th course, we may hope that ere long they will begin to clamo for that which we now waste so wickedly.

One more word before I bring my remarks on farming a close—remarks for which I make no apology, for I fe sure you must already recognise their bearing on the subje of sanitation. The remark I have to make is this, that the hands of Lawes and Gilbert farmyard manure ga better results with barley than with wheat. May not th fact that farm animals are largely fed with barley meal ha something to do with this? There are experiments whi show that minimal ingredients in manures are not witho effects which are often surprising. There are *a pric*

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grounds for thinking that the best manure for barley must be the excrement of a barley-eating animal, for in that excrement must be all that is necessary for barley. I wish some agriculturist would make the experiment of growing wheat with the excrement of a wheat-eating or bread-eating animal. As a gardener I have grown potatoes with the excrement of a potato-eating animal, and certainly the result has been most encouraging.

I have been obliged to draw my illustrations as to the practical result of burying organic matter from the agricultural employment of farmyard manure, because facts based upon exact experiments with the organic refuse of our towns is not forthcoming. *What I want to insist upon is this, that the proper destiny of organic refuse is immediate burial just below the surface of the soil.*

Most of the shortcomings of modern sanitary methods are due to the fact that in our dealing with organic refuse we commit a scientific error—i.e., we pursue a course which is in opposition to natural law. This error consists in mixing organic refuse with water. When organic refuse is mixed with water, it undergoes changes which differ widely from the changes which it undergoes when mixed with earth. According to Wollny, whose paper I have quoted previously, the process of oxidation of organic matter and the formation of nitrate takes place most readily when a moderate amount of moisture is present. The most favourable amount is about 33 per cent., and if the moisture rise above or sink below this amount, the process of nitrification and the formation of carbonic acid is hindered. When water is in excess the amount of free oxygen is insufficient to favour the growth of mould fungi, the schizomycetes (bacteria and micrococci) are formed, and, in place of oxidation, putrefaction occurs, with the formation of ammonia, free nitrogen, carbonic acid, and carburetted hydrogen. Under these unfavourable circumstances it is possible that the nitrates which may have been formed may be again reduced. This process of deoxidation takes place in mixtures of putrescible matter with water, and takes place also, it is said, in soil which is thoroughly soaked with sewage—i.e., putrescible matter mixed with water. In the face of these facts it is not to be wondered at that "sewage farming," which is farming under acknowledged difficulties, has not proved a commercial success. We must indeed be in doubt whether, when the circumstances are more than usually unfavourable, it exercises any very great purifying action upon the putrescible mixture. In the treatment of putrescible refuse, so that it shall not be a danger or annoyance, what we have to aim at is nitrification rather than putrefaction, and it is certain that by mixing with water putrefaction is encouraged and nitrification delayed.

It seems to be almost incontestable that the proper course to pursue with regard to organic refuse—putrescible matter—is the very reverse of that which we do pursue. We clearly ought to encourage oxidation and make putrefaction impossible. Putrefaction is certainly a great cause of ill-health. It was the putrefaction of wounds (now, happily, almost unknown) which converted our hospitals into something little better than charnel-houses. It is the putrefaction of organic refuse mixed with water in cesspools and sewers that causes that long list of ailments which we ascribe to the inhalation of sewer air. The opinion is held by many that the dejecta of typhoid patients and cholera patients do not become dangerous to others until putrefaction has set in, and such an acute observer as was the late Dr. Murchison held the opinion that common putrefactive changes taking place in dejecta were a sufficient cause of typhoid, independently of the admixture of any specific poison.

The putrefaction of organic refuse, when mixed with water, has, I think, been the chief cause of the development of modern sanitary "progress." Our forefathers were not given to this method of treating putrescible matter. House-slops trickled along open gutters, and excremental matters were deposited in dry pits. At the beginning of this century the watercloset came into use. Mr. W. Haywood, quoted by Dr. Farr, says, "Watercloset were invented about 1813, and became general in the better class of houses about 1828-33. The custom at first obtained of building cesspools having overflow drains put below their doming, by which means the solid matters were retained and the supernatant liquid only ran off. In the year 1849 what may be said to be an organic change in the system took place. In 1848 the City Commission of Sewers obtained its Act for sanitary purposes, which became operative on Jan. 1st, 1849, and then for the first time was discharge into the sewers legalised. Previously a penalty might have been enforced for such a usage of them, but henceforth, within the City of London, those incurred a penalty who failed, upon notice, to construct the drainage of premises in such a manner as not to discharge all waste waters *and fæcal matters directly into the public sewers* [i.e., directly into the sources of water supply], of which the full utility was, therefore, for the first time recognised by statute. This Act was speedily followed by others for the remaining area of the metropolis and for the entire country." "It will be noticed," says Dr. Farr, "that the deaths from cholera and diarrhœa increased in London in 1842, increased still more in 1846, when the potato crop was blighted, and in 1849 culminated in the epidemic of cholera." Dr. Farr says further, "a system of sewerage is the necessary complement of a water-supply. ..... Almost coincidently with the first appearance of epidemic cholera, and with the striking increase of diarrhœa in England, was the introduction into general use of the watercloset system, which had the advantage of carrying night soil out of the houses, but the incidental and not necessary disadvantage of discharging it into the rivers from which the water supply was drawn."

Mortality per 1000 from diarrhœa in London (Dr. Farr).

1838	·215	1853	1·011
1839	·201	1854	1·257
1840	·238	1855	·804
1841	·238	1856	·866
1842	·353	1857	1·181
1843	·410	1858	·759
1844	·340	1859	1·211
1845	·397	1860	·496
1846	·997	1861	·928
1847	·898	1862	·607
1848	·853	1863	·821
1849	1·705	1864	·981
1850	·813	1865	1·206
1851	1·085	1866	1·306
1852	·983	1871-80—Dr. Ogle	·940

Thus in the decade 1871-80, 33,168 persons died of diarrhœa in London, the death-rate from this cause being ·94. If the death-rate of 1838 (·215) had obtained in the decade 1871-80, the deaths from this cause would have numbered only 7600, and there would have been a saving of 25,568 lives.

Since the introduction of the watercloset, and I believe as a direct consequence of it, we have had four severe epidemics of cholera (a disease not previously known), and enteric or typhoid fever (previously almost or quite unrecognised) has risen to the place of first importance among fevers in this country. The evils which have arisen from cesspools and sewers have caused an enormous amount of attention to be devoted to what are known as "sanitary appliances," sewer constructions, &c., and so great and so well recognised are the evils of sewers that many of our friends are anxious that we should be compelled by Act of Parliament to protect ourselves from the mischief which previous Acts of Parliament have produced.

Not only does the putrefaction of organic refuse tend to fill the air of our houses and towns with foulness, but this mixture of organic matter with water is attended with other bad consequences. This arises from the fact that much of the organic matter which we mix with water is distinctly poisonous. The zymotic theory of disease has of late years assumed more definite shape, so that we may now leave what was called the zymotic theory and consider the actual facts. There is no doubt that the actual infective elements of many zymotic maladies consist of microbes, fungoid bodies belonging to the class of fungi known as schizomycetes, that class which grows in organic mixtures where insufficient free oxygen is present. These microbes are infinitely small; millions of them may live in a cubic inch of putrefying liquid. Under favourable circumstances they will live for long periods. They will not only live, but multiply, and it is at least a question, and a grave one, to what extent these infective germs undergo an increase when mixed with organic liquids such as sewage or milk.

The fact that the zymotic poisons are *particulate and alive* is one which has most important bearings on the subject under discussion. If the poison were a chemical poison, then dilution would practically do away with its power for harm. No amount of dilution is capable of destroying a zymotic poison; in fact, it is not impossible

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that the mere mixing of organic refuse which contains a zymotic poison with water may be the means of keeping it alive, and possibly causing it to multiply. When a mass of organic matter, charged with zymotic particles, is mixed with water and washed out of a house, the water will carry the poison with it wherever it may chance to flow or trickle, to watercourse, well, or any other source of drinking water; in fact, the dissemination is as perfectly and thoroughly done as if dissemination of poison were the main object which we had in view. When dealing with organic matter impregnated with zymotic poisons, mere dilution with water increases rather than diminishes the danger. As long as the poisonous organic refuse is concentrated, its repellent qualities are such that there is little chance of its gaining access to the human body. The microbes contained in it are theoretically capable of infecting an almost indefinite quantity of water, and this large quantity of water masks the repellent qualities of the stuff, and thus the danger of infection is greatly increased.

This dissemination of poison by water is one of which we have had very bitter experience in this country. There is little room for doubt that, in this country at least, water has been the great carrier and disseminator of the poison of cholera. In 1849 the mortality was highest in those districts getting their water-supply from the Thames between Battersea and Waterloo Bridge. In 1853-54 the same phenomena were observed. In 1866 the chief mortality was in the district supplied with water taken from the river Lea. With regard to this latter epidemic we are in possession of many details, and the following is a summary of the facts, as given by the late Dr. William Farr in his report on the cholera epidemic of 1866:—"Several cases of cholera and choleraic diarrhœa had occurred over London in May; and on June 27th, at 12, Priory-street, Bromley, one poor Hedges, a labourer, and his wife, both of the age of forty-six years, died of 'cholera Asiatica,' the former after fifteen, the latter after twelve hours' illness. These cases are minutely described by Mr. Radcliffe, who traces the discharges into a water-closet of 12, Priory-street, and thence 300 yards down the sewer into the Lea (a tidal river which ebbs and flows) at Bow Bridge, half a mile below the Old Ford reservoirs. He attaches great importance to these first cases, and they undoubtedly sufficed to pour into the sewers and waters millions of zymotic molecules, which day by day grew more and more frequent in the Lea by every hour's choleraic discharges on both sides of the river." A few days later water was supplied to the district from a reservoir, the bottom of which was pervious to the waters of the Lea, and then resulted an outbreak of cholera and diarrhœa which resulted in the death of over 4000 persons.

I need not give further instances of the dissemination of disease by water-carried sewage; sanitary literature is full of them. What is true of cholera is also true of typhoid, and I will only say in reference to this subject that (if we accept, as we are bound to do, the statements put forward with regard to the cholera epidemic of 1866) if the excreta of the Hedges' family had been buried or burnt, the waters of the Lea would not have been infected, and possibly 4000 lives would have been saved.

The first principle in dealing with epidemic disease is that which is expressed in the words *Principiis obsta* (Resist the beginnings). The object of this is evident, and is well expressed by Shakspeare in the words—

> "A little fire is quickly trodden out,
> Which, being suffered, rivers cannot quench."

The mixing with water may be looked upon certainly not as a resistance of the beginnings, but rather as a nursing and favouring of them, which, "being suffered," most certainly "rivers cannot quench." The great principle of *principiis obsta* has been most rigidly observed by surgeons in dealing with those forms of blood poisoning which arise in connexion with wounds, and which were known as hospital diseases. To Lister belongs the credit of recognising that the great thing to be aimed at was the checking of putrefactive changes in the discharges from the wound, an end which has been attained by adopting what are known as antiseptic precautions in the treatment and dressing of wounds. A foul wound is looked upon as a great source of danger to the patient himself, and formerly the poisons generated in the wound of one patient were carried by sponges and instruments (which, be it remembered, were *clean* as far as any indications appreciable by our unaided senses were concerned) to the wounds of others; and thus it followed that the mortality from what was wrongly spoken of as "hospitalism" was enormous. Now, however, putrefaction in wounds is practically at an end, owing to the use of antiseptics and to an improved appreciation of what cleanliness really means; and, as a result of this, hospitalism has disappeared.

How marvellous have been the results which have followed on the adoption of the principle of preventing putrefaction in wounds is well shown in a table given in the last edition of "Erichsen's Surgery." This table is taken from a statistical work by Max Schede on amputations, and shows conclusively what are the advantages of antiseptic precautions. I have simplified his statement for the sake of those of my audience who are not acquainted with medicine.

Uncomplicated Cases of Amputation.

Cause of death.	Old treatment, 377 cases.	Antiseptic treatment, 321 cases.
Blood poisoning.....	105	3

Thus it appears that the mortality from blood poisoning under the old treatment was 28 per cent., while under antiseptic precautions it is less than 1 per cent. Antiseptic measures are used in other than purely surgical cases, and my friend, Dr. John Williams, tells me that since their introduction into the General Lying-in Hospital the deaths from that terrible disease "puerperal fever" have practically ceased. This great result has been brought about by attention to the leading principle of *principiis obsta*. In my student days the treatment most in vogue for wounds was "pure" water; but now it is recognised that water is preeminently the encourager, and sometimes the main cause, of putrefaction, which of all things the surgeon tries to avoid.

The foulness of our rivers is largely due to the mixing of putrescible matter with water—i.e., to water-carried sewage; and there can be no doubt that as water-carried sewage increases, the difficulty of obtaining pure water increases also. Water-carried sewage so fouled the Thames "between the bridges," that after the bitter experiences of 1854, the intake of the water companies was moved to a point above the tideway. Since then the population all along the Thames valley has enormously increased, and if we who get our drinking water from the Thames escape disease, it can only be regarded as due to a happy accident, and not to the observance of any fixed principle to effectually prevent the fouling of the river. The precious liquid with which I am supplied from the Thames costs me, I think, nearly 10*s.* per 1000 gallons, and I need not say that I am very careful to have every drop which is used for drinking purposes both boiled and filtered.

If sewage finds its way to a water source, I have not much faith in the various modes of "treatment" which it undergoes in those establishments which local boards love to erect for this expensive amusement. The addition of chemicals, if in sufficient quantity to destroy living organisms, must make the water still more unpotable than before, and can only be of use by making the liquid so utterly nauseous that to drink it would be impossible. Mere filtration cannot be regarded as any safeguard after the experience of the Lausen typhoid epidemic, in which the poison of the fever filtered through a mile of earth, which was sufficient to check the passage of particles of wheat flour. Wide irrigation over a large area of land, as is practised in "sewage farming," is probably the best method of treating sewage, but this cannot be regarded as absolutely safe under all conditions, for reasons previously indicated. If antiseptics have been previously added to the sewage this must increase the difficulties of "farming" with it; as, if the antiseptics have been added in sufficient quantity to destroy disease organisms, this would effectually check the growth of those organisms upon which the fertility of the soil depends.

It is more than doubtful whether there is any absolute safety in obtaining water from deep wells. The Dudlow-lane well, near Liverpool, having a total depth of 443 feet, was fouled by percolation from cesspools, and percolation from a defective sewer would certainly prove equally disastrous. Surface wells are now not regarded as at all safe, but our suspicions with regard to them were not aroused until after the introduction of the plan of mixing water with putrescible matter. There was no soakage from an old-fashioned dry pit. There must be soakage from a cesspool or "dead well." The only way of securing pure water is to make quite sure that there is no fouling of water sources. If this were done, then pure water would be at

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once plentiful and cheap. It is now very dear, and is getting scarcer every day. Dr. Wm. Farr said, "a system of sewerage is the necessary complement of a water supply." For myself I should be inclined to say that an extraordinary water supply is the necessary complement of water-carried sewage, because with it our ordinary supplies quickly get fouled. In London we have effectually fouled all our wells, and the state of the Thames is such that a man must be in the very extremities of thirst, or else insane, before he would drink from the Thames anywhere between Teddington Lock and Gravesend. The state of our noble river is a deep reproach to us, and must remind us day by day of the serious blunders we have committed. As long as it remains as it is we certainly have no claim to be followed as an example in matters sanitary. London should serve as a warning, as did the drunken helot to the Spartan youth.

The fouling of our sources of water supply has driven us far afield for water, and this no doubt has been a great cause of the lessening of our mortality of late years; but it would be unwise to talk of security because we have had no serious epidemic since 1866, an absurdly short period in the history of a nation. It must not be forgotten that pure water is as necessary for animals as it is for man, and that if we persist in fouling our rivers the poor farmer may have to pay a "water rate" for providing an artificial water supply for his horses, cattle, sheep, and even poultry. Many diseases of animals are communicable to man, and it is daily becoming more evident that our health is very intimately bound up with the health of our animals, and that their sanitary condition is scarcely less important than our own.

From a financial point of view, water-carried sewage has not been encouraging. It has increased the rates, increased the cost of our houses, and put us to great expense for water. The "treatment" of sewage before it is finally discharged into our rivers is everywhere an expense and nowhere a source of profit, and we find that public sewers which cost millions, cost thousands to keep them in repair. The sewers we have built with borrowed capital. We have seized all the glory and patronage of disbursing enormous sums, and have left posterity to pay the bills. This is a doubtful policy, and I think a most immoral one; but I feel it is little use to raise my feeble voice against the custom, which is now so much encouraged, of hanging a debt round the neck of our successors. It may be defensible to raise a loan for building town halls, schools, and similar edifices, of which posterity will reap the benefit; but to raise loans for the purpose of wasting most valuable fertilising matter by means of works which will be a constant expense, and never a source of profit, is a very doubtful expedient. I hope the custom will soon obtain of compelling each generation to bear the charge of its own sanitary experiments—and blunders.

Sewers are constant sources of impoverishment to the soil, and the soil, be it remembered, is the only *permanent* and reliable source of wealth in any country. The waste of valuable matter which takes place in London and our big towns must make us blush. I wish the waste were limited to our big towns, but it is not so. It is common throughout the country, even in rural districts. Free trade has made food very cheap indeed, and cheap food, especially *imported* food, ought absolutely to increase the fertility of a country, for obvious reasons which I need not particularise. The fertility of this country is not increasing, to judge by the agricultural distress. The farmers are crying out for "protection." The first kind of protection needed seems to me to be a protection from ourselves and from the sinful waste of fertilising matters which local boards, municipalities, and Imperial Parliament equally foster. If we made a proper use of our organic refuse we should enrich posterity. As it is, we reap and we do not sow. If municipalities would bury organic refuse, and plant the seed of some forest tree suited to the soil and situation (which in these days of cheap food stuffs would probably be the best branch of agriculture to pursue), they would earn the blessings, instead of the curses, of posterity; and they would beautify the face of nature, instead of making it hideous with tall chimneys, pumping stations, and precipitating tanks. This piece of advice will, I fear, fall very flat, for of all agricultural arts, forestry seems the deadest in this country.

As a defence for gigantic sewage schemes, it is often said that you can do nothing well without co-operation, and this is the excuse for compelling all, whether they want them or not, to contribute towards the cost of sewers. If co-operation be for a good end, the result is a great good; but if co-operation be for a bad purpose, the result is a great evil. I need say no more.

The last charge which I have to bring against water-carried sewage is a serious one—viz., that it encourages overcrowding in cities, which is universally admitted to be the greatest of all sanitary evils, and one which cannot be counterbalanced. Water-carried sewage encourages overcrowding, because it enables us to build houses with no outlet except a hole for the sewage to run through. The growth of London must be a source of alarm to sanitarians, and it is impossible not to admit that our system of sewers has been a most important factor in its production. Look at Charing-cross, where a street of gigantic clubs and hotels has arisen, each without curtilage of any kind, and where a handsome profit has been made by setting the first law of sanitation at defiance. You will find the same thing to a greater or less extent throughout the metropolitan area. It is difficult to say why we are so prone to crowd into cities. In former days we crowded behind walls as a protection from our enemies. Those days are at an end, but the crowding is greater than ever. The common cant of the day is that in this nineteeth century we have annihilated time and space. Certainly in cities both are excessively precious. The telegraph, the telephone, and the steam engine ought to have diminished overcrowding, but they have not. The stream is still mainly from the country towards the town, the attraction being the making of money and the spending of it.

It may be well to glance at the effect of this overcrowding in this city. It is a common remark that London is a very healthy city, and as a proof of this assertion persons point to the death-rate, which certainly of late has not been excessive. The London of the Registrar-General, however, is a very extensive place, and many of the outlying parts are almost rural in character, so that if you want to find the effect of living in a crowded city it is not fair to take London as a whole. I am no believer in the healthiness of London. It is true that our death-rate has not been raised by any great epidemic of late years, but London is undoubtedly a city where an abundance of second-rate health exists. The crowds that throng the doors of hospitals increase, and in my profession there is a great outcry about "hospital abuse"—which means, I take it, that decent folk are not able to cope with the amount of chronic disorders with which they are beset. Again, the mobility of the population in the present day makes our vital statistics very uncertain. Many a healthy person is imported into London, and, being wounded in the battle of life, returns to the country to die or recover as the case may be. There is a scarcity of very young and very old people, and in order to appreciate the vital statistics of London great allowances have to be made for the abnormal age distributions.

In order to judge of the effect of overcrowding, let us look at the vital statistics of the Strand Registration District, which is about the centre of London, and from which one would have to walk very many miles to reach the country in any direction. The Strand enjoys many advantages. It is mainly a wealthy district, extending in irregular form from Temple Bar to Buckingham Palace. It includes the whole of the Green Park and half St. James's Park. It has a gravel soil, and slopes gently, with exposure to the south, to the fringe of (potentially) the noblest river in the country. The worst and poorest parts are at the north-east corner. I have compiled a table from the last nine quarter-year tables which have appeared in the *British Medical Journal*, so that I am able to compare the Strand with the whole of London (for nine quarters) and with Dorset (for ten years, 1871-80).

——	Birth-rate.	Death-rate.	Zymotic death-rate.	Deaths under 1 year to 100 births.
London	32·5	19·9	2·7	151
Strand and St. Martin's-in-the-Fields	23·7	21·8	2·6	192
Dorset (10 years 1871-80) ...	20·53	17·46	1·68	108

I have chosen the county of Dorset for comparison because it is a "healthy district," and if we are to do any good we must always aim at a high standard. Again, the Dorset-

shire labourer has always been a favourite stalking-horse for cockney politicians, and it may be well to show how much healthier he is than the Londoner, notwithstanding his supposed condition of chronic starvation. This table is very interesting. Dr. Letheby said, "A high death-rate means a high birth-rate, and a high birth-rate is the invariable concomitant of prosperity." This dictum does not evidently apply to the Strand. Dr. Farr, on the other hand, pointed out that "a low birth-rate implies a small proportion of young adults and a large proportion of the aged." This dictum, again, does not apply to the Strand, as we shall see by a reference to the next table, in which I have endeavoured to make corrections for the abnormal age distribution which obtains in that district, and which Dr. W. Ogle rightly insists is absolutely necessary before you can arrive at just conclusions.

The Strand. Mean population 1871-80 = 37,461.

Ages.	Actual numbers living at each age.	Normal age distribution for a population of 37,500.	Difference (+ and −) between actual and "normal" numbers.	Actual deaths in 10 years, 1871–80.	Deaths which would have happened had the distribution of ages been normal.	Death-rate at different ages.	Death-rate of Dorset.	Deaths which would have happened had the death-rate of Dorset obtained in the Strand.
Under 5	3597	5100	−1503	3596	5100	99·97	40·07	1440
5—10	3134	4500	−1366	390	548	12·44	4·31	129
10—15	3069	4012	− 943	163	212	5·31	2·79	84
15—20	3824	3640	+ 190	317	299	8·29	4·43	167
20—25	4426	3337	+1089	366	273	8·27	6·65	290
25—35	6773	5512	+1261	963	770	14·22	7·50	510
35—45	5121	4237	+ 884	1246	1009	24·33	10·48	525
45—55	3935	3225	+ 710	1338	1088	34·00	13·04	520
55—65	2311	2212	+ 99	1147	1100	49·63	24·56	565
65—75	1003	1237	− 234	754	900	75·17	55·28	550
75 & over	268	487	− 219	425	774	158·58	151·71	403
	37461	37500		10705	12074			5203

From this table it appears that there was in the Strand during the decade 1871-80 a deficit of 3812 children under fifteen, and of 453 of persons over sixty-five, while there was a surplus of 4233 persons between fifteen and sixty-five. This abnormal distribution ought, according to Dr. Farr, to give us a high birth-rate and a low death-rate. The very reverse is the case, and a critical examination of the figures seems to show that the death-rate in the Strand *is more than double what it is in Dorsetshire.* It may be said that this high death-rate is due to the presence in the Strand of two hospitals (Charing-cross and King's College), and doubtless these have some material effect in producing the terrible adult mortality. Hospitals, however, are generally placed where they are most needed, and I would point out that these institutions can hardly account for the enormous infant mortality; and certainly not for the deaths of infants under one year. Against the fact that the Strand contains two hospitals is to be placed the not less important fact that it contains no workhouse. This institution is at Edmonton, where it helped to raise the death-rate from 15·8 to 16·9.

It need not surprise us that a population situated in the very centre of the vastest city the world has ever seen should have a high death-rate, and it may be well to look to the causes of death and again to compare the rates from different causes with those in Dorsetshire.

Death-rate from different causes.

	Strand.	Dorsetshire.
Whooping-cough	0·62	0·29
Tabes	0·28	0·18
Phthisis	3·65	1·72
Hydrocephalus	0·61	0·22
Respiratory disease	5·92	3·15
Total of tubere. and resp. disease	11·08	5·56
Small-pox	0·11	0·09
Measles	0·36	0·20
Scarlet fever	0·49	0·33
Enteric	0·38	0·19
Violence	1·61	0·49
Diarrhœa	0·92	0·35

No good would be got by extending this table. Suffice it to say that there is no single cause of death in the Registrar-General's tables which is not more active in the Strand than it is in Dorsetshire. I would particularly draw attention to the fact that the death-rate for whooping-cough and tubercular and respiratory disease for the Strand is more than double that of Dorsetshire—a fact which is not to be wondered at in a population the bulk of whom only breathe pure air upon the rarest occasions, and who habitually breathe an air so foul that the sun often fails to penetrate it, and which is fatal to almost all flowers and a large proportion of trees. To me one of the saddest indications of the dismal state of this overgrown city is the appeal, which is now so common in the newspapers, for funds to give poor London children *one* day in the country, with of course the not immaterial deduction of the hours spent in going and returning.

These tables may serve to dispel another popular fallacy—viz., that the sulphur-laden air of London has antiseptic powers, and helps to check zymotic disease. As a fact, those zymotic diseases which presumably travel through the air (small-pox, whooping-cough, and measles) are particularly rife in London. The death-rate from these three causes was during 1871-80—

	In London.	Dorsetshire.
Small-pox	0·44	0·09
Measles	0·51	0·20
Whooping-cough	0·81	0·29
	1·76	0·58

In fact, the mortality caused probably by air-borne germs was exactly three times as great in London as in the healthy country district which I have chosen for comparison.

I have endeavoured to show that the admixture of water with putrescible matter is inadmissible—(1) because it is antagonistic to a law of nature, and there can be no successful antagonism to nature; (2) because the putrefaction set up in cesspools and sewers by mixing water with putrescible matter has been a direct cause of much disease; (3) because the practice involves the most perfect dissemination of disease particles, and involves a neglect of the great principle *principiis obsta;* (4) because it is the great cause of the fouling of rivers and wells, and makes the obtaining of pure water increasingly difficult; (5) because it is financially and economically disastrous, crippling the ratepayers, and exhausting the land; (6) because it is one of the chief causes of overcrowding, the greatest of all sanitary evils.

It may be asked, "What useful purpose can be served by talking thus to an audience of Londoners? London is hopelessly committed to the principle of water-carried sewage, and must make the best of it." To this I reply that even London need not needlessly increase her already insurmountable difficulties, and that happily the whole of England is not yet quite absorbed into London and other cities. There is a very general belief throughout the country that because London has adopted the system of water carriage it must therefore be the best. This idea is unthinkingly adopted, and to its adoption the distinction

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of borrowing and disbursing a large amount of other people's money acts as a spur. There has come within my own knowledge the case of a country town, in the midst of a poor agricultural district, which clamoured for a "sewage scheme" for the purpose of polluting its sparkling watercourse, where anglers pay large sums for the privilege of trout-fishing, its death-rate being at the time between 16 and 17 per 1000. In the Thames valley, the region of villas and market gardens, a whole crop of "sewage schemes" has lately been put forward, notwithstanding that the more rational methods of sanitation would be easier and cheaper. Only the other day I visited a lone farmhouse which a friend wished to take for the summer, and I found that the proprietor, having taken the soil-pipe of a recently erected watercloset into a cesspool alongside a deep well sunk in the chalk, had rendered his house unlettable to any thinking person; and, lastly, I recently heard of a friend who took a moor in Scotland and wished to have rational methods of sanitation, but the noble owner, bitten by the modern craze for water, would allow nothing but water carriage, and accordingly laid his filthy pipes to foul the babbling highland burn, and deprive the soil of that of which it was in need.

Again, in institutions such as workhouses, barracks, schools, and the like, water carriage is often adopted, notwithstanding the favourable conditions for rational methods. The ignorance of soldiers in this matter is an acknowledged cause of the sickness and mortality during campaigns. There seems, in short, a very great necessity for directing attention to the "shortcomings" of water-carried sewage.

What do you propose? will be the next question. My answer is fair play and no compulsion. Much as I believe in the good of spreading sanitary knowledge, I have little faith in the efficacy, and a potent belief in the dangers, of sanitary legislation, whereby blunders are stereotyped.

The first thing necessary is an equitable adjustment of sanitary rates. Borrowing for the purpose of constructing sewers should be disallowed, and those who do not need the sewers should not be called upon to contribute towards them—at least, not to the same extent as others. The present inequitable adjustment of sewer rates is a premium on jerry-built houses without curtilage. Encourage the man who has a little bit of garden to make use of it. Enforce the Pollution of Rivers Act against individuals, even against proprietors of highland moors. Let us have a real inspection of nuisances and a harassing of evil doers, and let us discourage by every means in our power the building of houses side by side, and almost back to back, with no outlet but a hole. Let water be paid for by meter.

I have every sympathy with the agitation for getting allotments for the poorer classes. The best and most economical allotment is one close to the house where refuse may be buried and in due time bring forth. Those who advocate "sewage farming" tell us that an acre is necessary for every 100 inhabitants. How infinitely better if the 100 people could absolutely live on the acre of ground in (let me say) twenty cottages, each cottage having one-twentieth of an acre. How infinitely better for the man to till this little plot in his spare time than to occupy his leisure by braying politics in a public-house.

Let us calculate the produce of this plot of ground in terms of potato. An acre of a field will produce an average crop of 7 tons; the twentieth of an acre would produce 7 cwt., or 784 lb. As these would be for home consumption, and would save the man from disbursing money at a retail shop, we may take the value at the average retail price of 1*d.* per lb., or £3 5*s.* 4*d.*, or for the sake of simplicity say £3. To give one-twentieth of an acre to every five inhabitants would make a town inconveniently big, it may be said. I think not; 100 to an acre is 64,000 to a square mile, or making a very liberal reduction for space occupied by roads, let us say 50,000 to a square mile. This does not sound like an inconvenient scattering of houses. The inhabitants would make £30,000 a year by the produce of the land, a gain of which Free Trade could not deprive them; and there would be no sewer rate, no plumbers' bills, and certainly a vast increase of health, happiness, and contentment.

What I am advocating is no utopian scheme, and I am not talking without some practical experience. A few years ago I bought twenty cottages adjoining a garden which I have in the country. Many of them had been built with a very insufficient curtilage, and their old-fashioned sanitary arrangements made the garden anything but pleasant. My first step in improving these cottages was to do away with the old-fashioned pits, which were not suited to the spot and were always full of water, and replace them by pails. The cottages are systematically scavenged every day, and all refuse, inclusive of food refuse, excrements, and ashes, are buried immediately in the garden. There has been a complete cessation of all offence, and my garden holds the proud position of being certainly one of the most fertile in the district. Roses and other flowers, and all the ordinary garden fruits and vegetables, flourish therein in great luxuriance. The æsthetic aspects of the place have been increased, and in no way diminished, by the course I have pursued. I wish it to be understood that I am no mere theorist, but that I practise what I preach.

I have dealt with this subject from rather a different point of view in a little book, "Our Duty in regard to Health," which I wrote for the Council of the Health Exhibition. Those who may care to pursue this subject further may get the book of Clowes and Co., the publishers, at Charing-cross.

ON A CASE OF

SUCCESSFUL SUTURE OF THE BLADDER, THROUGH AN ABDOMINAL INCISION AFTER TRAUMATIC RUPTURE.

BY T. HOLMES,
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THE operation of sewing up a rent in the bladder is still so novel, and has been so seldom successful, that I think the following case will be of interest in connexion with the two recently published by Sir W. MacCormac in THE LANCET.

Henry P——, aged twenty-four, was admitted into St. George's Hospital in the night of June 9th, 1887. He had been drinking for several days, and on the day of admission, about 7.30 P.M., in a quarrel, he received a kick in the abdomen. He had not emptied his bladder for an hour before the injury, and had been drinking freely in the interval. He felt great pain on the receipt of the kick, walked home (about a quarter of a mile), and then, as the pain did not abate, and he could not void urine, he was taken, at 9 P.M., to Dr. Powell of Battersea-park-road, who passed a gum catheter, and drew off about five ounces of blood-stained fluid; but, suspecting rupture of the bladder, sent him to the hospital. Mr. Vernon (then house surgeon) passed a silver catheter about 11.30 P.M., but drew off only about one ounce and a half of bloody fluid. I saw him about 1.30 A.M.—i.e., about six hours after the receipt of the blow. He was in great pain, but not collapsed. Examination of the abdomen showed nothing abnormal, but as the symptoms appeared to point to ruptured bladder, I decided, in consultation with Mr. Bennett, to whom I was indebted for most valuable assistance, to examine the patient under ether, with a silver catheter, with a view to abdominal section and suture, if that operation should seem called for. When first passed into the bladder the instrument drew off hardly anything, but on pressing it onwards a large quantity (more than half a pint) of blood-stained fluid was obtained, and the point of the catheter was felt nearer the umbilicus than the pubes. Judging that the catheter must be outside the bladder, the pubes being shaved and the skin washed with carbolic lotion, I made an incision in the middle line for about three inches and a half above the pubes, and deepened it gradually till the peritoneum was exposed, covering some coils of small intestine. The catheter was felt through this. The urachus was easily distinguished passing up to the umbilicus, but the position of the bladder could scarcely be defined. It seemed therefore certain that the rent was not extra-peritoneal. Accordingly the peritoneum was opened pretty freely, the intestines pushed upwards with a flat sponge, and the rent in the bladder exposed. This was of a horseshoe shape, convex towards the right side. The finger introduced into it felt the catheter, and when the point of the instrument was withdrawn the opening of the urethra into the bladder could easily be distinguished. The rent was judged to be about two inches in length, and was completely in sight. A suture was introduced behind its posterior termination, to hold and pull forward the bladder, and then the rent was closed by means of eight points of suture of fine silk, soaked in carbolic lotion,

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passed through the peritoneal coat and muscular tissue, but avoiding the mucous membrane. The sutures were carefully examined after they had been tied, and if the interval appeared to gape at all a fresh one was introduced, but the bladder was not injected. After the eight permanent sutures had been tied the first or temporary suture was withdrawn. The peritoneal cavity was washed out plentifully with warm water. No clots were seen in it and but little bloody fluid. Then the abdominal wound was closed by four deep silver sutures, in which the peritoneum was carefully included, and four superficial ones. Finally, an incision was made in the median line of the perineum, which seemed to open the urethra, and an attempt was made (unsuccessfully as it turned out) to pass a drainage tube that way into the bladder. No spray was employed. The operation lasted about an hour. A morphia injection was administered, and the patient slept well, but vomited after the ether. Next morning the pulse was regular and strong; temperature 101°. He complained of thirst and of pain in the lower part of the abdomen, but had voided urine on three occasions naturally; it was blood-stained and contained a good deal of albumen. The drainage tube was removed as useless, and the perineal wound allowed to close.

Daily notes are unnecessary, for there were no symptoms to record. I looked at the wound on the fifth day, and found it nearly healed. The temperature fell gradually to the normal, and the pulse came down on the fifth day to 76. The bowels remained constipated for a week, and were then acted on painlessly by castor oil. On June 22nd (the thirteenth day after the accident) all the sutures were removed from the abdominal wound. As there seemed a little irritation about the lower part of the wound, a few pieces of strapping were applied. He wanted to get up, but was persuaded to keep quiet for a few days more. On June 29th he was allowed to leave his bed, as he appeared perfectly well. The wound seemed completely healed. The temperature had been exactly normal for more than a fortnight. He left the hospital shortly afterwards, and was seen the other day in perfect health.

Remarks.—It was long considered doubtful whether a rupture of the bladder into the peritoneal cavity had ever occurred without a fatal result, though Chaldecott's[1] well-known case was usually accepted as proving the possibility of survival. In that case, however (admitting the correctness of the diagnosis), it appeared evident that the patient owed his recovery to the fortunate accident of the limitation of the extravasation by adhesions, rapidly formed in the peritoneal cavity in the course of the peritonitis, which speedily followed the injury. Now, it is equally evident that peritonitis does not necessarily ensue at once;[2] it is, in fact, I believe, rarely developed even as early as a day after the injury, and up to that time, and very probably long afterwards, the injury is susceptible of successful treatment.[3]

Now the question occurs what this treatment ought to be? It seems to me undeniable that cases of traumatic rupture, both intra- and extra-peritoneal, have recovered under various kinds of treatment and under no treatment at all. But they are very few indeed, so few that, as I have remarked above, many surgeons, a very short time since, denied the possibility of recovery from the intra-peritoneal injury. Writing as late as 1875, in the first edition of my work on the "Principles and Practice of Surgery," it was not without hesitation that I ventured[4] to argue that the free admission of healthy urine to the peritoneal cavity, through a rupture of the bladder, need not be followed at once by peritonitis, and also to propose what I have long believed to be the best treatment—viz., to sew up the rent by abdominal section.[5] Singularly enough, from that time till the occurrence of the present case, I have never had an opportunity of putting my own suggestion into practice; but in the following year Mr. Willett[6] performed the operation without having heard of my suggestion, and it was repeated in 1878 by Mr. C. Heath.[7] Both these attempts proved unsuccessful. In Mr. Willett's case the rent was imperfectly closed, and the operation was undertaken too long after the accident to have a very good chance of success. In Mr. Heath's case the suture (a continuous catgut one) seems to have been perfect at first, but to have given way on the third day after the operation, possibly from the softening of the catgut. These two failures were so far discouraging that Mr. Heath says he "cannot recommend the proceeding for adoption when there would be the best chance of success—viz, immediately after the accident"—and expresses his preference for catheterism of the bladder and peritoneum and washing out the peritoneum through the catheter, as practised by Dr. H. Thorp, in a case reported in the *Dublin Quarterly Journal* for Nov. 1868, which Mr. Heath accepts as one of intra-peritoneal rupture, though the diagnosis appears to me to be not quite certain. Thus the matter stood until Sir W. MacCormac's two cases, which were published in the latter part of last year,[8] though one of them occurred in the previous year. Both these cases were completely successful, and by "completely" I mean that the patients not only recovered, but recovered without any symptom of peritonitis. In Chaldecott's and Thorp's cases peritonitis occurred. The other cases of recovery referred to by Mr. Heath—viz, Walker's and Mason's, the former certainly and the latter probably—were extra-peritoneal, and in Mason's case there was peritonitis.

In the table appended to Sir W. MacCormac's oration on Abdominal Section for the Treatment of Intra-peritoneal Injuries,[9] a table of sixteen cases is given in which the abdomen was opened in order to expose an intra-peritoneal rupture of the bladder. Of these, however, two (Nos. 9 and 10) should be excluded, for in one it is distinctly stated that there was no intra-peritoneal injury, and in the other there is no proof that there was. Of the fourteen remaining, in four cases the rent in the bladder was not sewn up (Nos. 2, 5, 11, and 15), and these, therefore, were treated by an operation totally different in principle from the remaining ten, in which an attempt, more or less successful, was made to close the whole rent. Of these ten patients, only three survived—viz., Sir W. MacCormac's own two cases and one by Mr. Walsham, which is as yet unpublished. Adding my case to the above, we should have eleven cases of suture of the bladder with four recoveries—a most gratifying proportion of successes in an injury which is otherwise almost uniformly fatal, but a proportion which, I have no doubt, will be rapidly increased as the diagnosis becomes more known and the details of the treatment better understood.

In the limits of this paper I cannot adequately discuss the question of diagnosis; yet it has so vital a bearing on the treatment that I must not pass it over entirely. In by far the greater number of cases which I have seen, the diagnosis has been plain from the beginning, but there are a few in which the patient can pass some urine, or in which, as in Sir W. MacCormac's second case, he feels no wish to do so, and the symptoms of the injury are masked by those of the contusion or possibly fracture of the parts around. It is in these cases that a careful examination under anæsthesia is so important. In the case before us, the catheter readily drew off more than half a pint of urine (or urinous fluid) mixed with blood, and for a moment the diagnosis seemed at fault. But when we reflected that the bladder had been thus evacuated twice previously—viz., first by Dr. Powell and next by Mr. Vernon, the house surgeon, and that after the withdrawal of the fluid the point of the catheter could be felt more than half way up to the umbilicus, it appeared impossible that the bladder wall could reach up to so high a point; so that we felt sure the point of the catheter was in the peritoneal cavity, as proved to be the case. Now this, I would urge, not only justified, but absolutely indicated the performance of an exploratory operation. I am aware that, in some cases of the kind, the bladder has been found unruptured and greatly distended, but the previous catheterisations rendered this very improbable in this case, while the great pain the man had felt immediately on, and ever since, the injury, and his inability to pass urine, rendered the

[1] Prov. Med. and Surg. Journ., 1846, p. 333.

[2] See the case quoted in my work, referred to below, where a man walked to the hospital on Monday morning, displaying no distress of any sort except from inability to pass urine, though the bladder had been freely ruptured into the peritoneal cavity on the Saturday evening. So in Sir W. Mac Cormac's second case, twenty-six hours had elapsed and there was no peritonitis.

[3] Sir W. Mac Cormac (THE LANCET, vol. ii., 1886, p. 1118) quotes a passage from Sir H. Thompson's article in the third edition of the System of Surgery, as showing that Sir Henry believes that traumatic rupture is uniformly fatal. A more careful perusal of the passage would have shown him that Sir Henry is here speaking only of spontaneous rupture in cases of retention.

[4] Op. cit., p. 216.

[5] Sir W. Mac Cormac says that the same operation has been advocated by Lurrey, Legouest, Gross, and Cusack. He gives no references, but it may be so. At any rate, I never heard of the proposals of these authors, and they seem to have attracted no notice, for they are not referred to in any of the text-books of the period, as far as I know.

[6] St. Bartholomew's Hospital Reports, vol. xii., p. 209.

[7] Medical and Chirurgical Transactions, vol. lxii., p. 335.

[8] THE LANCET, vol. ii., 1886, p. 1118.

[9] Brit. Med. Jour., March 14th, 1887.

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diagnosis still more probable. Next comes the question, in cases where an exploratory operation is decided on, whether it should be done through the perineum or the abdominal wall. My own opinion is very decidedly in favour of the latter course. I think, for reasons I will give presently, that a perineal incision is useless, and therefore hurtful, in cases where the injury is intra-peritoneal, and sutures are introduced through an abdominal wound. If the perineal incision is used, it ought, I think, to be as an alternative, not as an accompaniment of abdominal section and suture, and I hope to show that it is a very inferior alternative. An exploratory incision above the pubes gives much more easy and complete access to the whole front, fundus, and sides of the bladder, it has the great recommendation that the injured part is exposed to sight as well as touch, and the surgeon has the choice of opening the peritoneum or not, as he finds necessary.

Having decided to perform abdominal section the surgeon ought, I think, to lose no time. This is not quite such a platitude as it seems at first, for a good light is very necessary, and it crossed my mind whether a delay of a few hours might not be advisable in order to wait for daylight. But I think the event showed that we judged accurately in proceeding at once. When all operating theatres are provided with the electric light, or perhaps some even more perfect means of turning night into day, the question will not occur, at least in hospitals. When the rent is exposed, it must be traced to its deepest—i.e., posterior—termination, and it seems to me that the main (if not the only) difficulty in the operation is here. Luckily, in this case, it was quite easy to bring the whole rent into view. Sir W. MacCormac found that the transverse division of the parietal peritoneum was effectual in both his cases. When the posterior end of the rent is defined the sutures must be applied quite close to each other, but the continuous suture ought, I think, to be discarded. Silk, well carbolised and thin, seems to me indisputably the best material. Ought the bladder to be distended on the completion of the suture in order to make sure that it is water-tight? This is recommended by Mr. Willett,[10] and was practised by Sir W. Mac Cormac and other operators, and therefore it is presumptuous in me to argue against it. I do not know whether it was used in Mr. Walsham's successful case. My patient did very well without it, and I think that when the surgeon has the whole rent clearly in view it is superfluous. I am clearly and decidedly against any abdominal drainage if the rent is sewn up and the peritoneal cavity is free from inflammation, and has been well washed out. Nor, after the experience of the present case, do I think that the operation ought to be complicated by perineal cystotomy. In Mr. Teale's case (No. 13 in Sir W. Mac Cormac's table) the patient's death seems to have been caused by this wound, while all was going on well about the rent in the bladder. In my own case, it was merely a useless complication. But if the surgeon decides on doing it, he should make the perineal opening before sewing up the rent. After closing the abdominal incision I found it quite impracticable to open the collapsed bladder without a staff, which I judged it imprudent to introduce. Nor do I know that it is wise to use the catheter in the after treatment. It was not used in the above case, nor in Sir W. MacCormac's second case at all, nor in Mr. Walsham's after the first day; and if the rent is well sewn up it is, I believe, safer to trust to the patient's own powers. At any rate, if a catheter is used it should be of the softest material and not left in, but passed every few hours during the first day only. Paring the edges of the cleft, which Mr. Rivington[11] speaks of, should, in my opinion, be entirely reprobated.

The sum of all this is that in this, as in all other peritoneal operations, our aim should be to avoid all unnecessary complications, and trust to the perfect apposition of the wound in the bladder, and the thorough cleansing of the peritoneal cavity to ensure success. And I believe that with such treatment, the majority of cases will survive, if operated on early.

There other methods of treatment have been practised with some success, and ought to be mentioned, though I have no space for their adequate discussion. I mean the treatment by drainage, either through an abdominal wound (as in the cases above referred to, Nos. 2, 5, 11, [illegible] in Sir W. Mac Cormac's table) or through a perineal wound, or through a catheter, as in Dr. Thorp's case. The grand objection to all these plans is the extreme risk of peritonitis. It seems to me quite impossible effectually to guard against the entrance of irritating fluid and the products of inflammation into the peritoneal cavity, except by sewing up the wound. If this be left unstitched, it can only close by a gradual process of inflammation and granulation—a process which in the perineal operation, and in the method adopted by Dr. Thorp, is being continually interrupted by catheterising and syringing the peritoneal cavity through the lacerated wall of the bladder. I would therefore entirely reject the perineal operation and Dr. Thorp's method; while, as for the abdominal operation without sutures, I should reserve it for the cases in which it is found impossible to sew up the whole rent, and for those in which peritonitis has already begun and the edges of the rent in the bladder appear unhealthy. But I repeat that, as surgeons acquire greater confidence in the operation by suture, and perform it constantly in the cases where, as Mr. Heath truly says, there is "the best chance of success—viz., immediately after the accident," we shall not often meet with the latter class of cases; while, as to the impossibility of commanding the whole rent, we may hope that the plan adopted by Sir W. MacCormac of dividing the parietal peritoneum will prove successful in the great majority of difficult cases. Certainly, to judge by the description, both of his cases were of more than ordinary difficulty.

On the whole, I submit that we have now sufficient evidence to show that suture of the bladder through an abdominal incision is the best method of treating these grave injuries—the method which should first occur to the surgeon, and which should not be given up until exploration has proved it to be impracticable, when the method by drainage through the abdominal incision should be adopted.

Great Cumberland-place, W.

[illegible]

[illegible] Bartholomew's Hospital Reports, vol. xii., p. 213.

[illegible] Heath's Surgical Dictionary.

ON RELIEVING TYMPANITES BY PUNCTURE OF THE ABDOMEN.

BY JOHN W. OGLE, M.D. OXON., F.R.C.P.,
CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL.

(*Concluded from page 106.*)

HAVING gathered information respecting the utility of puncture of the abdomen for dangerous tympanites from books, old and new, which record the results of individual experience, I will occupy a little space by an exposition of the teaching on this subject to be gathered from a few of our systematic works and text-books.

For this purpose I will commence by noticing the observations of the late Sir Thomas Watson (πολλῶν αντάξιος ἄλλων), whose opinion may well have greater weight than a dozen others. In his lectures on the Principles and Practice of Physic,[1] writing of mechanical occlusion of the intestinal tube, he quotes the rough-and-ready custom which obtains amongst farmers of piercing the distended abdomen of cattle, when they are, as it is said, "blown" by over-feeding on wet clover, with a hay-fork, and says that if he himself were "the subject of such pressing and prolonged torment [caused by distended intestine], I should try to have the inflated bowels eased by puncture with a fine trocar.[2]

Romberg, in his "Manual of the Nervous Diseases of Man,"[3] in one section treating of intestinal paralysis[4] from arrested action of sympathetic centres, speaks of cessation of peristaltic movement; the intestine, possessing no power of resistance, becomes distended with liquid and gaseous fluids. He states that "tympanites puerperalis sometimes threatens danger, even without antecedent affections of

[1] Vol. ii., 5th ed., p. 548.

[2] This strong recommendation of the operation is much in contrast with what Watson says, with his usual wise caution, of the operation of opening the colon, and establishing an artificial anus. Of this procedure, he observes that in an appropriate case he should think it his duty to mention, but he should be slow to recommend, this "anceps remedium."

[3] Syd. Soc. Ed., vol. ii., p. 347.

[4] Romberg observes that "intestinal paralysis occurs secondarily to other diseases, first of the intestinal canal itself; as in enteritis, in the most marked form in gangrene of the intestines, in peritonitis intestinalis and dysentery, in blood diseases, typhus, phlebitis, and inflammatory or septic puerperal states."

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the bowel." He remarks that the stomach may be so much distended as to fill the abdomen.

Dr. Flint, in his treatise on the "Principles and Practice of Medicine" (1868)[5] alludes to "the formation of gas resulting from over-repletion of the stomach to such an extent as to cause sudden death. Two instances of this kind have fallen under my observation."[6]

In Dr. Bristowe's "Theory and Practice of Medicine" (p. 696), this operation of puncturing the abdomen is alluded to as being one of little or no danger; it is stated that distension may be relieved by puncturing the distended gut with a grooved needle or fine trocar and cannula. And in Quain's "Dictionary of Medicine," Dr. F. Roberts observes that "in extreme cases it is allowable to puncture the large bowel in several points by means of a very small trocar, and thus afford an exit for the contained gas."

In J. G. Smith's "Abdominal Surgery" (p. 79), it is stated that, in tympanites associated with abdominal operations, tapping with a fine trocar may give temporary relief; but this is so slight and so evanescent as to be practically of no account.

Mr. Erichsen, in his "Science and Art of Surgery,"[7] speaking of the operations in question, observes that by means of the trocar or aspirator, it "has been frequently performed, sometimes with great relief to the patient"; but he gives cautions against moving the cannula about needlessly in the gut. He remarks that the puncture is rarely followed by any escape of gas into the cavity of the abdomen. In some apparently helpless cases, he says, relief of the obstruction has been known to follow the paracentesis of the intestine.[8]

The above citations constitute all the written experience which seemed to me desirable to select and collate for the purpose of enabling the reader to judge of the value of the operation in question; and perhaps already the same reader may be reminded of the adage, "L'auteur se tue à allonger ce que le lecteur se tue à abréger." But I cannot close this communication without presenting also the results of a few inquiries which I have made of friends and colleagues as to their individual and personal knowledge of the use of puncture in tympanites.

Mr. Hussey of Oxford tells me that he has punctured the intestine during the operation for strangulated hernia, and that, when he was a pupil, his master suggested puncture of the stomach in cases of excessive tympanites.

Sir James Paget has recently told me of a patient between sixty and seventy years of age, very feeble in body and mind, whose abdomen became distended to the utmost, after many days of complete obstruction or inaction of the bowels. "She appeared to be dying," he observes, "and I had no hope of doing more than relieve her distress by puncturing the intestines at the tensest places. I did this with a small trocar and cannula near each ilium, and at the upper part of the abdomen. Air escaped in large quantities, and the abdominal wall sank down. Some weeks afterwards I heard that the patient was in comfort, and that her bowels were acting."

Mr. Teale of Leeds, to whose use of the operation I have before referred, tells me that he has had no recent experience of puncture of the abdomen for flatulent distension. He says that he believes the operation to be "most effective when the large intestine is the seat of puncture. A puncture of small intestine only relieves a few inches, and is not entirely free from danger, as I have heard of fœcal leakage into the peritoneal cavity from such a puncture. It is most likely to be useful, and will be most free from risk in functional tympanites, especially of the large bowel, and to be of least use, and most dangerous, in obstruction of the bowels when the intestines are full of churned-up yeast-like gas and liquid."

Sir Wm. Jenner informs me that he has had the intestine punctured in several cases of extensive tympanites, and that in no case has any evil result followed. In one case, in which there was malignant disease of the sigmoid flexure of the colon, with obstruction, "two interesting facts followed the operation—one was that the gas which escaped through the tube caught fire, and the other that the removal of the flatus was followed by action of the bowels, as though the great distension of the gut had interfered with its full action." In another case of cancer in which Sir W. Jenner had sanctioned puncture of the bowels, each puncture of the bowel was found, after death, to be surrounded "by recent formation of cancer nodule, as if the irritation of the puncture had caused afflux of blood, and in place of ordinary lymph cancer had been formed."

Sir George Paget of Cambridge tells me that he has had only one case of tympanites requiring the puncture. The operation gave relief, but the patient died. Dr. Church and Dr. West, of St. Bartholomew's Hospital, and my colleagues, Dr. Dickinson, Dr. Whipham, and Mr. Holmes, inform me that they have resorted to the operation. Dr. Harper performed the operation in 1875, when house surgeon at St. George's. Mr. Dent tells me that he has a strong disbelief in the utility of puncturing in tympanites. Dr. Montague H. Jones, of St. Mary's Hospital, has practised it, though not with much advantage, in two cases of typhoid fever and one of intestinal obstruction.

Dr. Oliver of Newcastle-on-Tyne has given me the details of four cases, in which he had the operation done for tympanites with, excepting one case, the greatest relief. All but one were cases of mechanical obstruction. Dr. Oliver regards the operation "as not in the least dangerous, and as one almost certain to give 'relief.'" In one case he tested the gas which escaped by the puncture, but did not find it inflammable.

Dr. Gray, who has had large experience at the Radcliffe Infirmary at Oxford, tells me that his only knowledge of puncture for tympanites is derived from a single case. The patient was a lad of fourteen or fifteen years of age, suffering from severe typhoid fever. He observes: "One morning I found him to all appearance on the point of death from asphyxia, the upper half of his belly being so enormously distended that the diaphragm and lower thorax were fixed and motionless. I directed the house-surgeon immediately to thrust a small trocar into the most prominent part of the swelling (believed to be the stomach); and this done, the gas slowly blew off, the tympanites quite subsided, and the patient's relief was complete. He died, however, about three days afterwards of uncontrollable diarrhœa." After death ulceration of the ileum was found, but no peritonitis. The only trace of the puncture-wound (and that rather a doubtful one) was a little pink spot on the peritoneal surface of the stomach; no mark on the inner mucous surface of the stomach corresponding to the faint one on the peritoneal surface could be detected. Dr. Gray proceeds to observe that "the harmlessness of the puncture made much impression upon me. The cause of this probably was: 1. Thinning of the structures from extreme dilatation. 2. The small size of the trocar. 3. The urgency of symptoms requiring bold and rapid thrust-in of the trocar."

Sir Joseph Lister tells me that his experience of the operation is confined to one case. This was not favourable for the trial, but still death would have occurred earlier had the operation not been done. He does not regard the operation as absolutely free from risk, as "the valving of the puncture, which occurs when the distended bowel collapses, may be undone by subsequent extreme distension." Dr. Morgan and Dr. Dreschfeld, of Manchester, have sent me several cases illustrating the benefits obtained by the operation. Sir W. Mac Cormac considers the operation dangerous because of the risk of subsequent escape of fæcal matter, which would set up septic peritonitis. My friend Dr. Fox, of Clifton, has been in the habit of advising the operation, and states that he has never found anything but relief from it.

Dr. Henry Lewis of Folkestone, formerly house-surgeon at St. George's Hospital, has sent me the particulars of the following highly interesting case. He had under his charge a young lady about fifteen years of age, with "peri-typhlitis." "The abdomen became enormously distended, and death was imminent apparently, chiefly in consequence of the respiration being embarrassed by pressure upon the diaphragm, from the extreme distension. After a consultation with my brother," he says, "it was decided to relieve present distress by the use of Hemley's exploring aspirator. This

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[5] Third ed., p. 412.

[6] Reported in the Boston Med. and Surg. Journ. for March 10th, 1841.

[7] Vol. ii., p. 841.

[8] Dr. A. T. Myers has been so good as to give me the following references to the subject, which I have not had time to look up:—Brogniez: Nouveau Procédé d'Entérotomie ou le Ponction Intestinals (Bull. Acad. Roy. de Méd. de Belge; Brux., 1842-43. ii., 151—158). Augnet: Ponctions capillaires de l'Intestin (Bull. Méd. du Nord; Lille, 1875, xiv., 125—130). Evrard: Ponction Intestinale dans les cas de Météorisme (Trans. de Méd. et Chir. Prat.; Paris, xlvii., 158). Fronmüller, G., jen.: Ponction der Gedärme (Memorabilien; Heilbr., 1876, xxi., 208—210). Laub: Tilfaelde af Ileus helbredet ved Punktur af Tarmen og Klysopumpe (Hosp. Tad, Kypbenh., 1869, xii., 157, and 1870, xiii., 41). E. W. Lee: A case of Puncture of the Intestines for the Relief of Over-distension with Gas (Chicago Med. Jour., and Exam., 1877, xxxv., 381—83). A. Tomes: Tapping the Bowel (Indian Med. Gaz.; Calcutta, 1882, xvii., 211). Others might no doubt be found, if the prolific literature of the day were ransacked.

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was done freely in several places, and enormous quantities of fœtid gas escaped into the room. This was, in subsequent operations, deodorised by passing it through a solution of carbolic acid. The following day the abdomen was again distended, and life was again in immediate danger. The abdomen was again freely punctured, with the same instant relief. For two or three times more the same series of phenomena occurred, after which the patient very slowly but surely recovered. The punctures were made into the most prominent portions, freely and deeply, quite irrespective of any possible consequences." Dr. Lewis thinks that the mitigation afforded to the system by the evacuation of so much poisonous gas is as important as the mechanical relief obtained.

As the position sought to be maintained in this communication would not be complete without illustrations derived from the *pathology of the lower animals*, I will close it by a few quotations from writers and practitioners in veterinary medicine.

The earliest direct mention of injury to cattle from tympanites which I have come across is in the writings of Pamponius Mela, who travelled in Ireland about A.D. 40, and who describes the climate, soil, and people of that unhappy country. He says that the cattle are wont to burst from eating green food too much. He writes as follows:—"Terra autem adeo fecunda herbis, non lætis modo, sed etiam dulcibus, ut se exiguâ parte diei pecora impleant; et, nisi pabulo prohibeantur, diutius pasta dissiliant." This notice I quote from a polemical letter signed "Viator," in *The Times* of June 24th, 1887.

Sennertus, in his work "Epitome Institutionum Medicinæ," Lib. II., Part II., cap. vii. (Lugduni), 1644, when treating "De Humoribus, &c.," says that he was conversant with it, and with its treatment. After giving the causes of flatulence in cattle, and the treatment of evils arising from it, he observes: "Rusticæ mulieres ut periculum ex flatibus et ventris inflatione præcaveant, ventrem arctis fasciis constringere; et abdomen fubulis perforare solent."[9] The above passage has been alluded to by one or two later writers, when speaking of tympanites in man.

No doubt, if one could hunt up authorities, many accounts could be found of this practice. The next record of it, of which I have note, is in a work entitled "Mémoires Littéraires et Critiques pour servir à l'Histoire de la Médecine," 1775, as quoted by M. Barrière, who communicated a paper in 1783 to the *Journal de Méd. Chir. et Pharm.* upon "Meteorismus" from indigestion, in the case of the horse, relieved by puncture. The paper was based upon the operation which he had successfully performed, after all routine means had failed. In this paper he particularly points out that the right moment for election of the operation must be judged of by the state of the pulse; as, if it is found to be more than twice as frequent as it is in health, death is near. In some remarks on this paper M. Husard alludes to the practice of cutting boldly into the stomach of cattle when over-distended and with the hand taking the food out of the stomach.[10] He says that one cow does not die in twenty so treated. He mentions the names of Vitet, Paulet, Vicq d'Azyr, Bourgelat, and Chabert in connexion with the operation, and speaks of the gas liberated *as being inflammable*. Modern works on veterinary surgery make reference to the procedure in question, the majority, I think, approving. Thus, in a work entitled "The Horse in the Stable and the Field," by J. H. Walsh, p. 506, it is stated that "sometimes the distension of flatulent colic goes on increasing, and the only chance of recovery consists in a puncture of the cæcum, as it lies in the right flank, where, according to French veterinary writers, it may often be opened when greatly distended without dividing the serous covering." In the posthumous extracts from the veterinary records of the late John Field, I find notes of the case of a horse (p. 147) where death was attributed to the enormous swelling of the abdomen and to other symptoms caused by paralysis of the intestines. At page 83 a case of tympanites in the horse is related in connexion with inflammation of the bowels, in which, owing to excessive dilatation, the flank was punctured with a trocar. This was, however, without relief. Mr. Hussey of Oxford tells me that, forty years ago, he was told by the wife of a Scotch farmer that distension of the abdomen in cattle was very common, when the cattle first went out to grass, and that they were often, for this, "stabbed" in the loin below the last rib, but that if the puncture was done "on the wrong side," it was likely to be fatal. Dr. Aquilla Smith of Dublin informs me that in Ireland "our doctors practise puncture in cases of flatulent distension, and fasten a quill in the opening to give free exit to the flatus." He states that "some years ago a buffalo in our Zoological Gardens was operated on by a cow doctor, and had a quill secured in the opening. The animal lived for some days, and in the meantime I delivered her of a shoulder presentation, which was a difficult task." Professor Robertson, Principal of the Veterinary College in Camden-town, informs me that puncturing the rumen of cattle and the colon or cæcum of the horse, in cases of serious tympany, is an operation regularly resorted to by veterinary surgeons, and that the results are generally satisfactory. It is unattended with dangerous sequelæ. Emphysema or small "cellular abscesses" are occasionally observed to follow, but they are rarely very troublesome.

Lastly, I will quote from a remarkably interesting French work on veterinary subjects, the Dictionnaire de Médecine de Chirurgie et d'Hygiène Vétérinaires,[11] in which (tome i., p. 462), under the article "Coliques," the following statement appears:—"Si la tympanite devient trop forte, si elle gêne trop la respiration de l'animal, et le menace d'asphyxie, il ne faut pas hésiter à pratiquer l'entérotomie que l'on fait sur le flanc droit." The author speaks of the operation as having been recommended, in 1780, by Barrière and Herouard, and as having been successfully adopted by a number of others whom he names.[12] He warns against delay in having recourse to it. He states that he has, in some desperate cases, though without any real benefit, injected remedies, by the cannula of the trocar, into the punctured bowel.[13]

Such are the references to standard authorities and the illustrative cases supplied to me by living practical physicians and surgeons, which will, I think, suffice indisputably to show the great good which may be accomplished by the expedient, when timely resorted to, of puncturing the abdomen in excessive tympanites. They will be enough to demonstrate to those who have doubts or fears as to the wisdom of the procedure—that the operation is not, as some with whom I have conferred upon the matter would fain think, one to be regarded with ostrich-like indifference, to be "damned with faint praise," or, as others suppose, a wanton and necessarily dangerous, and therefore culpable, act—a species, in fact, of professional assassination; but that it is, incontestably, a legitimate and justifiable step, one that may be undertaken *tutò, celeriter et jucunde:* at any rate, that it has strong evidence in its favour as a *dernier ressort*. Their consideration will prove clearly that there are many cases in which the inexorable torments of death even can be forthwith averted by the operation in question, and Thanatos, with inverted torch, be made to give way to his brother Somnus with his poppies, medical aid stepping in, as, at once, *vitæ artifex, mortis fugator*.[14] But, in addition to immediate solace, it has been shown that *permanent good* may arise from the operation, from the fact that removal of the pent-up gas, in many cases, enables the paralysed intestinal walls to contract upon, and therefore evacuate, their contents, even after that constipation has lasted many days; and it is interesting to find that this not

[9] Sennertus quotes Dioscorides as describing a special kind of grass which causes cattle to burst, almost, and eventually to die.

[10] I am told that this mode of giving relief is now done in England, by some.

[11] The work is beautifully "got up," and well and copiously illustrated. An English translation would be a very valuable addition to our libraries.

[12] He alludes to a work by Charlier, entitled "De la Ponction dans les Coliques," Paris, 1863.

[13] This mode of dealing with cattle is ingeniously taken advantage of by the author of a well-known modern novel, "Far from the Madding Crowd," where the operation is graphically described. A number of sheep (see Chapter 21a) are represented as breaking into a field of young clover, and "getting blasted." An attendant exclaims, "They will all die as dead as nit." After a time many fell down helpless and livid, "swoln with wind," foaming at the mouth, and with quick and short breathing. "One of the ewes contracted its muscles terribly, extended itself, and jumped high into the air, then fell heavily and lay still," and died. Some recovered without operations, but forty-nine operations were performed with complete success with "a small tube or trocar, with a lance passing down the inside." "Passing his hand over the sheep's left flank, and selecting the proper point [the operator], punctured the skin and rumen with the lance as it stood in the tube, then he suddenly withdrew the lance, retaining the tube in its place. A current of air rushed out, forcible enough to have extinguished a candle held at the orifice." It would be interesting to know what authority the writer of the above has for describing the leaping into the air as a result of over-distension of the bowels.

[14] Many to whom I have spoken regarding the operation have said, "I should have liked to have done it many times, for years, but I dare not."

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infrequent result was recognised by some of the oldest writers on the subject,[15] who knew that over-distension paralysed the muscular walls of the bowel. It may be suggested that in many cases of obstruction found after death to have resulted from volvulus, or twisting of the intestines (permitted in many instances by an unusually long mesentery), relief might have been obtained had the distending air been liberated by puncture. It has been shown that the danger to be anticipated from the operation is, no doubt, that of peritonitis; but this would seldom be from direct injury to the serous membrane by the instrument, but from the oozing or leakage into the peritoneal cavity of some of the contents of the bowel.[16] In some cases, however, in which at first sight after death it would appear that the puncture had caused harm by letting out fæcal matter into the peritoneal sac, it seemed, upon investigation, that this had been altogether a post-mortem phenomenon. In these days, when the surgeon, with his better educated "digitus chirurgicus" and antiseptic appliances, deals with the peritoneal surface in so very fearless a manner as compared with what was customary in earlier days, when we are bidden not to shudder on reading of "mopping out" the peritoneal cavity, "thoroughly sponging out," "making complete exploration of" the cavity, &c., we may well conjecture that this surface would not gravely resent so slight an affront as the piercing of it by a very fine trocar, or an aspirator needle. Of course, as regards the surgical aspect, properly speaking, of these cases, I am not competent to make suggestions. Surgeons will know how the procedure should be conducted in individual cases; but the general mode of operation may be gathered, I surmise, by those who have any doubt, from the directions and hints contained in many of the quotations which I have presented to the reader (see especially the words of Dr. Wathen, Dr. Saunders, and Mr. Teale). A very important lesson to be gathered from the experience of many whom I have quoted is obviously the absolute necessity of not delaying the operation too long—that is, of not waiting until irreparable mischief has been effected by prolonged pressure of structures and organs, and until the muscular walls of the bowel have been so long stretched and strained that their contractile power is irrecoverable, and are *ipso facto* paralysed.

ELECTROLYSIS IN GYNÆCOLOGY.

BY THOMAS SAVAGE, M.D., M.R.C.P., F.R.C.S.,
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HAVING recently had an opportunity of paying two visits to the clinique of Dr. G. Apostoli in Paris, where he practises the treatment of certain diseases of women by electrolysis, I have thought it might be useful to detail to the readers of THE LANCET some of the observations I made. There were each day between thirty and forty patients, all of whom came to be treated by electricity for some form of special ailment. Apostoli used simple faradisation to a considerable extent, simply as a means for the relief of pain—e.g., vaginismus, ovarian and uterine pains, proceeding from various causes. He appeared to regard it that the patients, being in pain, came to have it relieved, and that if the frequent application of faradisation gave the desired relief it was sufficient, leaving the disorder itself to take its own course. Some of these cases which I saw were prolapsed ovary, small cystoma (?), adherent organs, the result of chronic inflammatory mischief, hysteria, &c. The application certainly has an anodyne effect, as evidenced by the presence and absence of tenderness on pressure, &c., before and after its performance. It appeared, also, in some instances to have a soporific effect. I take it, however, that this is only the resuscitation of a method of treatment that has been long known and practised.

The *galvano-caustique chimique* is, however, the essential element in Apostoli's special work. The clinical history and treatment of a number of cases were read to me, and I was shown the plaster models of some of the abdominal tumours, and certainly the condition of the patient in every instance had considerably improved. In cases of uterine myoma, a dozen or more of which I saw and examined, the hæmorrhage had ceased, the tumour had diminished, pressure symptoms had subsided, and the patients expressed themselves as being very decidedly ameliorated. Dr. Apostoli uses the positive pole (acid), which is caustic and therefore astringent, for cauterisation to the interior of the uterus for endometritis, subinvolution, and bleeding myoma; and the clinical notes in the latter class showed that the loss had been arrested after three or four cauterisations. The applications are made at intervals of two or three days, sometimes longer, and amount to a dozen or more altogether. The electrode remains in utero about five minutes at each sitting and does not generally give rise to much pain. There appears to be an entire absence of danger in this, as also in the negative electrode.

The negative pole (alkaline and destructive), which has the effect of causing a flow of blood and destruction of tissue, was used for myoma by way of puncture into the mass of the tumour, causing diminution of size and amelioration of the pressure symptoms. The puncture was made with a steel rod, protected in the vagina by a celluloid sheath, having a naked point of about two centimetres. This is allowed to remain in the tumour for five minutes, and is repeated from time to time as considered necessary. Formerly punctures were made of 6 or 7 centimetres. The patient has an anæsthetic if thought desirable, and rests in bed afterwards for an hour or two. No bleeding of importance has been noticed as a result of the puncture; when it has occurred, it has hitherto always been arrested by putting the vaginal wall on the stretch by means of a plug or the speculum. For the positive cauterisation a platinum intra-uterine sound is usually employed.

The galvano-caustic (negative) is sometimes used in cases of old, never acute, perimetric inflammation, acting, as is supposed, as a derivative. It is never used for the arrest of hæmorrhage. Most of the cases of pelvic peritonitis that I saw were on the right side, and I was struck by the absence of badly ruptured perineum and cervix, where the symptoms were old inflammations of post-puerperal origin. I saw negative puncture applied in a case described as "subacute perimetritis," which, on examination, showed a mass of exudation and tumour round the uterus. I saw a case of mucous polypus of the cervix, which Dr. Apostoli was going to treat with the negative application. He preferred this plan to the usual one of excision or ordinary caustics, as the electrolytic application would not only burn away the polypus, but also so alter the character of the mucous membrane of the cervical canal as to prevent a recurrence. The intensity of the action is regulated by a galvanometer, which measures up to 250 milliampères. Action is usually allowed from 100 to 150—more often the latter. Platinum is considered too soft for the negative puncture, and the steel rod which is employed is either simply pointed like a packing-needle, or spear-shaped. The steel point, after use, does not appear to be at all acted upon by the alkali, nor did it show any trace of blood on its withdrawal.

With every patient the dorsal position is adopted. The hands are washed in sublimate solution before examination, and the vagina is carefully irrigated with the same. All the instruments are kept in a porcelain dish containing antiseptic fluid. The abdomen is covered with a large piece of wet clay in which the opposite conductor is embedded—negative for cauterisation; positive for puncture. This is kept, by an assistant, closely applied to the abdominal wall, and ensures safety to the skin, which is always quite cool during and after the operation. The vaginal irrigation is repeated after withdrawal of the conductor, and the canal is packed with strips of iodoform gauze, changed from day to day if necessary. One patient presented herself (a first visit) with what was considered a small ovarian cystoma; and Dr. Apostoli said that he should apply galvano-puncture (negative) to it. It appeared to me that it would be extremely difficult so to fix it as to ensure accurate puncture, and I asked the question whether it might be desirable or justifiable for the tumour to be fixed from above by the fingers, through a small abdominal incision in order to facilitate the application of the negative needle per vaginam—a sort of combined operation. I was, however, forced to the conclusion that if a small incision were once made through the abdominal wall, the easiest and surest way of curing the patient would be there and then to remove the

[15] These older writers were also acquainted with the facts, now much relied upon, that diuretics and other medicines given in cases of ascites fail to act satisfactorily until the peritoneal liquid has been discharged by paracentesis. They were also conversant with the application of electricity for the purpose of making the intestines contract in tympany.

[16] In a few cases I have heard of peritonitis having apparently surrounded the orifice made by the trocar into the outer surface of the bowel.

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tumour. Dr. Apostoli is aided in his work by two admirable assistants and a most intelligent nurse.

It would obviously be impossible from an observation of two short visits to give an opinion of real value as to the merits of Dr. Apostoli's treatment. I was induced to pay my visits from a desire to learn for myself the details of applying the electrolysis, especially to cases of uterine myoma. I have long felt that we want some means other than those which we possess for the treatment of many cases of fibroid tumours of the uterus. Hysterectomy, grand and perfect when successful, has even now a larger mortality than is desirable, and can be practised only as a last resort. Will electrolysis ever be able to be a substitute for the more heroic treatment? It is our duty to answer this question if possible. With this state of mind, therefore, I am prepared to try the effects of Apostoli's method, and hope to be able to communicate in due course the results of such experience.

With my present views I thought that some of the cases I saw could have been cured by abdominal section, and on telling this to Dr. Apostoli and Dr. Woodham Webb, they both seemed to imply in their answers that when I knew more of what electrolysis could accomplish, I should be as enthusiastic in favour of it as themselves, and should substitute it for many cases now calling for abdominal section. The battery and all necessary appliances can be obtained of M. Gaiffe, 40, Rue St. André-des-Arts, Paris, at a cost including freight, &c., of about £25. I have much pleasure in testifying to the extreme courtesy of Dr. Apostoli, who allowed me to see for myself everything connected with his work, and explained most fully every detail. I had the pleasure also of meeting Dr. Woodham Webb, who most kindly assisted me by explaining what appeared difficult.

Birmingham.

BILATERAL PARALYSIS OF THE DILATOR MUSCLES OF THE GLOTTIS, WITH SUBSEQUENT PARESIS OF THE CONSTRICTORS.

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(*Concluded from page 110.*)

THE following case, which has come under my own observation, illustrates some of the points in dispute: A. R——, aged forty-seven, a carpenter, came to the out-patient department at the Brompton Hospital on Oct. 15th, 1886, complaining of difficulty in swallowing and shortness of breath. These symptoms had appeared twelve months previously, and for some five or six months he had been losing flesh. About three months ago hoarseness developed, and the dysphagia and dyspnœa became so much worse that he was able to do very little work. For the last week he had been completely laid up owing to increasing shortness of breath. There was no history of syphilis, but he stated that he had suffered from "rheumatic gout" in the wrists and ankles. Family history unimportant. The patient was anæmic and cachectic looking, being very thin. Breath extremely offensive. Voice only slightly hoarse. Marked inspiratory stridor. Neck swollen, owing to the presence of deeply-seated groups of large hard glands in both anterior and posterior triangles, especially in the [illegible] position. Veins at root of neck distended. There was [illegible] any movement of the larynx up and down with [illegible]ration. A few shotty glands in right axilla. Left radial [illegible] smaller than right. Pupils equal. Tongue furred; bowels [illegible]pated. On physical examination of the chest the [illegible] of the left side was somewhat impaired; there was [illegible] dulness over the manubrium sterni extending a short [illegible] to the left, and over this area tracheal bre[illegible]. The breath sounds were weaker at the left apex than [illegible]. No other abnormal signs. The pharynx was [illegible] and irritable, and the larynx was in the same [illegible] cords approximated during phonation to the [illegible] but on inspiration they did not [illegible] left sixteenth of an inch. On very deep [illegible] cords almost met in the middle line, [illegible] appearance of tension of the vocal cords; indeed, they seemed to be more lax than usual. The patient was thought to be suffering from a new growth of the cervical and mediastinal glands, possibly secondary to malignant disease of the œsophagus, implicating the recurrent laryngeal nerves. The patient was admitted into the hospital under my care, through the kindness of Dr. Symes Thompson. After admission he had one or two severe attacks of dyspnœa, and preparations were made for tracheotomy, but, after a consultation with Mr. Godlee, the operation was deferred, although dyspnœa continued to be a prominent symptom. The patient was able to swallow liquids with difficulty, but not solids, and the dysphagia did not increase much for the first four or five days. The temperature varied between 98° and 100° as a rule, and did not rise above 100·5° at any time. Sphygmographic tracings seemed to confirm the idea that the left radial pulse was smaller than the right. On Oct. 21st Mr. Godlee kindly examined the patient's œsophagus, and reported as follows: "Bougie (No. 9, Mackenzie's) stops at seven inches and a half from incisor teeth. The man struggles very much, so attempts had to be short. No blood. The finger will not reach beyond the tip of the epiglottis." A few days later a marked improvement took place in the breathing, and on Oct. 26th I found that, although the dyspnœa was decidedly less, the patient's voice was now very weak and high pitched. The man could not swallow either liquids or solids, and had wasted rapidly. "Fœtor ex ore" was more marked than ever. On laryngoscopic examination the opening of the glottis was distinctly wider. When attempts were made to phonate, the cords approached one another to some extent, but in a faltering manner. This imperfect adduction could not be sustained as in singing, but after a momentary movement towards, but not quite up to, the middle line, the vocal cords diverged and took up a position midway between that of quiet inspiration and phonation. No further opening of the glottis occurred on the deepest inspiration. The impression gained was that the constrictors of the glottis acted in a weak, irregular manner, while the dilators were completely paralysed. Recourse was now had to nutrient enemata, but the patient continued to waste with great rapidity. Mr. Godlee again saw the patient, and suggested gastrostomy, more as a means of postponing the end than with any hope of long-continued relief. The chances of the operation were put before the patient, and he decided to have it done. Gastrostomy was performed by Mr. Godlee on the afternoon of Oct. 30th. The pulse failed somewhat during the operation, but improved again, and the man appeared to rally somewhat afterwards. This improvement, however, was only temporary, and he gradually sank without any rise of temperature, and died the next morning at 9 A.M. No change was noticed in the laryngoscopic appearances after the 26th, but no examination was made after the 29th. The voice preserved its weak, high-pitched character to the end.

Abstract of necropsy.—Large nodular masses of new growth were found in both anterior and posterior triangles of the neck, being most abundant towards the middle third of the neck. These masses, which were hard and white, lay mainly beneath the sterno-mastoid muscles, and were matted together, forming a nodular chain continuous with a similar growth in the posterior mediastinum. There were only a few small nodules in the anterior mediastinum, though the connective tissue here was very dense and obviously thickened. The common carotid arteries were pushed forwards and inwards by the growth, which lay to their outer side, and the left subclavian artery was somewhat compressed. On the right side the vagus was not at all pressed upon, but opposite the cricoid cartilage the nerve presented a large fusiform swelling like a ganglionic enlargement. The right recurrent laryngeal nerve was traced round the subclavian artery to its entrance into the larynx, and was not implicated. On the left side the vagus was buried in the cancerous material at the level of the upper third of the thyroid cartilage. On dissection, the nerve could be traced with ease through the growth, and, though it was somewhat flattened, it did not appear to be infiltrated. Below this point the nerve was thinner than the vagus trunk on the other side. The left recurrent nerve passed freely round the aortic arch, but was embedded in the growth along the lower part of the trachea. The superior laryngeal nerve, with its external branch, was quite free on each side. The œsophagus, from a point one inch below the cricoid cartilage down to its termination, was infiltrated and thickened. Opposite the junction of the upper and middle

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third of the trachea the gullet was extensively ulcerated, and there was a ragged oval perforation of the trachea one inch and a half in length. There was a similar growth in the mucous membrane of the trachea from this point almost down to its division, with slight ulceration in places. The lower part of the pharynx contained a few miliary nodules on its mucous membrane, one just above the left border of the cricoid cartilage, but there was no infiltration of subjacent structures. The larynx was quite free from disease. The vocal cords lay in the cadaveric position, and could be moved freely to and from the middle line. There was no interference with the crico-arytenoid articulation. On removing the mucous membrane covering them the crico-arytenoidei postici looked pale and thin, but not more so than the muscles generally. The crico-arytenoidei laterales presented no abnormal appearance. The lower lobe of the left lung contained one small nodule, and there were a few enlarged glands behind the stomach and liver. The gastrostomy wound looked quite healthy, and there was no peritonitis. The rest of the abdominal cavity was free from disease. The brain with its vessels and membranes appeared quite healthy. Microscopical examination showed that the growth was a carcinoma (squamous epithelioma). In sections of the fusiform enlargement of the right vagus it was seen that almost all the nerve bundles had been destroyed, but the outlines of the bundles were still visible. The nerve fibres were replaced by an opaque granular material, which exhibited indistinct circular markings like those of the original fibres, but without any trace of axis cylinder or medullary sheath. Every section showed two or three small bundles of healthy nerve fibres, situated in each case peripherally—i.e., immediately beneath the epineurium. The epithelial growth could be seen between the nerve bundles, and in many cases lying inside the perineurium. In a very few places scattered epithelial cells were seen between the individual nerve fibres. Sections of the left vagus below the point of compression showed an opaque granular condition of the nerve fibres, with complete loss of axis cylinder and medullary sheath. Here and there a few healthy nerve fibres were seen lying scattered among the degenerate fibres, and not collected into bundles. Both recurrent laryngeal nerves were in much the same state. A few healthy fibres were seen here and there, but there was the same widespread granular transformation of the medullary sheath and axis cylinder, and in places the nuclei of the neurilemma were increased in number, and connective-tissue development appeared to be going on. The crico-arytenoidei postici and the right crico-arytenoideus lateralis were examined, and presented the following appearances. Most of the muscular fibres were normal and distinctly striated, but in all three muscles some of the fibres were thinner than the others and were slightly granular and devoid of striation. Mere degenerate fibres were not numerous in any of the muscles, but were more abundant in the postici than in the lateralis muscle.

The bearing of the present case on the subject of abductor paralysis is obvious. The patient presented at first the appearances of bilateral paralysis of the dilators to which was added subsequently paresis of the constrictors of the glottis. It is difficult to say how long the paralysis of the dilators had existed when the patient was first seen, but we know that this condition was present during the last fortnight of his life, and paresis of the constrictors only developed four or five days before death. The anatomical relations of the new growth found after death quite explain the succession of clinical symptoms. Both vagus nerves were compressed above the origin of the recurrent laryngeal nerves, one of these nerves being also involved in the disease. The first muscles to feel the effects of the gradually increasing pressure of the growth on the motor nerves were the crico-arytenoidei postici, the adductors showing no loss of power till a much later date. It is remarkable that in spite of the very decided pressure on the nerves which existed, the laryngeal muscles showed comparatively so little evidence of degeneration. It must be remembered, however, that some few healthy nerve fibres were found in each recurrent laryngeal nerve. Possibly, too, the complete immunity of both superior laryngeal nerves may have had something to do with the maintenance of nutrition in the muscles, for Exner's investigations teach us that this nerve takes more parts than was previously thought in the innervation of the laryngeal muscles. Krause wishes to exclude cases like that above described so as to avoid the possibility of a direct invasion of the muscles or their terminal nerves by the growth. But, as Rosenbach urges, these cases are specially suited for the elucidation of the question, illustrating as they do the uncomplicated effects of pressure on the nerves. In Rosenbach's, as in my case, the larynx itself was quite free from the growth, and the fact that in his case the necropsy was made by Professor Marchand is an ample guarantee of the correctness of the description which Rosenbach quotes. Cases like these and some of Dr. Semon's contradict Tervaert's assertion that no uncomplicated case is recorded in which paralysis of the dilators passed into complete paralysis of the recurrent laryngeal nerve. Krause lays himself open to a serious fallacy when he compares his experimental studies in animals with the affection known as abductor paralysis in man. Electrical stimulation of the laryngeal nerves of a dog can hardly be said to come within the same category as the degenerative processes set up in the corresponding human nerves by the slowly-increasing pressure of a carcinomatous growth. The same must be said of his attempts to imitate this slow degenerative process by his experiments with the cork. The appearances described in the nerves which he subjected to this treatment are those of acute neuritis, not chronic degeneration. Even granting that he really did produce a tonic contracture of the adductor muscles, which is somewhat doubtful, the difference between the method of production of his artificial contracture and the affections which occasion a similar position of the human vocal cords is so great as to forbid any analogy being drawn between the two conditions. It is strange that the closure of the glottis resulting from electrical stimulation of the nerve ceased when inspiration occurred, in spite of the irritation being maintained, whereas the median position of the cords produced by the pressure of the cork was unaffected by inspiration; and yet in both instances Krause ascribes the approximation of the cords to contraction of the adductors resulting from irritation of the motor nerves.

It will be seen from the various criticisms already quoted that the general opinion is adverse to Krause's views, and, as Professor Fraenkel says, the hypothesis of a primary neuropathic contracture merely adds to our difficulties. The fact that in the case described above both superior laryngeal nerves were unaffected may be claimed by Tervaert as supporting his view. But his theory quite fails to account for cases of abductor palsy dependent on central disease, and cannot therefore be regarded as admitting of general application. Seifert's cases do not throw much light on the subject. For the larynx was only examined anatomically in one case, and the account given is not complete. Whether the laryngeal paralyses described by Seifert can be credited to the influence of lead must remain at present a matter of doubt.

It seems, then, that Semon and Rosenbach have proved their point as to the vulnerability of the abductor nerve fibres, but an explanation is still wanting. It is hard to say whether the vulnerability attaches to the nerves alone or to both nerves and muscular fibres. Dr. Semon, I believe, inclines to the latter view. Simanowski's observations are interesting, as pointing to structural differences in laryngeal muscles. If the terminal motor nerves and their end organs are less abundant in one group of muscles than another, it is easy to conceive that any disease of the corresponding nervous tract, whether central or peripheral, would react more disastrously on this set of muscles than on another group more richly supplied with nervous filaments.

The writer of a leading article in THE LANCET, June 5th, 1886, endeavours to account for the vulnerability of the dilators by a mechanical explanation suggested by Dr. Gowers—viz., that the abductors are inserted at an acute angle into the muscular process of the arytenoid cartilage, and therefore act at a disadvantage as compared with the adductors, which are inserted into the same process almost at a right angle. There are, however, strong objections to the acceptance of this theory, plausible as it seems at first sight.

Mr. Horsley and Dr. Semon[1] have found that if the larynx be excised from animals immediately after death, and the elecrical current be applied directly to the muscles themselves, the crico-arytenoidei postici lose their excitability long before the adductors. Again, some experiments of Dr. Hooper[2] of Boston, published in 1885, and confirmed an

[1] Brit. Med. Journ., Aug. 28th and Sept. 4th, 1886.
[2] Transactions of American Laryngological Association, vol. vii.

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amplified by Horsley and Semon,[3] show that the degree of ether or chloroform narcosis determines whether the dilators or constrictors shall react to electrical stimulation of the recurrent nerve. When the anæsthesia was slight, irritation of the nerve produced adduction of the vocal cord; when the anæsthesia was more profound, stimulation of the nerve caused abduction of the cord from the middle line. The differentiation obtains when the peripheral end of the divided nerve is excited, pointing to the action of the anæsthetic being peripheral and not central. Facts such as these do not fit in well with the mechanical explanation suggested above, nor with the idea of the preponderance of the adductors assumed by Krause.

Brook-street, W.

ON LATERAL CURVATURE OF THE SPINE.

BY RICHARD BARWELL, F.R.C.S.,
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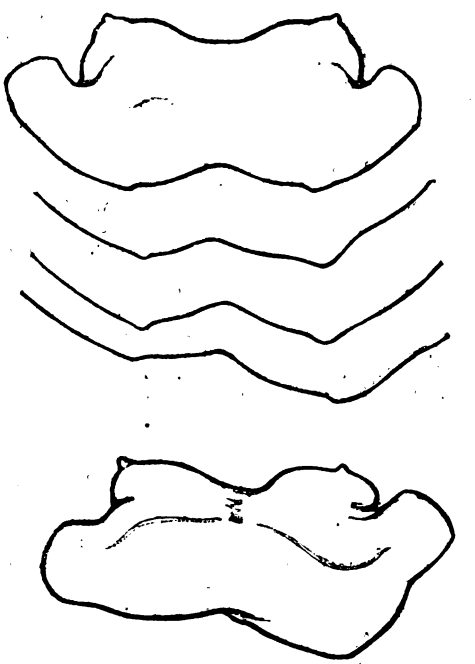
III.

AT some future opportunity, and in some method which affords to me a greater amount of space than can be allotted in the columns of a journal, I shall discuss the exceedingly difficult and much controverted etiology of curves primarily dorsal; here I must confine myself to semeiology and treatment. From whatever cause it may arise, the first advent of dorsal curvature, though occasionally pretty rapid, is in the vast majority of instances insidious and slow. The early changes of form are indicated, not by any aberration in the line of the spinous processes, but by certain alterations due in the beginning solely and entirely to rotation, and this, although the vertebræ as a whole, more especially their bodies, may have considerably deviated. This apparent paradox is due to the fact that by the very act of rotation the spinous processes of the aberrant vertebræ are carried towards the concavity of the curve, and that therefore a certain amount of deviation is, as far as the tips of the spinous processes are concerned, compensated by the rotation itself. But the ribs having a long sweep outwards from the spine, act as indices which show even a very small degree of rotation, a much smaller degree than can be detected by any examination of the spine itself, as, for instance, at the loins.[1] Hence changes of form produced by such twist can be verified by noting just about and outside the line of insertion of the longissimus dorsi tendons, the exaggerated backward projection of the ribs on one side, their diminished protuberance on the other. Moreover, the scapulæ lie on and are supported by the ribs, and must change their position and the direction of their surfaces with any alteration in the planes and forms of the bed on which they lie, hence certain changes in the shape of the shoulders are aids in the diagnosis, and are usually the special point which first attracts the attention of parents, and generally continues throughout the case to be the chief object of their solicitude.

This considered, it will be plain that diagnosis depends on a subtle perception of form, or rather of deviations from natural and healthy symmetry, which I will do my best to explain. Dorsal curvature is usually, though by no means exclusively, to the right. We will therefore suppose, for the purposes of description, a curve convex in that direction. The earliest sign, before any lateral deviation can be made out, and before any obvious change in the position of the scapulæ takes place, is a greater fulness and roundness of the posterior aspect of the right side of the chest, with a certain flatness on the left side around and about the [illegible] of the scapula, as also between that point and the spine. A most useful and instructive method is to inspect the form from above, either by letting the patient [illegible] stool, or better by the surgeon standing on one [illegible] remains erect. Whichever of these two [illegible] the chiefly important point is to look [illegible] spine, noting also the conformation of the [illegible] obtaining, if I may so express myself, a [illegible] patient's *torso*. The annexed series of outlines (see Fig. 7) are diagrams of the forms as thus seen, the head being omitted as likely to confuse the sketches, which were in each instance taken from life. The first is the normal form, showing absolute symmetry of left and right sides—the next three show the progressive changes of the back and shoulders in cases of increasing severity; the fifth depicts in a severe case the changes of back, shoulders, and chest. Now, to explain the last four outlines The depression near the middle of the figure is the place of the vertebral groove. On the left of this (concave side) the outline is slightly flattened, and the slight projection, a little further out (the posterior border of the scapula), lies pretty near the spine and the shoulder blade itself; the line still further out beyond the slight projection is the spine of that bone, looks too directly backward. On the right (convex) side the line from the vertebral groove outward becomes in increasingly severer cases more and more rounded, the posterior costa of the scapula recedes further from the spine, and the hinder surface of that bone looks abnormally outward.

These outlines and description form a key to the back view, in which, by careful lighting[2] these positions, the projections and depressions can be well studied, and the distances of the scapulæ from the spine measured. Moreover, it will be found that the right one sits close to,

FIG. 7.



and pretty firmly on, the ribs; the left lies looser, even a little way off the ribs, so that the surgeon can pass between them—that is, under the venter of the scapula—the ends of his fingers. Hence while the right shoulder is both thick and high, the left one is flat, flaccid, and low. In all but very early cases the line of the spinous processes is curved towards the right, but the proportion between the amount of curvature and the amount of rotation varies in different cases. Soon after the appearance of the dorsal deviation the lumbar spine begins to assume a secondary or compensating curve to the left, and the marks and signs of lumbar curvature, described in my former paper, are superadded to the above changes—namely, the deeper incurvation on one side (left) of the waist, the apparent sideways shifting of the upper part of the figure on the pelvis, the disparity of the two rounded angles between the iliac and the dorsal halves of the trunk. Moreover, about this period—sometimes a little earlier, sometimes a little later—evidence of alteration in the form and position of the ribs may be observed, though a little careful study will show that the anatomical changes must have begun some time before they were clinically perceptible. They are shortly described as follows. The angles of those on the convex side of the

[illegible] Loc. cit.
[illegible] Op. cit., I have shown that the ribs, [illegible] to produce rotation.

[2] A light direct from above has many advantages.

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spine become more acute, their first part from the head to the angle taking a course too directly backward; the body of the bone from the angle onward is directed too much forward, the whole rib being a segment of too small a curve. On the left (concave) side the first part is directed too little backward, the body runs too little forward—in other words, takes too outward a course; the angle, therefore, is too obtuse, and the whole bone too straight, forming a segment of too large a curve. The changes, therefore, on each side, directly the reverse of one another, are in each instance the continuation further afield of the alterations which I described[3] as taking place on the pedicles and transverse processes. But besides these alterations of form, besides the backward projection of the right and forward yielding of the left ribs other changes of position must be noted—viz., as lateral deviation of the vertebræ becomes marked, and, indeed, as a necessary sequela of that deviation, the thoracic rings become oblique in different directions. The condition may be illustrated thus: suppose seven vertebræ, from the third to the ninth dorsal, to be affected, the second and the tenth being on the median line and straight, the ninth, eighth, and seventh slope over to the right and stand oblique, the sixth, however, is perpendicular, while the fifth, fourth, and third slope back towards the middle line or towards the left, and stand in an obliquity of contrary direction to that of the three lower of our series. Hence, in the left (concave) side the ribs are on the axillo-iliac line packed close together. The middle rib of the series may be taken as normal; but above this they slope too much downward; below it, too much upward. On the right (convex) side the contrary conditions obtain; the basket-work of the chest is too open; the ribs below the most deviated vertebra slope too much downward, those above it too much upward. Thus, to sum up, the ribs undergo three sets of changes—(1) changes of form, (2) changes of position connected with rotation of vertebræ, (3) changes of position connected with obliquity of vertebræ. Naturally, the whole shape of the thorax and of the upper part of the abdomen alters, and many disturbances of function, great loss of health, invalidism, with persistent pain, are thus produced. For the heart is, though often not displaced, yet thrown out of position, the respiratory movements are greatly restricted, the stomach and liver are pressed upon and disturbed. Moreover, the figure becomes considerably, in the worst cases hideously, distorted. I have seen instances in which the ninth and tenth ribs lay within the venter of the ilium well below the crest, and it is not at all unusual to find the angles of the ribs, altered as above described, forming a conspicuous prominence, often taken, previous to closer examination, for the usual "humpback" of angular curvature. These conditions came on slowly in an uncared-for or mistreated case. Thus advanced they are incurable, though relief and alleviation can be afforded; but the very slowness of their advent gives great opportunities for, and shows the high importance of, early and rational treatment, such as I shall describe in my next paper.

ON TWO CASES OF

VAGINAL EXTIRPATION OF THE UTERUS FOR CANCER;

WITH REMARKS ON THE OPERATION.

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IT is now generally admitted that it is unnecessary, and indeed in most cases a mistake, to remove the uterus for cancer of the cervix alone. The tendency of cancer of the cervix is not to spread upwards towards the body of the uterus, but outwards through the thickness of the neck, so as to involve the cellular tissue. It is only when the disease commences near the os internum that it is likely to spread upwards beyond the cervix. This is a pathological fact of the greatest practical importance. It is now, in this country at any rate, generally agreed that it is only in cancer of the body of the organ, or in some cases commencing close to the os internum, that removal of the whole uterus is called for, or even justifiable. In cancer of the cervix not too far advanced for operation it is only necessary to divide the vagina from the cervix all round, and remove as much of the lower portion of the uterus as may be required to cut well beyond the disease. Almost any portion of the uterus short of the whole may be thus removed without opening the peritoneum. At the Leeds Infirmary we have for some time supplemented this operation by removing a further portion of uterine tissue by the use of chloride of zinc. This is followed by great contraction of the cicatrix. This "supra-vaginal amputation of the cervix" might with some justice be called "Baker's operation," as it was first described by Dr. W. H. Baker, of Harvard University, in the *American Journal of Obstetrics* of April, 1882. The mortality from this operation is very low (7·8 per cent.), and it gives equally good results as to freedom from recurrence in cases of cancer of the cervix, and when, or if, recurrence does take place it is very rarely in the stump of the uterus, but in the surrounding cellular tissue. In this paper I shall not again allude to this operation, as it concerns only cases for which it is not sufficiently radical. It is, of course, only possible to treat cancer of the body of the uterus by the removal of the whole organ, and it is now well established that this should be done by the vaginal method (kolpo-hysterectomy) whenever possible, and that what is known as Freund's operation, or removal of the uterus by abdominal section, with its mortality of 72 per cent., should be employed only in exceptional cases.

The two cases which form the subject of this paper were both primary cancer of the body of the uterus. I propose to relate them somewhat briefly, and subsequently to give more fully some details of the operation.

CASE 1.—This patient was thirty-eight years of age. She had had several children, the last being twins, three years before her admission to the infirmary in October, 1885. She was in bad health from loss of blood, which had been going on for a year and a half, in spite of the removal of a polypus in July, 1884. The uterus now again contained a polypus, which, although it had a comparatively narrow neck, grew from a widely extended base on nearly the whole of the anterior wall and fundus. The microscope showed this to be a round-cell sarcoma. The uterus was freely movable, and the disease had probably not extended beyond it.

On Nov. 14th, 1885, with the able assistance of Mr. Mayo, who was then resident surgical officer, and of Mr. Croft, our present resident obstetric officer, I removed the uterus entire per vaginam. Having separated it from its vaginal attachments all round and from the bladder anteriorly, and the peritoneal cavity being opened before and behind, the fundus was retroverted through the posterior wound. I had intended at the same time to push the cervix up through the anterior wound, but found it easier to bring the whole organ out at the vulva, when it lay fully exposed to view, the fundus pointing downwards and the cervix upwards as the patient lay in the lithotomy position. The only attachments were the broad ligaments, the vaginal bases of which had been divided, and these being healthy and elastic there was no difficulty in doing this. Had it not been for an unfortunate accident which now occurred, the operation would have been quickly concluded; but finding that I had not separated the uterus from the bladder sufficiently at the sides of the anterior wound, I widened it by tearing through the cellular tissue a little at each side with the finger. This must have thrown too much strain upon the coats of the bladder, weakened by its separation from the uterus, and a small laceration took place, of which I was not aware until later in the operation. The broad ligaments were now tied in two parts, including, of course, the Fallopian tubes and round ligaments, and the uterus was cut away. It was necessary to tie two vessels in the stumps of the broad ligaments. I now found out the laceration of the bladder, which was about three-quarters of an inch in length and transverse. This was closed by sewing the peritoneum over it to the anterior vaginal wall by a continuous suture, and as it was near the edge of the vaginal wound, it was also included with the peritoneum covering it in the catgut sutures by which the anterior and posterior vaginal walls were alternately brought together. The patient was in such a condition that her death before the conclusion of the operation was possible, and no time was lost which could be avoided, the whole being concluded in one hour and ten minutes. A slow but complete recovery ensued without the occurrence of any unfavourable symptoms. I thought I had made the wound in the bladder quite safe, but a fistula nevertheless resulted. In the following June

[3] First paper, June 25th.

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the patient was readmitted and the fistula closed. It was very inaccessible, as it could not be pulled down into view like an ordinary fistula, and it was not an aperture, but a small funnel-shaped canal at right angles to, and at the summit of, the vagina.

The patient was heard from thirteen months after the operation. There was no return of the disease, she could retain her urine, and was in fair health.

CASE 2.—Mrs. L——, widow, aged fifty, recently a cook in domestic service; never pregnant. She had suffered from excessive menstruation for four years; no pain until recently. On examination of the abdomen a rounded and somewhat nodulated tumour was felt nearly central, and reaching four inches above the pubes. This was found to be the uterus, the mouth of which was closed. The cervix having been dilated, it was ascertained by the aid of the finger that the growth had the clinical characters of cancer of the interior of the body, extending downwards into the cervix, but not actually implicating the lips of the uterus. This was confirmed by microscopic examination. The organ was fairly movable, but not as freely as in the preceding case. No extension of the disease to the surrounding cellular tissue could be made out.

On March 19th last, assisted by Mr. Harry Littlewood, the resident surgical officer, and Mr. Croft, the resident obstetric officer, I removed the uterus entire per vaginam. After separating the vaginal attachment all round, and separating the uterus from the bladder, and opening the peritoneum before and behind, it was found impossible to retrovert the uterus through the posterior wound owing to its size, and therefore impossible, of course, to bring it down into view as in the first case. It was removed without any particular difficulty in the following manner: Being well pulled down, the broad ligaments were ligated and divided in segments first on one side and then on the other. A Spencer Wells' long-handled needle was used. Each portion of broad ligament divided allowed the uterus to be brought a little lower, in a zigzag fashion. No hæmorrhage occurred from the cut surfaces on the uterine side, although not protected by any ligature. The fundus was then brought down into view, one cornu first, and the Fallopian tubes and round ligaments ligated and divided, and the uterus completely separated and removed. It was now ascertained that the disease had spread up the right tube, and a coil of intestine, which was visible, was seen and felt to be studded with small cancerous nodules. Had it not been for the state of the bowel I should have at once opened the abdomen and removed the tube. The vaginal wound was brought together precisely as in the first case, the peritoneum being in both cases included in the sutures. The only difference was that at each side of the drainage tube were four smaller stumps instead of two larger ones. Each suture fastened in the wound two stumps. The silk-constricting sutures on the stumps were left about two inches long.

The patient recovered without a bad symptom of any kind. The temperature, which had been 102° and over before the operation, fell to 101° and 100° on the two succeeding days. The drainage tube was removed on the fifth day, and all the silk ligatures on the pedicles or stumps came away on the thirteenth and fourteenth days. Of course, the recovery of this patient is only temporary, but her death will be less painful than it probably would have been from cancer of the uterus itself; and meanwhile she has a short reprieve, for she was up and walking about in three weeks and a half, and is now at a convalescent hospital, feeling and looking fairly well. Probably the implication of the tube and bowel was recent, and if the case had been seen earlier, the ultimate result, which is unfortunately too certain, would have been different.

This operation has now, I believe, been performed over 400 times, and the records of a large proportion of these cases are accessible. Almost every conceivable variation in the details of the operation has been made. I propose, whilst giving more in detail the plan of operation followed in the two cases related, to allude to some of these variations, especially as the plan of operation recommended is not that of any one operator, but consists of what appear to me to be the best parts of all, combined so as to form a practical whole, with the addition of some points which, so far as I can ascertain, are new, but seem to me of practical importance and likely to conduce to success. The simpler the operation can be made, consistent with safety from hæmorrhage, the greater will be the success, because these patients are generally in bad health from hæmorrhage, and the duration of the operation is a very important factor. Next to the duration of the operation the most important or equally important object we should have in view is to keep the peritoneum free from contamination with septic and cancerous matter from the uterus.

I notice that the leading idea of most operators has been to avoid hæmorrhage. This I take to be a mistake, for the application of temporary ligatures and clamps, or pressure forceps, takes up time and is generally unnecessary. Forcible dragging of the uterus downwards arrests the circulation, as proved by the absence of hæmorrhage from the uterine side of the divided broad ligaments. It is advisable to prepare the parts by removing with a curette any loose cancerous masses in the neck a few days before the operation and by the use of cleansing antiseptic injections. The patient being in the lithotomy position, and the vagina washed out with rather hot water, for the purpose of preventing hæmorrhage as well as for the sake of cleanliness, in both cases I scratched with a suitable instrument the exact line of the anterior and posterior vaginal fornices. This gives the situation of the incisions, of which the anterior is important. The uterus being now pulled down into view by vulsellum forceps, the posterior incision should be made first. After an aperture is made through the vaginal wall the left index finger is to be passed through to serve as a guide to the scissors with lateral angle, with which the division is completed on each side quite up to the bases of the broad ligaments. Whilst the scissors are used the traction by the vulsellum should be relaxed. Now let traction be again made, and with a scalpel divide the anterior vaginal wall by a semicircular incision in the line of the anterior fornix just to reach the cellular tissue, so abundant here in front of the cervix. Let this incision be prolonged laterally to join the posterior incision at each side, but here the depth of the incision must not be more than one-sixth of an inch, and exactly five-sixteenths of an inch from the cervix.

The next step is to separate the bladder from the uterus, and, being warned by the experience of the first case, in the second I did not use the finger for the purpose of tearing through the cellular tissue. The finger, although sensitive, does not give the nicety required. There can be no better instrument for the purpose than an ordinary uterine scarifier a little bluntened. The small flat blade of this partly cuts and partly tears through the cellular tissue without throwing any strain on the bladder, the walls of which are very tender, being weakened by their separation from the uterus. When the finger is in the anterior wound and a catheter is introduced into the bladder, it will be felt how very thin the bladder wall is. When the peritoneum is reached, it is at once opened by the scarifier, or scratched through by the finger-nail, and the wound is then to be widened with the scarifier from side to side, until a finger in the anterior wound will meet a finger in the posterior wound at each side of the uterus, the broad ligaments only intervening. This is important on account of afterwards ligating the broad ligaments, and it cannot be done unless the posterior wound is made first.

When the anterior wound was made the peritoneum was opened, but when the posterior wound was made in both cases it was left intact, thereby preventing access of blood, cancerous or septic matters. This is a point of the greatest consequence. Before it is opened (which must now be done), the parts must be washed clear of everything. It may be inferred from most accounts of operations that this has not been thought of, but some operators have with the same object made the posterior wound last. The plan I have indicated, however, answers the end required better, for in making the anterior wound, which is a matter of delicacy, it is an advantage to be able to insert a finger into the posterior wound, especially in order to gauge the proper width of the anterior wound, and to steady the parts whilst it is made. The peritoneum is quite loose over the roof of the vagina posteriorly, so that it is actually difficult to open it as it yields before the finger.

Nearly all operators now either bring down the fundus through the posterior wound or through the anterior one. The former plan is obviously the best, because there is more room posteriorly; but I believe both plans are bad, because the cervix is pushed up as the fundus comes down, and by this somersault the cervix with its hurtful discharges has the chance of infecting the peritoneum. To avoid this Mr. Greig Smith of Bristol, who reports a case in THE LANCET of Jan. 1st of this year, even passed a sponge into the peritoneal cavity. The plan of removing the uterus cervix first avoids all risk to the peritoneum. It is the plan followed by Billroth and Martin, but the former ligates the ligaments b

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mass ligatures—a more difficult and tedious and less secure way than that of ligating them in segments. The plan of bringing the uterus entirely outside adopted in my first case has the advantage of exposing everything fully to view, whilst equally with the plan of removing the uterus cervix first, directly downwards, it avoids the risk of septic infection of the peritoneum. It can only be done when the broad ligaments are elastic and free from any trace of past cellulitis, and when the uterus is not much enlarged. It is not mentioned by any writer on this subject as possible, nor in any account of operations which I have seen is it mentioned, except that Staude has published some cases in which, without the anterior wound being made at all, the fundus was retroverted through the posterior one, the cervix being thus not anteverted, as usual, and then, lastly, the anterior wound was made.

In order to avoid injury to the ureters, their exact distance from the cervix must be borne in mind. This is the merest fraction under half an inch. They are nearest the cervix, quite at the lowest part of the broad ligaments, and higher up three-quarters of an inch from the side of the uterus. This space is very small. It can be made a trifle larger by firmly grasping the broad ligament between the finger and thumb, when the ureter being of firmer structure than the surrounding parts escapes or is squeezed outwards a little. But we have to cut our coat according to the cloth, and it is absolutely necessary for the lowest ligature to be not further from the cervix than five-sixteenths of an inch. The uterus being now removed, we must sponge out the vagina and get an idea of the position and appearance of the wound. The left index is to be passed in to pull down the peritoneum anteriorly and posteriorly. The anterior is most important. With an Emmet's long needle-holder, and one of his needles, which, however, should be made an inch and a quarter in length, and curved slightly (to be had of Mayer and Meltzer, Bond-street, Leeds), a strong catgut suture is to be passed through the edge of the vaginal wall on the extreme right of the wound; then in order through the posterior flap of peritoneum, through two pieces of broad ligament stump (at opposite edges, so that they may not lie superimposed in the wound), through the anterior flap of peritoneum, and lastly through the anterior vaginal wall. These sutures should pass through the stumps at the further side of the constricting silk ligatures, so that when the wound is closed the latter are extra-peritoneal. Two similar catgut sutures at each side of the supra-vaginal wound are sufficient to bring it together and to fasten the pedicles in the wound. A drainage tube should be placed centrally, and fixed to the posterior vaginal wall low down by a suture. It can easily be removed by cutting this suture, without any disturbance or exposure of the wound. The ends of the catgut sutures which bring together the supra-vaginal wound should be cut short, but those of the silk constricting ligatures on the stumps should be left an inch and a half long and lying loosely in the vagina. These will come away in about a fortnight. The vagina, and especially the wound, should now be dusted lightly with iodoform, and the vagina plugged loosely with iodoform gauze. The drainage tube should be cut off so that the end is well within the vagina, lest air should enter the peritoneum. The end of the tube is to be packed round with absorbent wool. One advantage of leaving the silk ligatures on the pedicles so long is that in the event of secondary hæmorrhage the end of each pedicle could be examined separately by sight and any bleeding vessel taken up.

Much attention has been given by writers on this operation to the two questions of whether the peritoneum should be included in the sutures closing the vaginal wound, and whether a drainage tube should be used. A conclusion on these points can hardly be helped by elaborate statistics, for our knowledge of peritoneal wounds is quite sufficient from other sources to teach us that the peritoneum flaps should be brought down and included in the wound; but the result of statistics proves this almost foregone conclusion. There are other ways of doing this, as by using a continuous suture, which is said to be more quickly done, but I think this would seal up the parts rather too firmly. A little capillary exudation should be allowed.

There have been many modifications of the operation, which seem to me should be condemned. Such as removal of the cervix at the commencement of the operation, the use of mass ligatures either as temporary or permanent means of arresting hæmorrhage from the broad ligament, relying upon pressure forceps instead of ligatures for the same purpose, the use of elastic ligatures, putting ligatures on the broad ligaments with the uterus *in situ*, unnecessary ligating the vaginal roof before incising it, and especially leaving the vaginal and peritoneal wounds unclosed. On the other hand, the plan of bisecting the uterus and removing one half first, which has been followed by Müller of Vienna, Zweifel, and by Alexander Simpson of Edinburgh is a modification worth bearing in mind.

In conclusion, my object in this paper has been to try to work out the minute details of this operation, choosing from the various plans which have been previously followed those parts of each which seem most likely to conduce to success. It seems not improbable that the mortality may be considerably reduced. If it is properly done, there seems to me very little for the patient to die from, for the peritoneum can be guarded from sepsis by the methods I have indicated, and hæmorrhage can also be with great certainty prevented. Moreover, if the pedicles are treated extra-peritoneally and peritoneal surfaces everywhere lie together in the wound, it will be shut off almost at once from the general peritoneal cavity. By far the greatest number of these operations have been done on the Continent, and especially in Germany; but this arises from their being done unnecessarily, when supra-vaginal amputation would have given equal security with much less risk. For instance, out of nineteen cases of Fritsch's, sixteen were cancer of the cervix and only three of cancer of the cervix with enlargement of the body. The same proportion holds good with most German operators. In this country the operation has been performed comparatively seldom; but it has been generally confined to suitable cases—viz., cancer of the body or of the neck at its upper part. In Yorkshire it has, I believe, only been done four times, and the two cases related were the only successful ones; but I say this open to correction.

COMPARATIVE EXPERIMENTS BETWEEN THE ACTION OF PAPAIN (FINKLER) AND PEPSINE.

BY DR. D. FINKLER,
PROFESSOR AT THE UNIVERSITY OF BONN.

PAPAIN (Finkler) is a ferment which is manufactured according to my specification from the plant called Carica papaya. It is an albuminous body, which under certain conditions can change albumen into peptone. The conditions which produce this change are very different from those under which pepsine and pancreatine produce the same effect. In order to demonstrate the effect of papain I shall indicate various experiments made by myself which will give an exact insight into the conditions of the effect and also a comparison of the effect of pepsine. For these comparative trials I used a pepsine of known best quality, most of the commercial pepsines being decidedly weaker than the one I used.

I. HAS PAPAIN REALLY A DIGESTING PROPERTY?

Experiment 1.—(*a*) Five grammes raw minced meat, 50 c.c. water, 5 c.c. of a 1 per cent. papain solution (1 gramme in 100 c.c. water). This mixture was put into the oven and kept for twenty-one hours at 38° Centigrade; it was then filtered. The filtered portion contains the albuminous substance of the meat turned into peptone, which is *not* precipitated by nitric acid, nor by ferrocyankalium or acetic acid; it is precipitated by tannic acid. The xanthoprotein and biuret reactions are well shown. The non-peptonised residue of the meat weighs when dried 0·1 gramme; therefore 90 per cent. of the solid portion of the meat has been dissolved in water. Of the albuminous substances of the meat, 87 per cent. were peptonised—which shows a very energetic degree of digestion. (*b*) For comparison, 5 grammes raw minced meat, 55 c.c. hydrochloric acid (0·2 per cent.), and 5 c.c. of a 1 per cent. pepsine solution were treated as above. After twenty-one hours, 70·6 per cent. of the albuminous substance of the meat was peptonised.

Experiment 2.—(*a*) Five grammes meat, 50 c.c. water, 0·5 c.c. of a 1 per cent. papain solution. After forty hours the non-peptonised residue of the meat weighed 0·19 gramme; of the albumen of the meat 77·7 per cent. was peptonised. (*b*) Five grammes meat, 50 c.c. hydrochloric acid (0·2 per cent.), 0·5 c.c. of a 1 per cent. pepsine solution. After forty hours the non-peptonised residue weighed 0·19 gramme; of the albumen of the meat 77·7 per cent. was peptonised.

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Experiment 3.—(*a*) Ten grammes meat, 20 c.c. water, 1·5 c.c. of a 1 per cent. papain solution. After thirty-six hours, 73·5 per cent. of the albumen of the meat was changed into true peptone. (*b*) Ten grammes meat, 20 c.c. hydrochloric acid (0·2 per cent.), 1·5 c.c. of a 1 per cent. pepsine solution. After thirty-six hours, 18·0 per cent. of the albumen of the meat was changed into true peptone.

Résumé of the Three Experiments.

Ferment.	Digested albumen of the meat.	Time.	Proportion of the quantity of ferment to the meat.	Proportion of the quantity of the meat to the liquid.
Papain (Exp. 1) ...	87·0 %	21 hrs.	1: 100	1:10
,, (,, 2) ...	77·7 %	40 ,,	1:1000	1:10
,, (,, 3) ...	73·5 %	36 ,,	1: 600	1: 2
Pepsine (,, 1) ...	70·6 %	21 ,,	1: 100	1:10
,, (,, 2) ...	77·7 %	40 ,,	1:1000	1:10
,, (,, 3) ...	18·0 %	36 ,,	1: 600	1: 2

Papain therefore shows a more energetic peptonising power than pepsine, and especially so when the proportion of the liquid to the albumen is small—i.e., in the proportion of concentration in which food generally exists in the stomach and intestines. The great variability in the quality of commercial pepsine (some of which will, under the most favourable circumstances, not peptonise more than 20 per cent. of the albumen of the meat) gives papain (Finkler) also the preference, as it is always made of one uniform quality.

The peptonising of hard-boiled egg (egg boiled five minutes and rubbed down) is demonstrated by the following experiments, which were made in an oven at 38° Centigrade.

Experiment 4.—(*a*) Five grammes albumen, 50 c.c. water, 5 c.c. of a 1 per cent. papain solution. After sixty hours in an oven small residue—peptonised 95 per cent. (*b*) Five grammes albumen, 50 c.c. hydrochloric acid (0·2 per cent.), 5 c.c. of a 1 per cent. pepsine solution. After eighteen hours all peptonised = 100 per cent.

Experiment 5.—(*a*) Five grammes albumen, 50 c.c. water, 0·5 c.c. of a 1 per cent. papain solution. After sixty hours all peptonised = 100 per cent. (*b*) Five grammes albumen, 50 c.c. hydrochloric acid (0·2 per cent.) 0·5 c.c. of a 1 per cent. pepsine solution. After eighteen hours all peptonised = 100 per cent.

Experiment 6.—(*a*) Five grammes albumen, 10 c.c. water, 0·5 c.c. of a 1 per cent. papain solution. After forty-five hours peptonised 80 per cent. (*b*) Five grammes albumen, 10 c.c. hydrochloric acid (0·2 per cent.), 0·5 c.c. of a 1 per cent. pepsine solution. After forty-five hours peptonised 40 per cent.

Experiment 7.—(*a*) Ten grammes albumen, 20 c.c. of a 1 per cent. papain solution. After fourteen hours all albumen is dissolved. *Reactions:*—1. Boiling only produces a slight precipitate. 2. Xanthoprotein reaction succeeds very well. 3. Biuret reaction also shows very nice pink (rosy red). 4. Acetic acid and ferrocyankalium give slight precipitate; the albumen is therefore all peptonised = 100 per cent. (*b*) Ten grammes albumen, 20 c.c. of a 1 per cent. solution pepsine in 0·2 per cent. hydrochloric acid. Albumen dissolves slowly after forty-five hours; only 50 per cent. of the albumen is peptonised.

Résumé of the Four Experiments.

Ferment.	Albumen peptonised.	Time.	Proportion of quantity of ferment to albumen.	Proportion of the albumen to liquid.
[illegible] (Exp. 4) ...	95·0 %	60 hrs.	1: 100	1:10
[illegible] ,, 5) ...	100·0 %	60 ,,	1:1000	1:10
[illegible] ,, 6) ...	80·0 %	45 ,,	1:1000	1: 2
[illegible]	100·0 %	14 ,,	1: 50	1: 2
[illegible]	100·0 %	18 ,,	1: 100	1:10
[illegible]	100·0 %	18 ,,	1:1000	1:10
[illegible]	40·0 %	45 ,,	1:1000	1: 2
[illegible]	50·0 %	45 ,,	1: 50	1: 2

[illegible]-boiled egg is better digested by pepsine if [illegible] liquid be large in proportion. As soon, however, as a more concentrated mixture is employed, the superiority of papain is at once evident.

II. WHAT EFFECT CAN BE OBTAINED BY PAPAIN IN THE HUMAN BODY?

a. Concentration of the solution is of first importance.—It is impossible to create in the stomach and intestines such amount of liquid as would be favourable to the effect of pepsine; the conditions, therefore, are very much in favour of papain.

b. Importance of the reaction.—Pepsine acts in the stomach but not in the intestines, as in the latter the reaction is neutral or alkaline. Papain has little effect in the stomach, as the reaction there is acid; when, however, the stomach is neutral or alkaline papain will peptonise, while pepsine will be useless. The degree of acid reaction in the stomach varies greatly, especially in the case of a stomach out of order, in which case the reaction can be so highly acid or alkaline that pepsine would be of no value at all. In the treatment of stomach catarrhs we will, moreover, find that as a general rule the contents of the viscus have been rendered artificially neutral or alkaline by the administration of remedies, so that in these cases pepsine will have absolutely no effect. Papain, on the contrary, will act energetically.

c. Regarding the time available for the digestive ferment to act in the body.—In the case of pepsine this is necessarily very short, as the action ceases when the food enters the alkaline reaction of the intestines. In the case of papain, which can act well in alkaline reaction, the time is practically unlimited, as it continues acting on the food during the whole time it remains in the body.

For all these reasons the conditions for the effect in the human body are far more in favour of papain than of pepsine, and especially as under existing circumstances (high degree of concentration) papain has been shown to act much more energetically; it is only too clear that the preference should be given to papain as a digestive ferment for the treatment of dyspepsia. Besides for dyspepsia, the papain is of great importance in the treatment of diphtheria. Its effective power consists in the circumstance that no free acid need be present in the application, and further, that the moisture of the diphtheritic membranes is quite sufficient to allow the ferment to dissolve the solidified substances of the membranes. No other ferment has so far been able to obtain these results. It is on this account that many competent experimentalists and specialists have lately made observations as to these points. From all these circumstances there is no doubt that in papain we have a ferment which has a great future before it, and it is for this reason that I have made a special study of the manner of preparing the papain. I have had the satisfaction of obtaining the most favourable results from its use in the treatment of disease.

Bonn.

NOTES ON AN OUTBREAK OF BERI-BERI ON THE CHINESE TRANSPORT SHIP *TOO NAN*, STATIONED AT NEWCASTLE-UPON-TYNE.

BY WILLIAM SLATER, M.D., L.R.C.S.E.,
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THE world-wide reputation of Sir Wm. G. Armstrong and Co. as gunmakers draws from time to time the gunboats of many of the nations to the Tyne. Italians, Spaniards, Chilians, Indians, and others have in their turn visited us, and whilst in most their advent and departure have been apparently a source of pleasure to all concerned, such has not always been the case. About eighteen months ago an Indian gunboat arrived in the Tyne in the cold season of the year, and within a very short time several of the sailors died apparently from cold, but the chief symptom of whose illness, it should be remembered, was hæmaturia. None of these cases were seen by the writers of this article. Two months ago the Chinese Government sent over in their transport ship the *Too Nan* 640 sailors to man two new gunboats built on the Tyne. This was not the first

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visit of sailors belonging to the Chinese navy, nor is it the first during which the harmony of their stay here has been broken by the ravages of death amongst the crew. Two Chinese man-of-war's men died here about two years ago. The *Too Nan* had only anchored a few days in the Tyne, when the remains of three of her sailors were laid beside those of their countrymen in the Elswick Cemetery. Upon the minds of these Chinese sailors, who are by nature strongly bound to each other by ties of affection and friendship, and by whom death away from home and burial in a strange cemetery are regarded as completely destroying all hope for the future, the effect of the death of their comrades was most injurious. Those of them who were ill insisted upon being treated on the transport, in spite of the insufficient accommodation which the vessel offered, for the *Too Nan* had formerly been in the Merchant Service, and was thus ill adapted for the accommodation of such a large number of sailors even in health.

It appears that soon after having put to sea an outbreak of beri-beri, or as it is sometimes called kakké, occurred on shipboard. Two of the twelve sick men died whilst navigating the Red Sea—one on the Red Sea and the other at Suez—and soon after their arrival in Newcastle other three died from the same disease. Eleven were still suffering from beri-beri on the arrival of the ship, and were placed under the care of Dr. Slater, the native medical men preferring that local medical assistance should be procured, as mentioned by your Northern Counties correspondent. The three cases which died were evidently of a very acute character, there being most urgent dyspnœa, dropsy of the feet and legs, feeble pulse in all of them, followed by sudden death from syncope. Unfortunately no post-mortem was allowed. Nearly all the other cases were of a subacute type, and belonged to what Simmons would call the wet variety, so named from the general hydræmic condition of the blood and distension of the general areolar tissue with serum. Anæmia and anasarca are said by Sir Joseph Fayrer to be the general symptoms of the disease, and these, attended by numbness, pain, heaviness, and loss of muscular power, were what presented themselves in all our cases. After a feeling of malaise, which had lasted several days, the sailors noticed that their feet and ankles were swollen, as were also their faces. With this was experienced a sense of great weariness and inability for effort. In addition to the œdema of the legs, they all complained of pain and numbness down the front of the leg and ankle. There was no anæsthesia, nor from first to last did the paresis pass into paralysis. Great pain and stiffness were complained of in the hamstring tendons and the muscles behind the knee-joint. A most trying test for them was to ask them to rise from a kneeling to a standing position. Such exercise was always with great difficulty accomplished, and, in the case of some, was so severe that fainting was nearly induced, whilst in others the muscular effort called forth was such that big beads of perspiration stood out all over. In spite of the peculiar bronzing of their skin, the appearance of the sick men was that of anæmia. Breathlessness on the least exertion was a noticeable feature, and in all of them the pulse was small and feeble, the usual average being 72 to 80. We did not meet with any cases presenting the small quick pulse that Fayrer speaks of, nor in any of them did the temperature rise above the normal. The urine, though high coloured, remained fairly normal as regards quantity and specific gravity, and from first to last remained free from albumen. The furred and white-coated tongue which most of the patients presented did not in the least interfere with the appetite, which continued good all through the period of observation. Brain symptoms may be said generally to have been absent. The same remark applies to the lungs. In all the cases there was distinct evidence of dilatation of the ventricular cavities of the heart; and while no venous hum was heard in any of the cases, in a few of them a well-marked systolic murmur was heard over the pulmonary artery and in two of them a systolic murmur over the mitral orifice, which disappeared under treatment. In all the heart's sounds were feeble. The liver was small, and what struck both of us was the very *marked enlargement of*, and tenderness occasionally felt on pressing upon, *the spleen*. Beyond slight epigastric pain being complained of by one or two, our attention was seldom drawn to the abdomen. The bowels acted normally. The œdema of face and of the feet and legs was one of the most persistent physical signs, but in none of the cases was there ever evidence of the presence of fluid either in pleura or pericardium. A microscopical examination of the blood did not reveal any great reduction in the number of its corpuscles—the white were slightly increased, and the red not only formed rouleaux badly, but were extremely pale, and of very varying size; some larger, others smaller than in health. There was a marked deficiency of hæmoglobin, the colouring matter in some of the cases being present to the extent of only 60 per cent. of the normal.

The crew of the *Too Nan* is composed of two different types of Chinese, each speaking its own dialect, and while not racially distinct, all of them being Chinese, they are yet distinguished from each other by certain marked characteristics. The men who belong to the South of China are short, thick-set, and dark-coloured; those from the north are taller and of much fairer complexion. Now, the interesting point about the epidemic is that the disease attacked the South countrymen alone. Prior to coming to Newcastle these sailors had been to Corea, the projecting portion of the mainland which forms the northern and eastern boundary of the Yellow Sea. Beri-beri is endemic in certain parts of Asia—notably, Ceylon, certain parts of India, Burmah, and the Malayan Peninsula. We had no positive information conveyed to us by the officers of the *Too Nan* of the existence of beri-beri in Corea, but the impression was prevalent amongst the men that the disease had been caught there, and not in the Red Sea, where it first manifested itself with such fatality, and where it is said to be endemic. The fact of the disease being confined to one class—viz., the men who had been to a part of Asia which, though not absolutely known to be infected, is now by the officers regarded as having been so,—the protracted period of incubation, and the uniformity of the symptoms and signs, led us to regard the illness as being of a specific nature; and from the hydræmic condition of the blood and its deficiency in colouring matter and the very marked enlargement of the spleen, we feel inclined to regard beri-beri as a disease of a distinctly malarial character.

All of the cases did well under treatment. What Dr. Slater found of the greatest service was a good nourishing diet, such as beef-tea, eggs and milk, mutton and beef. Brandy and whisky also were allowed—half an ounce to an ounce—three times a day. Medicinally, iron and quinine in some, and arsenic in others, with cardiac stimulants. They were more thickly clad, and kept warmer. They had experienced very changeable weather, and this had, no doubt, greatly influenced the disease. The diet of the ship had consisted of rice, salted fish and pork, and occasionally fresh pork, three times a day. Milk they all dislike. Tea is taken occasionally.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

COMPOUND DISLOCATION OF ELBOW JOINT; EXCISION; SUTURE OF ULNAR NERVE.—REMOVAL OF LOOSE BODY FROM KNEE JOINT.—POST-ACROMIAL DISLOCATION OF HUMERUS; REMARKS.

(Under the care of Mr. WALTER RIVINGTON.)

IN our issue of July 2nd, page 15, we published some cases illustrative of the surgery of the ankle joint, which had been under the care of Mr. Rivington. This week we bring forward examples of injury of the shoulder and elbow joints, also the successful removal of a loose body from the knee joint after incision. The compound dislocation of the elbow joint, though extensive, was rendered more serious by the damage to the ulnar nerve. The result of treatment was very satisfactory. We refer our readers to the account of the case and also to the remarks on it. The post- or sub-acromial dislocation of the humerus is a variety of displacement rarely seen.

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CASE 1. *Compound dislocation of right elbow joint; damage to ulnar nerve; primary excision; suture of ulnar nerve; recovery.*—Charles B——, aged fifty-six, was admitted into the London Hospital on July 12th, 1886. He had fallen off an engine, and the right elbow joint had been opened by a jagged laceration on the inner side and behind. The triceps muscle was torn away from its attachment to the olecranon, and the ulnar nerve was exposed for several inches. The internal condyle was crushed; the forearm was displaced backwards; there was no shock. Temperature 99°.—13th: The elbow joint was excised by enlarging the wound on the inner side of the arm. The carbolic spray was used. The triceps was stitched, and a drainage tube was passed through to the outer side. It was feared that the ulnar nerve would lose its vitality in the middle of the exposed portion, but as it was entire it was left untouched. The arm was placed on an angular splint.—14th: Feeling in the hand imperfect; wound looked well.—25th: Passive movement; very little feeling in parts supplied by the ulnar nerve.—29th: Sensation of little and inner side of ring finger quite lost.—Aug. 13th: Spray left off.—Sept. 9th: Wound dressed and looked extremely well. Movement of the arm very free.—Oct. 4th: Some discharge from elbow; swelling of forearm and hand less. Extension, pronation, and supination limited.—13th: Made out-patient.—Nov. 17th: Readmitted for operation on ulnar nerve. As flexion and extension of the wrist and fingers and extension of elbow joint were not free, passive movement was directed to be performed by the dresser.—25th: On pressure over the cut on back of arm a sensation of pins and needles was conveyed to the little and ring fingers.—Dec. 3rd: Ulnar nerve cut down upon and traced downwards. It terminated in a bulbous extremity connected by fibrous tissue to the lower part of the nerve, and the nerve ends were bound down to the bone. The nerve ends were trimmed and united with carbolised silk suture. A straight splint was adjusted in front of the elbow and the arm was slung.—7th: Sensation had returned in ulnar side of ring finger.—Jan. 7th: Wound healed; no sensation in little finger.—14th: Constant current to ulnar nerve.—Feb. 8th: Ulnar nerve exposed again, and found united. On galvanising it the muscles of forearm supplied by it contracted. The nerve was freed from its under attachments, and the wound was sewn up.—12th: Sensation improving.—27th: Scar of incision only left. Galvanism had been continued daily. The skin over the forearm was more sensitive than over the hand.—April 21st: Flexion and extension of forearm at the elbow joint excellent. Pronation and supination could be passively performed for about half the usual range. Sensation was restored as far as the base of the little finger on the inner side of the hand. As the patient had a very useful arm and was anxious to go home he was soon afterwards discharged. The patient was shown to the members of the district branch of the British Medical Association.

Remarks by Mr. RIVINGTON.—In cases of compound fracture and compound dislocation implicating the elbow joint, the choice of the surgeon lies between an endeavour to save the limb without operation by antiseptic treatment, excision, and amputation. As amputation is reserved for the hopeless cases, the real question to be decided is usually whether excision should be performed, or whether the surgeon should trust to nature, aided by antiseptics, for the repair of the injury. In other words, the question lies between securing a stiff or a movable joint, for it is quite doubtful whether at the present day the patient runs any increased risk from submitting to the operation of primary excision in cases of bad compound fracture or dislocation. The advantages of a joint admitting, at least, of flexion and extension are so obvious that the surgeon would always endeavour to obtain the boon for the patient whenever he felt that he was not subjecting him to avoidable danger. The usual method of excision of the elbow joint adopted by surgeons is by the single straight incision through the triceps. There is another, and perhaps a better, method of excision by a single incision on the inner side through skin and fascia only, leaving the triceps untouched, and chiselling through the olecranon process and turning it aside with the attachment of the triceps. In order to obtain room for exposure of the ends of the bones the upper part of the ulna is cleared, the anconeus and fascia covering it being detached as far as may be necessary. The triceps is simply separated from the back of the humerus after the joint has been excised; the end of the olecranon may either be united to the shaft of the ulna by wire, or may be dissected out and the attachment of the triceps stitched to the fascia of the forearm. This was practically the method adopted in the foregoing case, the wound for exposure of the ends of the bones having been already made. The triceps muscle having been torn from its bony attachment, it was impossible to save the end of the olecranon, but the triceps was stitched to the fascia, and the continuity of the fascia on the outer side, the importance of which was well emphasised by Mr. Maunder, was preserved. For some time I have shown this second method of excision of the elbow to the class of operative surgery, but have not had an opportunity of practising it on the living subject, except in the case just related. The chief disadvantage, so far as I can see, consists in a freer exposure of the ulnar nerve than in the method of excision by a single median straight incision. In the latter the ulnar nerve, though felt, may not be seen at all. In the present case the ulnar nerve had been already dissected out for four or five inches, and it is, therefore, no wonder that it lost its continuity after the operation. By secondary reunion it had recovered its functions when the patient was last seen, except as regards sensation in part of the little finger.

CASE 2. *Loose cartilage in knee joint; removal; cure.*—A. L. D——, aged twenty-nine, ship's cook, was admitted in May, 1877. The patient was a Chinaman, and spoke English imperfectly. Eight months before in Japan he was laid up for nine months with some affection of the knee joint, for which some incisions were made in the knee. About four weeks before admission he noticed a lump in his left knee joint which seemed to catch him in walking, and gave him extreme pain. Shortly afterwards his knee joint became very much swollen. Several old scars were seen about his knee joint, which was enlarged and distended with synovial fluid. A foreign body about the size of a small chestnut, very freely movable in all directions, excepting posteriorly, was detected. It slipped freely from one side of the joint to the other.—May 10th: Mr. Rivington fixed the loose body with his fingers on the inner side of the internal condyle, and made an incision about two inches long over the body under the carbolic spray. Two ligatures were applied to bleeding vessels before the synovial membrane was incised. A large quantity of synovial fluid was evacuated, and the foreign body was then removed with finger and forceps. The body consisted of a flat disc of cartilage partially ossified. The synovial membrane was closed by catgut and the skin wound by silk sutures, and antiseptic dressing was applied. The joint filled again with fluid after the operation. The wound healed rapidly without suppuration, and the temperature was normal throughout. The patient was discharged before the end of the month.

CASE 3. *Post-acromial dislocation of the shoulder joint; reduction.*—J. S——, forty-seven, hammer man, was walking along a plank not a foot from the ground, empty handed, when his foot slipped and he fell to the ground. He put his right hand out to save himself, and the palm came in contact with the ground with considerable violence; the elbow joint bent, and he rolled over on to his shoulder. When he got up his hand "felt dead," but thinking that it was only bruising that would pass off, he went on working with his left hand, using the right as little as possible. However, he found the power did not come back to the arm, so he left off work. He experienced considerable difficulty in getting his coat on, and he suspected all was not right. The day following he attended at Miller's Hospital, Greenwich, where two attempts were made at reduction, during one of which the patient was anæsthetised. He was then informed that it was all right now, and was sent away. However, he was unable to use the arm the next day, and continued in this condition until he came to the London Hospital, where he was admitted twelve days after the accident. — April 16th, 1887: Present condition. The whole shoulder appears larger and more rounded than the other, the curves less abrupt. The fold of the axilla is higher on the right side. Behind appearances are more marked. The outline of the shoulder is very prominent and rounded at the back part, while there is some flattening internally. On placing the hand on this prominence and rotating the humerus at the elbow, the prominence is felt to rotate to an equal extent. There was half an inch shortening on the right side, but the left humerus had been fractured at the elbow in 1854, and the measurements are therefore put on one side as unreliable for diagnosis. As regards movement, the patient is able to put his elbow close to his side; indeed, that is the position usually

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adopted. He is able to cross his arm over his chest, but attempts to raise the arm in front are almost instantaneously checked. Abduction is also impaired. What movements there are are partly of the scapula on the chest. Extension is limited. Abduction is performed by the aid of the scapula to a great extent. The patient is unable to get his elbow behind the vertical axis of the axilla, and is unable to put his hand to his head, the back of his neck, or behind him. Rotation inwards and outwards, especially outwards, are less free than on the left side. Circumduction is also very limited. There is never much pain. Some crackling crepitus is felt on manipulation, but this is obtained with equal ease in elbow and left shoulder. The general health is good. In this condition the patient was shown to the members of the district branch of the Metropolitan Branch of the British Medical Association.—April 22nd: The patient was anæsthetised, and Mr. Rivington reduced the dislocation by means of two jack towels, one to steady the trunk, the other round the arm. With the sole in the axilla, extension was made combined with rotation. The reduction was easy, and took place without snap. The head of the bone slipped out again on rotation inwards and on carrying the arm across the chest. It was, however, easily replaced. The arm was bandaged to the trunk in the position of extension, the elbow was flexed, and the forearm fixed on the chest. In about a fortnight the patient was discharged cured.

Remarks by Mr. RIVINGTON.—The distinction made by Malgaigne of the backward dislocations as comprising two forms—sub-acromial and sub-spinous—appears to me to be just, for the symptoms attending the two varieties are essentially different. In the sub-spinous the flattening of the shoulder and prominence of the acromion are much more marked than in the sub-acromial, indeed, in the latter it may not be marked at all. Looking from the front in the present case it was not easy on cursory inspection to detect any difference between the two sides as regards the contour of the shoulder. Moreover, the elbow appears to be raised from the side in the sub-spinous, and not capable of being approximated, while in the sub-acromial it is applied or can be brought to the side. It is also stated that in the sub-spinous dislocation the axis of the bone is directed backwards, nearly horizontally. In this case the patient could not carry the elbow behind the vertical axis of the axilla. Lastly, the position of the head of the bone is different altogether. For these reasons I maintain that the two varieties should be distinguished. Doubtless they run into each other, but in typical specimens of each there are the marked differences mentioned. I do not think that the term "*sub*-acromial" is a happy one, for the head of the humerus naturally lies under the acromion, and it is from the head projecting backwards behind rather than under the acromion that the variety is produced. Hence, I have named the dislocation "post-acromial" instead of "sub-acromial." A good deal of discussion has taken place in regard to the direction of extension in dislocations of the shoulder, and some have endeavoured to connect their names with the adoption of right-angled traction, vertical traction, and the like. The intelligent surgeon will vary the direction of traction in each case according to the position of the axis of the bone and the special needs of each case. Sometimes one direction of traction will be advantageous and sometimes another, and sometimes a combination of all may be advantageous. In reducing an old dislocation of the shoulder some years ago (the case was published in THE LANCET), I varied the direction of traction by directing my assistant to move in the arc of a circle while extension was fully maintained, and I kept my arm in the axilla to act as a lever. I believe this method to be original, but I have not yet assigned a name to the method. Probably "circumductory extension" would be as good as any.

LIVERPOOL INFIRMARY.

A CASE OF CEREBELLAR ABSCESS; DEATH; NECROPSY; REMARKS.

(Under the care of Dr. MCMURRAY.)

J. W——, aged twenty-two, was brought in a cab to the workhouse on the 25th ult., at 7.30 P.M., and was taken to the waiting-room. When seen he was sitting on a form with his arms crossed, and his chin resting on his chest. His tongue was coated, eyelids drooping, pupils dilated, the right more so than the left. On raising his head, which he did with difficulty, there was internal strabismus of the right eye, which disappeared when he looked downwards. The hearing was more acute on the left than on the right side. He was unable to stand alone, but could do so when supported on each side, and could also walk when supported, but appeared not to know where he placed his feet. When in the upright position his head was thrown back and his neck and back kept rigid. When asked if he were in pain, he said, "Yes," and when asked where, he did not answer, but put his hand to his occiput. He could give no history, and did not answer any questions but the one, he seemed unable to comprehend the other questions put to him, or to collect his ideas. He was sent to the ward, and seen as soon as he was put in bed. He was then throwing his arms and legs about and putting his hands to the back of his head. He would not lie with his head on the pillow, but kept it hanging over the side of the bed. In the course of an hour he became quieter, but refused to swallow, and lay on his back with the eyes closed and his hands behind his head. At 10 P.M. he was unconscious and delirious. At 12.30 he was in the same position, but moved his head from side to side at intervals. He remained in this condition till 5 A.M., when he died.

History.—His friends could give very little information about his illness. He had been with the fishing fleet off Kinsale, and had written to his wife a fortnight previously to his admission here that he could not continue at his work much longer owing to the increasing pain in his ear. This pain he had complained of since November last. No history of discharge from the ear could be obtained. He arrived at Liverpool on the 25th ult., and during the passage remained in his berth, refusing to take anything. On arrival he was put into a cab and driven to the Sailors' Home, and then sent here.

Necropsy.—Body well nourished. No marks anywhere except those of vaccination on the left arm. On removing the skull-cap the vessels of the meninges were congested, and the meninges adherent to the superior frontal gyrus of each hemisphere; a little serous effusion on upper surface of each hemisphere. On removing the brain the vessels on the surface were congested, while the brain substance on section was paler than usual. A portion of the right hemisphere of the cerebellum was occupied by an abscess, which extended from the outer end of the corpus dentatum to the horizontal fissure, the meninges at that spot showing very little inflammation; but a small portion of the petrous bone immediately above the meatus auditorius internus was roughened, evidently from inflammation. The superior petrosal sinus was blocked up by a firm coagulum. No apparent disease of meatus. Chest muscles very dark in colour, right pleura adherent, lung bronchitic on section. Left pleura and lung healthy, but both lungs very dark in colour. Heart normal, but dark in colour. Liver enlarged and friable, dark on section. Gall-bladder contained a small quantity of bile. Spleen enlarged and almost black. Kidneys large and very dark in colour, but apparently good. Bladder contained six ounces of urine. Stomach contained half an ounce of brownish coloured fluid. Lining membrane healthy. A small quantity of fæcal matter in the small intestine; large intestine empty.

Remarks by Dr. MCMURRAY.—Although the history of this case is so imperfect, yet I think there is sufficient to show there had been disease of the ear, which set up inflammation in the petrous portion of the temporal bone, and extended to the superior petrosal sinus, causing thrombosis, that the inflammation extended from that point to the cerebellar meninges, and thence to the white substance of the cerebellum. Retraction of the head with rigidity of the muscles is a sign of cerebellar disease, but in this case the rigidity and retraction were present only when the patient was in the erect position, when sitting the head was bent forward, and when in the recumbent position, although the head was retracted it appeared to me to be due more to the patient being easier with it in that position than to contraction of the muscles, and for this reason when he placed his hands behind his head, he supported the head with his hands, and there was no rigidity of the posterior muscles of the neck. Vomiting is another sign, but there was none in this case, although it might have been present before his admission. Loss of coördinating power was present, but I do not think it could have been of long-standing; and for this reason, that it would have incapacitated him for work much sooner. The very dark

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colour of the muscles, lungs, kidneys, and other organs was remarkable; it was not due to hypostasis, but affected every portion of each organ, and yet during life there was neither cyanosis nor increased rapidity of inspiration; the weather was not warm at the time, and the post-mortem examination was made within thirty hours of death.

SAMARITAN HOSPITAL FOR WOMEN, NOTTINGHAM.

A CASE OF RADICAL CURE OF UMBILICAL HERNIA.

(Under the care of Mr. H. MICHIE.)

MRS. H—— was admitted with umbilical hernia of ten years' standing, during the last six of which it had been irreducible, and lately the patient said that she had suffered several attacks of obstruction of the bowels, with the symptoms of strangulation, these attacks occurring with increased frequency. The hernia having become strangulated, taxis having failed to reduce it, and the symptoms having become urgent, Mr. Michie performed the following operation. An incision extending from the upper to the lower border of the hernia, eleven inches long, was made down to the sac, which was then also freely laid open. The contents of the sac were the omentum, adherent to the walls of the sac, the transverse colon, the greater part of the ascending and descending colon, and small intestine, which was also adherent at several parts, some of the adhesions being very firm. A knuckle of small intestine at the lower border was constricted and of a slightly livid hue. The hernia could not be reduced. The upper margin of the umbilical opening was freely incised, the whole of the omentum removed after being ligatured in sections, the adhesions of the bowel to the sac separated, and after the bleeding, which from some parts of the bowel was considerable, had been stopped by pressure forceps and sponge pressure, the bowel was returned into the abdomen; the redundant sac and skin were removed, the margins of the umbilical opening were brought together by four deep, stout, catgut sutures, and the skin wound by fine silk. The patient has made an excellent recovery. She was not sick once after the operation; the bowels were moved every morning by a small enema of soap-and-water. The temperature remained normal throughout, and the highest pulse was 96 on the second night.

Remarks by Mr. MICHIE.—I had at first intended to treat the wound as in any ordinary abdominal section, but the patient was so stout that I had not a needle long enough to go through the whole thickness of the abdominal wall, hence the reason for using both deep and superficial sutures. No opiate was allowed either before or after the operation, an important element, I think, in the success of the case. Of course sufficient time has not yet elapsed to say that the cure is permanent, but I can see no reason why it should not be so, or to suppose that this woman will not have as much chance of freedom from a hernia as, for instance, a case of ovariotomy. In the text-books operation for strangulated umbilical hernia when the sac has been opened is said to be attended with an excessively high mortality, and one can easily understand why this should be so in a case where an operation for the radical cure has not been performed; but by carrying out at the same time some such proceedings as were adopted in the present case, we get rid of one at least, and I think two, of the great dangers. These two greatest dangers are, I feel certain, mechanical injury in effecting reduction, and entrance of discharge from the wound into the peritoneal cavity. Having determined upon such an operation, it need not give us much concern to make the incision through the constriction as free as we like. We may make it an inch or two long if we please. Now, with this free incision reduction can be effected with the greatest ease, and so we get rid of the first great danger—mechanical injury. By coaptation of the edges of the peritoneum by means of sutures we produce a radical cure, and at the same time get rid of the second great danger—discharge from the wound into the peritoneal cavity. In a case of strangulated umbilical hernia, where the taxis has failed after a reasonable trial, such a method of procedure as was adopted in this case, and which I have endeavoured to describe, appears to me to be the rational course to pursue; and when done early, before gangrene has taken place, I feel certain that such an operation is as safe as, I believe, it is sound in principle.

Medical Societies.

MANCHESTER CENTRAL MEDICAL SOCIETY.

AT a meeting of this Society on April 19th, Dr. OWEN showed an unusual case of Purpura Hæmorrhagica. The patient, a well-grown girl aged eleven years, had suffered more or less from hæmorrhages for about twelve months. Hæmorrhage from the bowel occurred first. This lasted only a few days, and had not recurred. Epistaxis followed occasionally, but during two months previously to her admission to the Clinical Hospital it had occurred daily, excepting three or four days, during which interval there was bleeding from the left ear. Bleeding from the ear had already occurred upon one day. She had never had purpuric spots upon the body, or swelling of the joints. There had been no bleeding from the mouth. Hæmophilia and purpura were entirely absent from her family history. Her mother was not hæmorrhagic. The girl was not anæmic, and the heart was healthy, and free from murmur. Upon admission she was treated with solution of arsenic, and advised to take freely of oranges and fresh vegetables. She had greatly improved under this *régime*. The special interest in this case rested on the absence of purpuric spots. Dr. Owen pointed out that mucous hæmorrhages, and especially epistaxis, frequently preceded the appearance of purpura, but that in almost every case recorded the spots, sooner or later, occurred as a striking feature of the complaint. The rarity of hæmophilia in the female, and its entire absence from the family history of the patient, excluded that disease from the diagnosis. There was no enlargement of the spleen, no anæmia, and no deterioration of the general health. It appeared impossible to place the case under any other category than that of purpura hæmorrhagica without the spots.

Mr. BISHOP showed a woman suffering from Osteitis Deformans. The bones mainly involved were both tibiæ; the femora, especially the right; the clavicles; the spine; and, but slightly, the right radius and skull. The patient was forty-nine, and had noticed the changes in her limbs for thirteen years. She attributes the results seen to falling over a cat, when, as she believes, the ankle was dislocated. The differences between osteitis deformans and rickets, as also those between it and osteomalacia, were pointed out. The woman shown, with the exception of any marked cranial enlargement, was a very good specimen of this rare disease.

Mr. BAIN read the notes of a case of Corporeal Endometritis, of which the following is an abstract:—L. C——, aged forty-three, married; has had four children and ten miscarriages. No history of syphilis, but several members of her family died of phthisis. Normally the menstrual period lasts about a week, and she loses about ten ounces. The first labour was instrumental; the child died from injuries received during delivery. The perineum was torn, but the laceration was not observed for some time after. The patient attributes all her subsequent illnesses and misery to this accident. Five consecutive miscarriages followed. Her health during this period was most indifferent. After her last miscarriage she had repeated attacks of flooding for some months. Four years ago in March she had a miscarriage. In the following July she again miscarried, and subsequently suffered from an enlarged prolapsed anteverted uterus, for which an air ball pessary was employed. The pessary produced considerable irritation. She has been more or less confined to bed ever since. When she came under Mr. Bain's care, two years ago, she was exceedingly weak and emaciated, and suffered acutely from indigestion. She had continuous backache and severe pain in the right ovarian region, and shooting down the right leg. She could not move in bed without aggravating the pain. Her menstrual periods lasted about a week, accompanied with intense pain and a profuse discharge—about a pint and a half. During menstruation her face seemed altered in appearance, and the prostration was extreme. On examination, the vagina was exquisitely sensitive. No matter how gently the finger was insinuated, it set up a severe aching, which lasted for about four hours. The cervix was enlarged, swollen, and tender, the os slightly lacerated and granular. The body of the uterus was elongated and bulky. The fundus was anteverted. The right ovary was enlarged and intensely tender. The treatment that had been

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adopted consisted of hot water injections, glycerine plugs, belladonna pessaries, tannin pessaries, lead lotion, borax and alum lotions. Mr. Bain began by applying carbolic acid to the interior of the uterus; occasionally substituting iodine for the carbolic acid. The discomfort set up by these applications increased the prostration and destroyed what little appetite the patient had, so all local applications were stopped, and tonics and ergot prescribed. She gradually improved, and she is now five months advanced in pregnancy. The sensitiveness of the vagina disappeared when the patient became pregnant.

At a meeting on May 17th, Dr. WALTER read a paper upon the Treatment of Post-Partum Hæmorrhage.

Mr. RAILTON read a paper upon the Medicinal Treatment of Epilepsy. He remarked that, although the bromides were adequate to arrest the attacks in most cases during the early stages of the disease, they were often ineffectual in cases of longer standing, or, if not actually ineffectual when administered in moderate doses, had such an injurious effect, both mentally and physically, that it became a question whether the remedy was not worse than the disease. After adducing various cases in illustration, first, of the occasional complete failure of bromide of potassium to arrest the attacks, even when given in doses reaching to an ounce and a half of the drug at a time, and, secondly, of the extreme susceptibility of some constitutions to the depressing effects of the bromides in very moderate doses, he cited instances showing the good effects to be obtained by the combination of belladonna (given in the form of Trousseau's pill) with bromide of potassium, the two drugs combined appearing to be able to arrest the attacks in every case in which they were tried, without having the slightest injurious effect upon the mind or general health. Dr. Railton recommended the pill to be given early in the morning, on waking, in doses commencing with extract of belladonna and bromide of potassium, of each a quarter of a grain, which might gradually be increased for an adult, if necessary, to a grain and a half of each, without any ill effects. The bromide might be given two or three times a day in the smallest doses, which were effectual, never exceeding one and a half drachms in the twenty-four hours.

Reviews and Notices of Books.

Hip Disease in Childhood: with special reference to its Treatment by Excision. By G. A. WRIGHT, M.B., F.R.C.S. With Forty-eight Original Woodcuts. Pp. 246. London: Longmans, Green, and Co. 1887.

HIP DISEASE is a subject of great interest, as much by reason of its pathological obscurity as on account of the difficulty of adequately treating it. It is unfortunately a disease of the poorer classes—in its severer forms almost entirely so. Under "General Considerations," our author says the influence of age is the first and most striking of the predisposing causes. But if this were really the case, would not hip disease be just as common among the better classes and among country-bred children as among the poorer and town-bred children? We are told, however, that "hip disease is enormously more common among the poorer classes, for obvious reasons: worse hygienic conditions, less care if injured, greater liability to injury, and in many cases a worse inherited constitution are sufficient to account for the excess." In this we fully coincide, and think that the "social status" rather than age should stand at the head of predisposing causes.

In discussing etiology and pathology we notice with satisfaction that the author favours the now generally accepted view that hip disease begins in the bone: "An acute, subacute, or chronic inflammation of the upper epiphysis of the femur or its neighbourhood is by far the most common condition." He summarises the published views of most leading surgeons, and discusses them critically. The cases which recover without suppuration he regards as traumatic simple synovitis. Tubercle is held to be the real lesion in the great majority of cases grafted on to or associated with progressive disease of bone, acetabulum, or femur—the latter the more frequent. This section well summarises our present views, and we can recommend its perusal and careful study. It is enriched with a number of drawings illustrative of the disease at the period of excision. The sections on symptoms, diagnosis, and prognosis are all good in their way, though they are founded largely on a hospital experience, and must therefore be taken from this standpoint.

In such a work as this, avowedly written with special reference to treatment by excision, we ought not to be disappointed that the question of treatment by rest has been somewhat disregarded. It is mentioned only to be disposed of in a few lines, and this notwithstanding the obvious fact that the author adopts and approves of the method in certain cases and at certain stages of hip disease. We think it would have been well to have differentiated a little more carefully the class of cases in which rest may be reasonably tried and persevered with. The author's experience is clearly among children of a very poor kind, in whom the reparative power is very low, and in whom disease, especially of bone, when once set up, is with difficulty arrested. As bone disease is shown to be the most frequent cause of hip disease, it follows that in a considerable proportion of cases simple rest in bed alone is inadequate treatment, even when combined with aspiration or incision into the joint. Mr. Wright criticises the results obtained at the Alexandra Hip Hospital, on which the Clinical Society's report and conclusions mainly rested, as somewhat misleading, as giving results such as may be obtained in private practice, but which are impossible in hospital practice. With this view we are inclined to agree. A considerable selection is undoubtedly made and only such cases admitted as are likely to benefit by rest.

We think Mr. Wright would have added to the value of his book if he had contrasted different forms of disease in their initial and early stages. He points out how the statistics of operation are rendered unfavourable by the fact that cases must be included which are operated upon at a stage of the disease when a really favourable issue is impossible by reason of the extent of the disease. What we want is to be able to diagnose early the cases which are likely to progress from bad to worse—cases in which rest is not an adequate treatment, and in which more radical measures will, sooner or later, be required.

The author tabulates 100 cases of excision, and in an appendix gives a summary of the cases. The reader will here find much that goes to justify both the doctrine and practice which Mr. Wright advocates in the body of the work. The book will be found useful and interesting to all those who have much to do with children's hospital work, and to such we cordially recommend it.

On Cancerous Affections of the Skin: a Treatise on Epithelioma and Rodent Ulcer. By GEORGE THIN, M.D. London: J. and A. Churchill. 1886.

IN this monograph Dr. Thin has succinctly given a *résumé* of the history, description, varieties, histology, etiology, diagnosis, and treatment of these neoplasms, and has set forth clearly his own views. He recognises the deep-seated, or infiltrating, and the superficial forms of epithelioma, but holds that the rodent ulcer should be regarded as a disease distinct from the superficial form of epithelioma. He insists that in some cases the differential diagnosis for a time is very difficult, and in some impossible at present; so that such confusion has much obscured the discussions on the nature of rodent ulcer. His views on the latter disease are well known. After pointing out its distinctive clinical features, Dr. Thin describes two markedly contrasted forms of cell grouping, the one uniformly tending to assume a cylindrical form, with giving way and disappearance of the

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enclosed connective tissue; the other in which the new cells are found in clusters of indefinite shape situated in spaces formed by the separation of the bundles of connective tissue, and in which the groups grow by the cells extending (at first in single file) between the bundles. In the latter form the columns do not penetrate the deeper layers of the cutis, where the bundles are thick and strong. He is confident that the histology of rodent ulcer will come to be recognised as specifically distinct from that of epithelioma, for the cells of the new growth have distinctive characters, and differ from those found in epithelioma in other respects than dimensions. Amongst other things, the cell protoplasm is comparatively scant. The cells never enlarge into the flat horny cells characteristic of epidermic epithelioma, never become "prickle cells," and never form true "nests," whilst there is an absence of the cells of the epidermic type which stain with eosin. Lastly, there is a comparatively small amount of cell infiltration and disorganisation in the connective tissue of the corium. Dr. Thin does not think that any satisfactory proof has been published of, nor has he been able to trace, the origin of the neoplasm from the rete mucosum, hair sheaths, or sebaceous glands; but he has twice observed appearances in the sweat glands that strongly suggest they afford the first point of departure of the growth, though cell masses of new growth were not traced in direct continuity with abnormal sweat glands. The monograph will well repay perusal.

OUR LIBRARY TABLE.

Fairlie Clarke's Manual of the Practice of Surgery. Revised and partly rewritten by ANDREW CLARK, F.R.C.S., Senior Assistant Surgeon to, and Teacher of Practical and Operative Surgery at, the Middlesex Hospital; Examiner in Surgery to the Society of Apothecaries. Fourth Edition. Illustrated by 214 Engravings on Wood. London: Henry Renshaw. 1887.—The late Mr. Fairlie Clarke's manual was well known, and there is no need to discuss now the scope of the work. In preparing a new edition Mr. Andrew Clark had an almost impossible task before him, for we deem it little short of the impossible to present the subject of surgery worthily in the small compass of this manual. But what could be done has been done, and we have no doubt the book will find favour with those students who regard brevity as the essential feature in a text-book.

Disease and Sin: a new Text-book for Medical and Divinity Students. By A MEDICAL MUSER. London: Wyman and Sons. 1886.—This book deals with a great problem; we cannot say that it solves it. The author speaks with a strange mixture of orthodoxy and freedom. He assumes and avers that all disease comes of sin—largely national sin. He would evidently apply capital punishment freely to politicians who for party ends promote petty questions and neglect great national measures for the preservation of children from inherited disease and other avoidable causes of death. He prefers the account of the Creation given in Genesis to all the speculations of Darwin. His estimate of Darwin is not satisfactory, proceeding largely on very doubtful phrenological data, charging Darwin with a lack of modesty, which appears to us more in the accuser than the accused. His main proposition that disease comes of sin is an old one, and, but for the memorable rebuke it received from the Great Teacher concerning the man that was "born blind," might be allowed to pass as a good general proposition with many most perplexing exceptions. The book is a very readable one, and carries the reader over much ground in morals, medicine, and legislation. The author condemns and praises with great freedom. He assumes much. He sometimes theorises in a most unscientific way, and passes from one question to another very incoherently. Some of his "practical" suggestions are highly impracticable, such as the holding of a coroner's inquest into every case of consumption, and the establishment of local councils. "The most urgent reform at present needed is the formation of a council in every parish, in every street, and in every village or hamlet to guard the people against all physical and moral disease .....All the inhabitants ought to be paraded for inspection before the council,..... and in case any child is found to be imperfect in any respect, a special investigation should be held, and the parents or guardians censured, unless," &c. But, with all its faults and impracticabilities, there is much in the book that may be read with advantage by those who would like to improve the world—notably by parents, legislators, and medical men, to whom the author is very complimentary.

Letters from a Mourning City (Naples, autumn, 1884). By AXEL MUNTHE. Translated from the Swedish, by MAUDE VALÉRIE WHITE. Pp. 289. London: John Murray, 1887.—These letters are from the pen of a Swedish doctor practising in Paris, who was at Rome, enjoying a holiday, in 1884, when cholera broke out with so much virulence in Naples. He immediately started for that city, with which he appears to have been previously well acquainted, to render any aid in his power to the plague-stricken people. He recorded his observations with regard to the condition of the poor and the ravages of the disease in a series of letters which appeared in the Stockholm *Dagblad*, and these have been translated into English and reprinted in their original form. We think it is to be regretted that Dr. Munthe did not carry out his intention of revising and condensing them, as there is necessarily, from the circumstances under which they were written, a considerable amount of repetition. The description he gives of the conditions under which the poor exist in Naples is painful, and must remove any feeling of surprise at the intensity of the epidemic of 1884. "According to the official statistics no less than 128,804 of these people inhabit underground dwellings and cellars. ..... As many as 9846 individuals dwell in Fondaci," which the author describes as "the most ghastly human habitations on the face of the earth." A large number are lodged in "so-called locande, where lodgers are received for the night at two and three soldi a head," and which are frightfully overcrowded; while a fourth and very numerous class "have the starry heavens above them and the sewers beneath them. This is the class of Neapolitan poor who have no home at all." Dr. Munthe speaks in strong but not unmerited terms of the vainglorious laudation bestowed by the press upon the White Cross ambulance, to the exclusion of the medical staff of the town, who were doing their duty quite as bravely. "The perpetual struggle for notoriety, the continual mention in all the newspapers of its own heroic deeds, is so striking with regard to this association that it disturbs the impression of all the great and good work it has actually accomplished." We are afraid it is not the only association of the kind to which the remark is justly applicable. The book contains some touching episodes connected with the author's work among the poor, and will amply repay perusal. Although, as we have already said, the book might have been improved by judicious revision, we have no hesitation in recommending it to our readers.

Die Pathologie und Therapie der Gelenkentzündungen. Von Professor Dr. MAX SCHÜLLER in Berlin. Wien and Leipzig: Urban und Schwarzenberg. 1887.—Dr. Max Schüller has published a short and condensed work on the pathology, etiology, and treatment of inflammation in joints. One of the opening chapters is devoted to a very good and simple classification of these joint inflammations; their causation and symptoms are then briefly dealt with, and finally the methods of treatment are described, not in detail as applied to each separate joint, but rather as to the principles involved. A very good bibliography is appended.

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Griffith's Materia Medica and Pharmacy. Third Edition. Edited and partly written by ALFRED S. GUBB, L.R.C.P., M.R.C.S. London: Baillière, Tindall, and Cox. 1887.—Griffith's Materia Medica and Pharmacy has long been a favourite with students preparing for examination. The present edition, edited and partly rewritten by Mr. Gubb, is a great improvement on its predecessors. We have examined it with attention, and find that the information it contains is accurate, and that the whole work has been thoroughly revised. The arrangement is clear, and the facts are concisely stated, and are given in a form which admits of easy reference, whilst the errors are few and unimportant. We are inclined to think that it will be popular with students.

The Cookery Primer for School and Home Use. By AGNES C. MAITLAND. Pp. 158. London: John Hogg. 1887.—This volume contains 121 recipes for the preparation of "very economical dishes, at once wholesome, appetising, and sustaining." It is intended chiefly for the use of girls attending the cooking classes in elementary schools, and for the heads of families in the labour-earning classes. The instructions are clear and easily understood. In the introduction the "hints for hard times" are very good; among these we would specially note one which merits the consideration of cooks in all classes of society. "We English people will try and cook fast, and we make up a fire to cook our dinner quickly in an hour, or perhaps much less, and use more coal in doing that than would have served, if well banked up, to keep in a little fire for three hours, and have cooked the dinner better." We take exception to the recipe for making oatmeal porridge, and would advise the authoress, in the event of a second edition of the Primer being required, to consult some old "Scotch wife" on the subject. The book is one which might be advantageously distributed by those who are interested in the promotion of the comfort of the working classes.

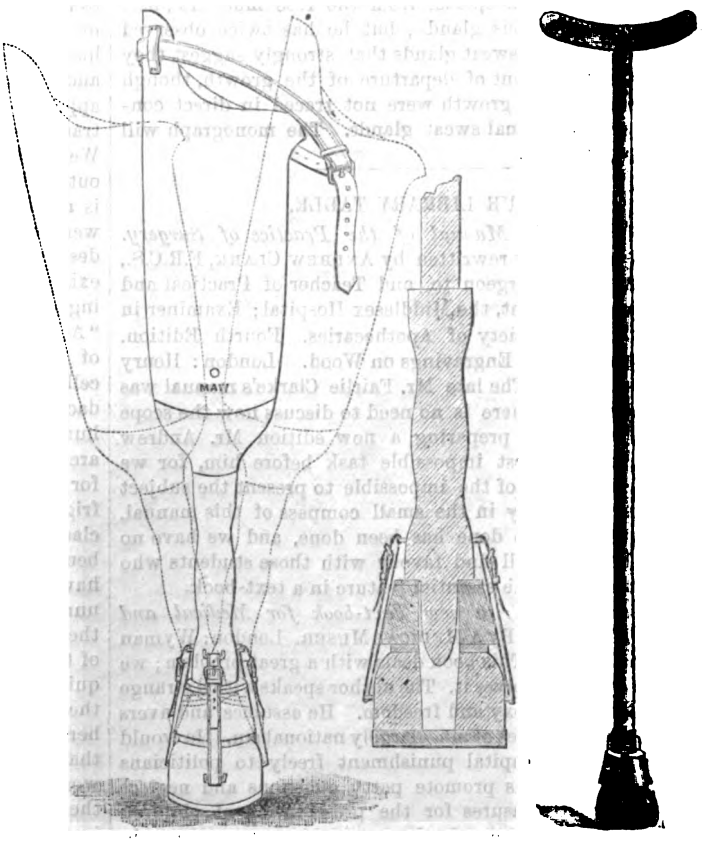
A Manual of Weights and Measures, with Rules and Tables. By OSCAR OLDBERG, Pharm.D., Professor of Pharmacy in the Illinois College of Pharmacy, &c. Second Edition, revised. Chicago: C. J. Johnson. 1887.—We are not surprised that this clear and useful little book has reached a second edition. The author has evidently a preference for the octonary or duodecimal system, but recognises the rapid increase of the decimal, and makes the best of it. His book is a carefully constructed and valuable little manual of metrology, and is well adapted for European as well as for American students. The sections on specific gravity, and the excellent tables with which the pages abound, will save much labour to those who use them.

Notes on the History of Freemasonry. By HENRY SUTHERLAND, M.D. London: John Bale and Sons.—These notes were, the author remarks in his preface, printed some years ago for distribution amongst private friends, and are now published in a larger form, with additions to them, which he believes will render the work more acceptable to his Masonic brethren. The notes do not profess to be exhaustive, but can be recommended as likely to prove interesting to those members of our profession who belong to the great Masonic body.

A NEW FORM OF ARTIFICIAL FOOT.

To the Editors of THE LANCET.

SIRS,—I should be obliged if you will allow me to draw attention to a new form of artificial foot which has been invented by a gentleman, who has been under my care, to suit the necessities of his own case. This foot or base is applicable to any form of artificial leg, and can be adapted to crutches or leg-rests. Its object is to furnish a wide basis of support which will maintain its plane and remain in contact with the ground by its whole surface in inclined positions of the leg. It adapts itself to slight irregularities of surface, and is of great advantage in walking over hilly or uneven ground. In walking it enables the wearer to carry his artificial leg parallel with the sound limb and to continue his stride well in front of the sound foot. It greatly diminishes the jarring and the noisy contact with the ground which is the common characteristic of all but the more expensive artificial legs; and for this reason it lessens the fatigue in walking and the friction at the end of the stump. The base or foot is more or less loose, and its movement is limited by three or more straps attached from it to the stem. Between the stem and the foot is inserted a thick block or ring of vulcanised rubber,



which is retained in place by the straps passing over it and by a peg which projects from the lower end of the stem through the central hole in the rubber block, and a short distance into a cavity in the upper part of the footpiece. The straps are left somewhat loose so as to allow of some movement between the stem and the foot. But any excessive movement is arrested by the tightening up of one or other of the straps. The accompanying illustrations will, I hope, supply the deficiencies of my description.

I am, Sirs, yours, obediently,

July, 1887. THOMAS SMITH.

P.S.—I am informed by Messrs. Maw and Son that the Willis' Leg and Willis' Crutches can be supplied at a comparatively small additional cost, and that the difference in price between these and the ordinary crutches and legs would vary from eight to ten shillings in the case of crutches, and twelve to eighteen shillings for legs.

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THE LANCET.

LONDON: SATURDAY, JULY 23, 1887.

FEW classes of men stand in more urgent need of an annual holiday than the members of the medical profession. Their work is very constant, very exacting, always anxious, often in the highest degree laborious and harassing. Just in proportion to the scantiness of their daily leisure is the necessity for an adequate annual rest. Yet this necessity is but too commonly overlooked or trifled with, and not rarely the doctor works on year by year until an imminent failure of health compels the adoption of a practice which might at an earlier date have proved both a source of much pleasure and an efficient prophylactic against premature breakdown. How often do we inculcate upon our patients the folly of working on until the overwrought machine gives way at some point; how commonly does our practice belie our precepts. No doubt the difficulties which beset the medical man in arranging for a holiday are in many respects peculiarly embarrassing, and the busy practitioner is tempted to think that the rather chequered pleasures of a hastily snatched holiday are dearly bought at the cost of the unusual worry and vexation which sometimes ensue upon his return home. But to argue in this way is to follow a short-sighted philosophy. The man who wishes to make the most of his powers and to give himself the chance of long life must learn to rest, and to rest betimes, before body and brain have suffered irremediable damage. Work is but one side of life, rest and amusement form the other, and each is essential for the man who would be

"In se ipso totus, teres, atque rotundus."

If the annals of medical holidays were faithfully recorded, we suspect there would be some curious revelations. Everyone knows the story of the 'bus-man who always spent his holiday on the box of a fellow 'bus-driver, and it might easily be paralleled by instances of medical men who leave the routine of daily practice only to maintain the old associations by attending the clinique of some distinguished metropolitan or continental physician. We are far from entirely condemning this practice; yet it lacks one essential of a perfect holiday—viz., change of mental habit as well as of physical environment. The same objection might be urged against another favourite form of medical holiday, otherwise commendable—viz., attendance upon one of our periodical congresses and associations. Such a holiday has the great advantages of affording the means of interchange of ideas with our medical brethren, of stimulating professional zeal, and of forming or renewing valuable friendships; but, except incidentally, it does not afford much mental distraction or intellectual refreshment. We would urge our brethren in arranging for such congresses to moderate their professional zeal, to limit the output of scientific material, to encourage the social aspects of such gatherings, and to allow ample intervals for rest and physical recreation. By such means these periodical assemblies may serve many useful ends, and more nearly approximate to the ideal of a perfect holiday.

The medical holiday is characterised more commonly by activity than by rest. Medical men pursue for the most part an unresting life and their holiday usually partakes of this strenuous character. We know a provincial physician in extensive practice whose daily life is one of unremitting toil, and whose favourite practice it is to escape for a few days to London, and amuse himself by simply walking about the streets. It is a serious question, however, whether such a form of holiday is a practice to be imitated, or rather an evidence of abnormal mental restlessness to be combated and overcome. Yet we think that for the most part medical men do not take to a holiday of idle dawdling at a watering-place or spa, and that, if the general health be fairly sound, the holiday tour is rather to be recommended. It will be a great additional advantage if the tour consist, not of aimless posting from cathedral to picture-gallery, but of a visit to a locality possessing some features of medical interest. Auvergne, with its celebrated spas, Mont Dore, Royat, and La Bourboule; the Rhine, with Wiesbaden, Ems, and Homburg; the Pyrenees, with Luchon, Cauterets, and Bagnères de Bigorre; the Alps, with the consumptive sanatoria, Davos, Wiesen, St. Moritz, and Maloja—such are a few out of the many districts which might be indicated with favour. At such places the medical man will be sure of pleasant professional company, and may without conscious mental effort acquire a large amount of information which may afterwards be turned to practical account. Year by year patients of the wealthier classes more and more incline to foreign travel as a means of health preservation or health restoration; and the physician who can recommend sanatoria from personal knowledge, and not from mere vague hearsay statements, is sure to find his advice practically beneficial and proportionately esteemed. The observations and inquiries which the medical man may institute upon such a tour have the double advantage of being of real professional utility, while at the same time they are sufficiently removed from the ordinary groove of his daily home routine to constitute a means of genuine intellectual distraction. He must be prepared to receive much conflicting evidence, and to hear many statements not purely disinterested, as the battle of the health-resorts waxes daily more fierce, and derives an additional bitterness from the fact that it is a real struggle for existence. Yet amid the din of jarring claims the intelligent observer may always learn much that is worth knowing. To hotel-keepers, guides, cicerones, *et hoc genus omne*, he will, of course, turn a deaf ear; local medical men would be more than human if their prepossessions and interests did not occasionally warp their judgment; but in the large numbers of visitors at health resorts there is always to be found an intelligent jury daily sitting in judgment upon the merits of each locality, and quite ready to impart their conclusions to the inquiring stranger. Such evidence is no doubt individually of small worth, but its cumulative value may be considerable. The results of treatment are freely canvassed at health resorts, and cannot be effectually hid. Then, again, the medical tourist can easily satisfy himself regarding such vital points as water supply, drainage, hotel accommodation, objects and scenes of interest, facility of access, &c.

To the medical man who desires a really restful holid-

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nothing is better than a yachting cruise, if it can be obtained under conditions favourable to comfort. No doubt an indifferent ship, persistent bad weather, or obstinate sea-sickness may rob it of all satisfaction and utility, but apart from such unhappy accidents it is of great value. Very pleasant forms of this species of holiday may be secured by cruises round the British Islands, to the fjords of Norway, or to the shores of the Mediterranean. In this way shelter from exceptionally bad weather may be obtained at will, and the tedium of the sea may be varied by occasional excursions on land. As regards sea-sickness, we must own that it still remains an *opprobrium medicinæ*. There is no drug, in our opinion, which can be relied upon to exercise any certain influence in restraining its onset or shortening its course, and medicinal treatment seems usually hurtful rather than the reverse. Bromides, nitrite of amyl, chloral, chloroform, and a host of other remedies enjoy, or have enjoyed, a short-lived and precarious popularity, but few practical men feel any real reliance upon them. Probably the best line of treatment for anyone of known susceptibility to the malady is somewhat as follows: Let him before embarking eat a full meal largely composed of meats and bread; let him assume the recumbent position immediately on going on board, and use freely some sweet-smelling substance to combat the evil odours so common on shipboard; let him fix a flannel bandage round the abdomen, and draw it as tight as possible. If these measures fail to prevent the onset of the affection, some acid fruit should be sucked when nausea first threatens. All stimulants are hurtful at this stage. If there has been a severe bout of sickness, the patient should be carried on deck, placed upon a reclining-chair, and encouraged to eat some lean meat and bread. If there be severe suffering and great prostration, iced champagne is the best remedy.

We have only glanced at a few of the possible forms of medical holiday. Many medical men know their own tastes and needs best themselves, and require no suggestions or advice. Some of these find what they need in a fortnight upon the moors, or in the Engadine, or traversing the wilds of Norway in a carriole. After all, a holiday, like everything else, must be judged by its results. That holiday is best which yields the best fruits, and every general rule has a host of exceptions based on peculiarities of individual taste and temperament. If we return from a holiday physically refreshed, mentally recreated, and with a stored-up host of pleasant associations and agreeable memories on which we can hereafter draw at will, then our holiday has been a success. In proportion as these results are imperfectly attained, or entirely missed, must the doctor's holiday be pronounced a doubtful experiment, or even a complete failure.

THE growing conviction, which in not a few instances amounts to certainty, that infective disease is due to the presence in the organism of pathogenic bacteria, cannot fail to be accompanied by a feeling of impotence to deal with such disease at its root. We are not unmindful of the important measures of prophylaxis which are forcibly suggested by this aspect of the etiology of disease; and it would be easy to adduce evidence of the great stimulus which it has imparted to sanitation. But something more than this is demanded at the hands of those whose aim in life is to heal diseases. Until the term "preventable" comes to be something more than a mere phrase (and in the complex conditions of modern life it is safe to say that the time is far distant when it will be so) we are bound to seek for measures of treatment which shall be effectual in proportion as they attack the foundation of disease. We all know how far the pathologist has outstripped the therapeutist, and there are some who doubt whether the means will ever be available to cope successfully with the minute agencies that attack with too much success the human body, which has to resist their influence as best it may. Pushed to their ultimate limit, diseases that owe their origin to bacterial invasion are the expression of the internecine warfare between the cells of the organism and the foreign intruders. Is it conceivable, then, that by any remedial agents we can hope to destroy the bacterial host, and thus abort the disease, without detriment to the delicate structure of which the body is composed, or the risk of deranging the nutritional processes of its elements? And yet the attempt is made, and will continue to be made, thanks to the rooted belief in the efficacy of medicinal measures. On all sides we hear of bacillicidal methods, but the results are not commensurate with the faith that inspires them or the plausibility of the grounds on which their employment is based. We question whether any real advance will be made in this direction; and yet we by no means despair of a way being found out of the morass. That way lies, we think, in affording to the organism support sufficient to cope with the bacterial hordes—in other words, to strengthen the powers of vital resistance. This is no new doctrine, for it is in perfect harmony with the practice, which was owing so largely to GRAVES, now invariably followed in the treatment of fevers.

That, in addition to our present resources, there are other means whereby the vital resistance of the cells of the body can be stimulated is highly probable. One such method has been lately the subject of experiment, with results that may be worth recounting. It is the method which was introduced by FEHLEISEN in his demonstration that injections of the erysipelas streptococcus could cure lupus, and more widely known through CANTANI in his assertions that inhalations of the bacterium termo could cure phthisis. CANTANI's method has proved a failure, and if it alone were in question there would be no more to say on the subject. But, as Dr. PAWLOWSKY (VIRCHOW's *Archiv*, t. 108) points out, one great error of CANTANI's method was the obvious confusion of many species of bacteria under the head of bacterium termo, and we may add also the reliance solely upon the antagonism of the two organisms, the bacterium termo and the tubercular bacillus, as sufficient to cause the destruction of the latter. Dr. PAWLOWSKY himself demonstrates that it is in no such direct way that one micro-organism can be made to annul the effects of the other. EMMERICH has stated that when animals were inoculated with anthrax bacilli and with erysipelas cocci, either simultaneously or at a short interval, the result was either a prolongation of life beyond the term at which the anthrax bacillus would have caused death, or even a complete neutralisation of the anthrax virus with the recovery of the animal. Seeing that anthrax *per se* is invariably

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fatal, these statements were sufficiently remarkable to warrant further investigation. Such an investigation was undertaken by Dr. PAWLOWSKY on Professor VIRCHOW'S suggestion, and in addition to testing the counteracting influence of the streptococcus erysipelatis, he experimented in the same way with bacillus prodigiosus, staphylococcus aureus, and FRIEDLÄNDER'S diplococcus pneumoniæ. The experiments consisted mostly in the simultaneous injection of the cultures either beneath the skin or directly into the veins, but sometimes a short interval was allowed to elapse between the primary infection with anthrax and the injection of the neutralising culture. Without entering into the details of these experiments, it may be said that PAWLOWSKY concludes from them in favour of the possibility of curing anthrax by inoculation with other bacterial forms. He found that local anthrax could be cured by subcutaneous injection of micro-organisms at the spot or around it; and that the diplococcus pneumoniæ was the most powerful antagonist to the anthrax bacilli. The next in order was the staphylococcus aureus, which operates in destroying the bacilli by the severe suppuration it excites; but as a remedial agent it is out of the question on account of its virulence. Even the injection of bacillus prodigiosus—a non-pathogenic organism—sufficed in some instances to annul the effect of the anthrax virus, especially if two injections of the former were made and local suppuration excited. Least in efficacy appears to have been the streptococcus erysipelatis—the organism which EMMERICH had made use of in his experiments. As regards the cure of general anthrax, the results of intravenous injection of the above micro-organisms were not so satisfactory. The most favourable results were those obtained by means of the diplococcus pneumoniæ, when this was injected simultaneously with the anthrax bacillus. But even when the injection of the diplococcus followed after an interval upon that of the bacillus, the animal's life was prolonged beyond the term usual in cases of pure anthrax-inoculation. Intravenous injection of the staphylococcus aureus was of no avail; the animals so treated dying either of anthrax or pyæmia, according as one or other of the micro-organisms prevailed. Lastly, similar injections of the erysipelas coccus or of the bacillus prodigiosus failed to prevent the animals dying from anthrax, although apparently prolonging life.

In spite of these somewhat variable results, there yet seems sufficient evidence for the belief that anthrax can be successfully treated by such a method; yet the reason of its success was found to lie less in the directly antagonistic action of one micro-organism upon the other, than in the effect produced upon the cells of the animal body by the introduction of a new micro-organism. This, at any rate, seems to follow from the microscopical examination of the organs of animals so treated. For example, Dr. PAWLOWSKY found in the body of a rabbit which died four days after the intravenous injection of anthrax bacilli, and then of bacillus prodigiosus, bacilli more or less disintegrated within the substance of the large splenic corpuscles, as well as within the cells of the lungs, liver, and kidneys. Indeed, speaking generally, in animals dying as late as four days after inoculation, there were fewer bacilli found outside the cells than within them; and whilst the former bacilli retained their natural characters, the latter were invariably more or less disintegrated. The longer the animal survived the more marked did this state of things arise, so that cells became crowded with bacilli in various stages of degeneration. These appearances were considered as highly confirmatory of METSCHNIKOFF'S doctrine of phagocytes, which in the spleen are represented by "macrophagi," and in other organs by migrated leucocytes. The explanation, then, of the antidotal effect of these bacterial injections would seem to lie in the phagocytes being stimulated to increased resistance, as well as reinforced in number, so that they were the better able to resist the intrusion of anthrax bacilli, and even to overcome them. Such is the latest conclusion arrived at in bacterio-therapy; it is by no means the last, for indeed the subject has hardly yet been studied. Its further development will be watched with interest, although the time for any practical application is probably far distant.

WE are now again approaching the period for those autumnal scientific conferences at which subjects involving important medical considerations are often fully discussed, and we are forcibly reminded of the singular and habitual absence of delegates officially appointed by the British Government when compared with those who represent other European and American States. And yet at some of these conferences the subjects discussed have more importance for this country than for any other. Take, for example, the Sixth International Congress on Hygiene (which is to assemble in September next at Vienna), and the French congress at Havre next month, to which representatives of all naval and mercantile marine interests are invited. At each of these gatherings questions are to be discussed relating to the preparation of international codes for dealing with epidemics, and leaders in the antiquated system of quarantine and allied measures are sent by their respective Governments to secure the acceptance by the congresses of certain definite resolutions laying it down that quarantine is the proper method for preventing the spread of cholera. Dr. PROUST seems to have a roving commission from the French Government in this respect, and he will appear at both the conferences named, having in charge the resolutions which were brought forward in Rome by the French delegation, and which are based upon the assumption that all that Europe needs to save her from cholera is to hold in check for a period of five days all vessels which are suspected or infected. At the last international conference on hygiene the same views were trotted out, no one was delegated from this country to show the fallacies underlying them, and hence conclusions inimical to the true interests of public health were passed on one-sided evidence alone. We do not know what steps Her Majesty's Government are taking to have British views on this important medical question properly set forth at Vienna and at Havre; but we feel confident that the policy of apparent indifference to what Europe at present thinks is not the one best calculated to secure British interests. At Havre, especially, we hope some properly authorised medical delegate will be sent out by the Government, so that British representatives of the shipping

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interests will not be there unsupported in any effort they may find it necessary to make to withstand conclusions already cut and dried by the French delegates, and which are to be submitted to the gathering as having already been accepted by other scientific and medical congresses. The attempt which was made in Rome in 1885 to impose quarantine in an international form upon Europe altogether broke down because of the attitude of the medical delegates from this country, and the conference having adjourned has never since met to give its sanction to the retrograde views which were set forth. But in the absence of delegates capable of showing the hollowness of mere quarantine restrictions, conference after conference is passing resolutions advocating these restrictions, and the representatives of British shipping stand a good chance, unless they see that the French medical delegates are fairly met by British delegates having knowledge of the medical aspects of this question, to be outvoted in this important subject; and then it will go forth that even a conference dealing with the maintenance of international health from the naval and marine point of view has also advocated the quarantine system. We trust that all who are concerned in opposing unnecessary and vexatious restrictions on commerce, and in frustrating useless attempts to control disease in connexion with shipping, will demand that this country shall be properly represented when these questions are discussed by professedly international gatherings.

THE teaching of Anatomy is a matter of such great importance, that we note with much satisfaction the remarks made on the subject at the commencement of the first business meeting of the Anatomical Society of Great Britain and Ireland held on the 7th of this month. *A propos* of his paper on the Brachialis Anticus Muscle, Professor MACALISTER of Cambridge remarked on the necessity of restricting the teaching of anatomy as much as possible to the points of obviously real value—the points, that is, which have some practical bearing or some morphological or developmental interest. These, he said, should be thrown into relief, and the student's attention fixed upon them, instead of being scattered promiscuously over the whole field, and no clear and defined marks left impressed upon his memory. Professor HUMPHRY, who was in the chair, welcomed these remarks with great pleasure, as forming the best possible introduction to the work of the Society, and hoped they would be duly borne in mind not only by teachers but also by examiners. They were peculiarly appropriate, he felt, at the present time, when the range of subjects of medical education and examination had become so great that it was scarcely possible for the average student to master them in the period that can reasonably be allotted to the preparation for the medical profession. The ill effect shows itself especially in the amount of detail, great in each subject and far too great in the aggregate, which leads to overloading the student beyond his carrying powers, and cramming him quite out of proportion to his digestive capacity, with the necessary result that he is wearied with his work, loses, or perhaps never acquires, interest in it, and forgets nearly as fast as he learns. Nothing, as he remarked, so much as this tends to make our "Jacks" "dull boys," and to swell the rejection lists to the serious dimensions they have now attained. This applies, Professor HUMPHRY said not to medical study alone, but along the whole line of education, general as well as special, and has done more than any other thing to repress thoughtfulness and pleasure in study. That which interests is remembered; and it is the thoughts associated with facts which gives them their interest. Each fact should be regarded as a peg to hang a thought on, and should be regarded as rather a useless article of furniture unless some thought is hung upon it. What is needed is not to burden our students with a mass of facts, but to associate important facts with ideas in such a manner as will impart interest to them, as will make the student perceive the value of them as part of his stock of knowledge, and will enable him to hold them firmly. We entirely concur in these remarks, and are glad that the initiation of the Anatomical Society has had the effect of evoking them. Notwithstanding the greatly increased opportunities for the study of anatomy which have recently been gained, we very much doubt whether the study itself is really carried on better than it used to be. Difficulty, we know, often gives impulse to effort, and scarcity of material enhances the value of it and the care with which it is utilised; but the supply is scarcely yet sufficient to produce any such ill effect. It may be that the students, perhaps from superfluity of assistance, of guidance, and of training, become too much dependent upon others and too little upon themselves. Hence they take less trouble to work out things for themselves, and therefore have less deep and enduring impressions and firm grasp, though they may receive a larger amount of impressions which are superficial and proportionately evanescent; or it may be, as Prof. MACALISTER seems to imply, that there is too much anatomy taught, and too little well taught. Whatever the cause may be, the anatomical status of candidates at the final examinations, when practical knowledge is chiefly required, is such as to demand the serious attention of teachers. The rejections at the primary examinations are startling enough; but of those who have passed this ordeal, far too many fail to retain a sufficient amount of valuable knowledge to meet the final test. We may hope that the new inspectors of examinations appointed by the Medical Council will direct their attention to this point, and be able to furnish some wise suggestions to teachers and examiners, as well as to students, of anatomy.

THE *Echo* of July 15th reports an inquest held by Mr. WYNNE E. BAXTER, touching the death of ELIZABETH RAINE, aged eighty-seven, a single woman, in the St. George's Workhouse, Old Gravel-lane, Wapping, which seems to us worthy of some attention. The deceased went into the workhouse on the 4th inst., in her usual health, according to the evidence of the principal witness, JAMES JOSEPH RAINE, her nephew. On the 10th inst. (Sunday) his wife and daughter called to see the deceased and she was then very ill and unconscious. On the Monday the nephew called. He was not allowed to see the deceased, but was told she would be all right in a day or two. His wife had told him his aunt was bruised and strapped in bed. On inquiring the cause of this he was told by the doctor it was to keep her in bed. On the Tuesday he received a card saying she was very ill

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and wished to see him. He went and found her unconscious. He was anxious to call in an independent medical opinion, but this, according to the ordinary rules of pauper attendance, was denied. On the 13th he called and found that death had occurred, and was told that a card had been sent to him. One of the inmates, MARY LEARY, deposed to being awakened on the night of Tuesday, the 5th inst., by a noise, and then to seeing the deceased lying on the floor near the fireplace, with her arms across the fender. She tried to help the deceased up, but could not do so, and called in the nurse, who got the patient into bed, and left another woman, an inmate, to watch her for the rest of the night. No explanations from the deceased were obtained. Other evidence continued the history of the case, its removal to the infirmary, where the deceased became delirious and restive, and was gently strapped in bed. Mr. ARTHUR MICKLE, the assistant resident medical officer, stated that the deceased had died from exhaustion, the result of acute senile mania. He did not think that the fall had anything to do with the attack, but that possibly the change from the home to the workhouse might. The nephew asked the coroner if he should not have been allowed to call in an independent medical man. The coroner said he could not allow that question to be argued, and that a patient coming into a workhouse must be treated by the doctor provided by the ratepayers.

Such are the simple facts of this case, which, by the courtesy of Mr. MICKLE, we are able to verify. The evidence seems to have been all given in a straightforward and candid manner, and we do not see that much blame attaches to any individual. But we cannot say that the illustration of the system which the facts afford satisfies us. It is not satisfactory to find that after a patient of eighty-seven has been found near the fireplace, and on the floor and helpless, in the night, she is left to be looked after only by a fellow-pauper almost as helpless as herself. Not only so, but after a nurse had been called and had got the patient into bed, there is no record of the medical officer being summoned.

The case raises, too, an important question to which we often revert—the system of medical attendance in workhouses, and, for that matter, of paupers outside. Here is a patient at the advanced age of eighty-seven under the necessity of becoming the inmate of a workhouse. Is it to be settled that to all the other painful incidents of such a position, and whatever the acuteness and severity of her disease, she is to be denied the advantage of a second medical opinion and the presence of her friends? This is to convert a workhouse into a prison. The coroner, naturally enough, could not allow the time of the jury to be taken up in discussing this question. But it is eminently one for discussion. Our workhouses, especially in London, are becoming more and more the residence of hundreds of poor people, with all the accumulating diseases of age and poverty upon them. Mr. MICKLE not unnaturally assumed that the very removal to the workhouse was a factor in the production of acute mania that was fatal in nine days. And it requires little of either experience or imagination to create the belief that there is a mass of painful and complicated disease in our workhouses, adding another pang to the bitterness of pauperism, which ought at any rate to be the subject of consideration. We will not believe that the ratepayers would refuse to consider some means whereby such sufferers might have the benefit of more than one opinion, either at their cost or that of friends. This is no matter of complaint against medical officers of workhouses, whom we know to be most capable men, and incapable of any unkindness. But do we not all know, in the more hopeless ages and circumstances of life, and when the limitations of art become so painfully apparent, how pleasant it is to see more than one representative of that profession which more than any other is looked to to mitigate suffering and to stimulate hope? We shall not cease to maintain that the thousands who inhabit our workhouses, and their friends, are entitled to know that in the mental and physical disease which afflicts them every resource of medicine and surgery is available for their relief.

Annotations.

"Ne quid nimis."

DEGREES FOR LONDON STUDENTS.

A PETITION has been presented to Her Majesty in Council by University College, London, and King's College, London, praying for the granting of a charter of incorporation "to a body of persons to be appointed as is described in the petition to be a University in and for the London district, having power to grant degrees in the faculties of Arts, Science, and Medicine, with power to add other faculties." The petition has been referred to a committee of the Privy Council, and will be considered on Sept. 1st. This petition has also been sent to the authorities of the London medical schools, who, it is proposed, shall join the medical departments of the two Colleges in forming the Medical Faculty of the proposed University, the faculties of Arts and Science being reserved for King's and University Colleges only. It has also been forwarded to the Royal Colleges of Physicians and Surgeons, with a hope that they may even yet combine in one application. As, however, the delegates of the two Royal Colleges have appointed a sub-committee to draw up a further statement of the claims upon which they urge the granting of a degree in medicine only, it seems highly improbable that any joint action will be taken. Obviously this statement and the draft charter of the joint Royal Colleges should be presented to Her Majesty in Council as soon as possible, for if the petition and charter from King's and University Colleges are to be considered on September 1st, whilst the others are left over to a further date, and the vacation intervenes, a speedy solution of the question, which in the interests of students and the profession is so desirable, cannot be arrived at. It is surely possible that the academical and professional sides of the question can still be fused and a teaching university for London established. Almost every reason that was put forward for the formation of the Victoria University applies to the necessity for a local teaching university in the metropolis.

ARMY ESTIMATES SELECT COMMITTEE.

AT the last two meetings of the Select Committee on the Army and Navy Estimates, Sir Thomas Crawford, the Director-General of the Army Medical Service, was under examination. He considered that the work of the department was sufficient to occupy its staff, and that it was at times overworked. There was no department in the public service in which the mortality was so great. The present rate of pay to medical officers was not too large, as lower rates would not attract a good class of men. It had b considered necessary to increase their pay, as it was f

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impossible to obtain a sufficient number of candidates to fill vacancies on the terms offered. Under the new system and the present rates of pay no difficulty had been experienced in getting a fair supply of good candidates. He was of opinion that it was a wise measure to allow medical officers to retire, if they wished, at forty-five (it would be more correct to say after twenty years' service), with a pension of £1 per diem. During his time a hundred officers had so retired, but of these, twenty were completely worn out. He believed the proportion of medical officers was about 3 to every 1000 men, and did not consider this proportion excessive, as many duties were imposed upon them which required them to be in constant attendance upon the troops. He was of opinion that all medical officers actually in the field should be military officers, but a considerable proportion of the others should be civilians. He thought the school at Netley was of great value. He pointed out that the health of the British army had improved most enormously during a period of years, and that improvement was continuous and still going on. In India there had been a steady progress in the direction of improving the general condition of the soldier, and this had served to bring about a reduction in the mortality. Such appears to be the general outline of the evidence; when it is published in detail there are several of the questions raised to which we may find it necessary to direct special attention.

MYOPIA IN GERMAN SCHOOLS.

THAT the educational system of our Teutonic kinsmen is responsible for the impaired vision so widely, nay, increasingly prevalent in the Fatherland has till the other day been accepted as a demonstrated fact—accepted, moreover, by the majority of German school legislators as calling for immediate and drastic reform. Dr. J. Stilling, however, the distinguished professor of ophthalmic medicine in the University of Strasburg, joins issue with these authorities, and in a vigorously argued and well-written treatise ("Untersuchungen über die Entstehung der Kurzsichtigkeit"—"Researches on the Origin of Short-sightedness") he seeks to prove—1st, that myopia is not a peculiarly German ailment, any more than it is a specific concomitant of modern high-class culture; 2nd, that myopia is in general no misfortune at all, but in the vast majority of cases a quite harmless deformation of the eye—a deformation not inherited as such, but conditioned by certain anatomical relations of skull development; 3rd and finally, that the school system of his country is not to be lightly made responsible for evils which have not yet been scientifically proved against it. On the other hand, he thinks, the panic into which the indictment has thrown the community, general and educational, the consequent prejudice to school work, and the needless burdening of the State and the taxpayer for the carrying out of crude experiments, constitute a far graver evil than the disadvantages due to myopia itself. Professor Stilling makes an important contribution to the history of medicine when, in support of his first plea, he goes back to Aristotle, and from that physiologist downwards proceeds to show that myopia has in all times been known to cultivated nations as a harmless defect, while in the Middle Ages knights-errant who happened to be short-sighted had helmets specially adapted to assist their vision. Was their defect, he ironically inquired, due to any school system or intellectual over-pressure? Mercuriale, the eminent Italian physician of the sixteenth century, remarked that while Italy had so many short-sighted people the Germans had few or none. "Cur in Italia," he asks, "tot videamus quorum oculi visusque sunt adeo offensi? In Flandria, in Bohemia, in Germania parcos videbitis qui ob visus offensionis cogantur ocularia gerere"; and then he proceeds to account for the phenomenon by the greater devotion to Venus and Bacchus on the part of Italy—an argument which Professor Stilling will not admit. A modern school-reformer in Germany would say that Italy at that time was what Germany has long been—the land of the studious, of those addicted to eye-exhausting pursuits. Professor Stilling, however, is as little satisfied with this explanation as with Mercuriale's, and proceeds to point out that there are two distinct kinds of myopia—the myopia of the diseased eye, with which work of any kind, school-work included, has nothing to do, and the myopia dependent on the formation of the eye, which is itself conditioned by the structure of the eye-cavity, or, in other words, by the cranial development. Donders himself, who opened the campaign against short-sightedness as a product of the school system, maintained that every myopic eye is an eye diseased *(jedes myopische Auge ein Krankes Auge sei)*, has yet had to avow that if he had the power to banish myoia pout of the world he would not exercise it. Near-work *(Nahearbeit)* is, in fact, better performed by this type of eye than by the normal one; but near-work of a far severer kind than any demanded in schools is daily performed by watchmakers, who, as a class, Professor Stilling maintains, are not short-sighted. The Strasburg professor's treatise has yet to run the gauntlet of many rival ophthalmologists, particularly among his compatriots, some of whom have announced their forthcoming criticisms; but his views are well worthy of consideration, not only from the acknowledged eminence of their author, but of the peculiarly pressing nature of the controversy which has evoked them.

THE STATE OF THE THAMES.

AT a recent meeting of the Common Council the present disgraceful and dangerous state of the Thames was once more discussed. Mr. E. G. Wood spoke of a large portion of the river as a huge sewer, and Deputy Saunders, who represents the Corporation on the Metropolitan Board of Works, admitted the evil, and even went so far as to confess his fear that it would never be effectually remedied "until the main drainage outfalls had been removed to a far greater distance down the river." The Board is spending enormous sums for chemicals, and is preparing for a still more enormous expense for permanent works of precipitation at the present outfall. But, as we have often pointed out, no true solution of the difficulty is as yet contemplated. The pertinacity of the Board in resisting the mass of evidence before it, and clinging to the present outfalls, is amazing. All the money that is spent on them will be thrown away, for common sense must inevitably prevail in the end, and a simple and practical remedy has repeatedly been suggested. There is, indeed, but one real remedy that is possible. The strongly expressed advice of the Metropolitan Sewage Discharge Commissioners must, sooner or later, be adopted. The sewage must go down to Canvey Island, or some other suitable spot in Sea Reach, and there be defecated, filtered through the land, and only thrown into the river as a clear and innocuous effluent.

TREATMENT OF DROPSY BY PERMANENT BATHS.

IN the course of a paper *(Berl. Klin. Woch.*, 1887, No. 29); upon the use of permanent baths (at a temperature of about 95° F.), L. Riess, after giving instances of their value in cases of spinal disease and injury, adduces some rather remarkable facts of their efficacy in the treatment of dropsy, whether cardiac or renal. These cases are often complicated with bedsores, erysipelas, and gangrene, for which such treatment would be suitable, but he says that he long withheld it because of the idea that cardiac or pulmonary disease would be a contra-indication to its employment. However, in 1879, in a case of extreme cardiac dropsy (mitral and

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aortic disease) with considerable erysipelas and cutaneous gangrene of the legs, he determined to try the effect of the permanent bath as a last resort, not without some misgiving lest the immersion should increase the dyspnœa and dropsy. The result proved quite the reverse, for a rapid improvement took place, and when, after having been in the bath a fortnight, the patient returned to bed, the dropsy and other severe symptoms had disappeared. Since then Riess has adopted the procedure in a large number of dropsical cases, and invariably with benefit, the dropsy in most cases (whether renal or cardiac) diminishing within the first forty-eight hours in a striking degree. The quantity of urine is not increased *pari passu*, so that it is suggested that the effect of the permanent bath is to increase the functional activity of the skin, which is contrary to the prevalent notion. The good results obtained in cases of chronic rheumatism so treated are also mentioned, and it is held that the application of the method is practically very simple, it being necessary of course to allow the patient to lie comfortably suspended in a hammock, and to place a thick woollen covering over the bath to retain heat as much as possible. At first it is well to allow the patient to leave the bath at night, but as he gets more used to it he may spend days and nights in it with much comfort both to himself and his attendants.

BONE-SETTERS.

THE untimely death of Mr. Hutton by accidental poisoning has given to a considerable portion of the public press an opportunity for lauding the practice of bone-setters in general and that of Mr. Hutton in particular. To judge from the panegyrics of several leading papers, it would seem that they were bent on the apotheosis of quacks and the canonising of "irregular practitioners." The adage "De mortuis nil nisi bonum" is on most grounds and occasions an admirable one; but, be it remembered, there is a duty owing to the living as well as to the dead, and we should be shrinking from what we consider a paramount responsibility were we to leave unnoticed certain articles recently made public, as we suppose, for the guidance of future sufferers from accidental injuries. Some years ago Sir James Paget gave to the medical profession a record of his experience of "cases that bone-setters cure." Therein may be found a detailed account of sprains, dislocations, and muscular inhibition of movement that may be and often are benefited or removed by the free and ready method of handling habitually practised by bone-setters. The pain and disability caused by a displaced tendon or a locked joint, and the stiffness due to adhesion bands, are appropriately treated by forced movements. At the same time the force requires to be tempered with discretion suggested by the patient's age, constitutional state, and other circumstances, which can only be properly appreciated by one who has received a careful training in surgery and the allied branches of the medical art. By a happy chance rude and rough exertion on the part of the manipulator may suffice to restore lost power and mobility to a crippled limb, and no doubt many such cases occur to the bone-setter. These are the cases that are signalised as triumphs, and find their way into the chronicles of wondrous cures. But what of the failures and disasters that make up the complement of "irregular practice"? We may be sure that their authors do not publish them, and that the victim-patients are only too glad to conceal their chagrin and the consequences of their misplaced confidence. The ancient Greek warriors hung up their shields on return from their wars as votive offerings to the gods for safe deliverance from the perils of battle. A contemporary philosopher gave a wise reproof when he [illegible] are the shields of those who did not return?" The same reasoning in different terms might aptly be applied to the subject under review: Here are the successes, but where are the martyrs to operative audacity? There are few medical institutions that could not furnish a ghastly array of cases where life has been sacrificed or the utility of a limb destroyed by the ruthless treatment of the bone-setter. One example may suffice for illustration. A bone-setter was applied to for the diagnosis and cure of "a bad shoulder." He discovered the inevitable "dislocation" and wrenched the joint, perchance with the strength of three ordinary men. The patient had a malignant tumour of the upper end of the humerus. Unfortunately the ignorant, but trusting, sufferer expects to be told he has a sprain, or a sinew out, or the like. Unhappily, too, for the cause of science and truth, there is too firm a ground for his expectancy. He may be pretty sure that he will be satisfied on this head; and so it is that a thousand and one cases of slight moment are falsely or wrongly described; and when in the course of time nature, in spite of the violence she has received, effects a cure, the result is spoken of as phenomenal. In one instance a renowned provincial bone-setter told a man that his finger was dislocated, whereas to our knowledge it was a case simply of a tendon severed by a knife. The finger was forcibly flexed and extended, a liniment ordered, and the wound healed, but to this day the finger is straight, stiff, and useless, simply because no attention was paid to position. We suppose it is the charm pertaining to mystery that makes the public refuse "to incline to the traditions of experience" or "to the methods of learning." It is difficult to convince a man of the truth against his inclination; and "in spite of the wisdom of sages, men's actions are not governed by their convictions."

A CHOLERA WARNING.

THE Registrar-General's return for the week ending July 16th supplies information which, together with the announcement of maintained cholera in Italy, should be taken as a warning to this country. The deaths which are included in the group of diarrhœa, dysentery, and so-called cholera amounted in London to 526, being 86 above the corrected average. Indeed, as regards diarrhœa, the leap in the last six weeks has been from 9 to 312, including 265 deaths of infants under one year of age. Although the causes of infantile diarrhœa are not yet fully understood, yet one thing at least is known, and that is, that there is a distinct tendency to diarrhœa fatality in districts which are liable to the spread of imported cholera. Under these circumstances, all sanitary authorities should endeavour energetically to cope with every condition tending to exceptional diarrhœa prevalence.

A CAUSE OF TYPHOID FEVER.

DISCUSSING the distribution of typhoid fever in Oldham, Dr. Niven, the medical officer of health, refers to the well-known tendency of this disease to prevail in the colder rather than in the warmer months. In the case of his district he interprets it by explaining that there is a general influence in operation which is for the most part combined with influences acting specially in the winter months. That general influence he describes as either the admission of sewer air into houses by means of defective drain arrangements, or the action of polluted subsoil water, or the two combined. Open doors and windows in summer reduce to a minimum the evils thus resulting. But in the winter, injurious emanations are drawn into dwellings by the aid of internal warmth and of fires, and the foul air is penned in by reason of closed doors and windows. This explanation has often been referred to by various officers of health, and the circumstances described must be regarded as having

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an important bearing both upon typhoid fever and other conditions of health. Ventilation of houses is as much needed in winter as in summer, and we should like to see a bye-law which requires every house to be built on a site covered with a layer of good cement concrete everywhere adopted and carried out. By such means alone can the suction into dwellings of subsoil air, which is always open to suspicion, be prevented.

SUMMER DRINKS.

A CONTINUANCE of fine weather and of warm sunshine, in spite of the rain upon St. Swithin's Day and occasionally since, implies a continuance of thirst as a necessary consequence of the free perspiration which is likely to attend all muscular movement. In England tropical heat is so rare that we cannot afford to dislocate all business engagements during the middle of the day, and we suffer accordingly; our ceaseless activity is followed by copious perspiration; this in turn by rapid evaporation and its ordinary risks; then, owing to the enormous drain of water from the system by the skin, the various secretions, more particularly those of the mucous and salivary glands, are diminished, and dryness of the mouth and thirst result. There is naturally great temptation to slake thirst whenever practicable, and to re-establish the balance of fluid in circulation. How this can best be effected becomes therefore a question of great importance at the present season. Many persons doubtless increase their discomfort by injudiciously drinking quantities of cold water, which serve to stimulate the sweat glands and so to increase the amount of loss by perspiration. While the "cold-water cure" is to be deprecated, it should not be forgotten that it is equally, if not more foolish to indulge freely in alcoholic stimulants. For the time they certainly allay thirst by stimulating the salivary glands, but after absorption they promote relaxation of the arterioles and increase the rapidity of the heart's action, and are hence followed by a speedy "Nemesis." The cooling influence of acids should be remembered in times of high temperature. The acid employed will necessarily be largely a matter of taste. Most persons would shrink from the use of dilute solutions of citric or tartaric acid, and yet many find relief from a beverage composed of diluted and unsweetened lemon juice. Should cider be found to agree with the digestion, a very pleasant summer drink may be compounded of equal parts of cider and of any pure form of effervescing water, the Hereford or rough cider being, as a rule, more palatable than the sweetened forms. Cold tea has many adherents, but it is worth noting that it should be poured out while still hot, and not allowed to stand to cool in contact with the leaves, since under these conditions, the astringent properties become more completely dissolved, and the tea becomes less palatable and more likely to disorder digestion. Tea has, however, its disadvantages, the chief undoubtedly being the amount of wakefulness produced by it when taken late at night. With regard to iced drinks, it should be borne in mind that the refreshing sense of coolness resulting from their employment in bulk is speedily followed by reaction. This is less felt when a cardiac tonic is employed in this form—as, for example, the iced coffee so commonly provided at afternoon parties. "American drinks," also, are to be employed only in great moderation and with caution, being liable to induce catarrh of the stomach during the period of reaction following the primary chill. Of the so-called "temperance drinks" and of the more common lemonade and ginger beer there is little to be said, provided that the purity of their source can be assured; it is, indeed, on this account that we would urge the employment of the more troublesome but infinitely safer home-made lemonade, prepared with boiling water, and rendered more agreeable by the subsequent addition of any pure effervescing water. Sugar should not be added in any quantity, as it evolves so much heat during oxidation. It is curious to note that the French, who in hot weather so carefully and wisely avoid alcohol, overlook this influence of sugar, and indulge freely in summer drinks of syrups and *eau sucrée*.

ACUTE PROGRESSIVE POLYMYOSITIS.

IN the current issue of the *Fortschritte der Medicin* (1887, No. 14), Professor Unverricht summarises the facts observed by himself and Drs. Hepp and Wagner in three separate cases of the rare affection, primary acute myositis. His own case was recorded in 1881, and he has not met with another since. The case was that of a bricklayer, twenty-four years of age, who was attacked with rheumatoid pains in the thighs and joints. An urticarial eruption on the face was followed by inflammatory swelling of the muscles and connective tissue of the face and limbs. The muscles were extremely tender, so that the patient could barely move. The trunk muscles were affected later, and then the laryngeal and pharyngeal muscles, so that deglutition became almost, and finally quite, impossible. The thoracic muscles were lastly attacked, pneumonia developed, and the patient died from asphyxia after an illness of barely six weeks' duration. The urine had been free from albumen and sugar; there was profuse sweating, and moderate fever. Trichinosis was suspected during life; an exploratory examination, however, of a portion of the deltoid revealed myositis, but no trichinæ. The post-mortem examination confirmed this, nearly all the voluntary muscles being attacked, the extensors of the limbs being most affected. The muscle had a speckled appearance, pale and grey streaks mingled with dark-red hæmorrhagic spots in its substance, which was brittle and œdematous The subcutaneous tissue was also œdematous. The tongue, diaphragm, ocular muscles, and heart were quite intact. The spleen was markedly swollen. No trichinæ were found in a large number of specimens of the muscles, which presented all forms and stages of degeneration, breaking up into fibrils and discs, with cloudy swelling and waxy degeneration, and in places fatty degeneration. The interstitial tissue was infiltrated with round cells, and in places the engorged vessels were surrounded by hæmorrhage. The spinal cord and peripheral nerves were free from changes. Dr. Hepp's case, published this year, was that of a woman, of previous good health, who had for some time felt unwell, when she was attacked with a rash and sore throat. A week later appeared rheumatic pains in the back, and then in the limbs, succeeded by dense œdema. Transitory œdema of the face occurred, leaving behind some swelling of the eyelids. The muscles became tonically contracted and rigid, and there occurred profuse sweating, scanty secretion of urine, insomnia, and increasing weakness. The contraction was so extreme that movements were very limited, and then succeeded cramp and paresis of the muscles of the neck, limbs, and palate. But mobility was retained in the ocular and facial muscles, as well as of the tongue, and the diaphragm, heart, and bladder remained unaffected. The patient died after eleven weeks' illness from intercurrent broncho-pneumonia. In this case also there were splenic swelling and fever. The muscles were pale, like those of the rabbit or of fish, rigid, friable, and infiltrated with serum. Hyaline degeneration of the fibres was found in various stages, but there was barely any interstitial inflammation. In this case the inflammation was almost wholly parenchymatous. Dr. Wagner's case was that of a female cook, thirty-four years of age, the subject of chronic phthisis, who was attacked with pains in the back and thighs, followed by stiffness and tenderness in the neck, shoulders, wrists, and legs. There was slight œdema of the hands, forearms,

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and legs, which increased to a great degree. An erysipelatous rash appeared on the arms, but passed off together with some of the swelling, so that the arms improved in their mobility. There was considerable fever, and attacks of dyspnœa attributable to involvement of the chest muscles. Death occurred about two months from the onset of pain. Myositic changes were found in nearly all the voluntary muscles. The diaphragm, tongue, ocular muscles, and heart were again unaffected; and no lesions were found in the nervous system. Professor Unverricht points out the close resemblance which these cases bear to one another: in the presence of fever, splenic swelling and œdema, the marked inflammatory nature of the muscular lesion, the preferential involvement of the limb muscles, the progressive course of the disease, which finally involves the muscles of deglutition and respiration, the immunity of the muscles of the eye, heart, tongue, and diaphragm, the occurrence in each case of an urticarial or erysipelatous rash, and finally the mode of death. These characters justify, he thinks, the term "polymyositis acuta progressiva," as descriptive of a distinct disease.

ADVANCE AUSTRALIA.

MANY things have concurred recently to direct the attention of Englishmen at home to the flourishing colony which has already made the Anglo-Saxon race pre-eminent in the southern hemisphere. That attention cannot fail to be arrested by Victoria, and the whole continent may well be content to have its progress measured by the record which Victoria shows. According to the very interesting report which has just been sent home by Sir H. B. Loch, this has been the first among the Australasian colonies to attain to the number of one million of inhabitants. This point was reached in March of last year, New South Wales being then nearly 100,000 behind. But by this time this distinction is no longer peculiar to Victoria, with which the mother colony of New South Wales maintains a keen competition. The rate of growth in a population such as that of Victoria is, of course, considerably higher than the rate of growth in our own country. It is, however, worthy of note that what may be called the domestic increase—that is to say, the increase resulting from excess of births over deaths—is nearly the same at both ends of the terrestrial diameter. It is estimated at 1·3 per cent. for England and at 1·6 per cent. for Victoria. The balance of emigration and immigration, however, reduces this growth with us by about a fifth of 1 per cent., so that the net annual increase is not much more than 1·1 in the 100. The tide which thus flows from our shores sets towards the colonies, and from this source Victoria derives an addition to her numbers equal to that of the domestic increment, bringing up her total annual addition to population to just over 3 per cent. From an analysis of the ages at marriage of the contracting parties, it appears that the habits of the colonists are markedly different from those of the mother country. This difference is, indeed, exhibited by the bridegrooms rather than by the brides. In Australia, as here, the favoured age for women lies between twenty-one and twenty-five years, whereas with us bridegrooms are most numerous at the same period of life, in Victoria the greatest number is found between the ages of twenty-five and thirty. This is easily understood. The men who emigrate are [illegible] single men, and, on the other hand, the men who [illegible] matrimonial alliances have usually little desire or temptation to seek their fortunes under distant skies. It is interesting to note in this connexion that the delay on the part of the men does not appear to involve any diminution of fecundity, the domestic rate of increase being, as we have shown, slightly above the domestic increase in the British islands. But this point requires for its complete elucidation a statement, which the present report does not furnish, of the proportion of the married to the unmarried population. In the record of mortality the reader of Sir H. B. Loch's report is struck by the apparent mildness of some disorders which are among the most formidable scourges of our own population. Thus bronchitis, which at home exacts a larger number of victims than does consumption, is satisfied in Victoria with fewer than one-half of this proportion. In some measure this may be due to the smaller relative number of old persons in the Victorian community, but it is probably attributable in a still larger degree to the more even climate of that favoured land. Its mild July winter counts for much in this connexion. On the other hand, the perils which peculiarly beset vigorous life are much more serious there than here. Thus fatal accidents are twice as frequent relatively in the colony as at home. "But things like that, you know, must be," and will never counteract or seriously impair the progress of an advancing state.

GERMAN LEGISLATION REGARDING POISONOUS COLOURS.

A MEASURE has just received the Imperial assent in Germany which prohibits the use of colours injurious to health in the preparation of articles of food or confectionery. The substances indicated are colours and colour preparations containing antimony, arsenic, barium, lead, cadmium, copper, quicksilver, uranium, zinc, tin, gamboge, coraline, or picric acid, power being given to the Imperial Chancellor to frame detailed regulations as to the tests to be employed for detecting the presence of arsenic and tin. The covering used for holding or wrapping the articles in question are subject to the above general regulations, but exceptions are made for sulphate of barium, coloured baryta lacquers (free from carbonate of barium), chrome oxide, copper, tin, zinc, and their alloys (when used as metallic colours), cinnabar, oxide of tin, sulphuret of tin (when used in mosaic gilding), and colours burnt into the glass, glaze, or enamel of the receptacles alluded to, as well as those used in painting the outside of packages, &c., composed of impermeable substances. The prohibition of the first-named group of noxious ingredients extends (with exceptions generally corresponding with those already named) to cosmetic preparations, or dyes used for the skin, hair, or mouth, as well as to toys, picture books, flowerpot frames, &c. Special restrictions against the use of arsenic are made with regard to printing and lithographic work upon the objects already specified, as well as with respect to wall-paper, carpets, furniture stuffs, paints, &c.; a small maximum quantity being permitted in textile articles.

DRUNKENNESS AT HOME AND ABROAD.

WHEN so many less momentous subjects are the topic for discussion in International and Colonial Congresses, it is gratifying to learn that we have at length such a Congress for the consideration of Inebriety, or what we prefer to call drunkenness. Dr. Norman Kerr delivered the opening address of the first meeting at the Westminster Town Hall on the 6th inst., and a short report will be found in our issue of July 9th at page 70. It is lamentable to find that in all civilised countries this vice—or, as the Congress prefers to call it, this disease—is so prevalent. The most educated nations—Scotland, Germany, France—are as deeply affected as others; and what is sadder still, they are the most blameworthy in carrying the *materies morbi* to uncivilised peoples, which are being demoralised and destroyed by drink. Our own colonies are drinking badly. Men of authority and medical experience say that in Australia our fellow-subjects drink far beyond anything in this country, and beyond their own potations twenty years ago. Chevalier Max Proskowetz de Proskowmarstorff stated at the Congress

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that in Austria drunkenness was increasing everywhere on a dangerous scale. Dr. Petithan of Liège reported alcoholism in Belgium to be increasing with frightful rapidity. Everywhere there are temperance reformers and noble men who set a splendid example of sobriety and self-denial. The leaders of medicine everywhere by their pathological and medical studies demonstrate the injury done by alcohol to the essential organs of the body—heart, liver, kidneys, brain, and bladder. What is to be done against a disease so deep and a vice so fascinating? Dr. T. D. Crothers thinks that in the United States the time is not far distant when the drunkard will be taken from his home and from the street and quarantined in special hospitals. The inadequate Habitual Drunkards Bill of our own country is about to expire, and a few weak attempts at strengthening it are to be made. But these are not radical remedies. Another suggestion at the Congress was that schoolchildren should be taught the effects of drink on health and national welfare. This is to be commended. Mere general intelligence is not so much a safeguard as might have been expected. Specific information drilled into the young of all the European schools seems loudly called for. The medical profession can do much. Statesmen and Royal Families have a grave responsibility brought home to them by Canon Farrar in a heavy indictment in this month's *Contemporary Review*, entitled "Africa and the Drink Trade," which is sad reading for the countrymen of Livingstone and Stanley. England, Germany—especially Germany—and the United States, the chief representatives of that religion of which Channing said, "Christianity is the mighty power before which intemperance is to fall," are pouring rum and other spirits into Africa as fast as their heartless traders can do it, without restraint from their rulers at home, and against the piteous cry of the hapless people and chiefs of the country, who feel that it will destroy them, and that it is a worse curse than the slave trade, which our fathers did so much to exterminate.

PALMER v. MALLET.

THE judgment of Mr. Justice Chitty in this case, of which we gave our readers a report on the 9th inst. (p. 93), has been made the subject of an appeal, and although the decision of Mr. Justice Chitty has been upheld, the discussion has incidentally raised one or two points of special interest to medical men. Lord Justice Cotton, in delivering judgment, laid down the rule as to the construction of a covenant entered into with two persons in the general sense that if the parties who have a common interest take what may be called divisible shares in the common interest, each of them is, to the extent of his share, entitled to sue upon the covenant without joining the other as co-plaintiff. Were the case otherwise—that is to say, if the parties interested in common had an *indivisible interest*,—they would be unable to enforce it separately. In the present case, Mr. Mallet had entered into an agreement not to "carry on the profession of medicine" in Newtown or within a radius of ten miles round it. The agreement was made with Messrs. Palmer and Hall, who were practising in partnership, and the breach complained of consisted in Mr. Mallet acting as assistant to Mr. Hall after a dissolution of the partnership. In these circumstances it was held that Mr. Palmer had a separate interest in the covenant, which entitled him to an injunction restraining its breach, notwithstanding that his ex-partner, who had of course a common interest with himself in the covenant, was a party to the transaction which he impugned. The case is a strong one, and evidently covers a very large number of others; indeed, it probably includes most of those matters which are in actual practice made the subjects of formal agreement. Another point of some interest upon which a judicial ruling was obtained was the true construction of the expression "carry on the profession," &c. The Court said that the word "profession" was more *emphatic* than "business," and pointed to the nature of the work done rather than to the mode of remuneration. It is abundantly plain that this is good sense, and we are glad to find that it is good law. Etymologically and in common use the word "profession" means that which a man openly says that he can or will do. Thus Cicero: "Ego me omnium provinciarum defensorem esse profitebor." To wrest it from this meaning and make it signify the immediate source of a man's income, so that the practitioner who receives fees is following a profession, while the practitioner who accepts a stipend is doing something other than following a profession, would not only have been a piece of very unlearned folly, but also a gross injustice to those who in good faith had used the term in binding instruments.

AN INFIRMARY FOR THE GORDON BOYS' HOME.

THE Committee of the Gordon Boys' Home have recently issued a special appeal for public assistance in establishing an infirmary in connexion with the new buildings in course of erection at Chobham. We have all along taken a lively interest in the progress of this appropriate and most useful memorial, and we are confident that no apology is needed from us in directing once more the attention of our readers to that part of the arrangements which must possess in their eyes an additional claim to support on account of its professional interest. It is but necessary that an establishment which is intended to accommodate temporarily about 160 boys, and may in the future be extended so as to give house room to a much larger number, should contain within it the means of treating apart and effectually such cases of sickness as may from time to time occur. In view of the possible outbreak of infectious disease it is very desirable that a small separate hospital should form part of its plan of structure, and the application just made in the name of the committee is therefore only reasonable. We learn that £500 has been already subscribed, and we feel sure that an equal sum which is asked for in order to defray the estimated cost of the proposed infirmary will not be sought in vain at the hands of Gordon's countrymen.

DISLOCATION OF THE SEMILUNAR BONE INTO THE PALM.

M. ALBERTIN, prosector to the Faculty of Medicine of Lyons, describes in *La Province Médicale* a case in which the semilunar bone was completely dislocated forwards, and some experiments he subsequently made in order to arrive at an explanation of this rare form of luxation. The only recorded cases of dislocation of the semilunar that M. Albertin has found in medical literature are the five instances collected in Hamilton's work, which include the cases of Messrs. Erichsen, Holmes, and Taaffe. Of these five cases three were palmar and two dorsal dislocations. The Lyons case was that of a workman who fell from a height of about twenty-five feet; he struck the ground with the palm of the left hand, which he had instinctively stretched out. He felt a violent pain, and then became unconscious. When examined at the Hôtel Dieu the semilunar bone was found protruding through the skin of the palm in which a rent had been torn. The bone was movable, being only held by some ligamentous remnants. Professor Poncet enlarged the existing cutaneous aperture and removed the bone. The wound was then disinfected, and a counter-opening made In spite of careful antiseptic treatment the patient succumbed in about a week's time with symptoms of tetanus. Unfortunately, the friends resolutely refused to allow a post-mortem examination to be made. In order to study

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the conditions under which luxations of the semilunar bone can take place, M. Albertin prosecuted a large number of experiments in Professor Testut's laboratory on eighteen subjects of various ages and of both sexes. He found himself, however, quite unable to produce the dislocation either by blows on the hand when the forearm was fixed, or on the forearm when the hand was fixed, or by violent extension of the hand. The only injury produced was fracture of the lower end of the radius. The conclusion come to by M. Albertin was that the dislocation of the semilunar is, as a rule, prevented by the ligament which binds its palmar surface to the radius, and which, if it remain intact, as it usually does, allows the radius to be fractured rather than the semilunar to leave its place as keystone of the carpal arch. In exceptional cases M. Albertin supposes that this ligament may be very weak, and that then the semilunar may be forced out of its place while the radius remains whole.

KASHMIR MISSION HOSPITAL.

THE native state of Kashmir, or Cashmere, as it is less correctly spelt, is to be congratulated on its possession of a hospital, where much good work, especially of a surgical character, is being done. The medical officers, Mr. Arthur Neve and his brother Dr. E. F. Neve, who are medical missionaries connected with the Church Missionary Society, performed during 1886 no less than 262 major and 596 minor operations, with only two deaths. The affection which may be considered as peculiar to Kashmir, and which has been described by Drs. Elmslie and Maxwell—viz., epithelioma of the abdomen and thigh due to the habit of carrying earthenware pots, or *kangris*, containing burning embers next the skin,—would appear from the report before us to be much less common than it formerly was, as the excisions of these tumours only number twenty-two, whereas several years ago these cases bore a very considerable proportion to the total number of operations. The number of cataracts operated on was twenty-two, of which only three gave unsatisfactory results. The skull was trephined once for epilepsy, the result being some improvement. Stone is not nearly so common in Kashmir as in many parts of the plains. In former years several months would sometimes elapse without a single stone case presenting itself. During 1886 only four cases of vesical calculus were operated on—all successfully,—two by litholapaxy, one by perineal and one by supra-pubic lithotomy. Nerve-stretching was done fourteen times, all the cases being "improved;" twelve of these were cases of leprosy, one was a case of multiple sclerosis, and one of anæsthesia of the limbs. Radical operations for hernia were performed eleven times, complete success being obtained in ten instances. The two fatal cases were a large abscess and a penetrating wound of the abdomen. No abdominal sections were performed.

CONTAGIOUS DISEASES ACQUIRED IN SHAVING.

A CASE which was recently decided in a County Court may serve as a caution to barbers and hair-dressers, who are in danger of forgetting their responsibilities in respect of contagious disease, while it should instruct the public as to some obscure but unavoidable risks to which they are liable. A man who was in the habit of being shaved every Saturday evening at the very modest cost of three-halfpence, was sensible on a certain Sunday of an unaccountable irritation in the skin of his face. He consulted a neighbouring practitioner, who pronounced his trouble to be "parasitic barbers' itch." One form of *sycosis menti*, it will be remembered, is due to the presence of the parasite of ringworm, and, like other cases in which the seats of hair-growth are affected by this troublesome pest, is very intractable. This, doubtless, was the character of the disease in question in the case before us; and the decision of the judge, which was not arrived at without considerable hesitation, held that the barber was guilty of having infected his client by means of a dirty razor, brush, or towel. We confess that this judgment is, to our mind, by no means a clear one. Of direct proof of culpable neglect on the barber's part there was none. At the same time, no other possible source of contagion appears to have been suggested, and certainly the facts that the face was the part affected, and that at the cost a cleanly renewal of shaving materials for each customer was well-nigh impossible, must invest the verdict with whatever support is derivable from circumstantial evidence. If, therefore, we grant that the materials used were not clean, to which of them should blame be specially attached? It seems to us far less likely that the razor was accountable than that either the soap or towel was so, the first-mentioned being so much more easily cleansed. With a view to the prevention of such accidents in future, it seems, therefore, advisable that all barbers should follow the rule already observed by the better class of that fraternity, and in place of using soap in the block form, employ a soap-cream, a little of which can be set apart for each customer. The provision of separate towels and brushes in each case is at least equally desirable, even though it entail an extra halfpenny in the charge.

BRITISH ADMINISTRATION IN WESTERN AFRICA.

IT is told of Zachary Macaulay, father of the distinguished essayist and historian, who was for many years British Governor at Sierra Leone, that his equanimity was never known to be disturbed except when someone ventured the opinion that Western Africa was insalubrious. In spite, however, of the genial Scotchman's championship the unfavourable opinion has continued to this day, and assuredly not without reason. A highly interesting series of reports from the British agents in the West African settlements has just been laid before Parliament, and certainly the state of facts disclosed does but little credit to the British administration of the local government. The following pungent comment, for instance, by Mr. T. D. MacCarthy on the condition of Accra ought not to lie buried in the depths of a parliamentary return. "I cannot help remarking," says he, "and no one can deny, that our system here is an utterly selfish one with regard to the water supply; for whilst the official public are, and, as a rule, always have been, well supplied with pure water for all purposes, the wants of the general public in that respect have been comparatively ignored. . . . . As constituted sanitary officer of this colony, however, and knowing, as I do, the evils in bodily health which accrue to the natives from drinking the foul and brackish water which they do, I earnestly appeal to the Governor's sense of justice and humanity to deal promptly and in a liberal manner with this important question." The urgency of the necessity to which Mr. MacCarthy alludes is irresistibly demonstrated by his description of the bathing pond at Accra. "The water is of a vivid green, turbid, and otherwise filthy." Yet it seems that the native population enjoys no better facilities than these disgusting pools afford. "For the want of public latrines they are compelled to take advantage of the shelter of every bush and old ruin they find at hand; and so, for want of a moderate water supply, the poor creatures are forced to wash their bodies in these stagnant ponds." The only comment which the Governor makes, in transmitting this report, upon the sanitary officer's demand is that some action was taken some time ago towards constructing a rain-water reservoir of a capacity to supply about a pint and a half of water daily to every head of the population. It may afford some measure of the absolutely ridiculous inadequacy of this proposal to say that

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the people of Calcutta receive fifteen gallons per head per day. We trust that this matter will not be suffered to remain here, but that, by questions in Parliament or otherwise, pressure will be put upon the Government in order to save the British Administration from the disgrace of sitting by with folded hands in the presence of such a dire necessity as this.

THE AMŒBÆ OF DYSENTERIC STOOLS.

DR. O. UPLAVICI, from an extensive series of observations on dysenteric stools, has come to the conclusion that bacteria, though they are to be detected in large numbers and of many varieties in the evacuations of dysenteric patients, are nevertheless not the cause of the disease. He made out nineteen different micro-organisms, but not one of them was constant. It was otherwise, however, with amœbiform masses which were present in each of the sixty cases of dysentery, some of them of the acute and some of the chronic form, which he examined. These amœbæ have been described by various writers. The first observer to notice them appears to have been Loesh of St. Petersburg, who mentions having found them in a case of dysentery in 1875, since which time Leuckart, Koch, Grassi, Cunningham, Normand, and more especially the Bohemian professor, Dr. Hlava, and Kartulis of Alexandria, have paid considerable attention to these curious masses of protoplasm, both of the two last-named observers having recognised the casual relationship of these bodies to the disease. The observations of Professor Hlava were referred to in THE LANCET of March 19th. Dr. Kartulis found amœbæ in every case to the number of 150 in which he examined the stools, and he entirely failed to find them in the stools of patients suffering from other diseases, such as typhoid fever and phthisis. He was unable to cause the amœbæ to propagate in any medium, and he injected them into the intestines of two pigs and a rabbit without result. Professor Loesh, however, had succeeded in getting them to multiply in one dog out of four into which he injected them. Dr. Uplavici has now prosecuted this line of research with better results. He injected fresh stools containing amœbæ into the rectums of seventeen dogs, and in two cases succeeded in producing dysentery with multiplication of amœbæ. In four cats out of six experimented on positive results were obtained, but no effects were produced on eight rabbits, two fowls, and six guinea-pigs. In one case of dysentery "giant amœbæ" were found, which, when introduced into a cat, were found in the stools.

THE PURITY OF DRINKING FOUNTAINS.

A FEW weeks ago we drew attention to the view maintained by several veterinary surgeons respecting the propagation of glanders by means of public horse-troughs, and we referred to the suggestion that by maintaining a constant flow of water this possibility would be reduced to a minimum. More lately mention has been made in the public press of the necessity of cleansing the interior of drinking fountains in case the common supply-pipes or cisterns within them should in course of time become unwholesome. The danger in this case, however, exists, we should say, rather in theory than in fact—that is to say, if the purity of the primary water supply can be relied on. Public fountains probably, without exception, are supplied from the main water supply. They are consequently not exposed to those unhealthy influences contained in sewer air by which the water supply of private dwellings is so often polluted. Certainly nothing but good could result from regularly cleansing the interior of any such fountain. Traces of earthy deposit would thus be removed, and assurance against contagion made doubly sure. If in any district the main water supply did happen to become impure, as in the case of cholera epidemics, such measures of purification would be absolutely necessary.

A LIBERAL PHYSICIAN AND THE JUBILEE.

THERE is still room for more device in the way of liberality in the Jubilee year, not for mere purposes of charity, but with a view of stimulating science and research and accomplishment of all kinds. We are happy to record a most creditable example in the case of a member of our own profession, who, though since graduation in Edinburgh he has become a dignitary of the Brazilian Empire, where he has been long resident, has not forgotten his native land and his *alma mater*, with all their great claims on the affection of their prosperous children. The *Aberdeen Herald* enumerates as follows the munificent gifts of Dr. Robert Halliday Gunning, who graduated in Edinburgh in 1816, writing a thesis on the "Nature and Treatment of Pulmonary Consumption." Happy the nation and the university that so treat their sons as to keep alive in them, forty years after, sentiments of refined patriotism and affection, to which such gifts testify:—

"1. To the Council of the Royal Society of Edinburgh—a triennial prize of £105, to be named 'The Victoria Jubilee Prize for the Advancement of Science.' 2. To the Council of the Society of Antiquaries of Scotland—£40 yearly, or £120 every three years, as they may prefer, to be named 'The Victoria Jubilee Gift,' the object of the founder being to assist experts to travel, with the view of 'examining other collections, and keeping the Edinburgh Museum as completely furnished with information and examples as possible.' 3. To the Senatus of the University of Edinburgh—£200 per annum, to provide eleven post-graduation triennial prizes of £50 each. These are to be named the Monro, Sir Charles Bell, Edward Forbes, Hutton Balfour, Joseph Black, Christison, Lister, Gregory, John Thomson, Simpson, and Alison prizes, and are to be administered by the Senatus—the incumbent of the chair in connexion with which the prize is to be awarded having a wide choice in the subjects of examination. 4. To the Royal College of Physicians of Edinburgh—£100 triennially, for a prize to bear the title 'Dr. Gunning's Cullen Prize for the greatest benefit done to Practical Medicine.' 5. To the Royal College of Surgeons of Edinburgh—£120 triennially, for a prize to be called 'The Liston Victoria Jubilee Prize,' which shall be open to all Fellows and Licentiates of the College, and shall be awarded for the greatest benefit done to Practical Surgery. 6. To the Edinburgh Association for the University Education of Women—£40 annually, for a bursary to be called 'The Victoria Jubilee Bursary.' In addition to the above, Dr. Gunning has intimated, through Lord M'Laren, a gift of £100 for the Ben Nevis Observatory. There are also gifts of £50 to each of four home mission stations in Edinburgh."

CHOLERA IN SOUTHERN ITALY.

UP to July 15th the amount of cholera in Southern Italy and Sicily was not very large, apprehensions of an extension of the disease having led to some exaggeration as to the extent of the mishief. But since then a decided increase has taken place, especially at Catania, where fifteen deaths occurred on the 16th, and where some twelve to fifteen deaths have occurred daily since then. The Angelo Custode and San Berillo quarters of the town present the conditions most favourable to further diffusion of the infection, they being in a terribly dirty state. Several cases of cholera have also occurred in Francofronte and Paterno, in the province of Catania, and five cases are reported from Grotte, in the province of Caltanisetta. Up to the 20th instant no fresh news had been received as to the outbreak in Calabria, on the main land.

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MEDICAL MEN AND PHARMACISTS.

THE Belgian Medical Federation having received a complaint from the Pharmaceutical Association with reference to some animadversions made at a previous session on a number of pharmacists who had, as was averred, trenched unduly upon the province of medical men by doing a prescribing business, a somewhat warm discussion took place, which made it plain that, though the federation had no wish as a body to prefer a formal complaint against the pharmacists, still they as individuals felt disposed to agree with the sentiments which had given umbrage. It was remarked that, if the pharmacists had complained of any doctors infringing their prerogative by openly or in an unauthorised manner selling drugs, the federation, so far from seeking to defend their erring *confrères*, would have heartily joined in censuring them, and so the Pharmaceutical Association might fairly have been expected to disavow all attempts on the part of its members to take upon themselves the office of prescribing. A lame sort of defence seems to have been attempted for the pharmacists on the plea that they are quite as competent to prescribe as doctors are to dispense; but that kind of argument did not receive much attention, the meeting unanimously resolving to pass on to its other business without replying to the complaint. The members whose speeches had given offence stated that they considered themselves solely responsible, and that therefore they should in their individual capacities reply to the pharmacists.

PHYSICS AND PHYSIOLOGY.

THE Physico-Technical Reichsinstitut, recently established in Berlin, will open for regular work on April 1st, 1888, and every guarantee is forthcoming for its completeness and efficiency. The curatorium in connexion with it will offer peculiar advantages to students of the higher physiology, for whom it will suffice to mention that its president is Professor H. von Helmholtz, of the Privy Council. Besides this pioneer in physiological research, there will be attached to the curatorium Dr. Werner Siemens, who bears an honoured name in physics, and whose donation has put the establishment on a working basis; while Professor Förster, Director of the Berlin Astronomical Observatory, with other distinguished *savants* and investigators, will also contribute to its scientific attractions. The Physico-Technical Institute, it may be well to remind our readers, has not been devised for teaching purposes, but purely to facilitate research, in which the curators will be always at hand, as experts and consultants, to assist the investigator. It will be under Government protection and control, the authority ultimately responsible for its success being the Minister of the Interior.

CUTANEOUS OR ANATOMICAL TUBERCLES.

M. AUGUSTE POLLOSSON five years ago examined in the Lyons pathological laboratory four cutaneous or anatomical tubercles, one of which was from the back of his own hand, with the view of determining the truth of the views expressed by many writers, who look upon these anatomical tubercles as closely connected, to say the least of it, with tuberculosis. M. Pollosson, who gives a very minute description of the [illegible] (*La Province Médicale*, No. 28, 1887), failed, however, to find any tubercle bacilli, and none of the subjects from whom they were excised have at any time shown any sign of tuberculous disease. His observations are in complete accordance with the short account of these growths by Cornil and Ranvier. Nevertheless, he does not think these are anatomical tubercles which are [illegible] tuberculosis. He only affirms that the connexion is not invariable.

THE SUPPLEMENTAL CHARTER OF THE ROYAL COLLEGE OF SURGEONS.

WE learn that the petition presented to Her Majesty in Council praying for a Supplemental Charter for the Royal College of Surgeons of England (an abstract of which we published in our issue of June 4th, page 1151) will be considered by a committee of the Privy Council on Sept. 1st next. The Associations of Fellows and of Members should take care that vacation arrangements do not render them oblivious of their claims to be heard on a subject in which they are so deeply and so justly interested.

SIR MICHAEL HICKS BEACH.

IT will have been seen with much pleasure from Sir Michael Hicks Beach's letter to his constituents that he has derived great benefit from his sojourn abroad, and that there is a change for the better in his sight. The cataracts have not increased in density, and a slight defect in the retina and choroid of the right eye, which was recognised by Mr. Critchett before Sir Michael left England, has also undergone improvement.

HOSPITALS FOR INFECTIOUS DISEASE.

THE Local Government Board have consented to recognise the certificate of every medical practitioner as sufficient evidence of the nature of a case to warrant the removal of the patient to the hospitals of the Metropolitan Asylums Board, and have issued an order for this purpose. It is presumed that an order of a relieving officer is to be obtained before the removal of the patient, but in practice this method is generally abandoned, and a telegram to the manager's offices in Norfolk-street is sufficient for the purpose. So far as small-pox is concerned, there is little demand for the accommodation of persons suffering from this disease, for on Saturday there was not a single small-pox patient under treatment in the several hospitals of the Board.

PERSISTENT YAWNING AND SNEEZING AFTER REMOVAL OF A TOOTH.

A CASE of a somewhat remarkable character is at the present time in the London Temperance Hospital, under the care of Dr. R. J. Lee. A girl, fifteen years of age, had the last molar tooth in the lower jaw on the right side removed about six weeks ago. No anæsthetic was administered. She was in perfect health at the time. Half an hour after the operation she began to yawn, and has continued to do so constantly since. One yawn succeeds another without interruption, and with an interval of two or three seconds. Galvanism had been tried without effect, and other remedies previous to admission into the hospital. Three days afterwards the yawning changed to sneezing, and recently she has suffered from constant and rapidly succeeding fits of sneezing, each of which paroxysms appears to begin with a yawn. She seems to have no power of controlling herself, or only to a very slight extent; and if she attempts to do so, the next sneeze is more violent.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Georg Wiesner, Senior Medical Officer of the Hospital of the Holy Ghost, Frankfort-on-the-Maine, and Sanitary Councillor.—Dr. Grewingk, Professor of Mineralogy in Dorpat.—Dr. Alexander Reumont, Sanitary Privy Councillor of Aix-la-Chapelle, at the age of sixty-nine.—Dr. Kempen, Knight of the Order of Leopold, a distinguished Belgian Military Surgeon.

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KING'S COLLEGE.

MR. EDGAR CROOKSHANK, M.B., has been elected Professor of Bacteriology, and the plans for a new bacteriological laboratory, to be built during the vacation, have been decided on. Mr. J. W. Groves has been elected Professor of Botany in succession to Professor Bentley, F.L.S., who has resigned the chair. Professor Groves will conduct a practical class in Vegetable Biology.

PROFESSIONAL CONFIDENCE.

A BELGIAN medical man has been condemned by the Court of First Instance, the Court of Appeal, and the Court of Cassation for refusing to give up the name of the mother of a child whose birth he announced. The Minister of Justice stated, however, in the House that there was no law to compel medical men to violate professional secrecy. The case is felt to be a hard one, and the Belgian Medical Federation are about to take the matter up by seeking counsel's advice.

SANITATION IN SHEFFIELD.

SPECIAL care is being given to the flushing of the sewers in Sheffield during this hot and dry weather. Under Dr. Sinclair White's supervision ordinary water-barrels holding some 250 gallons are pierced with an opening about eight inches in diameter, and round this is fastened a species of leather bag, the open end of which is fitted into the manhole of the sewer. By the turn of a lever the whole contents of the barrel are suddenly let off into the sewer, and in this way an effective flush is provided in a simple and inexpensive manner.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Professor Salkowski, who has charge of the chemical laboratory in the Pathological Institute, is to be offered the newly established Professorship of Medical Chemistry. Professor Ewaldis will be offered the Directorship of the new hospital at Urban.

Brussels.—In the recent second Doctorate Examination twenty-four candidates presented themselves, of whom four only were rejected, all the remainder excepting two passing with honours. This being one of the earlier examinations from which English practitioners who seek Brussels degrees are exempt, there are no successes to chronicle for such. We may mention, however, amongst the successful candidates for the Final Examination the name of Shapoorji Aspaniarjee Kapadia, L.R.C.P., L.R.C.S. Edin., lecturer on Hindustani at University College.

Cracow.—The Professorship of Surgery has been given to Dr. Ludwig Rydygier of Culm, author of a treatise on Surgery in the Polish language, and formerly *privat docent* in Jena.

Dorpat.—The professors of this university, the only one in Russia in which instruction is given through the medium of the German language, were recently directed to prepare to change the language of their lectures to Russian, but they objected so strongly to the change that they all sent in their resignations. This step seems to have produced some effect on the minds of the authorities, for they have announced that the Russification of the University will be deferred for three years. German professors who receive an invitation to Dorpat will have to be careful lest they find themselves shortly after their appointment ordered to lecture in a language with which they are more or less unfamiliar.

Ghent.—A statue of the late M. J. Guislain, the eminent alienist and professor, has been unveiled with an imposing ceremonial, in which M. Henri Lentz, who was deputed to attend on behalf of the Minister of Justice, made an eloquent speech. The medical profession were represented by M. le Professor Lefèbvre, President of the Royal Belgian Academy of Medicine, and M. le Professor Boddaert of Ghent.

Gratz.—Dr. Zuckerkandl, Professor of Anatomy, has been appointed Dean of the Medical Faculty.

Leipsig.—Professor W. Pfeffer of Tübingen has been invited to take the chair of Botany.

Paris.—The *concours* for three posts as *médecin des hôpitaux* has terminated by the nomination of MM. Josias, Juhel-Rénoy, and Hippolyte-Martin. MM. Dujardin-Beaumetz and Sappey have received the decoration of Commander of the Legion of Honour.

Prague (German University).—Dr. Knoll, Professor of Experimental Pathology, has been appointed Dean of the Medical Faculty.

Rome.—Dr. Pasquali has been appointed Ordinary Professor of Midwifery.

ON the 18th inst. the death occurred, at his residence in Cardiff, of Mr. F. W. Granger. On the 14th inst. the deceased was knocked down by an omnibus, and although the injuries received did not at the time of the accident appear serious, the unfortunate gentleman gradually became worse, and the illness, as above stated, terminated fatally. Mr. Granger, who was in his fifty-seventh year, was medical officer for the Cardiff Rural Sanitary Authority, a post he had held since 1872.

DR. SCHNEIDER (*Ministerialrath*) has resigned the post of President of the International Congress of Hygiene at Vienna. As his successor, the Bureau of the Organising Committee have unanimously elected Professor E. Ludwig.

PROFESSOR VIRCHOW, who takes a prominent part in the International Congress of Hygiene at Vienna, will at the close of its sittings start with Dr. Schliemann, the archæologist, for Egypt, on a "working-holiday" tour.

M. PASTEUR having consented to become a candidate for the office of Perpetual Secretary of the Paris Academy of Sciences, the other candidates have withdrawn their applications.

IN the recent matriculation examination at the University of London, 141 candidates passed in the honours division, 522 in the first division, and 94 in the second division.

DR. S. WEST will deliver the Bradshawe Lecture at the Royal College of Physicians on August 18th. The subject will be "Pneumothorax."

MR. CHARLES STONHAM and Mr. W. G. SPENCER have been appointed Assistant Surgeons to Westminster Hospital.

GREAT NORTHERN CENTRAL HOSPITAL.—The annual general meeting of the governors of and subscribers to this institution was held on the 15th inst. The report presented by the Committee of Management stated that the number of patients who obtained relief during the twelve months ended June last was 10,326, being an increase of 1260 over the previous year; of these 326 were in-patients and 10,000 out-patients, the attendances of the latter numbering 32,770. No less than 2570 cases of accident were treated during the same period. The ordinary income of the year amounted to £3481, which was less by £160 than that of the previous year, and the expenditure to £3508, which was £512 less than that of the preceding twelve months. The surplus of the Hornsey Children's Jubilee Fund, amounting to about fifty-five guineas, is to be paid to the building account of the hospital.

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ABSTRACT OF

STATISTICS OF THE MONTREAL MATERNITY HOSPITAL.

COMPILED BY W. A. DE WOLF SMITH, M.D. &c.,
PHYSICIAN TO THE MONTREAL DISPENSARY.

THE following is a collection of statistics gathered from the register of the Montreal Maternity Hospital, a small building situated in a very unfavourable part of the city, and possessing very inferior accommodation for the patients, the attendants, and the students who learn the practical part of midwifery at it.

Some years ago the hospital admitted about 130 patients a year, but lately, owing to the fact that the Western Women's Hospital has come into competition with it, the number has fallen to an annual average of less than 100. There is a list of patients' names entered in the register from 1844, but no particulars are given with any of the cases until 1851, and these observations are brought up to the end of 1883—a period of thirty-three years. During this time 3483 patients were admitted, an average of 106 a year. The number of children born in the institution was 3520, there having been thirty-five cases of twins and one case of triplets. The time spent in hospital is not of much importance, but it may be noted that the shortest time spent there was one day—four patients having been in for that length of time only. The longest stay in hospital was 213 days, while the average number of days spent by each patient was twenty-seven. The time of the year does not seem to have had much influence on the births. The largest number of children were born in April, and the other months follow in this order—May, June, October, July, January, November, February, December, March, August, and September, the numbers declining very evenly, however. This differs from Dr. Sutton of Kentucky, as quoted by Dr. Carpenter, who gives the greatest number of births in December and the fewest in January. Dividing the year into quarters, the largest number of births, 973, occurred in the second quarter, 844 in the fourth quarter, 825 in the first quarter, and the smallest number, 815, in the third quarter. This arrangement may be due to the smallness of the numbers considered, as Dr. E. M. Snow, in his report for 1885 to the City of Providence, gives statistics for thirty years, in which the largest number of births, 8459, occur in the fourth quarter, 8149 in the second quarter, 8065 in the third quarter, and 7929 in the first quarter.

The ages of the patients admitted show the greatest range, running all the way from thirteen to forty-eight. Three patients were admitted at thirteen years of age, and two at fourteen. Dr. MacCallum quotes one of the former in his report of the institution, published in 1879. She was, to quote from the report, "a private patient, and when admitted was in short dresses. Although she was short in stature, her hips were wide and her chest well developed. Some days before labour set in an examination of the pelvis was made with Dr. Lumley Earle's pelvimeter. The bulbed extremities could be separated at the brim to the extent of three inches and a half without causing pain, and we therefore concluded that no obstruction would be offered to the passage of the head from narrowing of the conjugate. . . . Her labour was natural, of ten hours' duration, and she gave birth to a male child weighing 7 lb. 1 oz. She was confined on Sept. 13th, 1869, and her fourteenth birthday was in the following month of December." There were fifteen patients admitted over forty years of age, the two oldest being forty-six and forty-eight years of age respectively. The greatest number of patients were admitted at twenty-two years of age, while those at twenty and twenty-four come next. The average age of all patients admitted was twenty-five. The majority of the patients have been primiparæ, though previous to 1869 the majority were multiparæ, a circumstance which, I think, may be explained by the fact that while the Imperial troops were stationed here the hospital was full, many of the men were confined in the hospital.

The majority of the labours have been natural, over [illegible] been of that description. A number which [illegible] have been protracted have, I am sure, been [illegible] by the administration of chloral, now [illegible] Hospital, alone or in connexion with hot-water douches in cases of rigidity of the parts. In over 90 per cent. of the cases—3404 out of 3558—the head presented. Breech presentations occurred in ninety-eight, footling thirty, and knee three times; the frequency of breech presentations being one in 36·3 cases, this being more frequent than is given by Churchill, and a little more frequent than according to Ramsbotham. Footling presentations occurred once in 118·6 cases, and knee presentations once in 1186 cases, this being nearly three times the frequency given by Madame Lachapelle. Placenta prævia occurred in three cases, and the face presented in eight. The age of the patient does not seem to have had much influence on the duration of labour, nor does the fact of the mother being a primipara or multipara. The duration of labour was as follows:—

Under 1 hour	...	...	...	...	...	71	cases.
From 1 to 4 hours	...	...	...	...	...	672	"
" 4 to 8 "	...	...	...	...	...	921	"
" 8 to 12 "	...	...	...	...	...	654	"
" 12 to 16 "	...	...	...	...	...	472	"
" 16 to 20 "	...	...	...	...	...	172	"
" 20 to 24 "	...	...	...	...	...	96	"
" 24 to 48 "	...	...	...	...	...	249	"
" 48 to 72 "	...	...	...	...	...	35	"
" 72 to 120 "	...	...	...	...	...	10	"

One case lasted seven and another ten days. Thus it is seen that by far the largest number of deliveries were terminated inside of twelve hours. The average duration of labour in 3359 cases was ten hours and twenty minutes, being slightly over the average given by Dr. MacCallum in his report. The average time before delivery at which the membranes ruptured was three hours and a half. In one case they ruptured 120 hours, and in three cases they ruptured ninety-six hours, before delivery; while in 250 cases they ruptured at the moment of delivery. The sex of the child is given in 3477 cases. Of these, 1788 were males, 1689 females—a proportion of 105·85 males to 100 females—this being about the general proportion as regards legitimate children, but somewhat higher than common amongst illegitimate children, which, of course, most of these were.

While there is a predominance in the number of male children born, they also, as an average, are larger in size and weight than female children. The average length of all children born in the hospital was 19·75 in., or, excluding premature births, 19·88 in. The average weight of all children born in the hospital was 7 lb. 10⅜ oz., or, excluding premature births as before, 7 lb. 12⅛ oz. Three children were born measuring 30 in. in length, and five measured 28 in. There were two children (twins) born alive weighing 2⅜ lb. each, but they soon died. Thirteen weighed between 11 lb. and 12 lb., and one each 13 lb., 16 lb., and 16⅜ lb. respectively. The average weight of male children was 7 lb. 12¼ oz., the heaviest weighing 13 lb. The average length of male children was 20⅛ in., the longest being 30 in. Female children averaged 7 lb. 6¾ oz. in weight, although the largest female child weighed 16⅜ lb., or more than any male. Their average length was 19 1/3 in., the longest being 28 in. Of 3405 placentæ noted the average weight was 24¼ oz. There were two with children at full term which weighed only 6 oz. each. Eight weighed 8 oz., 387 weighed 16 oz., or less, 2612 weighed between 1 lb. and 2 lb., 360 between 2 lb. and 3 lb., and there were with single children placentæ weighing 50, 51, 52, 53, 55, 56, 58, 60, 64, and 65 ounces respectively. In cases of twins there were two placentæ weighing over 4 lb., and in the one case of triplets recorded the placenta weighed 6½ lb. The shortest umbilical cord measured 4½ in., and the longest 56 in. There were twenty-nine 10 in. and under in length, and twenty-six 40 in. and over, the largest number being 20 in. long, and the general average being 22½ in.

The duration of pregnancy is a very interesting question, but, unfortunately, these cases are not recorded with sufficient exactness to allow of any calculations being based upon them. Deducting, however, those cases given as premature, and cases in which menstruation continued for some time during pregnancy, we have an average of 294 days as the duration of gestation. The shortest period of gestation is given as 173 days, or a trifle over five months. The greatest number were delivered at 280 days, while there are forty-two cases given in which pregnancy lasted 300 days or more, three of these being at 361, 368, and 385 days respectively—my own opinion being that these are cases of error. Excluding also these cases, then, which seem hardly

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possible, we have an average of 293 days as the duration of gestation. The largest number of cases were, of course, primiparæ—viz., over 61 per cent. There were, however, a number of multiparæ, one case being a tenth pregnancy, four cases being eleventh, and two cases twelfth pregnancies.

Of the 3520 children born in the hospital, 150 were dead, a proportion of one in 23·5 nearly, the proportion of dead children born in the St. Louis (Mo.) Female Hospital being at the rate of one in 12·16, according to the report for 1884-85, and in Burlington (Vt.), according to Dr. J. H. Linsley, the proportion in 1885 was one in 19·55. Of 3483 women admitted thirty-five, or a small fraction over 1 per cent., died, a rate of one in 99·5, this being an increase over the number given by Dr. MacCallum, but less than the rate given in the report of the St. Louis Hospital, where it was 1½ per cent. Of these deaths, eight were from puerperal fever, which broke out in the hospital in 1871 and 1872, in both instances, however, being brought into the hospital from the city, where it had been prevailing for some months previously. Owing to the small accommodation of the hospital, it was closed for a time on both these occasions. Four deaths occurred from uræmic poisoning and one each from thrombus of the labia, congestion of the lungs, heart disease, post-partum convulsions, peritonitis, and Bright's disease. In seventeen cases the cause of death is not given.

Of the 150 children born dead, ninety-two were males and fifty-eight females, or in the proportion of 158·6 males to 100 females. The average weight of these children was—

	Males.	Females.
Maximum	11 lb.	9 lb.
Mean	5¾ lb.	5½ lb.
Minimum	3 oz.	1⅝ lb.

Dead children were distributed as follows, according to pregnancy:—

	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	Total.
Males	54	23	7	3	2	1	1	1	0	92
Females	30	15	4	2	1	2	1	1	2	58
Total	84	38	11	5	3	3	2	2	2	150

The average weight of children born dead, according to pregnancy, was as follows:—

	lb. oz.		lb. oz.
1st pregnancies	6 3	6th pregnancies	4 14
2nd ,,	6 2	7th ,,	6 8
3rd ,,	5 0	8th ,,	6 14
4th ,,	6 15	9th ,,	8 14
5th ,,	7 5		

Eighty-seven cases are given as being premature births, and of these fifty were males and thirty-seven females. Fifty-five of the mothers were primiparæ and twenty-one were in their second pregnancy. The average weight of the placenta in these cases was 14⅓ oz. The average weight of all children born prematurely was 3 lb. 5 oz., and the average length was the same in both sexes within a small fraction of an inch—viz., 14¾ in. Twins occurred thirty-five times, or a proportion of one in ninety-four cases, nearly. In these cases the average duration of labour was 9 hours 50 min., the extremes being 20 min. and 103 hours. The placentæ belonging to these children averaged 34⅓ oz. in weight, and the umbilical cords averaged 21 in. in length. The average duration of pregnancy in cases of twins was 277 days. Of the seventy children born sixty-one were alive, seven dead, and two stillborn. Seventeen of the mothers were confined for the first time, eleven for the second, and five for the third time, while one case was a fifth, and one an eighth, pregnancy. The average weight of twins was:—

	lb. oz.		lb. oz.
Of two males	6 8	Of all children	6 3
,, two females	6 6	,, males	6 4
,, male and female	5 13	,, females	6 2

Only one case of triplets is recorded. This was an Irish woman, about thirty-three years of age, and married. It was her third pregnancy, and gestation had lasted 280 days. Forceps were used to deliver one of the children, the others being born naturally. The breech of one presented, and the heads of the other two. The duration of labour was three hours. Two of the children were males, and one female; they measured nineteen, sixteen, and sixteen inches, and weighed 5½ lb., 4¾ lb., and 4¾ lb. respectively. The placenta, as previously mentioned, weighed 6½ lb., and the cords measured fourteen, twelve, and twelve inches. Two of the children were alive, and one was stillborn.

Although no opportunity has existed for the comparison in this hospital, it may be interesting to note the comparative frequency of plurality births among the white and coloured population. In thirty-one years the proportion is as follows:—

Colour.	No. of births.	Plurality births.	Proportion.
White ...	63721	715	1 in 89·12
Coloured ...	2490	53*	1 in 45·1
Total ...	66211	768	1 in 86·21

* All cases of twins.

The above table shows a much larger proportion of plurality births amongst the coloured than amongst the white population.

In the hospital instrumental interference was required in seventy-eight cases, forceps in seventy-five cases, the perforator twice, and the blunt hook once. The forceps were applied once in 46·5 cases, sixty-six cases were primiparæ, and in these the difficulty may be attributed to rigidity of the soft parts, deformity of the pelvis, or to malposition of the head, or to any of these causes acting in combination. The cases of deformity of the pelvis are very few, and this may doubtless be attributed to the fact that the hygienic surroundings of the working classes are better in Canada than in older countries, and also to the fact that girls are not put to work at as tender an age as in some countries. In none of these cases is it recorded that the mothers died, while of the seventy-five children delivered with forceps thirteen, or 17·33 per cent., died. In three cases the forceps were applied to hasten the delivery in cases of convulsions, once in a case where symptoms of exhaustion appeared, and once in a case of narrowing of the conjugate diameter of the brim, with prolapse of the funis. The forceps generally employed are Rigby's and Simpson's, but on one occasion Tarnier's forceps *à aiguille* were used. The average age of these patients was twenty-six, and the average duration of the labours a little over twenty-four hours. Of the children forty-five were males and thirty females. The average length of these children was twenty-one inches for the males and twenty inches for the females, and the average weights were 8 lb. 5 oz. and 7 lb. 12 oz. respectively. The perforator was used twice to diminish the size of the fœtal head. The first case was a girl aged nineteen, in her first confinement. The breech presented, and the case had lasted forty-three hours when, after perforation, she was delivered of a male child, measuring 18 in. in length and weighing 7⅝ lb. The second case was a girl admitted in labour with her second child. The shoulder presented, and the funis protruded from the vulva. Great difficulty was experienced in turning, and after it was accomplished the head had to be perforated behind the ear, when, after a gush of water, the collapsed head was expelled. A full description of the case is to be found in Dr. MacCallum's report, published in vol. xx. of the Transactions of the Obstetrical Society of London. Version was performed in six cases. In all of these the mothers recovered, but in only one instance was the child born alive; in one other case, although stillborn, it was resuscitated.

Hæmorrhage after delivery is of rare occurrence in this hospital, and this is no doubt greatly due to the care with which the uterus is attended to during the expulsion of the child and removal of the placenta, and also to the care with which adherent membranes are treated. The rules laid down for the guidance of students at this hospital are given by Dr. MacCallum in his report, and are very complete. When hæmorrhage does occur after delivery, the treatment consists in strong grasping pressure on the fundus uteri; the application of cold, either externally or through the vagina; and the introduction of the hand into the uterus. Ergot of rye has also been given.

Ten cases were followed by convulsions. In three it is recorded that the urine was albuminous, and in one it is stated that the urine was free from albumen, while the condition of the urine in the other cases is not given. In two cases blood was drawn from the arm in connexion with inhalations of chloroform and the use of chloral and bromide of potassium, which were also used in the other cases. Bleeding was not refrained from because of any belief in its inefficiency, but because the class of patients coming to hospital will not, as a rule, bear it. In three of the cases the forceps are mentioned as having been used to complete the delivery. The average duration of labour in these cases was fourteen hours. Six of the children were males, and averaged 8⅝ lb. each; four were females, and averaged 8⅛ lb. each. Of the ten children, two males and one female were dead.

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Three cases of insanity after delivery are reported—all in primiparæ. The first was the subject of fibroid tumour of the uterus and metrorrhagia, and was an habitual opium eater, although this habit was partly overcome while she was in the hospital. On the third day after delivery she was attacked with acute mania, and became very violent. Under treatment she rapidly improved, and left the hospital on the twelfth day after delivery. The second was a young girl who had been seduced. Five days after a natural labour she was attacked with mania. She improved under treatment, but finally had to be sent to the asylum for the insane. In this case there was a family history of insanity. The third was a girl aged twenty-one, whose labour was natural. She was attacked with insanity six days after delivery, after having received a severe mental shock. She was very violent and abusive, and had homicidal tendencies. In three weeks, however, she recovered sufficiently to leave for home, and had no return of the attacks. The treatment of these cases consisted in full doses of chloral and bromide of potassium, with warm purgatives and nourishing diet.

Among the more curious things met with in the hospital were:—Three anencephalic children, two with supernumerary fingers, one with two teeth, and one covered with hair. Two were born with clubbed feet, and one with a bifurcated cord; one child was born with a spina bifida situated over the sacral region. It was removed to the Montreal General Hospital, and the tumour tapped by Dr. Roddick. The child lived only a few days, however. One blighted fœtus was born with a healthy, well-formed child. It measured 6 in. in length. Two patients were married while in the hospital. One patient was admitted who presented many of the signs of advanced gestation, but on examining her closely it was found to be a case of phantom pregnancy. Three patients menstruated for the first seven months of their pregnancy, and two for the first three months.

KAKKÉ, OR JAPANESE BERI-BERI.

No. I.

KAKKÉ, a complaint now regarded as identical with the beri-beri of India, has long ravaged the great commercial centres of Japan, but it is only in recent years that it has been brought within the range of scientific observation. The first complete accounts of the symptomatology were those given by foreigners resident in the country; but during the last five years the work of research has been prosecuted under more advantageous conditions by highly educated Japanese medical practitioners of the Western school, and one of these, Surgeon-General Takaki, a Fellow of the English College of Surgeons, and a former house-surgeon to St. Thomas's Hospital, has now published in the *Sei-I-Kwai Medical Journal* some original observations that will constitute a great landmark in the study of the disease, and a contribution of no small importance to physiology. Mr. Takaki, having formed a strong opinion that the relative deficiency of nitrogenous elements in the ordinary dietary of his countrymen, as compared with the European standard, might account for the great prevalence of kakké in the naval forces, succeeded in obtaining permission from the Japanese Admiralty in 1883 to make a number of experiments in the service upon a scale of great magnitude. The substance of his creed and the nature of the evidence he gathered to support it by the end of a single year may be collected from the subjoined extracts from his contribution to the *Sei-I-Kwai Medical Journal* in April, 1885:—

"1. The elements which enter into the formation of the animal tissues, and whose waste must, I believe, bear a definite relative proportion with the food, and therefore, to make up the loss of keeping the tissues in a perfect condition, must be accordingly supplied. For example, the relative proportion of nitrogen and carbon is one to fifteen. An adult man doing very heavy work must have a supply of twenty-three grains of nitrogen at least to every kuwamme (10,042 drachms) of the weight of the body: thus 345 grains is required by a man weighing fifteen kuwamme (15,630 drachms), while the quantity of carbon is fifteen times as much in the course of twenty-four hours. I found by very careful investigations that the food taken by the men attacked by kakké was greatly deficient in nitrogen and contained a great excess of carbon, their relative proportion being one to twenty-eight or more.

"2. The *Riujio*, a training-ship bearing 276 men, including officers, had sailed first from Shinagawa (Yedo Bay) to Wellington, New Zealand; thence to Valparaiso, Chili; from Valparaiso to Calao, Peru; then from the latter port to Honolulu, Sandwich Islands; and thence to Shinagawa, having spent 272 days in making the whole trip. During the voyage 169 cases of kakké occurred, 160 out of which appeared among the sailors and petty officers, with twenty-five deaths before she had arrived at Honolulu. The fact was indeed alarming, and consequently a careful examination was subsequently made by a special committee appointed by the Minister of Marine, and what they have found in regard to the relative proportion of nitrogen and carbon, and their respective quantity, is stated below.

Before the arrival at Honolulu.

Rank.	Daily quantity of nitrogen.	Daily quantity of carbon.	Relative proportion.
Sailors	189 grains	5497 grains	1 to 28
Cadets	241 ,, ...	6331 ,, ...	1 to 25
Warrant officers	280 ,, ...	5902 ,, ...	1 to 20
Officers	359 ,, ...	7578 ,, ...	1 to 20

After the arrival at Honolulu.

Rank.	Daily quantity of nitrogen.	Daily quantity of carbon.	Relative proportion.
Sailors	286 grains	4881 grains	1 to 16
Cadets	325 ,, ...	4772 ,, ...	1 to 11
Warrant officers	365 ,, ...	4707 ,, ...	1 to 11
Officers	437 ,, ...	5901 ,, ...	1 to 11

"The careful examination following the course of the voyage, in regard to the appearance and disappearance of the disease, shows that whenever the quantity of nitrogenous substances was diminished and carbohydrates increased in quantity, it always appeared, but, on the contrary, whenever the reverse was the case, the disease retrogressed or disappeared entirely.

"3. The *Tsukuba*, a training ship, was then sent out to follow the same course as that the *Riujio* had taken, with a supply of the food elements, the relative proportion of nitrogen and carbon of which was one to fifteen. But these two elements were actually taken by the men in the proportion of one to seventeen, the total quantity of nitrogen being 450 grains, and of carbon 7650 grains daily on the average. In the course of the 287 days of the voyage, four cadets and ten men were attacked by the disease, and it appears that these cadets were unable to take condensed milk, while their fellow-cadets had taken one pound of it weekly; also eight out of the ten men had been unable to eat meat as the others did, so that there was a distinct history of the quantity of nourishments having been much less with those affected than with those not affected. There was not a death from disease during the whole voyage.

"4. The relative proportion of nitrogen and carbon in the navy rations in 1883 was one to twenty-eight, showing that there was a great deficiency of nitrogen and great excess of carbon. During 1884 some improvement has been made, resulting in a great increase of nitrogen (yet not reaching the necessary quantity), with a comparative increase of carbon. As, however, the increase of nitrogen was greater, the relative proportion of the two elements came down to one to twenty of nitrogen and carbon in the food."

Then follows a statistical table, demonstrating that a diminution in the relative proportion of carbon and an increase in that of nitrogen in the rations were followed by a decrease in the number of cases and deaths during the year 1884; other tables detailing the relative proportions of nitrogen and carbon in the principal articles of food; and, finally, a series of twelve diet scales. From the latter Mr. Takaki had selected the combinations he considered most suitable, and expressed his conviction that their adoption would ensure the prevention of the complaint.

The subject was continued in a further article in the same journal in April, 1886, and the writer there proffered some interesting figures in connexion with the naval prisoners,

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from which we quote the following (with the correction of an arithmetical error occurring in the original):—

Year.	1. DISEASE.			2. DIET.		
	Number of prisoners.	Number of cases of kakké.	Percentage.	Nitrogen, in grains, daily.	Carbon, in grains daily.	Rates of N. & C.
1883	113	69	61·06	216	7054	1 to 32·65
1884	128	73	57·03	258	6614	1 to 25·06
1885	168	0	0·0	289	5839	1 to 20·20

The most significant statistics, however, are those published in the *Sei-I-Kwai Journal* for May of the present year, which carry the results to the end of 1886. Mr. Takaki there gives the following comparative table showing the number and proportion of cases of kakké for nine years, from 1878 to 1886 nclusive.

Comparative Table showing the Number and Proportion of Kakké Patients during nine years.

Year.	Force.	Patients.	Ratio of patients per 100 of force.	Admitted to hospital.	Ratio of admitted per 100 of patients.	Dead.	Ratio of dead per 100 of patients.	Invalided.	Ratio of invalided per 100 of patients.
1878	4528	1485	32·79	325	21·89	32	2·15	...*	...*
1879	5081	1978	38·92	485	24·51	57	2·88	8	0·40
1880	4956	1725	34·81	319	18·49	27	1·57	9	0·52
1881	4641	1163	25·06	300	25·79	30	2·58	16	1·38
1882	4769	1929	40·45	545	28·25	51	2·64	17	0·88
1883	5346	1236	23·12	378	30·59	49	3·96	4	0·32
1884	5638	718	12·74	209	29·10	8	1·11	1	0·14
1885	6918	41	0·59	25	60·97	—	—	1	2·44
1886	8475	3	0·04	—	—	—	—	—	—

* Uncertain.

From this we shall see that if the whole period be divided into two parts, the first including the six years from 1878 to 1883, the second the three years from 1884 to 1886, during which the new dietetic rules were in force, the percentage ratio of kakké cases to the naval force fell from 32·79 in the first term to 4·45 per cent. in the second; while the percentage mortality of the disease shows a reduction from 2·63 to 0·37, and in the last two years to zero.

A second table, which gives the diminution in the number of days during which kakké patients were under treatment, after the adoption of the new dietary, is equally telling,

Comparative Table showing the Number of Days of Treatment under Different Grades of Service during four years.

Year.	Duration of ordinary work under treatment.	Duration of light work under treatment.	Duration of rest.	Duration in hospital.	Total.
1883	25,235	7612	7894	22,534	66,275
1884	10,667	4675	5542	11,309	32,213
1885	154	69	175	1012	1410
1886	28	—	71	—	99

and will afford material for the financial authorities of the navy when they desire to strike a balance between the increase of outlay in food and the saving in hospital and other expenses connected with the treatment of the disease. Whatever be the result of such a calculation from the pecuniary point of view, there is no doubt of the immensity of the gain as judged by the standard of the political economist and the humanitarian. Nor is the interest of the question by any means confined to Japan or to students of the particular disease which has been taken as a measure of the results of the experiment. With regard to kakké, there is reason to believe that it still exists amongst the Chinese, who, indeed, were the first to describe its symptoms, and if we assume that the complaint is identical with beri-beri, the area of its ravages will be found to extend over the greater part of our Indian Empire, Ceylon, and even to certain regions of South America. It is, moreover, known that European residents in these places share the danger with the native population, as instanced but recently by the grave losses inflicted by beri-beri upon the Dutch troops in India, and hence, even if we are moved by no higher considerations than those of selfishness, it is desirable that we should give a share of our attention to the etiology and treatment of the disease.

HOSPITAL SUNDAY FUND.

THE following are the principal contributions to the Hospital Sunday Fund, which have been lately received at the Mansion House:—All Hallows the Great and Less (with additions), £55; St. Pancras Parish Church, £50; Newcourt Congregational Chapel, Tollington-park, £51; St. Matthew's, Bayswater, £200; St, Nicholas', Chislehurst (including a further £100 from Richard Foster, Esq.), £217; Spanish and Portuguese Synagogue, £50; the Great Synagogue, £247; Bayswater Synagogue, £96; New West-end Synagogue, £68; and Central Synagogue. £63.

The fund at the time of our going to press amounts to nearly £39,000.

A meeting of the Council of the Fund is to be held at the Mansion House at 4 P.M. on the 25th inst., to order the payment of awards to hospitals and dispensaries, as recommended by the Committee of Distribution.

WILLS OF MEDICAL MEN.

THE will of Mr. William Chapman Begley, M.R.C.S. and F.R.C.P. Lond., late of 26, St. Peter's-square, Hammersmith, who died on April 12th last, was proved on the 27th ult. by Mrs. Jane Begley, the widow, and Mr. Claudius Francis Du Pasquier, the executors, the value of the personal estate exceeding £6000. The testator bequeaths £4200 consols, with any additions he may have been able to make thereto, upon trust to pay the dividends to his wife for life, and then for the College of the Holy and Undivided Trinity in the University of Dublin for the establishment of four studentships in medicine in the said college, tenable for four years, to be held by members of the college who have passed through the greater part of the undergraduate course in arts, and shall not have commenced the study of medicine. The residue of his property he gives to his wife.

The will of Frederick John Hensley, M.D., late of 10, Coleherne-road, South Kensington, who died on April 4th last, was proved on the 19th ult. by Mr. Thomas William Hensley and Miss Emily Marianne Hensley, the son and daughter, two of the executors, the value of the personal estate exceeding £1600. The testator gives the goodwill of his medical practice, together with drugs and books, and a piece of freehold land at Finchley, to his son Philip Henry and £50 to his servant Sarah Brown. The residue of his property is to be divided between his nine children in various proportions.

The will of Mr. John Chatto, M.R.C.S., librarian to the Royal College of Surgeons of England, late of 3, Chapel-road, Notting-hill, who died on April 19th, was proved on the 18th ult. by Miss Jane Chatto, the sister and sole executrix, the value of the personal estate exceeding £3000. The testator gives all his property to his said sister.

The will of John Henry Cook, M.D., late of 44, Chepstow-place, Bayswater, who died on May 28th last, was proved on the 14th ult. by Mr. John Wickham Barnes, the sole executor, the value of the personal estate exceeding £600. The testator gives certain furniture to his housekeeper, Elisabeth Henderson, £100 to his executor, and legacies to relatives and others. He leaves upon trust for his nephew Richard Todd, £1000 Brazilian 5 per cent. bonds and £100 Costa Rica 4 per cent. bonds, and for his niece, Mrs. Martha Ward Jull, £2000 Brazilian 5 per cent bonds, for life, and on their deaths to their respective children. The residue of his property he leaves upon trust for his said nephew and niece and on their decease for their children, share and share alike.

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The will of Mr. Charles James Bracey, M.B., F.R.C.S., late of 155, Hagley-road, Edgbaston, Birmingham, who died on April 21st last, was proved on the 1st ult. in the Birmingham district registry, by Mrs. Edith Jane Bracey, the widow and sole executrix, the value of the personal estate exceeding £5000. The testator gives all his property to his said wife absolutely.

The will of John Vaux, M.D., late of Chestergate, Macclesfield, who died on January 30th last, has been proved at the District Registry of Chester by Miss Mary Elizabeth Vaux and Miss Charlotte Marie Dyhrenfurth Vaux, the daughters and executors, the value of the personal estate amounting to upwards of £3000. The testator, after exercising the power of appointment given him under the will of his father, gives all his linen, plate, glass, pictures, household effects, surgical instruments, and books to his wife for life, and then to his daughters. The residue of his property he leaves upon trust to pay the interest (as also the capital, if his trustees shall think fit) to his wife for life; and at her death the ultimate residue is to be divided between his children in equal shares.

The will of William Murray, M.D., late of Burley, near Otley, Yorkshire, who died on April 13th last, has been proved at the Wakefield District Registry by Mrs. Sarah Anne Murray, the widow, Mr. James Murray, the brother, and Mr. Robert Fox, the executors, the value of the personal estate amounting to upwards of £3500. The testator gives all his household furniture and effects to his wife. The residue of his property he leaves upon trust to pay the income thereof to his wife for life or widowhood, and at her death or marriage for his children in certain proportions.

The will of Mr. John Hurd, late of Yatton, Somersetshire, surgeon, who died on April 10th last, was proved on the 4th ult. by Mrs. Matilda Hurd, the widow and sole executrix, the value of the personal estate exceeding £1000. The testator gives all his property to his wife absolutely.

The Scotch Confirmation, under the seal of the Commissariat of Fife, of the trust disposition and deed of settlement, of William Traill, M.D., late of Woodwick, granted to Mrs. Anna Harvey or Traill, the widow, David Thomson Glover, and Allan Briggs, the executors, was resealed in London on the 11th inst., the value of the personal estate exceeding £4000.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. Wm. Dollin Alexander, formerly of Summit House, Clapton, but late of Broomhill Bank, Tunbridge Wells, and 9, Second Avenue, Brighton, £100 each to the Stoke Newington Dispensary and the Tunbridge Wells Dispensary.—Mr. John Bacon, late of Liverpool and of Clwyd Hall, Llanychan, Denbighshire, £1000 each to the Liverpool Northern Hospital, the Liverpool Southern Hospital, Bootle Borough Hospital, Stanley Hospital, Kirkdale, near Liverpool, the Liverpool Royal Infirmary, and the Denbigh Infirmary; and £300 to the Convalescent Institution, Woolton.—Lieut.-Col. Wm. Henry [illegible], late of Andover, Southampton, £300 to the Winchester [illegible] Hospital.—Right Hon. Henry Baron Hindlip, late of [illegible] Hall, Worcester, and Alsop-en-le-dale, Derby, £1000 to the Burton-on-Trent Infirmary.—Mr. Abraham Flatau, formerly of Ropemaker-street, Finsbury, but late of 197, Maida-vale, £100 to such Charities as his executors may think fit.—Mr. Walter Samuel Tollet Sandilands, late of Fenchurch-avenue, and Highfield Grange, Sandown, Isle of Wight, £500 each to the London Hospital, East-end, the Royal Free Hospital, Gray's-inn-road, the Cancer Hospital, Brompton, and the Royal Hospital for Incurables, Putney-heath; and the ultimate residue of his property to such charitable institutions and in such parts as his wife shall appoint.—Miss Ivy Webster, late of Exeter, £2000 to the [illegible] and Exeter Hospital.—Miss Maria Beaumont, late of [illegible]-road, Stoke Newington, £1000 to Mrs. Pennefather to establish a bed in the hospital under her superintendence [illegible] Mildmay Conference Hall; £1000 for the benefit of [illegible] at Furnille-square, Bethnal-green; £1000 each [illegible] Hospital for the Paralysed and Epileptic, [illegible] Bloomsbury, and the Royal Hospital for [illegible], Putney; £500 to the Asylum for Invalids, Stoke [illegible]; and £200 to the Home for Confirmed Invalids, [illegible], Highbury.—Mrs. Charlotte Frances Brownley, [illegible], East End, Finchley, £250 to the Small-pox [illegible] Hospital, Highgate, and the University [illegible], and £50 to the Convalescent Home, [illegible]

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Oldham Urban District.—The report which Dr. James Niven has presented to the Corporation of Oldham on the health of the borough during 1886 is one of the most complete documents which we have received. Commencing with a geographical description of the district, and showing by means of a large plate what is the superficial geology, it next proceeds to discuss all the various matters influencing health in the borough, such as dampness and faulty construction of dwellings, smoke nuisances, trapping and ventilation of drains and sewers, building on "tips," and such-like subjects. We are glad to observe a strong condemnation of the practice of building back-to-back houses, the rooms in which are never adequately ventilated. It only needs a large aggregation of such dwellings in any district to bring about that special musty smell, so akin to that which prevails where typhus exists, which attaches to this class of dwelling. Open space about individual houses and the possibility of a through current of air are of the utmost importance, especially in our larger cities and towns. As regards work done in the borough, there is a satisfactory record. The Westhulme sanitary hospital was twice full, and, under the pressure of some typhus, the separation of diseases could not be properly carried out, scarlatinal patients being placed in the same ward as those suffering from typhoid. Some additional hospital provision will now be needed. A wave of scarlatina passed over the borough, and there was a by no means inconsiderable prevalence of typhoid fever. The statistical portion of the report is very exhaustive, the value and bearing of vital statistics being discussed at considerable length in their various aspects. The general death-rate during 1886 was 22·7 per 1000. In connexion with summer diarrhœa, Dr. Niven is of opinion that the disease ought to be grappled with, and he proposes to issue a sanitary guide for distribution at each house within the borough, to assist in diminishing mortality from this cause. And as regards more general action in the same direction, he advocates special flushing of sewers, the use of potent disinfectants in the midden pans, the ventilation of houses and the cooking and boiling of all infants' food as aids in preventing this fatality. Amongst the various appendices to the report are meteorological and other records, which if continued year by year will afford very valuable material for studying the causes of preventable disease amongst the population.

Kingston-on-Thames Urban District.—Estimating the population at 22,655, Dr. Shirtliff shows a death-rate of 19·3 per 1000 in 1886. The diphtheria death-rate is one of the most serious features of the district, for it has now for several years past been largely in excess of the rate prevailing in the country generally, and so long as the conditions of contamination by sewer air remain, the authority cannot even plead that they have done their utmost to prevent it. Again and again has this matter been pressed on the authority, the necessity for breaking the direct connexion between the rain-pipes and the sewers having been specially advocated. Such direct connexion turns these pipes into ventilators during dry warm weather, and their position endangers the health of the inmates of rooms in the upper storeys of houses. Other matters, such as the provision of a hospital and an abattoir, also call for action.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5796 births and 3660 deaths were registered during the week ending July 16th. The annual rate of mortality in these towns, which had been 17·6, 18·1, and 19·6 per 1000 in the preceding three weeks, further rose last week to 20·7. During the thirteen weeks of last quarter the death-rate in these towns averaged 19·8 per 1000, and was 1·4 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·6 in Portsmouth, 14·4 in Bolton, 14·7 in Nottingham, and 15·5 in Wolverhampton. The rates in the other towns ranged

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upwards to 22·9 in Salford and Newcastle-upon-Tyne, 24·5 in Manchester, 29·9 in Leicester, and 31·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 486 and 673 in the preceding two weeks, further rose last week to 880, owing to the increased mortality from diarrhœa; they included 497 from diarrhœa, 152 from measles, 132 from whooping-cough, 50 from scarlet fever, 25 from "fever" (principally enteric), 23 from diphtheria, and only one from small-pox. No death from any of these zymotic diseases was registered during the week in Halifax, whereas they caused the greatest mortality in Newcastle-upon-Tyne, Preston, and Leicester. The highest death-rates from diarrhœa occurred in Salford, Wolverhampton, London, Leeds, Preston, and Leicester; from measles in Manchester, Birkenhead, and Newcastle-upon-Tyne; and from whooping-cough in London, Birkenhead, and Bradford. The 23 deaths from diphtheria in the twenty-eight towns included 16 in London, 2 in Manchester, and 2 in Newcastle-upon-Tyne. Small-pox caused 1 death in Greater London, but not one in any of the twenty-seven large provincial towns. No case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The mortality from diarrhœa only slightly exceeded the average for the season. The deaths referred to diseases of the respiratory organs in London, which had been 199 and 189 in the preceding two weeks, further declined last week to 188, and were 21 below the corrected average. The causes of 79, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Blackburn, Cardiff, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Newcastle-upon-Tyne, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·5 and 18·8 per 1000 in the preceding two weeks, rose again to 19·5 in the week ending July 16th; this rate was 1·2 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 14·6 and 17·3 in Perth and Aberdeen, to 27·3 in Leith and 28·1 in Greenock. The 487 deaths in the eight towns last week showed an increase of 18 upon the number in the previous week, and included 43 which were referred to whooping-cough, 30 to diarrhœa, 11 to scarlet fever, 4 to "fever" (typhus, enteric, or simple), 3 to measles, 1 to diphtheria, and 1 to small-pox; in all, 93 deaths resulted from these principal zymotic diseases, against 85 and 84 in the preceding two weeks. These 93 deaths were equal to an annual rate of 3·7 per 1000, which was 1·3 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 43 and 46 in the previous two weeks, declined again last week to 43, of which 16 occurred in Dundee, 12 in Greenock, 8 in Glasgow, and 5 in Leith. The deaths attributed to diarrhœa further rose, from 10, 18, and 22 in the preceding three weeks, to 30 last week, of which 14 occurred in Glasgow, 5 in Edinburgh, 4 in Paisley, and 3 in Dundee; these 30 deaths were 3 above the number returned in the corresponding week of last year. The fatal cases of scarlet fever further rose from 7 and 8 in the previous two weeks to 11, and included 4 in Glasgow, 3 in Edinburgh, and 3 in Dundee. The 4 deaths referred to "fever" showed an increase upon the low numbers in recent weeks, while the three fatal cases of measles corresponded with the number in the previous week. The death returned from small-pox was one attributed to chicken-pox in Glasgow. The deaths resulting from acute diseases of the respiratory organs in the eight towns, which had been 80 and 76 in the previous two weeks, further declined last week to 65, and were 8 below the number returned in the corresponding week of last year. The causes of 67, or more than 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 29·4 and 26·6 per 1000 in the preceding two weeks, rose again to 27·9 in the week ending July 16th. During the thirteen weeks of last quarter the death-rate in the city averaged 28·7 per 1000, the mean rate during the same period being but 18·0 in London and 19·4 in Edinburgh. The 189 deaths in Dublin last week showed an increase of 9 upon the numbers returned in the previous week; they included 28 which were referred to measles, 12 to diarrhœa, 3 to "fever" (typhus, enteric, or simple), 2 to whooping-cough, and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 40 and 47 in the preceding two weeks, declined last week to 45; they were equal to an annual rate of 6·6 per 1000, the rates from the same diseases being 6·3 in London and 2·4 in Edinburgh. The fatal cases of measles, which had steadily increased in the preceding ten weeks from 6 to 36, declined again last week to 28. The 12 deaths attributed to diarrhœa showed a considerable increase upon recent weekly numbers; and those referred to "fever" had also slightly increased, while the fatal cases of whooping-cough showed a decline. The deaths of infants were more numerous than in either of the preceding two weeks, while those of elderly persons had further declined. Four inquest cases and 6 deaths from violence were registered; and 38, or rather more than a fifth, of the deaths occurred in public institutions. The causes of 29, or more that 15 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

THE RELATIVE RANK QUESTION.

To the Editors of THE LANCET.

SIRS,—I read with much pleasure the letter of "A. M. D." in your issue of May 14th on the above subject. I beg leave to add my humble testimony to its excellence, and only wish that a copy of it were placed in the hands of every young officer of the medical staff, and with it also a copy of your sound and sensible leader on the same subject in the same issue. It is a matter of congratulation that the utter foolishness of this claim for honorary rank has been so well exposed.

Like another of your correspondents, "Army Surgeon," I can speak for many of my brother officers, and say with him, "We do *not* want to be called captains and colonels; we do *not* want to sink our profession by adopting utterly incongruous titles; we do *not* want to become the laughing-stock of the army." I trust that this most mischievous agitation will be stamped out now, once and for ever—this most ignoble and contemptible striving after titles to which we have not a shadow of claim; and I am quite familiar with all the arguments used in favour of it.

I cannot but think that this desire to appear in borrowed plumes, this most illegitimate aspiration, is begotten of a low origin, and nourished in the main by those who very naïvely admit that on retiring from the service they have no position.—I am, Sirs, yours faithfully,

J. P. H. BOILEAU,
Surgeon-Major of twenty-three years' full-pay service.

Punjab, June 20th, 1887.

HEALTH OF MARGATE.

To the Editors of THE LANCET.

SIRS,—Anyone reading your article in last week's issue, founded on Dr. Page's report to the Local Government Board, would certainly draw the conclusion that Margate is a hotbed of fever, and a place which it is not safe to visit. Such an impression, if conveyed by the report, is a false one, and, being most injurious to the town, I trust you will allow me to contradict it. Margate has its faults—offensive privies in the poorer districts, closets often without cisterns, slaughter-houses, and other defects,—but is far from being in the generally unwholesome condition described in your article and in Dr. Page's report.

Last year an epidemic of typhoid fever invaded Margate and most of the neighbouring towns and villages. The epidemic was not limited to Margate only, and this is shown by the fact that the joint hospital for Ramsgate, Margate,

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and the rural districts received sixty-two cases of typhoid, of which thirty-three came from Margate. Dr. Page does not mention this fact, but it is important as indicating that the disease was due to epidemic causes, and was not entirely endemic, as his report leads the reader to believe.

During the nine years preceding 1886 twenty-five deaths occurred from typhoid fever, inclusive of deaths happening in the Hospital for Infectious Diseases, an average of less than three per annum; in each of two of the years there was only one death. Many of these cases were imported. Is it probable that Margate, frequented during the season by about half a million of visitors, many from the worst parts of London, would under any system of drainage show a materially diminished mortality from this cause? There is in the report no comparison with other seaside towns in this respect. The heading of the report states it to be an inquiry into the continued existence of typhoid fever in Margate. Is it correct to describe a place with this mortality as suffering continuously from typhoid fever? I have read the report carefully, and I cannot find that the general death-rate is given or alluded to; the geological features of the district, and the structure and height of the joint hospital wall are described, but there is no allusion to the general death-rate; the fact is, the death-rate is low, would show favourably for the town, and is omitted. Surely in a report on the general sanitary condition of Margate the death-rate is of some importance, and should be included. I submit that an official report should be impartial, and should convey the whole truth; this report does not do so, and is calculated to reflect credit neither on the Local Government Board nor on the officer who made the inquiry.

The epidemic affected the poorer classes chiefly, and for the most part houses with open privies. There was scarcely an instance of any of the better lodging houses being attacked. I did not, for instance, hear of a single case of typhoid in any of the houses on the sea front.

I had reason to doubt the water supply, and I thought that excessive pumping might suck back impurities which pass into the overflow on its way to the sea. The Town Council, acting on my advice, have dug a new well, whence they get a perfectly pure supply of water; they have not yet altogether abandoned the old well, but as soon as more adits are cut in the new one they will do so. I think with less pumping at the old well they are not likely to exhaust far enough to reach the sources of pollution.

The lower levels of Margate for the most part drain into the sea; the remainder of the houses and those of the higher ground drain into cesspools. We are condemned for these, and they are supposed to contaminate the subsoil by soakage. If, however, the chalk close to a cesspool be examined, it is found to be white, clean, and without smell. Scientific opinion is against cesspools, but in Margate, where the houses are not crowded, 3067 houses in 995 acres, they have answered fairly well. We escape, at any rate, soil pipes under the basements, and faulty plumbing out of sight, also the nuisance of street gratings and ventilators.

Facts, however, are better than arguments, and the following figures I am prepared to substantiate: 1. There is not at the present time a single case of typhoid fever in Margate. I append to my letter copy of certificate from the medical practitioners to this effect. 2. In a population of 13,000 there were only 144 deaths during the half-year ending June, 1887, giving a gross death-rate of 16 per 1000 per annum. Deducting fifteen deaths which occurred in hospitals and ten among visitors, the death-rate is 13·2 per 1000. 3. There were but three deaths from zymotic disease in Margate during the half-year, in addition to one in the joint hospital. The deaths were due—two to diarrhœa, one to [illegible] fever, and one to croupous laryngitis. There was no [illegible] from zymotic disease within the radius of the town [illegible] during the last quarter ending June, 1887.

These facts need no comment, and if any of your readers would like to verify them, I shall be pleased to enable them to do so.

I am, Sirs, your obedient servant,

WM. KNIGHT TREVES, F.R.C.S.,
Medical Officer of Health for the Borough of Margate.

[illegible] comprising the whole number of [illegible] practising in Margate, hereby certify that at the present time any case of typhoid fever under our care in the borough of Margate, and that, to the best of our belief and knowledge, there is not a single person suffering from typhoid fever within its radius.

(Signed)	A. NORTON TAYLOR.	WM. PRICE.
	A. W. SCATLIFF.	F. E. NICHOL.
	ARTHUR ROWE.	GEO. M. PITTOCK.
	T. SMITH ROWE.	E. A. WHITE.
	WM. KNIGHT TREVES.	ROBT. THOMSON.
	BERTRAM THORNTON.	AMBROSE WILLY.
	ROBT. PETTICREW.	W. W. COLBOURNE.

Dated this 18th day of July, 1887.

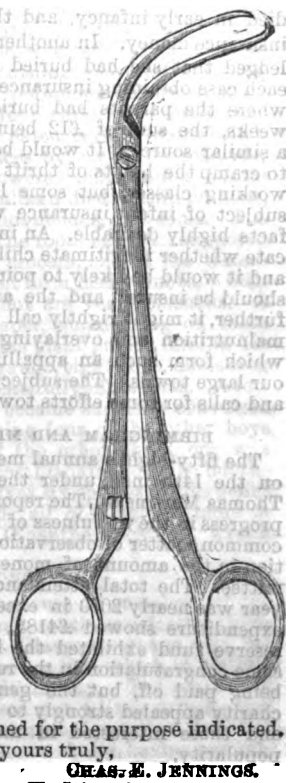
I certify the above to be a correct copy.
WM. KNIGHT TREVES.

*** Notwithstanding this letter, we are compelled to regard the sanitary condition of Margate as very unsatisfactory; and nothing but the abolition of cesspools, the provision of a proper system of drainage and of a safe water supply, will make Margate fit to be regarded as a first-class health resort.—ED. L.

"TRACHEOTOMY AND INFLATION IN THE TREATMENT OF A STILLBORN CHILD."

To the Editors of THE LANCET.

SIRS,—Referring to Dr. Watson's interesting paper in your issue of to-day, permit me to remark that asphyxia in newly-born children is due to the fact that during inspiratory efforts the epiglottis is drawn down like a valve over the superior orifice of the larynx, so that air cannot obtain access to the lungs. The manner in which asphyxia thus arises can be readily demonstrated by examining the throat of a dog whilst under the influence of anæsthesia, in which animal the epiglottis and upper part of the larynx can be seen with the naked eye. As the result of this observation it is clear that the form of asphyxia under consideration can be prevented by drawing the epiglottis forward with a forceps.[1] This manœuvre being of the greatest importance, because it dispenses entirely with the necessity for tracheotomy, perhaps you will not object to reproduce from my article[2] the drawing of my forceps for the epiglottis, which I specially designed for the purpose indicated.



I am, Sirs, yours truly,

CHAS. E. JENNINGS.

Upper Brook-street, Grosvenor-square, W., July 16th, 1887.

"SURVIVANCE AFTER GUNSHOT WOUNDS OR OTHER INJURIES OF THE HEART."

To the Editors of THE LANCET.

SIRS,—Under the above heading are some very interesting cases collected by Dr. Curran; I should like to add one to the number. About twelve years ago, being in New Zealand, I was one day walking across a plain, having a sporting Snider rifle with me, but no dogs. Presently I saw a large wild boar trotting gently across the open at about 250 yards distance from me, and showing a good broadside. I knelt down and fired at him, and felt sure I had hit him. He, however, turned sharp round at the shot and immediately charged straight down upon me at a tremendous pace. I instantly reloaded and reserved my fire for a close shot, when within

[1] THE LANCET, 1885, vol. i., p. 291. [2] Loc. cit.

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thirty yards he suddenly went head over heels, and running up to him I found him stone dead. Curiosity made me carefully open the thorax. I found the lower third of the heart completely torn away, right and left ventricles being cut in half, and the two sets of valves exposed. I found the bullet, quite flattened, under the skin of the opposite side. Passing through the shield and impinging against a rib on the near side had flattened the bullet, which had then cut through the heart like a knife.

I am, Sirs, yours obediently,
JOHN A. FRANCIS, M.R.C.S., L.S.A.

Southsea, July 19th, 1887.

BIRMINGHAM.

(From our own Correspondent.)

INFANT LIFE INSURANCE.

FIVE inquests held in one day on the bodies of infants calls for more than usual attention, even from those indifferent to the ordinary value of life. Coupled with the question of infant life insurance, it affords material for grave reflection. In one of the cases reported the mother admitted that two of the three iligitimate children she had borne had died in early infancy, and that in both she had received insurance money. In another instance the mother acknowledged that she had buried five out of seven children, in each case obtaining insurance money. Still another instance where the parents had buried three children in as many weeks, the sum of £12 being the amount obtained from a similar source. It would be manifestly wrong to attempt to cramp the habits of thrift and independence among the working classes, but some legislative interference on the subject of infant insurance would be in the face of these facts highly desirable. An inquiry of this kind might indicate whether illegitimate children ought to be insured at all, and it would be likely to point out the ages at which infants should be insured, and the amounts to be received. Going further, it might rightly call attention as to the influence of malnutrition and overlaying in producing these disasters, which form such an appalling feature in the mortality of our large towns. The subject is one of national importance, and calls for some efforts towards a solution and a remedy.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

The fifty-eighth annual meeting of this charity was held on the 14th inst., under the presidency of the Mayor, Sir Thomas Martineau. The report showed a steadily increasing progress in the usefulness of the charity, but, as is getting a common matter of observation in these bad times, a diminution in the amount of money at the disposal of the committee. The total attendances of out-patients during the year was nearly 2000 in excess of the previous year. The expenditure showed £4183, and the income £3829. The reserve fund exhibited the low sum of £12. There was some congratulation in the remainder of the building debt being paid off, but the general financial position of the charity appealed strongly to the support of the benevolent and those interested in maintaining its usefulness and popularity.

BIRMINGHAM KYRLE SOCIETY.

A meeting of those interested in the formation of recreative evening classes for the education of children who have left the elementary schools was held lately, and was well attended. Considerable success has attended the movement in this town, and its objects cannot be too highly commended. The efforts to make education interesting and agreeable cannot be too strongly advocated. The proposals embraced subjects such as musical drill, cooking, dressmaking, knitting, imaginary shopkeeping, athletics, wood carving, inventive drawing, elocution, and dramatic reading, with a number of other subjects calculated to promote utility, ornament, and occupation. It is to be hoped that means will be provided, and teachers found to carry out this laudable work, in which the pursuit of work and pleasure can be so advantageously combined, with good results to the growing population.

CARDINAL NEWMAN.

The many admirers of His Eminence Cardinal Newman will be pleased to know of his unabated mental vigour and general health. Though now in his eighty-sixth year, physically feeble, and unable to walk with ease, he continues to work with system and regularity in his daily life. At the annual play of the Oratory School, in which the Cardinal's adaptation of Terence's play of "Pincerna" was performed, the venerable Cardinal sat through the whole of the time, and was apparently much interested in the manner in which the pupils played their parts.

Birmingham, July 20th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE ROYAL WEEK IN NEWCASTLE.

THE great Cattle Show held here under the auspices of the Royal Agricultural Society of England last week has proved a great success. Except on the last day the weather was all that could be desired. On the first popular day nearly 80,000 persons paid for admission. The North-Eastern Railway alone brought 60,000 passengers into the city. The show on the whole attracted more than 126,000 visitors, being about 12,000 more than the previous one held in this city about twenty-three years ago. The Mining and Engineering Exhibition had also a good week, receiving about 120,000 visitors. The whole passed off without a single serious accident to mar the week's festivities.

NEWCASTLE HOSPITAL FOR INCURABLES.

A new departure was made at this very useful charity last week, when the Charities' Committee of the Newcastle Corporation, who are its governors, gave a very successful garden party to their friends, and at the expense of the members of the committee, so as in no way to trench upon the resources of the charity, which, as I told you in a previous letter, are derived from the revenues of an ancient charity founded for the benefit of lepers. The hospital at the present has about thirty inmates, and Mr. J. A. Angus is the medical superintendent. He, in the course of the afternoon, conducted suitable parties of the visitors over the hospital, and introduced them to the patients. The idea of the garden party was to enlist the sympathy of the public, and let them see the good work done by the hospital; and it was properly considered that the entertainment would have a good and cheering effect on the patients, as showing them that they were not altogether cut off or isolated from outside feeling, especially as no pecuniary aid was required. I do not know who thought first of the party; but, at all events, it was a happy and humane idea; and Mr. Angus, who is distinguished by his kindness to the poor, is to be congratulated on the result.

THE CHINESE SEAMEN IN THE TYNE.

The transport *Too Nan* has now left the Tyne for Germany, with some 300 native Chinese sailors on board, and, I believe, in fair health; but Dr. Slater informs me that more than 300 have been left behind to take out from the Tyne two steam cruisers now receiving their armaments at the Elswick ordnance works. It is announced that a portion of the crews are to join in some military sports in North Shields this evening, on the invitation of Colonel Pilter, and the Chinese Admiral Lang, in his reply, consents to his men entering into a competition among themselves at a feat, the object of which is to throw very heavy weights into the air and catch them on their descent. This is a trial of strength which is very common in the northern provinces of China, from which many of the seamen come.

NEWCASTLE ROYAL INFIRMARY.

A conference of the working men's delegates has been held with the infirmary subcommittee, and it has been arranged that for each £10 subscribed annually a governor may be elected. It has also been recommended that all honorary medical officers are to be in future governors *ex officio*.

Newcastle-on-Tyne, July 19th.

SMALL-POX EPIDEMIC AT ABERDEEN.—The outbreak of small-pox which was reported to have occurred in Aberdeen about the beginning of June has within the last few days exhibited such a tendency to spread that the Public Health Committee of the town has decided to erect two special wards at the City Hospital for the treatment of patients.

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EDINBURGH.

(From our own Correspondent.)

UNIVERSITY COURT MEETING.

A MEETING of the University Court took place on Monday, the 18th inst., at which Dr. Heron Watson, the recently elected Assessor for the General Council of the University, took his seat for the first time. There was a good deal of routine business gone through, and certain points of greater general interest and importance were also considered, among them the representation of the General Council of the University, adopted at a stormy meeting of that body some months ago, asking for a "consideration of the sound construction of the Universities Act, 1858, read along with the Medical Acts, 1858 and 1886, relative to the election of the representative of the University in the General Medical Council." It has been urged, with some show of reason, that the General Council of the University should carry out the functions of an electorate in this respect as representing the University in its widest sense. Precedent, on the other hand, and a strong conservative instinct among its members, would point to the Senatus Academicus as the proper electing body. In the circumstances, specially in view of the strong public feeling on the question, the Court has done wisely in deciding to take counsel's opinion on the sound interpretation of the Acts under consideration. The point is a purely legal one, and can be best settled by the dispassionate judgment of a legal expert. Amongst other matters, the Court considered and approved the report of the Committee in charge of the University library, which was of a satisfactory nature, and reflected credit on Mr. Webster, the lately appointed librarian, whose energy and intelligence are doing much in developing the usefulness of the library.

THE ROYAL SOCIETY OF EDINBURGH.

The last meeting of the session was held last Monday, when a number of papers were read, and the work of the session brought to a close by an address from the Vice-President, Sheriff Irvine, who occupied the chair. His statement of work done was highly satisfactory, and shows that the Society is in a flourishing condition. A Victoria Jubilee prize, founded by Dr. Gunning, and amounting to 100 guineas annually, has been this year awarded to Sir William Thomson, President of the Society, for his remarkable series of papers on Fluid Motion. One of the papers read on Monday was of considerable meteorological interest. It is a record of observations made by Mr. Stack, assistant at the Ben Nevis Observatory, on the temperature of winds. The observations were made with an apparatus called the "thermic windrose." Not only were the maximum and minimum temperatures of the various winds measured, but their range of rise and fall in temperature in the different seasons was in each case recorded. The warmest is found to be south wind; the coldest the north-east wind; while that from the south-east has the greatest range of temperature, representing a variation of 24·3° between the maximum and minimum recorded.

THE EDINBURGH UNIVERSITY UNION.

The Students Union, on behalf of which there have been such loyal exertions among present and former students and their friends, is now to be commenced. An estimate of £10,000 for the cost of the buildings has been accepted by the Buildings Committee, and the work will proceed at once, the site having been already acquired.

THE DISCUSSION ON SCARLET FEVER.

The Medico-Chirurgical Society is to hold its meeting for the discussion on Scarlet Fever to-morrow, the 20th inst. The discussion is to be opened by Dr. W. Allan Jamieson, physician to the City Fever Hospital, and it is understood that the question of the origin of epidemics will be largely dealt with, in connexion with the recent violent outbreak of the disease in this city. The higher etiology is also to be to some extent discussed. It is reported that the committee appointed to look into the question in relation to [illegible] Billington's researches have not been able to come to a definite conclusion, and will only present a preliminary statement of their work.

GLASGOW.

(From our own Correspondent.)

POISONING CASES.

A NUMBER of serious cases of poisoning have occurred in Glasgow and its vicinity lately. About a fortnight ago, in Pollokshaws, eight children suffered from arsenical poisoning, and of these two died, the others recovering only after very prompt and energetic treatment. They had picked up in the street a quantity of a white, crisp substance, which they took for alum, but which consisted almost entirely of arseniate of soda. The symptoms presented were typically those of arsenical poisoning. At Whiteinch, one of the western suburbs of Glasgow, about twenty children were reported as being more or less ill from eating "jubilee shortbread," which they had bought at a stand in the street. The symptoms complained of were those of some powerful gastro-intestinal irritant—vomiting, pain, purgation, and collapse. No death occurred. The nature of the poisonous ingredient in the shortbread has not been made out, but it is supposed that it was either nitrate of potassium or carbonate of ammonia; the latter is often used by pastry bakers, and may have been impure or excessive in quantity. The fact that the symptoms were due to the cakes eaten was proved by an experiment, which may be commended to the attention of anti-vivisectionists. The father of one of the children who suffered gave a cake to a dog, which, by promptly turning sick and vomiting copiously, gave evidence of the poisonous nature of what had been eaten. At Greenock, four children showed very serious symptoms after having eaten certain roots which they had dug up in marshy places by a country roadside, under the impression that they were "ladies' nuts," a kind of "earth nut." One of the children died within an hour, after suffering from vomiting, convulsions, and coma. The other three children recovered. The roots eaten are supposed to have been those of Œnanthe crocata, one of the water-dropworts. The roots of this plant form fleshy knobs, which are not unpleasant to the taste, but are very poisonous. A correspondent of a local newspaper, commenting on these cases, gives instances in which this plant proved fatal in its effects. "At Clonmel, some years ago, eight boys, mistaking this plant for wild celery, ate plentifully of its roots. A few hours afterwards the eldest boy became suddenly convulsed and died; and before next morning four of the other boys died in a similar manner. Of the other three, one was maniacal several hours; another lost his hair and nails; but the third escaped unhurt. Hooker gives six species of this genus as native of the British Islands, all of which are more or less poisonous, but he mentions Œnanthe crocata as 'a rank poison.'"

JUBILEE HONOURS.

The distribution of jubilee honours to members of the profession in Glasgow has given much satisfaction here. Sir George Macleod is the first Glasgow surgeon who has received the honour of knighthood, a title which in his case will be worn worthily and with dignity. The absence of another name from the list caused not a little surprise, and even irritation; but it is satisfactory to learn that Professor Gairdner remains untitled of his own choice, having respectfully declined an honour similar to that conferred on his colleague; he does this for reasons which, as he himself puts it, "do not in the least affect his grateful reception of Her Majesty's message as a token of goodwill, or his hearty congratulations to friends who have been the recipients of like distinction." Another mark of the esteem in which Dr. Gairdner is universally held has been accepted by him however—namely, the degree of M.D. (*honoris causâ*), conferred on him recently by the University of Dublin.

THE VICTORIA INFIRMARY, GLASGOW.

This hospital, formerly known as the Southern Hospital, is now to be known by the above title, having received Her Majesty's consent thereto in recognition of her jubilee year. The scheme for its erection progresses favourably. Money is being subscribed with fair rapidity, about £13,000 having been already received. When the sum of £15,000 is reached building operations will commence. Various meetings have been held in the southern suburbs of Glasgow, such as Pollokshields and Rutherglen, and at these the cause of the

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infirmary has been enthusiastically adopted. It is hoped that the foundation-stone of the building may be laid next year, and possibly by some member of the Royal Family, as our exhibition building will be ready for a similar ceremony about the same time.

BURGH POLICE AND HEALTH (SCOTLAND) BILL.

This unfortunate Bill has been shelved again. The Convention of Royal Burghs having brought this measure again under the notice of the Secretary for Scotland, and having represented its extreme importance and urgency, have received from Lord Lothian an intimation, "that owing to the state of public business the Bill cannot be introduced this session with any possible chance of its becoming law." This is the more regrettable as the measure has already passed in separate sessions third readings in both Houses of Parliament, and has been favourably reported on by a Select Committee of each House, and, indeed, a common understanding had been arrived at by those interested in its provisions, so that it was expected that it might pass without serious opposition. Meanwhile the sanitary law of Scotland stands just as it did twenty years ago.

GLASGOW ROYAL INFIRMARY MEDICAL SCHOOL.

At the close of the summer session yesterday, Dr. Macintyre was presented with a handsome marble dining-room clock, with suitable inscription, and statuettes, as a mark of the esteem in which he is held by the medical students who have been attending the classes in this institution. Dr. Clark, dean of the school, presided.

Glasgow, July 20th.

DUBLIN.

(From our own Correspondent.)

THE CONJOINT EXAMINATION SCHEME.

COMPLAINTS are numerous about the *viva-voce* part of the examination in physics at the first professional examination held recently under the conjoint scheme. It is alleged that the questions in this subject were mostly outside the prescribed course of examination. Certainly the rejections were so excessive that no other explanation appears to be tenable, and it seems that the examiners—and I do not exclude those in anatomy—expected too much from the candidates who came before them.

OPHTHALMIA IN THE CORK WORKHOUSE.

For a considerable time past eye diseases have been prevalent among the children in this workhouse, but recently it has reached such proportions that Dr. Sandford has been requested to report on the matter to the Board of Guardians. He states that in the boys' school 74 per cent. of the pupils are suffering from affections of the eyes, of greater or less severity. In the girls' school 80 per cent. are affected, while in the infants' school 6·3 per cent. have some form of eye disease. In both the boys and girls in hospital the majority of the patients are sufferers from ophthalmia. With few exceptions the disease takes the form of granular ophthalmia and its complications, and is in many instances associated with other scrofulous affections. It varies in severity from the latent forms, in which its presence is not apparent except by close examination, to an unsightly condition in which the eyes are a mass of disease, and vision is hopelessly impaired or destroyed. In the boarded-out children, on the other hand, there were only 2 cases in over 100 children. The prevalence of the disease in the chronic form is due to various causes, one of the most important being its communicability from one child to another by direct contact. A number of children are crowded together, most of whom are constitutionally predisposed to the reception of such an affection, the chances of the spread of infection being enormously increased by the use of a common lavatory, the same towel or roller being used by a number of children. Under such circumstances the introduction of one case into a school previously free from disease would render its contraction by the other children almost a certainty. Once contracted, the nature of the disease is to assume a chronic form—kept alive by favourable surroundings, such as overcrowding, insufficient ventilation or improper food, and breaking out at times into an active condition when stirred by some special stimulus or local irritation, such as exposure to cold or wet, to dust or rain. It is to be hoped that the disease may be effectually stamped out by acting on the admirable suggestions made by Dr. Sandford.

ZYMOTIC DISEASES IN DUBLIN.

During the five weeks ended July 2nd, the mortality from measles was doubled as compared with the previous month, but, on the other hand, there was a marked decline in the number of deaths from whooping-cough. It is interesting to note (the occurrence being most unusual) that there was not a single fatal case of typhus fever recorded during the month. Measles, it may be added, is still prevalent in Dublin. Last week 36 deaths were ascribed to this disease, and there are 141 cases under treatment in hospital.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

Her Majesty, who is patron of this Society, having completed the fiftieth year of her reign, it has been suggested that a special Jubilee collection should take place. About £100 has already been contributed towards the fund in question, and the amount, when complete, will be distributed, in honour of the occasion, to the many annuitants relieved by the operations of this charitable Society.

Mr. Broomfield, of the Carmichael College of Medicine, has been presented with an address and testimonial on the occasion of his approaching marriage.

Dublin, July 19th.

THE SERVICES.

Deputy Surgeon-General R. Hungerford has been appointed Principal Medical Officer, Eastern District, vice Surgeon-General Fox, now at Aldershot, and Deputy Surgeon-General S. A. Lithgow, M.D., C.B., has been appointed Principal Medical Officer of the South-Eastern District.

WAR OFFICE.—Army Medical Staff: Deputy Surgeon-General Sir James Arthur Hanbury, K.C.B., M.B., F.R.C.S.I. to be Surgeon-General, vice J. O'Nial, C.B., granted retired pay (dated June 14th, 1887); Deputy Surgeon-General Randolph Webb, from half-pay, to be Deputy Surgeon-General, vice Sir J. A. Hanbury, K.C.B., M.B., F.R.C.S.I. (dated June 14th, 1887); Surgeon Norman Smyth, M.D. resigns his commission (dated July 20th, 1887).

YEOMANRY CAVALRY.—West Somerset: Surgeon S Farrant is granted the honorary rank of Surgeon-Majo (dated July 16th, 1887).

ARTILLERY VOLUNTEERS.—2nd Volunteer (Devonshire) Brigade, Western Division, Royal Artillery: E. Holberto Edlin, Gent., to be Acting Surgeon (dated July 16th, 1887) Honorary Assistant-Surgeon G. Miles resigns his commissio (dated July 20th, 1887).—1st East Riding of Yorkshire Thomas McCraith Foley, Gent., to be Acting Surgeon (date July 20th, 1887).

ENGINEER VOLUNTEERS.—1st Cheshire: Acting Surgeo Andrew Stewart is appointed Second Lieutenant (dated Jul 20th, 1887).—2nd West Riding of Yorkshire (Leeds): Charle Malcolm, Gent., to be Acting Surgeon (dated July 20t 1887).

VOLUNTEER SUBMARINE MINERS (the Tees Division).— William Jones Williams, M.D., to be Acting Surgeon (date July 20th, 1887).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Queen Own (Royal West Kent Regiment): Acting Surgeon Eyr Ievers, M.D., resigns his appointment (dated July 16th, 1887

Medical News.

YELLOW FEVER.—Reports are current in Ne York of an alarming prevalence of yellow fever at Memphi Tennessee.

AN epidemic of hysteria is reported to have broke out amongst the women at Agosta, a populous village ne Subiaco.

NEW FRENCH HOSPITAL.—His Royal Highness t Comte de Paris has given a donation of £100 to the buil ing fund of the new French Hospital which is to be erect in Shaftesbury-avenue. Her Royal Highness Madame Comtesse de Paris has paid, for the same fund, to t bankers of the institution the sum of £600, being a share the proceeds of the bazaar held at Willis's Rooms in June.

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THE SHEFFIELD WATERWORKS.—At a special meeting of the proprietors of the Sheffield Waterworks, held on the 11th inst., the terms of agreement recommended by the directors for the sale of the undertaking to the corporation were unanimously confirmed. These terms are equivalent to a purchase price of rather over £2,000,000. The Corporation Bill seeking the power of purchase is now before Parliament, and is expected to pass as an unopposed measure.

THE HEAT IN THE UNITED STATES.—The heat throughout the United States on the 16th inst. was unusual and extreme. The following figures show the temperatures recorded: Pittsburg, 101°; Washington and Baltimore, 99°; Pekin (Illinois), 103°; Joliet (Illinois), 113°; St. Louis, 107°; Chicago, 102°. The 17th inst. was the hottest day known at Philadelphia, with one exception in 1876, for thirty years. On the 18th the excessive heat continued, and many deaths from heat have, as might be expected, occurred.

GUY'S HOSPITAL.—On the 19th inst. a meeting of the subscribers to the Special Appeal Fund on behalf of this institution was held, when it was reported that the fund now amounted to £75,000. After paying off a debt to the bank, a sum of £60,000 was left. The interest of this sum, however, is not sufficient to maintain the 500 beds, but it is hoped that it will be possible to save the principal, and that with increased subscriptions in the future the work of the hospital may be satisfactorily carried on.

TESTIMONIAL TO MR. GODART.—On Monday, the 18th inst., in the presence of the staff and a large number of the past and present students of St. Bartholomew's Hospital, Mr. Savory presented a testimonial to Mr. Godart, upon the occasion of his departure for Sydney. In an eloquent address, Mr. Savory alluded to Mr. Godart's long connexion with the school of St. Bartholomew's Hospital, and concluded by presenting him with a gold watch and a purse containing fifty guineas from his friends amongst the past students and staff of the hospital, and a testimonial, illuminated on vellum, and signed by the consulting and acting medical and surgical staff.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—Sir James Paget, president, took the chair at the quarterly court of directors of this Society, held on Wednesday, July 13th. One member was elected, the deaths of four were reported, two gentlemen had ceased to be members, and the election of another was declared void. A sum of £1384 was voted for distribution amongst sixty-four widows and nine orphans. The application of a widow was considered, and a grant made. The expenses of the quarter were £37 odd. The treasurer reported the receipt of the legacy of £5000 from the executors of the late Sir Erasmus Wilson, a vice-president of the Society.

AFTER-CARE ASSOCIATION.—The annual meeting of this Association, founded for the benefit of poor and friendless female convalescents on leaving asylums for the insane, was held on Thursday last, at 83, Lancaster-gate, W. In the absence of Lord Meath, Dr. Hack Tuke took the chair. The meeting was addressed by the Rev. C. J. Ridgeway, Rev. E. S. Derrick, Dr. Geo. H. Savage, Dr. T. Claye Shaw, Dr. S. Russ Philipps, and others. A fair amount of progress had been made during the past year, but funds are much wanted to extend the work of the Association. There are about 30,000 women of various callings and conditions of life in lunatic asylums in England and Wales. Full information of this valuable work may be obtained of the secretary, Mr. Thornhill Roxby, Emblewood, Osbaldiston-road, N.

MEDICAL NOTES IN PARLIAMENT.

Army Medical Officers.

IN the House of Commons, on the 14th inst., in answer to Dr. Tanner, Mr. Stanhope stated that the reduction in the troops in Egypt had resulted in a temporary excess of medical officers in various military districts, of which Cork was one, and all military medical officers not exclusively employed in the station hospital are available for duty in barracks. The number on the roll at Cork on May 30th was fourteen, of whom two were on leave; and on the same date there were eighty sick in the station hospital. It is the practice to place one medical officer on orderly duty each day, so that with twelve officers available the turn of each would come round every twelfth day. The usual term of rotation depends on the number of officers, which for Cork (exclusive of Cork Harbour) is eight. The other officers, although not on duty, are all employed. He added that in consequence of the present temporary excess admission to the medical staff has been suspended until the supernumeraries are absorbed.

Contagious Diseases in the Colonies.

In answer to Mr. Stuart, Sir H. Holland said that the colonies in which contagious diseases ordinances were in force in October last were Jamaica, Trinidad, Barbadoes, Labuan, Ceylon, Hong-Kong, the Straits Settlements, Malta, and Fiji. In Jamaica, Trinidad, and Barbadoes repealing laws have been passed, which have been confirmed. In Labuan the ordinances have been suspended, and their repeal has been ordered. In Ceylon, Hong-Kong, and the Straits Settlements the Governors have been directed to introduce measures repealing the ordinances, but there has not yet been sufficient time to carry out the instructions. In the case of Malta the Governor has been instructed to invite the Council to follow the example of the United Kingdom in this matter. In Fiji, in view of the special circumstances affecting the health of the native population, and especially in consequence of the coolie immigration from India, he has decided not to press for the immediate repeal of the ordinances. In the case of Gibraltar, where there is no ordinance, the Governor has been directed to put an end to the system of the examination of women. In St. Helena the ordinance of 1865 was allowed to lapse in 1879.

Alleged Ill-treatment of a Lunatic.

On the 19th inst., Mr. W. Corbet asked the Secretary of State for the Home Department what was the result of his inquiries into the alleged ill-treatment of a lunatic in Stafford Goal.—Mr. Matthews replied that he had received a report from the Prisons Commissioners of the inquiry which has recently been held at Stafford Gaol, and which was conducted by the visiting committee assisted by an inspector. The inquiry as a whole is not yet complete, but it appeared from the report to be clear that the injuries which were found upon the man were self-inflicted, that no violence was done to him by the prisoners with whom he was placed, and generally that the amount of the injuries had been much exaggerated. Further investigation would be made as to whether all was done that should have been done to prevent the prisoner from injuring himself. At the same time there was no doubt but that the magistrates committed an error of judgment in sending him to Stafford Gaol, for his mental condition showed that he should have been removed at once to an asylum.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADIE, A. J., L.R.C.P.Lond., L.S.A., has been appointed Resident Obstetrical Officer to Charing-cross Hospital.

BARTON, G. P., L.S.A., has been appointed House-Physician to Charing-cross Hospital.

BOWER, B. J., M.R.C.S., L.R.C.P.Lond., L.S.A., has been appointed House-Surgeon to Charing-cross Hospital.

HAYNES, SYDNEY W., M.B., C.M.Ed., has been appointed an Honorary Administrator of Anæsthetics to the Birmingham Dental Hospital.

HODGSON, JOHN, M.B.Lond., M.R.C.S., has been appointed Assistant Surgeon to the Oldham Infirmary.

LINGWOOD, E. H., L.S.A., has been appointed House-Physician to Charing-cross Hospital.

LITTLEWOOD, J. O., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Walsall Borough District of the Walsall Union.

MAITLAND, EDWARD W., L.R.C.P.Ed., M.R.C.S., has been appointed Assistant Surgeon to the Oldham Infirmary.

PEDLEY, F. NEWLAND, F.R.C.S., L.D.S., has been appointed Senior Dental Surgeon to Guy's Hospital, vice Moon, resigned.

ROBERTS, THOMAS H., L.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Township of Saddleworth.

SANDELL, H. W. A., L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Upper District of the Leighton Buzzard Union.

SILK, J. FREDK, W., M.D., has been appointed Anæsthetist to the National Dental Hospital.

SMITH, E. J., M.R.C.S., L.S.A., has been appointed House-Surgeon to Charing-cross Hospital.

STONHAM, CHARLES, F.R.C.S., has been appointed Assistant Surgeon to Westminster Hospital, vice A. M. Sheild, resigned.

WILDERS, JOHN ST. S., M.R.C.S., L.S.A., has been appointed Honorary Consulting Surgeon to the Birmingham Dental Hospital, vice Furneaux Jordan, resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester-street, S.W.—House-Surgeon. Salary at the rate of £20 per annum, with board, &c.

BIRMINGHAM GENERAL HOSPITAL.—Resident Medical Officer. Salary £130 per annum, with residence, board, and washing.—Two Assistant House-Surgeons. No salary, but residence, board, and washing will be provided.

CARLISLE DISPENSARY.—Junior House-Surgeon. Salary £100 per annum, with apartments (not board).

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Senior and Junior Resident Officers. Salary £100 and £80 per annum respectively, with apartments and board.

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LAMPETER UNION.—Medical Officer, Medical Officer of Health, and Public Vaccinator. Salaries and fees about £80 per annum.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer. Salary £120 a year, with board.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, Berner's-street, W.—Resident Librarian. Salary commences at £250 per annum, to which are added residence, coals, and gas.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House-Surgeon and Secretary. Salary £80 per annum, rising by annual increments of £10 to £100 per annum, with residence, board, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

DUNLOP.—On the 10th inst., at Long Sutton, the wife of J. Gordon Dunlop, M.B., of a daughter.

JAMES.—On the 16th inst., at Butler House, Kilkenny, the wife of C. E. James, B.A., M.B., T.C.D., L.R.C.S.I., of a son.

MACKERN.—On the 13th inst., at Calle Lavalle, Buenos Ayres, the wife of George Mackern, M.D.Lond., M.R.C.S., of a daughter.

MARSH.—On the 14th inst., at Grasmere, Rotton-park-road, Edgbaston, the wife of F. Marsh, F.R.C.S., of a daughter.

PECK.—On the 18th inst., at Gower-street, the wife of Awdry Peck, M.A.Oxon., M.R.C.S., L.R.C.P., of a son.

PESKETT.—On the 17th inst., at Oakover, Burnham, Somerset, the wife of A. W. Chalmers Peskett, M.A., M.B., B.C.Cantab., of a daughter.

PRESTON.—On the 16th inst., at Liskeard, Cornwall, the wife of George Preston, M.R.C.S., L.R.C.P., of a son.

TOWNSEND.—On the 15th inst., at Jalapahar, Darjeeling, the wife of Surgeon-Major Townsend, A.M.S., of a daughter.

MARRIAGES.

BLATHERWICK—FRANKS.—On the 19th inst., at St. Peter's, Streatham, by the Vicar, the Rev. A. C. Tarbutt, M.A., assisted by the Rev. Charles G. Gull, M.A., Henry Blatherwick, M.R.C.S., L.R.C.P., of Woodlawn, Dulwich Village, second son of Deputy Surgeon-General Blatherwick, of Southampton, to Kate Temple, only daughter of the late J. F. Franks, of Streatham-common, and Catherine S. Temple Franks, of Crown-hill, Norwood.

BRENCHLEY—SPURLING.—On the 15th inst., at St. Giles's, Camberwell, Algernon Brenchley, M.D., to Marion, eldest daughter of Henry John Spurling, of De Crespigny-park, S.E.

EDSELL—HAINES.—On the 14th inst., at St. Mary's Church, Byfleet, George Alfred Edsell, L.R.C.P., M.R.C.S., to Annie Isabel, eldest daughter of William Haines, Esq., of Coleman-street, E.C., and The Cedars, Byfleet, Surrey.

GOLLAND—REID.—On the 19th inst., at St. John's, Altrincham, by the Rev. C. E. Golland, M.A., brother of the bridegroom, assisted by the Rev. P. Wainwright, M.A., Vicar of the Parish, Alfred Golland, M.R.C.S., L.R.C.P.E., of Altrincham, to Mary (Minnie), third daughter of Alexander Reid, Esq., of Woodlands-park, Timperley.

GRIFFIN—STROTHER.—On the 14th inst., at Shaugh Prior Church, Roborough, South Devon, Richard Michael Griffin, M.B., M.Ch., to Mary Julia, daughter of the Rev. James Baxter Strother, M.A., Vicar of Shaugh Prior.

PARKHILL—ABBOTT.—On the 12th inst., at St. Giles's, Reading, by the Rev. C. F. J. Bourke, Samuel J. Parkhill, M.D., of Church Gresley, Derbyshire, to Lydia (Dick), daughter of the late Charles W. Abbott, of Marlpool, Derbyshire, and niece and adopted daughter of the late Wm. Carrick Crofts, M.R.C.S.Eng., of Church Gresley.

WAYLEN—LEAKE.—On the 2nd ult., at St. George's Cathedral, Perth, Western Australia, Alfred Robert Waylen, M.D., Colonial Surgeon and Principal Medical Officer, to Louisa, widow of the late Sir Luke Samuel Leake, Speaker of the Legislative Council of Western Australia.

WEARING—COMER.—On the 7th inst., at St. Margaret's, Anfield, Liverpool, by the Venerable the Archdeacon of Man, assisted by the Rev. C. S. Nicholl, Richard Wearing, M.D.Edin.Univ., of Wavertree, to Helena Blanche, younger daughter of George Comer, of Larkfield, Wavertree.

DEATHS.

BAZELEY.—On the 17th inst., at Queen Anne-terrace, Plymouth, Wm. Bazeley, M.R.C.S., L.S.A., aged 49.

DAWSON.—On the 14th inst., at his residence, Regent-street, Great Yarmouth, John Dawson, M.D., aged 46.

LYONS.—On the 13th inst. (of phthisis), on board s.s. *City of Bombay*, while entering the docks, Thomas Lyons, L.R.C.P., L.S.A., Civil Medical Officer, Bogra, India, aged 47.

RONALD.—On the 17th inst., at Wellington-square, Ayr, N.B., John Ronald, C.M.Glas., J.P., in his 84th year.

ROSE.—On the 14th inst., at Diss, Norfolk (of apoplexy), Fredk. Robert Rose, M.R.C.S., L.S.A., in his 78th year.

YOUNG.—On the 28th ult., at Hastings, Thomas Young, L.R.C.P.Ed., L.R.C.S.Ed., L.F.P.S.Glas., L.M. (brother of G. W. Young, Surgeon, of East Ardsley, near Wakefield), aged 34. (Deeply lamented.)

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 21st, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
July 15	30·15	W.	64	60	104	78	59	...	Overcast
,, 16	30·19	N.	63	59	114	76	59	·14	Hazy
,, 17	30·20	N.E.	64	57	111	69	53	·09	Cloudy
,, 18	30·24	N.E.	57	51	113	72	49	·07	Bright
,, 19	30·28	N.E.	63	55	116	78	52	...	Hazy
,, 20	30·30	N.E.	68	60	123	81	58	...	Hazy
,, 21	30·25	E.	64	59	112	75	59	...	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE VALUE OF THE SUNFLOWER.

IT is stated on the authority of a Cuban journal that since the sunflower has been cultivated in certain swampy districts on the banks of the river Potomac malarial fever has almost ceased to be endemic there. Similar beneficial results appear also to have followed the cultivation of this plant in the neighbourhood of the mouth of the Scheldt in Holland. The editor of the *Monthly Journal of Pharmacy*, who has been engaged in observations on sunflowers, found that during the month of June, 1885, a quarter of an acre of sunflowers exhaled, with a mean temperature of 70° F. at midday, exactly 1950 gallons of water in the form of vapour, or sixty-five gallons a day. He attributes the antimalarial action of the sunflower therefore not only to its properties of absorbing and destroying the malarial miasm and of emitting an abundance of pure oxygen, as taught by other writers, but also to its great capacity, owing to its rapid and vigorous vegetation, of absorbing and utilising the moisture of the soil in districts which are unfit for human habitation. He likewise suggests that the aromatic odour of the flowers may perhaps be possessed of antiseptic virtues.

Diploma.—Our correspondent should address a complaint to the registrar, and failing to get satisfaction, to the Registrar-General; also to the Apothecaries' Company. The Medical Council also should receive a statement of the facts, though its power to interfere is less than that of the other authorities. We do not understand our correspondent to imply that certificates of vaccination are accepted.

A.M.D.—We have no recollection of the reference mentioned.

DANGERS OF SWING-BOATS.

To the Editors of THE LANCET.

SIRS,—The following case is another instance—if further evidence were necessary—of the danger of swing-boats when not properly guarded in places of public amusement.

A young woman, whilst watching a show, came unconsciously too near to one of these stands, and on turning round received a blow in the face from one of the boats in its ascent. She was knocked down and much bruised, and both her upper central incisors were dislocated from the maxilla, one being transversely fractured at the centre of the crown. Their attachment to the gum was fortunately undisturbed. With traction and a little manipulation the teeth were both returned to their sockets, and became firmly fixed eventually. Still, the loss of a front tooth is a matter of considerable moment to a woman, and the results might easily have been worse, as we have seen before.

I am, Sirs, faithfully yours,

Skipton-in-Craven, July 17th, 1887. C. W. SESSIONS BARRETT, M.B.

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AN INDIAN REMEDY FOR TAPEWORM.

To the Editors of THE LANCET.

SIRS,—In reply to a correspondent's letter in your valuable columns of May 28th last, asking for a remedy for the cure of tænia solium in a case in which male fern, kousso, and pelletierin had each and all been tried unsuccessfully, may I suggest to him to try the powdered seeds of *Embelia ribes*, called by the natives, "bao-birang." If your correspondent is unable to procure these seeds from any druggist in London, and will place himself in communication with me, I will very gladly put him in the way of getting any quantity of them. I have used this drug for the past four or five years in cases of tapeworm amongst Europeans and natives with good results, and it is a favourite Indian remedy in this disease. I have usually given from one to four drachms (or even more) of the powdered seeds with milk or with curds early in the morning, fasting, following it up some hours later with a purgative dose of castor oil. This latter I have found nearly invariably necessary, as the seeds themselves are not purgative. The seeds are about the size and shape of pimento seeds, and are not unpleasant to take, being slightly aromatic in taste. The dose which is efficacious is, I admit, unpleasantly large, and possibly if the active principle could be isolated it could be given in a much smaller dose, and more palatably. I have asked Dr. Warden, the Chemical Examiner in Calcutta, to try to isolate this active principle. Dimmock, in his recent work on the Materia Medica of Western India, mentions that the seeds of the *Embelia ribes* are largely imported into Germany, and form the chief ingredient in several patent medicines for tapeworm. I can vouch for the efficacy of this remedy when given in full doses, repeated every morning if necessary, and I have never seen the slightest ill effects follow its use. The general price of the seeds is about sixpence for 2 lb. Will "Puzzled" give this simple remedy a trial?

I am, Sirs, yours faithfully,

Simla, June 24th, 1887. GEO. H. HABERN, L.R.C.P.Lond., M.R.C.S.

Mr. James S. Hörifall.—We should recommend our correspondent to make application to the Secretary of the St. John Ambulance Association, St. John's Gate, Clerkenwell.

G. M. Ross should address the editor of the paper in which the extract appeared.

Dr. Dudley Buxton.—The paper is marked for early insertion.

PUNCTURE OF THE ABDOMEN.

To the Editors of THE LANCET.

SIRS,—The following case may be of interest in connexion with Dr. Ogle's article on Relieving Tympanites by Puncture of the Abdomen.

Some few years ago, when practising in Gloucestershire, I attended a case of occlusion of the bowels, which continued unrelieved for ten or twelve days. There was much pain, stercoraceous vomiting, and great distension, causing difficulty of breathing, syncope, &c. Finding matters going from bad to worse, and having failed in all other kinds of treatment, I, with the consent of the patient's relatives, punctured the abdomen with a small-sized trocar and cannula in two different places, where the bulging was most prominent, allowing the escape of a quantity of very fetid gas. This operation was followed by immediate relief of all the distressing symptoms, and in the course of three or four days the bowels acted, and the patient recovered. I was induced to try the operation for two reasons, the first being that I had read Trousseau on this subject, who states that punctures of the abdomen in such cases are likely to be productive of benefit, and that they are neither very painful nor dangerous; the second was that I had seen similar treatment adopted in the case of cattle suffering from distension from over-eating with satisfactory results. I think I should always consider myself justified in acting similarly in other cases, having failed in the usual forms of treatment.

I am, Sir, your obedient servant,

Stroud Green, N., July 15th, 1887. HUGH G. WEBB, L.K.Q.C.P., &c.

REGISTRATION OF FOREIGN DEGREES.

To the Editors of THE LANCET.

SIRS,—Permit me to call attention to the cool manner in which the Medical Council performs its duties. By the new Medical Act it is lawful for certain foreign graduates to register their degrees, and the day fixed by Parliament for doing so was June 30th at latest. I sent my degree up to the registrar, with a request that it should be registered on June 30th, and I have had no notice taken of it so far; and now I hear that the Executive Committee is called for July 25th to consider the matter. Had I been registered at the proper time, I should in all probability have been elected to an important office, for which a registered M.D. is a *sine quâ non*. It is now filled up, and I am still unregistered.

I am, Sirs, yours truly,

July, 1887. M.D.

*** Our correspondent's case seems hard, though he does not give us particulars of his other qualifications, if any. But the law does not contemplate a hasty or wholesale registration of foreign degrees, but a careful consideration of the case of each university. Even under Clause 16, providing for the description of foreign and colonial titles to be added to the names of already registered practitioners, the Council has to be satisfied that the degree has been obtained after proper examination, and before the passing of the Act—conditions that require a little time.—ED. L.

UNQUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—Though a great many letters have already appeared on the above subject, I trust you will insert this, as our position daily becomes more serious, and it behoves us to do something in our own behalf. The vital question now is, What is to become of us? Are we to starve, if the law and the medical profession itself make it impossible to obtain employment, as now seems almost the case? By our previous training we are totally unfitted for anything else. Business men can obtain *employés* ingrafted from boyhood with business, who are for this reason of far greater value than one without experience, however well educated. Chemists, if we are willing, will not employ us without previous apprenticeship, which closes their portals to us. There is no denying the hardships of those who, like myself, besides often being the sons of medical men, have matriculated at a university, and entered as *bonâ fide* students, when, after undergoing half or more of the curriculum and passing some of their examinations, they have through pure misfortune to break off and go as assistants. My testimonials will prove that my hospital work and several years' experience in large general practices, together with hard reading at the same time, have made me competent to obtain a livelihood in some defined medical capacity. Can you, Sirs, suggest any plan for our benefit? And I also appeal to the members of the profession to aid us, who, had fate been propitious, would long ago have been numbered in their rolls. I have no doubt all would be willing to undergo a fair test, so that we could, as has been before suggested, be registered as assistants. We are, unfortunately, heavily handicapped by the large number of newly qualified hospital men constantly being added to the number of competitors for a livelihood in medicine, but who—and it is the expression of medical men themselves—are our inferiors as far as private practice is concerned. Apologising for occupying so much space,

I am, Sirs, yours sincerely,

July, 1887. AN UNQUALIFIED ASSISTANT.

Edwardsonist (Brighton).—1. The competing claims of literature and science in the mental equipment of youth were quite well known in the first century.—2. The passage is from Petronius Arbiter I. (ed. Bücheler): "I am of opinion that our boys at school are made very unintelligent, because they neither hear nor see any of those things which are in practical use" (Ego adulescentulos existimo in scholis stultissimos fieri, quia nihil ex his quae in usu habemus aut audiunt aut vident).

A. B. C. would no doubt obtain the information he desires by application to the Secretary of the Brussels Medical Graduates' Association, Dr. Pocock, The Limes, St. Mark's-road, N. Kensington.

Young Diabetic.—We do not prescribe.

"REMOVAL OF BREAST TUMOUR WITH THE AID OF COCAINE."

To the Editors of THE LANCET.

SIRS,—In your issue of June 18th I find a very interesting report of removal of adenoma of the breast with cocaine as the anæsthetic. Inasmuch as Mr. Grün used very strong solutions of the drug, and also believed it to be the first case of removal of a tumour of the breast under the influence of cocaine, I beg leave to call your attention to a case of amputation of the breast under cocaine published in the *New York Medical Record* of June 4th, 1887. The operation was performed in the New York Skin and Cancer Hospital on March 27th, the patient being seventy-eight years of age, and having a double cardiac murmur. In other words, ether was positively contra-indicated by the condition of the patient. The anæsthetic was confined to the region of operation by the use of a large rubber ring, as devised by Dr. F. L. Corning of this city. A two per cent. solution of cocaine was then injected into the skin along the entire line of incision, which I first traced with tincture of iodine. Then the base of the tumour was flooded with the same solution. The operation was painless and exceedingly satisfactory. It might be well to state that only three drachms of this two per cent. solution were used, the operation lasting twenty-five minutes. When presenting the case to the Surgical Section of the New York Academy I expressed the opinion that some modification of Dr. Corning's device would enable us to remove such tumours, even after they have invaded the axilla, in cases where general anæsthesia is inadmissible.

I am, Sirs, yours very truly,

New York, July 7th, 1887. DANIEL LEWIS.

Rev. Robert Sorsbie.—There is no recommendation of the system to be found in THE LANCET of the date given. The passage may have been extracted from an advertisement.

Cavendo tutus.—We are not aware of the existence of any book of the character mentioned.

Inquirens and *Truthful James* have not enclosed their cards.

HAY FEVER: CORRIGENDA.

To the Editors of THE LANCET.

SIRS,—In my letter published in your last issue may I ask that *gastro-intestinal* may be read for "gastric intestinal," and *inflection*, or possibly more correctly *deflection*, for "infliction."

I am, Sirs, yours faithfully,

July 18th, 1887. J. PERCIVAL HUNT.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Savage, London; Mr. Barwell, London; Dr. Ogle, London; Mr. Edmund Owen, London; Mr. W. Anderson, London; Messrs. Clarke and Co., London; Mr. H. W. Page, London; Mr. C. Steele, Clifton; Mr. F. J. Smith, London; Dr. Stewart, Nottingham; Mr. Laurence Humphry, Cambridge; Mr. Lightowler, Southport; Messrs. Hall and Son, London; Dr. Swan, Batley; Mr. Fuge, Taunton; Messrs. Hogg and Co., London; Surg.-Major Bolleau, Ferozepore; Messrs. Sharrow and Anderson, London; Mr. H. G. Webb, Northleach; Messrs. Clark and Co., London; Mr. B. Walker, Spondon; Mr. Daniel Lewis, New York; Dr. Travers, Sutton; Mr. Sessions-Barrett; Messrs. Vickers and Co., London; Mr. G. Harris, Simla; Dr. Shirtliff, Kingston-on-Thames; Dr. F. W. Bennett, Leicester; Mr. A. B. Macdowall, Gadebridge; Mr. C. B. Jennings, London; Mr. Blackett, London; Mr. F. Lawrence, York; Mr. J. W. Vickers, London; Dr. Plothmann, Ems; Dr. Hillar, Kennington; Mr. McBryan, Hanwell; Mr. Hodgetts, Smallheath; Dr. Muirhead, Edinburgh; Mr. Hannay, Newcastle-on-Tyne; Mr. Thompson, London; Mrs. Read, Shanklin; Mr. Dowell, London; Mr. Lloyd, Lampeter; Mr. Hyde, Buxton; Dr. Reid, Kingsland; Dr. T. Oliver, Newcastle-on-Tyne; Mr. Horsfall, Sowerby Bridge; Mr. Taylor, Cambridge; Dr. Millar, Glasgow; Mr. D'Arcy Power, London; Mr. H. T. Rutherford, London; Mr. Inland, Beech Haven; Mr. J. A. Francis, Southsea; Dr. Thudichum; Dr. John Lucas, London; Mr. Addison, Tipton; Mr. Davis, Brighton; Mr. J. J. Tobin, Ilkeston; Mr. Parker, London; Dr. Bower, Bedford; Mr. T. P. Smith, Reigate; Mr. Bremner, Manchester; Mr. H. F. Philpot, London; Mr. H. T. Roxby, London; Mr. Scott, Penrith; Mr. Jordan, Manchester; Mr. A. J. Harvey, London; An Old Correspondent; Truthful James; M.D.; Forum; F.R.S., Droitwich; A. B.; Cemetery Chaplain; M.D., St. Ives; Bee; Puzzled; Matron, Batley; Cavendo Tutus; Warner; Delta; Somebody, Chalfont St. Peters; H. C.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Taylor, Cannock; Dr. Seaton, Sunbury-on-Thames; Mr. Smith, Tunbridge Wells; Mr. Ostell, Carlisle; Mr. Cox, London; Mr. Hutchinson, Newmarket; Mr. Blackwood, Liverpool; Mr. Derry, Leeds; Dr. Johnston, Sheffield; Mr. Kilvington, Hartlepool; Mr. Milne, Huntley; Mr. J. Wolff, London; Mr. Hartley, Huddersfield; Messrs. Burgoyne and Co., London; Dr. Apjohn, Kilkee; Mr. Ernst, London; Messrs. King and Co., London; Mr. Hanson, Dhar, India; Messrs. Higham and Co., Hyde; Mr. Hunt, Bristol; Mr. Cooke, Newtown; Messrs. Geddes and Co., London; Dr. Ward, Oxford; Mr. Teague; Messrs. Bell and Co., Edinburgh; Dr. Bennett, Chatham; Mr. Sawyer, Shaftesbury; Dr. Collier, Cranford; Dr. Stewart, Morpeth; Dr. Chisholm, Liverpool; Dr. Case, Nottingham; Dr. Roulston, Wakefield; Mr. White, Bayswater; Mr. Efferman, Bootle; Mrs. Manger, Ventnor; Mr. Sutton, Pontesbury; Mr. Barlow, Birmingham; Mr. Bigg; Messrs. Loeflund and Co., London; Mr. Chadwick, Lancaster; Miss Pudney, Earl's Colne; Mr. Poppet, Newport; Dr. Munroll, Oldham; Messrs. Read and Co., Bristol; Dr. Barret, Littleport; Mrs. Burns; Mr. Young, East Ardsley; Miss Beldon, Royston; Mr. Moulding; Mrs. Butler, Gipsy Hill; Mr. Preston, Liskeard; Mr. Blount, Preston; Messrs. Beal and Co., Brighton; Mr. Forrest, Camberwell; Mr. Irving, Altrincham; Mr. Heygate, Cosham; Mr. Beckton, London; Mr. Hunt, Southampton; W. W., Bath; Medicus, Bristol; J. P., Camberwell; Ames; Glasgow Apothecaries' Co.; Fechden; G., Whitby; L. D.; Royal Mail Steam Packet Co., London; Matron, Leeds; Veritas, London; B.A., Nottingham; X. Y. Z., Leeds; Matron, London; S. W.; K. W. D.; Matron, Newark; Nomen; H. J.; Medicus, Dalton-in-Furness; Bona Fide, Horsham; Tenens, Everton; Buxton; Tax; M.D., Bristol; A. A., Stafford; H. A. S.; C. D., Congleton.

Schoolmaster, Manx Sun, Liverpool Courier, Retford Mercury, Bath and Cheltenham Gazette, Skegness Herald, Daily Telegraph, The Christian Commonwealth, Leamington Advertiser, Tiverton Gazette, Ilfracombe Chronicle, Buxton Chronicle, Skyrack Courier, Scottish News, Sydney Echo, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 26.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, July 28.

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Clinical Lecture
ON THE
THERAPEUTICS OF HEART DISEASE.

By THOS. OLIVER, M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE INFIRMARY, AND LECTURER ON PRACTICAL PHYSIOLOGY AT THE UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

[AFTER dealing with the nervous mechanism of the heart, and the relationship of the beats of that organ to varying degrees of arterial tension, the lecturer proceeded with the following remarks on cardiac therapeutics.]

In the treatment of most of the forms of cardiac disease rest in bed is more or less a necessity; and yet rest in the recumbent position has perhaps, in this country at least, been too much insisted upon, for excellent results have been obtained abroad by Oertel and others by means of Alpine climbing, graduated gymnastic exercises, and massage. The experience of physicians in this country who have given this method of treatment a trial is favourable, due care being taken as to the selection of cases. Where the walls of the heart are extremely feeble, we do well, in the first instance at least, to reduce the strain which is thrown upon them, and so we keep the patient quietly in bed for a few days that he may be carefully watched. Called urgently to a case of old-standing heart disease, with feeble pulse and difficult breathing, and with secondary lesions in lungs, liver, and kidneys, you would at once lose no time in administering such stimulants as brandy, ammonia, or ether; but where time is given for a careful line of treatment to be adopted, you would naturally direct your attention to a list of drugs whose efficacy in restoring disordered states of the heart and circulation is known to you either practically or theoretically. It is to this class of drugs that the term "cardiac tonics" has been applied—tonics in the sense that they act slowly and improve the contraction of muscular fibre, rendering in the case of the heart the beat of that organ slower and more powerful. Pushed beyond this limit, however, they frequently tend to bring about disordered and irregular cardiac movements; hence the necessity for care as to their employment, and watchfulness as to the effects produced by them. Whenever therefore the propelling power of the heart is failing, these are the drugs that are called for.

Now, everything which tends to keep the blood in the heart, or behind it in the veins, is simply so much obstruction placed in the way of the circulation. Obstruction at the aorta, or at any of the valvular orifices of the heart, is an impediment to the circulation, to overcome the effects of which the heart or some of its chambers must hypertrophy. Regurgitation through any of the cardiac orifices acts almost exactly in the same way. It is an obstruction, for it delays the circulation and tends to rob the arteries of blood. And the drug which has for us the greatest interest is *digitalis*. In aortic obstruction, hypertrophy of the left ventricle is generally present to such an extent that, the driving power of the heart being thus increased behind the obstruction, sufficient blood is squeezed through the constricted orifice during systole, so that no medicinal interference is, as a rule, called for. And the same remark applies to many cases of mitral stenosis—the hypertrophied left auricle is quite sufficient to fill the left ventricle with blood, owing to the contraction of the auricle taking place during the longer of the two periods of the cardiac cycle. It is the failure of a compensation that has already existed, or when compensation fails to be developed, that causes the subject with cardiac disease to come to us for advice. In many of these digitalis acts well; but as these are the cases in which a dilated right ventricle is sooner or later developed, and with this hepatic fulness and gastric catarrh, the drug has frequently to be discontinued on account of the sickness which is present. The cases, in my opinion, in which digitalis acts satisfactorily are those of mitral regurgitation where the lesion has not been too long in existence, where slight dilatation of the left ventricle is present. In these, owing to the improvement in the tone of the muscular walls of the ventricle, not only is there a larger quantity of blood sent forward into the system under a higher pressure, but by the drug increasing in addition the contractility of the circular muscular fibres which surround the mitral orifice, mitral regurgitation is itself diminished, a smaller quantity of blood is driven backwards towards the lungs, pulmonary congestion is lessened, and the pressure on the right side of the heart is diminished. It is in regard to the employment of digitalis in aortic regurgitation that the greatest difference of opinion prevails. Contrary to the opinion of many writers, I regard digitalis as of the greatest service in the treatment of aortic reflux. But there are cases and cases of aortic regurgitation. This is the form of cardiac disease in which, while there is often great effort on the part of the heart, very low arterial tension is nearly always present. I have seen a few cases of aortic regurgitation with high tension pulse, and they have always struck me as being not only the cases most likely to have the greatest longevity, but as being those in which fewest cardiac symptoms are complained of. A patient who has gone about for twenty years with aortic regurgitation, and with well-filled arteries and pulse of good tension, is in a very different condition from one whose arteries are seen pulsating visibly, whose pulse is of low tension, and whose countenance is pale. The former, even after the lapse of these many years, may require no treatment at all; the other may be practically beyond the influence of all drugs. Still, I must confess that I do not share in the opinion that the use of digitalis is dangerous in aortic regurgitation. In the early stages of an ordinary rheumatic endocarditis involving the aortic cusps, the diseased condition develops as a rule slowly, and consequently aortic regurgitation takes place only to the slightest extent. When the regurgitation increases, owing to further shrinking of the newly formed tissue in the valves, the heart, under the stimulating influence of the slightly increased distending force, undergoes hypertrophy, its beats become a little more frequent, and thus there is restored to the systemic circulation *in time* what was robbed from it *in quantity* by regurgitation through the aortic orifice. It is at this stage of the disease that most cardiographers consider only one tendency is developed, and that is in the direction of dilatation of the left ventricle. Owing to the refluent column of blood from the aorta passing into the left ventricle during diastole, and coming into contact with that which is passing forwards from the left auricle, the cavity of the ventricle is thus said to be increased; dilatation occurs, but this is kept within limits by the walls of the ventricle undergoing hypertrophy. As in aortic regurgitation the refluent column of blood is regarded as the dilating force, anything therefore which tends to prolong the period of regurgitation not only increases the tendency to syncope by lowering the arterial tension and robbing the capillaries of blood, but tends also to produce over-distension or dilatation of the left ventricle, and the cardiac muscle, thus unable to contract in the face of this over-distending force, remains in a state of flaccidity or paralysis, and death in such might be the immediate consequence. These are regarded as the dangers or risks that attend the administration of digitalis in aortic regurgitation—dangers that may be diminished by keeping the patient in the recumbent position. It has always struck me as being strange that if the upright or semi-upright position is the one in which the refluent column of blood through the aortic orifice exerts the greatest degree of pressure within the left ventricle—pressure spoken of as dangerous,—why is it that patients who are the subjects of this affection so unhesitatingly, and frequently contrary to our advice, assume this position? I do not believe in the dangers of this distending force in the early stages of aortic regurgitation from disease of the valves if the nutrition of the heart is maintained. There is a tendency to dilatation, but any attempt to make the distension permanent at this stage is met by increased contractility and hyperplasia of muscular fibre. Only a fortnight ago I made a post-mortem examination on a case of old-standing aortic regurgitation, and I found the walls of the left ventricle nearly an inch thick, whilst the cavity could not be said to be above the normal. Nor do I believe that by lengthening the period of diastole you allow greater reflux to take place into the left ventricle, and thus tend to the production of those dangerous conditions to which I have alluded. My experience of the treatment of aortic regurgitation is that here, just as in other forms of cardiac

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disease, your patient is likely to do well the nearer you can bring the beats of his heart to the normal. The cases of long-standing aortic regurgitation—twenty years and upwards—that I have seen are those in which the pulse ratio is low, whether they have been taking medicine to keep it thus or not; and I know of a few cases at the present time where to my knowledge the disease has lasted from seven to ten years, and the pulse is frequently as low as 44 per minute, without there ever having been the least feeling of syncope—the patients following their handicraft the while. Instead of regarding the prolongation of the period of pause in the heart as dangerous, and giving time for the left ventricle to be over-distended, what occurs is this: Admitting that the number of beats of the heart has been reduced by digitalis, then such slowing is not only accompanied by improvement in the contraction of cardiac muscular fibre, but also by increased arterial tension, which means not only that the capillaries generally are better supplied with blood, but that the coronary arteries, too, are better supplied, and consequently that the heart is better nourished. But I also think that under these circumstances the regurgitation is itself lessened, and for this reason the aortic orifice is more or less constricted by the contraction of its own circular muscular fibres, or if not to any great extent by them, by the prolongation of that period which is spoken of by Foster as the third phase in the systole of the left ventricle. The contraction of the left ventricle still continues after all the blood has been ejected from it, and if this period is lengthened the orifice of the aorta still remains constricted, and the easy escape of blood backwards into the left ventricle from the aorta is prevented. While I cannot recall one case in which digitalis could be regarded as precipitating the fatal issue in aortic regurgitation, I can recall very many which have experienced the greatest benefit from it. The drug has frequently disagreed and aggravated at times existing gastric symptoms, but this applies to all cardiac remedies. Wherever I have had satisfactory results, they have always come along the line I have already mentioned—viz., slowing of the heart's beat, increase of arterial tension and improvement of cardiac nutrition. But aortic regurgitation is generally associated with mitral regurgitation, and as we have seen in dealing with mitral regurgitation the action of digitalis is to narrow that orifice and thereby diminish reflux through it, so in these combined cases the mitral ostium is also narrowed, and thus owing to lessened regurgitation through it, an additional factor is brought into operation, whereby the arterial tension is raised. In all cardiac cases it is the sudden assumption of the upright position which is dangerous, and not simply the fact that it has been assumed. The ill effects which I have seen follow the employment of digitalis have been more upon the stomach than the heart, but as digitalis is a drug which raises arterial tension by causing contraction of the peripheral arterioles, and thus throws additional weight upon the heart, I would not use it in cases where I suspected fatty heart or extreme dilatation of the left ventricle, nor would I consider its employment called for in any case of cardiac disease, no matter the lesion, in which arterial tension was already high.

In *convallaria* we have an excellent substitute for digitalis in the treatment of many cases of aortic regurgitation. My best results from this drug have been obtained in aortic regurgitation, and next to that in mitral stenosis. In cases of aortic combined with mitral regurgitation I have frequently found it relieve, and that very quickly too, urgent dyspnœa over which digitalis had no effect. I am inclined to think that it acts purely as a cardiac tonic—i.e., directly upon the heart, by improving the tone of its muscular fibre. It is not a drug that, as a rule, is badly borne or causes gastric irritation, but in one of my cases of advanced mitral regurgitation its administration was always followed by sickness and vomiting.

Of *casca* I have had no experience.

Belladonna I look upon as a valuable drug in the treatment of heart disease. Whilst it diminishes the sensibility of the endocardium to the varying pressure exerted by the distending column of blood on the walls of the heart, thus lessening the sense of fluttering and palpitation, it has induced easier and more forcible beats of the heart, partly by improving the tone of the organ, and probably too by its somewhat dilating effect upon the bloodvessels. In cases of mitral regurgitation its efficacy is most marked. Many of my best results have been obtained from belladonna in cases, chiefly mitral, where digitalis and other drugs caused violent sickness. Belladonna in such not only gives relief to the difficulty of breathing, but relieves the gastric irritability as well.

From *caffeine* I have had good results, particularly in the treatment of mitral stenosis. I frequently combine it with convallaria, and have soon found arterial tension raised and diuresis increased. In only two of the several cases of mitral stenosis with dilated right ventricle in which I have employed it have I been obliged to discontinue it on account of sickness.

Through the kindness of Messrs. Christy of London I have had some experience of the beneficial effects of *Kola paste* in the treatment of heart disease. It is supplied in large irregular masses of a brown colour, not unlike chocolate, and is a paste into which the juice and substance of the Kola nut largely enter. Its efficacy as a nervine tonic has long been recognised in those places where the fruit abounds. By the inhabitants of such it is employed as an antidote to alcohol: men who are so intoxicated and rendered incapable of walking straight are said to become sober and recover their normal gait from within half an hour to an hour after taking the drug. To patients who are the subjects of heart disease I often give as a beverage for breakfast two drachms of the Kola paste mixed well with boiling water, sweetened with sugar, and either flavoured or not with vanilla; and from a repetition of this night and morning not only has there been increased diuresis (a fact explained by the 2 per cent. of caffeine which it contains), but good has also come from its action as a cardiac tonic and nutritive. Cases of mitral regurgitation have received much benefit from it, and some of my patients, the subjects of aortic regurgitation, have received so much good from it that they ask for its continuance, telling me at the same time that whilst taking it they pass a larger quantity of urine, and feel generally more comfortable. Dropsy I have seen disappear under its use. In the treatment of the headache complained of occasionally by patients the subjects of cardiac disease consequent upon contracted kidney and diseased arteries, I have had satisfactory results from its use.

Next to digitalis—nay in many respects superior to it, I rank *strophanthus* as a cardiac tonic. Strophanthus is one of the most powerful cardiac tonics we possess. A few doses of the tincture are in many cases sufficient to produce in patients who are the subjects of aortic or mitral regurgitation a feeling of well-being and comfort, followed by complete relief to difficulty of breathing. In functional cardiac irregularity its effects are quick and lasting, while in many cases of advanced mitral regurgitation the difficulty of breathing is soon relieved, the pulse improved, and the quantity of urine increased. Similar results have been obtained in the treatment of aortic regurgitation. Patients unhesitatingly speak of the relief which is given to any præcordial pain that is present, of diminution of, or relief to, the numbness felt running down the left arm, of relief to dyspnœa, and of it creating a feeling of general well-being consequent upon the improved state of their circulation. Through the kindness of Messrs. Brady and Martin, of Newcastle-on-Tyne, I have tested the therapeutical values of ethereal tinctures made from the pericarp, hairs, and seeds of the plant. From the tincture made from the pericarp no decisive results were obtained, although one patient, the subject of aortic regurgitation who could not take convallaria without feeling sick, said that when the dose was pushed it relieved præcordial pain. It did not increase the amount of urine passed. The tincture made from the hairs—which in colour is not unlike that made from the seeds, a beautiful green—answered well. Its efficacy is less marked than that made from the seeds. It is not nearly such a strong diuretic. From my experience of the tincture made from the seeds, I regard strophanthus as a powerful cardiac drug; it acts quickly and strongly upon cardiac muscular fibre in small doses, but in large doses it is a cardiac irritant and muscular poison. Whatever improvement follows its administration is, I am convinced, from its special action upon the heart; more forcible contraction of that organ is induced, the general arterial tension is thereby raised, and diuresis is promoted. Old-standing cases of mitral regurgitation, with small feeble pulse, cold extremities, distended jugulars, and pulsating liver, have improved under its use; and yet, while this is the case, it is only right to mention that in not a few patients most unpleasant symptoms have been developed, such as sickness and vomiting, pain in the stomach, and diarrhœa—symptoms which,

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while they have in many disappeared on reducing the dose of the drug, have in others only yielded on withdrawing the drug altogether. Its taste is somewhat objectionable, being extremely bitter. Three minims of the ordinary ethereal tincture is quite a sufficient, and to many rather a large, dose. As an illustration of the good effects of strophanthus I would point to the subjoined sphygmograms. (See Figs. 1 and 2.) In this case the effect of the drug was most

FIG. 1.



Deeply cyanosed; pulse feeble and rapid; ineffectual systole; mitral regurgitation; dilated left ventricle. Taken before treatment, when mitral murmur was not very audible.

FIG. 2.

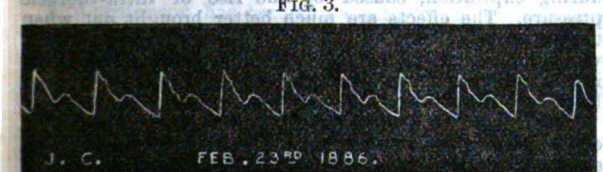


One week after taking strophanthus: much improved; pulse stronger and firmer; less ineffectual systole; mitral systolic murmur much more audible.

marked, and the case is typically one of those in which its influence is soon felt by the patient. Here, in addition to the mitral regurgitation and dilated left ventricle, there was much cardiac distress, shortness of breath, and ineffectual systole; several of the pulses failed to reach the wrist. A few doses sufficed to dispel the unpleasant cardiac symptoms, and restored the radial pulse to a very great extent. In cases, too, of functional cardiac derangement, palpitation, sense of fluttering, and enfeebled cardiac action, strophanthus has, in small doses combined with stimulants, answered well.

In *sulphate of sparteine* we have a drug (dose one to three grains) of whose beneficial effects as a cardiac tonic I can speak highly. Probably its action as such is indirect. In one of my cases of aortic and mitral regurgitation ascites developed, due perhaps to some subacutely inflamed condition of the peritoneum as much as to the state of the heart. The distension of the abdomen was so great that the breathing became much impeded by interference with the descent of the diaphragm. The action of the heart was much embarrassed. The patient was very ill. His pulse was soft water-hammer, and 110 to the minute. A few days after the administration of sparteine the distension of the abdomen was considerably less. The pulse was of much firmer tension, and had fallen to 68, and the breathing had become easy. From the sphygmograms (see Figs. 3, 4, and 5)

FIG. 3.



Sphygmogram taken when first under treatment for aortic and mitral regurgitation. Pulse of low tension.

FIG. 4.



Taken on readmission six months after the above, when the abdomen was filled with fluid, and there was œdema of feet, with pulse extremely rapid and of low tension. Tracing taken before treatment.

FIG. 5.



Taken a few days after the preceding, when he had received considerable benefit from sparteine and digitalis; ascites disappearing; large quantities of urine being passed. Pulse had fallen from 110 to 68 beats per minute; tension much increased coincident with improvement in health. No albumen in urine.

it will be observed that the tension had considerably risen, and that it bears some resemblance to the tracing taken in Bright's disease. Corresponding with the rise in the arterial tension and that of feeling generally better, the amount of urine passed rose from twenty to ninety ounces daily, and in less than a fortnight not only had the whole of the ascites disappeared, but the ordinary cardiac symptoms depending upon the aortic regurgitation had also ceased to trouble him; this, be it remembered, at a time when his pulse was only 68 per minute, the half of what it was on admission, when the period of cardiac diastole was so lengthened that in accordance with the usually accepted opinion the effect of aortic regurgitation should have been at its worst. In this condition, and with a pulse of high tension, the patient left the infirmary feeling quite well, and returned to his work as a machinist in the Elswick works. I have seen him since from time to time within the last few months, and he tells me that he has felt better since this last illness than he has done for the last six years, the date to which he ascribes the origin of his cardiac affection. His case is not only an illustration of the absence of danger in producing lengthening of the cardiac diastole, but is also a striking one of the good effect which is produced upon the heart and thus, upon the system in general, by slowing the pulse and raising at the same time arterial pressure. Another thing which was noticed in this case was that, while the aortic diastolic murmur was quite easily heard and recognisable before the treatment was commenced, its audibility was much increased—a fact which, while it points to an increase in the force which drove the blood backwards as it had done forwards, may also have been due to increased constriction of the aortic orifice—either stronger contraction of the circular muscular fibres at its orifice, or prolongation of the third phase in the systole of the left ventricle. Sparteine has always seemed to me to act very much in the same way as digitalis—i.e., by causing contraction of the peripheral arterioles. Arterial pressure is thus raised, the coronary arteries are better flushed, cardiac nutrition is improved, and the left ventricle thereby responds with greater vigour and force to the stimulus of distension created by the column of blood within it. Other dropsical effusions quite irrespective of heart disease—e.g., ascites from cirrhosis of the liver, pleural effusions—have disappeared under its use, and in any case of dropsy where the pulse is small and compressible I should regard sparteine as a drug extremely likely to do good.

Barium chloride, I find, raises arterial tension and thus acts as a diuretic. With half-grain doses morning and evening, several of my cases of aortic regurgitation have had their pulse ratio reduced, the pulse rendered fuller and firmer, and the amount of urine increased. Its action as a cardiac tonic is indirect.

Venesection has fallen too much into disuse. In several of my cases, both of aortic and mitral regurgitation, I have not only succeeded in warding off impending death, but by removing blood from the veins have placed the patient in the enjoyment of good health for months to come, repeating from time to time as necessity arose subtraction of blood from the arm. In cases of over-distension of the right ventricle, where the jugular veins are swollen, the face livid, the pulse small, and dyspnœa urgent, I have never hesitated to remove from eight to twelve ounces of blood from the vein in the arm, or failing this from any very distended vein at a reasonable distance from the heart, with, in most cases, almost immediate relief to the breathing, improvement of the pulse, and with increased comfort to the patient. The removal of blood relieves the over-distended right ventricle, wards off the paralytic condition into which its walls are being thrown as the result of over-

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distension, and, by allowing the muscular fibres to contract upon diminished contents, life has been saved. The use of stimulants at this time must never be forgotten.

Just as venesection as an old remedy in acute nowadays seldom is practised, the same remark applies to the administration of *mercury*. Neither in recent endocarditis, nor in the treatment of the conditions leading up to it, is mercury ever called for; but in cases of old-standing mitral disease, where the venous system generally is engorged, the liver enlarged, and its venous channels over-distended, the employment of pil. hydrarg. c. coloc., in two to four grain doses at bedtime or for a few days at first night and morning, with or without the addition of squill, will be often followed by the happiest results. It will in almost every case form a useful adjunct to any line of treatment which is adopted. Calomel is again being resorted to as a remedy in cardiac dropsy.

In the treatment of angina pectoris nothing has answered so well as the inhalation of a drop or two of *nitrite of amyl*, but in many cases of aortic regurgitation attended by constant and very severe præcordial pain, with paroxysmal exacerbations, I have had the most satisfactory results from the internal administration of nitrite of amyl, beginning with two minims, and increasing it to ten, fifteen, or twenty minims, combined with ten minims of tincture of opium and twenty minims of sal volatile.[1]

In the treatment of the insomnia of heart disease we have two reliable and safe drugs that we can fall back upon. *Paraldehyde*, in doses of from fifteen to thirty grains, answers well. The sleep is similar to that induced by chloral, but, unlike this drug, it does not depress the action of the heart. I have not found it act as a diuretic, as some assert. The only and a most important drawback to it is its very unpleasant taste. Patients simply refuse to take it after a few trials. Not so with *urethan*, which I have found, in doses of ten grains and upwards, to be one of the safest hypnotics in cardiac disease. It is in heart disease that we frequently see patients thoroughly worn out for want of sleep. Nay, they are even afraid to sleep, for no sooner has sleep been induced than, the cyanosis increasing, they suddenly wake up and gasp for breath. Opium and its allies are most unsafe hypnotics where there is such a carbonised state of the blood; they only add to the accumulation of waste products in the blood. Chloral, too, cannot be given without running the risk of inducing cardiac failure. It is in such cases that urethan acts well, and is perfectly safe. It is less unpleasant than paraldehyde; in fact, if there is any marked unpleasant taste with the drug, the probability is that it is of English and not of German make. I have seen a patient, the subject of heart disease, who had not slept for several days, fall into a calm and placid sleep after a few grains of urethan, waken from it calmly four or five hours after without any dyspnœa, and express himself as feeling quite a new man to what he had been a few hours previously. After this the whole character of the case has been changed, and patients who until then had been retrogressing not only began to improve, but ultimately made a good and fairly lasting recovery.

[illegible]

[1] It is only of late that I have had experience of the value of the nitrites in the treatment of mitral stenosis. Dr. Barr, in the *Liverpool Med. Chir. Journal* for July, 1886, draws attention not only to the inefficacy of digitalis, but to the harmfulness of the drug in mitral stenosis. In such cases, while the systemic arteries are under-filled, the vessels of the lung are over-filled, as are also the left auricle and the chambers of the right side of the heart. The left ventricle, compared with these, is practically empty. What is wanted is an increase of force in the right ventricle and a reduction of the contents of the pulmonary vessels. No cardiac tonic will produce this alone without acting upon the left ventricle. If you increase the capacity of the arterial system, relief may come to the over-distended lungs and the veins generally. In one case of mitral stenosis with hæmoptysis, urgent dyspnœa, dilated right heart, and small feeble pulse, the relief given generally by nitrite of amyl was most marked.

[illegible]

A New Hospital at Zanzibar. According to the *Bombay Gazette*, Mr. Tharia Topun made an offer to the British Government, on the day of the celebration in Bombay of Her Majesty's Jubilee in February last, to build and endow a hospital at Zanzibar. The estimated cost of building the hospital will be about 80,000 rupees, and Mr. Tharia Topun has offered a further sum of 50,000 rupees for maintaining the institution on a permanent basis, which amount the British Government will hold in trust for the donor. The institution will be named the Tharia Topun Hospital. The offer has been accepted by Lord Salisbury, as Foreign Minister, on behalf of Her Majesty's Government.

EFFECT OF RESPIRATION AND DEGLUTITION ON THE VENOUS HUM.

By GEORGE R. MURRAY, B.A. CANTAB.

THE venous hum, as heard in the large veins of the neck, is a murmur which gave rise to much discussion as to its situation when Bouillaud first drew attention to it. He named it "bruit de diable," and considered that it was an arterial murmur, an opinion which was also held by other French writers. It was first shown to be a venous murmur by Dr. Ogier Ward in this country. This murmur has been found to be of little practical value in diagnosis, and consequently attracts much less attention now than it did formerly.

The venous hum is most distinctly heard on auscultation over the lower end of the right internal jugular vein, in the neck of a patient suffering from anæmia; and when studied in this situation it illustrates some points which are perhaps of physiological rather than medical interest. As it occurs in a vein just outside the thorax, this murmur is exposed to influences which cannot be brought to bear on intra-thoracic murmurs. Thus we find marked changes in the venous hum are brought about by respiration and deglutition. Before proceeding to the consideration of these changes, it is necessary to review briefly the conditions which produce the venous hum.

The internal jugular vein is slightly dilated at its lower end into a kind of sinus, which is so attached by the cervical fascia to the surrounding structures that it cannot shrink. When the volume of the blood is diminished in anæmia the upper part of the vein shrinks, but its lower part retains its former size. The blood flowing from the narrowed vein above into the relatively dilated part below sets up a fluid vein, and as the blood contains fewer red corpuscles than it does normally, it is the more readily thrown into vibrations. It is now generally supposed that the vibrations of the fluid vein produce the murmur, and in some cases a fine thrill can be felt. It is important to bear in mind that the loudness of a murmur so produced varies with the rate of the flow. The faster the flow the louder the murmur, and conversely slowing of the flow diminishes or stops the murmur. Changes in the rate of the blood-flow in the vein may be brought about by variations in either internal or external pressure. The former is illustrated by respiration, and from some observations which I have made, the latter appears to be illustrated by deglutition.

With regard to respiration.—In some cases slight variations in the venous hum can be heard during normal breathing, the murmur being louder during inspiration than during expiration. If, however, the patient makes an inspiratory effort with the mouth and nose closed, a distinct increase in the loudness of the murmur can be heard; and conversely a slight expiratory effort, made in the same way, stops the murmur. These facts are practical illustrations of the two effects of respiration on the blood-flow in the veins towards the heart: first, the increase in the rate of the blood-flow, due to the diminished intra-thoracic pressure during inspiration; second, the slowing of the blood-flow during expiration, caused by the rise of intra-thoracic pressure. The effects are much better brought out when [illegible] of the air is prevented, so that the whole force of the inspiratory or [illegible] into play is expended in aiding or retarding the flow of blood into the thorax.

With regard to deglutition.—I find that [illegible] slowing the venous hum in the [illegible] opinion. This is a fact to which I believe [illegible] before been drawn. It is most conveniently observed in the following manner:—Place the patient in the erect posture, with the head slightly turned to the left, and apply the stethoscope over the lower end of the right internal jugular vein just above the clavicle. Then get the patient to swallow a mouthful of water. The venous hum which was previously heard [illegible] during the act of deglutition, and [illegible] as soon as it is over. I [illegible] a [illegible] possibility of compression of the internal jugular vein by the omo-hyoid muscle was suggested by Thelle. A consideration of the anatomical relations of the omo-hyoid muscle and the internal jugular vein, and of the action of

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some of the muscles which aid deglutition, will show how this may be brought about.

The posterior belly of the omo-hyoid muscle arises from the upper border of the scapula, just internal to the notch. From this point the muscle runs forwards and inwards across the lower part of the neck, passing behind the sterno-mastoid muscle. It here becomes tendinous, and bends upwards, passing just in front of the internal jugular vein. It then becomes muscular again, and the anterior belly ascends to be inserted into the body of the hyoid bone. The tendinous part of the muscle passes through a process of the deep cervical fascia which is attached to the cartilage of the first rib. This process of fascia maintains the bent position of the muscle, but may allow the tendinous portion to be pulled slightly upwards when the muscle contracts or is put on the stretch; for this muscle acts as a tensor of the cervical fascia. The two ends of the muscle and the central tendon appear so to lie that the line of action of the muscle is in a plane which slopes from above downwards, forwards, and outwards. Consequently, when the muscle contracts or is put on the stretch, the part of it which lies just in front of the internal jugular vein is pulled upwards, backwards, and inwards against the vein, so as to compress it.

Now, in deglutition, we find that the omo-hyoid muscle is first put on the stretch and then contracts. At the end of the first part of deglutition, the hyoid bone is raised by the action of the genio-hyoid, anterior belly of digastric, and mylo-hyoid muscles, the omo-hyoid being thus put on the stretch. Immediately afterwards the omo-hyoid contracts with the other depressors of the hyoid bone, so as to bring the hyoid back into its normal position. Thus it would seem that the cessation of the venous hum is due to the tension and subsequent contraction of the omo-hyoid muscle, compressing the internal jugular vein, and so retarding or arresting the flow of blood as to stop the murmur.

It may be maintained that the omo-hyoid muscle could not thus exert sufficient pressure. Much pressure, however, is not necessary, for the wall of the vein is thin, the blood in the vein is at a low pressure, and the murmur is easily stopped by pressure on the vein, either with the finger or with the stethoscope itself. It may also be here mentioned, in conclusion, that pressure thus exerted on one internal jugular vein causes an increase in the loudness of the murmur in the other, from the increased rate of blood-flow along it, showing how readily one internal jugular vein returns blood from the brain when the flow in the other is obstructed.

Torrington-square, W.C.

A TABULAR STATEMENT OF SIXTY-FOUR CASES OF ABDOMINAL SECTION,

INCLUDING FORTY-FIVE COMPLETED OVARIOTOMIES; WITH REMARKS.[1]

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The profession has become so accustomed to long lists of successful operations by leading ovariotomists in this country that it needs some boldness on the part of those of us who have worked in a more limited sphere to publish our results. It has always appeared to me, however, that whoever accepts a hospital appointment undertakes grave responsibilities—not only to the institution he serves, but to the profession of which he is a member; and that not the least of the responsibilities which come under this latter head is that of making public from time to time the results of his hospital experience, and of endeavouring to present them in such a shape as will make them useful to his professional brethren. It is under the influence of this conviction that I publish the accompanying statement of my cases of abdominal section. It was my original intention to give an account of the work of the last three or four years, but it soon became apparent that such a course would make my results appear better than in the aggregate they really are, and I decided that it would be more honest, and probably more instructive, to include in the statement all my cases from the year 1873 (when I first operated) to the present time, a period of fourteen years. It seemed to me that I should thus not only secure myself against the charge of suppressing unfavourable statistics, but furnish myself with a more useful text for discussing the operation and comparing past and present results.

My earliest experiences in abdominal surgery were perhaps even exceptionally disheartening. The first ovarian case that came under my care was that of a woman with a multilocular tumour, sixty-six pounds in weight. The size of the abdomen was enormous. The legs and trunk were œdematous, and the uterus and vagina had been pushed downwards by the tumour until they formed a hernial protrusion outside the vulva. The thoracic viscera were also very considerably displaced. As the gelatinous character of the contents of the tumour rendered quite fruitless an attempt to give the patient relief by tapping, I thought it my duty to try to remove the growth. I succeeded in removing it, but unfortunately my patient died. My next two cases were even more discouraging. In each of them I was unable to complete the operation on account of inseparable adhesions. Both the patients died. During the year that elapsed between these two incomplete ovariotomies, it happened to me to have two cases of extra-uterine fœtation, in both of which abdominal section was required. Again both my patients died; so that my record, after four years, stood thus: five abdominal sections with five deaths. It was a disastrous beginning; but luckily the tide turned, and, during the ten years that have since elapsed, I have had no case of ovariotomy in which I have been unable to complete the operation.

The cases that form the basis of this communication are arranged in two tables. Table I. consists of all my completed ovariotomies, arranged in two series,—the first series extending over the seven years from 1873 to 1879 inclusive, the second series embracing a similar period from 1880 to the close of 1886. Table II. consists of all my cases of abdominal section (to December, 1886) not included in Table I. They necessarily form a somewhat miscellaneous collection. I shall have a few words to say about them presently. In the meantime I wish to draw attention to one or two points of interest in the first table.

The total number of completed ovariotomies is forty-five; of this number, eight are included in the first series and thirty-seven in the second. Of the eight cases operated upon before 1880 four died, giving a mortality of 50 per cent. Of the thirty-seven cases operated upon during the last seven years five died, giving a mortality of 13·5 per cent. If the later cases of this series be compared with the earlier, the improvement is still more striking. All the deaths occurred amongst the first seventeen cases; of the last twenty (covering a period of three years) every one recovered. Side by side with this reduction in the mortality, it is to be observed that the progress of the successful cases towards recovery has become more rapid, more even, and generally more satisfactory. It has come to be quite exceptional for a case to cause even a single day's anxiety; and troublesome complications, such as suppuration along the suture tracks of the abdominal wound, which used to be common enough, have become the rarest possible events.

How is this improvement to be accounted for? It cannot be due entirely to chance, although that is an element which one should not altogether overlook. Nor is it that the more recent cases have all been particularly simple and uncomplicated. Take, for example, the last three on the list. In each of them, as the table shows, there were complications of a very marked kind; in two instances there were serious adhesions, in the other there was no proper pedicle. Notwithstanding which, the patients did exceedingly well, the temperature during the first fortnight being, with scarcely an exception, below 100° F. What, then, *are* the causes of the diminished mortality and the lessened frequency of interruptions to normal convalescence?

Foremost amongst these causes must, I think, undoubtedly be ranked the improvements introduced from time to time in the method of operating. Most of the cases recorded in the first series were operated upon at a time when the most experienced ovariotomists advocated the use of the clamp in the treatment of the pedicle. The reintroduction of the intraperitoneal method of dealing with the pedicle was an immense improvement, and its adoption had a most favourable influence on the statistics of the operation. Almost simultaneously with this advance came the general recognition of the value of antiseptic precautions in surgery. The mortality after operations had hitherto been chiefly due to septicæmia. Prof. Lister taught us by his researches and example that

[1] Read before the Manchester Medical Society, February 2nd, 1887.

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TABLE I.—COMPLETED OVARIOTOMIES IN HOSPITAL AND PRIVATE PRACTICE.

SERIES I., 1873 TO 1879

No.	Name.	Age.	Civil cond.	Date of operation.	Nature and weight of tumour.	Adhesions.	Antiseptic.	Treatment of pedicle.	Condition of other ovary.	Result.	Remarks.
	A. H.	45	W.	1873. Oct. 17	Enormous multilocular cystoma with thin walls and thick gelatinous contents, pushing up liver to 3rd rib, and causing protrusion from vulva of uterus and vagina; weight, 66lb.	Very numerous	None	Returned	Not recorded	Death in 32 hours	Autopsy disclosed recent peritonitis over whole of lower part of abdomen, glueing intestines together.
2	S. B.	46	M.	1877. July 27	Single cyst left ovary, with solid mass in ant. wall; weight, 11lb. 2oz.	None	None	Clamp (removed Aug. 2)	Not recorded	R.	—
3	F. S.	20	S.	Sept. 12	Large piliferous cyst of right ovary with solid masses in cyst wall, and some smaller cysts grouped around them; 9lb. 6oz.	Slight parietal	None	Clamp (removed Sept. 16)	Not recorded	R.	Had been tapped three times previous to operation.
4	M.A.R.	22	S.	Oct. 31	Compound cyst left ovary, consisting of a mass of small cysts with thick walls interspersed with much solid matter; 8½lb.	Slight omental	None	Clamp	Right ovary size of walnut, cystic; removed	Death in 34 hours	Septicæmia. Pulse and temp. gradually rose from time of operation, until at 9 A.M. on the following day the pulse was 178, the temp. in recto 105·4°; at 5 P.M., temp. 106·9°; at 6, 107·0°; at 7, 107·2°; and at 8.20 (5 minutes after death), 106°.—*Autopsy:* Heart universally adherent to pericard. from old inflammation; right lung cong., lower lobe dark red, solid, friable. Recent perit. in neighbourhood of pedicle.
5	S. B.	24	S.	Nov. 7	Simple cyst of right ovary; 17lb. 2oz.	None	None	Clamp (removed on 11th)	Not recorded	R.	Temp. on 3rd day rose to 103·6°, pulse to 160. Some sloughing of pedicle after removal of clamp; wound open and discharging for nearly 5 weeks.
6	E. F.	27	M.	1878. June 19	One large cyst and many small ones; 14lb. 6oz.	None	Carbolic acid spray and other precautions	Ligatured and returned	Not recorded	R.	Highest temp., 102·2° on 3rd day. Next day 2 drachms of purulent fluid exuded from the wound, which continued to discharge for several days.
7	M. F.	34	M.	Aug. 2	Multilocular ovarian cyst; 10lb. 8oz.	Extensive parietal	Thymol spray	Ligatured and returned	—	Death on 13th day	Maximum temp. on 2nd day, 103·5°; on 3rd day, 102·9°; on 4th and 5th, 101°; on 6th, 101·4°; on 7th, 102·6°; on 8th, 101·2°; on 9th, 103·4°; on 10th, 103·6°; on 11th, 104°; on 12th, 102°; and on day of death, 105·4°. On the 11th day wound was opened and abdomen explored. No pent-up secretion, but intestines matted together from recent perit. No post-mort. permitt.
8	M. D.	38	S.	1879. Dec. 17	Large multiloc. cystic sarcoma; 30lb. 14oz.	Universal	Carbolic acid spray, &c.	Ligatured and returned	—	Death in 26 hours	Patient emaciated and weak; collapse during operation extreme. Death probably due to shock.

SERIES II., 1880 TO 1886 (TREATED ANTISEPTICALLY).

No.	Name.	Age.	Civil cond.	Date of operation	Nature and weight of tumour.	Adhesions.	Drainage, glass tube.	Condition of other ovary.	Result.	Remarks.
9	C. D.	26	M.	1880. March 23	Multilocular cyst of left ovary, 4lb. 14oz.	Omental, intestinal	2 days	Normal	R.	Lower angle of wound reopened, pedicle sloughed, indiarubber drainage tube worn April 8th to 24th. On Aug. 10th the sinus at the lower angle of wound was 1½in. deep. Blood was noticed issuing from wound during 2nd and 6th menstrual periods. In November wound had closed.
10	P. H.	24	S.	July 14	Multilocular cyst of left ovary	None	3 days	Enlarged, cystic: removed. (Had amenorrhœa 16 months before admission.)	R.	August 17th, well and strong; not menstruated.
11	S. S.	43	M.	1881. Jan. 12	Round and spindle-celled sarcoma of right broad ligament, 7lb. 13oz.	Numerous to mesentery	Throughout	Both ovaries normal	D., 69 hours	Septicæmia. Temp. an hour before death, 103·4°; pulse, 150.
12	E. C.	33	M.	April 13	Single cyst, right ovary, 37lb. 8oz.	Slight to omentum	None	Normal	R.	Five months pregnant at time of operation. Aborted April 21st, 9.35 P.M.
*13	M.A.D.	30	M.	Aug. 18. 1882.	Single cyst, right broad ligament, 26lb. 10oz.	Intestinal	None	Cystic (small); removed	R.	—
14	M. K.	26	M.	Jan. 3	Single cyst, 10lb. 2oz.	None	None	Normal	R.	Two months pregnant. Aborted April 20th, after return home; fœtus dead, apparently at 5th month.
15	B. B.	36	M.	Jan. 18	Single cyst, left ovary, 14lb. 12oz.	Parietal	None	Cystic (small); removed	R.	—
16	M. R.	46	M.	Jan. 26	Cystic sarcoma, both ovaries, 51b. and 4lb. 10oz.	Parietal and to each other	36 hours	See under "Nature of Tumour"	R.	Died shortly afterwards from return of disease in peritoneum, &c.

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17	J. H.	23	S.	March 15	Single cyst, right ovary, 9lb. 2oz.	None	None	Normal	R.	Had been tapped once previous to operation.
18	E. H.	29	M.	May 5	Peritoneal disease, with double ovarian cyst, embedded in friable semi-transp. growth; no pedicle	—	Throughout	See under "Nature of Tumour"	D. next day	Syncope or septicæmia. Had been tapped nine times previous to operation.
19	F. C.	45	S.	May 19	Single cyst, left ovary	Parietal	None	Atrophied and hard; not removed	R.	—
20	M. B.	64	M.	Aug. 23	Cystoma of left broad ligament, 9lb. 1oz.	Parietal, omental	Throughout	Right ovary cystic; removed	D. 8th day	Temp. normal for 24 hours, then gradually rose until evening of 4th day, when it was 100·3°; highest temp. on 5th and 6th day, 101·2°; on 7th day, 101·6°; and on day of death, 100·4°. Death from peritonitis, septic (?) and old mitral disease.
21	M. H.	46	M.	Oct. 11 1883.	Multilocular cyst, right ovary, 19lb. 14oz.	Parietal, numerous	None	Normal	R.	Abscess in abdominal wall burst through wound Oct. 16th.
22	L. B.	28	M.	March 2	Multilocular cyst, left ovary, 12lb. 6oz.	Uterine, omental, intestinal	Throughout	Removed on account of tumour in right broad ligament	D., 38 hours	—
23	S. B.	29	M.	April 18	Single cyst, right ovary, 12lb. 8oz.	None	None	Cystic; removed	R.	Highest temp., 100·2° F.
24	M. S.	20	S.	May 23	Multilocular cyst, left ovary	Parietal, omental, and to right broad ligament	24 hours	Enlarged and indurated; removed	R.	Highest temp., 102°; wound discharged after removal of tube.
25	M. A. K.	46	M.	Sept. 12	Double multilocular cystic sarcoma, peritoneum studded with nodules	Lower tumour adherent to mesentery and post. wall of pelvis	Throughout	See under "Nature of Tumour"	D. 9th day	Peritonitis.
26	M. S.	26	M.	Dec. 12 1884.	Cystic sarcoma of both ovaries	None	None	See under "Nature of Tumour"	R.	Highest temp., 101·6°; after first two days normal. Died April 22nd, 1884, from recurrence of the disease.
*27	M. E. H.	42	S.	Jan. 31	Single cyst left broad ligament, 24lb. 5oz., ovary healthy	None	None	Size of pigeon's egg, cystic; removed	R.	Temp. never exceeded 100° F. Had been tapped 12 times during past 20 years.
28	M. A. D.	51	M.	Oct. 8	Simple cyst, right ovary, 25lb. 7oz.	Parietal, costal, omental	5 days	Atrophied; undisturbed	R.	Much shock; rallied in a few hours. Highest temp. during convalescence, 104·0°, at 2 A.M., Oct. 12. Had been tapped 4 times previous to operation.
29	E. R.	34	S.	Oct. 22 1885.	Multiloc. cystoma, left ovary, 12lb. 3oz.	Parietal	7 days	Cystic, size of hen's egg; removed	R.	—
30	E. M.	16	S.	Jan. 14	Large multilocular cystoma, left ovary, 17lb. 10oz.	None	None	Size of pigeon's egg, cystic; removed	R.	Patient has never menstruated. During convalescence had pelvic hæmatocele, causing dulness and hardness, first on right, afterwards on left, to 4½in. above pubic level. Diagnosis confirmed by aspiration.
31	A. W.	60	W.	Feb. 4	Unilocular, right ovary, 9lb.	None	48 hours	Normal	R.	Had been tapped twice previous to operation. Multilocular cystoma of left ovary removed successfully in May, 1887.
32	S. A. T.	50	M.	March 11	Multilocular cystoma, right ovary, 8¾lb.	None	None	Cystic, size of cricket ball; removed	R.	—
33	A. P.	33	M.	May 29	Multilocular cystoma, 34lb.	Parietal, hepatic, omental	24 hours	Normal	R.	Slow convalescence. Patient much reduced by recurrent peritonitis and recent parturition. Had been tapped once previous to operation.
34	H. F.	57	M.	June 24	Multilocular cystoma, left ovary, 12lb.	Parietal, extensive and firm	48 hours	Dermoid cyst, 3½oz.; removed	R.	Had been tapped six weeks previously.
35	S. A. P.	39	M.	Sept. 9	Multilocular cystoma, right ovary, 7lb.	Parietal and omental	48 hours	Cystic, not much enlarged; removed	R.	—
*36	S. B.	22	S.	Nov. 12	Large thin-walled multilocular cystoma, gelatinous contents; thickened omentum; proliferating masses on peritoneum	Parietal, omental, intestinal	7 days	Cystic; removed	R.	Temp. same evening, 100°; afterwards never above normal. Twelve months afterwards patient well and at work. Exploratory puncture had been made two weeks before operation with no result.
37	E. W.	43	W.	Nov. 25 1886.	Multilocular cystoma, right ovary, 8½lb.	None	None	Normal	R.	—
38	E. C.	40	M.	Feb. 10	Multilocular cystoma, right ovary, 25lb.	Parietal, omental	48 hours	Normal	R.	—
39	M. G.	35	S.	March 17	Multilocular cystoma, left ovary; much solid material; 8lb. 2oz.	None	24 hours	Cystic; removed	R.	Slight suppuration in abdominal wall during convalescence.
40	E. T.	34	M.	Sept. 15	Single cyst, 33lb.	None	None	Normal	R.	Pregnant two months. Patient confined naturally May, 1887.
41	M. A. J.	30	S.	Oct. 6	Single cyst, right broad ligament, 11½lb.	None	48 hours	Cystic, not much enlarged; removed	R.	—
42	B. B.	55	S.	Nov. 10	Single cyst, left broad ligament, 11lb.; small pedunculated sub-peritoneal fibroid of uterus also ligatured and removed	None	None	Atrophied; normal	R.	—
43	M. S.	41	M.	Dec. 1	Cystoma, left ovary; 12lb. 8oz. (fluid, 5 quarts)	Extensive pariet. and omental	96 hours; removed with diffic.; adherent	Normal, but removed on account of closely contiguous cyst of right broad ligament	R.	Temp. during first fortnight uniformly under 100°; afterwards, once exceeded 100° from chill during removal to general ward.
44	A. H.	32	M.	Dec. 15	Thick-walled ovarian cystoma (left), 4lb.; contents, 3 pints of odourless pus	Omental and intestinal, the latter very firm and vascular	24 hours	Normal	R.	Site of adhesion on bowel 1½in. × ¾in., divested of peritoneum, raw and bleeding. Edges of peritoneum at its border stitched together, doubling in and concealing the raw surface, to prevent fresh adhesion. Temp. only once reached 100°, and never exceeded it; from and after morning of 4th day normal.
45	G. H.	48	M.	Dec. 28	Large multilocular cystoma of right ovary and broad ligament; pedicle very short and broad; tied in sections; portions of cysts left in stump. Weight of tumour, 11lb. 13oz.	None	48 hours	Normal	R.	Temp. first six days uniformly under 100°; max. on 7th, 100·2°; on 8th and 9th, 100·6°.

* The cases marked with an asterisk were private operations; the rest were hospital cases.

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TABLE II.—ALL THE CASES OF ABDOMINAL SECTION NOT INCLUDED UNDER THE HEAD OF COMPLETED OVARIOTOMIES, 1874-1886.

No.	Name.	Age.	Civil cond.	Date of operation.	Object and nature of operation.	Result.	Remarks.	Reference to detailed account of cases already published.
1	M. P.	32	M.	April 24, 1874	Incomplete ovariotomy.	D.	Tumour very large, multilocular, chiefly solid. Operation abandoned on account of universal adhesions.	—
2	E. D.	36	M.	July 2, 1875	Exploratory incision for supposed suppurating ovarian cyst. Removal of putrid fœtus from an extra-uterine gestation-sac.	D.	Patient suffering from septicæmia at time of operation; died from septic broncho-pneumonia on sixth day after operation.	*Obstetrical Journal of Great Britain*, October, 1875
3	M. B.	26	M.	Nov. 10, 1875	Removal of dead fœtus from extra-uterine gestation-sac.	D.	Patient declined operation until septicæmia had set in. Fæcal fistula in posterior wall of sac. Died 66 hours after operation.	*Obstetrical Journal of Great Britain*, January, 1876
4	A. B.	61	M.	July 5, 1876	Incomplete ovariotomy.	D.	Enormous tumour; operation abandoned on account of intimate connexion with uterus. Died 56 hours after operation.	—
5	E. M.	46	M.	Feb. 7, 1877	Exploratory incision in case of large accumulation of pus between layers of abdominal wall (from rupture of ovarian abscess) simulating ovarian cyst.	D. 7 hours	... ...	THE LANCET, November 3rd, 1877
6	E. McD.	40	M.	Aug. 7, 1878	Nature of tumour doubtful; exploratory incision; uterine myoma; wound closed.	R.	After operation tumour gradually diminished in size, with relief of symptoms and great improvement of general health.	—
7	J. H.	36	S.	June 9, 1882	Nephrectomy for hydronephrosis.	D. 12 hours	... ...	*British Medical Journal*, Nov. 11, 1882, p. 930
8	F. J. H.	45	M.	March 7, 1884	Removal of pedunculated subperitoneal myoma of uterus. Weight 15oz.; pedicle clamped.	D. 3rd day	Septicæmia.	—
9	H. B.	37	S.	Nov. 5, 1884	Nature of tumour doubtful; exploratory incision; uterine myoma; wound closed.	R.	—	—
10	E. B.	30	M.	Jan. 2, 1885	Abdominal section with a view to nephrectomy; pyonephrosis; removal of impacted calculus from right ureter.	D.	Left ureter discovered, at autopsy, also to contain impacted calculus, causing abscesses in left kidney. Death from uræmia (?) 80 hours after operation.	Trans. Path. Soc. of London, vol. 36 for 1884-5, p. 278
11	A. McC.	25	M.	May 13, 1885	Removal of chronically inflamed ovary and small polycystic tumour of each broad ligament.	R.	... ...	*British Medical Journal*, January 30, 1886
12	M. M.	26	M.	Oct. 7, 1885	Small cystic tumour of each ovary with right hæmatosalpinx.	R.	... ...	
13	J. R.	35	M.	Jan. 13, 1886	Exploratory incision for recurrent pelvic peritonitis, with small intra-pelvic tumour; removal of three small broad ligament cysts with right hydrosalpinx. Ovaries not removed.	D.	Died on third day from peritonitis (? septic).	—
14	E. J.	40	S.	Feb. 5, 1886	Removal of uterine appendages for large myoma with excessive hæmorrhage. Both ovaries cystic. Ovaries and tubes removed.	R.	Very slight uterine hæmorrhage for some months after operation, but no flooding. Ten months afterwards myoma much diminished in size, general health very greatly improved.	—
15	E. B.	43	M.	April 14, 1886	Exploratory incision for supposed ovarian cystoma. Removal of large sarcoma of left kidney, which had undergone extensive cystic degeneration.	R.	After patient's return home the disease rapidly recurred, causing tumour over right lower ribs posteriorly, and eventually paraplegia. Died Nov. 26, 1886, seven months after operation.	*Medical Chronicle*, November, 1886
16	M. B.	25	M.	April 30, 1886	Exploratory incision for recurrent pelvic peritonitis, with small fixed intra-pelvic tumour on right of uterus. Right ovary enlarged (3 inches long), cystic; one large cyst filled with pus; universally adherent; removed, with both tubes, which were much thickened, and contained in their walls several cysts.	R.	Drainage tube, 48 hours. Convalescence rapid. Six months after operation, patient stout, well, and free from pain.	—
17	M. H.	45	M.	Oct. 29, 1886	Exploratory incision with view to removal of the uterine appendages, if practicable, for multiple uterine myomata with excessive hæmorrhage and recurrent pelvic peritonitis. Pelvic contents densely matted, neither ovaries nor tubes distinguishable. Adhesions undisturbed; abdominal wound closed.	R.	Left the hospital Nov. 27, much improved in health.	—
18	M. B.	62	M.	Nov. 17, 1886	Exploratory incision for supposed ovarian cyst. Malignant disease of liver and peritoneum, with ascites and matting of intestines against post. abdominal wall. Fluid evacuated. Wound closed.	R.	Left the hospital in a fortnight. Wound healed; abdomen refilling.	—
19	E. G.	30	S.	Nov. 24, 1886	Cæsarean section in case of flattened and generally contracted pelvis. Conjugate diameter, $2\frac{1}{16}$ in.	D.	Child saved.	Communicated to Obstetrical Society of London

The operations in this table were all performed in the hospital.

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this cause of failure could be largely eliminated. I am aware that some of our most successful operators reject the theory upon which the antiseptic method of Lister is based, and, without adopting the details of that method, have achieved brilliant results by scrupulous attention to cleanliness alone. But no one, I think, will deny that this minute and painstaking solicitude with regard to the cleanliness of hands, instruments, sponges, and dressings is the direct outcome of the teaching of Lister, and that even those who do not follow out his method in detail owe the improvement in their results very largely to the recognition of the great principle that underlies that teaching. Scarcely less important than the improvements already mentioned were the introduction of the glass drainage tube of Kœberlé and Keith, and the recognition of the value of dry and infrequent dressings, with the advocacy of which the name of the late Mr. Sampson Gamgee will always be honourably associated.

Again, there can be no doubt that the change for the better is partly to be attributed to the greater dexterity that comes of increased personal experience. Another cause that has influenced our results for good is the more general agreement that exists as to the desirability of operating early and the evils of preliminary tapping, the consequence of this being that practitioners send us their cases before they become quite so desperate, and before the constitution of the patient has become seriously undermined. Further, the interest of late years awakened in abdominal surgery has led to improvement in our methods of diagnosis, and cases of ovarian disease are now recognised at an earlier period of their development than was usual a few years ago.

Lastly, there are one or two circumstances special to St. Mary's Hospital, Manchester, that have materially contributed to lessen the death-rate after operation. During the earlier years of my connexion with the hospital, the board of management, noting the fact that Manchester and Salford provided the greater part of the funds for carrying on the work of the hospital, considered that the recipients of its benefits ought, as far as possible, to consist of persons resident in these towns; hence, they placed great restrictions on the admission of patients from out-lying districts. As a natural result of this policy, country patients drifted to other hospitals where admission was more easily obtained, while our patients at St. Mary's were drawn chiefly from the slums of Manchester and Salford, and largely consisted of women whom poverty and vice, and other unhealthy conditions, had rendered highly unfavourable subjects for operation. Six or seven years ago a wise change was introduced, and it is now as easy for patients from the country to obtain admission as those from the town. One other circumstance that has told in our favour must also be mentioned—viz., the anxious care manifested by the hospital authorities during the last few years with regard to the sanitary arrangements, which are now probably as satisfactory as they can be in so old-fashioned a hospital.

(To be concluded.)

A CASE OF TYPHLITIS;

EVACUATION OF LOCALISED PERITONEAL ABSCESS; RECOVERY.

BY ALBERT WILSON, M.D,
AND
RICKMAN J. GODLEE, M.S.

IN view of the difference of opinion amongst surgeons as to the best method of dealing with a localised collection of pus in the neighbourhood of the cæcum, when general peritonitis is supposed to have supervened on acute typhlitis, the following case may be of general interest.

H. S——, a groom, seventeen years of age, who had previously enjoyed good health, was said to have strained his side six weeks before he was first seen by Dr. Wilson, on Oct. 23rd, 1886. He complained of no symptoms till about the 17th, when he thought he took cold; this, at all events, was the date of the commencement of his illness. On the 21st and 22nd some rigors occurred, and on the 23rd he was brought to his home. He was then suffering from intense pain in the abdomen, especially on the right side, the tenderness here being so great that a complete manual examination could not be made. The temperature was 102·5°, and the pulse 100. The bowels at the commencement of the attack had been confined, but had been moved after some aperient medicine which had been previously given. Dr. Wilson at once ordered hot fomentations to the abdomen, and ten minims of tincture of opium to be taken every two hours, with some carbonate of soda to relieve the flatulence. On the 24th, 25th, and the early part of the 26th, the condition remained about the same, or rather improved, except that a swelling, small at first, was noticed in the right iliac fossa, which gradually increased to the size of a small orange. The tenderness, however, had diminished. On these days the temperature varied from 100° to 101°, and the pulse was always about 100, a little over or under. The tongue was thickly furred, and there was no action of the bowels. The treatment was continued, and the patient was fed upon beef essence, beef-tea, and milk in moderate quantities. In the evening of the 26th there was a sudden alteration in the symptoms, the pain and tenderness suddenly becoming much more acute and extending over the whole abdomen; so great were they, in fact, that he could not bear the weight of the bedclothes, and complained if anyone walked across the room. The temperature rose to 103·5°, and the pulse to 120, the latter being thready and weak. The countenance was ashy pale, and there were all the symptoms of collapse. It seems clear that at this time the peritonitis became general. Thirty grains of salicin were administered.

In the morning of Oct. 27th the patient's condition became worse, the temperature rising to 103°, but afterwards falling to 99°, and the pulse being 104, and hardly perceptible. Vomiting also set in, so that any food or brandy was at once returned. The breathing became altogether thoracic, and retention of urine occurred. He rallied, however, in the afternoon, and when we saw him together at 4 P.M. it was decided at once to make an incision into the now very marked swelling on the right iliac fossa. Chloroform was therefore administered, and a cut about three inches long was made by Mr. Godlee through the abdominal muscles below the anterior superior iliac spine, as if for ligature of the external iliac artery. In the deeper parts the tissues were infiltrated with inflammatory products, and when the peritoneum was reached and incised exit was given to about an ounce of extremely offensive pus. This occupied a small cavity, the posterior boundary of which was formed by coils of small intestine loosely held together by soft adhesions; but as the suppuration appeared to be completely localised, and as no pus welled up from the pelvis, the utmost care was taken not to break down these adhesions. The cavity was very gently swabbed out with a little solution of corrosive sublimate (1 to 500), and some iodoform was introduced; a drainage tube was inserted, and the wound was dressed with salicylic wool. It was decided to feed him with peptonised nutrient suppositories, and to keep him thoroughly under the influence of opium. After the operation the patient was somewhat relieved, though still very weak. Vomiting continued during the night, the material brought up having on one occasion a somewhat fæcal smell; indeed, the vomiting, though gradually subsiding, lasted for three days, only ceasing on the 31st. On the 29th the case was further complicated by the onset of diarrhœa, which prevented the rectal alimentation and lasted for a day or two. The vomiting and straining at stool caused a protrusion of a knuckle of intestine between the lips of the wound; the gut soon assumed a bright-red velvety appearance, and from its prominence prevented the reintroduction of the drainage tube. It became necessary gently to press the bowel back into the deeper part of the wound, and to retain it there by means of a pad of boracic lint kept in place by strips of plaster. The discharge in the meantime continued to be very fetid, and was expelled from the wound mixed with bubbles of air. For these three days the patient's state remained very critical, and we have to thank Dr. MacDonald, Dr. Wilson's assistant, for his unremitting care and attention during this period of the case. The temperature gradually rose from 97·8° to 99·2°, but the pulse fell from 130 to about 80.

Between Nov. 1st and Nov. 7th there was a gradual improvement in the abdominal symptoms and in the appearance of the wound, though the discharge continued to be offensive. The diarrhœa and vomiting had ceased, and the patient was able to digest peptonised corn-flour. He had, however, always an evening rise of temperature, which on one occasion reached 102·2°; the pulse also was again close upon 100. This increase of fever was no doubt accounted for by the fact that a small left parotid bubo occurred, which did not suppurate, but subsided without causing further trouble.

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After Nov. 7th convalescence was uninterrupted, except on one occasion, when, after the bowels had been confined for a week, the temperature rose to 102°; they were relieved by an enema, and the temperature at once fell to normal. By Dec. 7th cicatrisation was complete, and the patient was sent to the seaside for a fortnight. He has since returned to his occupation, and remains quite well.

Most, if not all, will agree that as soon as there is distinct evidence of the presence of localised suppuration in the neighbourhood of the cæcum, it is the best practice to go in search of it; in other words, that the patient will have a better prospect of recovery if exit be given to the pus, than if he be left to the chance of the abscess bursting into the bowel. But there is room for differences of opinion as to whether, if there be signs of general peritonitis, it is not better to make a mesial incision, with the object of purifying the general abdominal cavity in the event of this peritonitis being purulent. It must be borne in mind that it is quite possible for general peritonitis to supervene after the formation of a localised peritoneal abscess, and that although the pus in the latter may be exceedingly offensive, the lymph or serum in the former may be, if not aseptic, at least free from smell. A case is recorded in the Transactions of the Clinical Society,[1] in which the same condition of things as that which was present in our patient was met with; but the diagnosis was rendered obscure by the absence of any marked local swelling. Here a mesial incision was made, and the intestines were found intensely injected from very early peritonitis. The abscess was first opened through the mesial incision, and the fetid pus was thus allowed access to the general peritoneal cavity. In spite of this, however, the patient made a good recovery; but it should be added that those parts of the peritoneal cavity over which the fingers and the pus had passed were, as far as possible, treated with corrosive sublimate solution (1 in 500), and that the abscess was drained through a second incision in the groin. The lesson to be learnt, if it be fair to generalise from a consideration of two cases only, appears to be that if pus be suspected in the neighbourhood of the cæcum, it is best at first to make an incision in the groin, even although there be reason to think that general peritonitis has set in. If the abscess be then found to be distinctly localised, all will have been done that is necessary. If, however, it be clear that the general peritoneal cavity is full of fetid pus, the surgeon may proceed to make a mesial incision with the object of gaining free access to the rest of the abdomen and to the pelvis, though it must be confessed that any attempt at purification under such circumstances is an almost hopeless task. The occurrence of the parotid bubo adds another to the long list of cases where an association between this condition and peritoneal inflammation has been observed.

A CASE OF COMPOUND FRACTURE;

AMPUTATION; SECONDARY HÆMORRHAGE; REAMPUTATION; RECOVERY BY PRIMARY UNION.

BY A. PIERSON, M.R.C.S., L.R.C.P. LOND.,
SURGEON, INDIAN MEDICAL SERVICE.

H——, aged twenty-eight, a Mussulman railway labourer, well nourished and healthy-looking, was admitted into a camp hospital on the Bolan State Railway on October 16th, 1886, with a compound fracture of the left tibia just above the ankle joint. The patient had been standing on a stack of loose rails, when one of them had turned over on its side and caught his leg. There was considerable bruising of the soft parts, but as the wound was small the hospital assistant in charge of the camp decided on trying to save the leg. He therefore syringed out the wound with carbolic lotion, dressed it with carbolic oil, and put up the leg in splints.

I saw the man for the first time on Oct. 29th. The discharge from the wound looked dirty, and the dressing could not be kept antiseptic. The patient was removed on a bed by train to the chief railway hospital, a distance of nine miles. On Nov. 5th I advised him to submit to amputation, as the discharge was profuse and offensive in spite of all carefulness in dressings. He stoutly refused, but on Nov. 8th he was put under chloroform and the leg amputated at the knee joint. This was necessary, as the skin was swollen and infiltrated lower down. On cutting out the posterior flap, I noticed that the skin was thickened and the subcutaneous tissue decidedly watery. A higher operation, however, was thought to be unjustifiable, as it was impossible to say how far the septic poisoning extended. The operation was therefore completed, and the wound dressed with iodoform and wool. His evening temperature before operation had been 99·8° or 100° for about six days. On the evening of the day of operation the patient's temperature was again 100°, but on the next night it rose to 103·8°. The wound was then dressed and found to be sweet, but the discharge was unhealthy.

Nov. 10th.—Morning temperature 100·4°. Discharge smelling. Evening temperature 103°.

11th.—The posterior flap is beginning to slough; it is commencing from a circular ulcer which has appeared between the two condyles of the femur, and has apparently been caused by infected lymphatics, as no pressure from bandaging could have been exercised on this particular spot, situated as it is between two bony prominences. After this the whole of the posterior flap sloughed off, leaving the two condyles quite bare and the artery visible between them. The temperature then fell to normal, and rosy granulations sprang up on all sides, and the artery was rapidly covered.

The temperature remained normal, with only occasional rises, apparently due to malaria, until Jan. 17th, 1887, when it rose to 100° in the evening. The wound caused by the sloughing of the posterior flap had gone on admirably at first. Then the patient's strength had begun to flag about Dec. 15th and a bedsore had formed on his sacral prominence, and after this the skin-forming had come to a standstill on the ulcer. At the end of December and beginning of January the granulations had a congested, flabby appearance.

On Jan. 20th—that is to say, two months and twelve days after the amputation—secondary hæmorrhage set in. The blood spurted from the granulations in three streams, one central over the artery and two lateral. Luckily, the assistant surgeon was on the spot, and at once applied an elastic band to the femoral artery. I decided to amputate again, seeing that the healing process had apparently stopped in the ulcer. Amputation was performed through the lower third of the thigh. Troublesome hæmorrhage (i.e., oozing) occurred after the operation, and the flaps were not closed for at least half an hour. Two hours and a half afterwards hæmorrhage came on again. The assistant surgeon opened the flaps, and found a small bleeding point which he tied. Two hours after this the dressings were again observed to be soaked through. I therefore again took off the dressings, washed out the flaps with a solution of perchloride of iron (1 in 8), sewed up the flaps, and applied two antiseptic sponges on each side of the incision. The stump was then firmly bandaged to the splint, and elevated on a high pillow.

Jan. 22nd.—Sponges removed and stump found to be quite sweet. Iodoform and wool applied. Temperature normal.

26th.—Wound dressed again for the purpose of removing the drainage tube and sutures. After this the wound required no trouble, and healed perfectly with the exception of a small collection of pus (about fifteen minims) which occurred in the course of a suture scar. This sent the temperature up to 100° on the ninth and tenth days after operation.

Feb. 20th.—Wound has been healed for some time, and the stump can be handled without causing any pain.

The amputated portion of the thigh was examined after the operation, and it was found that the granulations were large and flabby, and full of blood. They could be squashed like jelly beneath the fingers, and were easily peeled off the subjacent tissues. The prominent parts of the condyles on their posterior surfaces were carious and breaking down. This could not be seen except by first clearing off the granulations. The artery was traced down the popliteal space to the site of the ligature, and it was found to be pervious right up to it. There was no trace of the ligature (a catgut one), but the constriction was well marked. A probe easily went through, and the artery was found to be continuous with and moulded into a mass of large spongy granulations gorged with blood. I should not forget to state that the shaft of the femur when sawn through at the second operation did not appear healthy. The medulla bulged out like a watch-glass, and was abnormally congested.

Bolan Pass.

[1] A Case of Suppuration around the Vermiform Appendix treated by Abdominal Incision, by T. Barlow, M.D., and R. J. Godlee. Vol. xix., p. 88.

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A CASE OF

OBSCURE ABDOMINAL ABSCESS; PERFORATING ULCERS OF STOMACH AND DUODENUM.

WITH REMARKS.

BY ANDREW MILLER, M.D. EDIN.

THE case here recorded is one of a class which present so much difficulty in diagnosis, and are therefore so difficult to treat successfully, that I feel it is a matter of great importance that each instance should be laid before the profession. At present but few observers have published cases resembling the one narrated below, and little or no mention of them is to be found in the standard works of reference, such as Leube's article in Ziemssen, &c. Under these circumstances, it is only to isolated pathological records that the profession can turn for information concerning these rare and dangerous groupings of symptoms. The following case, which occurred in my practice, may be briefly given.

For ten years before Mr. A——'s last illness he had been subject to attacks of abdominal pain, diffused in character, and referred to no particular region, but generally to the lower part and left side of the median line of the abdomen. These attacks occurred in paroxysms, there being sometimes an interval of from one to three months, during which there was complete immunity from suffering. The pain, which was very severe, but indefinite in character, was ascribed by the patient himself to cold or prolonged abstinence from food, and seemed to be wholly independent of the ingestion of ordinary solids or liquids, which, indeed, he could take with perfect impunity. Mr. A—— was a very abstemious man alike in food and drink. The attack of abdominal pain sometimes lasted only a night, but at other times was prolonged for two or three days; the severity of each seizure, however, generally spent itself in from twelve to twenty-four hours. The beginning of his fatal illness was looked upon by all concerned, himself included, as identical in character with what he had suffered before, the abdominal pain at this time not even being nearly so severe as on many previous occasions. In one instance, when I did not see him, the pain was so intense as to give rise to the supposition that it might be due to the passage of a gall-stone; however, there was no direct evidence of such having taken place.

On the morning of Nov. 30th, 1886, I was called to see Mr. A——. I found him in bed, looking pale, drawn, and pinched, complaining of dull, diffused, aching pain below the umbilicus and to the left side of the median line. I elicited that, owing to the pain, he had passed a restless and sleepless night. As he had been travelling by rail the whole of the previous day, and consequently had only taken hurried meals at irregular and unusual hours, his suffering was at first attributed to dyspepsia; no objective symptoms had up to this time developed themselves. Temperature 97·4°; pulse 100; bowels confined. Physical examination revealed nothing more than slight tympanites, general tenderness of the abdomen, some meteorism, but no tenderness on palpation over the stomach itself. Hot fomentations were applied to the abdominal parietes, enemata of a pint of hot water administered to counteract the constipation, and three-minim doses of tincture of nux vomica given every three or four hours. In the evening the temperature rose to 100·2°. The fomentations had somewhat relieved the pain, and the bowels had been freely opened. On carefully examining the abdomen, dulness on percussion and a sense of resistance to pressure, as if from some mass or obstruction, were noticeable in the left lumbar region of the abdomen just below and to the left of the small cul-de-sac of the stomach. This "tumour" was always more or less distinctly to be felt from this time to the close of the illness, but the distinctness with which it could be made out varied inversely to the degree of flatulent distension of the intestines. The night which followed was a very restless one; the patient slept but little, although the pain was sensibly diminished. Twenty grains of bromide were therefore administered on the third night, with very good result. During the next four days the temperature fluctuated from 100° to 102°, the diurnal variations being slight except on the third day, when the morning temperature touched normal. With this exception, pyrexia existed till the occurrence of the hæmatemesis, which was followed by the fatal collapse. In spite of this exaltation of temperature, for which quinine in two-grain doses three times a day was exhibited, up to this time the patient's condition had not caused special anxiety, as the present attack in all other respects resembled its predecessors before mentioned. The pain had yielded to treatment; the patient was cheerful and appeared to be making daily improvement, took food with some relish, passed quieter nights, and had more sleep. He was kept on the simplest diet—milk, beef-tea, and sometimes a little chicken or fish panada. From the sixth to the twelfth day the patient became more restless; the temperature assumed a higher range, exhibiting a marked diurnal variation, touching 102·8° on the tenth day, and with a variation of four degrees on the eleventh day. Thirst became a troublesome symptom, and the tongue was dry and furred. On the twelfth day there were two loose actions of the bowels. Early on the night of Dec. 12th (thirteenth day of illness) the bowels acted twice; the stools were liquid and the colour of tar, suggesting melæna; and about a pint and a half of dark blood mixed and diluted with the fluid contents of the stomach, was vomited suddenly and without pain. This was accompanied by a fall of temperature, which on the morning of the fourteenth day reached 98°, and subsequently to this, on the nineteenth day, when the patient died, the evening temperature never exceeded 99·6°, while the morning temperature kept about normal, being sometimes a fraction of a degree above and sometimes a little below normal. From this moment, when the hæmatemesis took place, till the close of the illness there was very marked prostration, amounting to collapse, so that transfusion of blood was contemplated, and a surgeon kept himself in readiness, and every preparation was made for carrying out the operation. The physical signs, with the exception of slightly increased tympanites, remained much the same as before. During this anxious period the respiration was of the Cheyne-Stokes type, and the pulse was exceedingly weak, compressible, and too rapid to be counted. There was a little wandering of the mind at times, while the countenance wore an anxious look. The patient was kept on nutritive enemata of beef-tea and brandy, nothing being taken by the mouth for about two days, water to rinse the mouth and ice to suck alone being allowed to enter the stomach. During this period one-sixth of a grain of morphia was given twice a day hypodermically. The hæmatemesis not recurring, he was allowed a little champagne and some meat juice and beef essence. In spite of all we could do, there was no rallying on the part of the patient, who died on Dec. 18th, the nineteenth day of his illness. The symptoms already recorded persisted until death, with varying intensity. It may be remarked that the urine, tested frequently during the illness, at no time exhibited a departure from health.

Necropsy twenty-seven hours after death.—On opening the abdominal cavity, the small intestines were revealed uncovered by omentum. This, together with the stomach, were afterwards found to be displaced upwards and backwards, so as to be hidden beneath the ribs. The former—that is, the omentum—was further found to be implicated with the tumour. The liver occupied its usual position, and in every way appeared perfectly normal. Upon drawing the small intestines aside, the tumour, which had been felt during life, was found to consist of a mass occupying a position to the left of the median line, extending from the hypochondrium to the inguinal region, irregular and somewhat oblong in shape. Its walls were in places half an inch thick, and appeared to be made up of inflammatory tissue together with adhesions formed with the omentum, mesentery, pancreas, colon, and duodenum, and probably the pyloric end of the stomach, but owing to the matted and displaced condition of the tissues and the friableness of the walls of the tumour any great precision on these points was difficult of attainment. The adhesions were very dense, firm, and evidently of old standing. On cutting into the tumour, it was found to contain a considerable quantity of offensive pus. Its interior was lined by smooth walls, to which shreds of curdy material were attached. The cavity was easily capable of holding a man's clenched fist. On opening the stomach, the mucous membrane was seen to be of a dusky hue. About three inches from the pyloric opening a minute punched-

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out orifice was seen on the posterior lower wall. There was no heaping up or tumefaction about the edges, simply a thinning of the mucous membrane, and no signs of inflammatory change upon the visceral aspect. On passing a probe through the perforation, the probe was found to enter the cavity of the abscess described above. Similar but smaller communications existed between the abscess cavity and the stomach; these were situated somewhat nearer the pylorus. Upon cutting down the intestines, an aperture was seen in the wall of the duodenum quite similar to the larger perforation described in the stomach, which in its turn also led into the abscess cavity. No other outlets from the pus cavity existed. Close examination revealed that these various communications were funnel-shaped, the larger end of the funnel being away from the stomach and duodenum respectively. The visceral opening was exceedingly small indeed, so small that pus in this stage of the malady seemed unable to obtain free exit. The mucous membrane of the intestines below the duodenum was healthy, and, in fact, all the other viscera were free from morbid change.

Remarks.—In reviewing the above case, certain points appear to deserve special attention. The clinical phenomena were so ambiguous as to prevent a correct diagnosis being arrived at, and even after the necropsy it was found difficult, if not impossible, to trace the order of pathological events which led to the fatal issue. Dr. Bristowe published in THE LANCET of Sept. 29th, 1883, cases which bear some resemblance to the above, and which may well be studied in relation with it; but in these there was either a distinct history of gastric ulcer perforating and leading to abscess, which in its turn perforated, giving rise to fatal collapse, or of ulceration occurring in the intestines, which anticipated extra visceral abscess. Now, in the case of Mr. A—— there was a history of ten years: slight dyspeptic trouble marked by paroxysmal attacks and abdominal pain, without any hæmatemesis, melæna, or distinct pain after food relieved by vomiting—indeed, vomiting was wholly absent in this patient's case. There is not evidence, I think, sufficient to indicate whether these attacks of pain were or were not manifestations of localised peritonitis, although it must be admitted that the facts furnished by the necropsy would point to such a hypothesis. If this supposition—for it can only be viewed as such—be entertained, it would appear that the last illness was, in fact, a kindling into activity of a pre-existing chronic abscess due to such localised peritonitis. How far the interference with the alimentary tract arising from Mr. A——'s travel was responsible for this renewed activity in the abscess it is impossible to say. At any rate, the increasing size of the tumour apparently encroached upon the stomach and duodenum, and ultimately by a process of ulceration produced openings into these hollow viscera. In support of this view it should be remembered that, although the patient had been frequently and carefully examined, no tumour of any size could be made out till the occurrence of his last illness, and it is equally certain that the adhesions and thickening about the collection of pus could not have been the result of an eighteen days' inflammation. The assumption that the abscess was a sequence of the ulceration of the stomach or duodenum appears to me wholly untenable, and for the following reasons. There never were any symptoms of gastric ulcer until the advent of the hæmatemesis and melæna, which occurred five days before death; and the appearance of the perforations clearly indicated that they were produced from without into the viscera, the visceral opening being distinctly smaller than those looking into the pus cavity, while the mucous membrane in the stomach and duodenum in the vicinity of the perforation was absolutely healthy. It would appear that the purulent collection became infected probably through the thinned walls of the stomach or intestine, and took on a rapid infective course, leading to the hectic which marked the last attack, taking the abscess from the realm of harmless chronicity to that of a highly dangerous infective process. It is noteworthy that no general peritonitis existed, and that the patient at no time was the subject of rigors. In conclusion, I desire strongly to emphasise that I in no way wish to lay stress upon the explanation I have ventured to offer above. It appears to me to fit in with the facts as revealed by the necropsy. To others it may appear insufficient. My only object in bringing the case forward has been to state the facts of what I believe is almost a unique case. To others I would leave the explanation. The treatment throughout the case was practically one of expectancy. Judging after the fact, I regret that an exploratory incision was not had recourse to, for there is little doubt that such purulent collections, if diagnosed in time, might be treated by operative measures, with at least a fair hope of success.

Grosvenor-street, W.

THE INTERPRETATION OF DISEASE.

BY H. CAMERON GILLIES, M.B.

The meaning of the initial depression.—That the condition of depressed vitality, referred to in my last paper, obtains before every case of acute disease I am, for myself, fully satisfied. Indeed, I do not expect anyone will deny that it is so—being so simple, so apparent a fact in every case. What, then, is the cause of it? what does it mean? Many and ingenious hypotheses have been advanced to explain this condition when observed, and to explain what is commonly regarded as the disease—the acute violent attack that disables the sufferer. Very few of these can stand examination; most of them are not worth the trouble. They are, as a rule, matters of fancy, and, even as such, not very good guesses. There are a few, however, that claim and shall have attention. But before doing so I may be excused for resuscitating a little more of the commonplace.

"The human body, like that of any other animal, is an organism in which by the chemical changes of its constituent parts potential is converted into kinetic energy, and these changes depend upon the presence within the body of energy-yielding substances."[1] It must be clearly understood that the body of itself has no inherent power whatsoever—that it lives and moves and has its being by virtue of energy and substance received from its environment. "Whatever amount of power an organism expends is the co-relate and equivalent of a power that was taken into it from without."[2] Not only are the larger and more apparent forms of action, such as of manual labour, under this law, but every organic act also; every beat of the heart, every movement of respiration, every twinkle of the eye, is under the same law, and implies so much energy spent, however small that may be. The principle goes even further than that. "No idea or feeling can arise save as the result of some physical force expended."[3] We now arrive at this, that no act whatsoever of mind or of body, however small and insignificant, whether voluntary or involuntary, in health or in disease, can have origin or execution except it be from physical energy derived from food taken into the body and there digested and assimilated. We cannot of ourselves by any effort of will generate the least conceivable quantity of vital energy. Every thought and every act implies the transformation in our bodies of so much organic matter as contained the energy spent on them in a latent state. In the human body there is no constant measure of energy. It varies not only at different periods of life, but from day to day and from hour to hour. There is, however, during the period of maintenance or adult life in a healthy person, an average measure of potential energy, the total sum of which day by day is perhaps approximately constant. This potential energy of maintenance is what has been appropriately called the physiological capital of the individual. It is really the true expression of the individual vigour, and determines the height of the *health line*, to which our most serious calculations are referred in the estimate and treatment of disease. The food we eat from day to day sustains the current account of our physiological transactions. It would be wrong, however, to adhere too closely to this analogy, for there is no distinction of kind or place between the physiological capital and the current account. The energy received at any given time is incorporated with and assimilated to the potential capital; and from the sum is drawn the measure that becomes kinetic in our life acts. The fact to remember is that the capital from day to day gives an approximately constant sum. That is the condition we call health.

A theory is advanced by Dr. W. B. Carpenter, which, because of the honest endeavour it shows in the direction of truth and of the measure of truth in it, and because it has had very general acceptance, is of some interest: "Ample

[1] Hermann's Physiology (Gamgee). [2] Herbert Spencer. [3] Ibid.

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evidence is afforded by army experience of the special liability of soldiers to zymotic disease when on long and fatiguing marches, because, the respiratory process being reduced by the high external temperature, the products of waste tend to accumulate in the blood"—and so the organism is predisposed to disease. The *fact* here expressed is correct and valuable, but I venture to say that the explanation and the interpretation of it are wrong. The author himself seems to have had his suspicion, for he gives a further explanation in support: "There can be no doubt that it lowers the healthy vigour of the body generally, and thus renders it more liable to disease." That is good. All the facts of the case are there—all the elements that are necessary to get at the truth. We have labour, wear and tear of body-structure, and a great expenditure of energy; and as a consequence of these, exhaustion and fatigue and liability to disease. But surely the waste products, the débris of the spent tissues, are not here the *cause*. That a depression of the healthy vigour renders the body liable to disease is true—it is, in fact, the whole truth; but that the waste products are the cause of that depression is wrong. We cannot accept it that any result can predispose to produce its own cause—that the child is the progenitor of or determines its own grandfather. The labour is the cause, and that the waste products accumulate is only an accident and a part result of the real cause. Dr. Carpenter refers to the fetid secretions, excretions, and exhalations, and to the rapid putrescence of the victims to the Irish famine of 1847, in support of his theory; and he attributes all this to the uncleanly condition and habits of the people preventing exhalation from the skin of the waste products in the blood. But there is no meaning in saying that in such cases, as of famine, waste accumulates in the blood. The whole body is a waste product. There is not anywhere in the whole body a healthy part. It dies in the mass. Every tissue and cell is so far famished and diseased. Energy is not, and cohesion is not. The "internal relations" are exhausted; the "external relations," the forces of destruction and putrefaction, operate without any resistance, and because of that there follows all the conditions detailed. Properly considered, a victim of famine is dead before he dies. It is not correct to measure decay from the moment of total extinction, for it commenced when the body first began to suffer the effects of famine, and destruction is far advanced before the last flicker of life. The poor tenement of clay that is for our purpose the instrument of life fails not in any one part or organ, but in its total mass, and it is no wonder that "rapid putrescence" sets in after death. With every respect, I submit that the theory of Dr. Carpenter entirely fails—that it cannot be accepted as a guide or as an aid to the true interpretation of disease.

"It becomes a very interesting question," says Mr. Simon, "by what manner of action different kinds of privations are able to produce inflammatory excitement. Just in the same way as the setting sun produces darkness or the absence of its rays cold, it is not a positive product but a negative." There is an error here, of the *post hoc propter hoc* kind. It is not the privation that produces the inflammation, as shall be shown later on. The question is, however, of great value, and that especially because of his own answer: "In the present state of knowledge the only conceivable explanation is that the excitement is secondary, that a certain amount of textural death is the primary and direct result of the privation, and that the inflammation is a consequence." This doctrine, that textural death is the cause of inflammation, is of the very highest interest. I am disposed to accept it in its broadest and most comprehensive application—to give it, perhaps, more value than Mr. Simon meant it should have. That textural death is followed by inflammation in cases of traumatic injury is evident; we all see that. It is therefore extremely interesting to find Mr. Simon's theory coming into straight line at a long distance with facts so plain as to need no proof. Inflammation follows wounds we all know; it follows on privation, causing textural death, Mr. Simon tells us. In the one case the textural death is substantial and visible, local and sudden; in the other it is general, perhaps, and gradual, and, at any rate in its early stages, quite beyond the powers of our senses to detect. But the one is as real and as much a fact as the other, and they are both identical in purpose and effect. It matters not whether the disease be a simple cut, a broken leg, or a pleurisy—there is textural death, and textural repair follows in direct proportion to the textural vitality, to the physiological capital, to the potential energy of the individual, and destructive processes in the inverse ratio of the same. We die daily in the strictest physiological sense. Every second of our lives is a long history of physiological operations in which death and repair run parallel in our bodies. "We are kept from dissolution by foreign powers, and not by any powers in ourselves." If the natural and necessary textural death of physiological change overcome or exceed the parallel process of repair and restoration or restitution of tissue elements, then that is death actual in that measure. We may call the moral expression of it weakness or even disease; and if it proceed beyond recovery, it is dying, and, finally, total death, when the potential energy is run out. Malaise, weakness, disease, and death are in one and the same straight line. "*Predisposition to disease and disease are the same thing*" is the invaluable expression of John Brown, and therefore all the cause or forces of predisposition—defective food and warmth, overwork or dissipation, unhealthy surroundings, &c.—are also in the same straight line with disease and death. So that even Mr. Simon falls short of stating the whole truth. His "structural death" on which inflammation (disease) follows is itself secondary to a loss of energy that has gone before. The *dis*-ease is the expression of the functional derangement that is the necessary result of the textural death following on the primary loss or defective supply of energy to the organism. Disease in the accepted sense is therefore the fourth remove from the prime cause. All this listlessness and indisposition, flying pains and neuralgia, blood poverty and irritability or sleeplessness, loss of appetite and general weakness—the whole condition thus and otherwise variously described—are so many points in the inclined plane that extends from our remotest adverse environment downwards through all the gradations of disease till it end in death.

Several very interesting lines of thought invite attention at this point, but considerations of space forbid.

Brockley, S E.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SUCCESSFUL REMOVAL OF AN ABDOMINAL CYST OF EXTRAORDINARY SIZE.

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,
HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY, AND LECTURER ON PRACTICAL SURGERY AT THE YORKSHIRE COLLEGE.

OVARIOTOMY being such an ordinary operation, it would be quite unjustifiable to report a single case were it not that it presents special points of interest.

In saying that a patient, aged thirty-seven, was admitted to the Leeds General Infirmary on May 10th, 1887, suffering from abdominal tumour, it would be almost more correct to describe it as the admission of a huge tumour with a patient attached, had it not been for the fact that the woman actually walked from the cab to the ward. There was a history of fourteen years' abdominal enlargement, and of rupture of the cyst six years before admission due to a severe shake, the fluid being passed off through the kidneys at the rate of four pints a day for about three weeks. Her general health had been fairly good until the pressure, which had produced great œdema of the lower extremities, had interfered with her nutrition and had impeded locomotion. The appearance of the patient was most remarkable: thin and careworn, she lay on her side, coiled round her immense abdomen, which was nearly six feet in circumference two inches above the umbilicus, the tumour occupying the bed and the patient being pushed to the edge. She could only with difficulty lie on her back or left side on account of dyspnœa, and had to lie on her right side or to be propped upright. The ribs were expanded like alæ, the lungs were pushed upwards, and the apex of the heart was felt in the third left intercostal space, one inch and a half above the nipple and half an inch from the anterior axillary line. Very large veins coursed over the abdomen, which presented the usual signs of an ovarian tumour. From the length of time it had existed, the slight effect, except

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from pressure, on her general health, the history of rupture without peritonitis six years before, and the presence of a very distinct wave as of thin fluid in one cyst, I diagnosed the cyst as parovarian, and from the fact of rupture I anticipated adhesions. At the operation on May 24th this turned out to be the case; the cyst was growing from the left broad ligament, to which it was attached by a pedicle, thus enabling it to be removed without interfering with the contiguous ovary. It was very extensively adherent over the front and upper part of the abdomen, and had some adhesions to the viscera both in the abdomen and pelvis. The cyst contained no less than eighty-five pints (ten gallons and a half) of fluid, of a dirty grey colour; specific gravity 1026, alkaline, and containing much albumen. A Keith's drainage-tube was used, which was removed on the fourth day, there being no discharge from it after the second day. Recovery was slow but uninterrupted, save for an attack of dyspnœa on the third and fourth days, apparently due to the heart and lungs being displaced and trying to regain their position. Relief was given by ammonia inhalation, and by firmly padding the abdomen, which was collapsed and perfectly flat.

It may be that cysts as large have been removed; but I cannot find the record of such a one, and I can safely say that I personally never previously saw one nearly as large.

Leeds.

BILHARZIA HÆMATOBIA.

By E. B. HARTLEY, V.C.,
SURGEON-MAJOR, CAPE MOUNTED RIFLEMEN.

IN THE LANCET of April 30th, 1887, I notice certain notes on this subject taken by Mr. W. K. Hatch in Bombay. It may not be out of place for me to offer a few remarks on the same disease as it occurs in King Williamstown, Cape Colony. For some years I have encountered occasional cases of hæmaturia among soldiers of the Colonial Forces. The numbers are limited. It is not until recently that I have treated numerous cases among boys and youths of ages varying from ten to eighteen years; the disease being clearly owing to the presence of the parasite bilharzia hæmatobia. The disease appears to be very common in this town among European lads. I have heard of no cases among females. The history is generally similar to that of the following case:—

A. B——, aged fifteen, a pale, anæmic, ill-grown youth, for three years or so has remarked blood in his urine. It generally comes at the termination of micturition, sometimes as pure blood, at other times it is intimately mixed with the urine, or lumps of congealed blood settle at the bottom of the vessel, the urine under the last circumstances being clear. There is sometimes pain, but in the majority of instances it is absent. The blood is worse after playing football or cricket or after taking any violent exercise. Has received no injury to the bladder, and can assign no reason for the advent of the blood in his urine. Does not feel ill, and knows a great many boys who have had the same complaint gradually get over it and appear to be none the worse afterwards. Has been in the habit of bathing a great deal in the river, but has been advised to discontinue doing so, as the doctors say this is the cause of the disease. Is in the habit of drinking rain water which is collected from a corrugated iron roof and stored in a barrel. The urine upon inspection appears either dusky coloured or intimately mixed with blood, and in some cases there are clots of mucus and epithelium at the bottom of the vessel. Under the microscope ova, as pictured by Cobbold and other observers, and described under bilharzia hæmatobia, are readily seen, the numbers varying in proportion to the quantity of blood. In only one case have I been able to detect the parasite itself. No opportunity of making a post-mortem examination has been afforded me. The disease is by no means common in the higher altitudes of this colony. During a residence of three years in Basutoland, some 5000 feet above the sea, I met with only one case, and that was an Indian coolie from Natal. As a general summary I would affirm that the disease is rare amongst grown-up men, but very common among boys; that it lasts from three months to three or four years, and that it does not appear to do any permanent damage to the individual. In two cases I have noted blood as being passed with the motions.

Treatment——tions of medicated lotions into the bladder I regard as perfectly useless, besides being very objectionable to the patient. I have tried quassia, iodine, carbolic acid, iron, nitrate of silver, hamamelis, iodide of potassium, gallic acid, &c. By the mouth I have given endless and varying drugs—ergot, gallic acid, hamamelis, acetate of lead, belladonna, buchu, matico, hyoscyamus, turpentine, carbolic acid, almond mixture, cod-liver oil, mercury, syrup of iodide of iron, santonin, &c. I cannot affirm that any of these have done much good. It is, however, pleasing to record that Blaud's pills (ferri sulph., gr. iiss., potas. carb., gr. iiss.), as described by Ringer in his book of therapeutics, afford very material relief to the symptoms, and in several cases a cure. I commence with three pills a day, and as soon as it is seen that the digestive organs are not upset, I increase the dose to six pills in the day. They must be persevered with for some two or three months. Other preparations of iron appear to be useful, but I cannot speak of them with the same confidence as being likely to reduce the quantity of blood passed. At present I am treating fifteen cases with it.

King William's Town, S. Africa.

SYMPATHETIC AFFECTIONS OF THE EARS.

By F. W. BENNETT, M.D.,
HONORARY ASSISTANT PHYSICIAN TO THE LEICESTER INFIRMARY.

Two cases which have occurred recently in my practice seem to present examples of a sympathetic relation between the ears.

The first was a man, aged about twenty-five, who had suffered from deafness for several months. The hearing distance on either side was about six inches. On examination mucus was diagnosed as being present in the middle ear on both sides. I incised the membrane on the left side, and by syringing through a Eustachian catheter removed a considerable quantity of mucus. The hearing distance increased to more than two feet. To my surprise there was a corresponding improvement on the other side; this latter was, however, only temporary, and had disappeared three days later. The left ear continued much better, but no further improvement occurred on the right side until I removed mucus by incision.

The second case is more interesting. A painter, somewhat anæmic, complained of recent deafness and pain on the left side, with constant humming on the right. On examination I found a recent collection of cerumen on the left side but nothing abnormal on the right. I syringed away a soft ceruminous plug from the left ear, when the patient said that not only had the deafness and pain gone, but the humming on the right side had ceased.

Possibly in the first case excitement, due to the unpleasant operation, so stimulated the auditory nerve as to render its perceptive power temporarily greater. In the second case, however, there was no excitement, no prolonged syringing required, and nothing whatever was done to the right ear. I could not but conclude that the soft plug had sufficed in the patient's anæmic condition to set up irritation, causing pain on the same side and tinnitus on the opposite.

Leicester.

MYELOID SARCOMA OF UPPER JAW; REMOVAL OF SUPERIOR MAXILLA; RECOVERY.

By ALFRED E. HIND, F.R.C.S.

THIS case was treated by me while I had charge of the Jersey General Hospital. It is in no way remarkable except for the very rapid recovery and almost complete absence of deformity.

Mrs. K——, a woman aged forty-two, came to the out-patient room on May 26th, 1886, complaining of a painful growth between the canine and second bicuspid teeth on the upper alveolus on the left side. She stated that about two years previously a decayed tooth (first bicuspid) had been extracted, but that after extraction the wound never healed, and she soon noticed a fleshy nodule projecting in its site. This nodule has been growing slowly since.

On admission into hospital there was found between the canine and second bicuspid teeth a projection from the alveolar margin. It was softer than the normal gum tissue and covered with mucous membrane; its colour was dark

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red. The nasal fossa on the affected side was not encroached upon. There was a little depression of the palate on that side, but so slight was it that it was scarcely noticeable. The cheek was, on careful comparison, found to be perhaps a little raised. The orbit was not affected. On the day after admission I removed the second bicuspid tooth. With it came away a piece of what was evidently sarcoma tissue. There was a little bleeding. The alveolar walls were found to be separated by a soft new growth which extended upwards into a distended antrum. On May 31st, the patient being under chloroform, I removed the superior maxillary bone, after reflecting a cheek flap. This was done by an incision extending through the upper lip in the middle line passing round the ala of the nose up to within about half an inch of the inner canthus, and thence passing outwards to the malar prominence. There was free bleeding for a moment while the cheek flap was being dissected up, but this was arrested by firm pressure. After separating the attachments of the bone by means of bone forceps, the bone was found to be so much thinned that it was impossible to get firm hold of it with a pair of lion forceps. It was easily removed piecemeal with a pair of parrot-bill forceps. It was found necessary to remove almost the whole of the floor of the orbit, as the new growth was attached to its under surface. The cavity was firmly plugged with dry lint and iodoform, and the edges of the wound brought into apposition by sutures. No dressing was applied except a piece of lint soaked in ice-cold water. The whole external wound healed by first intention. Patient's temperature never rose above 100°. She left the hospital on June 19th with a strip of lint lightly plugged into the cavity. By the middle of August she was able to wear a set of artificial teeth, the plate of which completely covered the deficiency of the palate. The scar was almost imperceptible, and no deformity resulted. On July 12th of the present year there was no sign of any recurrence. As the tumour was a myeloid sarcoma, encapsuled and confined to the superior maxilla, the whole bone having been removed, the chance of its recurrence is not great.

Jersey.

TYPHO-MALARIAL FEVER.

By J. G. LAFFAN,
COLONIAL MEDICAL SERVICE.

THERE prevails in the Mediterranean a fever known variously as "Rock," "Levant," "Mediterranean," or "Cyprus" fever, according to the name of the locality in which it occurs. A disease running a similar course is known on the west coast of Africa as "coast" fever, in Western Australia as "colonial," and soldiers are familiar with "Peshawur" fever on the north-west frontier of India. All cases of this fever resemble one another; but, as a rule, they can be divided into classes.

Class 1—and I have found that the greater number of cases may be placed in this class—contains all those cases in which great fluctuations of temperature, with or without rigors and sweating, are observed, in addition to many of the typical signs of typhoid fever. This class of cases I propose to call "malario-typhoid," as signs of malaria predominate.

In Class 2 I would place all those cases, so common in tropical climates, in which are found nearly all the signs of typhoid (the rash is generally absent), but in which abnormalities occur pointing more or less to the presence of malaria. To such cases the term "typho-malarial" seems peculiarly appropriate.

The differential diagnosis of these two varieties is difficult during the first week of the attack. At the end of that time, in most cases of Class 1, the tongue, which had been, hard and dry, brown-furred and red-edged, becomes moist and clean; if diarrhœa has been present (and it generally is) it ceases, or changes from its typhoid character, the patient's mind becomes clear, and he convalesces; but generally slowly, the temperature remaining high, sometimes for weeks, and most likely one or more relapses will take place. On the other hand, cases of Class 2 run on a course more or less nearly resembling ordinary typhoid fever. Surgeon James, of H.M.S. *Téméraire* (to whom I take the liberty of referring), has, I believe, in his possession notes and temperature charts of several cases of Class 1.

The treatment I have adopted in this fever or these fevers has been, for the first week or so, expectant and sustaining afterwards being guided by the symptoms, adopting a course based upon the diagnosis of the nature of the poison present. I am happy to be able to add that up to the present I have been successful.

Wyndham, Cambridge Gulf, Western Australia.

THE FORCEPS IN MIDWIFERY CASES, WITH COILS OF FUNIS AROUND NECK OF FŒTUS; ALSO IN PUERPERAL CONVULSIONS.

BY T. OSBORNE-WALKER, M.R.C.S.

QUITE recently I have had under my care four cases of lingering labour, presenting a singular coincidence of symptoms and attendant circumstances, as infrequent, irregular, and inefficient pains, with retrocession of fœtal head on subsidence of pain—the presentation being occipito-anterior vertical in all the cases. Three out of the four I delivered with Sir James Simpson's long forceps and one with Dr. Greenhalgh's short forceps, though I experienced difficulty with the short forceps in consequence of the high position of the head, not having any long forceps with me at the time. Of the four cases the last happened to be the most difficult, as the head of the fœtus receded almost beyond touch of the examining finger after cessation of pain, without introduction of the hand into the vagina; and this occurred to a multiparous woman, who had borne twins in her immediately preceding confinement. Two of the cases were primiparous and two were multiparous, and in all the funes were convoluted tightly around the necks of the children; and both mothers and infants—though two of the latter were greatly asphyxiated at birth, requiring vigorous application of resuscitative means to revive them—have since progressed most satisfactorily. In two cases of puerperal convulsions I have also applied the forceps with marked success, the convulsions ceasing and consciousness returning immediately on delivery of the fœtal head, mothers and infants alike surviving and doing well. In my early practice days I had a case under my care with the cord tightly applied in two convolutions around the child's neck, necessitating its division to safely complete the birth; and in a subsequent case there were not only two tight coils encircling the neck of the fœtus, but both clenched fists were compressing the cord externally, partially overlapping the horizontal ramus of the lower jaw, and a foot interposed, also external to the funis. This state of things I rectified, and the infant, born limp, pale, and apparently lifeless, I was enabled to resuscitate.

Crick.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

CASE ILLUSTRATING THE VALUE OF THE INDUCTION BALANCE FOR DETECTING A NEEDLE IN THE THUMB.

(Under the care of Mr. RICHARD DAVY.)

THE use of the induction balance and telephone, as applied in the case recorded, was undoubtedly of the greatest value in proving the presence and localising the position of the foreign body. The publication of this case will again bring before the profession the value of its use in those obscure injuries in which foreign bodies of a metallic character are lodged, when other definite indication of their presence is absent. For proof of the lodgment of bullets, slugs, &c., at the time of their infliction, the military surgeon has to trust to the evidence obtained by examination of the part, &c., and cannot utilise such a delicate instrument as that described by Mr. Hawksley. In cases, however, where the missile has been lodged for some time and search with the ordinary instruments has failed, it will doubtless be more employed

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in the future, and that with success. The notes of the case were taken by Mr. Gordon Green, dresser.

T. D——, aged thirty-seven, late corporal 40th Foot, was admitted into the Mark ward on March 17th, 1887. Ten weeks previously the man was scrubbing a floor, and felt something sharp enter the ball of his right thumb. He went to a hospital, and a surgeon probed the small wound, ordered the man poultices, and kept him under observation for six weeks. He had obscure pain about the ball of the thumb, for which blisters had been applied. Not feeling satisfied, and believing that a needle was yet in his thumb, he came to Westminster Hospital.

When seen, the man's right thumb was painful, and at a small spot in the palm was an eczematous rash, at which point the needle had entered. Surgical examination proved nothing, for no needle or foreign body could be felt on careful manipulation, nor could the patient feel any foreign body, though he had sat long by night and by day trying to settle all doubt as to whether or not any needle was there. Under these circumstances Mr. Davy and Mr. Lownds paid three visits to Mr. Hawksley, on March 18th, 19th, and 22nd, with the patient. Mr. Hawksley not only showed every attention, but favoured Mr. Davy with a report, which is as follows:—

"The apparatus used was essentially the same in principle as that invented by Professor Hughes, and named an 'induction balance.' Its first application for the purpose of detecting a bullet in the human body was that made by Professor Bell in the case of the late President Garfield. There are three uses of this beautiful electrical arrangement: (1) for the detection of the presence of metal in the human body, (2) as an audiometer, and (3) as a means of detecting most minute differences in the mass or alloy of gold or silver coinage. It consists of the following parts: from two to six Leclanché or bichromate elements; a simple microphone, arranged to indicate the ticking of a clock or other source of constant, regular sound; then two double bobbins or pairs of reels of wire, one reel in each pair being of thick wire and forming a primary coil, which is in circuit with the battery and microphone, the other reel in each pair being of fine wire, in the circuit of which is a telephone; the current passing through these latter reels and the telephone is a secondary or induced current, induced by the proximity of the two primary reels. One of the pairs of reels is attached to a box, and is not used for searching. The two reels comprising this double bobbin are held together by elastic bands, but may be separated at will by means of the fine adjustment of three ivory screws. To this latter bobbin is attached the other double reel, or 'searcher,' by means of long conducting cords. This reel is of a convenient size and shape to move about with facility, is made hollow so that prominent parts may be enclosed by it, and, moreover, it may be made of various sizes. Some art as well as technical skill and experience are required to so adjust the fixed coils that the sound of the microphone is not heard in the telephone; but by careful adjustment, absolute silence may be produced, and the two sets of coils or bobbins are then said to be balanced. When this is done the search for a needle or bullet may be commenced by means of the movable coil.

"This instrument need not be used if the presence of the metallic foreign body is evident by the sense of touch or probe explorations; but where these have failed to detect its presence or localise it sufficiently to warrant the surgeon operating, then it is well to use the balance. The evidence it gives is unmistakable, if it be a witness at all, for it simply says metal is or is not in the region examined. It is sufficient, therefore, to know about the neighbourhood where the metallic mass is suspected to lie, and the balance will localise it, often with great precision. The 'searcher,' which the movable reel may be called, is taken in one hand and applied to the surface of the body, the telephone is carefully placed to the ear, and the balance tested for silence. This being found correct, the searcher is slowly moved in parallel lines over the part supposed to contain the metallic body. On detecting the slightest sound in the telephone the searcher is removed and tested for silence. This being found still correct, the searcher is again applied to the body, and, if the silence is again broken, mark the spot through the aperture in the reel. Then begin the search at right angles to the former lines of examination until the silence is again broken, and at the point of maximum disturbance mark the position. A very little manipulation will now enable the searcher to be placed over the spot on the body where the greatest resonance is obtained, and beneath that the metallic object will be found. To define the depth of the metal beneath the surface or its size need not be entered upon here.

"In the case of the needle in question, no indication whatever of its presence was obtained by searching outside the thumb, but on inserting the thumb inside the hollow reel of the searcher, at one particular angle, the pattering sound of the microphone was faintly but unmistakably heard, and the correctness of the indication of the instrument was demonstrated by the result of the operation.

"In a previous case under the care of the late Francis Mason, the patient, an American, had shot himself by placing the muzzle of his revolver into the external orifice of the auditory meatus. Where the bullet was could not be determined; it was searched for by means of the electrical probe of Trouvé, and also the chemical probes of Hawksley On applying for the first time practically the balance test, and after a little searching, a loud sound was heard in front of the patient's ear, though the area of this sound was rather large for a bullet. Nothing else was suspected until the brother of the patient, who was present, inquired if 'gold filling' would interfere with the indications. An examination of the patient's teeth in the upper jaw showed them to be extensively filled with gold, hence the loud sound and its extensive area. From the elementary description of the apparatus which has been given it will be evident that its indications will be very reliable in the hands of an expert; the presence of any other metal in the neighbourhood of the searcher, whether that of a coat-button, a watch-chain, or the ironwork of an ordinary bedstead, must be borne in mind in the endeavour to discover such an inferior electrical body as a common leaden bullet. 'If,' as Professor Bell remarks, 'people would make their bullets of silver, copper, or iron, there would be no difficulty in finding them in any part of the body.'"

The man's suspicion and the surgical opinion being fortified by Mr. Hawksley's examination, Mr. Davy proposed operation to the patient, but not before he had subjected Mr. Hawksley to a crucial test. He showed Mr. Hawksley one needle and a dead hand, informing him that he would place the needle in the hand while he was absent from the room, and then he, by the aid of the searcher, should tell him where it was. During Mr. Hawksley's absence Mr. Davy cut the needle into two and rammed them deeply by means of a pair of tweezers into two fingers. On re-entering, Mr. Hawksley at once spotted correctly the long and ring fingers, and accused Mr. Davy of having used two needles instead of one.

On March 24th, the man being placed under the influence of chloroform, Mr. Davy made a small puncture in the belly of the man's thumb with a tenotomy knife, about midway over the metacarpal bone; using the tenotome as a probe, the needle was, after some searching, felt distinctly. The puncture was enlarged, and the sides of the wound gently retracted; the end of the needle was lifted upwards by tilting, and extracted by an ordinary pair of small pliers. It was the broken point of an ordinary stocking needle, and measured three-quarters of an inch long.

Remarks by Mr. DAVY.—This bit of needle seems to have been lodged between the flexor brevis pollicis and adductor, in some position parallel to the metacarpal bone, and under cover of the bone. This shelter seems to have prevented the patient from experiencing pricking pain. The plan for getting at the needle reminds me of the bet made by oak-rippers that their axe shall hit the same mark on a tree twenty times running. They make their first cut, and then nineteen strokes follow at right angles to the first. So in this case the needle was discovered by using a tenotome (as a probe) at right angles to the suspected track of the needle. In all these doubtful needle cases any diagnostic help is of value; wavering was steadied, suspicion was confirmed, and all were pleased at the valuable assistance rendered in this instance by the induction balance.

NEWCASTLE-ON-TYNE INFIRMARY.

THREE CASES OF COMPOUND FRACTURE OF THE SKULL; TREPHINING; RECOVERY.

(Under the care of Dr. HUME.)

THE following cases, for the notes of which we are indebted to Herbert Bramwell, M.B., C.M., house surgeon, may be of interest to some at a time like the present, when so much attention is being devoted to the surgery of the cranium and its contents.

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CASE 1.—W. D——, aged twenty, was admitted on Feb. 24th, 1886, having received a blow over the left eyebrow with a sharp piece of iron, rendering him unconscious for half an hour. Two hours and a half after admission he was conscious, but suffering from shock, with dilated pupils, the left being more so than the right. There was an irregular wound, about an inch in extent, extending from the inner part of the left orbital ridge over the nasal eminence. The orbital margin and adjacent bone were fractured and slightly depressed. On opening the wound free hæmorrhage took place from the divided supra-orbital artery. Considering the small extent to which the bone was depressed, and its relation to the sinuses, it was thought possible that the internal table of the skull might not be injured. Any operation was therefore postponed, and the wound dressed. During the next few hours, after recovering from the shock, the patient vomited several times.

No symptoms developed until Feb. 26th, seven days after the accident, when the following notes were made:—Morning temperature 99·5°; pulse 45, full, with a slow laboured beat. The patient has been very drowsy and lethargic all day, complaining of pain in the head, and is very irritable if disturbed. The pupils are irregular, the left being larger than the right. The wound is suppurating slightly, but is clean and healthy-looking. Evening temperature 100·5°; pulse 40.

March 1st.—The patient has been in much the same condition. The frontal headache still continues.

2nd.—Morning temperature 102°; pulse 48. The lethargy and irritability on being disturbed are more marked. Dr. Hume considered the symptoms indicated inflammatory compression of the brain, and determined to remove the depressed fragment. On exposing the bone, a considerable portion, measuring half an inch in its longest diameter, was found depressed. By removing two small triangular portions of bone from the lower angles, the depressed portion was elevated, when it was found that the inner table had been extensively comminuted. One irregular fragment, the size of a sixpence, was projecting edgeways on to the dura mater. The orbital roof was splintered, several spicules pressing inwards on the membranes. After carefully removing all fragments, the two triangular portions of bone removed by the saw were replaced in position, and the periosteum, which had been carefully preserved, was stitched over them with catgut sutures.

The after-progress of the case was very satisfactory. The general aspect of the patient improved as soon as the effects of the chloroform had passed off; all signs of lethargy and irritable temper soon disappeared. The replanting of the portion of bone was not successful, and delayed the healing of the wound. A small part of one portion formed adhesions, but the other pieces came away as sequestra some weeks afterwards.

CASE 2.—J. S——, aged twelve, was admitted into the infirmary on April 28th, with the following history: About an hour before admission he was hit on the head by the shaft of a cart going at a quick pace, and knocked down insensible. The loss of consciousness lasted only a few minutes.

On arriving at the hospital he walked into the accident room, and seemed little the worse for the injury. On removing the handkerchief which had been applied to the head, a large irregular cut was found on the left side, its centre being situated two inches and a half above the zygoma, and one inch behind the external angular process of the frontal bone. The bone was found extensively comminuted and depressed, and brain substance protruded from between the fragments. The pulse was regular, and beating 72 to the minute. There was no muscular rigidity or paralysis, and he was able to give an accurate account of the accident. After the head had been shaved and thoroughly cleansed, chloroform was administered, and Dr. Hume removed two irregular fragments of bone each about the size of a halfpenny which were depressed on the dura mater and almost completely stripped of periosteum. Several smaller splinters were also removed. During the operation about a drachm of brain substance escaped through a tear in the dura mater, an inch in length, and extending transversely across the wound. This tear in the dura mater corresponded to the position and direction of the transverse frontal fissure. The dura mater was not stitched; a small drainage tube was placed in the lower angle of the wound, and the skin margins drawn together with silkworm gut sutures. The operation was performed under the carbolic spray, and antiseptic treatment pursued throughout the case.

The after-progress of the case was remarkable by the entire absence of symptoms of any kind. The boy recovered rapidly from the effect of the operation, and was quite cheerful next day. There were no signs at any time that the brain had been injured. The wound healed without suppuration, the temperature never reaching 100°. After cicatrisation a space the size of a florin remained, unprotected by bone, through which the cerebral pulsations were communicated to the skin. A flat silver plate has been provided to protect this portion of the brain, and which the patient wears continually without any inconvenience.

CASE 3.—P. M——, aged fifty, a strong, healthy man, was admitted on Jan. 20th, 1887, suffering from a compound comminuted depressed fracture of the frontal bone. The fracture was caused by a blow with the corner of a block of wood, which had been projected with great violence from a circular saw. He was knocked down, but not concussed, and walked the distance of one mile to the infirmary. When admitted he was faint, but had no other symptoms. There was an irregular wound over the right frontal eminence, leading to a large circular depressed fragment of bone, round the margin of which three smaller fragments could be made out.

Two hours after admission, chloroform having been administered, Dr. Hume enlarged the wound by a T-shaped incision, exposing the fractured portion. It was then seen that a portion of the entire thickness of the frontal bone, measuring an inch and a quarter by one inch had been driven inwards and downwards, its lower margin projecting for a quarter of an inch between the dura mater and the bone. Three smaller portions of bone were bent inwards around the lower end of the wound. The whole formed a firmly impacted depressed mass, quite immovable. A small trephine was placed over the upper angle of the wound, and a semicircle of bone removed, exposing the superior angle of the large fragment. By laying hold of this with a pair of sequestrum forceps it was withdrawn in an upward direction. After the removal of this portion the three smaller fragments were elevated with ease, and, being completely detached from the periosteum, were removed. From under the margins of the surrounding bone five small splinters of the inner table were extracted. These were irregular sharp fragments, which would undoubtedly have given rise to meningeal irritation if they had not been discovered and removed. The dura mater was abraded at the upper part of the wound, but not completely torn through. The portions of bone removed, when placed in accurate apposition, measured two inches in their longitudinal, and one inch and a quarter in their transverse, diameter. In stitching up the wound the sutures were made to include the whole thickness of the scalp and whatever portions of periosteum remained. A small drainage tube was inserted at the lower angle of the wound. The carbolic spray was used during the operation, and the wound cleansed with corrosive sublimate lotion.

Recovery took place without a hitch, there being no fever and very little suppuration. The drainage tube was removed on the third day after operation, the stitches on the sixth. The patient was allowed to get up on the tenth day after the operation, the wound being firmly healed; he went home on the thirteenth day after admission. Two months after the operation the cicatrix had contracted to half its former size, and a firm thick covering occupied the site of the fracture.

Remarks by Mr. BRAMWELL.—These cases may be taken as strong recommendations to the immediate removal of depressed bone in compound fractures of the skull. When the operation is performed at once, with complete antiseptic precautions, it will rid the patient of the dangers of septic meningitis, and the surgeon's mind from visions of sharp fragments sticking into the membranes. In any depressed fracture of the cranium one cannot be certain that there are no spicules of the inner table irritating the dura mater; and until this doubt is removed, the surgeon must always be in an anxious state about his patient. Considering, then, the small danger of trephining the skull with antiseptic precautions, the old saying, "When in doubt, operate," would certainly seem the most comfortable to follow.

IT has been decided to establish a Throat and Ear Hospital at Nottingham, and a committee has been appointed to take the necessary steps.

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Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

Injury to Cranium at Birth.—Extra-uterine Fœtation.—Urine Reactions.—Abscess of the Uterus opening through the Umbilicus.

AT a meeting of the Obstetrical Section held on May 6th,

The PRESIDENT (Dr. MACAN) said he had taken the unusual course of bringing a living child, in care of its mother, for exhibition, the child being a remarkable example of the extent to which an infant's cranium might be injured at its birth without its health being seriously affected. It was a second child. The child was delivered by turning. The woman's pelvis was narrow; and it caused a great depression on the child's head, which had become less since its birth, but was still very marked. The child was slightly asphyxiated after birth, but had been since in perfectly good health, and had given the mother no anxiety. In other cases of narrow pelvis in the hospital the children had been delivered without injury to their crania, but had afterwards died, some of them in an inexplicable manner, within a week.

The PRESIDENT also exhibited a rare case of Extra-uterine Fœtation. The woman had a suspension of the menses for three months, and then was suddenly attacked one day with violent pain in the abdomen, and fell down in a state of collapse. She was put to bed, and remained there for five weeks before she was brought to the Rotunda Hospital. When she arrived there she was in great pain. He found a tumour extending up to the umbilicus. She gave a positive history of pregnancy, and on squeezing her breast a considerable quantity of fluid came out. After she had been for some time in the hospital he thought the posterior cul-de-sac more indicative of fluid than it had been, and determined to aspirate. He did so, and the first syringeful of blood that came away was quite black, but the next was so bright that he withdrew the needle at once. Symptoms of increasing collapse ensued, and after nine days she died. Dr. M'Kee made the post-mortem examination. On cutting through the uterus, a large blood clot was found in the posterior cul-de-sac. The fœtus was found in the abdomen. There was also a fibrous tumour. The sac in which the fœtus must have been was recognisable, but the condition of the clot and tumour was such that the place in which the fœtus had developed could not be determined.

Dr. R. H. FLEMING showed the Decidua removed from the cervix of a patient shortly before death, who was suffering from profuse internal hæmorrhage, the result of a ruptured extra-uterine pregnancy, probably tubal.

Dr. ALFRED SMITH exhibited specimens of Urine Reactions. The urine had been taken from a woman who had suffered from puerperal convulsions. Four days before the attack she had great pain in the abdomen with frontal headache, and the convulsions were started with epigastric pain and great depression about the chest, and small and rapid pulse. The reactions were divided into four groups, representing urine drawn off at different times—viz., the first at 6 P.M. on April 30th, shortly after the woman was admitted into the Rotunda Hospital; the second at 2 P.M. on May 1st; the third at 10.30 P.M. on the same day; and the fourth at 6.30 P.M. on May 6th. Specimen *A* of the first group showed a half bulk of albumen; *B* a heavy peptone reaction; and *C* well-marked acetone. Specimen *A* of the second group showed albumen one-half by bulk; *B* heavy peptone reaction; and *B* acetone. Specimen *A* of the third group showed one-eighth of albumen by bulk; in specimen *B* peptone was absent; and in specimen *C* acetone was absent. In the fourth group Specimen *A* showed a tenth of albumen by bulk; in specimen *B* peptone was absent; and in Specimen *C* acetone was absent. The testing of the urine took place after the convulsions. The quantity of it was perfectly normal before she came in.

Dr. J. R. FITZPATRICK related the case of an Abscess of the Uterus, opening through the Umbilicus, in which an abdominal tumour appeared three weeks after delivery, in shape and size corresponding to the uterus at the seventh month of pregnancy. The tumour reached from the pubes to an inch above the umbilicus, became adherent to the abdominal walls, and after four weeks an abscess discharged through the umbilicus. The matter discharged was thick and putty-like, in large quantities, and very fetid for some days. There was not much pain, but very rapid pulse, and varying temperature, running up at night to 103° and 104°. A drainage tube was passed in at the umbilicus, and for several days the abscess cavity was irrigated with a solution of boracic acid, in hot water (1 in 40). The feverish symptoms subsided after some days, the discharge ceased, the tumour diminished in size, and the patient made a good and perfect recovery. A similar case is described by the late Professor Schroeder, in vol. x., p. 99, of "Ziemssen's Cyclopædia of the Practice of Medicine." — Professor BENNETT said that as it devolved on him to have a large part in the active treatment of this case, he desired to make a few observations. The pelvis was flat at the sides, back, and vagina, and was quite free. The only feature that pointed to the uterine character of the affection was the upward elongation of the uterus. The opening was near the summit of the tumour and was extremely small; and, in the absence of precedent, the question was whether, as the symptoms were urgent, it would be wiser to dilate the opening with a knife, or to adopt the slower method of gradual dilatation, as he was apprehensive that there might be adhesions along the point of exit. A remarkable symptom was that whenever the tumour was compressed, the woman felt a desire to urinate. The path of the opening was along the urachus, and, as he felt some delicacy in using the knife there, he adopted the slower course of dilatation. Spots of pyæmia appeared, and he was inclined to lay the tumour open, but did not do so for fear of infecting the abdominal cavity. The abscess originated subsequently to labour, and had a duration of between three and four months. A remarkable feature in connexion with it, which he never saw in any other abscess, was that the contents were reduced to such a condition of solidity that a great force of irrigation had to be employed in order to dislodge them. The whole tumour was full of material which was firmer a great deal than butter. Such rapid degeneration of pus he had never seen in so short a period as between three and four months. The material consisted of nothing but a mixture of detritus of pus and oil. The question of its size was a difficult one to decide. It was not in the uterine cavity, because there never was any discharge whatever of pus from it; and he believed that it must have been situated in the sub-peritoneal tissue of the upper part of the body of the uterus. It was the only example of the kind he had ever seen. At one period of the case he thought that there was a suppurating ovarian cyst which had become adherent; and he also thought that it might be a case of extra-uterine fœtation, and that they would come on the débris of the fœtus. Whether he was right or wrong in the course he took of slow dilatation, the result of the case had been successful. The rapid restoration to health of the woman, the moment the contents of the abscess were entirely cleared away, showed that the case was neither one of an ovarian tumour which had suppurated nor one of extra-uterine fœtation in which the fœtus had decomposed. The only difficulty was the removal of the putty-like material which the abscess contained. As he had said, he feared to make a free opening in the abdomen, not knowing the limitations of the canal through which the pointing took place, and, as irrigation was adopted, it was necessary to employ a free stream, and the only question was what antiseptic should be used. They could not use three or four pints of mercuric, iodoform, or carbolic solution; the only antiseptic that could be employed in the necessary quantity was boracic acid, and that solution proved most efficient.

Lumbo- and Laparo-colotomy.

At a meeting of the Surgical Section, held on May 20th,

Mr. THOMSON read a record of two cases of Colotomy. In the first, which the patient survived twenty-one months, a tube about the size of small intestine was found in the position of the colon, and between that viscus and the kidney. He was assisted by the late Professor M'Dowel and Professor Thornley Stoker, neither of whom could recognise it. The latter thought it might be an enlarged ureter, but on puncturing it with an angular needle two or three times nothing escaped. The tube was left *in situ* and the colon was opened. The patient made a good recovery. In a drawing of a frozen transverse section he showed how, if the colon had a long mesentery and was distended by flatus, it could extend forwards past the jejunum, lying on

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its outer side, and, overlapping that portion of the intestine, appear second in order from the quadratus lumborum, and not first. In the second case, fæces did not appear for seventeen days. The patient was aged seventy-one, and, although the wound was entirely healed, he died on the twenty-third day after operation. Both operations were done for cancer of the rectum.

Dr. BALL read a paper on Colotomy, illustrated by five cases, in three of which the lumbar operation was selected, while in two laparo-colotomy was performed. He advocated the adoption of the latter operation in the adult as well as the child.—Mr. TOBIN, while confident of a consensus of opinion in favour of early operation, was equally sure that the cry could be carried too far, and that there were "too soon" operations as well as "too late." When there was malignant stricture of the rectum, inflammation might be remedied by palliative treatment, and when it subsided the bowel would carry on its work. He had had a case in point—one of stricture of the rectum—that almost occluded the bowels. Having tried palliative treatment and given enemata, he found the bowel could carry on its work fairly well. He taught the patient to use Higginson's syringe. Subsequently the patient was admitted into the Hospital for Incurables, yet in a condition to go to a garden party when he had the opportunity. Therefore that a surgeon could not operate too early was not to be taken as a rule.—Dr. CHANCE observed that his colleague, Dr. Coppinger, in order to identify the intestine, passes through the stricture a very small catheter, and then a stilette through it.

Reviews and Notices of Books.

A Practical Treatise on Diseases of the Eye. By Dr. EDOUARD MEYER, Prof. à l'Ecole Pratique de Médecine de Paris, &c. Translated by FREELAND FERGUS, M.B., Ophthalmic Surgeon to the Glasgow Royal Infirmary. London: Charles Griffin and Co. 1887.

CONSIDERABLE courage is now demanded of anyone who will undertake to write single-handed a complete treatise on the diseases of the eye. In Germany, the vast collection of independent treatises which have been collected by v. Graefe and Saemisch in the "Handbuch" supply evidence of the wide extent of the ophthalmological knowledge of the present day, and of the depth to which it has been carried by many earnest workers. In France, both De Wecker and Galezowski, though masters of the craft, have found it expedient to avail themselves, in the compilation of their larger treatises, of the services of younger men; whilst Sichel appears to have been unable to get beyond his first volume. The work before us, which has been excellently translated by Dr. Freeland Fergus of Glasgow, is not quite a new work, but it is greatly enlarged as compared with former editions, and has been almost rewritten. It has certainly been well brought up to the knowledge of the present day, and may be regarded as in all respects a very trustworthy guide for the practitioner, who, whilst possessing a fair knowledge of eye diseases, is yet unable to avail himself of the services of an ophthalmic surgeon. The volume has been very well got up by Messrs. Griffin, and the type, woodcuts, and chromolithographs are alike excellent.

The mode in which Professor Meyer deals with each subject is thoroughly practical; a short anatomical introduction precedes the description of each part of the organ, as of the cornea, iris, and retina, but no attempt is made to treat these subjects exhaustively. They are only described so far as may be requisite to render the nature of the pathological processes intelligible.

We venture to notice a few subjects which have attracted our attention in looking through the work. In speaking of the treatment of purulent conjunctivitis, Professor Meyer recommends cold compresses in the early stages, with scarification of the mucous membrane and division of the external canthus, and thinks that astringents and caustics should be avoided. We do not think that scarification is often practised in England, nor is the external canthus frequently, though it may be occasionally, divided. With us the sac of the conjunctiva is generally sedulously washed out with boracic acid or some other antiseptic; and lead lotion, which is here recommended, is rarely employed, lest a white deposit should occur on the cornea. Professor Meyer is opposed to the abortive method in the earliest stages, but when the purulent nature of this disease is clear, caustics in the form of a strong solution of lapis divinus, acetate of lead, or silver nitrate may be employed, the latter being used preferably in the form of mitigated nitrate. This method has not in our hands proved very satisfactory, and we are inclined to rely a little more on general treatment, such as quinine and iron.

Of Sympathetic Ophthalmia, with the symptoms of which every practitioner should be familiar on account of the serious issues in which it may terminate, Dr. Meyer recognises four forms: sympathetic irido-choroiditis, which very frequently ends in complete blindness; sympathetic serous iritis, which is much less dangerous; sympathetic chorio-retinitis, which has hitherto only been observed by v. Graefe; and sympathetic neurosis, which is characterised by the absence of any material change in the structure of the eye. Dr. Meyer points out that the means of transmission of the irritation may be along the ciliary nerves, along the optic nerve, and along the vessels; whilst the presence of micrococci in the intra-vaginal space after the injection of microbes proves that sympathetic ophthalmia may be of an infectious nature. In regard to treatment, he recommends the removal of the injured eyeball as the only certain means of preventing the development of sympathetic ophthalmia; other proceedings being section of the anterior ciliary nerves behind the point of tenderness, or section of all the ciliary nerves behind the globe, either with or without section of the optic nerve. We think the author might have expanded this chapter with great advantage. Imagine a case occurring to a country practitioner in which a child has received a cut with a knife in the ciliary region. What shall he do? If he refers to the work before us, he obtains little information. The excision of the eye seems to be the only course open to him, if he wishes to place the child in absolute security; but the child may see very well, and parents or friends may object to such extreme measures, and we think with justice. The nature of the wound is of some consequence in determining the question. A stab with a fork, as in attempting to open the knot of a bootlace, is much more dangerous than a cut with a piece of glass. The temperament of the child is an element in the prognosis. Enucleation should be practised on an irritable child, whilst it might safely be postponed in one of placid disposition. Nothing is said of the propriety of pad and bandage applied to *both* eyes, and perfect rest in the dark for a week or ten days, by which means dangerous consequences may often be averted, and so on. The question of the removal of an eye is a very serious one, and the surgeon is not unfrequently placed in a dilemma. If he leaves it alone and sympathetic ophthalmia supervene, he is blamed for the result and for his non-interference; if he removes the eye immediately, he is blamed for acting precipitately, and for being only too anxious to operate.

We have noticed a few slips which, in view of a second edition to which the work will assuredly run, may prove of service to the translator. Page 57, line 15, "chymotic" should be "chemotic"; page 189, "Streatfield" should be "Streatfeild"; page 22, "The disease has till now been rarely observed," should be "The disease up to the present time"; page 237, "Fentana" should be "Fontana"; page 320, line 15, after "sooner" the words "or later" require to be inserted; page 391, line 18, instead of "a lens made of a convex sphere," read "a convex lens made from a sphere"; page 401, line 8 from bottom, for "preserves" read "preservers"; page 402, line 16, "Prismatic glasses are also used in *ophthalmology*," should be "in ophthalmic surgery" or "in ocular therapeutics"; looking to the derivation of the term, they can hardly be said to be used in "ophthalmology." Some proceedings are described rather fully that have fallen into entire disuse and are not likely to be again practised.

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A very high tribute of praise must be given to Dr. Freeland Fergus for the general character of the translation, which is extremely readable and at the same time very accurate. The work may, as a whole, be regarded as a faithful epitome of the present state of ophthalmological science, and may be fully relied upon as an index of treatment for ordinary affections of the eye.

The Climatic Treatment of Consumption. By JAMES ALEX. LINDSAY, M.A., M.D. London: Macmillan and Co. 1887.

THIS book is one which is not only eminently readable and suggestive, but clear and concise, and is evidently the outcome of an extended personal experience. The writer, who has visited most of the health resorts of the world, is enabled to bring to bear upon his subject information which, coming first hand, is of the highest value, whilst he has evidently studied the question of medical climatology with great care. The chapter devoted to the mountain sanatoria has in great part appeared in our columns, when it attracted attention from the manifest grasp that the writer had of the facts for and against these now highly fashionable resorts. Dr. Lindsay displays the same judgment and discretion in dealing with ocean travel, whilst the chapter on Australia abounds in facts that will be gladly welcomed in this country. He distinguishes between the characters of the littoral region, the highland region, and the region of the inland plains, the last named alone being the most suitable for invalids—to those, at any rate who can adapt themselves to the mode of life; but he proves clearly that in the large towns on the littoral, especially if the patient continue the sedentary vocations of his home life, the benefit he will derive may be *nil*. Very significant are the details of mortality from consumption in Melbourne and rural Victoria in this respect. In the city it amounts to 2·5 per 1000; in the country to only 0·87 per 1000; so that the rate at Melbourne is as high as in rural England, and not much below that of London (3·2 per 1000). The climatological characters of Tasmania (where the Australian invalids resort in summer to escape the hot winds of that season) are next described. This island is "one of the most picturesque little spots in the world," contrasting strikingly with "its great and prosperous, but uncomely neighbour." The northern and eastern coasts seem to be the most equable. The death-rate of the island is about 15 per 1000, whilst the mortality from consumption is but little over one-third of the British rate, and the quietude of the place renders it peculiarly suitable for invalids; but as its climate is more damp than Australia, and changes of temperature are frequent, it is not considered suitable for the permanent residence of the consumptive. In New Zealand, where there is great prevalence of wind, and a very considerable rainfall, the death-rate from consumption is rising steadily, and it is not to be preferred as a residence for the consumptive to the Riverina of New South Wales, or the Darling Downs of Queensland. Dr. Lindsay wisely points out the undesirability of this remarkable country for the invalid, however attractive for the tourist. A short chapter on Southern California serves to indicate the dryness and warmth, with absence of wind, which point to its utilisation as a health resort, although it is not much developed. The Cape, objectionable on the coasts from the prevalence of winds, is barred to the delicate invalid from the discomfort of travel and accommodation in the interior, where the climate is most suitable. Algeria is described as the favourite among the new health resorts for the consumptive, but the author speaks with hesitation, from the existence of such drawbacks as an imperfect water supply and the presence of much dust. He considers, however, that the idea that Hamman R'Ihra is unsuitable for a winter residence is overrated. But little, in fact too little, space is allotted to the description of the health resorts of Southern France and of the home country, and it would be well if in a future edition the author were to expand these subjects. It would add greatly to the utility of the book. Some mention should also be made of Madeira and Oratava, and of Egypt. Of especial value is the chapter upon the choice of a climate for the consumptive; for we may fairly say that no question is more difficult for the physician to decide, or one which entails so much responsibility. As an aid towards enabling him to arrive at a right decision this book is sure to prove of service, and we have little doubt that it will be widely read and appreciated. The subject is one, too, which engages the attention of patients as well as doctors; and it is highly important that it should be discussed without prejudice and in a scientific spirit. Dr. Lindsay has certainly succeeded in fulfilling these requirements, and we may be contented to have drawn attention to a work which will do much towards placing on a sounder basis the appreciation of the relative merits of health resorts.

Scheme of Case Reporting. Arranged by W. H. ALLCHIN, M.B., F.R.C.P. London: H. K. Lewis. 1887.

Notes on the Physical Diagnosis of Lung Diseases. By J. MAGEE FINNY, M.D. London: H. K. Lewis. Dublin: Fannin and Co. 1887.

DR. ALLCHIN'S scheme has at least one distinctive merit. It is by far more detailed than any similar work with which we are acquainted. To some this may seem to be a questionable advantage, as tending to confuse the student in his bedside examination; but Dr. Allchin has anticipated such criticism, and we are inclined to agree with him that nothing ought to stand in the way of obtaining a complete clinical record of a case. A few cases worked out thoroughly upon the lines laid down in the Scheme would be a most useful educational exercise. It is, however, as a complete guide or reference that the Scheme will probably be most utilised by house-physicians and clinical clerks; and it is produced at a price which will bring it within the reach of all. We have carefully gone through its pages, and can safely say that there is not a point in the clinical history and examination of a medical case that has been omitted.

Dr. Magee Finny's little book, based upon the instruction given in his class, simply aims at recording the methods of physical examination of the chest and the nomenclature of physical signs, with their significance. The author's reputation is sufficient proof of its accuracy, and its size is conveniently portable.

Dermatitis Venenata: an Account of the Action of External Irritants upon the Skin. By JAMES C. WHITE, M.D., Professor of Dermatology, Harvard University; Physician to the Out-patient Department for Skin Diseases, Massachusetts General Hospital. Boston: Cupples and Hard. 1887.

THE title "Dermatitis Venenata" is applied to those forms of inflammation of the skin which are produced by the direct action of irritating agencies externally applied, and in this treatise Professor White has collected much reliable information on the subject, which has not been hitherto accessible to the practitioner in a convenient form. The bulk of the work is taken up by a consideration of the action of plants on the skin; then follows an account of other irritants, organic and inorganic; and lastly, the author treats briefly of animal irritants. The nature of these irritating agents, and the conditions under which they come in contact with the skin, are most varied. They excite inflammatory processes of all degrees of intensity, characterised by certain primary efflorescences, such as the hyperæmic macule, a wheal, a papule, vesicle, bulla, or pustule, and by such secondary lesions as scaling, excoriation, scabbing, ulceration, scars, and pigmentation, and these lesions are indistinguishable from such inflammatory lesions as eczema, erythema, and urticaria excited by internal agencies.

The botanical tastes of Professor White have made this work an agreeable labour, and it is throughout written in a scholarly manner. The treatise will be useful, and we cordially recommend it to the profession.

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THE LANCET.

LONDON: SATURDAY, JULY 30, 1887.

THE consideration of the Estimates in the House of Commons on the 22nd inst. gave opportunity for objections to be raised to that part of the vote which related to vaccination administration in England and Wales. Usually the opposition is limited to the few anti-vaccinationists who become members of Parliament, but their number was on the present occasion strengthened by the Irish members, who, following Mr. ARTHUR O'CONNOR, objected to this item, on the ground that it was a special and exceptional allowance limited to England and Wales alone. Mr. O'CONNOR was supported by Dr. GAVIN BROWN CLARK, who gave as the ground of his opposition that Scotch medical men did not receive any portion of this grant for vaccination. Mr. RITCHIE, however, explained that the Act of 1867, under which awards to public vaccinators are made, was limited in its application to England, and that if its provisions had extended to Scotland, that part of the kingdom would receive a share of less than £100. In regard to Ireland, he observed that the vaccinating officer was also the dispensary officer, who was partly paid from Imperial funds, and that altogether Ireland was at no disadvantage. The combination of members who for these various reasons opposed the vote numbered only sixty-six.

The arguments raised against the operation of vaccination were of the same sort as those to which the House has each year to listen when the subject comes under discussion, the same stock statements were made as to the injuries which follow from the enforcement of the Vaccination Acts. As an illustration of the reasons given for Parliamentary inquiry into the working of the Acts may be mentioned the statement of Dr. CLARK that he had himself "vaccinated from children suffering from syphilis; he could not help it, because he did not know the antecedents of the child from whom the lymph was taken."

Mr. RITCHIE, in an able reply, expressed his doubt as to whether the opposition to compulsory vaccination was really increasing; but if it were, he said, he should not feel in the least astonished, because the gross misrepresentations by anti-vaccinationists as to the effect of vaccination, which were constantly placed before the people, and especially the working classes, in our large towns, could fully account for any growth of opposition to the law. He pointed out the great saving of life that had been effected by vaccination, and claimed for the Local Government Board that every case of alleged injury was investigated and the facts concerning it fully stated. The Board, indeed, deserve much credit for the full accounts of the working of the Vaccination Acts that are given each year in the reports of their medical officer, and which show that only some 5 per cent. of children in this country escape the operation of the Acts. It is true that in some few localities the proportion of children who are left unprotected against small-pox is much greater than this; but these places are essentially those in which the inhabitants are deceived by the misrepresentations referred to by Mr. RITCHIE, and it may safely be asserted that for the rest of the kingdom no widespread opposition to vaccination exists.

The proposal of Dr. CAMERON, that the use of calf lymph should be more largely extended, is a point upon which we have frequently expressed our views. The work of the Animal Vaccine Establishment has certainly shown that excellent results attend the direct vaccination of children at that institution. If calf lymph, however, were to replace humanised lymph throughout the whole country, it would necessitate the use of stored lymph, and the more certain arm-to-arm vaccination would have to give way to vaccination having a less assured success. No sufficient reason has ever been shown for thus changing a system which has practically banished small-pox from many parts of the country, and has greatly reduced its prevalence in others; nor do we believe that the opposition to vaccination which is now carried on by a few misled enthusiasts would be overcome by any such alteration of method as that which Dr. CAMERON proposes. The silence which the anti-vaccinationists have hitherto observed with regard to the use of animal lymph would at once be broken if the current vaccination of the country required its universal employment.

The supporters of vaccination have no grounds for fearing the result of any inquiry as to the value of the operation which might be instituted, but it has to be remembered that the mere fact of such an inquiry being held would itself be regarded by the ignorant as casting doubt upon the efficacy of this means of preventing small-pox, and would afford direct encouragement to the opponents of vaccination to persevere in efforts which have already in certain places been attended by an unfortunate success. It is possible for the Vaccination Acts to fall into abeyance in Leicester and some other towns without immediate calamity following from this negligence, but as the populations gradually revert to a state of susceptibility to small-pox, it is certain that in the future a terrible mortality will result, and the mouths of anti-vaccinationists will be for a time silenced. It is lamentable that such experience is needed for those communities which persistently refuse to learn the lessons taught by the past.

AT the present time, when corrosive sublimate has established its claim to the title of being the most powerful and the most efficacious of all known antiseptics, and has therefore passed into general use, but has, on the other hand, caused many untoward accidents, the experimental work of DOLÉRIS and BUTTE[1] is opportune and valuable. These observers, desiring to elucidate the causes of mercurialism, especially in obstetric medicine, compared the effects of vaginal and other injections in animals (dogs, rabbits, and guinea-pigs) when the mucous membrane was (*a*) intact, (*b*) wounded. The strength of the sublimate solution was 1 in 1000.

(*a*) Experiments when the mucous membrane was intact gave the following results. In dogs, the first vaginal injection of one litre of the solution was generally followed

[1] Nouvelles Arch. d'Obstétrique et de Gynécologie, No. 12, Dec. 25th, 1886, p. 739.

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the next night by simple yellowish or by blood-stained diarrhœa, and often by the vomiting of food. This affection was, however, transient, and lasted only a few hours, the animals rapidly recovering on the second day. The temperature was not affected. However long the injections were continued, to the amount of two or three litres daily, no further effect was produced. This acquired immunity seemed to be due to alteration in the vaginal mucous membrane, which was noticed to become dry, hard, and thickened, and presumably non-absorbent.

(*b*) As regards sublimate injections after injuries to the mucous membrane, the results varied with the nature of the wounds. If these were slight, the effects might amount to slight diarrhœa, but generally there were no results at all. To produce fatal results it was necessary to produce extensive and saccular wounds, allowing the fluid to stagnate, or to continue the injection for a long time. These experiments were made on rabbits, guinea-pigs, and dogs.

The rodents seemed very easily poisoned by the sublimate; in some cases death occurred within twenty-four hours, and no marked pathological lesions could be observed. In most cases death occurred at between two and three and a half days (forty-eight to eighty-four hours), and with marked changes in the large intestine and kidneys. The temperature gradually sank and became subnormal (33° C.), and the animals became rapidly weaker and unable to stand. The urine appeared to be diminished; it became slightly albuminous after the second day; it reduced the cupro-potassic test, forming a dark yellow liquid, but not the precipitate characteristic of sugar. This reaction may have given rise to the assertion of diabetes as a result of mercurialism, and a similar reaction is recorded by one of the authors in a patient under mercurial treatment.

The post-mortem appearances are practically as follows. The cæcum and colon show submucous hæmorrhages with sloughs of the mucous membrane in places. The kidneys are somewhat enlarged, and in a condition of acute parenchymatous nephritis; their surface is pale, and shows some white dots. On section the cortex is pale and almost entirely composed of yellowish-white streaks, which are straight tubules full of calcareous deposits, which, when treated with sulphuric acid, show crystals of sulphate of calcium. The medulla is congested, the pyramids are reddened, and contrast markedly with the pale cortex.

Dogs seem less sensitive than rodents to sublimate intoxication. Sometimes they do not die at all, sometimes after four or five days. The temperature does not sink till towards the fatal termination. Diarrhœa, with tenesmus and blood-stained stools and vomiting, always begins the night after the sublimate injection, and continues throughout. The first few days dogs do not seem very ill, but towards the end they lose flesh and strength, remain recumbent, and fall on trying to rise. In one case death was preceded by convulsions, with subnormal temperature. Perhaps the convulsions were uræmic. The urine is always albuminous, and gives a yellow colour with the cupro-potassic test. There is no change in the hæmoglobin of the blood, its power of absorbing oxygen not being diminished. Death follows in from four to twelve days, and, as in rodents, the earlier the more sublimate is used. The causes of death appear to be principally the renal changes; the quantity of urea in the blood increases considerably in the last days of life. As a rule there is no salivation. In cases rapidly fatal the liver and pancreas are sometimes congested; this congestion is not observed when death ensues slowly. The other appearances are the same as in rodents, with the following differences: no ulceration of the bowels is found, and no calcareous deposits in the renal tubules, which are filled with renal epithelium in a state of fatty degeneration.

The practical conclusions point to the caution necessary to be observed in the use of sublimate after delivery, on account of the surgical injuries present. The temperature is oftener raised in women than in animals, probably on account of the greater intensity of intestinal lesions, and the peculiarity of the placental site in women favouring sepsis. Rise of temperature is, therefore, at best, only an indirect sign of mercurialism, while depression of temperature, especially if gradual, points directly to it. The daily examination of the urine will show early albuminuria and the yellow colouration above mentioned; that of the blood will show the accumulation of urea. The presence of mercurialism does not prevent septicæmia. These experiments, which of course require confirmation from clinical observations on women, are meanwhile of great importance.

THE inadequacy of medical incomes is not a pleasant subject, but it is not one which can properly be ignored; on every ground it is one that should be explored and demonstrated. The duties of the medical profession are not such as can be adequately discharged by men whose living is precarious or whose remuneration is mean. This is not an original remark, but was made more than a hundred years ago by so sound a writer as Dr. ADAM SMITH. One or two of his sentences are worth reproducing:—

"We trust our health to the physician; our fortune, and sometimes our life and reputation, to the lawyer and attorney. Such confidence could not safely be reposed in people of a very mean or low condition. Their reward must be such, therefore, as may give them that rank in society which so important a trust requires. The long time and the great expense which must be laid out in their education, when combined with this circumstance, necessarily enhance still further the price of their labour."

It may be said that SMITH had in view exclusively the case of highly cultivated physicians who moved and practised among the rich; but this is not so. He applied the same principle *mutatis mutandis* to the general practitioner, or, to use the language of his day, the apothecary.

"The skill of an apothecary is a much nicer and more delicate matter than that of any artificer whatever, and the trust which is reposed in him is of much greater importance. He is the physician of the poor in all cases, and of the rich when the distress or danger is not very great. His reward, therefore, ought to be suitable to his skill and his trust."

We cannot give space for the whole interesting paragraph, in which this great authority shows that the apparently large profits on mere drugs are really a reasonable reward for labour and skill.

There is too much reason to think that these elementary principles are forgotten by many, not of the poorer classes alone, who would reduce medical remuneration to a degrading pittance, that neither recognises actual outlay nor

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sustains the dignity of a liberal profession. Let us take the case of an accoucheur. Are we to rate his value at the cost of the timely dose of ergot which he administers? Such a question has only to be stated to carry its own refutation. Clearly the remuneration of his services should be such as to cover the outlay on his past education, and to stimulate him and enable him to regard his life as a continuous piece of high educational work, and his profession as the most responsible which a human being can undertake—more responsible and important in the case of him who practises among the poor than of him who attends the rich, for the simple reason that the rich can multiply their advisers, whereas the poor have to be content with one or with few.

On the delicate question as to whether medical incomes are improving or becoming worse we shall not say much. The letters of Dr. THURSTAN on that subject are not easily to be disproved, in which he reduces the average income of medical men in actual family practice, after deducting working expenses, interest on money spent on education, &c., to little more than £350 a year. The inadequacy of this income is further shown by the scanty savings of medical men, and the slight reserves for a "rainy day" which they are enabled to put by. It is impossible that medical men should not suffer in common with others in a time of general depression, such as we are passing through. But Dr. THURSTAN'S complaint goes much further than this, and implies a want of public recognition of the value of medical services. He blames errors of administration in public medical charities, which tend to break down the sense of honest independence among the farmers, tradesmen, and working people, and which infect these classes with a low sense of the value of medical services. "A Hospital Surgeon" in a very able letter in our columns, in reply to Dr. THURSTAN, vindicated young consultants, and described graphically the anxious years of strained hope and patience which they had to pass through before attaining to assured comfort, to say nothing of independence. "An Old Oxonian" did not seriously question Dr. THURSTAN'S facts. He properly complains that old and eminent men should be tenacious of humble appointments, instancing a hospital surgeon who to near his death held many clubs. He admitted that from his neighbourhood several rich people, *far better off than local doctors*, had gone as in-patients to London hospitals. It is, as he indicated, a grievous evil when eminent hospital surgeons admit patients to be treated by them as gratuitous patients who cannot pay their fees, but who can easily pay the fees of highly capable men who have not yet attained that degree of fame which implies the power to command large fees. If young consultants were thus considered a little more by their seniors, they would find an earlier reward of their ardour and study, and would be less open to the temptation to compete with general practitioners. By this as it may, it is a monstrous thing that well-to-do people should be treated gratuitously in hospitals simply because they cannot pay the very highest fees of operating surgeons. After all, the maintenance of a proper standard of fees and of the dignity of the profession rests chiefly with members of the profession itself, rather than with its corporations or the Medical Council. The power of the latter in this regard, is extremely limited. The Corporations have still ethical powers which they do not sufficiently use, and which they should be pressed to employ more frequently when their members forget the obligations of a learned and liberal profession. But, after all, it is to individual members of the profession that we must look—to the older members for a little more consideration for the younger, and to the younger for more regard to the traditions of professional honour and for maintaining the traditional fees, *plus* something that will represent the larger wealth of the public and the larger wants of medical men. Competition is inevitable. With six or seven hundred more entering the profession yearly than are needed to fill natural vacancies, there must be competition. But let it be the competition of those whose wants are modest, and who see in true professional ways the only sure path to lasting success and credit. Even in competition for appointments in which the poor are concerned, nothing is more important than to hold high the value of medical services. The working classes need instruction on this point. It is of more moment to them than to their richer neighbours to have one good medical man, and to retain him by generous treatment.

THE subject of the holidays occupies the minds of a large portion of the inhabitants of this country at present. Boys and girls are looking forward to a delightful cessation from work; more or less anxious parents are forming plans for the amusement and gratification of their children. The cry of "What shall we do with them in the holidays?" is not heard so constantly in the summer as in the winter, since if the weather is at all propitious amusements are comparatively easily obtained, and the young people return to school looking as well as or better than when they left it. Not so, unhappily, in the Christmas vacation, when parties, sight-seeing, and sometimes want of exercise, send them back to school decidedly the worse for their holiday. Crowds of school-boys and school-girls will be congregating at the sea-side during the ensuing months. The question naturally arises how best to employ this time to the benefit not only of their bodies, but also of their minds. The fashion of mixing up lessons and holidays is an undesirable one. Let our children work while they work and play while they play; only it is sometimes necessary to teach them how to play. Of course allusion is not made here to cricket, tennis boating or fishing; but many a boy even with these amusements will give utterance to the complaint some part of the day, "There's nothing to do." A listless mind is good neither morally nor physically, and a remedy for it might be found to lie in cultivating the habit of observation. The seaside would present a far wider field of amusement if parents would endeavour to interest their children in the natural objects round them. Of course this presupposes a degree of intelligence not always found, and even where it is present the habit of indolence too often intervenes. It is a common belief that the mere fact of holidays ought to be all-sufficing to the rising generation, but the active minds and bodies of our boys and girls require constant occupation, and also a change of occupation. In cultivating the love of natural objects, the knowledge of the habits of birds, fishes, butterflies, either at the seaside or in the country, a great stride is made towards dissipating the ennui which sooner or later may attack the young holiday makers. It seems strange that our seaside towns are not more alive to this fact, and

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that, except in rare cases, no attempt is made by the local authorities to exhibit the manner of life and the habits of fishes and other occupants of the sea. Why should there not be in every such town an institution with an aquarium and a good collection of butterflies, flowers, and other natural objects to be found in the neighbourhood? Our boys would often enter with pleasure into a search if they only knew what to look for. The very pebbles of the beach might be made to furnish amusement if the different kinds were exhibited and catalogued in their rough and in their polished state, especially if facilities for cheap cutting were afforded. Few things are of greater value in many professions than a keen observant faculty, and in most cases it is the result of careful training on the part of parents and schoolmasters, or at a later period of the individual himself. Take, for instance, the medical profession: how much success many a man owes to his keen powers of observation, which materially aid him in diagnosis and treatment. If our boys were taught to use their eyes in connexion with common natural objects, the probable result would be an extended power in other departments. Even more marked benefit is to be looked for in the summer holidays for our girls than for our boys. Boys have their games all the year round at school, but the less fortunate school-girl is restricted to the holidays for the full and complete enjoyment of the use of her limbs. She may, it is true, be able to play tennis during the warmer months, but even then it is by no means the serious business which cricket and football are to a boy. The holidays are necessary for the physical development of our girls. Let them bathe, swim, row, run, and even play cricket as much as possible, without incurring the odium of being "unladylike" or "hoydenish." Young girls and growing girls would make better and healthier women if the holiday time were to them a season of complete open air life, with a sufficiency of active but not too arduous physical exercise.

Annotations.

"Ne quid nimis."

A NEW TEACHING UNIVERSITY FOR LONDON.

THE terms of the draft Charter for a new University, to be named the Albert University of London, and designed to include a district of fifteen miles' radius from Somerset House, have been agreed upon and adopted by the Councils of University and King's Colleges, and will accordingly be submitted to the Privy Council in a few days. The Charter is in its essential features similar to that of the Victoria University.

THE HOSPITAL SUNDAY FUND.

THE Report of the Distribution Committee, adopted on Monday by the Council of the Hospital Sunday Fund for the current year, shows that the total amount available for distribution, after allowing sufficiently for liabilities and the usual current expenses, is £39,125. It will be remembered that the result of the collection last year was a total of £40,300. Of course we could have wished that this Jubilee year had had, in addition to all its glories, the distinction of a huge hospital collection that would reduce, if not extinguish, all the adverse balances of our hospital finances. And that may still be the case. We may not yet have seen the full development of Jubilee liberality. Meanwhile the Hospital Sunday collection of the present year approaches within a few hundred pounds that of last year—the largest result which had been realised since the establishment of the Fund. As far as the collection is concerned, the Jubilee evidently cut two ways. It multiplied the demands made on public generosity in a great variety of directions, and by so much created schemes which competed with the Hospital Sunday collection. But the Council has no reason to complain; it receives a sum second in amount only to that collected last year; it conciliates and combines all classes and all creeds, and, as was well said, it enjoys the unique distinction among benevolent Societies of being allowed to have its headquarters at the Mansion House, and the hearty and potent assistance of every Lord Mayor in succession. Sir Reginald Hanson has been a most ardent and valuable friend of the Fund, and is evidently ready to serve it further in the future, if elected, as he no doubt will be, to serve on the Council.

THE INTERNATIONAL CONGRESS OF HYGIENE.

EVERY State, European and Transatlantic, will be represented at this great hygienic gathering. The Organising Committee have already enrolled the names of 960 members and the "four figures" will be reached, it is confidently expected, before their books are closed. Local committees have been at work in every province of the Austro-Hungarian Empire, and Prague, Salzburg, Laibach, Czernowitz and Lemberg, with Wiener-Neustadt and Kakonitz, have each contributed to the effective force of the Congress. The Medical Faculty of Vienna, with the various professional societies of the capital, are unwearied in their exertions for the convenience and entertainment of their coming guests, all working together with the determination to make the meeting not only more numerous but also more successful than its predecessors. We announced last week that, to the great regret of the central bureau, the Ministerialrath, Dr. Franz Ritter von Schneider, had resigned his post of president, and that Professor Ludwig, Dean of the Faculty of Medicine, had been unanimously elected in his room. Failing health was Dr. von Schneider's reason for declining the laborious duty; but the committee have succeeded in so far inducing him to accept office that he will take part in the proceedings as honorary president. A highly distinguished name will thus be secured for the official staff, and it is possible that the discussions may not altogether be deprived of the presence and participation of certainly one of the most accomplished of contemporary hygienists. As we write, we learn that subtropical hygiene will be represented at the Congress by Dr. Pedro à Pardo, the delegate of the Argentine Republic. Dr. Pardo, for many years the head of the health department in the Buenos Ayres Government, and dean of the Medical Faculty in its university, brings with him high credentials for the effective discharge of his mission.

TYPHOID INFECTION IN MILK.

IN a paper on Typhoid Infection in Milk, Dr. Ali Cohen gives an account of an epidemic in Groningen from Nov. 1884, to March, 1885. The infection was traced to a dairy in the suburbs where two persons had suffered in October from continued fever followed by hypostatic pneumonia. Two others were attacked by undoubted typhoid fever, and died in consequence. At one corner of the dairy there was a manure heap, at another a pump, and close by a watercloset. This latter was used for the patients' dejects. The milk of course was sold in the town, and the water from the pump was used for cleaning the cans and all necessary uses of the dairy. All the cases of typhoid in the

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town were those of people who bought milk from the dairy. Inmates of houses in which cases of infection occurred who dealt elsewhere escaped. In two cases the disease was induced by water drunk from the pump. A house close to the dairy possessed a pump which gave foul water. Two of the inhabitants, therefore, drank the clearer water of the dairy pump and were attacked, while two others who drank the foul water escaped infection. Forty-six cases of typhoid in the town could be indistinctly traced to the dairy, since no one who purchased milk elsewhere was attacked. Even boiling the milk appears to have been unavailing, as fourteen people who drank boiled milk suffered, and three who took it only in coffee. That the disease was due to the milk is evidenced by the fact that people in different parts of the town under totally different hygienic and social conditions suffered, the only bond of connexion being the milk purchased from the dairy. Dr. Ali Cohen remarks that this is a very weighty point, since in other epidemics of "typhus" due to drinking water most of the patients lived in the same place and under the same hygienic, or rather unhygienic, conditions.

SCIENCE AND RELIGION.

EVERY candid man, whatever his convictions, must sympathise with the purpose of the Victoria Institute, whose primary aim has been to promote the examination and, if possible, the reconciliation of apparently opposite scientific and religious views on questions of common interest. The address delivered by Professor Stokes last Tuesday week in the institute was distinguished by a fairness of argument which was characteristic of this purpose. As he pertinently observed, it is necessary first of all, in order to arrive at a just conclusion from such discussions, that there should be a disposition to follow the guidance of truth wherever it may lead. The effort to do this does not imply merely that supple versatility of intellect which goes with the habit of lightly turning over prevalent opinions without any serious attempt at mental penetration. What it does imply is a resolute and patient sincerity in dealing with facts and opinions from whichever side of the discussion they may come, while admitting for all concerned the possibility of misunderstanding. If arguments of this kind were more often conducted in a dispassionate spirit, we should hear less of the antagonism between science and religion. We will confess that we have no belief in the reality of this supposed antagonism. The conflict, when it arises, is rather between the votaries of one creed or the other than between the creeds themselves. Nor is it found that the best minds engaged on either side are the most bitter partisans. It is not usually the laborious investigator of scientific problems who concerns himself with the disparaging statements of revelation. It is not the man whose chief desire is to model his belief, his daily thought and action, according to the plan of an inspired Scripture who cavils at the honest doubts of the scientific reasoner. In both of these types there is not wanting the charitable fellow feeling which comes of personal sincerity and seeks to promote agreement wherever that is compatible with a conscientious exercise of judgment. Contentions arise much more commonly from the impatience of half-instructed disputants. The unwise immoderation of persons of this class has done much to obscure the harmony naturally existing between the truths of science and those of revelation, a harmony which has been repeatedly denied but never disproved, and which is to-day more widely admitted than perhaps at any former time in the history of this controversy. The address above mentioned was itself a model of reasonableness, and in this respect may serve as a pattern for any who may hereafter discuss from either standpoint the subjects with which it dealt.

THE SANITARY CONDITION OF MARGATE.

MARGATE and its sanitary condition continue to engage public attention, and the Town Council have published a report by Professor Corfield on the mortality returns of the borough during the six months ended June 30th of the present year. The report shows "that the borough has been during the past half-year remarkably free from zymotic disease of any kind"; but no one is content with this fact, if Margate retains conditions which are liable at any moment to be a source of danger to the inhabitants and visitors. A clergyman who visited the town with his children last year writes to the papers that six of his family were ill with diarrhœa within a week, and one lingered on to die on their return home. This death would not affect the Margate rate of mortality; but who can say how many more cases of this kind there may be? Families visiting the seaside for the benefit of their health do not desire to inhale the exhalations from hundreds of cesspools, however much these may be diluted by the sea breezes. Last year showed Margate to be the seat of a considerable prevalence of typhoid fever, and the town still has about it all the conditions to foster this disease. It would be a misfortune if the public mind were quieted before the Town Council have recognised the necessity of performing the most elementary duties of a sanitary authority—viz., the provision of a safe water supply and of a proper system of excrement disposal. As a mere matter of pecuniary investment, the necessary outlay would have an ample return in the security it would give to the health of the many persons who annually frequent this locality. Until the Town Council have fully complied with the recommendations contained in Dr. Page's report to the Local Government Board, and are able to assert that the conditions which are therein properly condemned no longer exist, it is impossible for intending visitors to think of Margate as a town in which proper precautions are taken to secure them from disease.

PHOSPHORUS AND INTELLECTUAL ACTIVITY.

WHETHER the now famous aphorism, *Ohne Phosphor keine Gedanke* (Without phosphorus no thought), originated with Büchner, or, as a recent writer believes, with Moleschott, the phrase has doubtless been dragged into use in a most unjustifiable manner, especially by the proprietors of drinks and nostrums containing, or said to contain, phosphorus, and which are on the strength of this urged indiscriminately on all who have brain work to do, as well as on all who suffer from any affection which tends to impair the functional activity of the nervous system. This, of course, is about as sensible as the celebrated advice to Verdant Green to lay in a stock of "Reading" biscuits to assist his reading. The writer referred to, Mr. Atwater, is positive that Moleschott, in using the phrase, had no intention of stating that there was a definite connexion between phosphorus and thought, but meant to show that thought is a function of organised matter. Agassiz is credited with the responsibility of the theory that fish is a peculiarly valuable food for persons who have to use their brains to a large extent, because of its richness in phosphorus. As a matter of fact, however, M. Atwater has found, from a long series of researches, that fish meat contains no more phosphorus than ordinary butcher's meat, so that the suitability of fish as a diet for brain workers, which is by no means to be disputed, depends rather, as Sir Henry Thompson puts it, on its greater digestibility in consequence of its deficiency in fat than on its possession of an abundance of phosphorus. Reading men, in consequence of their want of exercise, their stooping posture, and their frequent confinement for long periods in close and ill-ventilated rooms, are less able to digest their food than men whose work is of

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a manual nature and lies out of doors. They are thus liable to flatulent dyspepsia, associated, as Dr. Ralfe has pointed out, with alkalescent urine due to excess of carbonates of soda and potash. Urine of this kind causes deposition of phosphate of lime, and this has led some observers to conclude that it is the brain work which causes the apparent excess of phosphorus in the urine, and which therefore requires a diet specially rich in this element, whereas the phosphatic urine would appear in reality to be only an indicaition of disordered digestion due especially to a want of proper aeration of the blood. The recent researches of Zuelzer and others seem to point to the fact that the excessive elimination of phosphorus by the urine is associated rather with nervous depression than with nerve activity, the phosphorus being retained in the body in the latter instance to supply the waste caused by the increased metabolism.

THE RAILWAY WHISTLE NUISANCE.

BARON DE WORMS has done as much as can at present reasonably be required of him to alleviate one of the lesser evils of city life, by engaging that the Board of Trade will interest itself to ascertain how far the annoyance caused by the whistle of railway trains can be abated. It is perhaps hardly to be expected that the use of this form of signal, in so far as it is deemed necessary, should be dispensed with. When, on the other hand, it is needlessly employed at the caprice of an engine driver—and such a case is not imaginary,—the ears of the public have surely some right to consideration. Nay, we may fairly be allowed to ask if no alternative plan can be suggested to obviate or to render less frequent the necessity for signalling in this way within the walls of railway stations and in tunnels. A shrill steam whistle is capable of injuring the drum of the ear so as to cause deafness, and the risk of this occurence is increased when the sound is intensified by concentration within a limited space. It must be allowed that this danger, though real, is not one of great urgency, but its diminution would nevertheless be a distinct advantage. Householders in general assuredly do not, on their part, feel indebted to railway companies, for the signal shrieks which now and then disturb their slumbers, and may even prove so great a nuisance as to compel a change of residence. The sick in particular are much to be pitied when the scanty sleep which is to them a necessity of treatment is thus rudely scared away. It is therefore evidently desirable in the public interest that the use of the whistle should in future be limited as far as possible by some regard for amenities which are now too little considered.

HEPATIC CIRRHOSIS IN CHILDREN.

THAT cirrhosis does happen in childhood is now generally admitted; but the occurrence is still rare enough to make all cases worthy of note. The journal of the American Medical Association reports a paper on the subject read at the meeting of the Association of American Physicians at Washington on June 2nd by Dr. R. Palmer Howard, Dr. S. Weir Mitchell presiding. He reported two cases in which cirrhosis of the liver was present in children, brother and sister. Most unfortunately, the reporter gives no particulars further than saying that sections of the organ were exhibited. Dr. Wm. A. Welch described a case in a child of twelve years. The child had suffered from malaria, and had come from the coast of Africa. Dr. Welch said that most cases of malarial origin had been reported from the coast of Africa. Dr. Forsheimer had seen two cases (one eight years old) which he considered due to syphilis. One, with a distinct history of syphilis, is under observation in the last stage of the disease. Dr. Forsheimer thinks it clear that syphilis is the most common cause of cirrhosis of the liver in children. In the other, at the necropsy the hobnail liver was found. Dr. William Pepper of Philadelphia reported a case in which cirrhosis of the liver followed measles in a child eight years old. During the measles catarrhal jaundice occurred; subsequently the symptoms of developing cirrhosis appeared, and death by coma ensued. The whole duration of the case was not less than a year. At the necropsy a typical hobnail liver was found. Here, then, are six cases of hepatic cirrhosis in children. Though alcohol is not mentioned, it might have been more explicitly excluded. The causation is assigned to malaria, inherited syphilis, and measles.

ADVERTISEMENT IN PRACTICE.

IT is much to be regretted that some cause, probably connected with the still prevailing commercial depression, has, particularly of late years, exposed an ancient weakness in the armour of medical ethics. We refer to the system of trade competition and of self-advertisement resorted to by not a few qualified practitioners. It is needless to say that this custom is not in accordance with a true idea of professional duty. The business of a trade is in itself something different from the practice of a profession, and especially of such a one as medicine. The object of the latter is not merely to make money, but to acquire and apply knowledge for the treatment of disease, and to bear responsibility, such as cannot be appraised in coin alone. It should therefore be evident to most unprejudiced minds that its appropriate methods are not those of the ordinary tradesman. The distribution of handbills soliciting a trial of the benefits to be obtained at some private dispensary and offering treatment at a trivial cost are certainly in strict accord with the usages of the retail dealer, but they convey an unfair and misleading impression of what is really implied in medical attendance. Not only do such practices lower to an absurd degree the public estimate of such attendance, but they offer the unseemly spectacle of a mere trading competition between medical men for the money proceeds of professional service. It has been urged by some that this system suits the pockets of the poor working class. In answer to this argument we might quote innumerable instances in which medical men in general practice have given their best services at little cost without any of the blatant pretension of the quasi-charitable establishments. We might also remind our readers that it is by no means the poor only who avail themselves of the sixpenny dole of advice with medicine which is offered by the latter. Let it not be thought that we dispute the right of practitioners to adjust their fees where necessary to the condition of their patients. It is not the feeling or exercise of consideration in this particular, but the ostentatious advertisement of such consideration with a view to profit that we object to. Some are more tried than others by the temptation to self-advertisement. We have considerable sympathy with young practitioners about to enter general practice as regards this question. Slender means and insufficient introduction are often combined in their case to make rapid success very desirable if not necessary, and to weaken the restraints imposed by professional feeling. We should, however, advise any who are tried not to give way. Success, when it comes, will be better worth having. Practice will be of a superior quality, for it commonly happens that the character impressed upon it at the outset continues with it, and of this the public are not ignorant. With a view to avoidlng the risk of long waiting, and the impatience of scruple which it may entail, one hint may be borne in mind. We allude to the advantage of choosing as a nucleus of practice some spot in the zone of increasing population which invests our cities, or even in a rural district, rather than a long established neighbourhood. In the former there is sure to be some demand for the services of an incoming practitioner such as cannot be counted on in older districts, however

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populous. By the use of some common shrewdness in this and similar matters, it is still quite possible for young practitioners to exercise their calling profitably without resorting to usages alike unworthy of the practitioner and of his art.

THE HEALTH OF THE POPE.

OUR Rome correspondent writes:—"The sun has entered Leo and the thirteenth Pope of that name abides in the Eternal City when all who can have fled—upper ten thousand, senators, deputies, and *corps diplomatique*. It is the policy of the Curia which keeps the Pontiff immured in the Vatican; but his Holiness accepts the 'situation' with alacrity, and, so far as his health goes, seems the reverse of a sufferer. Much nearer eighty years of age than seventy, he displays an elasticity of mind and a vigour of body which are the envy, if not the reproach, of others far his juniors. This mental and corporeal energy, put forth as it is in a temperature wellnigh tropical, is hardly inferior to that of his middle age, when, as Archbishop of Perugia, he would indite a long Latin epistle in the morning, join a shooting party in the forenoon, and return with the best bag at nightfall, to celebrate the achievement in Ovidian distichs or Catullian hendecasyllabics before retiring to rest. His day begins at 6 A.M., when he rises, takes the cold bath, which he finds so invigorating, and, but for the brief interruption of his slight and admirably regulated meals, works steadily on till late into the evening at his multifarious tasks, theological, diplomatic, and administrative. For the present he is relieved of the numerous and fatiguing audiences which came to an end only last week; but just the other day he presided at the closing ceremony of the Leonine Institute of Literature, and as examiner and adjudicator took for more than three hours the chief part in the proceedings, which he wound up with a brilliant address on the moral and intellectual advantages of an oft-renewed familiarity with Homer, and Virgil, and Dante. To these masters, but mainly to the third, and to his favourite 'Angelic Doctor,' he recurs with enhanced delight now that the ordeal of his Thursday audiences is at an end and his cares are chiefly those of administrative routine. Whether Leo XIII. will see 'the years of Peter,' like his predecessor Pio Nono, or whether he will not, his union of venerable old age with energy of mind and body will long be noted in Pontifical annals, and will in high degree redound, let it also be said, to the skill, the care, and the devotedness of the Vatican medical staff."

A STRANGE CASE.

THE *Retford Mercury* of July 16th contains the report of an inquest touching the death of a young lady aged twenty-six years, a private governess. She was out with her pupils, and after crossing the railway she left the children and returned to the line ostensibly to find a watch she said she had lost. The driver and guard of a passenger train deposed that deceased deliberately laid herself down on the rails, and the jury adopted their evidence, and returned a verdict of suicide. Dr. Savile examined the body after death. He stated that he did not make a *sectio cadaveris*—the coroner did not think this necessary; but from an external examination he obtained no evidence that deceased was pregnant. No motive was assigned for her committing suicide; in fact, at breakfast time on the day of her death she appeared quite cheerful. It seems to us that, as the question of pregnancy was suggested as a possible motive for the fatal act, it was highly desirable that this should have been determined beyond doubt, and that for this purpose a complete post-mortem examination should have been made. The mere mention of deceased being *enceinte*, although unsupported by any evidence and contradicted by some, is warranty enough for a coroner's post-mortem order, for surely, in considering a case of supposed suicide, something is due to the memory of the victim and the feelings of her bereaved relatives. We are not by any means convinced that the death was suicidal. The testimony of the guard and engine-driver was truthful, no doubt, as to observation of facts, but the inference they drew from the facts is open to question. A person seeing a train approaching, and finding himself in imminent danger of death, may become either giddy or fixed trance-like, and unable to make a sufficiently directed exertion to escape the threatened catastrophe. Many such cases have been recorded. Medical evidence on this point should have been given at the inquest.

SANITATION AT LEICESTER.

THE annual congress of the Association of Municipal and Sanitary Engineers was held at Leicester on the 15th, 16th, and 17th inst. There was a large attendance of members, most of whom occupy official positions in various municipal corporations. Amongst the papers read and discussed was "Refuse Destructors for Large Towns," by Mr. C. Jones of Ealing. He described the one erected at Ealing, which had given satisfactory results. Mr. Howson of Leeds referred to the destructors in use at that town, which are situate in a densely crowded locality, and do their work without causing a nuisance. Mr. T. Birch read a short paper on "Sewage Treatment," and criticised some experiments undertaken in connexion with the metropolitan sewage, and the different results obtained with different samples of sewage. The general opinion of the members seemed to be that laboratory experiments conducted on a small scale were entirely fallacious as a guide to practice when enormous quantities had to be dealt with. A paper by Mr. W. Eassie on "Cremation" gave rise to an interesting discussion, many of the members citing instances that had come under observation in their official capacity of the harm arising from earth burial in improper places and crowded communities. This paper was somewhat appropriate for Leicester, as the Town Council has recently had under consideration the desirability of erecting a public crematory, and has gone so far as to get complete plans prepared for the same.

BALDNESS.

A LECTURE on the subject of Baldness, its Causation, and the Rules and Methods for its Prevention, delivered by Dr. Jackson, of New York, has lately formed the text for a variety of remarks in the daily press, with special reference to the increasing tendency to premature baldness amongst men, and to the influence of the prevalent custom of the "morning tub" in bringing about the condition. Premature baldness has no doubt existed amongst mankind as long as records go back, but to what extent it prevailed in past ages, and in different countries, races, and conditions of men, is not very clear, nor are any very trustworthy facts forthcoming for comparison in the present age. However, there seems little doubt that premature baldness is on the increase. Putting aside such forms of loss of hair as depend on definite and well-known diseased conditions, it must be confessed that our knowledge is not very precise as to the cause of the form known as alopecia senilis. The reasons why man should be specially selected, and why the distribution of the baldness should be so peculiar and constant, are problems hard to explain. There is no doubt that premature baldness of this kind is very frequently hereditary, and is entirely a local matter; but where such tendency is present the existence of any local or general disorder readily excites its onset. Some cases also we must ascribe to defective nutrition brought about by actual disease of

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other parts of the body, by the increased wear and tear of life of the present day, and such-like influences. But there exist still other cases for which it is difficult to assign a cause, and here the action of tight hats in interfering with the local circulation, the continuous wearing of injurious head-gear in destroying the texture of the hair, have been invoked with questionable force. The habit of washing the head each morning and the neglect to replace the oily material is no doubt in time injurious.

"RELATIVE RANK."

THE following remarks from the columns of our contemporary, the *Broad Arrow*, appear to confirm the views we have consistently advanced on the question of relative rank in the Army Medical Service:—"Upon relative rank as such we have had our say. It is not substantive rank, and for the purpose for which it was first instituted it still exists. Upon the proposal to substitute honorary rank for it, we will only observe now that, whilst we suspend our final judgment, we have as yet seen no argument that can commend it to our support. It can add nothing whatever to the dignity and status of medical officers, for it would infallibly expose them, as members of a healing profession, to much captious satire, and its adoption would, we fear, prove a veritable disservice. We confidently believe that, were army medical officers polled, a majority of the best men would be found eager to repudiate every claim to honorary rank, and would declare that the idea is repugnant to their instincts and professional susceptibilities; and, though the voice of these men may not be heard in the prevalent clamour, there is no reason why their existence should be systematically ignored."

THE SMOKE NUISANCE.

THE Select Committee which was appointed to consider Lord Stratheden and Campbell's Smoke Nuisance Abatement Bill has made its report, and has confined its amendments within exceedingly narrow limits, making in effect only one alteration in the proposed measure. That alteration has for its object to place clubhouses, hotels, and refreshment rooms under the operation of the Smoke Acts of 1853 and 1856. The form, then, in which this promising piece of legislative work appears likely to pass the House of Lords will apparently involve us in the most hopeless maze of jurisdictions and authorities. The Bill itself will empower the vestries to impose regulations for the consumption of smoke upon the users of existing stoves, and the Metropolitan Board to lay down rules as to the construction of new grates, thus giving rise to a sufficiently perplexing variety of bye-laws and administrations. But, to make a bad thing worse, the extension of the older Acts will enlarge the sphere of police authority in relation to these matters, so that in the same street there will be three different municipal authorities, administering three different systems of bye-laws, and acting through three different inspectors, to repress the nuisance of smoke contamination of the atmosphere. Surely nothing could be more feeble. If any one of the departments which are thus to be yoked together in an ill-assorted team were set to do this work alone, there would be some chance of its being taken up zealously and done effectively. But when success depends upon concerted action, it is ridiculous to suppose that it can be attained by such an awkward squad as the present proposal will collect. The City Police must co-operate with the Metropolitan Police, and these two again with the Board of Works; and when these metropolitan powers have agreed as to a course of action, they must bring all the vestries within their jurisdiction into co-operation. To organise concerted action on such a scale would demand the genius of a Chatham. The concert of Europe is a simple thing and easily manipulated by comparison. Yet without this concerted action the whole scheme is foredoomed to failure. How can the local vestry visit with penalties the private occupier whose window garden is smirched with soot from the neighbouring chop-house? The exemption of hotels and the like from the present Act is particularly unfortunate, for no restrictions can well be less strict than those of the Act of 1853, to which they are remitted. These buildings are confessedly the worst offenders in the matter of smoke, and the statute law has conspicuously failed in operation to grapple with the nuisance. Therefore these buildings are to be removed from the operation of the new bye-laws and left to the control of the ineffective statute. Truly a wonderful scheme! But let us add a word here. For the glaring deficiencies of this Bill we do not blame its promoters. They have undertaken to make bricks without straw; and though it may be open to a critic to cast doubt on their discretion in so doing, it is hardly fair to complain of the brick-making.

THE BERGEON TREATMENT OF PHTHISIS.

DR. FRANCIS KINNICUTT of New York (*Boston Med. and Surg. Jour.*, July 14th) publishes a brief account of the results he has obtained after a three months' trial of Dr. Bergeon's method of treating chronic disease of the lungs and air passages by means of gaseous enemata. "The apparatus employed was Dr. Morel's of Paris; either the Richfeld springs or the Sharon water, preferably the former, were used to charge the carbonic acid gas (which was freshly prepared for each enema) with sulphuretted hydrogen." Nine cases were so treated, with results which corroborate some of the statements made by Dr. Bergeon. Dr. Kinnicutt says that there seems to be no doubt that the method ameliorates many of the distressing symptoms of advanced phthisis, lowering the pulse, reducing temperature, diminishing the severity and frequency of the sweats, markedly diminishing the amount of expectoration, and improving the appetite. But he has no data as to its capability of arresting phthisis in an early stage. In all the cases the disease was advanced, and in two at least the improvement appears to have been striking. The table of cases includes one of paroxysmal asthma, in which the attacks were completely relieved after a treatment of three days. In the remainder—one a case of pulmonary abscess, another of chronic bronchitis, and the others of phthisis—the treatment was pursued for periods of from eighteen to thirty-nine days. As a contribution to the subject, and an encouragement for further trial of the plan, Dr. Kinnicutt's paper is timely.

CAN IT BE TRUE?

THE *Ilkeston Advertiser* records a case of flogging, the facts concerning which, if correctly reported, are an outrage on humanity. It is stated that a child, aged seven, convicted of the theft of a watch, was ordered to receive four strokes with a birch rod. Our contemporary's report includes a copy of a letter from Mr. John J. Tobin, the doctor called to attend the child after its castigation. It is there stated that the boy was suffering from "lacerated wounds on the side and belly inflicted by the policeman's lash." "The wounds, fifty in number, had penetrated deep into the cellular and muscular tissue; the child was feverish and sickly." The doctor's statement contains the following: "I understand also that the child was arrested and taken out of bed at 1 o'clock in the night, and kept in a solitary cell until bail was given next day." If the above description of the punishment and its effects is accurate we have no hesitation in saying that there is someone who deserves similar chastisement with compound interest. Since writing the above we have been informed that Si

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Walter Foster, M.P., who saw the child subsequently to the punishment, has interrogated the Home Secretary, and that the latter has undertaken to see "that where there is any doubt about the robustness of a boy's health a doctor shall be consulted before he is flogged." This, no doubt, is an important concession, but it does not affect the question as to the injuries the boy Buckbury is said to have received. It is only just to add that Mr. Matthews, in his reply to Sir W. Foster, stated that the flogging took place "in the presence of the police inspector, his wife, and a Mrs. Knight, who attended at the request of the boy's mother"; and, further, that Mrs. Knight did not think the punishment severe. The flogging took place on the 11th inst., and on the 25th inst. the senior surgeon of the county infirmary examined the boy and reported him quite well. Fourteen days had elapsed between the date of the flogging and the examination made by the infirmary surgeon; and Sir W. Foster, in a letter to a contemporary, says that he saw the unhealed wounds five days after their infliction.

THE PREVENTION OF RABIES.

DR. WHITELEGGE, medical officer of health for the borough of Nottingham, has recently given considerable attention to the subject of rabies in dogs, and has pointed out that in the year ending March last 35 cases of this disease occurred in Nottingham, and 64 cases in various animals within a circle of about five miles around the borough. In 5 cases the diagnosis was verified as the result of inoculation by Professor Horsley of the Brown Institution. Of 49 rabid dogs referred to, 18 are known to have been bitten; the history was also clear in the case of 10 sheep and 2 cows. Of the human beings bitten, six went to Paris to undergo the Pasteur treatment, and in two others cauterisation was employed. One man bitten in the hand, in October, 1886, by a strange dog died in January, 1887, of hydrophobia. A marked reduction in the number of cases of rabies followed the imposition of the muzzle; 243 stray dogs were also destroyed in less than four months. Muzzles can now be used which cause no distress to dogs, and with a view of stamping out this essentially preventable disease their general use should be made imperative.

THE PERMANENT BATH.

SINCE the brief note we published last week upon the alleged value of continued immersion in a bath for the relief of dropsy, we have seen a paper by Dr. James Barr, which will appear in the forthcoming issue of the *Liverpool Medico-Chirurgical Journal*. Dr. Barr gives details of the case of a girl, eighteen years of age, who was in a most critical condition from pyæmia, acute periostitis of the left femur, acute arthritis of the left hip and knee joints, and extensive bedsores. It was decided as a last resource to immerse the patient in a boracic bath at a temperature of about 95°F. For seventeen weeks she was thus kept continuously immersed, with the most satisfactory results. Dr. Barr appends a case of pyæmia treated for four months in a bath by Mr. Chauncy Puzey some years ago. It is evident that the practice is one which might well be more widely adopted, and there does not appear to be any serious difficulty in carrying it out. As Dr. Barr points out, it was a plan long since advocated by Hebra in cases of extensive burn and widespread dermatitis, and at Vienna bath-rooms specially adapted for this purpose are fitted up; but in this country it has been but seldom resorted to, one instance which occurs to us being a case of acute pemphigus, which Dr. Southey brought before the Clinical Society five or six years ago. Dr. Barr's paper is additionally interesting from the description he appends of the "hydrostatic bath" introduced by Dr. Neil Arnott, which consists in supporting the patient (without total immersion) in a bath of water of sufficient depth to permit of it. The description is given in the first edition of Dr. Arnott's famous work on the "Elements of Physics," and it is to be regretted that in the later editions this description should have been curtailed by the editors. The ordinary form of water-bed, although involving less management, is certainly not so well designed for the purpose in view as this very ingenious plan of Dr. Arnott's.

THE GENERAL COUNCIL AND IRREGULAR PRACTICE.

WE would direct attention to an "important notice" which appears on the advertisement sheet (p. 39) of our present issue, in respect of a resolution passed by the Medical Council on April 21st, 1883. The resolution runs as follows:—

"(*c*) 'That the Council record on its Minutes, for the information of those whom it may concern, that charges of gross misconduct in the employment of unqualified assistants, and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract, are, if brought before the Council, regarded by the Council as charges of infamous conduct under the Medical Act.'"

The publication of the resolution at the present time would seem to indicate an intention, on the part of the General Council, to act with vigour in the case of persons whose irregular conduct in the manner specified may be brought under its notice.

SUNSTROKE AND ITS PREVENTION.

SEVERAL cases of sunstroke have recently been reported from the west of England, and intelligence from America shows that deaths from this cause have also been remarkably frequent there. A few observations on this subject should therefore be not unseasonable at the present time. To speak of sunstroke as being due to more causes than one may sound at first sight rather like a contradiction in terms, but there can be no doubt that besides the principal influence at work in such cases there are others of real though secondary significance. In seeking to explain the causation of this morbid state we must, indeed, regard at least two different conditions as commonly acting together to produce the result. One of these is external heat, not necessarily that of the direct solar rays; the other is the presence in excess of impurities in the blood circulation, with a want of due nutrition in the tissues which it supplies. The consequence of this abnormal state of body is necessarily to delay the blood current, and the state of congestion thus engendered in the nerve centres of the brain and cord renders the latter unusually irritable to the action of external stimuli, of which external heat is, for the case we are discussing, the most important. It follows accordingly that prevention must include some care as to modes of living, as well as means of regulating or resisting heat from without the body. For example, the free use of alcoholic stimulants, which tends to impair nutrition, is no longer considered to be advisable; while tea and coffee, which check the formation of waste products, are proportionately valuable. Tight clothing about the chest is generally condemned as being likely to impede the aeration of blood in the lungs, and experience has proved that for a similar reason the imperfect ventilation of workrooms in warm summer weather is conducive to heatstroke. As regards protection against the sun's rays, it should be remembered that not only the head but the back of the neck must be suitably guarded in order to ensure the traveller against the risk of injury. The

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wearing a damp handkerchief, or a leaf, such as that of the cabbage, next the head has also been found very useful. One word as to the immediate treatment of a case of sunstroke. In some instances doubtless not even the readiest assistance will save life, but in case of need it is well that all should bear in mind that the most effectual form in which first aid can be rendered is the application of cold—as cold water, ice, &c.—to the head and neck.

A SCHOOL-CLOSURE INCIDENT.

A CASE of importance in connexion with school closure on account of infectious disease under the Education Code is likely to come before a superior court. The master of an elementary school at Falmouth, who in January last closed his school on account of measles, under an order of the urban sanitary authority, sought to recover £20 from that authority as compensation. It is well known that such closure involves at times a substantial loss to schoolmasters, and the claim was based on Section 308 of the Public Health Act, which is to the effect that when any person sustains any damage by reason of the exercise of any powers of that Act in relation to any matter in which he is not himself in default, full compensation shall be made to such person by the local authority exercising the powers. But the sanitary authority in this and similar cases acts, not under the provisions of the Public Health Act, but under a code issued by the Education Department of the Privy Council. Taking this view, the magistrates decided in favour of the authority; but at the request of the complainant they have granted a case for the superior courts. We would gladly see the schoolmasters compensated for such cases, and this at the cost of the district for the benefit of which the measure is adopted, but it seems to us doubtful whether the sanitary authorities can in the present state of the law undertake that responsibility.

THE CORONERS' CONSOLIDATION BILL.

THIS Bill, which has been introduced by the Government in the House of Lords, is intended to be simply what its title dubs it—a Consolidation Bill. It is not to make any change whatever in the existing law, and one or two alterations in the letter of existing statutes will serve only to bring the authorities into conformity with what is now established practice. Thus, for example, an old statute of the time of Edward I. requires that a county coroner shall be a knight. This law, though unrepealed, has become quite obsolete, and has long been a dead letter; it is accordingly destined to be quietly dropped. Some half-dozen other similar changes will also be made in the statute-book, but the effect of the Bill will be to gather up and focus in a single document the multifarious law relating to coroners which has now to be picked out piecemeal from two-and-thirty different Acts of Parliament, supplemented by the unwritten "common law."

A BONE-SETTER'S CASE.

IN our last issue we noticed the bone-setter's calling and mentioned one or two instances of egregious blunders committed by quack practitioners. As a sequel the following gives point to our previous contentions. An inquest was held on July 20th at Newcastle touching the death of Joseph Davison, aged forty-two years. Deceased met with an accident which caused a compound fracture of the leg. He was attended to by Dr. Allen, who very properly applied antiseptic dressings. For several days the patient progressed favourably. There was no fever, and the wound remained healthy. Unfortunately for the deceased, he and his friends determined to call in a bone-setter. The latter took off the splint and dressings employed by Dr. Allen, and put on two other splints and applied bread poultices to the wound. Putrefaction set in, and ultimately death occurred from blood poisoning. Dr. Short, who saw deceased subsequently to Dr. Allen's withdrawal from the case, deposed that the bandages were too tightly bound, but that deceased refused to allow him to slacken them. Shortly before death, Dr. McIntyre visited Davison, and found the wound in a putrid condition. The coroner, addressing the bone-setter, told him that, although not guilty of criminal culpability, he was nevertheless deserving of censure for interfering with a case which had already been treated properly and scientifically by a duly qualified medical man. We commend the remarks of the coroner to all those who prefer the services of a bone-setter to a regular practitioner.

NEPHRECTOMY IN BELGIUM.

DR. THIRIAR of Brussels recently performed nephrectomy on a lady patient at Antwerp, this being the first occasion of the performance of the operation in that city. Indeed, it does not seem to have been performed more than four or five times in Belgium. The case was diagnosed as sarcoma, but turned out to be a large renal abscess. The pain had been very severe. Notwithstanding what was said at the Medico-Chirurgical Society on the advantages of the abdominal method, Dr. Thiriar prefers to operate through a lumbar incision. He commences at the inferior border of the eleventh rib at the distance of eight centimetres from the spinous processes of the vertebræ, and, keeping parallel to these, he carries the incision to within a centimetre of the iliac crest, and then, changing its direction forwards, brings it almost to the iliac anterior spine. The external border of the quadratus lumborum is then in view; the attachment of this muscle to the iliac crest is then divided for two or three centimetres, a proceeding recommended by M. Ledentu of Paris, which Dr. Thiriar finds of great value in giving plenty of room for the subsequent steps of the operation.

THE HOSPITAL SATURDAY FUND.

THE Hospital Saturday Fund has issued sheets for use in various establishments for the purpose of promoting weekly or monthly contributions to the Fund. The workshop collections are to be taken weekly till the 3rd of September. This is the right method, as we have maintained; and if it be duly organised and carried out in the various districts and establishments of the metropolis, we may hope to see a very much larger result in connexion with the Fund than has as yet been realised. Much will depend on the co-operation of employers, foremen, and others, which is asked for by the Council, and which we trust will be heartily accorded.

SMALL-POX AT ABERDEEN.

THE small-pox epidemic is spreading and giving rise to considerable alarm. The disease has affected families widely apart, and the efforts of the sanitary officials to stamp it out have not proved so successful as was at first expected. Last week nearly a dozen cases were reported and removed to the hospital. Adults are being revaccinated in large numbers.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—M. Théodore Jouret, member of the Belgian Superior Council of Hygiene, at Kissingen, aged sixty-six.—Don Santiago Ruli, of Barcelona.

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CHOLERA IN TONQUIN.

THE *Revue d'Hygiène et de Police Sanitaire* states that cholera recently appeared in Tonquin in the form of an epidemic which threatened to assume alarming proportions. Thanks, however, to the prompt and energetic measures taken by M. Halais, vice-resident at Hanoi, who called a meeting of the Sanitary Council, under the presidency of M. Nagier, director of the medical service, and saw that the recommendations drawn up by the Council were carried into effect, the epidemic was almost entirely confined to natives, and was soon stamped out. The measures employed comprised the disinfection of all places where there had been any affected persons or any dead bodies, the establishment of an isolated hospital for natives, the increase of the public pail-closets, disinfection of ponds, ditches, cesspits, and recently disturbed burying places, establishment of new burying places outside the town and under the surveillance of the authorities, careful sanitary inspection of the prisons, restriction of the use of the river water to the Public Works Department and to certain specified localities, inspection of the food on sale, provisioning the country with rice for fear of a famine, and the formation of a permanent native hospital. The ambulance hospital established for the natives is said to have been most successful, fully half the cases which were treated there having been cured.

POISONING BY "LORDS AND LADIES."

TWO children were recently poisoned at Dogsthorpe, Peterborough, as is alleged, from eating some leaves of the plant commonly known as cuckoo-pint, or "lords and ladies" (Arum maculatum). One, a boy aged seven, died after much vomiting and purging within twenty-four hours. We have some doubt whether the *leaves* were eaten, for, as a rule, at this season of the year they have died down, or become shrivelled, leaving a peduncle closely set with bright-red berries. Probably the latter were ingested. The acrid principle, which is destroyed by heat, causes a sharp pricking sensation of the tongue, and in a recorded fatal case the tongue was so swollen that deglutition was difficult or impossible. We are not informed whether any portions of the plant were discovered in the vomited matter in this case.

FOREIGN UNIVERSITY INTELLIGENCE.

Berne.—Dr. Brühl has been appointed *Privat Docent* in Gynæcology.

Bonn.—Drs. T. Rumpf and E. Ungar, *privat docenten*, have been made Extraordinary Professors.

Bordeaux.—M. Coyne, Professor of Pathological Anatomy, has been appointed an Officer of Public Instruction. This appointment is hailed with gratification by the French provincial medical press, which, as a rule, has some cause for its complaint that nearly all the Government distinctions and appointments are monopolised by the Parisian members of the profession.

Breslau.—Professor Emil Richter has been appointed Medical Councillor and Member of the Medical Board of the province of Silesia.

Dorpat.—The assertion of a German medical journal that the professors have refused to lecture in Russian is denied by the *Vrach*.

Göttingen.—Professor Graf Hermann Solms-Laubach will probably decline an invitation to assume the post of Director of the Botanic Institute of Berlin.

Innsbrück.—Dr. Rokitansky, Professor of Internal Pathology, has been appointed Dean for the ensuing year.

Königsberg.—Dr. J. Mikulicz, Professor of Surgery, has been appointed Medical Councillor and Member of the Medical Board of the province of East Prussia.

Leipsig.—Professor W. Pfeffer will next session take over charge of the Botanic Institute, in succession to Professor A. Schenk.

Lille.—To the duties of the Chair of Internal Pathology has been added the teaching of Experimental Pathology. The professor appointed is M. le Dr. Leroy, *agrégé*.

Madrid.—Dr. Don Fausto Garagazza has been appointed Professor of Analytical Chemistry.

Marburg.—Professor Gasser of Bern has been appointed Professor of Anatomy.

Marseilles.—The Chairs of Pathology, Clinical Surgery, and Clinical Medicine are to be filled after a concours to be held at Montpellier.

Montpellier.—M. Gilis, *agrégé*, has been appointed for nine years Chief of Anatomical Studies in succession to M. Chalot.

Paris.—The only candidates for the Chair of Physiology in the Faculty of Medicine, vacant by the death of M. Béclard, are MM. Reynier and Ch. Richet.

Vienna.—Professor E. Ludwig has been appointed President of the International Hygienic Congress, in place of Dr. Schneider who has resigned. Professor Bandl (Gynæcology, &c.) has been refused permission to lecture by the Minister of Public Instruction.

DURING the past six months the Metropolitan Public Gardens Association has received £4337 less than it obtained from the public during the corresponding period of last year. During the four years of its existence the Association has laid out or assisted to lay out forty-three metropolitan gardens and playgrounds, and it is to be hoped that increased and prompt donations will enable it to continue its work, the value of which can only be rightly estimated by those who are brought into daily contact with the inhabitants of the crowded alleys and reeking courts of this modern Babylon.

THE recently issued reports of the Inspectors of Mines to Her Majesty's Secretary of State show that during the past year the aggregate number of persons employed in and about the whole of the mines in the United Kingdom of Great Britain and Ireland amounted to 561,092, of whom 5568 were females above ground. The total number of fatal accidents was 869, and the total number of deaths occasioned thereby 1018; being an increase of 3 in the number of fatal accidents, and a diminution of 196 in the number of lives lost, compared with the totals for the preceding year.

ON the 21st inst. Sir Edward Sieveking presided at the annual distribution of prizes to the students at St. Mary's Hospital Medical School, and at the conclusion of the ceremony was presented by Dr. Broadbent, on behalf of 250 present and past students of the school, with a piece of plate, as a token of their appreciation of his services to the profession and the public and of gratitude for his services to them personally and to the hospital, on the termination of his career in connexion with the hospital school.

M. LABORDE has been elected, by forty-four votes, member of the Section of Anatomy and Physiology in the Academy of Medicine of Paris. His competitors were M. Fr. Franck, M. Gréhaut, and M. Regnard, the first named of whom received thirty-two votes, and the other two candidates one vote each.

THE epidemic of small-pox in Sheffield shows no signs of abatement, fresh cases being daily admitted into the Borough Hospital. Arrangements are being made so that in case of need further hospital accommodation can, by means of temporary iron erections, be provided without loss of time.

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WIESBADEN in September next will be the seat of the sixtieth Congress of German Naturalists, at which one of the most important features will be the exhibition of scientific instruments. The latest improvements in electro-therapeutic appliances will be on view. Microscopy will also be richly represented; while the assortment of surgical instruments will, it is announced, be the completest yet exhibited.

THE Italian Government has contributed six thousand lire (£240) to the relief of the cholera-stricken at Catania, and the Minister of the Interior has just sent thither Professor Cervello, accompanied by four other physicians, to investigate on the spot the best means of combating the malady.

IN view of the tropical heat now prevailing in Italy, the War Minister has issued orders that the troops, whether in garrison or on service, for the approaching manœuvres, shall be spared as much as possible.

IN the issue of the *Illustrated London News* for the 23rd inst. an illustration is given of the inspection of the Volunteer Medical Staff Corps in the grounds of Lambeth Palace on the 16th inst.

DR. OCTAVIUS JEPSON, on his retirement from the office of medical superintendent of the City of London Lunatic Asylum, after a long period of service, has been granted an annuity of £800.

DR. MORELL MACKENZIE'S book on the Hygiene of the Vocal Organs, which has reached a fourth edition, is being translated into Swedish, German, French, and Italian.

REPORT
OF
The Lancet Commission
ON THE
WORK OF THE PIT-BROW WOMEN OF LANCASHIRE.

THOUGH representing but an infinitesimal proportion of the three to four million women who work for their living, the pit-brow women of Lancashire have recently attracted a very large share of public attention. In 1878 Professor Leoni Levi estimated the number of wage-earning women at 3,800,000. Mr. Atherley Jones, in the House of Commons, spoke of only 6000 pit-brow women, yet this small body of female workers have raised the strongest party feelings concerning their right to labour at the pit brow. The problem involves social, economical, and sanitary issues, and consequently we resolved to undertake a special inquiry. It is only in some districts, notably in the neighbourhood of Wigan, that women are employed at the mouth of the pits; and much has been said both for and against the practice. We can only deal with the social and economical aspects of the question in so far as they bear upon the health of the population concerned; and certainly all these phases of the dispute are more or less intimately related to each other. Through the courteous assistance of the managers, the proprietors, and some of the local medical practitioners, we were able to visit several coal pits, and saw a considerable number of women at work. At the Winstanley pit an engine was placed at our disposal, and thus we got over rapidly the numerous fields that separate one coal mine from the other. While speaking of this pit we must also record that the women work under cover; this is a rare and welcome exception to the general rule.

The work of the women consists, for the most part, in screening the coal. As the little truck or "tub" comes up from the mine, it is seized by a man, who drags it upon the scales, and when it has been weighed places it upon a line. A woman then takes the truck and pushes it along the metals to a tilting machine, ingeniously contrived to empty the contents of the truck on a screen below. This can be done with but little effort. The screen consists of iron bars some twelve to sixteen feet in length, that form an inclined plane. As the coal slides down this screen the slack falls between the bars, and on either side stand women, who with rakes push the coal along, examining each portion as it goes by. If they notice any defect, any slate in the coal, they at once seize the piece, and with a small pickaxe chip off and throw away the useless part. The photograph exhibited in the Strand, and that was given to many members of Parliament, representing this work, shows the women under their most favourable aspect. Here the women are fairly clean and sheltered; in the great majority of cases they are covered with coal-dust, are often drenched to the skin with rain, and very rarely enjoy any shelter whatever. At all seasons of the year they have to stand by the screens, waiting for the coal; and periods of inactivity following on excessive physical exertion must, in wet weather, occasion chills which none but the strongest can endure with impunity. Nor is the work always limited to what we have just described. The coal very frequently is not screened, but piled up in the form of a large embankment. On the summit is a truck rail; women push the truck to the end of this line, and there, without the assistance of any tilting machine, lift the truck bodily up and throw it over. At one mine, where this was done in our presence, the trucks weighed 3 cwt., the coal they contained from 6 to 7 cwt. To lift and tilt these trucks over, it is necessary to stoop so as to bring the hand right underneath and within a distance of from eight to ten inches from the ground. Nor is this all: the metals placed on the loose coal that forms the embankment rest on a very insecure foundation, consequently the truck often runs off the line, and its little wheels sink deep into the coal. The effort necessary to lift up the truck steadily so as not to spill the coal it contains, and place it back again on the line, requires very great strength of muscle. Mere brute force with little or no skill is brought to bear. At one pit we saw a truck come off the line twice before it could be wheeled to its destination. Here some five or six women were at work with one man to help them; and we failed to notice any difference between the man's work and that of the women. They all mutually helped each other, and the women seemed quite as strong as the man. One of the women even offered to wager that she would lift as heavy a shovelful of coals as any man in the mine. The work of piling up the coal is also done in the open air away from all shelter, and the same may be said concerning the women who go on the top of railway waggons to smooth out and pack the coal on the summit so that it should not fall on the line when the train is in motion. Altogether, in many hundreds of employments, men do not perform work of so masculine a character as that of the pit-brow women.

It does not, however, follow that the work is unhealthy. The medical men whom we were able to see at Wigan all bore testimony to the remarkable strength and healthfulness of the women employed at the pit-brow. Certainly those who did not possess good constitutions could not stand the exposure; but such exposure, if it can be endured at all, must have a hardening effect. Many women who had been accustomed to the open-air work could not bear the confined atmosphere of a factory; and, after trying to earn their living at a mill, gladly returned to the pit-brow. On all sides, it is energetically denied that the health of the women suffers. When we inquired into the condition of the dust-yards of London we were told the same thing. The poor, half-starved, ragged women who, for the smallest pittance, sift the dust and refuse of this great metropolis, were all stated to be free from disease. Surprise is also often expressed at the healthfulness of the men who clean out the sewers, and of the staff employed to fumigate and wash rooms after cases of infectious disease. Nevertheless, and in spite of immunity from disease, no one would care to maintain that these various employments are healthy in themselves. But with regard to the pit-brow women, there is no doubt that the open air, in spite of the wet and cold, is a compensation for a multitude of hardships. The trucks, tubs, or boxes, as they are called, weigh from

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2 cwt. to 4 cwt., and contain from 3 cwt. to 6 cwt. of coal. Though the pit-brow women are represented generally as working at the screen, we are assured on good authority that 50 per cent. among them manipulate these heavy trucks. Fresh air and long custom may give them exceptional health and strength; but it cannot be right for women, at least during the period of child-bearing, to even assist in raising such loads from the ground. The working at the screen, on condition that proper cover be provided, is doubtless more healthy than working in a badly ventilated factory. This is a strong argument in favour of the better ventilation of factories, but that does not prove that women can with impunity and all times and seasons do men's work. With still greater force do all these arguments apply to young children. What may be said concerning a fully developed and strong woman cannot be maintained with regard to a young and unprotected child. Yet we have seen children working at the pit brow; one whom we questioned was under fourteen years old; she wore male attire, and was lifting and chipping heavy and very large pieces of coal. Mr. M'Laren declared, in the House of Commons, that there were only some 300 children between thirteen and sixteen working in connexion with the coal mines. If the number is so small, it would inflict no great social hardship to establish by their exclusion the principle that the healthy development of the new generation is the first of all considerations, and that, when such vital interests are at stake, the State has the right to interfere.

Much has been made of the peculiar dress the women wear. The bodice is that of an ordinary working woman's jacket fitted over a common pair of stays; for, in spite of the stooping, most of the women wear stays. The legs are covered with a cast-off pair of trousers, obtained from some male relative or friend. These garments are patched with many colours; and the idea of women wearing men's old trousers certainly does not lend itself to romance. Second-hand clothes, we have always objected, may be the means of conveying infection; but we can scarcely blame poor people for resorting to such economies. Putting this latter question aside, it cannot be said that the women are indecently dressed. They are more securely covered than if they wore skirts, and better able to defy the rude aggression of the wind. With their blackened faces and clothes they are scarcely recognisable, and their appearance is hardly likely to suggest any impropriety. In respect to general decency, the want of proper closet accommodation is of far graver importance. The closets, of the midden type, are out in the open, removed from all dwellings, and clean; but the number was altogether insufficient, and the separation between men and women of a purely fictitious character. The women earn about ten shillings a week; this gives them a certain independence. They have little or no social status to maintain. Among the working classes they are contemptuously called *canacks*, and rarely marry other than collier lads. The working-men miners, with whose representatives we have discussed the question at length, unanimously demand the suppression of the work of women at the pit brow, not because the work effects the health of the women, but because it destroys the homes of the men. The women are not domesticated; they cannot cook a decent dinner; when they are married their husbands do not stay at home, as there are but few comforts to greet them, and this leads to intemperance. The children also are grievously neglected, and the natural result is a deterioration of public health.

Mr. Barnish, the medical officer of health of Wigan, in a lecture delivered a year or two ago, showed that, while the death-rate of England during ten years previous to 1883 amounted to 21·4 per 1000, the death-rate of Wigan during that same period was 27·0 per 1000. At the same time, during these ten years the illegitimate birth-rate for all England amounted to 4·9 per cent, while the illegitimate birth-rate of Wigan reached the high figure of 9·2 per cent. Indeed, the work of women at the pit brow is so far discredited among the working classes themselves, that Mr. Abraham, who in the House of Commons was able to speak in the name of the miners, pointed out that during the last twelve years their number had decreased from 6899 to 4131.

In face of all these circumstances, and if the presence of women at the pit brow is still to be tolerated at all, the State should, at least, exclude all children, and all girls who have not reached the age of puberty. The provision of means of shelter from the rain should also be made compulsory, and certainly an increase in the number of closets is demanded, as well as the placing the women's closets in a totally different part of the premises to those used by the men. Women during the period of utero-gestation and lactation might, with advantage to the future generation, be excluded from the works. With these restrictions, which we bring forward as the minimum justified by the case, the greater evils would be dispelled; and doubtless the moral pressure of the community at large, and of the mining population in particular, will soon still further reduce the number of women working at the pit brow.

KAKKÉ, OR JAPANESE BERI-BERI.

No. II.

How far the teachings of Mr. Takaki's experiment go beyond the settlement of the kakké problem is indicated by one of his tables, which, we hope, will be expanded and analysed at some future time. By this it is shown that the daily average of the men sick from all causes in each 1000 of the force was reduced under the new dietary from 121·15 in 1883 to 84·45 in 1884, and 52·25 in 1885; and that the annual ratio of cases of sickness for each 100 of strength fell from 323·54 in 1883 to 186·37 in 1884, and 99·25 in 1885. The most astonishing improvement is in kakké, which fell from 27·30 per cent. to 0·59 per cent., but it was strongly marked in all other important directions. Thus "constitutional diseases" sank from 16·58 per cent. to 7·89 per cent., diseases of the eye from 29·75 per cent. to 7·57 per cent., diseases of the respiratory system from 75·07 per cent. to 18·05 per cent., diseases of the digestive system from 83·38 per cent. to 17·99 per cent., and diseases of the integumentary system from 28·85 per cent. to 8·22 per cent. Genito-urinary diseases alone maintained the former level, but this exception only emphasises the significance of the other facts.

These statistics, after all allowance has been made for improvements in general hygienic conditions, place it beyond doubt that Mr. Takaki has achieved a success of very large proportions, and one which hereafter will prove to have a far wider range than has yet been demonstrated. It is probable that his theory will require modification; that error of diet will be admitted to occupy the second place instead of the first in the order of causative agents; but the fact will still remain that by a measure initiated by himself, and carried out with all the courage of a strong conviction, he has been able, not only to quell within the sphere of his action a malady which had baffled all the efforts of his predecessors, but he has shown his countrymen how they may fortify themselves against disease in general, and hope for a progressive augmentation of physical development and vigour.

The dietetic theory of the origin of kakké is not a new one, but it has never before been supported by material facts. The majority of observers of the disease have been inclined to attribute its existence to a specific poison which is generated in the soil under certain insanitary conditions of local origin, and finds its way into the human body by means of the atmosphere, and perhaps of the food and drinking water also. There is certainly much in common between kakké and complaints generally recognised as miasmatic, although the former presents no clinical resemblance to ague or its immediate allies. It has been stated without contradiction that kakké is particularly liable to develop in low-lying and ill-drained districts, and under circumstances of overcrowding. It prevails during the hot, rainy season, and is rare in the dry, cold winter months. Its attacks are directed chiefly against male adults in the prime of life, and are very seldom met with before puberty or after the age of forty-five, while the susceptibility appears to be ten times greater in men than in women. New arrivals in a kakké district are especially predisposed, and suffer more severely than the natives and older residents of the place. It is non-contagious; and, lastly, one attack affords no protection against a recurrence. It is, however, distinguished from typical maladies of the malarious group by the absence of febrile disturbance and periodicity, and by the prophylactic and therapeutic inefficacy of arsenic and quinine. Mr. Takaki, indeed, uses the latter fact as a weapon against the miasmatic theory, and says that "if malaria be the cause, quinine

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should have a specific influence over it, while the peasants who are constantly breathing a malarious atmosphere should be more especially attacked by the disease, but there is no positive evidence to this effect." But this argument contains a double fallacy, since it assumes that there is only one kind of miasmatic poison, and that all the various manifestations of malarious disease are necessarily amenable to the same remedy.

If, on the other hand, we endeavour to look upon kakké as a disease of malnutrition, it is not easy to discover any analogy between it and the conditions known to arise from the privation of essential elements of food. The most fatal attacks may occur in subjects of more than average vigour, and, as pointed out ten years ago,[1] and since repeatedly confirmed, anæmia and physical enfeeblement are far from being necessary concomitants. It may also be remarked that the use of a dietary containing a relatively small proportion of nitrogen is not confined to kakké and beri-beri countries, and that in India Europeans under a European scale of diet may suffer severely from beri-beri when living in a district where that complaint is rife amongst the natives. It is of course possible that some of these facts are open to a different explanation, and that others may be contradicted altogether when new information is forthcoming, but for the present the weight of evidence is still in favour of the miasmatic hypothesis. We may, however, regard it as proved by the extraordinary results of the naval experiment that an imperfectly nitrogenised food exerts an especially powerful influence upon the prevalence and intensity of the disease, and that the system may be strengthened against attacks by a diet scale constructed in accordance with European theories of nutrition.

Since the study of bacteriology has gained ground, many observers have looked for a solution of the mystery in the detection of a specific micro-organism in the blood and tissues of affected subjects, and already a claim to success in the research has been advanced by two physicians, Dr. Wallace Taylor of Osaka, and Dr. M. Ogata, of the Tokio University. Dr. Taylor (Transactions of the *Sei-I-Kwai*, August, 1885) states that he has found in the blood and urine of persons suffering from kakké, and also in the soil and canal water of infected districts, and in the rice used as food, a spirillum by means of which after cultivation and inoculation he has been able to produce the symptoms of kakké in the hare, monkey, and rabbit. He finds, moreover, that the organism is not destroyed either in the process of cooking the rice with which it is associated, or by the digestive secretions after it has entered the alimentary canal. Dr. Ogata, after a similar course of investigation, has described a specific kakké bacterium in the blood, and asserts that he has succeeded in conveying the disease to monkeys, dogs, rabbits, and pigeons by inoculation, and to monkeys and dogs by simple admixture of the virus with the food. He has also extracted from the blood of persons who have died from the complaint an acid substance which, by inoculation, induces in the rat a train of paralytic symptoms like those of kakké.

These observations, supported as they are by similar discoveries at the hands of investigators of beri-beri in other countries, are highly suggestive; but until the experiments are reported in greater detail, it will be impossible to judge as to their freedom from sources of fallacy, or to see how far the differences between the two sets of results are capable of reconciliation. It is especially necessary that we should know upon what evidence the two pathologists have assumed that the symptoms caused by the inoculation of the germ into the lower animals are identical with those of kakké in man, for a mere superficial resemblance would be quite inconclusive. Dr. Taylor's discovery of the beri-beri spirillum in canal water and rice, taken in conjunction with Dr. Ogata's assertion that in dogs the virus is efficient when merely swallowed with the food, would lead us to think that the disease must prevail amongst the canine race independently of the intervention of the bacteriologist but it is not known that this is the case.

In conclusion, we may be allowed to remark that neither the etiology nor the intimate pathology of kakké has been removed from the stage of speculation. The necessary inquiry into the conditions under which the complaint is developed in various parts of Japan have not yet been sufficiently carried out, and the pathological researches are in need of confirmation and extension. The problem, however, has been attacked with good will and intelligence from two sides, and Mr. Takaki may already be congratulated upon the magnificent and unassailable results attained by his dietetic experiments, results which alone are sufficient to entitle him to the gratitude of his countrymen and the esteem of his profession.

For the benefit of those who are interested in the subject, a list, arranged in chronological order, is appended of the literature at present accessible to Europeans with respect to kakké:—1. "Kakké," by Dr. Hoffmann of the Imperial Medical College in Tokio, published in the Transactions of the Deutsche Gesellschaft für Natur und Völkerkunde Ostasiens, July, 1873. 2. "Kakké," by William Anderson, F.R.C.S., St. Thomas's Hospital Reports, vol. vii., New Series, 1876. 3. "Klinische Untersuchungen über die Japanische varitäl der Beri-beri Krankheit," by A. Wernich, M.D., Virchow's *Archives*, 1877. 4. "Lectures on Kakké," by William Anderson, Yokohama, 1879. 5. "Beri-beri, or the Kakké of Japan," by Duane B. Simmonds, M.D., Medical Reports of the Imperial Maritime Customs of China, 1880. 6. "Beri-beri, or the Kakké of Japan," by Stewart Eldridge, M.D., *Pacific Medical and Surgical Journal*, Dec. 1830, and Jan. 1881. 7. "Die Japanische Kakké (Beri-beri)," by B. Scheube, M.D., *Deutsche Archives f. Klin. Med.*, 1882. 8. "Kakké," by Theobald A. Palm, M.D., *Edinburgh Clin. and Path. Journal*, Sept. and Oct. 1884. 9. "On the Cause and Prevention of Kakké," by K. Takaki, F.R.C.S., *Sei-I-Kwai Medical Journal*, April, 1885. 10. "Pathology of Kakké," by Wallace Taylor, M.D., *Sei-I-Kwai Medical Journal*, Aug. 1885. 11. "Kakké amongst the Japanese Maritime Prisoners," by K. Takaki, F.R.C.S., *Sei-I-Kwai Medical Journal*, April, 1886. 12. "The Circulation in Kakké," by Wallace Taylor, M.D., *Sei-I-Kwai Medical Journal*, July, 1886. 14. "First and Second Special Reports upon the Improvement in the Scale of Diet in the Imperial Japanese Navy," 1887. 14. "Special Reports on Kakké in the Imperial Japanese Navy," *Sei-I-Kwai Medical Journal*, April and May, 1887.

[1] On Kakké, St. Thomas's Hospital Reports, 1876.

ETIOLOGY OF SCARLET FEVER.

AT the meeting of the Edinburgh Medico-Chirurgical Society held on July 20th, for the discussion upon Scarlatina, T. Grainger Stewart, M.D., President, in the chair, an interim report of the committee appointed to inquire into the results obtained by Mr. Edington in his research upon the Etiology of Scarlatina was read as follows:—

"Your committee reports that, in accordance with instructions received, an inquiry and experimental investigation has been commenced with regard to the results obtained by Mr. Edington, M.B., and published in his paper entitled 'An Investigation into the Nature of the Contagium of Scarlet Fever.' It will be evident to the Society that sufficient time has not yet elapsed for your committee to have formed a definite opinion upon the intricate and important issues raised; many of the experiments are still in progress, while the number completed is too limited to warrant a distinct conclusion. Before detailing the lines adopted in the inquiry, the committee has to record its appreciation of the courteous co-operation of Mr. Edington in supplying information and affording facilities for the furtherance of the work. So far as your committee has been able to judge from inquiry and observation, Mr. Edington appears to have followed carefully the recognised methods of bacteriological investigation, and to have observed the precautions necessary to ensure accuracy in his laboratory work. Evidence has, moreover, been afforded of the large amount of laborious and long-continued work which his research has involved. While it is impossible in the meantime to report definite results, it appears desirable that the Society should be made acquainted with the general line adopted in the inquiry. This has included the consideration of the following points among others:—1. A preliminary inquiry with the object of defining accurately the conditions observed by Mr. Edington in his research. 2. An inquiry into the characteristics and the specific value of the several organisms which Mr. Edington has separated and described, with inoculation experiments on healthy animals. 3. The repetition of Mr. Edington's observations, including the microscopical examination of scarlatinal blood and desquamation, cultivation experiments with the same materials, and a collateral series of observations on the healthy subject to

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control the results obtained. In the further prosecution of the inquiry, the committee will be much helped by the co-operation of the members of the Society, in giving them access to early cases of the disease suitable for experimental investigation; especially to such as are in the earliest stages of the fever, or such as may be deemed to be in the period of incubation.—On behalf of the committee,

"(Signed) T. GRAINGER STEWART, convener."

In the absence of Dr. Brakenridge, who was expected to have opened the discussion, the President called upon Dr. Jamieson to do so.

Dr. Allan Jamieson described the general characters of the recent epidemic in Edinburgh, which, although it has been very extensive, has not been of a very virulent type. Accurate observations have been made at the City Fever Hospital with regard to the incidence and relative intensity of the several symptoms and complications of the disease. It is found that nephritis is commoner in cases of distinct milk infection than in those where infection is derived from other sources. The temperature reaches its maximum on the second or third day of the disease, and desquamation, which is invariably present, commences from the fourth to the sixteenth day, on the tenth in the majority of cases. Desquamation is usually profuse after a well-marked rash, but this association is not invariable. As regards complications of the disease, out of two hundred cases specially recorded, thirteen had rheumatism, thirteen glandular enlargements in the neck, seven nephritis, four diphtheritic sore-throat, and four inflammations of the ear. The primary sore-throat always precedes the occurrence of the rash. In speaking of the etiology of the disease, it must be noted with what great rapidity the contagium can multiply; in this, however, it does not equal the contagium of typhoid fever. The disappearance of the bacillus from the blood at an early stage, as seen by Mr. Edington, is the most natural thing to be expected of it, when it has exhausted the papulum suitable for its maintenance at the crisis of the disease; such behaviour on its part is quite comparable to that of the embryos of filaria. In the treatment, boroglyceride is applied to the throat, and antiseptic mouth washes are used. Warm baths are also employed throughout the treatment, the bath being wheeled to the bedside and the patient placed in it and lifted out again without any change in his posture. Salicin acts efficiently in alleviating the rheumatic complications, and cotton wool, iodine, and iodide of potassium in checking and causing resolution in the cervical glandular enlargements. In the matter of prophylaxis, Dr. Jamieson was not desirous of claiming originality in drawing attention to the treatment by inunction. The method was an old one, but what he did draw attention to as of importance was that the antiseptic should be applied all through the disease, so that the spores of the causative organism, which he believed were deposited in the deep layers of the rete Malpighii, might be destroyed and prevented from ripening in the epidermis, and thus becoming a source of infection. A very important point is the frequent washing of the scalp with carbolic lotion, as the branny scales from this region are specially dangerous as a source of infection. During the recent epidemic there had been 500 cases in the hospital, and they had experienced a mortality of 3·6 per cent. among these patients.

Mr. Edington gave further information than was published in his original paper, as to the size, character, and method of growth of the bacillus separated by him, and described as the cause of scarlatina. Its length, which had been understated, varies from 2·5 to 4·5 μ. In a series of subcultures there is a marked increase in its rate of growth, specially if these subcultures be plate cultivations. In regard to the appearance of the bacillus in the skin not earlier than the twenty-first day, there was no doubt of the fact; and the large number of cases where it had been sought for earlier without result were sufficiently extensive control experiments, the absence of which had furnished ground for some criticism. He showed the appearance of a colony from a plate cultivation by a photographic transparency and the oxy-hydrogen light.

Dr. Foulis traced very carefully the history of the Edinburgh epidemic, and showed that of 597 cases of scarlatina in the month of February 200 cases had received their milk supply from eleven dairies, all of which obtained milk from farms supplying 120 gallons per diem, where there was a distinct source of contamination in the form of severe cases of the disease. A chart thrown upon the screen with the lime-light gave interesting evidence upon this point, showing the localities specially affected in the outbreak. Dr. Foulis urged strongly the necessity of compulsory notification of disease in rural as well as in urban districts, as the only way of preventing such outbreaks.

Mr. Hare spoke of the ways in which a milk supply may become a source of infection. That direct contamination from the human subject was one method was placed beyond reasonable doubt by the Transactions of the International Medical Congress in 1881. These records, however, showed certain cases, no less than five epidemics out of the sixteen described, where the human origin of the infection was not clearly established, and where other factors might be at work. But it was the recent work of Mr. Power and Dr. Klein which had rendered it all but certain that in some cases at least the infection was of bovine origin. The speaker then gave a *résumé* of Mr. Power's paper and of Dr. Klein's experimental results, and demonstrated a series of cultivation and microscopical specimens illustrating Dr. Klein's work, and lent by him for that purpose. He also referred to the question of disinfecting milk by heat, speaking of the difficulties experienced by bacteriologists in rendering it sterile for experimental purposes, and the degree of heat necessary to do so. If the contagium of scarlatina has as low a death temperature as that described by Klein, this difficulty would be obviated; but in any case the only efficient method to employ was to prevent infection at the source of milk supply, and not to attempt its destruction when conveyed to the consumers.

(To be concluded.)

THE HYDROPHOBIA QUESTION.

M. LUTAUD, the editor of the *Paris Journal de Médecine* and author of a severely critical work ("M. Pasteur et la Rage") upon the Pasteurian treatment of hydrophobia, delivered a lecture on this subject on Wednesday last at Prince's Hall, Piccadilly, Lord Henry Bruce, M.P., in the chair. The lecture was delivered in English before an audience of about 200 ladies and gentlemen. M. Lutaud commenced by criticising the report of the English Commission, which he characterised as confused and inconclusive. He pointed out that the comparison made in that report between vaccination and Pasteur's method was incorrect, seeing that the former was prophylactic and the latter alleged to be curative. The Commission had personally inquired into 90 cases treated by M. Pasteur, but only 24 of these were said to have been bitten by undoubtedly rabid dogs, so that the 8 fatal cases in this number were far in excess of the usual proportion of fatalities in cases of bites of rabid dogs—viz., 5 per cent. The report had reckoned that of the 2682 cases treated at the Pasteur Institute the mortality should have been 130 instead of 40, but it ought to have been stated that only 233 of the cases were found to have been bitten by rabid animals, which should have given only a mortality of 15 if untreated. M. Lutaud contended that the Pasteurian method had increased the mortality instead of diminishing it. Before its adoption the annual average mortality in France was 30. In England and Wales the average is 43, in Austria 12, whereas in Germany for the past two years not a single case has occurred. The actual mortality in France during 1886 was 42, of which 25 had been treated by Pasteur. The introduction of the "intensive method" was alleged to have been the cause of 9 of these fatalities from paralytic rabies, and the two English cases mentioned in the Commissioner's report were detailed. M. Lutaud firmly believes that had the man been promptly treated in England before being sent to Paris, he would have been still alive; and the other case—in which the cause of death was said to be pneumonia,—was, he felt convinced, one of paralytic rabies, of which pneumonia is a feature. He concluded that the intensive method was responsible for these fatalities. Professor Horsley's experiments were inconclusive; and, indeed, all experiments where the protective inoculation is practised *before* the introduction of the virus direct, are not comparable in their results with the practice on the human subject, where the inoculation is performed *after* the virus has been introduced. The report of the English Commission had been welcomed by Pasteur's adherents as a favourable support to their views, but yet the Commission did not venture to suggest the free adoption of the method,

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and to advocate the foundation of a Pasteur Institute in England. Their conclusion in favour of increased police regulation was not based on the results of Professor Horsley's experiments, but on the dictates of common sense. The lecturer solemnly declared that M. Pasteur's method was based on inaccurate experiments and fallacious conclusions, and that the method must be condemned in the interests of humanity and of science. The lecture, which was clear and concise, was frequently applauded, and a vote of thanks was heartily accorded to M. Lutaud and the chairman.

THE HOSPITAL SUNDAY FUND.

ON the 25th inst. a meeting of the Council of the Hospital Sunday Fund was held at the Mansion House to receive the report of the Committee of Distribution. The Lord Mayor presided, and among those present were Sir Sydney Waterlow, Sir J. Risdon Bennett, Dr. Sedgwick Saunders, the Rev. Canon Nisbet, Mr. Joseph Fry, &c. The total amount received this year was only a few hundreds less than that realised in 1886. The report stated that the committee recommended the payment of awards to 158 institutions, being an increase of 4 since last year, and of 53 since the first awards were made in 1873. The total amount available for distribution, after allowing sufficiently for liabilities and the usual current expenses, was £39,125. Of this, the sum of £37,525 was recommended to 108 hospitals and 50 dispensaries. Four per cent. of the total collected—viz., £1600—was set apart to purchase surgical appliances. The following were the principal awards:—Charing-cross Hospital, £939 11*s.* 8*d.*; King's College Hospital, £1354 3*s.* 4*d.*; London Hospital, £3333 6*s.* 8*d.*; Royal Free Hospital, £885 8*s.* 4*d.*; St. George's, £1875; St. Mary's, £1822 18*s.* 4*d.*; Middlesex Hospital, £1979 3*s.* 4*d.*; University College Hospital, £1510 8*s.* 4*d.*; Westminster Hospital, £987 10*s.*; Hospital for Consumption, Brompton, £1675; and Hospital for Sick Children, Great Ormond-street, £729 3*s.* 4*d.*

Sir Sydney Waterlow, in moving the adoption of the report and the payment of the awards, expressed the gratitude of the Council to the public for the increased contributions which had been given to the fund this year, especially considering the very numerous demands which had been made everywhere in this Jubilee Year. He proposed to ask the Council to authorise the distribution of £1100 more than last year. That sum would enable them to distribute on the basis of last year, although they had to include this year four more institutions, making a total of 158, among which the money had to be divided. They had also to set aside a sum of £1600 for surgical appliances, and it was gratifying to know that in this branch 1450 cases were relieved last year, at an average cost of just over £1 a case.

Mr. Joseph Fry seconded the motion, which was carried unanimously.

Resolutions were afterwards adopted conveying the thanks of the meeting to the chairman and other members of the Distribution Committee for the great labour they had undertaken, to the Lord Mayor for presiding over the Council, to the Duke of Cambridge and other noblemen and gentlemen for pleading the cause of hospitals during "Hospital Week," and to the editors of newspapers and other members of the press who had given valuable assistance.

TESTIMONIAL.—An illuminated address, with silver bowl and candlesticks of the value of £70, and a purse of 100 guineas, have recently been presented by Sir Lionel Darell, Bart., to Mr. Thomas Watts, of Frampton-on-Severn, on behalf of his old friends and patients, "as a testimony of their high regard and esteem for him personally, and in recognition of his kind and skilful attention to all who have been the subjects of his professional care during his practice amongst them for upwards of forty years." It is interesting, in relation to this, to recall the fact that nearly fifty years ago Mr. Watts's father, who then held the same practice, had given to him a complete silver tea service, and that on his death, a few years later, a sum of £300 was subscribed to found a "Watts" prize at the Medical Benevolent College. It would be pleasant indeed to believe that characteristics so helpful and so honourable to patients and doctors alike might be considered as capable of hereditary transmission and contagious extension.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

The Sanitary Condition of Cranbrook, by Dr. AIRY.—Cranbrook, in Kent, is the centre of a rural sanitary district which is essentially uninteresting from a sanitary point of view, except in so far as it has long been in a neglected state. Dr. Airy's report tells of watercourses polluted with accumulations of offensive filth, sewers broken and riddled with rat-holes, wells of doubtful purity, and such-like matters. Some of the sewage arrangements that have been contrived often cause nuisance at the outfalls; and at Frittenden a prevalence of enteric fever in 1886 was associated with excremental nuisances and polluted drinking water. But the worst of all is the fact that, notwithstanding these circumstances, Dr. Airy gathers, as the result of his conferences with the local people, that, so far as Cranbrook itself is concerned, there is very little hope of any thorough remedy being applied. Unfortunately there is throughout the district a great unwillingness to incur any expense which will show itself in the form of a sanitary rate, and so far such work as scavenging, &c., is alone to be hoped for. There are many people who, seeking rest and health, turn to Kent as the "garden of England." They had better direct their steps to such parts of the county where obvious conditions of ill-health do not prevail.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5980 births and 3937 deaths were registered during the week ending July 23rd. The annual rate of mortality in these towns, which had increased in the preceding four weeks from 17·6 to 20·7, further rose last week to 22·2. During the first three weeks of the current quarter the death-rate in these towns averaged 20·8 per 1000, and was 0·4 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 11·7 in Derby, 13·2 in Portsmouth, 14·3 in Blackburn, and 15·0 in Brighton. The rates in the other towns ranged upwards to 24·9 in Newcastle-upon-Tyne, 27·2 in Birkenhead, 32·4 in Leicester, and 36·7 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 486, 673, and 880 in the preceding three weeks, further rose last week to 1173, owing to the increased mortality from diarrhœa; they included 800 from diarrhœa, 162 from whooping-cough, 100 from measles, 54 from scarlet fever, 29 from diphtheria, 27 from "fever" (principally enteric), and only one from small-pox. These zymotic diseases caused the lowest death-rates last week in Halifax, Derby, and Brighton, and the highest rates in Leeds, Preston, and Leicester. The highest death-rates from diarrhœa occurred in Nottingham, Liverpool, London, Leeds, Preston, and Leicester; from whooping-cough in Bradford, Bolton, and Birkenhead; from measles in Manchester and Birkenhead; from scarlet fever in Blackburn; and from "fever" in Preston. Of the 29 deaths from diphtheria in the twenty-eight towns, 24 occurred in London. Small-pox caused 1 death in Sheffield, but not one in Greater London, or in any of the twenty-six other large provincial towns. No case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The mortality from diarrhœa did not considerably exceed the average for the season. The deaths referred to diseases of the respiratory organs in London, which had been 199, 189, and 188 in the preceding three weeks, further declined last week to 174, and were 19 below the corrected average. The causes of 80, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Salford, Brighton, Bolton, Blackburn, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sheffield, and Bradford.

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HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·8 and 19·5 per 1000 in the preceding two weeks, further rose to 20·9 in the week ending July 23rd; this rate, however, was 1·3 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 18·7 and 19·1 in Edinburgh and Aberdeen, to 23·1 in Paisley and 23·7 in Dundee. The 523 deaths in the eight towns last week showed a further increase of 36 upon the numbers in the preceding two weeks, and included 39 which were referred to diarrhœa, 37 to whooping-cough, 9 to "fever" (typhus, enteric, or simple), 8 to diphtheria, 5 to scarlet fever, 5 to measles, and not one to small-pox; in all, 103 deaths resulted from these principal zymotic diseases, against 84 and 93 in the preceding two weeks. These 103 deaths were equal to an annual rate of 4·1 per 1000, which was 2·6 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had increased in the previous four weeks from 10 to 30, further rose last week to 39, of which 16 occurred in Glasgow, 6 in Dundee, and 6 in Paisley. The deaths from whooping-cough, which had been 46 and 43 in the preceding two weeks, further declined last week to 37, and included 14 in Edinburgh, 10 in Glasgow, and 5 in Dundee. The 9 deaths referred to "fever" showed an increase upon the low numbers returned in recent weeks; 5 occurred in Glasgow, 2 in Edinburgh, 1 in Aberdeen, and 1 in Leith. The fatal cases of diphtheria were also more numerous, and included 2 in Edinburgh and 2 in Leith. The 5 deaths from scarlet fever were fewer than in any recent week; 4 were returned in Dundee. Three of the 5 deaths from measles occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 80, 76, and 65 in the previous three weeks, rose again last week to 77, and were 10 above the number returned in the corresponding week of last year. The causes of 74, or more than 14 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 26·6 and 27·9 per 1000 in the preceding two weeks, further rose to 29·9 in the week ending July 23rd. During the first three weeks of the current quarter the death-rate in the city averaged 28·1 per 1000, the mean rate during the same period being but 22·1 in London and 19·1 in Edinburgh. The 202 deaths in Dublin last week showed a further increase of 13 upon the numbers returned in the previous two weeks; they included 21 which were referred to measles, 21 to diarrhœa, 3 to whooping-cough, 2 to "fever" (typhus, enteric, or simple), 1 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 47 and 45 in the preceding two weeks, rose last week to 48, and exceeded the number returned in any previous week of this year; they were equal to an annual rate of 7·1 per 1000, the rates from the same diseases being 8·5 in London, and 4·2 in Edinburgh. The fatal cases of measles, which had been 36 and 28 in the previous two weeks, further declined last week to 21. The deaths attributed to diarrhœa, on the other hand, rose to 21, from 8 and 12 in the preceding two weeks. The deaths from the other zymotic diseases did not materially differ from the numbers in recent weeks. The deaths of infants exceeded the number returned in any previous week of this year, and the deaths of elderly persons also showed a marked increase. Two inquest cases and 2 deaths from violence were registered; and 49, or nearly a quarter, of the deaths occurred in public institutions. The causes of 27, or nearly that 13 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Army.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Staff Surgeon [illegible] has been placed on the retired list of his rank (dated July 19th, 1887).

The following appointment has been made:—Surgeon [illegible] Veasey, to the *President*, for temporary service (dated August 2nd, 1887).

Correspondence.

"Audi alteram partem."

DISEASE AND MEDICAL ATTENDANCE IN WORKHOUSES.

To the Editors of THE LANCET.

SIRS,—A leader in last week's LANCET refers to an inquest held on the body of a patient, who died in the infirmary, St. George's-in-the-East, and, as one or two points in the account of the inquest require further elucidation, I trust you will grant me space for that purpose, and also to comment briefly on the article.

After the patient was admitted to the workhouse, she was warded amongst the aged and infirm, and the ward she occupied was under the supervision of a paid nurse both by day and night. During the night she got out of bed and fell near the fireplace, with her left arm on the fender. Of course there was no fire in the grate. The patient did not appear to be injured by the fall, and after being put back in bed another inmate sat by her side, and the nurse visited the ward from time to time as usual. In the morning when I saw her, she was quite able to walk about, and did not think anything of the injury, which was simply a bruise of the left arm, and not one private patient in a thousand would have called a medical man in the night to see it. As her mind was becoming affected she was removed to the infirmary, when an attack of acute senile mania supervened, and she died. During her residence in the infirmary she was seen at least twice daily by the medical officer or myself, and the former left the infirmary only two days before she died. The relative who called to inquire after her on the Monday was not allowed to see her, as I did not think it desirable for him to do so in the state of mind she was then in, and she had been visited by friends on the previous day. He, however, put too hopeful a construction on my words when he stated that I said she would be all right in a few days.

I do not see that this case affords an illustration of any want of care or attention. Had she been injured by the fall a message would have been sent immediately to the medical officer.

I will now turn to the question of additional medical advice for the inmates of Poor-law institutions, and, at the very outset, beg to express my opinion that the inmates of these institutions receive far more medical aid than most people do at their own homes, and who pay for it. You allow that we are capable men and incapable of any unkindness, but at the same time you think that another opinion might be provided by some means or another. Respecting our capabilities, I think I may say, and without fear of being considered guilty of boasting, that we are quite equal to the average medical man. For Poor-law appointments there is no lack of good candidates, and usually, though perhaps not always, the best are elected. As regards the advisability of providing further medical advice for the recipients of parochial relief, I must say that I think it a question open for discussion. I should be very sorry to stand in the way of anyone from receiving the best medical or surgical advice in a serious illness. It might be argued, and argued with very great force, that medical officers of Poor-law institutions are men of very considerable professional attainments, and fully capable of treating all cases that come under their charge. Again, in London many of the patients in workhouse infirmaries have previously derived all the benefit they can from treatment at hospitals; and should any patient require operative treatment the medical officer does not care to undertake, he can transfer the case to a hospital. Of course, consultants might be appointed, whose advice and assistance should be available when required, and for which they should receive appropriate remuneration. It would never do to allow inmates and their friends to call in medical men when they wished; such a system would upset the working of any institution, and assuredly a medical officer's berth is not such a bed of roses that anyone would wish to make it more unpleasant. We certainly might have some additional help, and I believe it would be found to answer best if given by the appointment of more junior officers. Such assistance would be an advantage to both medical officers and patients, and would

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be a means of gaining experience in fields of practice particularly useful to recently qualified medical men.

During the past fifteen years or so great strides have been made in medicine and surgery, but I believe in no departments have there been more improvements than in the medical administration of our Poor-law institutions.

I am, Sirs, yours faithfully,

July 26th, 1887. ARTHUR FFLINTOFF MICKLE, M.B.

"SUBSTANTIVE *VERSUS* HONORARY RANK."

To the Editors of THE LANCET.

SIRS,—So many sensible letters, supported by your favourable comments, have appeared in THE LANCET against honorary rank for medical officers in the army, that nothing more seemed necessary to be said. Having, however, just heard from a friend that a medical contemporary supports the idea of honorary rank, and teems with letters in favour of it, I venture to suggest that the wishes of the majority of medical officers are not represented by these letters. Naturally, those wanting honorary rank write; while the contented ones remain, as a rule, quiet. But there is, I believe, no doubt that, if there were any danger of honorary rank being given to us, a large majority of the medical staff and of the Indian Medical Service would support Mr. Stanhope's statement in the House of Commons, that they had no wish for "titles so dissociated from the duties of their honourable profession," and would protest in the words of your correspondent, "Army Surgeon," against becoming "the laughing stock of the army."

I am, Sirs, yours faithfully,

S. L. DOBIE,
Surgeon-Major, 4th Madras Cavalry.

Kamptee, India, July 3rd, 1887.

VAGINAL HYSTERECTOMY.

To the Editors of THE LANCET.

SIRS,—Dr. Braithwaite's interesting paper in your issue of July 23rd contains much controversial matter. I would first congratulate him on his success, and then, briefly as possible, touch on certain of his statements as regards the best method of operating. Not having a copy of THE LANCET before me at the time of writing, I must rely on my memory, which I trust will be found accurate.

Dr. Braithwaite disapproves of the use of instruments for checking hæmorrhage from the vessels in the broad ligament, and deprecates any attempt to secure them without retroverting the uterus. My experience is quite opposed to this, and having operated on two cases, and seen a few others done, I have no hesitation in saying that with the use of properly-shaped strong forcipressure forceps with a firm catch the operation is materially shortened and bleeding quite safely controlled. In my cases the body and fundus were large, hence the broad ligaments were of a greater vertical depth, and my forceps would only clamp their lower two-thirds; but when the body is of the normal size the forceps act admirably, and the operation is less difficult. With these instruments there is no fear of any slipping of ligatures or risk of secondary hæmorrhage from their ulcerating through the coats of the vessels. Dr. Braithwaite disapproves of the use of sponges. I can only say that in my last case, which made an admirable recovery, and which was a case of cervical cancer complicated with pregnancy, I found that a soft flat sponge, folded, with a strong carbolised silk ligature tied round its middle and introduced into Douglas's cavity, was an excellent means of absorbing the blood which came from the uterine side after separating the uterus. When removed at the end of the operation, it brings the peritoneal and mucous surfaces outwards and into contact, and they soon unite; hence, in my view, as in that of many others, there is no need for suturing these surfaces. A large drainage tube with capacious holes should be inserted for a couple of days, and syringing commenced at the end of twenty-four hours, and done at least three times daily or oftener according to the amount and condition of discharge. This is very important. Dr. Braithwaite seems to contradict himself with reference to the propriety of first removing the diseased cervix. Unless the mass be large there is no need for this, as the peritoneum need not be infected in the operation with forceps, but in retro- or ante-version with ligature it may be. There are other points in the operation which I must leave to another occasion, but I feel sure Dr. Braithwaite will agree with me when I say that in the interest of patients I wish he had insisted that no one should attempt the operation without having practised it on the cadaver a few times, and without having seen it done on the living.

With regard to the indications for the operation, its mortality, and its comparison with supra-vaginal excision of the cervix, I am compelled by the most recent information to differ from him and other writers on the subject. On the matter of so-called recurrence, which really means an incomplete operation, we must all wait for time to decide as regards total extirpation; but as Schroeder's cervical excision is at best but a partial operation, and has a mortality of at the best 7 per cent., and an all-round mortality several points higher, and as recurrences have been too frequent, I think every careful surgeon would agree that the mortality is far too high for any partial proceeding, and the recurrence is what he would expect. Now, the most recent mortality results of the complete operation are *nil*—i.e., that two operators have had a series of fifteen or twenty cases without a death,—and I see no reason why experienced operators should not obtain similar results in this country; but even if the expert and all-round mortality were, with recent improved modes of operating, equal to the best results of Schroeder's operation, I should elect the complete operation, as in properly previously examined cases and those proper for the method there is far greater prospect of a permanent cure by the radical plan. To take the pathology of Ruge and Veit (which is some years old, and needs confirmation) as a basis on which to select an operation can only lead to disappointment, for we hardly ever see cases early enough to feel at all sure that we can get well above the disease; and even if it were proved to demonstration that cancer of the vaginal portion always spreads outwards to the lymphatics in the broad ligament, and rarely, or never, upwards along the canal, I hold that the complete operation would enable us to well remove the diseased parts of the broad ligaments in cases which are not too far advanced for any operation. In those extremely rare cases which are seen early enough for Schroeder's operation, there can be no comparison between it and the complete one, for these rare cases are suitable for the former and not for the latter; but in the majority of cases, as we first see them, Schroeder's operation, with its high mortality and frequent recurrence (through incompleteness) is, in my opinion, out of court. The ordinary amputation of the cervix by the écraseur and other means is only admissible in cases of papilloma, and even these have been known to return. So that in dealing with ordinary cases of cancer as we see them, whether of the vaginal portion, cervical canal, or body, it seems to me that elytro-hysterectomy is the best proceeding.—I am, Sirs, yours truly,

Grosvenor-street, W., July, 1887. H. A. REEVES.

THE THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—At a meeting held last Friday by the kind permission of Dr. Milner Fothergill at his house, the following gentlemen were elected as Executive Council of the above Society, with power to add to their number:—Dr. Milner Fothergill, M.R.C.P.L.; Mr. Haward, F.R.C.S. Eng.; Dr. Stretch Dowse, F.R.C.P.E.; Dr. Prosser James, M.R.C.P.L.; Dr. Saundby, F.R.C.P.L.; Dr. Campbell; and Dr. Illingworth.

A discussion arose, after the reading of a paper on the advantages of this Society, as to the admission as members of *all* registered general practitioners; and it was finally decided that, as the basis of the Society was to be distinctly "unsectarianism," the following should be the rule for eligibility for admission: "That all qualified medical practitioners shall be eligible for membership provided that they have not already avowedly pledged themselves to any exclusive line of therapeutics." If all gentlemen, therefore, who have already sent in their names for membership, who cannot agree to this rule, will kindly write me a card withdrawing from the Society, I shall be much obliged; at the same time I trust that they will be "few and far between." It was felt by the Council that as an "unsectarian" Society it would be destructive to admit as members any holding strongly biased views with regard to therapeutics. This Society is founded for "investigation of all methods of medical treatment now existing, or which may afterwards be introduced," and therefore it stands as a reasonable pro-

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position that its members should be "from bias free of every kind." It was also unanimously decided that, subject to this rule, ladies who are upon our Medical Register should be enrolled as members, and it was with much pleasure that I handed in the names of Mrs. Garrett Anderson, M.D., and Mrs. Marshall, M.D. There can be no possible objection to the presence of ladies at a Therapeutical Society, and it is a step in the right direction to admit them as a privilege due to their degrees.

Now that the Society is launched, it only remains for medical men, by joining as members, to make it a success. The subscription is placed at 10*s.* 6*d.* at present, but it was decided to raise this after the first 300 names have been sent in. The journal, of course, will not be included in the subscription, a special charge being made for it. The first meeting will take place in October, and the Council trusts that this Society will not be looked upon as a mere metropolitan one, but literally the Therapeutical Society of Great Britain. It will then take its place amongst the older societies as one of the most useful, because of its essentially practical nature.

Thanking you again for the use of your valuable columns,
I remain, Sirs, yours faithfully,

July, 1887. A. GEORGE BATEMAN, M.B., Hon. Sec.

ON THE USE OF THE THERMOPILE AND SECONDARY BATTERIES.

To the Editors of THE LANCET.

SIRS,—Messrs. Coxeter have, at my suggestion, obtained from Prague the thermopile mentioned by Professor Ogston in an article published in THE LANCET on April 30th, p. 867. The thermopile itself has, when acting properly, an electro-motive force of from four to eight volts. The secondary batteries mentioned by Professor Ogston, when charged, have each an electro-motive force of two volts, and the two boxes contain four cells; therefore the whole secondary battery has also an electro-motive force of eight volts. They answer very well for the electric light and for galvano-cautery, and one box (two cells) is quite sufficient to work an induction coil, but they do not possess sufficient power to overcome a high resistance such as is experienced in performing electrolysis. When needles attached to both poles are inserted, for example, into a nævus, no doubt the current strength would be sufficient, for the resistance then experienced is very low; but if only one pole is used for the needle—say, the positive pole,—when every endeavour is made to prevent a slough, and an electrode is attached to the negative pole and placed on some indifferent part of the body, then the electro-motive force is not sufficient to effectually overcome the resistance. If we take the resistance of the body with a needle attached to one pole beneath the skin at 500 ohms, we should only have a current strength of 16 milliampères. In the electrolysis of nævi with the needles attached to one pole we have generally found that we have been obliged to use a current strength of 40 milliampères to produce any destruction of the growth; and, of course, with the electrolysis of uterine fibroids, in which M. Apostoli is said to use a current strength of from 100 to 300 milliampères, the secondary battery, as described by Professor Ogston, would be of very little use. Again, with the employment of the constant current in the treatment of such an affection as sciatica, when both poles are applied to the skin the secondary batteries would give a current strength of about 8 milliampères, and we have found that the best effects are derived from a current of from 10 to 15. It will therefore be seen that for electrolysis and ordinary galvanising it will be more efficacious to still employ primary batteries containing a large number of cells; but for [illegible] lighting, heating small cauteries, and for working [illegible] coils, the secondary batteries, as charged by the thermopile, are, no doubt, "a convenient means of producing electricity for medical and surgical purposes."

I am, Sirs, yours obediently,

W. E. STEAVENSON, M.D. Cantab., M.R.C.P.,
In charge of the Electrical Department at
July, 1887. St. Bartholomew's Hospital.

[illegible] are said to be giving trouble to some [illegible] of Camberwell and its vicinity. A man who [illegible] by these pests thought it necessary to [illegible] at St. Thomas's Hospital.

LIVERPOOL.

(*From our own Correspondent.*)

THE REBUILDING OF THE ROYAL INFIRMARY.

THE removal of the present buildings of the Royal Infirmary and the erection of a new structure on its site are matters of more than local interest. The institution has existed since 1749. The first infirmary, which was erected in that year, was removed in 1836, and replaced by the present structure, which was commenced in 1821 and completed in 1824. The institution, therefore, possesses some antiquarian interest. The present infirmary has afforded clinical instruction to thousands of medical practitioners, past and present, in all parts of the world; while the re-erection of this most important provincial hospital is a matter of interest to all readers of THE LANCET.

THE OLD INFIRMARY.

Proceedings were taken in 1745 to found "an infirmary for the sick and hurt," but a threatened invasion prevented the completion of this, the first medical charity in Liverpool, until four years later. Excellent views are preserved of this building, which was, and must ever remain, memorable as being the scene of Henry Park's first most successful excision of the knee joint. A less creditable circumstance in connexion with this infirmary is that its medical staff constituted an examining board for African surgeons, the name given to the surgeons on board slave ships, for which Liverpool had at that time a most unenviable reputation.

THE PRESENT INFIRMARY.

Partly owing to town improvements, partly to the fact of the old infirmary being inadequate for its purpose, the present one was erected on a site which was then in the eastern suburbs of the town. From the very first its internal arrangements were faulty. As an illustration of this, it may be mentioned that the original plan contained no stairs at all, and these had to be introduced as an after-thought. Since it was first erected the building has been altered, patched up, and added to repeatedly, the result being to create a huge rambling edifice, most inconvenient to everybody connected with it. Still its complete removal will cause a shade of regret to many an old student who may have pleasant recollections of former days spent within its walls.

THE PROPOSED NEW INFIRMARY.

After due deliberation it was decided that the present site should be retained, some additional adjoining ground having been also acquired and added to it. This latter is being rapidly cleared of the old houses which covered it, and the infirmary itself is in process of demolition. Temporary wards have been erected, and additional accommodation provided in the immediate neighbourhood. Mr. Alfred Waterhouse, R.A., the architect, has produced a general design, which will be at once useful and effective, without being unnecessarily ornate. He has selected the dark Liverpool brick for his material, with terra-cotta facings and ornaments, the effect of which, as seen in the recently erected chemical laboratories, is very rich. The executive department will face Pembroke-place (a leading thoroughfare), and contain all the offices, living rooms, and commissariat department. The general plan is that of a long ridge or backbone, this being a general means of access. From one side of this run off three long pavilions; from the other, two towers and a short central pavilion, by means of which last communication is effected with the executive department. The chief features of the interior will be the use of coloured glazed bricks for the walls, of fireproof cement covered with oak parquet for the floors, and of cement ceilings. By this means every portion of each ward will present an impenetrable surface, always capable of easy cleaning. The ventilation will be of the simplest description, reliance being almost entirely placed upon the windows. The wards will be heated partly by steam coils and partly by central open fireplaces, so as to combine the advantages of both systems. The supervision of the drainage has been handed over to the special care of Mr. Rogers Field, a guarantee in itself that this important department will be of the most perfect character. The members of the Building Committee have spared no pains to ensure the success of the new building. They have visited the more recent hospitals to obtain all possible information on the

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most modern questions, and have had the active and hearty co-operation of the medical staff in their labours. Mr. Mitchell Banks has from the very first devoted himself almost unremittingly to the plans and organisation generally, in which Dr. Alexander Davidson has also lent great help. A description of the proposed new building, with a bird's-eye view engraving, are given in the *Building News* of July 1st.

HOSPITAL SUNDAY AND SATURDAY FUND.

The following sums have been awarded by the Hospital Sunday Committee to the various medical charities:—Royal Infirmary, £2187 10*s.*; Royal Southern Hospital, £1312 10*s.*; Northern Hospital, £1137 10*s.*; Dispensaries, £612 10*s.*; District Nursing Society, £612 10*s.*; Ladies' Charity—Lying-in Hospital, £350; Children's Infirmary, £525; Eye and Ear Infirmary, £437 10*s.*; Homœopathic Dispensaries, £175; Hospital for Cancer, £87 10*s.*; Hospital for Consumption and Diseases of the Chest, £262 10*s.*; Stanley Hospital, £437 10*s.*; Dental Hospital, £21 17*s.* 6*d.*; St. George's Hospital, £21 17*s.* 6*d.*; St. Paul's Eye and Ear Infirmary, £131 5*s.*; Convalescent Hospital, Woolton, £175; Hospital for Women, Shaw-street, £175; Home for Incurables, £87 10*s.*: total, £8750. Amongst the list of the institutions that used to be included in the amount voted was the Netherfield-road Hospital. That institution, however, is now under the management of the Corporation, and the Home for Incurables has taken its place in the list. In addition to the amounts mentioned above the committee resolved to pay over to the treasurer of the Hospital for Women, Shaw-street, the amount of £185. That institution shared the Fund for 1886, but which had been held over.

Liverpool, July 26th.

MANCHESTER.

(*From our own Correspondent.*)

THE BRITISH ASSOCIATION.

THE final arrangements in connexion with the approaching meeting of the British Association, to be held here next month, are fast being completed, and it is hoped that it will prove to be one of the most successful gatherings the Association has ever had. The support both of private individuals and of public bodies which is being accorded it bids fair to make this hope fully realised. A guarantee fund of upwards of £10,000 has been raised, conversaziones will be held at the Town Hall and at the Jubilee Exhibitions, and more than a dozen excursions have been arranged for, amongst those who have invited the Association to their seats being the Duke of Devonshire and the Duke of Westminster. The sections, eight in number, into which the work is divided all promise plenty of material for consideration, and the biological section will be of special interest. More than a hundred acceptances have been received from distinguished men from all parts of Europe and America, and it is thought not impossible that the meeting may be graced by the presence of a distinguished member, the Emperor of Brazil, who is at present on a visit to Europe. It is twenty-six years since the last meeting of the Association was held in Manchester.

VOLUNTEER MEDICAL STAFF CORPS.

The first annual inspection of the Manchester division of the Volunteer Medical Staff Corps was held on the 16th inst., when Deputy Surgeon-General A. Bradshaw (the principal medical officer of the northern district) was the inspecting officer, and expressed himself well pleased with the manner in which the men went through the various drills and treated the supposed "cases" on which they had to practise. The enrolled strength of the corps is fifty-eight, and much credit is due to Surgeon Crookwell (who is in command) for the satisfactory manner in which the men acquitted themselves. On the same day the Artillery Volunteers were inspected by Colonel Maclaverty, and two "stretcher detachments" marched past at the rear of the brigade, the latter having recently been through the prescribed ambulance course under the instruction of Drs. Tomkins and Daly, surgeons to the regiment.

OPEN SPACES, ETC.

Mr. Herbert Philips, whose zeal in the matter of open spaces is beyond all praise, is making earnest appeal for more assistance from the well-to-do in furtherance of these objects. The Society of which he is chairman has spent £2000 during the past year in laying out and providing the necessary appliances for gymnasia and recreation grounds in various parts of the city, but, like many other institutions, it is cramped for want of funds. It is gratifying to see that the Corporation are also alive to the importance of this matter, and it is hoped that ere long the large space around St. Michael's church may be utilised much more fully than at present as a playground, &c. The "children's holiday" fund committee have issued their annual appeal for help in sending children out from the slums into the country for a few weeks each. Already this summer some 500 have been thus sent into the surrounding country, and this good work is only limited by the amount of money at disposal.

SCARCITY OF WATER.

The long-continued drought is beginning to assume somewhat serious aspects. Upwards of twenty million gallons of water are required daily for the needs of this great population, and the present quantity in store is running dangerously low. The supply is now cut off between the hours of 8 P.M. and 5 A.M., and economy of consumption is earnestly urged upon everyone. The state of the river Irwell this dry season is giving rise to loud and bitter complaint. The fact is, the stream is little better than an open sewer, and gives off, in places, the most vile smells. Mr. Alderman Walmsley, one of the medical representatives on the Salford Corporation, has addressed some very strong letters to the papers, in which he says the stench in the neighbourhood of the Broughton Cricket-ground is positively dangerous. This is particularly hard on the Salford residents, seeing how much Salford herself has done to prevent the fouling of the river. A boy who recently fell in was rescued from drowning, but died within two days, and a verdict was returned that he died from poisoning, "the effects of the filthy water of the Irwell." *Verb. sap.*

ROYAL INFIRMARY.

The annual meeting of the Royal Infirmary is to be held on the 28th, and in the abstract of the report now issued it is stated that ten years ago each occupied bed cost £74 per annum, whilst in the past year it was only £42. But it is somewhat fallacious to pick out any two years for the purposes of comparison; it would be much better to take, say, the average of the past ten years, since the new management came into operation, and compare it with the average of the preceding ten years. The in-patients under treatment during the past year have been 5308 at the infirmary, 1279 at the convalescent hospital, and 1755 in the fever hospital, the cost per bed at this latter institution still appears to be high even for an infectious hospital.

NEW FEVER HOSPITAL.

The proposal of the Salford Corporation to acquire land at Hope for the erection of a new Fever Hospital in place of the one soon to be removed at Cross-lane, is giving rise to much opposition; and an organised movement to prevent if possible its erection on this site is in progress.

July 28th.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

ACCIDENTS IN NORTHERN MINES.

THE annual reports of the inspectors of mines to the Home Secretary were issued yesterday morning. Mr. James Willis, reporting on the Newcastle-on-Tyne district, which embraces the north part of the county of Durham, the counties of Northumberland and Cumberland, and detached parts of Lancashire, shows that the number of persons employed was 52,643, as against 53,011 in 1885. There had been thirty-six fatal accidents in the course of the year, each occasioning the loss of one life. This is a larger number of fatal accidents than the preceding years, but the loss of life is very much less. Mr. Willis shows that the accident figures compare favourably with those of the United Kingdom. Mr. Thomas Bell, inspector of the Durham district, which embraces South Durham, Westmoreland, and the North Riding of Yorkshire, reports that

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there has been a falling off in the number of persons employed to the extent of 1581. There were seventy-four fatal accidents during the year, fifty-five of them in the coal mines, seventeen at the ironstone, and two in the metalliferous mines. In the previous year there were the same number of fatal accidents, when, however, thirteen occurred in the coal mines, ten at the ironstone, and one in the metalliferous mines. The death-rate was higher in the aggregate than in the preceding year, there having been eighty-three lives lost in the coal mines, seventeen at the ironstone, and two at the metalliferous mines. This increase was due to the explosion at the Elenore pit last December, and if the loss of life from that accident were deducted the death-rate would be the lowest in any year during the continuance of the present Acts.

POISONING BY PHOSPHORUS.

An inquest was held last week in Newcastle on the body of a young married woman, who, after a quarrel, purchased eight boxes of matches and swallowed an infusion she had made of the heads. She never complained for about four days, when, her symptoms becoming acute, Mr. Foggin was called in, and she confessed to the act, surviving nearly seven days.

THE NOTIFICATION OF MEASLES.

At a meeting of the Newcastle Sanitary Committee held last week, it was stated that a serious epidemic of measles at present existed in the city, and after some discussion the following motion was carried by ten votes to five: "That the Council at its next meeting be requested to take the necessary steps for the notification of measles similar to the notification of other infectious diseases."

DEATH OF DR. LUCIUS HOLLAND OF NEWCASTLE.

I regret to announce that another active and well-known practitioner in this city, Dr. Lucius Holland, has fallen out of the ranks. Dr. Holland died at his residence in this city on Tuesday morning last. For a short time he had suffered from sore throat, and had been confined to his house, but within the last few days before his death the affection assumed a very grave and ulcerated appearance, causing his strength to give way rapidly. He was attended by Drs. Scott and Barkus. Dr. Holland, who had nearly reached his forty-fourth year, was born at St. Ives, and was the son of a Presbyterian minister there, he himself being originally destined to enter the same ministry; and he studied at the Theological College of English Presbyterians in London, under the late Dr. Lorimer. Some scruples precluded Dr. Holland from following theology, and he took to medicine, and finished a very distinguished course as a student at Aberdeen, where he graduated, and ultimately became an M.D. He came to Newcastle about twelve or thirteen years ago, and commenced private practice. He was one of the physicians to the Newcastle Infirmary, and had charge of the aural department in that institution, where he also lectured on Aural Surgery. Dr. Holland has left a wife and two young children to mourn their loss.

Newcastle-on-Tyne, July 26th.

DUBLIN.

(*From our own Correspondent.*)

THE DUAL SCHEME BETWEEN THE APOTHECARIES' HALL AND THE COLLEGE OF SURGEONS.

The dual scheme proposed by Sir Charles A. [illegible] of a combination between the Royal College of Surgeons with the Apothecaries' Hall, as well as with the College of Physicians, has become an accomplished fact. The College of Surgeons will appoint two examiners in [illegible], two in Ophthalmic Surgery, two in Anatomy, two in Physiology, one examiner in Midwifery, one in Chemistry, and one in Physics. The Apothecaries' Hall will appoint two examiners in Medicine, two in Pharmacy, two in Materia Medica, two in Forensic Medicine, and Hygiene, one examiner in Midwifery, one in Chemistry, and one in Physics. To qualify as examiners in Medicine and Surgery candidates for those offices must be clinical physicians and surgeons of five years' standing, while the examiners in Midwifery are required to be ex-masters or ex-assistants of Lying-in Hospitals. Each body pays its own examiners and charges its own fee for diploma. It is probable that the Apothecaries' Hall will charge £6 for their diploma. I am in a position to state that the Council of the Royal College of Surgeons have resolved to confer the Honorary Fellowship of their College upon the following gentlemen—viz., Sir G. Macleod (of Scotland), Messrs. C. Macnamara, Heath, and Erichsen (of London).

BRITISH MEDICAL ASSOCIATION: DUBLIN MEETING.

The meeting to be held next week in Dublin is regarded with considerable interest; and as the place is so central and convenient to a large number of the members of the Association, it is expected that it will be well attended. The President-elect will be Dr. Banks, Regius Professor of Physic in the University of Dublin; and there will be an address in Medicine given by Dr. Gairdner; one in Surgery, by Mr. Edward Hamilton; and in Public Medicine, by Rev. S. Haughton. There will be eight sections and two sub-sections—viz., Medicine, Surgery, Obstetric Medicine, Therapeutics and Pharmacology, Pathology, Public Medicine, Psychology, and Ophthalmology; the sub-sections being Otology, Laryngology, and Rhinology. The meetings will take place and the addresses will be delivered in Trinity College. In the Medical Section there will be a special discussion on the different kinds of Aphasia, introduced by Dr. Charlton Bastian. In the Section of Surgery there will be a discussion on the Radical Cure of Hernia. In Obstetric Medicine there will be two subjects for discussion—viz., on the Prevention of Puerperal Fever, and on the Management of Anterior and Posterior Displacements of the Uterus. The special subject for debate in the Section of Therapeutics and Pharmacology will be the Therapeutics of the Uric Acid Diathesis, which will be introduced by Dr. Burney Yeo; in the Section of Pathology, the Pathology of Empyema and the Etiology of Chlorosis; while the subjects for discussion in the Section of Public Medicine include the Influence of Modern Preventive Measures on the Prevalence of Infective Diseases; and How to deal with the Insanitary Property now occupied by Artisans and Labourers. The latter will be introduced by Sir Charles Cameron, medical officer of health for Dublin. The other subjects for discussion will be Nervous Disorders following the use of Anæsthetics, and on Private Treatment *versus* Asylum Treatment, in the Section of Psychology; the Etiology and Treatment of Convergent Concomitant Strabismus, in the Section of Ophthalmology; on Tinnitus Aurium in the Section of Otology; and on Phthisis of the Larynx, and the Reflex Neuroses of the Naso-pharynx, in the Sub-section of Laryngology and Rhinology. Saturday will be, as usual, the day selected for excursions to various places of interest.

DUBLIN MAIN DRAINAGE.

At a meeting of the Corporation of Dublin last Monday, it was moved that a committee should be appointed to inquire into the advisability of dealing with the main drainage question by means of intercepting sewers only, in connexion with some system of purification. Also that the Council sanction an expenditure of a sum of money, not to exceed £200, for the purpose of securing every information as to the working of existing intercepting and purification schemes. It is thought the proposed work can be carried out for £150,000.

OUTBREAK OF MEASLES IN DUBLIN.

This disease being still very prevalent in Dublin, Sir C. Cameron, medical officer of health, in a recent communication, urges the working classes to remove their children to the city hospitals, and also to apply for disinfectants to the authorities.

DUBLIN HOSPITALS BILL.

This Bill, which has been introduced by some of the Nationalist members, has, it is believed, little chance of becoming law. As a contemporary points out, it is intended as an attack on the Richmond Hospital, which has done good work, and I may add it is proposed to utilise the grant of £8000 which the Richmond Hospital at present receives to augment the funds of the Mater Misericordiæ Hospital. The closing of the Lock Hospital—a most valuable institution,—as contemplated by the Bill, and the injury it would inflict, if it became law, on other institutions, will no doubt cause it to be strongly opposed. As the Bill most probably will be blocked, it is not necessary for the present to refer at any considerable length to the subject.

Dublin, July 28th.

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MEMORIAL PORTRAITS OF DR. WILSON FOX.

Second List.

H. R. and I. H. the Duchess of Edinburgh...	£10	10	0
*Dr. Adey, St. Leonards...	2	2	0
Thos. Ashton, Esq.	10	10	0
Dr. Bastian	2	2	0
Dr. Lionel Beale...	2	2	0
Dr. Beddoe Clifton	1	1	0
E. Bell, Esq., Bradford ...	5	0	0
Dr. H. J. Benham	1	1	0
Dr. Bowles, Folkestone ...	2	2	0
Miss Campbell of Garscube	2	0	0
Dr. T. A. Carter...	2	2	0
Dr. J. Chalmers...	1	1	0
Dr. Church	1	1	0
Dr. Sinclair, Coghill... ...	1	1	0
Dr. H. Colgate, Eastbourne	2	2	0
Dr. D. A. Davies, Swansea	0	10	6
Dr. Langdon Down... ...	1	1	0
Sir Dyce Duckworth, M.D.	2	2	0
C. W. Evans, Esq.	0	10	6
Dr. Falls, Bournemouth...	1	1	0
*C. H. Fox, Esq....	10	0	0
*Henry Fox, Esq., and Sisters	10	0	0
*Thomas Fox, Esq.	1	1	0
*Miss S. A. Fox	5	5	0
Dr. Frank	5	5	0
Dr. Henry Green	2	2	0
†Dr. Goodhart	1	1	0
Miss Hammill	1	1	0
Dr. Grally Hewitt	£2	2	0
Mrs. Grally Hewitt	2	2	0
Dr. Hollings	2	2	0
W. D. Howard, Esq. ...	2	2	0
J. E. Howard, Esq.	2	2	0
Dr. J. Hunt...	1	1	0
S. J. Hutchinson, Esq. ...	2	2	0
J. B. Jessett, Esq.	1	1	0
H. W. Kiallmark, Esq. ...	1	1	0
Dr. Wickham Legg	2	2	0
Dr. Madge	1	1	0
Miss Murray-Hickson ...	2	2	0
Dr. Nash	1	1	0
Sir Joseph Pease, Bart. ...	5	5	0
Dr. W. S. Playfair	2	2	0
Dr. Douglas Powell	2	2	0
Dr. Pryce Jones...	2	2	0
R. Quain, Esq.	5	0	0
Dr. W. Rickards...	2	2	0
Dr. Ridge-Jones...	2	2	0
Dr. Siordet	2	2	0
Dr. F. Semon	2	2	0
Dr. Snow, Bournemouth	2	2	0
H. Symonds, Esq., Oxford	1	0	0
Dr. J. Williams...	2	2	0
Dr. Wood	10	10	0
H. Wood, Esq.	10	10	0
Mrs. H. Wood	10	10	0
The Misses Wood	10	10	0
"B. W. W."...	10	0	0
"Friendship"	10	0	0
"A Debt of Gratitude" ...	50	0	0

* For the Replicas. † For the College of Physicians Replica.

W. R. Gowers, M.D., 50, Queen Anne-street; T. Barlow, M.D., 10, Wimpole-street, hon. secs., by whom further contributions will be gratefully received.

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary Comitia of the College of Physicians was held on the 28th inst., Sir W. Jenner, Bart., President, in the chair. The question whether a medical officer to an institution, who had to dispense medicine in that capacity, could be eligible for the Membership of the College was discussed; but no decision was arrived at.

A communication was read from the Home Secretary, conveying Her Majesty's thanks to the College for their address.

A communication was read from the General Medical Council enumerating the titles registrable under the Act of 1886, and it was announced that the list had been amended to include the College licence.

A letter from the Councils of King's College and University College, enclosing a copy of their draft petition to the Crown, was read, and referred to the Committee of Delegates.

On the recommendation of the Council the Baly medal was awarded to Dr. Ferrier.

The reports of the Finance and Library Committees and of the Curators of the Museum were read and adopted.

A report from the Committee of Management, containing recommendations as to the examination in Public Health and other matters relating to the regulations of the Conjoint Board, was read, and after some discussion adopted

The report of the Leprosy Committee was read and adopted, and it was directed to be sent to the Colonial Secretary. The report stated that if leprosy contained elements of contagion, it was not more to be dreaded than syphilis, but that it was desirable that the subject should be again investigated; and it was recommended that the Government should undertake such investigation as the College should direct.

The following Fellows were elected to the undermentioned offices:—Censors: Alfred Baring Garrod, M.D.; John Syer Bristowe, M.D.; James Andrew, M.D.; Peter Wallwork Latham, M.D. Treasurer: Sir Dyce Duckworth, M.D. Registrar: Sir Henry Pitman, M.D. Harveian Librarian: William Munk, M.D. Assistant Registrar: Edward Liveing, M.D. Curators of the Museum: William Wegg, M.D.; Lionel Smith Beale, M.B.; Henry Charlton Bastian, M.D.; John Curnow, M.D.

GUY'S HOSPITAL.—The library of this hospital will be closed on Saturday, the 6th of August, at 3 P.M., and reopened on Monday, August 29th, at 9.30 A.M

Medical News.

SOCIETY OF APOTHECARIES.—The following gentlemen passed the Primary Examination on July 7th:—

Fullard, John, Queen's College, Birmingham.
Johnson, Philip, St. Bartholomew's Hospital.
Hildyard, Nathaniel, University College.
Tyson, Edward, St. Bartholomew's Hospital.

The following gentlemen passed their Examination in the Science and Practice of Surgery on July 14th:—

Brennan, Joseph Richard Mary, Owens College, Manchester.
Haviland, Frank Papillon, St. George's Hospital.
How, George Bradley, Owens College, Manchester.
Samman, Charles Thomas, London Hospital.

The following gentlemen, having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates entitling them to practise as Licentiates of the Society on July 20th:—

Baldwin, Henry Clifford, Lockwood, Huddersfield.
Brennan, Joseph Richard Mary, Congleton, Cheshire.
Bryett, Lewis Thomas Fraser, Girdler's-road, West Kensington.
Caley, William Birch, Stanley-road, Liverpool.
Cooper, Henry C. Evans, Myrtle Cottage, Southall, Middlesex.
Greeves, Thomas Neville, South-hill Park, Hampstead.
Powell, Herbert Edward, Battersea-park-road, S.W.
Watkins, Frank Augustus, Stowe Park, Newport, Mon.

THE library of the Royal Medical and Chirurgical Society will be closed during the month of August.

THE Tavistock Cottage Hospital was formally opened on the 25th inst.

AT Canterbury, on the 27th inst., a bazaar was opened in aid of the funds of the Kent and Canterbury Hospital, an institution which is now about £1500 in debt.

A GENTLEMAN of Somerset, who does not wish his name divulged, has increased his gift of £500 to the Extension Fund of the Taunton and Somerset Hospital to £5000.

ON the 21st inst. a conversazione in connexion with the London School of Dental Surgery was held in the rooms of the Medical Society of London, Chandos-street.

PRESENTATION.—Dr. C. J. White has been presented with a silver salver, a purse containing £70, and an illuminated scroll, on the occasion of his leaving Snodland, after practising in that place for seventeen years.

ON the 23rd inst. the managers of the Metropolitan Asylum District made their annual visitation and inspection of the Caterham Asylum for Imbeciles. The result of the inspection was reported to be satisfactory.

AT Finedon, near Wellingborough, a large number of children have been poisoned by fried fish. Some of the sufferers are not yet out of danger, but it is believed that in all the cases fatal results will be averted.

THE Managing Committee of the Birmingham Queen's Hospital have issued an appeal to the public for £10,000, half of which it is proposed to expend on an improvement scheme.

ON the 21st inst. Mr. T. H. Bartleet, the Ingleby lecturer for the year, gave a lecture at Queen's College, Birmingham, on the "Surgical Treatment of the Lower Bowel." The chair was occupied by Mr. O. Pemberton.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—On the 21st inst., the tenth block of houses for the accommodation of patients at this institution was opened by Princess Beatrice. The new building, which has been erected at a cost of £10,000, brings up the entire hospital accommodation to 120 beds.

DEATH UNDER CHLOROFORM.—A death occurred at the Queen's Hospital, Birmingham, on the 24th inst. during the administration of chloroform to a girl aged seventeen who was about to have an abscess opened. At the post-mortem examination the heart was found structurally healthy, but feeble. A verdict of "Death by misadventure" was returned.

PHARMACEUTICAL SOCIETY.—At a recent meeting of the Board of Examiners appointed under the provisions of the Pharmacy Acts to examine persons desirous of carrying on the business of pharmaceutical chemists and chemists and druggists, thirteen candidates were certified for registration as pharmaceutical chemists, and ninety-one as chemists and druggists.

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MR. JAMES B. BAILEY, resident librarian of the Royal Medical and Chirurgical Society, has been appointed to the librarianship of the Royal College of Surgeons.

WATER SUPPLY.—Viscount Cranbrook has presented a petition to the House of Lords, and Sir Robert Fowler, Bart., to the House of Commons, from the Water Consumers' Association, calling attention to the recommendations of the Royal Commission of 1868-74 on the Pollution of Rivers, in connexion with the present deficiency of water in many districts, its impurity, and the injurious effects of its hardness as now generally supplied.

THE Italian War Office, preparatory to the military operations impending on the Abyssinian frontier, has established three floating hospitals, each with its medical staff and relative equipment. One of these is to lie off Massowah; the other two will ply between that port and Italy for the transport of the sick and wounded. The hospital system ensures the patient being under the same physician or surgeon from the beginning to the end of his illness.

CITY OF LONDON LYING-IN HOSPITAL.—At a meeting of the Committee of Management, held on Wednesday last, the medical officer, in his monthly report, drew attention to the very satisfactory results achieved in the hospital during the past twelve months. Since that time, there having been 331 deliveries in the hospital without a maternal death, although several cases had caused considerable anxiety, there had not been a single case of septicæmia. This, he considered, most gratifying, as such good fortune had not attended the hospital for many years. The last death occurred early in May, 1886.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At the monthly meeting of the members of this Association on the 20th inst., a communication was read from the Manchester and Salford Sanitary Association suggesting further co-operation among local authorities between whose districts traffic in milk was carried on. Some discussion followed, and a committee was eventually appointed to consider the matter. A resolution was then adopted, on the motion of Mr. Vacher, approving of the proposed federation of Societies of Medical Officers of Health. Dr. H. H. Vernon afterwards delivered an address on the "Practical Results of Sixteen Years' Sanitary Work in Southport."

MEDICAL NOTES IN PARLIAMENT.

Coroner's Bill.

IN the House of Lords on the 21st inst., the Lord Chancellor moved the second reading of this Bill which, he said, was simply a measure of consolidation.—Lord Herschell said he hoped that with this Consolidation Bill the subject of the amendment of the law would not be lost sight of.—The Earl of Selborne, referring to the mode of electing coroners as requiring amendment, observed that as the freeholders of a county elected a coroner, there was a long and expensive canvass, and he knew for certain that the usefulness of some coroners had been permanently injured by the embarrassments into which they had fallen in consequence.—Viscount Cross remarked that when he had the honour of being at the Home Office he brought in a Bill dealing with coroners' elections. He knew the enormous expense of such contests in Lancashire, and he believed that it had seriously affected the usefulness of those offices. He for one would wish to see some other mode of election, but the first step to reform would be the consolidation of the law.—The Bill was read a second time.

Sanitary Condition of Margate.

In the House of Commons, Mr. S. Leighton asked the President of the Local Government Board whether he proposed to take any action in consequence of the official report of Dr. Page to the Local Government Board, stating that "the Town Council of Margate continues in default in not providing for the pressing (sanitary) requirements of their district;" and that "the infant mortality in Margate has during the last five years been 176 per 1000, whereas the infant mortality of the rest of England is 148 per 1000;" and whether it would be possible to provide for the periodical publication of reports on the sanitary condition of other towns by independent medical inspectors of the Local Government Board.—Mr. RITCHIE, in reply, stated that the Board had sent copies of the report to the Town Council and requested that they would at once give it their serious consideration and inform the Board of the action which they proposed to take with regard to the matters to which it referred. The reports of the Board's medical inspectors on the sanitary condition of districts inspected by them were usually printed, and when it was considered expedient they were placed on sale. When a report was in print and not for sale, the Board was always willing to supply copies to persons interested.

Brompton Cemetery.

In reply to Sir A. Borthwick, Mr. Plunket stated that the total burials in Brompton Cemetery up to February last were 135,617, and the yearly average of the last three years was in round numbers 5000. Under the Acts relating to intramural interments the Secretary of State was the authority who decided on the closing of burial grounds, but special provision was made for the keeping open of Brompton Cemetery, subject to rules and provisions laid down by the Home Office. He could not admit that any necessity had been shown for closing Brompton Cemetery.—Sir A. Borthwick gave notice that on an early occasion he would call attention to the subject.

Compulsory Vaccination.

On the 22nd inst., the House being in Committee of Supply, on the vote for the Local Government Board coming under consideration, Mr. A. O'Connor moved its reduction by £16,600, being the amount allocated for public vaccinators. He complained that the system of compulsory vaccination was unfairly administered and had been proved to be a failure, and he especially objected to the system of "rewards" for successful operations.—Dr. Farquharson was strongly in favour of the compulsory system, which had greatly improved the efficiency of vaccination, and thought the system of "rewards" ought to be extended to Scotland and Ireland.—Mr. Picton, Sir J. Pease, and Dr. Clark objected to compulsion, and Mr. Whitbread, who warned the Government that the anti-vaccination movement was spreading, suggested the appointment of a Royal Commission, which he thought would be the best means of laying before the public the new information on the question.—Mr. Ritchie admitted with regret that the opposition to the vaccination laws was not diminishing, but he did not think the number of anti-vaccinators was largely increasing. But he complained of the gross misrepresentations which where disseminated among the non-informed portion of the community. To illustrate the advantages of the compulsory system, he quoted statistics to show that from 1847 to 1853, before vaccination was compulsory, the death-rate from small-pox was 1617 per 1,000,000, but from 1854 to 1871, when it was compulsory, although inefficiently performed, the rate decreased to 817 per 1,000,000, while in 1872 the number of deaths had gone down to 323 per 1,000,000, and it was calculated, he said, that from 1853 to 1880 no fewer than 22,000 children had been saved by vaccination.—Mr. A. M'Arthur, Sir U. Kay-Shuttleworth, Dr. M'Donald, and other members also spoke, and the amendment was negatived on a division by 196 to 66. Ultimately, after a series of interrogatories had been put to Mr. Ritchie by Mr. Pickersgill and Dr. Tanner, the vote was agreed to.

The River Lea.

Mr. Ritchie informed Captain Colomb that the Local Government Board had been in communication with the West Ham Town Council on the subject of the insanitary condition of the River Lea. The Board considered that further inquiries into the matter should be made, and one of their inspectors would attend the meeting of the West Ham Council on Thursday next.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, ADOLPHUS B., L.D.S.R.C.S.Eng., has been appointed Dental Surgeon to the London Throat Hospital.

ANWYL, H. J. N., has been appointed Senior Assistant Medical Officer to the Kent County Asylum, Chartham, near Canterbury, vice E. W. White, resigned.

BROCKWAY, A. B., M.R.C.S., has been appointed Resident Clinical Assistant to the South-Eastern Hospital of the Metropolitan Asylums Board at New Cross.

BRUSHFIELD, THOS., M.A., M.B.Cantab., M.R.C.S., has been appointed Second Assistant Medical Officer to the Kent County Lunatic Asylum, Chartham, Canterbury.

COWAN, FREDERIC S., L.R.C.P.Lond., M.R.C.S., has been reappointed Honorary Medical Officer to the Royal United Hospital, Bath.

CRADDOCK, SAMUEL, M.R.C.S., L.S.A., has been reappointed Honorary Medical Officer to the Royal United Hospital, Bath.

DYER, BERNARD, has been appointed Analyst for the City of Truro.

ELLIOTT, GEORGE H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Second District of the Westbourne Union.

FIELD, ERNEST, M.D.Aber., M.R.C.S., has been reappointed Honorary Medical Officer to the Royal United Hospital, Bath.

GRIFFITH, THOMAS WARDROP, M.B., C.M.Aber., has been elected Professor of Anatomy in the Medical Department of the Yorkshire College, Leeds.

HARLOCK, H., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Third District of the Westbourne Union.

LEIGH, JOHN D., M.B., C.M.Ed., has been appointed Assistant Medical Officer for the Workhouse of the Township of Toxteth-park.

LONGMAN, ARTHUR, M.R.C.S., L.S.A., has been appointed Medical Officer for the Bishopstone District of the Wilton Union.

MCGILL, ARTHUR F., F.R.C.S.Eng., has been appointed Professor of Surgery in the Medical Department of the Yorkshire College, Leeds.

MORRISON, J. T. J., B.A., M.B., B.C.Cantab., F.R.C.S. Eng., has been appointed Casualty Surgeon to the Queen's Hospital, Birmingham, vice Marsh, appointed Honorary Surgeon.

REID, IRVINE K., M.D., C.M.Aber., has been appointed Medical Officer in the Government Medical Service of British Guiana.

ROBSON, MAYO, F.R.C.S.Eng., has been appointed Lecturer in Practical Surgery in the Medical Department of the Yorkshire College, Leeds.

SHARP, J. A., L.R.C.P.Lond., M.R.C.S., has been appointed Honorary Surgeon to the Derby Infirmary, vice Dolman, resigned.

SPURGIN, WILLIAM H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Schools at Flimby of the Cockermouth Union.

TAYLOR, ALFRED H., M.B., B.S.Lond, M.R.C.S., has been appointed Surgical Registrar to Westminster Hospital.

TIFFEN, C. J., M.D., C.M.Ed., has been appointed Medical Officer for the Wigton District and the Workhouse of the Wigton Union.

VOELCKER, JOHN A., has been appointed Analyst for the Borough of Bedford

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

DIOCESE OF NEW WESTMINSTER, British Columbia.—Medical Missionary. Stipend £150, with lodging, and liberty of private practice.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Senior and Junior Resident Officers. Salary £100 and £80 per annum respectively, with apartments and board.

LAMPETER UNION.—Medical Officer, Medical Officer of Health, and Public Vaccinator. Salaries and fees about £60 per annum.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

NORFOLK AND NORWICH HOSPITAL.—Resident Secretary and House Steward.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary £150, with free house.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor.—Assistant Resident Medical Officer. Small honorarium.

SUNDERLAND INFIRMARY.—House-Physician. Salary £80, rising £10 annually to £100, with board and residence.

TOTTENHAM HOSPITAL, N.—Assistant House-Surgeon. No salary, but residence and board.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, Welbeck-street, W.—Physician.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House-Surgeon and Secretary. Salary £80 per annum, rising by annual increments of £10 to £100 per annum, with residence, board, washing, and attendance.

Births, Marriages, and Deaths.

BIRTH.

MURRAY.—On the 14th inst., at Swinburne Castle, Northumberland, the wife of William Murray, M.D., F.R.C.P.Lond., of a daughter.

MARRIAGES.

BLOOD—DUDGEON.—On the 20th inst., at All Saints', Blackrock, county Dublin, Joseph Blood, of the Indian Medical Service, to Eliza, fourth daughter of Henry James Dudgeon, of The Priory, Blackrock, county Dublin.

CASSIDI—DUNCANSON.—On the 20th inst., at St. Mary's Church, Dublin, Francis Richard Cassidi, M.D., to Marion E., younger daughter of the late John Duncanson, M.D., of Alloa, N.B.

FITZGERALD—FINUCANE.—On the 20th inst., at Hamilton, Ontario, Canada, Michael FitzGerald, Staff-Surgeon, R.N., to Florence Maria, eldest daughter of Deputy Inspector-General Finucane, R.N.

PITT—HERIOT.—On the 20th inst., at the Parish Church, Harrow Weald, George Newton Pitt, M.D., M.A., M.R.C.P., Assistant Physician at Guy's Hospital, late Fellow of Clare College, Cambridge, to Jane Elizabeth, eldest daughter of Robert Heriot, Esq., of Graemes Dyke, Harrow Weald.

RICHARDSON—REECE.—On the 21st inst., at the Parish Church, Hove, by the Rev. T. Peacey, M.A., Vicar, Adolphus Joseph Richardson, M.A., M.B.Cantab., M.R.C.P.Lond., of St. John's-terrace, Hove, to Kitty H. (Tiny), only daughter of the late Geo. Reece, of Edwardes-place, Kensington.

WEEKS—PRANGLEY.—On the 20th inst., at Aylsham Parish Church, by the Rev. Robt. Hake, Vicar, assisted by the Rev. A. Law, Ernest Alfred Weeks, of Willesden-green, to Muriel Maude (Dolly), younger daughter of Thomas Prangley, M.R.C.S., of Aylsham, Norfolk.

DEATHS.

ATKINSON.—On the 25th inst., at Kew, Surrey, John Charles Atkinson, M.D., aged 76.

CHEETHAM.—On the 20th inst., at Compton-road, Canonbury, Joseph Cheetham, M.D., M.R.C.S., aged 68.

COOPER.—On the 25th inst., at Buxton, Frederick Cooper, H.M.'s late Inspector-General of Hospitals (India), aged 83.

ENGALL.—On the 18th inst., Thomas Engall, M.R.C.S., of Lady Somerset-road, N.W., formerly of Euston-square, in his 80th year.

GRANT.—On the 19th inst., at Lagos, West Africa, Charles Scovell Grant, M.D., Colonial Surgeon.

GREEN.—On the 21st inst., at Lynchmere, Harold-road, Upper Norwood, William Abbott Green, Inspector-General of Hospitals, Bengal (retired), and Honorary Surgeon to the Queen, aged 79.

PRICE.—On the 18th inst., at Pontresina, Switzerland, John Price, Surgeon, R.N., aged 32.

ROWE.—On the 25th inst., at Haverfordwest, Thomas Henry Rowe, M.R.C.S., J.P., aged 47.

STEPHEN.—On the 19th inst., at Windlesham Lodge, Bagshot, Andrew Stephen, M.D., of 58, Queen's-gate-terrace, Kensington, aged 53.

WARD.—On the 1st inst., at Rangoon, George James Ward, M.R.C.S., L.R.C.P.Ed., L.M.D., 5th Bombay Light Infantry, aged 34.

WILKINS.—On the 19th inst., Arthur Frederick Wilkins, M.R.C.S., L.R.C.P.Ed., aged 29.

N.B.—A fee of 2s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 28th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 22	30·10	S.E.	61	58	105	80	55	...	Hazy
,, 23	30·17	N.E.	68	60	117	82	60	...	Bright
,, 24	30·01	W.	68	61	120	79	58	...	Cloudy
,, 25	29·81	N.E.	62	60	91	72	60	·31	Cloudy
,, 26	29·75	S.W.	66	60	111	77	60	...	Cloudy
,, 27	29·66	W.	68	63	121	77	63	·09	Cloudy
,, 28	30·09	W.	67	61	123	73	59	...	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

INTEMPERANCE AMONGST WORKMEN.

THE *Concordia* reports the fact that various large employers of labour in Germany have been devising a means of stopping the drinking of brandy by their workmen. The experiment has been tried of distributing coffee gratuitously, and the results have been, it is said, of a satisfactory character.

Mr. J. Martin.—The cases recorded seem quite insufficient to prove injury to health from butter substitutes in the face of the mass of evidence to the contrary. As for the name, "margarine" has been settled by Government and adopted in the Bill now before Parliament, so that it is not easy to see what our correspondent wishes to prove.

Viator.—It is both customary and reasonable for a general practitioner to charge more for visiting several members of a family than for visiting one.

Mr. H. J. Dixon's communication arrived too late for publication this week.

Denver.—The paper has been received.

THE BRUSSELS UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—In the current number of THE LANCET, at page 186, under the heading "Foreign University Intelligence," you have inadvertently published a statement relating to the examinations for the Brussels degree in medicine which is calculated to mislead English practitioners who may contemplate presenting themselves at that University for examination. Permit me to point out to you that not only is the Second Doctorate examination *not* "one of the earlier examinations from which English practitioners who seek Brussels degrees are exempt," but that every candidate, no matter what his nationality, must pass the First as well as the Second Doctorate (which examinations some of the rejected have good cause to remember) before being admitted to the Final or Third.

I am, Sirs, yours faithfully,

July 23rd, 1887. M.D. BRUX., &c.

Mr. B. H. Mumby (Portsmouth) will find much information in Prof. Storer's book, "Agriculture in some of its relations with Chemistry"—a work which will very shortly receive notice at our hands.

IN-DOOR PUPILS.

To the Editors of THE LANCET.

SIRS,—Could any of your readers oblige a brother medical man by informing him of any hospital or infirmary where in-door pupils are taken on moderate terms per annum?—I am, Sirs, yours faithfully,

July 27th, 1887. C. C.

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CAMELS FOR THE WOUNDED IN WAR.

At Massowah the Italian Medical Staff have completed a course of experiments with the object of utilising camels for the conveyance of the sick and wounded. Each camel will be so equipped as to carry with the minimum of discomfort three patients—one on the back and two at the sides. Every sanitary convoy is henceforth to consist of one camel and two mules, to transport five sick or wounded.

Mr. S. Grenfell.—The question is too vague to admit of a precise answer. Dr. Marchison's work on the "Continued Fevers of Great Britain," re-edited by Dr. Cayley, deals exhaustively with this question as regards typhoid fever. With reference to scarlet fever and diphtheria, the evidence as to the influence of sewer air in their production—whether that air contains the infection of those diseases or acts *per se*—is mainly embodied in local reports of officers of health. Much the same applies to such other diseases as erysipelas and blood-poisoning. The history of such cases is scattered, and not put together, in so far as this special method of causation is concerned.

Enquirer.—If lymph is to be used within a short period after it is collected—i.e., after a few days,—it is best preserved on ivory points; if after a long period, it is then best preserved in tubes.

Mrs. Clarke had better apply to the Secretary of University College Hospital.

Mr. F. E. Marston.—Tickets were sent to the medical corporations.

"VOMITING PERSISTING FOR YEARS."

To the Editors of THE LANCET.

SIRS,—*Apropos* of the two cases of persistent vomiting alluded to in THE LANCET of the 9th and 16th inst., the following one of twelve or fifteen years' standing may prove interesting to your readers if you will oblige me by inserting it in your columns.

The patient is a lady over fifty years of age, of small frame, thin, and with very soft tissues; naturally of an active temperament; now, of course, greatly subdued by the long and unceasing strain upon her system. She is certainly not hysterically inclined. Her face has a careworn aspect, and its features have rather a pinched and sunken appearance. Her tongue is always moist, foul, and sometimes slightly furred. In the submaxillary region are two soft-feeling glands, clearly defined, and projecting above the surrounding tissues. From these active little organs flows almost a continuous stream of saliva, causing a most annoying ptyalism, and whilst the lady is conversing filling her mouth with saliva. The bowels are always costive, only yielding to an enema. The stools are, however, natural in colour and consistence. There is no history or symptoms of malignant disease or gastric ulcer, except an attack of hæmatemesis many years ago. No complaint is ever made of cerebral symptoms, and the liver, kidneys, and uterus appear to be sound. Digestion is good, Welsh rare-bit being one of the dishes most appreciated by the stomach, which, however, is rather fastidious. I cannot detect that one kind of food causes emesis more than another: I mean foods which are suggested by the appetite. Never a day passes without this capricious organ disgorging a portion of its contents, the attack always being heralded by nausea. The stomach, like an irritable uterus, seems to have contracted the bad habit of expelling as a foreign body its natural burden. I say the digestion is good, because what is vomited is well digested, having the appearance of panado, flotting, however, in an excess of limpid fluid. I can find no sign of enlargement. Sir Andrew Clark, who some time since kindly saw the case with me, thought he did. The body being thin, the slightest deviation from the natural condition of things could easily be detected at the present time. I have tried every so-called remedy in the Pharmacopœia without any appreciable benefit accruing. Peptonised milk is as efficacious as anything, for it is bland and soothing to the organ when more than usually irritable. Effervescing drinks painfully distress the patient. Alkalies to increase and acids to check the flow of gastric juice are alike futile. My view of the case is the following.—That there is a thickening of the pylorus, not necessarily of a malignant character, which only permits a certain portion of the digested food to pass in a given time. The large quantity of saliva which is constantly being insalivated and swallowed disturbs the stomach, thus irritating the diaphragm, and so in the usual way exciting vomiting by its upheavings. In a few words, vomiting is caused by a contracted pylorus and excess of fluid. How much habit is a factor in the operation I know not. Pathologists might smile incredulously if I ventured to be too dogmatic upon this point. Two symptoms are always present—pyrosis and cardialgia, to use an old fangrunous word. According to our present ideas, an overflow of saliva should neutralise acids, but in the case under notice neither saliva nor artificial antacids have any neutralising effect whatever. Whether unnatural distension of the stomach by the excess of a natural stomachic stimulant, nor contraction of its pyloric extremity, produce the constant emesis, we must, I suppose, look further, as in glycosuria, and conclude that some hidden and mysterious pathological condition of the nerves caused little lesion, as the corpus striatum, or optic thalamus of the right side, is the direct cause of the disturbance. I may add that I have failed to discern carcinomatous cachexia, although the vomit certainly seems at times to be a mass of fermentation. Perhaps some of your readers more capable than myself of solving the difficulty may be able to throw some light upon the subject.

I have the honour to be, Sirs, your obedient servant,

Finsbury-circus, E.C., July 26th, 1887. HARVEY J. PHILPOT.

PROPOSED ARTIFICIAL SEA-WATER LAKE FOR SOUTHPORT.

THE gradual retirement of the sea from the town of Southport has long had an unfavourable influence on this pleasant seaside resort. We have before us a scheme invented by Mr. Lightowler, a Southport tradesman, and developed by Mr. B. H. Thwaite, C.E., of Liverpool, that is intended to minimise the defect mentioned. Mr. Lightowler's scheme consists in the construction of a dwarf breakwater of a novel sectional form along the beach, in such a position that during abnormal or spring tides, or when the water at rare intervals reaches nearly to the esplanade, the water accumulated therein, or behind the breakwater, is retained, and cannot escape, except the sluice-gates provided are opened. The breakwater is constructed of such a height as to retain water of an average depth of, say, 2 ft. on the inside of the breakwater, and such water would then form a lake of a superficial area equal to 201 acres, and form a healthful adjunct to the town of Southport. The breakwater is designed so as to provide a drive of six yards in width. The sectional form of the breakwater, which is intended to be constructed entirely of Portland cement concrete, possesses some novel features. It is hollow in section, and provides a silt depositing canal for the collection of the silt sand and offensive organic matter brought forward and held in suspension by the sea water when in motion, but which are deposited when the water is in a quiescent condition in the depositing canal. By this means the artificial lake is kept pure. The height of the proposed breakwater is such as not to interfere with the seascape, and the reach of sand between the breakwater and the line of sea at low tide would be lost in the line of sight of an observer standing on the esplanade. Consequently, the sea would appear to reach continuously up to the foot of the esplanade. The advantages of what is practically the bringing of the sea back to Southport will be obvious to anyone, and its applicability to seaside resorts similarly situated to Southport need not be dilated upon.

Puzzled.—The circumstances detailed by our correspondent are very annoying. It is to be regretted that, on seeing the letters, and especially on seeing the individual, "Puzzled" did not decline his services. He should see the gentleman who recommended the *locum tenens*, and if the representations concerning the qualifications are false he should refuse the fee claimed, if not undertake proceedings to expose the individual in question. If, on the other hand, he possesses such qualifications, we should recommend our correspondent to pay. It is always unwise to enter into such arrangements without both seeing the person and having the most definite understanding with him as to terms in writing.

Probang.—Such a practitioner can only enforce payment on account of surgical cases. He can keep an open surgery.

450 has not enclosed his card.

TREATMENT OF LUPUS.

To the Editors of THE LANCET.

SIRS,—Dr. Drewitt, at the meeting of the Clinical Society of London on May 27th last, stated that he had used salicylic acid and creasote with good effects in lupus. Would Dr. Drewitt kindly state the proportions of the application and the method, &c., of applying, as I have a very obstinate case in hand.—I am, Sirs, yours faithfully,

WILLIAM H. MACDONALD, M.D.

Antigonishe, N.S., Canada, July 11th, 1887.

Dr. T. P. Smith.—There is, as far as we know, no restriction as to the length of the essays. It would be well for intending competitors to write to the Secretario de Gobierno, Calle del Triador, No. 11, Valencia, for details as to the conditions of the competition.

Mr. T. Laffan.—The hon. secretaries may be addressed, 61, Kennington-park-road, S.E.

Taxpayer will find a letter on the subject in THE LANCET of December 6th, 1884.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Gant, London; Surgeon-Major Doble, Kamptee; Dr. W. E. Steavenson, London; Mr. Vincent Jackson, Wolverhampton; Dr. A. H. Hassall, Lucerne; Sir G. H. B. Macleod, Glasgow; Dr. Gowers; Mr. Godlee, London; Mr. H. A. Reeve, London; Dr. Purcell, London; Mr. A. F. Mickle, London; Messrs. Holmes, London; Surgeon-Major Bethe; Dr. W. H. Macdonald, Antigonishe, Canada; Messrs. Macmillan and Co., Cambridge; Mr. A. G. Bateman, London; Messrs. Richardson and Sons, London; Mr. D. Stewart, Nottingham; Messrs. Allen and Sons, London; Lieutenant-Colonel Brayan, Bristol; Messrs. Eason and Son, Dublin; Lieutenant Bersford, Belfast; Messrs. Robertson and Scott, Edinburgh; Mr. Owthwaite, London; Messrs. Blake and Co., Leeds; Mr. Revell, London; Surgeon-Major Harvey; Mr. Van Praagh, London; Mr. R. J. Reece, London; Dr. Bates, Gloucester; [illegible], London; Dr. R. Spencer.

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LETTERS, *each with enclosure*, are also acknowledged from—Mr. Lawson Tait, Birmingham; Mr. Broadbent, London; Dr. Armstrong, South Shields; Dr. Squire, London; Mr. Lacy, Holborn; Messrs. Merritt and Hatcher, London; Miss Bartlett, Tunbridge; Messrs. Robbins and Co., London; Mr. Barbour; Mr. Kerr, Glasgow; Dr. Lane, San Francisco; Dr. Barr, Glasgow; Mr. Sargent, London; Messrs. Gale and Co., London; Mr. Pace, Newcastle-on-Tyne; Messrs. Roberts and Co., London; Mr. Richardson, London; Dr. Horne; Messrs. Bennett Bros., Salisbury; Mr. Crawford, Sevenoaks; Mr. Wadham, Darlington; Mr. Torrance, Blofield; Mr. Irwing, Lancaster; Mr. Martindale, London; Mr. Hamel, Tamworth; Mr. Smyth, Monaghan; Mr. T. B. Browne, London; Mr. Armstrong, Manchester; Dr. Glover, London; Mr. Jordan, Manchester; Mr. Hughes, Ombersley; Mr. Hornibrook, London; Miss Olbey, Whetley; Mr. Saunders, Bideford; Mr. Scott, Lanark; Messrs. Hester, London; Mr. Milne, London; Mr. Solomon, Ostend; Mr. Ottley, Attercliffe; Mr. Hicks, Bodmin; Mr. Gould, Aylsham; Mr. Robson, Leeds; Mr. Greathead, Reeth; Dr. Oliver, Newcastle-on-Tyne; Mr. Lee, Bristol; Mr. Barnes, Wells; Dr. Dowse, London; Mr. Crassweller; Mr. Bainbridge, Reigate; Mr. Davenport; L. H., Llanelly; Secretary, Devonport; C. A. C. S., Edinburgh; J. C., Eastbourne; Secretary, Wolverhampton; Endymion, Chelsea; M.A., London; B. R.; A. M. D., Scarborough; M.B., Monkstown; Lady Superintendent, Burton-on-Trent; Secretary, Hastings; Medicus, Newcastle-on-Tyne; Manchester; J. C., Southsea; H. A. S.; M.A., Lutterworth; Doctor, Tottenham; Surgeon, London; Veritas, Croxdale; A. B., Twickenham; M. R. A.; X., London; Medicus, New Basford; O. S. W., Dartmouth; C. J. G., Preston; W. M., Wisbech; C. B., London; G., Whitby; G. P., London; J. M., Bedford; Y. Z., London; Gamma, Manchester; Excelsior; Scotland; F. G. L., Bury St. Edmunds; A. S., London; Medicus, Worsley; Pato; Medicus, Brighton; Surgeon, Coventry; A. L., Bayswater; L. A.; Medicus, Dorchester; A. S., Birmingham; Alpha, London; W. J.; Medicus, Reading; H. F., Barnstaple; Medicus, Everton; M. H.; A. A., Great Bridge; D. H., Deal.

Nottingham Daily Guardian, Manchester Examiner, Keble's Margate and Ramsgate Gazette, Bromley Telegraph, Hull Express, Tenby Observer, Hull Weekly Express, Kent County Standard, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 2.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, August 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, August 5.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 6.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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ABSTRACT OF

The Address in Medicine,

Delivered at the meeting of the British Medical Association at Dublin.

BY W. T. GAIRDNER, M.D., LL.D. ED.,

PHYSICIAN-IN-ORDINARY TO HER MAJESTY THE QUEEN IN SCOTLAND, PROFESSOR OF MEDICINE IN THE UNIVERSITY OF GLASGOW.

DR. GAIRDNER commenced his address by observing that anyone who had acted as a teacher of medicine had been in the habit from year to year of surveying officially the healing art as a whole. He had watched the rise and fall of doctrines, of methods, of tendencies and currents of opinion. He had come, or ought to have come, to see that there has been an evolution of the art going on in his time; an evolution not at all the work of any one man or of any one school, but rather of what Matthew Arnold and the Germans call the *Zeitgeist*—the spirit of the age. It seemed to him the possible theme of an interesting address to seize upon those aspects of the subject which most revealed that inner spirit, and to expand them so as to give a vivid conception of whither we are tending, or how, and by how much, we differ from our fathers. The field was, Dr. Gairdner said, vast, and we recoil instinctively from the conclusion that it was a mere aggregate of laborious investigations, guided by no common purpose, no fixed or polar star. It must, however, be confessed that the various doctrinal systems of the past, and not a few of the gross charlatanisms of the present, have had a seductiveness for the public and even for some minds in the profession itself, founded mainly on the notion that here at least—viz., in the particular formula, or perhaps exclusive remedial method advocated—is to be found a ruling principle, a law or compendious statement of doctrine intended to illuminate every corner of the art of medicine; hence that physicians are bound to bring all their accumulated stores of knowledge into court, and make them all do homage to this one doctrine, one law, thus set forth as the only true law of the healing art. To such a universal proposition, when made, there can be only one answer. No such exclusive or single principle or law of the healing art can be said to exist; the action of remedies, the resources of hygiene and of preventive medicine, refuse to submit to any formula comparable in its simplicity with that of the law of gravitation. After referring to an address delivered in 1875 by the late Dr. Warburton Begbie, in which an answer was given to the question by the late Sir William Hamilton, "Has the *practice* of medicine (that is, the art as distinguished from the science) made a single step since Hippocrates?" and to the work of Cullen and his controversy with John Brown, Dr. Gairdner, referring to the instability of the medical art in Cullen's time, said that it seemed as if the medical mind, oscillating between the claims of humoralism, solidism, and vitalism, could find no resting-place, but was constantly exposed to be drawn out of the path of traditional medicine by any new theory which presented a certain amount of apparent simplicity and plausibility—all the more if it contemptuously dismissed, as unworthy of serious study, the laborious and positive acquisitions of clinical and pathological fact which had even then been largely gathered in, especially by Morgagni, as to the natural history of disease; and this was exactly what the Brunonian system did. Since Cullen's time, however, the progress of modern medicine has been in the direction of *stability*—a kind and degree of stability not possessed by the art of medicine in any previous state of its progress—not even in those "dark ages," as we call them, when it had the prestige of a kind of immutability, or, as a theologian would call it, orthodoxy, founded on the overwhelming authority of Galen.

To take a single illustration from surgery, which was out of the direct line of his inquiry, but which could not fail to be a striking one: it was not open to him even now to claim for antisepticism, in the strict sense of the word, the credit of an advance all along the line, because we have eminent surgeons among us who claim to obtain, and he believed do obtain, brilliant results without using the particular remedies called antiseptics; and therefore the theory of antisepticism, and the separation of what is permanently from what is only incidentally true in this great issue, was a research of no small complexity, and perhaps of extreme difficulty for a professor of medicine, who nevertheless believes, as he does, that the impulse communicated to surgery through antisepticism is one of the greatest in the history of the art. And yet it was surgery which, as respects the more tangible and obvious character of its processes and results, has been humorously defined as, *Quod in medicinâ non dubium.*

As regards that great revolution in the medical treatment of fevers and inflammations, which in some minds occupies in relation to medicine as advanced a position as antisepticism does in relation to surgery, Dr. Gairdner said that it had not as yet been made quite clear to his mind by evidence, statistical or other, that the treatment of any fever or inflammation by such means as were recorded some years ago by Liebermeister and Jürgensen, the one as regards typhoid fever, the other as regards pneumonia, had resulted in a permanently lessened mortality when set against results obtained or obtainable in this country, without these very active procedures. Having stated his opinion to this effect some time ago, however, he felt bound to add now that he was by no means insensible to the wonderful patience, research, and apparently scientific exactness shown by these authors in their latest researches on the subject. Certain modifications of the practice had also tended towards the removal of distrust, and should another great epidemic, say of typhus fever, occur in Scotland, he should very gladly witness or concur in a therapeutic experiment such as would practically settle the question. In the meantime, however, he must regard the antipyretic treatment in all its various forms as still under controversy.

No one having any familiarity with modern medical practice could overlook the large place occupied in it by certain powerful, and it would be hardly too much to say indispensable, remedies acting on the nervous system, many of which are entirely modern. The most prominent and perhaps also the most unquestionable of these was chloroform; and if forty years could ever be regarded as sufficient for testing an advance in medicine, or surgery, it might be safely affirmed that the reputation of our day and generation might be regarded as saved by this one great achievement. Yet there were not wanting evils to be discounted, and failures to be set against the benefits of this enormous boon to the suffering human race; and it would not surprise him to find that there exist, even now, well-informed persons who believe that the lethe which comes from modern chemicals, like that which of old was born of poppy and mandragora, has been a questionable advantage to humanity at large. What then should be said of hydrate of chloral, butyl-chloral, paraldehyde, urethan? and what of the condensed forms, or alkaloids of the older narcotics, so immensely convenient, but also so powerful for mischief? He for his part had no doubt that the balance inclines, at least in instructed medical hands, greatly in favour of the service these remedies are doing, and may yet do, to great numbers of the sick, and especially the fatally afflicted members of our race. Again, the modern use of digitalis, strophanthus, and other cardiac tonics; and again, the use of nitrite of amyl and of nitroglycerine in angina pectoris and the allied conditions: Who was there that doubted that in these, when well employed in judicious and well-instructed hands, we have obtained a very distinct and very valuable addition to our resources in cardiac diseases? And yet was there anyone who would expect him to prove this in an unassailable manner, to the satisfaction of a sceptical friend or foe, within the limits of his present address?

Again, the benefit derived from the salicyl compounds in acute rheumatism was to his mind very satisfactorily established, and he should be personally disposed to claim this as a very distinct advance in the healing art within a comparatively recent period, and a partial removal, moreover, of one of the old *opprobria medicinæ* which he had lived long enough to have been obliged, over and over again, to recognise as such. But would anyone say that his simple assertion of this could reasonably outweigh all the sceptical or contradictory statements on this point which it might be expected to call forth? Evidently, in regard to remedial agents and processes not more than twenty years old, it was vain to expect such a concurrence of opinion as to entitle anyone to set them forth dogmatically, as the permanen

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and unquestionable milestones in our progress, which future ages too might be expected to acknowledge as such. In considering stability, therefore, we have not only to lay our account with possible new discoveries, but also with the perhaps unknown or unappreciated dangers attaching to practices now vaunting themselves in the full sunshine of apparent prosperity and success. While, therefore, he had and professed the most entire faith that the efforts of hundreds of young and enthusiastic workers are being fruitfully directed towards a science of pharmacology, on the joint bases of experimental research and scientifically directed observation, we are still, he feared, too much in the transitional stage to allow of many of these researches being adduced in evidence of the increasing stability of the medical art. Rather might it appear to some as if the multitude of new remedies which come to us from all the ends of the earth, the too brief reputation of some of these, and the evidently over-sanguine estimates of others, were the proofs of an unrest which was quite the reverse of stable; which could not be satisfied with the old remedies, old prescriptions, old methods of cure; but holding itself bound to drive on the *currus triumphalis* of modern therapeutics at all costs, was likely to land us once more in a new series of controversies such as attended the famous work of Basil Valentine on the healing virtues of antimony, perhaps three hundred years ago.

But he held, and had never ceased to hold, as a teacher of medicine, that all this fermentation, so to speak, of opinion with respect to current remedies and modes of treatment, all these tokens of unrest and dissatisfaction, were, in reality, an advantage to the medical art, and tended both towards progress and towards stability; an altogether different kind and measure of stability, however, from that implied in the authority of Galen, or the traditions of the Greeks and Arabians.

Dr. Gairdner hoped to be able to show that there were some points of our progress in which the dissolution or weakening in their hold of what he called orthodoxies had been accompanied by a truly constructive process, and that the new theory and corresponding practices which had displaced the old differed from it in this, that, being the result of applied science and not of mere tradition, they were correspondingly secured against revolutionary overthrow.

1. *Hygienic remedies.*—The fruitful and, he thought, the unquestioned progress of preventive medicine (otherwise called sanitary science) during the last thirty or forty years was not only a very striking advance in itself, but it might also be maintained, he thought, without contradiction that curative medicine had largely and quite steadily advanced along the same lines. The prevention and the cure of disease were not, indeed, identical, but the laws which guide the former were in a large measure, and necessarily, applicable to the latter. The same noxious influences which beget typhoid fever, for example, tended in a remarkable degree to exaggerate, if not to cause, a host of minor diseases, and very notably to increase the risks of the healing of wounds and of the puerperal process. The same overcrowding which was in a great degree the cause of typhus fever was a source in hospital wards of pyæmia and erysipelas, in barracks and gaols of consumption (and this often among picked men), in certain endemic localities of contagious pneumonia, and probably of diphtheria. It was impossible, in the face of modern sanitation, to escape the conclusion that the causes and the remedies of disease alike were often to be sought more in the study of groups and even of multitudes of cases than in the ordinary text-books, or in the conventional remedies set down for the particular *nomen morbi*. In short, the treatment of diseases of every kind had been largely, even if silently, influenced by the thought that the chief disease-breeding factors must also be, in individual cases, adverse influences to be carefully studied and kept in check by those who would cure disease, and that, in chronic cases especially, a large part of the cure consisted in the removal or modification of the injurious action of the cause. The changed point of view implied in the more fruitful and practical study of causes had in many cases made it impossible to cling to the old and traditional aspect of certain diseases as entities, arising we do not know (and do not strive to know) how, and only to be met by a *farrago remediorum* addressed to individual symptoms, or, at least, directed to the consideration that a morbid influence, or something unknown, had got to be battered down in the recesses of the economy by sheer expenditure of therapeutic violence, at whatever cost to the physiological functions of the sufferer.

2. *Self-healing processes in acute diseases: abuses of venesection.*—Closely allied with this change, which he took to be a permanent one, making in the direction of stability for the medical art, was another which had come to a head, or at least had begun to bear fruit largely, only within his own recollection, and which he could distinctly recall as most powerfully influencing his own mind and practice from the very earliest period of anything like independent thinking about it. He did not wish, even for a moment, to lose sight of the fact that the irrational orthodoxies (as he ventured to call them) of the past have been unsettled, very largely owing to the prevalence and the countervailing influence of certain heresies, of which no rational mind could approve. But it was one of the privilegs of our art in its more advanced and, as he thought, more stable condition in this day of ours, that where there was no orthodoxy there could be no heresy (in the old ecclesiastical sense of the term), or, rather, that our freedom of opinion was such that we could afford to absorb into our daily practice, and even into our theories of disease, the instruction that came even from the most erratic and monstrous of heresies, no man making us afraid. Forty years ago, for example, it was still a point fairly open to question whether pneumonia and other acute inflammations could possibly be cured without blood-letting. All knew what had become of this burning controversy, and how completely the old traditional theory, as it came down from Cullen and Gregory, had been overthrown; but it was surely a cardinal instance of the essential instability of that theory that, after being for a time supplanted in Cullen's own day by the ridiculous extravagances of a vainglorious charlatan like John Brown, it should have been reinstated in greater power than ever as regards this particular point in therapeutics, only to be subverted once more, and more completely, by a far better man, the late Sir John Forbes. He it was first who, becoming distrustful of the old tradition, and anxious to learn in a genuine spirit of scientific humility about "nature and art in the cure of disease," did not refuse to accept truth, even at the hands of homœopathists and others, not much, if at all, superior to the Brunonianists of Cullen's day in their claims upon genuine medical science.

3. *Epidemic fevers: alcoholic stimulation.*—Dr. Gairdner then briefly reviewed the treatment of fevers during the past fifty years, and the use in them of alcohol, and said that it might now be regarded as a position established by evidence that in typhus fever, and therefore, *a fortiori*, in other fevers and in all diseases attended by febrile debility, alcoholic stimulants were not the only nor yet the best form of alimentation; that their proper use was as medicines, and this within limits; and that, as a rule, and also within such limits as are suggested by reason and easily attainable in practice, milk (which during the alcoholic fanaticism had been nearly lost sight of) was in reality the food which was for the most part more easily digested and more conducive to success than almost any other. He had thus, he said, endeavoured to show by a few instances only, in what manner, and on what lines, the art of medicine has been advancing towards stability, and concluded by assuring his hearers that what had been done in all these years since Cullen's time had not been in vain. A vast army of earnest unprejudiced and disciplined workers had been engaged upon all the unsolved problems connected with disease. Diagnosis and pathology had made immense strides in advance during nearly the whole of the present century. Operative surgery had achieved the most brilliant and unquestionable triumphs of any period in the long course of medical history, and this in almost every department. Hygiene and sanitation, with their reflected influence on curative medicine, had advanced by leaps and bounds; and, even in the application of strictly therapeutic methods, the changes, though not so easily stated or so palpably appealing to the judgment of public opinion (inasmuch as quackery always was and always would be more self-asserting than truth), were all in the right direction. Polypharmacy in its old and irrational forms was now nearly gone. Hardly anyone of intelligence supposes nowadays that a disease is to be slain by a mere prescription or Latin formula. A science of pharmacology, or of the uses and actions of medicines, was being built up upon a foundation that was never even possible before the present day, and which, beyond all question, would render this, the least satisfactory department of the science of healing, far more secure in the future. The mere simplification in the forms of remedial agents, and the mitigation accordingly of the old, inexpressibly repulsive, and nauseous manner of pre-

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scribing them wholesale (which incurred the ridicule of Molière two centuries ago, and yet lived on into almost our own day), represented an advance by no means devoid of importance as regards the comfort of the individual patient and the peace of families, and especially of nurseries. Nor was the immense relief to human suffering by the use of anæsthetics rightfully employed, and even of narcotics and anodynes in greatly improved forms of administration, to be lost sight of, even in the most brief allusion to the modern use of drugs.

All that removal, moreover, of the old traditional dogmatisms to which he had referred had been merely a clearing of the ground, so to speak, on which a modern science of healing, not by any means forgetful of its past history, but entirely unshackled by its old errors and prejudices, was being slowly but surely built up. And the fervid youth of the present generation, if they remained true to the spirit and not to the mere letter of the Hippocratic medicine, might well be grateful to their fathers and their grandfathers, were it for nothing else than this important and necessary process, whereby a soil had been prepared, at much cost of individual labour and sacrifice, on which they were permitted and privileged to sow the seed, and to reap more or less fruitful crops of good for humanity at large.

ABSTRACT OF

The Address in Surgery,

Delivered at the meeting of the British Medical Association at Dublin,

BY EDWARD HAMILTON, M.D., F.R.C.S.I.,

SURGEON-IN-ORDINARY TO THE LORD-LIEUTENANT OF IRELAND, PROFESSOR OF SURGERY IN THE ROYAL COLLEGE OF SURGEONS OF IRELAND, AND SURGEON TO STEEVENS' HOSPITAL, DUBLIN.

DR. HAMILTON commenced his address by remarking on the fact that twenty years had passed away since the place which he that day occupied was filled by one of the brightest ornaments of British surgery, Robert William Smith, and thanked the Council of the Association for permitting him to follow, even after such a lapse of time, so distinguished a pioneer. In such an address as he was expected to deliver, the mind, Dr. Hamilton observed, instinctively turned to a retrospect of improvements in surgery or a critical inquiry into the nature of the work which is actually being done amongst us, and so suggestive a theme possessed many attractions, although much of all this had been anticipated in the annual digests to be found in our periodical literature. Engaged in the constant work of a general hospital and the daily routine of metropolitan practice, he could not lay claim to any special opportunities, nor was there any subject on which he had attained that degree of proficiency which would justify him in undertaking the instruction of the able thinkers he was addressing.

He who wrote the history of the surgery of this Victorian era would find one or two cardinal facts of such vast and stupendous proportions as to dwarf all others in the influence which they had exercised on our surgical work. *Facile principe* among these was the method known as the antiseptic system, still enveloped in clouds of uncertainty and misconception, notwithstanding the work which so many eager and enthusiastic inquirers have bestowed upon it, far indeed removed from any approach to finality. It might not be unprofitable to determine what is the present actual condition of this system, and, setting aside bogus theories and misunderstood hypotheses, to ascertain its exact relation to our every-day work. For, after all, it must come to this important question—What help does antisepticism afford to the daily practice of surgery? No honest or impartial observer could fail to recognise with a deep sense of gratitude the magnificent results and the brilliant success which had attended the Listerian system—results which had led to its adoption throughout the civilised world—results which had revolutionised surgical methods, and given a startling impulse to the conservative treatment of injury and disease. The system might be wrong in practice, and founded on an erroneous theory, but that wonderful results had followed since its introduction was an historical fact beyond contradiction. And yet, with this triumphant record, we find some of its most devoted adherents now relaxing the stringency of its application and abandoning parts of the system which were long regarded as essential, and that, too, without any diminution of successful results. Again, we find antiseptic precautions so little regarded—nay, almost set at nought—as to prompt the ovariotomist to flush the peritoneum with water containing "*germs and spores and thirty different kinds of beasts*," and yet point to a continuous record of success little if at all inferior to the more complex method. In this burning controversy, to what conclusion could the simple inquirer after truth arrive at—he who is anxious to decide what is best for those who entrust to his judgment and skill the safety of their limbs and their lives?

It might be conceded as proved by the actual observation conducted and recorded by competent authority, that the atmosphere which surrounds our globe is infested with myriads of minute organisms—call them by whatever name one pleases; that they belong, some to the vegetable, some to the animal kingdom; that they possess vitality, either potential or actual, from which it follows that they are subject to constant and restless change—the heirloom of organisation. These changes are largely influenced, if not altogether caused, by the surroundings among which they are situated, and they in their turn reciprocate and produce disturbance in the material which environs them. It has also been established beyond controversy that some of these microbes are incapable of development or growth in the tissues or fluids of the living body, and can only undergo their life changes when surrounded by material which is dead, and therefore amenable to the physico-chemical laws. Others, again, are capable of maintaining their independent vitality in living tissues, where from a minute beginning they increase and multiply, disarranging and vitiating the entire organism into which they have found their way, waging a deadly war against the tissue cells, who, nobly acting on the defensive, throw out breastworks to resist to the utmost the encroachments of these merciless invaders. In the first variety the effect produced is in direct proportion to the actual amount of the ferment introduced. In the second, the amount of disturbance is out of all proportion to the minute quantity of the noxa which produces it. That these latter bodies are an efficient and potent cause of suppuration and infective inflammation would appear to be proved by actual demonstration. He would not weary his hearers with details, but simply state the experiments which had brought conviction to his own mind. We have experiments which prove beyond doubt that injury may be inflicted on the deep tissues of the living body, either by mechanical, physical, or chemical noxæ; and if due cleanliness of the instruments is observed and atmospheric air absolutely excluded, no effect whatever is produced beyond the injured spot. Hueter of Greifswald injected a 5 per cent. solution of chloride of zinc, killing the tissue with which it came in immediate contact, the necrosed mass producing no ill effect upon the surrounding structures. Like results followed the action of the hot iron.

Chauveau adopted for his experiments the continental mode of castration, by torsion of the spermatic vessels (*bistournage*) by which the organ becomes completely detached from its living connexion, without inflammation, suppuration, or sepsis, in thousands of cases; but if the minutest portion of fluid containing these atmospheric atoms were injected under the skin, so that they entered the blood current, severe inflammation was at once developed, a seething focus of disease where all was peace, and subsequent examination showed the organ and its surroundings infiltrated with infecting germs. These experiments and observations proved conclusively by positive and negative evidence that these aerial entities were capable of producing suppuration and infective inflammation. It had not, to his mind, been established that they were the sole and only origin of such phenomena. But the facts determined by Ogston, Köcher, and others, that they may enter the interstitial tissues through the respiratory or digestive tract, were gradually narrowing the ground uncovered by their influence, and explain away the apparent spontaneity of such diseases as ulcerative endocarditis and infective peritonitis, when these atoms are found crowding the deepest organs without any wound or breach of surface to account for their entrance. If the history which he had endeavoured to sketch be true, it must commend itself to the ordinary

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understanding that it is our duty to destroy and exclude them from the body with all the care we possibly can; and if the means adopted for that purpose—call them Listerism, antisepticism, surgical cleanliness, or by whatever name we will—turn the scale a feather weight in favour of restoration to health or saving the life of a single human being, the man who refuses to employ them through prejudices or apathy incurs a responsibility nothing short of criminal. The difficulty which is now exercising the minds of practical pathologists and chemists is to find the most suitable germicide—one which will act efficiently without being poisonous to the tissues or the system at large; and it was interesting to watch how one after another they have been lauded and proclaimed, only to be superseded by another and another; and here at all events we are very far removed from finality. Carbolic acid, corrosive sublimate, iodoform, thymol, have each for a time enjoyed the crown for a few months, only in their turn to be deposed and dismissed as impostors with ignominy.

There is, however, another side of antisepticism which has been almost entirely neglected. It would appear as if, up to the present, attention had been exclusively fixed on infective germs, sufficient regard not being had to the important influence of environment. Every effort has been strained to discover the most infective and deadly germicide, when we know that these atoms, no matter how virulent they may be, cannot undergo their life changes, cannot produce these infective results, unless the environment, like the cultivation liquids of the histo-pathologist, was capable of developing and sustaining these changes. Deposited on clean metal, glass, or porcelain, they died of inanition; they exercised no influence whatever, and were amenable to none. In contact with dead organic matter, or living matter in certain conditions of altered or reduced vitality, they become a teeming source of infection, decomposition, and decay. If pathological surfaces could possibly be brought to and maintained in such a condition that they would not afford a suitable cultivation ground, would not almost as much be accomplished as when they are destroyed? He need hardly, Dr. Hamilton interpolated, quote examples of this influence of environment, such as the protection afforded by vaccination against the germ of small-pox, and the protection of the blood by previous action of exanthemata. The bacilli of splenic fever, so destructive to the herbivorous animals, take little effect on carnivora, and none at all on the pachydermata. The bacteria which will cause septicæmia in the mouse are wholly inert against the field mouse. We could learn much that would enlarge our views if we studied human by comparative pathology, and our researches must not be confined within the narrow limits of even the animal kingdom. Much can be learned by the pathology of the vegetable kingdom. Some of the most troublesome diseases which the surgeon has to deal with are derived from the invasion of vegetable parasites.

In connexion with the influence of environment, Dr. Hamilton related a remarkable fact which had been communicated to him by a friend who devoted much time and patient industry to the cultivation of fruit, and which he thought explained many facts in human pathology. In exhibiting fruit for prize competition, they have to be brought to a certain degree of ripeness to a day, almost to an hour, and the ripening can be hastened with almost mathematical precision by interposing between the prize specimens fruit of the same species which were already ripe, as if the emanation from the ripe fruit produced a ripening impression upon the apples in its immediate vicinity. He thought we saw this principle of environment frequently illustrated in human pathology when disease extends to adjacent but not contiguous surfaces. This twofold aspect of infective inflammation was forced on his attention when trying to think out the best mode of dealing with chronic abscess—a subject which has for a long time taxed the ingenuity of the surgeon, and often defeated his most ingenious plans, no matter how carefully they may have been carried out. This might be gathered from the long list of methods provided in our systematic works on surgery. There was nothing which indicated the uncertainty of our knowledge so much as the multiplication of modes of treatment; witness the hundred-and-one ways in which it is proposed to deal with so simple an accident as a broken collar-bone or a fractured femur. The structure of the immediate wall of a chronic abscess has been the subject of much diversity of opinion, and there is considerable doubt as to the existence of any such structures as the so-called pyogenic membrane or cyst wall. The idea of Billroth, that an abscess is but a hollow ulcer, conveys probably an accurate description of its structure. Its action as an absorbent surface is frequently brought under our notice, but its power of pyogenesis is not in accord with modern pathology. There was a fact of very great interest in this connexion. The discharge from a recently opened chronic abscess does not contain the microzymes which are so characteristic of purulent matter in acute suppuration. Ogston and others have failed to detect them by the most carefully conducted observations, or to produce septic results by them; and hence it is that the collections produce little or no constitutional disturbance until they are opened. They may remain for years without any effect other than mere local inconvenience until the matter is discharged—either by the efforts of nature, or by the knife of the surgeon,—and the repeated observation of this fact has induced the surgeon to postpone any interference, waiting often too long for the slow process of natural opening. The clinical records of these cases would lead us to believe that in some remarkable way the system would appear to be somehow prepared for this event; and he was satisfied in his own mind that far less constitutional disturbance follows the natural opening than that effected by the surgeon. There could be no doubt the use of antiseptics has done much to reduce this difference, but he could not say, as the result of his own experience, that they had completely removed it.

Dr. Hamilton then briefly reviewed his plan of treatment of chronic abscesses, and, condemning the Vivisection Act, concluded by appealing to his hearers to make the best use of the means at their disposal and to carry forward the standard of investigation into new and unexplored fields. There was, he said, ample room and verge enough for work—many untrodden fields of discovery—so that they could make the future of Queen Victoria's reign as glorious in the annals of scientific discovery, as full of help to the sick and wounded sufferer, as had been its past.

NOTE ON THE USE OF DRAINAGE TUBES.

BY HERBERT W. PAGE, M.C. CANTAB.,
SURGEON TO ST. MARY'S HOSPITAL.

IN THE LANCET a few weeks ago (vol. i. 1887, p. 947) was a very interesting note on the "Value of the Hæmorrhage in the Treatment of Wounds," wherein was set forth the opinion of Professor Turazza that hæmorrhage, provided that it be not due to the lesion of large vessels or carried to excess, is of small importance, and does not interfere with primary union. And as the outcome of his experience, the following "new rule" in surgery was formulated: that "in wounds perfectly disinfected, and free from foreign substances, the effusion of blood is not a source of danger, but the reverse, for the extravasated blood fills up the cavity of the wound perfectly, preventing the formation of empty spaces, and rendering both compression and drainage superfluous, and further, the organisation of the clot favours healing." Holding these views, the note tells us (for I have not seen his original paper) that he almost entirely discards the drainage tube, "because it increases septic risks, and may remove from the cavity into which it is inserted fluids which in an aseptic condition may be useful by reabsorption."

It would be instructive to know what is nowadays the general practice of surgeons with reference to the point of procedure here recorded. That the amplest possible drainage is ever necessary in cases of suppurating wounds, or of wounds which cannot from various circumstances heal by first intention, is, of course, an accepted doctrine; but it is a question—and with this question I now wish to deal—how far the drainage tube is really necessary, or for what length of time it should be used in the case of wounds inflicted by the surgeon under perfectly aseptic conditions. About the time that this paragraph appeared I had an amputation below the knee performed under not the most favourable conditions, in which the presence of a large blood clot did unquestionably seem to be of value in, or at any rate to cause no interference with, the healing process. This was the case of a woman, aged fifty, in whom a very bad displacement after fracture of the lower end of the tibia and fibula was gravely increased by a violent attack of delirium

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tremens, and in whom it was found impossible to bring the bones into apposition or to secure union. Efforts in this direction having failed, her leg was removed below the knee on May 10th, two months after her accident, by lateral Stephen Smith flaps — a method of flap-formation, by the way, which is highly to be commended in amputation at the seat of election. The position of the flaps rendered a drainage tube unnecessary, although a very large amount of oozing was expected from the œdematous state of the tissues. The oozing of blood was very great indeed, but in the course of forty-eight hours, at the second dressing, it was seen through the opening which had been left at the most dependent part of the wound that the flaps were filled and distended with a large blood clot. This clot was subsequently watched with much interest. The skin healed by first intention, and at no time was there any pus. The clot gradually contracted in size, and became firmer and firmer, and it clearly aided largely in the filling up and consolidation of the stump, which was perfectly sound and firm when the patient left the hospital on June 16th. The stump had then, in fact, the appearance of one which had been formed for several months, and was absolutely free from discomfort. There can be no doubt, I think, that in this case the blood clot did what Professor Turazza claims for it, and it raises an important question as to the use of the drainage tube. Speaking as the result of general observation and experience, and without reference to any particular case, I should say that the sooner a drainage tube is removed the better is it for the healing process — that is, in aseptic wounds inflicted by the surgeon. The drainage tube performs its office of carrying off superfluous blood and sanguineous serum in the course of from sixteen to twenty-four hours. If its margins have been accurately adapted, the skin wound is healed in this time—sufficiently healed, that is, to render the parts beneath occluded from the air,—and any subsequent extravasation of blood, of which there is sure to be some in the course of the next forty-eight hours, will be dealt with by the tissues, as the tissues ordinarily deal with blood poured out in a true subcutaneous injury where there is no communication with the outside. Some of this blood will be reabsorbed, some—perhaps the greater part—will clot, and organisation forthwith proceeds in this blood coagulum, which fills up all the nooks and crevices of the wound. The clot acts as a sort of scaffold for the building up of new tissue; in other words, organisation takes place on it and in it, and the process of union, of healing, and consolidation is much helped thereby. If the drainage tube be left longer than the time named it is very prone to act as a source of irritation, and I feel sure that it is the frequent cause of suppuration and of apparent failure in antiseptic methods, simply because it has been retained too long. Seeming to act with perfect and needful efficiency because of the visible discharge on the dressings, it is all the while merely carrying off the fluid which itself has caused the tissues to exude. Professor Turazza would discard the tube altogether, and encourage the collection of blood and formation of clot, and his opinion clearly deserves the consideration of surgeons. Without going as far as he, I would say that each case must be dealt with according to its own conditions, and by no hard-and-fast rule. After some wounds no drainage tube is obviously needed, but in the large majority of cases where it is, the early removal of the tube will, I am convinced, conduce to the healing process and lessen the risks of failure and of suppuration. Accurate apposition of the skin, a dry dressing, and perfect rest—these are the essentials for rapid healing in the presence of ordinary cleanliness, by that obtained by purification of water, or with this or that antiseptic solution. With these precautions, and the very early withdrawal of the tube, the immediate healing of a wound seems, in my experience, to be a matter of almost absolute certainty; it matters not whether it be the extensive wound in an amputation of the thigh, an excision of the knee or the excision of a large breast, or the smaller wound such as is inflicted in the operation for strangulated hernia or the removal of a small lipoma. The surgeon secures the immediate closure of the wound, and the inflammatory action which may be set up in deeper parts by the injury of the operation goes on under subcutaneous conditions. We only need to use the drainage tube for the removal of that fluid which, if excessive and confined, will interfere with the perfect rest and approximation of the divided tissues. The use of the tube for this purpose is rarely demanded for more than from sixteen to twenty-four hours, and the method of its *gradual* removal by cutting it a little shorter day by day is, I think, vastly inferior to that of its bodily removal at the end of the first day, or at the first dressing on the day after the operation, in less than twenty-four hours, even if its presence beyond this time be not positively injurious to the tissues and does not interfere with the process of healing.

The antisepticism of modern surgery has sometimes been derided, and it has been held that the drainage tube is the real source of all the good which is to be had from antiseptic treatment. The spray has had its day, and it will be strange if the drainage tube is to follow it. *Pace* Professor Turazza, I find it hard to believe that the drainage tube will disappear entirely from use, even in aseptic wounds. Experience, it is more probable, will lead to its being employed with greater discrimination and caution, and with better adaptation of means to ends, than heretofore; and towards this desirable result (for by it we shall have greater certainty in the healing of wounds) the paper of the Italian surgeon on the value of the hæmorrhage in the treatment of wounds cannot be without influence.

NOTES ON ULCERATIVE ENDOCARDITIS.[1]

By HENRY McCLURE, M.D.

ANY contribution to the literature of ulcerative endocarditis must prove interesting to the profession, and the two cases I am about to give should prove doubly so by reason of the recovery of the patients. The first case is a recent one, the duration of the illness being sixty-eight days—that is, from the beginning till the temperature settled steadily down to the normal.

Miss C——, aged twenty-six, fairly well nourished, rather anæmic, menstrual function normal. Gouty family history. No history of rheumatic fever or rheumatism. Was seen first on Oct. 9th, 1886. Had complained of some pain in the back and chest for the previous week. She was coiled up in bed in extreme pain, which was referred to the region of the left kidney, with excessive tenderness on pressure. Pulse 80; tongue clean; temperature normal; urine cloudy, containing copious lithates, but no albumen. A morphia and ether mixture was given, with chloroform and opium applied externally.

Oct. 10th (second morning).—Still in great pain, which now seems to shoot from the original seat up the back to the left shoulder, with very anxious look; complexion dusky; pulse 109; temperature 103°; a distinct direct murmur heard at the second interspaces; some tenderness all over the abdomen; tongue coated with smooth white fur; thirst; no headache or nausea. Evening (7 P.M.): In much the same state; temperature 101·5°; pulse 100. Ordered salicylate of soda, in ten-grain doses, every two hours.

11th (third day).—Temperature 104°; pulse 110; pain less; very restless night; some delirium; urine contained traces of albumen (sp. gr. 1020); systolic murmur heard up into the neck, rasping in character. Evening temperature 101·6°; pulse 120, and very feeble. Brandy given and salicylate discontinued; quinine in four-grain doses to be given every three hours. Bowels had acted; motions natural in character. An Austin's inhaler with carbolate of iodine is now to be used frequently.

12th (fourth day).—Temperature 102°; pulse 106. Some delirium in the night; severe headache; no nausea; pupils react to light.

13th (fifth day).—Temperature 105°; pulse 120; respiration 28; headache; some delirium. Lungs carefully examined; nothing abnormal. Evening temperature 101°; pulse 110.

14th (sixth day).—Temperature 102°; breathing very shallow; respiration 28; constrictive pain round lower part of chest. Urine and fæces passed involuntarily. Evening temperature 103°; a roseolous rash observed on abdomen.

15th (seventh day).—Morning temperature 101°; some sickness, delirium, and headache; urine albuminous; sp. gr. 1018. As there is great difficulty in using the inhaler, an oro-nasal one was now substituted, with sponge saturated

[1] Abstract of a paper read before the Norwich Medico-Chirurgical Society.

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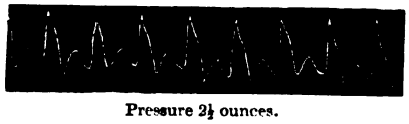
with carbolic acid, creasote, and iodine. There is pain over the heart and distinct cardiac distress.

16th (eighth day).—Temperature 101°; almost constant, rather noisy, delirium in night; breathing shallow; respiration 30; moist râles heard over both bases; pain and tenderness over kidney, spleen, and liver; aortic systolic murmur, harsh and grating, heard all over chest. Seen by Dr. Bateman of Norwich. Quinine continued; small dose of grey powder; six ounces of brandy in twenty-four hours to be taken.

17th (ninth day).—Temperature 101°; very delirious in night, severe headache; passed evacuations involuntarily; pain, tenderness, and some enlargement of spleen; moist râles, with distinct creaking sounds heard at both bases; aortic murmur harsh; other sounds murmurish; pulse tracing dicrotous and feeble; slight jaundice.

19th (eleventh day).—Temperature 100·5°; headache less; better night; tongue fairly clean; takes nourishment well. Evening temperature 102·8°.

23rd (fifteenth day).—A slight rigor had been noticed in the night for the first time. Temperature 104°; pulse 120; respiration 30; headache and delirium. Called in the night, as she was thought to be dying. Temperature 102·6°; pulse 120, very feeble. (See pulse tracing.) Tincture of digi-



Pressure 2½ ounces.

talis in three-minim doses was given every two hours, and brandy increased to eight ounces in twenty-four hours.

24th (sixteenth day).—Temperature 103°; feels rather better: headache less; pulse tracing better. Evening temperature 101·6°.

25th (seventeenth day).—Temperature 100·6°; pulse 109; respiration 29. Better night. A copious deposit of uric acid sand in urine, with trace of albumen. Cardiac murmur is decidedly softer in character; moist râles and creaking sounds heard over back and sides; a deep inspiration causes severe constrictive pain across lower part of chest; pain and tenderness over left kidney; tenderness over liver and spleen; bowels acting regularly; tongue almost clean; takes food well; still some yellow tinging of conjunctivæ.

30th (twenty-second day).—Slight rigor in night. Temperature 103°; tenderness over heart, liver, spleen, and leftp kidney; still some jaundice; condition of lungs and heart the same. Small doses of solution of perchloride of mercury, with ammonia and cinchona, given.

Nov. 6th (twenty-ninth day).—Temperature 100·1°. No headache; no delirium; jaundice almost gone. Condition of heart and lungs the same. A full inspiration still causes pain; tenderness over heart, liver, spleen, and kidney continues. Urine free from albumen; still some uric acid sand.

12th (thirty-fifth day). — Evening temperature 102·4°; pulse 125; tracing of exceedingly low tension; feeling of faintness on slightest movement. Brandy increased; tincture of digitalis in five-minim doses, with cinchona given every three hours.

13th (thirty-sixth day).—Pulse rather better; physical signs the same.

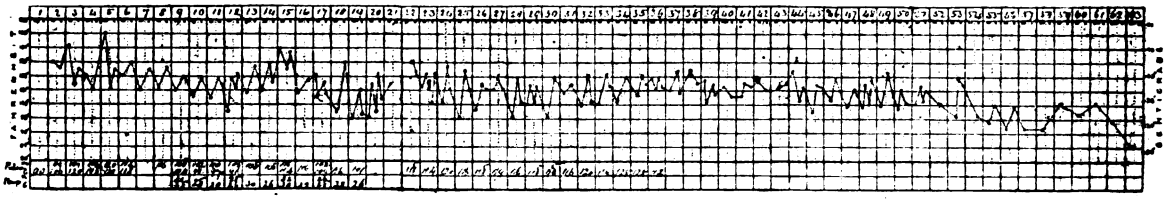
21st (forty-fourth day).—Slight rigor. Temperature 102·5°.

22nd (forty-fifth day). — The cardiac murmur was observed to be much softer in character.

For several days there was some nausea and sickness. The digitalis was discontinued, and bismuth and soda given.

On Dec. 3rd (fifty-sixth day), the morning temperature was 98·8°, and the patient felt decidedly better. The lungs were free from abnormal sounds.

9th (sixty-second day).—Morning temperature 100°. From this time the temperature remained normal till the 16th, when it rose to 100°, and it has since remained normal. (See temperature chart.)



A condition of rather obstinate constipation was the only troublesome after-symptom I had to deal with. There was a steady but slow gain of strength from day to day. She got up for the first time on Jan. 4th. A brownish staining has replaced the roseolous rash. A deep inspiration still causes pain referred to the lower part of the chest in front. There is some slight tenderness over the liver, spleen, and kidney. A soft blowing systolic murmur is still heard propagated along the course of the larger vessels. Other heart sounds normal; still some tenderness on pressure in cardiac region. Has gained flesh; takes food well.

Remarks.—The recognition of ulcerative endocarditis as a distinct disease is comparatively recent. According to Osler[2] it occurs under three conditions: 1. As a primary disease affecting the lining membrane of the heart or its valves, either attacking persons in previously good health, or more often attacking the debilitated or those with old valve lesions. 2. As an associated condition in connexion with such diseases as rheumatic fever, pneumonia, scarlet fever, diphtheria, ague, &c. 3. An associated condition in septic processes, traumatic or puerperal. I consider this case a typical one of the disease beginning at the heart. There was no evidence of any previous heart lesion; the fever was secondary to the presumed renal embolism. The main diagnostic points are: 1. The endocardial murmur, its changing character during the illness, and its total disappearance. 2. The character of the fever as indicated by the thermometer, its irregularity of type, the exclusion of other affections—as rheumatic fever, pneumonia, &c. 3. The albuminuria, roseolous rash, jaundice, and the presumptive evidence of infarcts in kidney, spleen, and lungs. There was no initial rigor observed, and only three slight ones during the illness; there was no cough till the last week, and that was transitory in character. There was no irregularity of pulse observed, and no hæmaturia.

The disease is considered to be due to the presence of a micro-organism — the staphylococcus. These microbes exist in colonies on the endocardium, are swept into the blood current, lighting up a septic fever, and are found in the plugs of the vessels of the spleen and kidney. From what I have gathered from the literature of the subject, the prognosis is gloomy in the extreme. Almost all the recent authorities state that there has not yet been one recorded case of recovery, but admitting the anatomical possibility of it.

As to the treatment. Believing the disease due to the presence of a micro-organism, and a micro-organism of low vitality, the germinating power of whose spores is completely checked by a solution of 1 in 300,000 of bichloride of mercury, a rational method of treatment would seem to be to expose the blood to the action of an antiseptic vapour, which we can do by means of inhalations. This method of treatment was suggested to me by the following case.

June 2nd, 1882.—J. B——, aged twenty, first seen on this date, had been ill for about ten days under Dr. Stovin—an undefined illness: some dysenteric symptoms, with obscure pains in muscles and joints; slight fever; was able to walk about his room.

3rd.—Confined to bed. Temperature 102°. Some cough, with difficulty in breathing; a well-marked mitral systolic murmur heard at apex for the first time. For a few days in much the same state. There was a good deal of nausea and sickness.

About June 8th a well-marked phlegmasia alba dolens developed in the left leg. Cough much worse; some dulness at base of left lung; extreme fetor of breath, with profuse expectoration of extremely fetid greenish matter. We then determined to try antiseptic inhalations. An Austin's

[2] THE LANCET, vol. i., 1885.

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inhaler was used with carbolate of iodine. In a very few days a marked improvement set in, the swelling of the leg was almost gone, the lung symptoms were decidedly better, and the fetor less; some broken down lung tissue was expectorated, the murmur at the apex still persisting. He went on steadily improving, and in about fourteen days was almost well. There was still some cough and expectoration, but no fetor. The cardiac murmur was softer in character. Before the end of August he was able to get out; cough gone, and the heart-sounds quite normal. I saw him a year after a perfect picture of health. The lung sounds were perfect, and the heart quite normal.

That this was a case of ulcerative endocarditis I have no doubt now, but at that time there was not much known on the subject by the ordinary general practitioner. Both Dr. Stovin and myself attributed his recovery to the inhalations, and, I think, rightly so, as amendment in all the symptoms began almost directly after using the inhaler.

In the December following this, Dr. Julius Pollock related a case of ulcerative endocarditis with pyæmic symptoms,[2] resulting in death on the fifteenth day. He says: "The treatment of ulcerative endocarditis with pyæmia is most unsatisfactory; none of the ordinary remedies had any real effect, nor did large doses of alcohol sensibly improve matters. I wish now I had tried the inhalation of carbolic acid or carbolate of iodine, and I would suggest giving such a line of treatment a fair trial in any case of the kind, especially where the lungs appear to be much affected." The case, I may say, was watched attentively throughout by Dr. Stovin (now of Stratford) and myself. I am sorry my notes are defective, but I think the main points and course of the case are correctly indicated. I have recently submitted them to Dr. Stovin for his verification.

In my recent case, though the inhalations were begun on the third day, I am afraid they were practically useless until the seventh day, when the oro-nasal inhaler was substituted. This was used throughout the illness for ten minutes at a time, about ten or twelve times in the twenty-four hours. I cannot help feeling that the gradual decline of the most urgent symptoms was due to the presence of the antiseptic in the blood, checking the growth and reproduction of the microbes, if not destroying them. The second indication in the treatment of my recent case was to keep up the failing power, and especially to combat the cardiac depression. Fortunately, nourishment was taken fairly well throughout (administered often), and consisted of strong broths, beef-tea, jellies, milk, eggs, &c. Stimulants were given freely when absolutely required. Digitalis, though often indicated, was given with caution, fearing to excite sickness or nausea; the sphygmograph was specially useful in giving the indication for it and recording its effects. During the most anxious part of the illness I was fortunate in having the co-operation and assistance of the young lady's brother, a very intelligent senior medical student, who watched the case most carefully, and to whom I am indebted for the minute records of the temperature. As he often heard the cardiac murmur during the illness, he tells me he auscultated the heart recently, and that the sounds seemed to him quite right; he could detect no murmur. This I can verify, as I saw my patient on March 26th; she was then able to walk a mile without fatigue. The heart sounds were normal and the lungs sound.

CASE OF ACUTE RHEUMATISM WITH HYPERPYREXIA.

By ARTHUR J. DALTON, L.R.C.P. Lond., M.R.C.S.

I READ with much interest Dr. Taylor's case of rheumatic hyperpyrexia in THE LANCET; and having had a very similar one lately in private, with even a higher temperature—viz., 108·6° in the axilla,—I venture to publish a few particulars of it.

Miss S——, aged twenty-four, never had rheumatism before, but her father, mother, and one sister had suffered from it on several occasions. On Dec. 31st the patient was seized with pains in the joints, which shortly became swollen and hot. On the fourth day she had a little pleurisy on the left side, with a good deal of pain. The temperature was never very high. On January 6th the pain in the joints disappeared, and an erythematous rash appeared over the body. The temperature now began to rise, and on the morning of Jan. 7th was 103°. Up to this date I had only seen the patient once, my partner, Mr. F. M. Miller, having been in attendance. In the afternoon of the same day, at 3.50 P.M., they sent round in a great hurry, and, Mr. Miller being out, I went at once to find the patient violently delirious, erythematous rash covering the body, pulse very feeble and not to be counted, and the temperature in the axilla 108·6°. I immediately ordered half an ounce of brandy with a little milk, which was given by the mouth with great difficulty. The patient was then stripped, and a sheet wrung out with ice-cold water applied to the chest and abdomen; also several lumps of ice, four or five in number, were placed outside the sheet. The patient was so violently delirious that it took three people to hold the ice on and keep her in bed. The sheet was replaced by another at short intervals and fresh ice applied.—4.5 P.M.: The brandy and milk, with a quantity of milk previously taken, was vomited, also a good deal of phlegm.—4.15 P.M.: Temperature 107·6°; pulse 160.—4.45 P.M.: Temperature 104°; pulse 124. Patient passing everything under her, and motions very much relaxed and offensive.—5 P.M.: Temperature 102·4°; pulse 124, weak. Patient now fairly conscious, but much hesitancy in speech and difficulty in finding words; good deal of muttering and trembling of lips. Subcutaneous injection of brandy (ten minims).—5.20 P.M.: Temperature 100·6°; pulse 128, stronger. Injection of brandy (fifteen minims) subcutaneously.—5.40 P.M.: Temperature 99·6°; pulse weak. The ice was now removed, patient dabbed dry, and put into another bed in the same room between blankets. She was now quiet and conscious.—6 P.M.: Temperature 97·2°. Injection of brandy (fifteen minims) repeated, and, as patient complained of feeling cold, a hot bottle was applied to the feet.—9.30 P.M.: Temperature 99°. Quite conscious and comfortable.—12 midnight: Temperature 102°; pulse good. Face a little flushed. Ice was applied to the head, and ten grains of sulphate of quinine were given in a little orange juice. The patient was given small quantities of brandy and milk during the night. The temperature taken through the night by patient's sister was as follows: at 1 A.M., 102°; 2 A.M., 103°; 3 A.M., 103°; 4 A.M., 102°; 5 A.M., 103°; 6 A.M., 103°; 7 A.M., 104°. The patient was also given five grains of sulphate of quinine every two hours.

On seeing the patient at 8 A.M. on January 8th, I found she had taken a pint of milk during the night, and about seven dessertspoonfuls of brandy. There had been no sickness. Her temperature was 103·3°, and pulse 120, full and regular; respiration 36. The patient complained of feeling tired, and seemed inclined to sleep. She had had a fair amount of sleep during the night, and had passed a large quantity of urine naturally, having passed nothing more under her.—11.40 A.M.: Temperature 101·8°; pulse 109; respiration 33. Since 8 A.M. has had six dessertspoonfuls of brandy with milk and quinine, five grains every two hours. She is now a little deaf, with some buzzing in ears, and very drowsy. No headache. Last quinine powder was vomited. The brandy and quinine to be discontinued.—4 P.M.: Temperature 101·6°; pulse 110; respiration 37. The breathing resembles Stokes' respiration. Since 12 o'clock has had no brandy, but has taken a pint of milk without sickness. Quinine (five grains) to be repeated. Ice still to head. The patient expresses herself as much better. The bowels have acted well; motions pale, but not relaxed.—9.15 P.M.: Temperature 101·5°; pulse 100; respiration 36. Has slept a good deal during the day. Takes plenty of milk. The quinine now to be given every four hours. The temperature during the night did not exceed 101·4°.

Jan. 9th.—10.30 A.M.: Temperature 100·8°; pulse 93; respiration 32, more regular and less noisy. Quinine given every six hours. No pain in any of the joints.—9.20 P.M.: Temperature 100·4°; pulse 92; respiration 32, quiet. This evening the patient says voices have been talking to her. Head has been a little uncomfortable. Since 5 P.M. has had a little pain in the left knee and ankle, also in the wrists, but there is no swelling or redness. Quinine to be discontinued, also ice to be removed from head. Both to be repeated if the temperature reaches 103°.

10th.—Breathing normal. No pain anywhere. Temperature through the day varying from 99° to 100°. The skin has resumed its normal appearance.

11th.—Temperature throughout the day 99°.

12th.—About 11 o'clock last night the pain in the wrists

[2] Ibid., Dec. 9th, 1882.

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returned, and the temperature went up to 101°. This morning the patient has pain in the wrists and shoulders. Ordered ten grains of salicylate of soda every three hours.

13th.—Pain in shoulder still troublesome. Ordered ten grains of salicylate of soda every two hours. Temperature remains about 100°.

16th.—Pain gone from shoulder, which, however, is stiff and powerless. Temperature normal. Shoulder to be well rubbed with oil and worked frequently.

20th.—Temperature still normal. Patient now taking ferri et am. cit., &c. Shoulder improving.

23rd.—Patient got up for the first time. Shoulder still stiff. The after treatment consisted in keeping the shoulder well worked, and a mild preparation of iron taken internally.

On March 16th the patient was in her usual health and spirits. All stiffness had disappeared from the shoulder, she had had no return of pain anywhere, and it is satisfactory to state that there had been no cardiac trouble throughout. As in Dr. Taylor's case, the patient remembered nothing afterwards of the cold applications; neither did the temperature again rise to a dangerous height. All temperatures were taken in the axilla, and it was interesting to note as the temperature dropped the gradual transition from violent delirium to consciousness. I think in a subsequent case I should remove the ice and place the patient in blankets earlier than I did in the present one.

Bethune-road, Stamford Hill.

CASE OF ACUTE RHEUMATISM WITH HYPERPYREXIA,

SUCCESSFULLY TREATED WITH COLD BATHS, AND ICE-BAGS TO THE NAPE OF THE NECK.

BY WALTER GREENE, L.R.C.P., M.R.C.S. LOND.

A. B——, aged thirty-six, came under my care on January 18th, 1887. He was then suffering, he supposed, from the effects of a severe chill, and complained of pain in his limbs and some of his joints, and there was slight febrile disturbance. When seen three days later the temperature was 103° and the pulse 120. There was considerable pain and swelling of the wrists, finger joints, and ankles, and also profuse perspiration, having the characteristic rheumatic odour. I prescribed twenty grains of salicin to be taken every three hours, which was continued for a week, during which time the temperature was fluctuating, but rarely rose higher than 102°, and the joint complications and rheumatic perspirations continued. On the morning of the 28th (Friday) the temperature had risen to 103°, and there was much restlessness. The salicin in twenty-grain doses was then taken every two hours, but in the evening the temperature had risen to 103·6°. At 11 o'clock on the following morning (Saturday, January 29th) the temperature was 106°, the pulse 140 and irregular. Shortly after 12 o'clock the temperature had risen to 107·4°; the respirations were 43; the pulse was small, irregular, and uncountable; and there was lividity of the face and delirium. I now determined to try the effects of the bath. The only bath available was not long enough to admit of the patient's lying down in it; so he had to be supported in a sitting position, with the water, the temperature of which at first stood at 105°, up to his waist. I then poured cold water over his head, chest, shoulders, and back, from relays of cans and jugs which were kept in constant readiness, so as to afford a continuous supply, the nurse baling the warm water out of the bath as fast as the cold water was poured in. In about twenty minutes the temperature was brought down to 102°, and his mind appeared to be quite clear. He was then wrapped in a warm blanket and returned into bed. The temperature continued to decline, and in about a quarter of an hour after he had been replaced in bed it had fallen to 100·4°. A pericardial friction sound was now audible. In the evening the pyrexia was again increasing, and as so much relief had followed the former use of the bath, I determined if necessary to repeat it, and did so when the temperature reached 105°, having first given him an ounce of brandy. As he was very weak, I did not allow him to remain long; but had him wrapped in a warm blanket, and returned to bed as soon as the temperature had fallen to 103°. The bath, as before, was repeated at 3 o'clock in the morning (Sunday, 30th), the temperature having risen to 105°, and again at 11 o'clock, the temperature at this time having reached 106° (the same as on the previous morning at the same hour). After being replaced in bed, a bag of ice was now kept continually applied to the nape of the neck, and this I found by its occasional removal was exercising a markedly controlling influence upon the temperature, which did not again rise above 104°. The slight pericardial friction sound could still be heard. Towards evening he became very restless, and as he had passed several sleepless nights, I gave him, within half an hour of each other, two doses of thirty minims each of paraldehyde. This having no effect, I then gave him thirty grains of bromide of ammonium, and at the same time a subcutaneous injection of liquor somnifera, after which he had a few short intervals of sleep, lasting about one or two hours at a time. The following morning (Monday, the 31st), the temperature being 104°, I gave him twenty-grain powders of salicylate of soda every three hours. He took five, but the effect upon the temperature was insignificant. The extreme restlessness, or rather wakefulness, which had continued through the day, increased in the evening, and towards midnight he appeared to be sinking. He was unconscious, though lying apparently awake, with his eyes wide open. The pulse was exceedingly small, and quite uncountable; the respirations shallow, and 44 to the minute. I then injected over a drachm of ether subcutaneously, and gave him an ounce of brandy. A marked improvement in the pulse ensued, and consciousness returned. He was, however, still very restless, so I prescribed forty grains of urethan, which, although it did not induce sleep, seemed to improve the character of the pulse. I then injected three minims of liquor somnifera subcutaneously, and in about a quarter of an hour after this the respirations had fallen to 19 and the pulse to 108, and he slept quietly for two or three hours. On awakening, some milk was taken, and I again gave him forty grains of urethan, after which the general condition greatly improved, and he slept at intervals the greater part of Tuesday morning. During the following three days, although the patient was very prostrate, the temperature gradually fell, and a slight improvement was observable. There was, however, a tendency to nervous excitement, and I prescribed each night eighty grains of urethan, and injected subcutaneously three minims of liquor somnifera. The pericardial friction sound, first observed on the Sunday, was still audible, little or no liquid effusion having taken place. The pain and swelling of the joints gradually decreased. Each day some progress was made, and on Feb. 4th he was able to sit up, complaining only of great weakness and some stiffness in his joints. On the evening of Feb. 19th he appeared to be threatened with a relapse. His hands, wrists, and shoulder joints became swollen and painful; he was bathed in a profuse perspiration having the rheumatic odour; the temperature rose to 101·2°, and the pulse to 109, and in the night he complained of a sharp pain in the præcordial region. In addition to the quinine which he had been taking in five-grain doses twice daily from the time the temperature subsided, I now gave him twenty-grain doses of citrate of potash. These symptoms continued for about a week, and then gradually passed off, leaving him exceedingly weak and helpless. From this time, however, he slowly and steadily progressed towards recovery. It was a noteworthy feature in this case that when the temperature was rapidly rising, and while the hyperpyrexia continued the joint pains and acid perspirations entirely disappeared. At such times the skin was dry, and the patient seemed to move his limbs freely and without apparent discomfort.

Remarks.—This is his third attack of acute rheumatism, and the high temperature coupled with delirium, and the signs of a failing circulation, as indicated by the lividity of the surface and an almost imperceptible pulse, are sufficient to mark it as being one of the greatest severity. It presents points of great practical interest. Salicin and salicylate of soda failed to exercise their so-called specific action. From January 21st to 29th my patient had taken at least 1280 grains of salicin, and in spite of this the temperature had risen to 107·4°. No better result followed the administration of salicylate of soda, of which he took 100 grains, though in both instances the drugs were of excellent quality. The effect of cold baths in these extreme cases is well known and needs no comment, but the influence on the tempera-

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ture exerted by the ice-bag at the nape of the neck, in close proximity to the heat-regulating centres, is worthy of notice. Urethan given in large doses, on some occasions as much as eighty grains at a time, had little or no influence in procuring sleep, though it sometimes seemed to allay the extreme restlessness, which was such a troublesome factor throughout this case. Its principal effect, however, appeared to be exerted in improving and steadying the pulse.

Wallingford, Berks.

BRIEF NOTES OF THREE CASES OF

INTESTINAL OBSTRUCTION ILLUSTRATING SOME POSSIBLE ERRORS OF DIAGNOSIS.

BY HAROLD G. TAYLOR, M.D. LOND.,
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CASE 1. *Chronic intestinal obstruction simulating tabes mesenterica.*—W. M. T——, an imbecile boy aged sixteen, with family history of phthisis. Towards the end of August, 1882, it was noticed that he had fallen off a good deal in flesh, and had occasional attacks of abdominal pain and diarrhœa. On examination of the abdomen there was found to be general enlargement with prominence of the superficial veins, and apparently a little ascites. On Sept. 21st a tumour was felt in the right iliac region, which subsequently extended into the hypogastric region; it was hard, lobulated, and easily mapped out with the hand, being evidently distinct from the liver and kidney. The symptoms were gradual emaciation, abdominal pain, occasional vomiting (which, however, was never copious or uncontrollable), and a tendency to diarrhœa, the motions being of a dark muddy colour. The morning temperature was generally about normal; in the evening it was usually a little over 100°, but sometimes as high as 102°. He died on Oct. 31st without any fresh symptoms. The diagnosis made was tubercular disease of the mesenteric glands. The post-mortem examination showed that the cause of death was intestinal obstruction. The tumour felt during life consisted of coils of intestine closely matted together by peritoneal adhesions, and distended by a dense fæcal mass consisting almost entirely of potato parings.

CASE 2. *Acute intestinal obstruction simulating choleraic diarrhœa.*—S. B——, an imbecile boy aged sixteen, with feeble circulation and subject to occasional attacks of diarrhœa. On July 30th, 1883, some friends came to see him and gave him a good many sweets. The same night he had diarrhœa badly; the next day he looked very pale and ill; about noon the diarrhœa recurred, he became very blue, and his pulse was almost imperceptible. He was put to bed and stimulants administered; he looked better, but diarrhœa continued.—Aug. 1st: He was restless during the night, and the diarrhœa still continues; the stools are liquid, of a *dark-greenish mud colour;* he complains of no pain but is thirsty; the hands and feet are cold and the pulse imperceptible; temperature in the axilla 102°, no abdominal distension; tongue slightly coated; he has taken plenty of milk and beef-tea, *without sickness.* Ordered a mixture containing tincture of opium, compound spirit of ammonia, spirit of chloroform, and tincture of catechu, every three hours, and two teaspoonfuls of brandy every two hours, with warmth to the surface by hot flannels and a hot-water bottle. He, however, did not rally, and died at 2.45 next morning. The post-mortem examination showed that death was due to intestinal obstruction, the seat of obstruction being the sigmoid flexure of the colon, which was tightly packed with hard scybala.

CASE 3. *Acute intestinal obstruction simulating choleraic diarrhœa.*—Arthur T——, an idiot boy aged fifteen. Aug. 17th, 1886: The last fortnight he has been suffering from disordered bowels, apparently diarrhœa, the motions being liquid and of a dark-green colour (according to the nurse). During this time he has been sick twice, and has not taken his food as well as usual. This morning the symptoms suddenly became more acute, he vomited repeatedly during the day, and there was an almost constant liquid flux from the bowels. Towards evening he became very much exhausted, the pulse being quick and feeble and the hands and feet cold. Stimulants, astringents, and sedatives were administered freely without effect.—18th: This morning, at 8 o'clock, he looks very bad; he is hollow eyed, the surface is cold and clammy, and there is no pulse perceptible. He has been sick only once during the night, but there is almost constant retching, and the diarrhœa has continued almost incessantly, the stools being liquid and of a peculiar *muddy* colour. The character of the stools called to mind the previous case; the rectum was therefore examined with the finger, and just at its tip a hardened mass of fæces was felt in the upper part of the rectum. An attempt was made to break it down, and then a copious enema was administered. Nothing came away immediately, but about two hours afterwards a piece of slate pencil 2½ in. long was extracted from the rectum with the finger; subsequently, after repeated enemata, a quantity of small pieces of slate pencil about an inch long, a few bits of stick, some pieces of rag, and fragments of wool, came away. All the bad symptoms passed off, and the boy rapidly recovered.

BULLET WOUND OF SPINE; PARALYSIS; SECONDARY ABSCESSES; DEATH.

BY JUSTYN GEO. D. DOUGLAS, M.D., C.M.,
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BULLET wounds occurring in civil practice are comparatively rare, and the records of any case are always of sufficient interest to merit their publication. The following notes of a recent tragical case that has happened in a quiet seaside town, presenting some unique features, will probably be deserving of perusal.

Walter W——, aged forty-four years, a gentleman of independent means, following no profession, when on a visit to Bournemouth, went out for a walk on the Common near Westbourne, between 4 and 5 o'clock on the afternoon of Sept. 11th, 1886. He overtook and passed a man walking in the same direction, who was going more slowly and who appeared to be lame. After getting some five or six yards beyond him, he was suddenly shot in the back and fell to the ground, the man firing two other shots at him from a revolver. Assistance being rapidly procured, the assailant was secured and Mr. W—— carefully conveyed to the Bournemouth Cottage Hospital, where he was temporarily attended by Dr. Snow (in the absence of myself and the other surgeons), who found him conscious, but in a state of collapse, complaining of pain in the back, numbness, and inability to move his legs freely. At 8 P.M., an examination of the wound showed a small circular opening about the level of the tenth dorsal vertebra, a little to the left of the mesial line of the spine. A probe was carefully passed down for about an inch and a half, but no bullet could be felt; there was some œdema round the wound and oozing of blood. There was found to be slight movement in the legs, but sensation was impaired, especially in the calves of the legs and dorsum of the feet. The right ear had been penetrated by a bullet, there being a small circular opening through the concha. As the patient was still suffering from shock, further examination was not deemed advisable. A pledget of lint dipped in carbolic oil was applied to the wound and some ice put over the part. Two ten-minim doses of tincture of opium had been administered at 6 and 7 P.M., and as there was still a good deal of pain over the lower part of the back and abdomen, twenty minims of tincture of opium were ordered at 9.30 P.M. The patient could not pass his urine. There was no vomiting, and he took a few ounces of Liebig's beef-tea.

Sept. 12th.—The patient passed a bad night, suffering from a good deal of pain and restlessness; one-sixth of a grain of morphia, given hypodermically about noon, afforded great relief. Owing to the serious nature of the case, his depositions were taken before a magistrate, who attended in the afternoon. About an ounce of clear urine was voided. Temperature in the morning 99·6°; evening 100·6°. Pulse in the morning 88; evening 108.

13th.—Quiet night after two hypodermic injections of morphia. Twenty-nine ounces of urine drawn off in the morning, very bloody, probably from kidneys. Bowels confined; two enemata, which were used to empty them, were not retained owing to the relaxed condition of the sphincter. Temperature, 100·2°; pulse, 108. Mr. Victor Horsley came down this evening and examined the patient. After consultation, it was considered that there was no local evidence of injury to the spinal cord itself; the partial loss of movements in the legs and the impaired sensation

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were attributed more to concussion of the spinal cord than to direct injury to it. Vastus reflex present, cremasteric absent; superficial reflexes over the chest and abdomen well marked. Some pain on pressure to the right of the umbilicus felt in the leg, also on pressure on the right side of the scrotum. Crural branch of genito-crural nerve, also genital branch on the right side in line, and this pointed to pressure on the right genito-crural, and also, probably, on the right external cutaneous. The bullet probably pierced the body of the vertebra from left to right and lodged in the right psoas. The danger was, of course, septic mischief, but an attempt to extract the bullet was agreed upon.

14th.—Passed a quiet night. At 8 A.M. the urine was drawn off and found to be quite clear. The following operation was performed by Mr. Horsley. Chloroform having been given, an incision was made down the middle line of the body, beginning at the wound of entrance made by the bullet and extending down about five inches in length, and another incision was made at right angles to it, running to the left for about two inches. The track of the bullet was followed downwards to the first lumbar vertebra, and it then appeared to pass between the transverse processes of the twelfth dorsal and first lumbar vertebræ; one of these transverse processes was removed by bone pliers, but the bullet could not be found or felt by exploring with probe or otherwise. No further attempt was considered either advisable or safe. The track of the bullet was then scraped with a sharp spoon, and the bruised tissues around the entrance wound were cut out, to place the entire track in as antiseptic a condition as possible. A solution of chloride of zinc (forty grains to the ounce) was used to cleanse out the wound, which was then sewn up and dressed carefully with carbolic gauze after the introduction of two drainage tubes. Full antiseptic precautions were adopted strictly throughout the operation, which was performed under the spray of carbolic acid.

15th.—Wound dressed under antiseptic precautions; looked well. Free discharge. Urine drawn off morning and evening. Bowels relieved by an aperient of mist. sennæ co. and decoct. aloes co. (of each one ounce). On testing the legs, the patient can move the right over the left, but cannot move the left over the right. Tactile sensation normal in right foot and leg, but impaired in left and absent from dorsum of foot.

16th.—Progressing favourably. Hypodermic injection of morphia continued as before. Bladder still requires use of catheter to relieve it.

17th.—Wound dressed. Small amount of serous discharge quite sweet. Sensation in left leg still diminished, and he complains of "pins and needles" in foot, also that he cannot keep the legs apart. Urine tested; no albumen.

18th.—Some slight cystitis appeared to-day. Bladder washed out with boro-glyceride solution, one drachm to the pint.

19th.—Erythematous rash over chest and back and on legs, probably due to the carbolic acid dressing. Corrosive sublimate was therefore substituted.

22nd.—Took a little solid food to-day, and passed a little urine without catheter. Wound looking well and line of incision healed, though open at either end. Some of the stitches removed.

24th.—Going on well. Temperature for last week has been 99° in morning, 100° evening. Remaining stitches taken out as they were causing some irritation. Wound had not been dressed for three days.

25th.—Bedsore forming over right trochanter of femur. Rather more motion in legs, and sensation in left a little better.

28th.—Wound dressed and all healed, except at upper part, and this only superficial. Dressed with boracic ointment.

30th.—Catheter passed only once a day. Temperature has been half a degree lower; evening 99·6°.

Oct. 2nd. Rather more feverish to-day. Temperature 99·4°; in the morning 101·8°, probably due to small fibrous slough separating from the upper part of the wound.

3rd.—Still feverish. Morning temperature 99·8°; evening 102·2°.

6th.—Moved on stretcher to Lansdowne House. Complaining of some indigestion. Ordered twenty minims of compound bismuth mixture twice a day.

7th.—Restless night, and complaining of hot burning pain in legs. Temperature lower: morning 99·2°; evening 100·4°.

9th.—The last two nights have been better. Morphia has been continued. Bladder greatly improved, and only occasionally washed out. Still great want of power in legs, especially the left. Bowels confined. Ordered pulv. glycyrrhizæ co. (one drachm) at bedtime.

10th.—Bowels acted four times, with flatulence and griping. Two drachms of brandy in arrowroot given.

12th.—Seen by Dr. Snow, and following notes taken:—"No tenderness over abdomen, and sensation normal. On the right side, between the knee and ankle, sensation is a good deal impaired, especially on the inner side over the foot, as if touched with a hot iron, and it is bent down; cold objects feel warm. On the left side, sensation imperfect below middle of left leg; cold objects also feel warm. As regards motion, the right leg he can draw slightly up, with difficulty semi-flexing it; the left leg, on the other hand, he cannot move at all. Ordered acid. phosph. dil. (five minims) and inf. cascarill. (half an ounce) bis die ex aq. a. c.; hypodermic injection of morphia as before.

Oct. 15th.—Slight rigor towards noon, and temperature ran up from 99·2° in the morning to 104° in the afternoon. Some powders of antipyrin, ten grains in each, were ordered, one or half a one to be given every two hours till temperature falls. One powder was taken, and two halves at two hours' interval, and the temperature fell to 102·2° in the evening. Two drachms of brandy to be given with food as required.

16th.—Better. Only one half dose (five grains) of antipyrin given.

17th.—Bowels relieved by injection. Better; night temperature lower.

19th and 20th.—Two half powders of antipyrin given.

21st.—Some quinine added to acid mixture, and no antipyrin given.

22nd.—Bedsore over trochanter and sacrum extending. Very apthous mouth. Ordered six grains of nitrate of silver in one ounce of water to be applied frequently.

26th and 28th.—One or two tablespoonfuls of pus passed from the bowels: rectum examined, but nothing to be felt.

29th.—Paraldehyde (fifty minims) was substituted for the morphia, but did not answer, and he had a restless night. Abscess of small size, which had formed in the calf of the left leg, was opened.

31st.—Slight amount of pus in fæces to-day, which were also very fetid. Temperature has been lower last three evenings; since pus was passed it averages 99·6° morning, 100·6° evening.

Nov. 6th.—Was seen by Mr. Erichsen in consultation with Dr. Snow and myself. Mr. Erichsen remarked that the bullet had stopped in the vertebral column; if not, it must have gone through and wounded the viscera; it had not gone through, however, but, striking the spine nearer the mesial line than the articulation of the rib, was either arrested in the bony part of one of the vertebræ or may have dropped into the pelvis. No further surgical exploration was possible; prognosis very gloomy, owing to danger of septic poisoning primarily, and secondarily the paralysis, exhaustion, and bedsores.

29th.—Has kept on much the same, but slowly losing ground and emaciating. Bedsores have greatly extended, large dry sloughs have come away, and there is evidently communication from the sacrum to the trochanter. Aphthæ come and go in the mouth, greatly kept under by application of weak caustic solution, glycerine, and borax, and washing out the mouth with oxygen water. Fever has been persistent, but not markedly high, being between 99·8° and 100° in the morning and 101·6° or 101·8° in the evening. Tendon reflexes exaggerated on right side and blunt on left. There is a good deal of inversion of right thigh and leg, which are also œdematous.

Dec. 9th.—Certainly weaker the last ten days, and more emaciated. Bedsores have greatly extended, resembling more a dry form of gangrene; all the bones of the sacrum are exposed and skin greatly undermined, especially on the right side, where the probe runs down to the bedsore over the trochanter. Has been ordered stimulants more freely.

30th.—Patient greatly wasted and wandering in his talk, misplacing and forgetting words; has been able to do with less morphia. Pulse has latterly run up to between 120° and 130°, thready, and very weak. Morning temperature 100°; evening 102°.

Jan. 3rd, 1887.—Slight dulness over both lungs, especially the left, where there is also some crepitation. Tubular breathing.

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4th.—Very weak; respiration 36; sight, speech, and hearing gone; lung condition the same.

Jan. 5th.—Unable to swallow; unconscious; sinking.

6th.—Died this morning.

Necropsy twenty hours after death.—Present, Drs. Snow and Douglas, Parrott and Cusse. Body greatly emaciated and lower legs œdematous. Large deep bedsores over sacrum and right trochanter, exposing bone. Brain and membranes healthy except some slight congestion. Pericardium contained about two drachms of fluid. Left auricle and ventricle, especially former, full of decolourised clot. Heart muscular, tissue quite healthy, and valves normal. Left lung slightly adherent at base, and between one and two ounces of fluid in the pleura. Some congestion at base, but pieces float. The right pleura contained also a little fluid, and there was slight congestion at base. Liver natural in size and on section. On exposing and raising the bowels, a large diffuse abscess was found extending from the base of the left kidney, permeating the left psoas and passing into the internal iliac muscle. The pus was of curdy character. There were numerous small multiple abscesses in both kidneys, especially the left; capsules of the kidneys were non-adherent. On raising the psoas muscle, part of the iliac bone was found bare. After a careful and prolonged search, the bullet was found completely embedded in the twelfth dorsal vertebra, and to such an extent had the bone been penetrated that the base of the bullet did not project at all. Its situation seemed to be anterior to the transverse process. The cord appeared to be pressed upon, though not penetrated by the foreign body. Small spiculæ of bone and pieces of cloth, which had been driven in, were afterwards detached. To the naked eye there was no apparent change in the appearance of the cord or its membranes.

Bournemouth.

A TABULAR STATEMENT OF SIXTY-FOUR CASES OF ABDOMINAL SECTION,

INCLUDING FORTY-FIVE COMPLETED OVARIOTOMIES; WITH REMARKS.

By C. J. CULLINGWORTH, M.D.,

PHYSICIAN TO ST. MARY'S HOSPITAL, MANCHESTER; PROFESSOR OF OBSTETRICS AND GYNÆCOLOGY AT THE OWENS COLLEGE; VICE-PRESIDENT OF THE OBSTETRICAL SOCIETY OF LONDON.

(*Concluded from page 209.*)

In all my fatal cases of completed ovariotomy it is probable that septicæmia was the immediate cause of death. But in one case, that of a young woman of twenty-two, the pericardium was found universally adherent from old inflammation; and in another, that of a patient of sixty-four, there was mitral disease of old standing. How far these conditions contributed to the fatal result I am not prepared to say. In four of the fatal cases the disease proved to be of a malignant character. Three of these were examples of sarcoma. In the fourth the patient had been tapped no fewer than nine times, and probably, as a consequence of the escape on some of these occasions of the contents of the cyst into the peritoneal cavity, the peritoneum had become the seat of a vast mass of soft, semi-transparent, proliferating tissue, filling up the pelvis and embedding within it the ovaries, both of which were cystic.

With regard to the condition of the second ovary, my experience has been, I believe, somewhat exceptional. Certainly, the proportion of cases, in which there was sufficiently marked disease of the second ovary to necessitate its removal, has been greater in my practice than in that of my colleagues at St. Mary's. Of the forty-five cases in the table, the condition of the other ovary in seven cases is not recorded; in sixteen it was either normal or simply atrophic, and was left undisturbed; while in twenty-two it was removed. The reasons for removal were as follows: in fourteen cases the organ was more or less enlarged and cystic; in one it was enlarged and indurated; in two the second ovary was normal, but was removed on account of a broad ligament cyst in close contiguity with the ovary; in one case there were ordinary cystoma of one ovary and a dermoid cyst of the other; and in four cases both ovaries were the seat of advanced cystic sarcoma. In all the cases in which the second ovary was removed the indications for that step were clearly defined, and my colleagues fully concurred in its desirability.

On three occasions I have operated on pregnant women. In one of these cases gestation had advanced to five months. Convalescence progressed normally until the ninth day, when uterine contractions commenced, and the patient aborted without any ill result. In the other two cases, the patients had only advanced two months in pregnancy. One of these recovered very favourably from the operation, and went home, but fifteen weeks after the operation she miscarried, the age of the fœtus being apparently about five months. The third patient was operated upon last September. She made an excellent recovery, without interruption to her pregnancy.

When alluding to the condition of the second ovary, I stated that in four of my patients both ovaries were affected with cystic sarcoma. Two of these patients died in consequence of the operation; the other two recovered rapidly from the operation, but died within three or four months from recurrence of the disease within the abdomen. As I have said elsewhere, the surgical treatment of sarcoma seems utterly hopeless. One patient, in whom the growth had all the appearance of malignancy, completely falsified the forebodings, in which, I believe, everyone who witnessed the operation was a sharer. The case (No. 36 in the table) was that of a girl of twenty-two years, in whom a large abdominal tumour had formed with suspicious rapidity. The growth was semi-solid in its consistence. It had been punctured a few days before I saw it by means of a small trocar, but no fluid had escaped. On opening the abdomen the case looked desperate. The tumour was a large, thin-walled, multilocular cystoma, with intimate adhesions to the parietes, omentum, and intestine. The gelatinous contents had, to a certain extent, escaped through the aperture made by the trocar into the peritoneal cavity. The omentum was greatly thickened, and the peritoneum was studded with soft papillomatous growths. The wall of the tumour was so thin that it gave way wherever there were adhesions to be separated, and it was impossible to prevent the contents escaping in all directions into the peritoneal cavity. I feared that I should be unable to complete the operation. In any case, it seemed unlikely that the patient could recover, and even if she did, the character of the growth led one to fear a speedy return of the disease. With much difficulty I succeeded in removing the tumour, cleansed the peritoneal cavity as well as I could, put in a glass drainage tube, and closed the wound. I told the friends what I conceived to be the nature of the case, and explained how it was scarcely possible to hope for ultimate recovery. To my utter surprise the patient got well without a bad symptom. The temperature on the evening of the day of operation was 100° F.; after that it never exceeded the normal. It is now twelve months since the operation, and the girl is at her work in perfect health.

I do not propose to speak further of individual cases; the main particulars of each will be found in the tables. There are some points, however, in regard to the operation and after-treatment, about which I shall probably be expected to say a few words.

Up to the end of 1886, I continued to use the carbolic acid spray in my operations. Personally, I have never seen it do harm, and as my cases seemed to me to do well in proportion as the details of the antiseptic method were rigidly adhered to, I hesitated to abandon any part of a system to which I owed so much. I do not consider the spray essential, and, indeed, I have since dispensed with it; nevertheless, it had its use, if only by being an emphatic reminder to everyone in the room that the case was being dealt with on antiseptic principles.

Of much more consequence than the spray is the thorough purification of the hands, sponges, and instruments. For the hands I now always employ a solution of corrosive sublimate (1 in 1000). For the sponges and instruments I use a solution of carbolic acid, of the strength, in the former case, of one part in forty, in the latter of one part in twenty.

In every case in which there is reason to anticipate oozing from the site of adhesions or any accumulation of fluid in the peritoneal cavity, from whatever source, I use the glass drainage tube. In simple cases I prefer to do without it, because I can then leave the dressings undisturbed for several days—a point, in my opinion, of no little importance. It will be found, on reference to the table, that the drainage

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tube was used in twenty-two out of the thirty-seven cases operated upon during the last seven years. That the fifteen cases in which no drainage was employed all recovered, while of the twenty-two in which it was used five died, affords no argument against the value of drainage, as it was only used in the more serious cases.

Both for tying the pedicle and for the deep sutures, I use carbolised silk. Where superficial sutures are required, I prefer silkworm gut, which I have found absolutely unirritating, and which I should use for the deeper sutures as well if it were not quite so fine. The dressings I usually employ are pads of sublimate wood wool enclosed in gauze; over these I place a thick layer of cotton wool, retaining the whole in position by means of a many-tailed flannel bandage. Where no drainage tube is used, I leave the dressings undisturbed usually until the sixth day, when I remove the deep sutures.

The nineteen cases of abdominal section in the second table require for the most part but few words of comment. Already, allusion has been made incidentally to the first four on the list, and they need not now be further referred to. The two nephrectomies, and the case (the first on record) of the removal of an impacted calculus from the lower end of the ureter, have been published in detail in various journals and Transactions. So also has case No. 5, where a large quantity of pus had accumulated between the layers of the abdominal wall from the bursting of an ovarian abscess. The Cæsarean operation (No. 19) is merely included here because it comes technically under the head of abdominal section. The case will be fully reported elsewhere. Of the rest, three (Nos. 6, 9, and 18), were cases of exploratory incision for abdominal tumour, where the nature of the swelling was doubtful. Two of these turned out to be uterine myomata. The third was a case of malignant disease of the liver and peritoneum, with ascites, where the diagnosis had been obscured by the matting together of the intestines against the posterior abdominal wall. In none of these was anything done beyond establishing the diagnosis, and removing ascitic fluid where present. The abdominal wound healed well in each case, and the patients were no worse for the operation.

In two cases of uterine myomata I have felt justified, owing to the excessive and uncontrollable hæmorrhage, in undertaking the operation for the removal of the uterine appendages. In case No. 14 the operation was a complete success. Although a slight metrostaxis continued for some months, there has been no hæmorrhage of any consequence since the operation. The tumour has decidedly shrunk in all its dimensions, and has become softer. The patient has recovered from her anæmia, and to a great extent regained her usual health. In the second case the operation was not completed. On opening the abdomen the contents of the pelvis were found to be so matted together from old peritonitis that the tubes and ovaries could neither be seen nor felt. I thereupon closed the wound before any mischief had been done. A case may be bad enough to justify a comparatively simple operation, such as removal of the healthy or non-adherent appendages, and yet may not be bad enough to justify an operation involving greater risk, such as removal of the appendages when they are firmly adherent to other viscera, and so distorted and displaced as to be even recognised with difficulty. The patient in question recovered from the operation, and, owing no doubt to the rest and care, left the hospital with her symptoms relieved and her general health much improved.

Five of the remaining cases form a group in which the abdomen was opened, not on account of the presence of an abdominal tumour, but of intra-pelvic disease of a chronic and more or less obscure character. In a paper read before the Lancashire and Cheshire branch of the British Medical Association, and published in the *British Medical Journal* of Jan. 30th, 1886, I formulated certain conditions which, in my opinion, justify exploration in these cases. They are briefly as follows:—(1) That there shall be present physical signs of actual disease, in the form of one or more circumscribed intra-pelvic swellings, which appear not to spring directly from the uterus; (2) that there shall exist persistent pain, which rest and other simple methods of treatment have failed to relieve, and sufficiently severe in character to disable the patient from following the ordinary occupation of her life; and (3) that the patient and her friends shall be made acquainted with the nature of the operation, and shall be willing to accept the risk. These conditions were, I believe, fulfilled in all five of my cases. Two of them (Nos. 11 and 12) were published in detail in the paper just referred to; in both, the patients made excellent recoveries. In the case marked No. 8 in the table, there was a solid immovable tumour in Douglas's pouch, pushing the uterus upwards and forwards so as to interfere with the functions of the bladder. I thought I could move the uterus independently of the tumour. It turned out that in this I was mistaken. The tumour was a subperitoneal myoma springing by a short pedicle from the posterior wall of the uterus, and incarcerated in the pelvis. It was extricated with some difficulty and removed, the stump of the pedicle being secured outside the wound by means of a Kœberlé's serre-nœud. The patient unfortunately died of septicæmia on the third day. I now think it would have been better practice to have contented myself with liberating the tumour from its position without removing it. Nothing is easier than to be wise after the event.

The next case (No. 13) was that of a patient who had for some years been worn out and almost entirely disabled by chronic pelvic peritonitis. There was a distinct tumour to be felt in the neighbourhood of the broad ligament, and the patient was eager for an operation. The risk was fully explained to her, and she deliberately accepted it. The contents of the pelvis were much matted, the right tube was distended with serum, and there were three cysts in the broad ligament. The cysts and the diseased tube were removed, and many of the adhesions separated. A fresh attack of peritonitis unfortunately supervened, and the patient died on the third day. I was greatly distressed at the loss of this case, as the patient had acted for several years as caretaker at my consulting-rooms, and was a most worthy, loyal, and devoted servant. Nevertheless, while I deplore the result of the operation, I cannot reproach myself for having undertaken it. The fifth and last case (No. 16) was somewhat similar in its character; happily, however, it was more successful. There was a history of long disablement from chronic pelvic peritonitis, and a small fixed intra-pelvic tumour could be felt to the right of the uterus. On opening the abdomen, the uterine appendages were found universally adherent. Both tubes were enormously thickened from chronic inflammation, and contained in their walls several cysts. The right ovary was enlarged and contained many cysts, the largest of which was filled with pus. I removed both ovaries and both tubes, and the patient is now strong and well. This was a typical case for exploratory operation; one cannot conceive that any other mode of treatment, however long continued, could possibly have been of any avail.

The work, of which I have here rendered an account, has for many years been one of the great interests of my life. It is therefore not surprising that I should feel tempted to refer to some other lessons I have learned from it; but I must refrain. I cannot conclude these remarks, however, without gratefully acknowledging the friendly help and counsel I have at all times received from my colleagues at St. Mary's Hospital, and especially from my senior colleague, Dr. Lloyd Roberts. It has been my good fortune to assist him in a large number of his operations, both public and private, as well as to have the advantage of his assistance in many of my own operations. But while each has thus benefited by the experience of the other, the fact that Dr. Roberts had already won a reputation as an ovariotomist when I undertook my first case makes me, in this respect, by far the greater debtor. I am much indebted, too, to the three gentlemen who have successively held the post of house surgeon at the hospital during the last nine years (Dr. Walter, Mr. Winterbottom, and Dr. Donald), for the careful manner in which my cases have been recorded, and particularly to our present house surgeon, Dr. Donald, for his help in preparing the tables. A word of acknowledgment is also due to the nurses, whose devotion to these operation cases is beyond all praise.

Some portions of the retrospect I have here laid before the profession amount to a confession of failure; other portions, fortunately, are a record of success. Had it not been so, it is just possible (such is the weakness of human nature) that not even the sense of responsibility, of which I spoke at the outset, would have sufficed to draw from me the story of my early failures.

THE anniversary dinner of St. Bartholomew's Hospital was held on the 27th ult., the treasurer, Sir Sydney H. Waterlow, Bart., presiding.

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TWO KNEE CASES.

SERIOUS INJURY TO JOINT WITH IDIOPATHIC EROSION OF CARTILAGES; REPEATED ASPIRATION; RECOVERY. FRACTURE OF PATELLA, TREATED BY SILVER LIGATURE; RECOVERY.

BY LEIGHTON KESTEVEN, M.R.C.S.

CASE 1.—At the Brisbane racecourse on Nov. 10th, 1883, J. W——, squatter, riding his own horse in a Corinthian race, having the inside running, at the turn for home in a hot finish brought his knee in contact with the distance post. So great was the concussion that the post—which was six inches in diameter—was snapped off at the ground. His leg was thrown backwards over the horse's rump, and he was nearly unseated, but managed to recover and get his leg over again, and rode in fourth or fifth at the winning-post. He was lifted off his horse and taken to the jockeys' room, where I saw him within five minutes of the accident. The leg was very much swollen, and the knee appeared to have received serious injury. He was at once conveyed into town and I attended him at his hotel. On examination I came to the conclusion that there was no fracture, nor any extensive laceration of the ligaments; but that the synovial membrane was lacerated, and most probably the semilunar cartilages displaced, as he was in extreme pain, and the joint was evidently filling fast with fluid. Three hours later the knee was greatly distended, the synovial sac bulging on each side above the patella, and the patella floating. On pressing it down on to the condyles (which, owing to the great distension could with difficulty be done) a grating sensation was communicated of rough surfaces, indicating that the forcible impact of the patella on the condyles had denuded the apposed surfaces of both of some amount of their cartilage. The calf of the leg was bruised from the knee to the ankle, and distended with effused blood; cold cloths and ice were applied, and morphia administered hypodermically and by mouth.

Next day (11th), under chloroform, I opened the calf of the leg (using eucalyptus spray) by an incision four inches in length, and removed about ten ounces of clotted blood from a hæmatoma formed by the sheathes of the muscles, washed out the wound with ice-cold carbolic lotion, stitched it up, covered it with boric lint, and bandaged as tightly as I thought safe. I then aspirated the knee joint, and removed twelve ounces of what appeared to be almost pure blood, giving great and immediate relief to the patient. The leg was then put up on pillows, steadied with sandbags, and cold irrigation applied to the knee. The fluid drawn off on being examined under the microscope proved to be nearly pure blood, and contained tesselated epithelium and cartilage cells. It clotted shortly after exposure to air. The general constitutional disturbance was severe; he had passed a very bad night, and had been awakened each time he dozed off by jumping pains in the knee. The grating could be very easily felt on rolling the patella on the condyles after the fluid had been removed. The temperature was 104°F.; pulse 120; skin hot and dry. A mixture was ordered of opium, aconite, and acetate of ammonia in camphor water. A medical man called in consultation by the patient's friends considered the injuries too severe to admit of saving the leg, and recommended immediate amputation.

13th.—Two other medical men, in consultation, in view of the palpably serious nature of the injury to the cartilage of the joint, recommended that the leg should be put on a long splint, to obtain ankylosis of the knee joint, as the only means of saving the leg. This advice I declined to act on, and, taking the responsibility myself, I put it on a Mclntyre's splint, flexed, and applied ice-bags to the joint, slightly altering the angle—i.e., increasing or diminishing the flexion—three or four times daily. The pain is very severe, especially the spasms at night, and the joint very tender on pressure. Temperature 103·4°; pulse 110. Not much pain in calf, which has not been disturbed.

14th.—The knee appears as much distended as on the 11th. Palpitations; temperature 103°. Aspirated, removing thirteen ounces of dark-red fluid, which examination shows to be sero-sanguineous with tesselated epithelium, but no trace of pus corpuscles. Great relief of pain.

15th.—Temperature 102·5°; pulse 96. Passed a better night [illegible] about five hours' sleep.

16th.—[illegible] severe rigor this morning; and though the knee was not so distended or painful and the temperature was not raised, I considered it advisable to aspirate for diagnostic purposes, and drew off eight ounces of fluid, red, but lighter than the last. No trace of pus; fewer epithelia. Carbonate of ammonia, iodide of potassium, and bark ordered, and six ounces of whisky daily.

22nd.—Temperature 99°; pulse 80. Very little fluid accumulating. Wound in calf undressed, first time since the operation; quite healed by first intention.

25th.—Increase of pain in knee: passed a bad night, with jumping pain. Temperature 102°; pulse 100 and rather hard. Patient flushed and irritable. Aspirated, getting only two ounces of clear, serous fluid; no pus cells. Extract of belladonna ordered to knee. Previous mixture repeated.

26th.—Temperature 99·8°; pulse 92. Flushing and irritability disappeared. Pain much less.

Dec. 2nd.—Temperature and pulse normal. Applied oleate of mercury to knee. Grating sensation plain. Carbonate of ammonia and iodide mixture reordered.

12th.—Very much improved in general health, appetite good, and bowels regular. Very little tenderness on pressure on knee. Grating still perceptible, but less; no jumping pain, only aches slightly at night. Joint painted daily with tincture of iodine.

25th.—Convalescing rapidly. Pain quite gone. No swelling or signs of effusion, but tenderness on putting foot to ground. Grating almost inaudible. Splint taken off, and the leg put into Sayre's plaster-of-Paris bandages from hip to ankle.

30th.—Left for home. In plaster-of-Paris, and on crutches. Very little tenderness on standing; no grating perceptible.

He had the bandages off a fortnight after this, and was getting about freely a month afterwards. No stiffness was left in the knee, and he says that that leg is as sound and reliable as the other.

Remarks.—In summarising the points of this case I would give the reasons of my diagnosis and treatment. The hæmorrhage into the joint might have proceeded from lacerations of the capsular ligaments, but from the tension, the peculiar defined shape of the swelling, and the constant presence of tesselated epithelium and cartilage cells, I felt justified in locating its origin principally, if not entirely, in the erosion of cartilage and synovial membrance from the surfaces of the patella and condyles in contact. Besides which the grating was of too distinct a nature to be mistaken for anything but denuded bone, and too early a symptom to be taken for the crackling caused by organised bands of adhesions. The spasm and jumping pain during sleep are diagnostic of erosion or disintegration of cartilage, and the heat and tenderness of the joint and agony on movement of synovial mischief. The effusion being traumatic and so rapid and the pain of distension so great, I felt that early aspiration with careful antisepsis was indicated as imperative: first, for the relief of pain, and, secondly, for the removal of what was evidently effused blood; and to the success in obtaining those objects, by relieving the pressure on the synovial membrane and removing a possible source of decomposition, I attribute the obviation of suppuration. The value of the microscopic examination of the effused fluid as a means of diagnosis and guide to treatment was most apparent, and enabled me to watch the processes going on inside the joint as plainly as if I had been able to see into it. The appearance of the leg the day after the accident was seemingly hopeless—cut, bruised, and black from the thigh to the ankle,—and yet by the aid of the microscope I was able to make a favourable prognosis from the beginning, and act on it, to the result of saving a joint which might have been sacrificed to expediency. My reasons for declining to adopt the suggestion of the straight splint to procure a stiff knee were the excellent general health of the patient and the continued absence of pus in the effused fluid. I therefore ordered the limb to be moved at intervals on the splint from the first to prevent the organisation of the effused fluid into fibrous adhesions, the position of flexion being adopted as affording the maximum amount of relaxation of the joint.

In a similar case, if of an asthenic type and ill-nourished, it might be necessary to obtain ankylosis to obviate further mischief in the joint; but I very much doubt if there are many cases so asthenic that careful nursing and nutrition would not pull through any such risks. With means of diagnosis so simple and practicable, if utilised with due care and precaution and in time, many a joint might be saved that is at present sacrificed to the plan of treatment by immobility.

CASE 2.—On the railway, near Brisbane, on Nov. 20th, 1884, J. B——, aged twenty-four, signalman, slipped on the metals, and fell on his knee, fracturing his left patella. His right foot was a club-foot (talipes equinus) and very wea[illegible]

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I had therefore no hesitation, in view of the very unreliable knee joint which a ligamentous union of the patella would give him (he being dependent on his own exertions for a livelihood), in deciding to ligature the fragments with silver wire. This I did on November 29th, under the eucalyptus spray. The bone drill snapped in one of the fragments, and I had hard work to get it out again. I hammered the ends of the wire into the patella. After ligaturing, the wound was stitched up, covered with a good pad of dry boric lint and oil silk, and bandaged. No drainage tube was put in. The temperature the following day was 99·5°F., and normal the day after, and continued so to the end. The wound was not undressed until Dec. 21st, twenty-two days after the operation, when the wound was found to be healed by first intention. Plaster-of-Paris bandages were then put on, and retained for three weeks. When removed, perfect union of the patella had taken place, and his leg was quite sound. Some day I think of taking the wire out or nipping the end off it, as it irritates the skin over it.

Remarks.—This case is useful—1st, as showing the great benefits this operation confers, compared to the old plan of ligamentous union. With a weak foot on one leg and an unreliable knee on the other, this man would have been incapable of earning his living; 2nd, as another added to the long list of successful ligatures of the patella for simple fracture. I was induced to send these two cases to you by the interesting nature of the "Occasional Records in the Science and Practice of Surgery," contributed to THE LANCET by Mr. Oliver Pemberton. The details of cases outside of hospital practice, treated by the operator himself throughout, with his reasons for such, may often very well be more interesting than the set notes by the surgical registrar or house-surgeon of another man's case.

Brisbane, Queensland.

OSSEOUS UNION OF INTRA-CAPSULAR FRACTURE OF THE FEMUR.

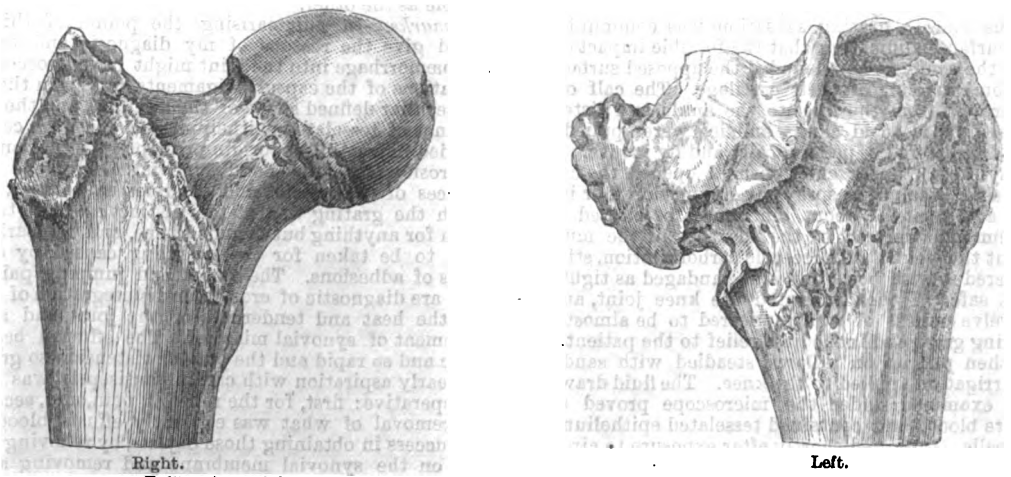
BY THOMAS F. RAVEN, L.R.C.P. &c.

A WOMAN, aged sixty-nine, slipped and fell, and on examination presented the usual symptoms of fracture of the neck of the femur, without impaction. She was treated with a long splint, and no extension was made. Her recovery was so rapid, and she walked so well subsequently, although with a shortened limb, that I was inclined to doubt the accuracy of my diagnosis, and to suspect that the fracture had occurred high up in the shaft. A short time ago she died, at the age of seventy-six, and I was enabled to secure the upper portion of each femur. The accompanying sketches, made with artistic fidelity by Mr. Arthur Trower, M.R.C.S., show how close to the head of the bone the fracture really was, and give a good idea of its complete bony union, and also of the contrast between the injured and uninjured bones, both in regard to the fracture itself and the resulting osteo-arthritis.

Sir James Paget tells me, after an inspection of the bones, that he does not remember to have seen so thorough a repair of this kind of fracture, and by his advice I have presented the specimens to the Royal College of Surgeons, where they will be found in the Pathological Museum.

Broadstairs.

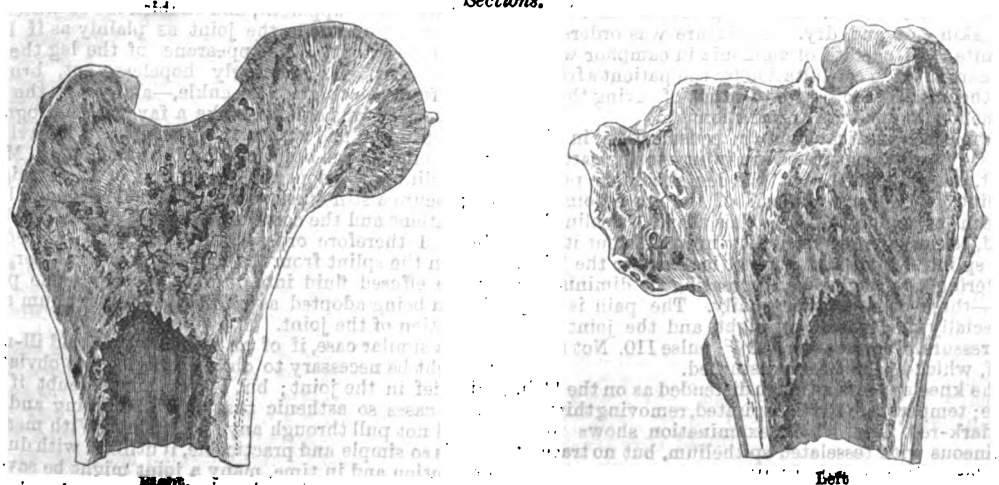
Anterior Aspect.



Right. Left.

Bones removed from a woman, aged seventy-six years, who sustained a fracture of the neck of the left femur seven years previous to her death. The sketch shows strong bony union and erosions of the head of the bone from arthritis.

Sections.



Right. Left.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

TWO CASES OF FRACTURE OF THE SPINE WITH DISPLACEMENT: IN ONE, DEATH AFTER RECURRENT ATTACKS OF ERYSIPELAS; IN THE OTHER, RECOVERY AFTER EXTENSION UNDER ANÆSTHETIC.

(Under the care of Mr. MORRANT BAKER.)

THESE two cases of fracture and displacement of the spine are of much interest. The first, in which there was fracture of the seventh cervical and first dorsal, with displacement of the cervical vertebræ forwards, is remarkable for the length of time that intervened between the infliction of the injury and the death of the patient. It is also interesting from the various morbid conditions which followed in the parts supplied by the cord below the damage. The second is an example of the value of extension when judiciously applied to displacements in the lumbar region, and somewhat resembles a case reported in THE LANCET (vol. ii. 1885, p. 114), where recovery followed the reduction of a displacement of the third lumbar vertebra. For the notes of the cases we are indebted to Mr. R. J. Reece, house surgeon.

CASE 1.—On June 17th, 1886, A. P——, aged eighteen, fell down a lift, a distance of forty feet. He was picked up and brought to the hospital, and admitted. It was found that he had sustained a fracture between the upper third and lower two-thirds of the left femur. He complained of no pain in the leg during manipulation, but of intense pain in his back and shoulders. He had a fracture of the spine about the first dorsal vertebra. Sensation in the hands and arms was retained, but there was loss of power. There was total loss of sensation below a line drawn transversely just below the nipples, the breathing being entirely diaphragmatic. Only very slight extension was required to bring the fractured femur into position, and it was not put up in splints, but kept in position with sand-bags.

June 20th.—The patient has vomited for the last day, but slept well last night, and takes large quantities of milk, with a little lime water. On examination it is observed that he has no power or sensation downwards from a line drawn round his chest three inches above the nipples, whereas on admission this line was situated half an inch below the nipples. The loss of power complained of in his arms and hands has increased, but sensation remains. Priapism, which all through has been very marked, being increased considerably on the passage of a catheter so much so, that a soft one was only passed with much difficulty,—is now present to a much more limited extent. Over the buttocks the skin is reddened, and threatens to break down, between the nates two large blebs being seen; glycerine and starch powder were applied. The left heel is also reddened; a circular cushion with a hole in the centre was placed under it, and under the nates.

The patient was placed upon a water-bed and the urine drawn off twice daily, the bladder washed out with Condy's fluid, and an ounce of solution containing one grain of sulphate of quinine injected and left in. Bowels open involuntarily. On inspiration chiefly, but also during expiration, from three to five spasmodic contractions of the muscles under the chin occur. Inspiration, as before, is entirely diaphragmatic, the chest walls falling in instead of expanding. He is able to cough slightly. There is apparently no dimness of vision; he can read a text on the opposite wall. Urine: sp. gr. 1010; acid; one-twentieth albumen; mucus.

June 26th.—Incontinence of urine setting in. Urine becoming offensive; sp. gr. 1008; trace of albumen; no sugar. Complains of pain in back and neck. Relieved by an ointment of cocaine, 5 per cent. in lard. Takes food well. Much thirst. Bowels open freely.

July 2nd.—Has a bedsore on the right elbow. Urine not so offensive as before; neutral; no sugar or pus-corpuscles.

19th.—Two or three small sores forming on buttocks.

25th.—Bedsores over posterior superior angles of ilia, the sacrum, and spines of scapulæ. They are painted with collodion. Appetite not so good.

Aug. 2nd.—Condition much better. Urine no longer offensive. Only one bedsore over left elbow, which is dressed with zinc lotion. Patient can move his arms better. Temperature, which has been raised sometimes to 102°, is now 98°.

23rd.—A bedsore forming over left heel. There appears to be firm union of the fractured femur.

26th.—Electrical examination: No line of hyperæsthesia; in the right arm electro-sensibility impaired. In the extensor muscles of the forearm A.C.C. > C.C.C. In the flexors and interossei and abductor indicis the reaction is normal. All the muscles except the hypothenar react to faradism. In the left arm the same conditions hold, but the hypothenar muscles contract to faradism, and there is no galvanic reaction in the interossei.

Sept. 9th.—Some facial neuralgia.

27th.—General condition much the same. Appetite good. Feels comfortable. Can raise his body from the bed on his elbows; no power over abdominal muscles. Sensation accurate over second rib, indistinct over third, lost below that. There is considerable wasting of muscles of forearm and hand. The fractured femur has united, but there are two inches of shortening. Under the microscope the urine contained no pus-phosphates. Bladder treated as before.

Oct. 5th.—After the bladder is washed out, patient sweats profusely over his face, neck, and arms.

28th.—After his tea (5.30 P.M.) patient vomited. Temperature, taken at once, 103°. During the evening nausea continued, and at 8 P.M. the temperature was 105°. The patient has some expectoration of frothy mucus, not more than usual. Urine as usual. No fresh bedsores. Pulse 142; respiration 32. Sweating profusely. Complains of pain in the head.

29th.—Erysipelas spreading rapidly from sore on left heel, reaching the knee by midnight. Enlarged glands in left groin, with inflamed skin over them. Vomited. Some convulsive twitching of arms. Delirious. Temperature 105°.

30th.—Blush not advancing. Temperature 102·4°.

Nov. 1st.—In the right leg there is no ankle clonus, patellar or cremasteric reflex. The left leg not tried, but no superficial reflexes on the left side. Diarrhœa. Temperature 103°. Urine alkaline; no albumen or sugar. The patient suffers much from nausea and vomiting. Abdomen distended over region of stomach. Œsophageal tube passed, a great quantity of gas escaping from the stomach, after which the patient was more comfortable and vomiting ceased. A bedsore forming on right thigh.

8th.—Respiration 28. Nausea. Desire to expectorate, but inability to do so. A fresh attack of erysipelas spreading from glands in groin.

10th.—Temperature normal. A fresh ulcer commencing on dorsum of left foot.

16th.—Two fresh ulcers forming on left foot. The patient complains of toothache.

17th.—Rigor. Temperature 104·2°. Vomited four or five times.

20th.—Temperature has been high since the 17th, once reaching 105·6°; to-day normal. Vomiting, which has been continuous notwithstanding the means taken to check it, is not so constant. There has been a blush on outer side of left thigh.

26th.—General condition much better.

Dec. 1st.—Patient carefully examined to-day. When the soles of the feet were tickled there were distinct contractions of the toes on the right foot, the outer toes twitching most; on the left the twitching was most marked in the big toe. There was no clonus of the ankle joint on either side. The patellar reflex on both sides was absent, nor was there any pectoral reflex. Sensation remains much the same, lower border of the second rib. While being dressed patient complains of severe itching sensation over the upper part of his chest (limited in area below by the lower border of the second rib) and neck. This he has always complained of, but for the last week or so it seems to be more intense. He describes it as if needles were running into him. On these occasions he perspires very profusely all over his face, neck, shoulders, and arms. The portion of his chest just below the line of sensation is also

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covered with perspiration. This extends three or four inches down his chest, gradually dying away. His neck and the upper part of his chest, too, are at the same time covered with a bright red rash, and sometimes, slightly, the face. This rarely extends to the arms. To-day the rash not only covered the area of sensation, but extended all over the front and sides of the thorax, dying away over the abdomen. The pricking sensation passes away very quickly after the bladder is washed out, rarely lasting more than five or six minutes after the operation. The rash remains longer, gradually fading away in from a quarter to half an hour. The patient states that he sometimes suffers in this way, even when he is not dressed, or without any other known cause. On some days, except after dressing, he is free from it, while on others he has it two or three times during the course of the day, and also at nights. The left heel and foot are still ulcerated.

7th.—Bedsores increasing in size; still occasional vomiting and mucous expectoration.

13th.—Patient has increasing distress owing to inability to expectorate, the cough being extremely feeble. Sores all healing.

23rd.—Fresh bedsore over left buttock; iodoform used.

24th—Patient delirious for twenty-four hours, calling out loudly at night. Iodoform discontinued and sores poulticed.

Jan. 5th.—Abscess forming in left thigh; sores on right heel closed, but there is still one on the dorsum of the left foot.

7th.—An abscess of the left thigh burst, about two pints of rather fetid pus escaping.

17th.—The terminal phalanges of the little and ring fingers of right hand are necrosing. The nails are blackened and misshapen; beyond and towards the hand the skin is tense, red, and angry as far as the terminal phalanx. The abscess in left thigh discharges less and is much less offensive. All sores doing well. Much difficulty in breathing, and occasional twitching of muscles about neck and face.

19th.—Complains of toothache; tooth extracted without much pain; immediately after an ounce of brandy had been administered the toothache ceased.

20th.—The tongue is ulcerated and swollen. The whole of the bed is shaken by the attempts of the patient to breathe.

22nd.—A fresh attack of erysipelas broke out in the right leg, and he died on the 26th.

At the post-mortem examination, held twenty-five hours after death, the articular processes of the seventh cervical and first dorsal vertebræ were found to have been fractured, and the cervical vertebræ had been displaced forwards. Opposite the seat of displacement the spinal cord had been crushed within the dura mater.

CASE 2.—J. H——, aged twenty-eight, a ship's steward, was admitted on Nov. 22nd, 1886, under the care of Mr. Morrant Baker, suffering from a fracture and dislocation of the spine. The patient, from the age of fifteen, has been subject to epileptic fits, and whilst about to enter a train at a railway station he was seized with a fit, and fell between the train and the platform. On regaining consciousness he found he had lost power in the left leg, and was brought to the hospital.

His condition on admission was as follows. At the junction of the twelfth dorsal and first lumbar vertebræ there was an obvious displacement — the lumbar vertebræ being depressed, leaving the dorsal prominent. There was entire loss of motion and impairment of sensation in the left leg. There was hyperæsthesia in the right leg, with acute pain over an area corresponding to the distribution of the twelfth dorsal nerve. There was no bruising over the seat of injury.

The patient was put under the influence of ether, and, under the superintendence of Mr. Bruce Clarke, extension was made from the arms above the head and the ankles, the patient lying on his left side. The bones were seen to go back into position, but the displacement returned when the tension was discontinued. Extension was again applied, and maintained while the patient was placed upon his back, the vertebræ this time remaining in position. While making the extension, crepitus was distinctly felt by the hand placed over the seat of fracture. An extension of 5 lb. was applied to each leg, counter-extension being obtained by raising the foot of the bed. There was no hyperæsthesia in the right leg when the patient had recovered from the anæsthetic, and there was less pain at the seat of fracture.

Nov. 23rd.—No urine has been voided since admission. A catheter was passed and twelve ounces of urine drawn off; sp. gr. 1020; acid; no albumen; bowels acting normally.

24th.—To prevent any displacement of the spine occurring during a fit, the man was put into a plaster-of-Paris jacket extending from the axilla to below the trochanters. The jacket was previously prepared, commencing with a many-tailed flannel bandage, followed by numerous strips of crinoline bandage soaked in a mixture of plaster-of-Paris and gum, and internally a thick layer of wool. The gum was used to prevent the case setting too quickly. The jacket was placed upon a second bed, to the foot of which the patient's bed being brought, he was carried over the head of his bed and laid upon the jacket and enveloped in it. Extension being maintained during the time. There has been great pain of a spasmodic character down the course of the great sciatic nerve, followed by involuntary expulsion of fæces. As the rectum was distended, enemata were administered with marked relief. The urine was drawn off daily and the bladder washed out with a solution of Condy's fluid and an ounce of a solution containing one grain of sulphate of quinine injected and left in. The urine only occasionally had an alkaline reaction, and once or twice contained pus. Fifteen grains of benzoate of ammonia were given three times a day.

25th.—Patient has sensation over the anterior crural nerve, but not over the external cutaneous of the left thigh.

27th.—He can move the ankle joint and foot, and localise sensation better.

Dec. 11th.—Plaster jacket removed, and a poroplastic jacket substituted. The extension was removed a few days ago from the right leg, and to day from the left.

24th.—All muscles react to both currents normally, but the extension of the foot and the peroneal muscles react rather less easily than in the right leg, and the electro-sensibility is impaired to a slight degree below the knee.

18th.—The patient got up. He has very little power over the left leg, no control over his sphincter ani, and still uses a catheter, although several attempts have been made to dispense with it.

Feb. 4th.—Electric reaction of muscles of legs normal; power returning over the rectum; perineum galvanised (+ electrode).

8th.—During an epileptic fit urine was voided spontaneously.

15th.—The patient left the hospital. He had control over his rectum, but still used a catheter; could walk easily and without pain. The bladder had not been washed out for a month, the urine remaining acid. He complains of pain on pressure over the seat of fracture, and the last dorsal vertebræ are slightly more prominent than natural. Temperature, pulse, and respiration remained normal throughout.

CUMBERLAND INFIRMARY.

PERITONEAL ABSCESS DISCHARGING THROUGH THE UMBILICUS.

(Under the care of Mr. H. A. LEDIARD.)

THIS case seems to merit a little attention, on account of the doubt that was reasonably felt in satisfactorily tracing the suppuration to its origin, and the necessity there is of reading it in connexion with others where purulent discharge from the umbilicus has existed, in order to arrive at a correct conclusion as to the pathology.

The child's age was ten, and she was first seen on Feb. 3rd, 1886, having been brought to the out-patient room, a long distance, by her mother. For six weeks there had been swelling and tenderness of the abdomen. Her appearance was suggestive of the end of an exhaustive fever, which had rendered her exceedingly thin, weak, and haggard, for she lay in her mother's lap like a rag.

On admission the child's temperature was 100°, but for the next six days it was subnormal. In addition to a swollen abdomen with distended veins, the umbilicus was converted into a red, tender protuberance the size of a walnut, which burst a week after admission, the temperature rising to 103°; the discharge was very foul, but entirely purulent, and continued for a very long while, so long that it was thought that it might be needful to explore the abdomen.

On Feb. 18th a drainage tube was put into the peritoneum through the umbilicus, and although the temperature rose to 102° or 103° each night, the child began to improve. Examination of the abdomen suggested tubercular peritonitis to some who saw her in the ward, and this seemed confirmed by the fact that there were some moist sounds

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heard in the chest. Mr. Lediard did not share this view, for when the child was admitted he could not help thinking of typhoid fever, and was somewhat supported in his first impression of the fact that whenever a long probe was passed through the sinus it always found its way to the region of the cæcum or towards the right iliac fossa. Occasionally it was thought that fluctuation was present, and a certain amount of thickening within the abdomen; but there was never any definite tumour to be felt. Pus could generally be forced, on pressure, from the umbilicus, whilst the smell was something more than simply foul.

In spite of a night temperature constantly more or less high, and profuse discharge from the sinus, the child picked up; in spite, also, of an always loose condition of the bowels, there being frequently three motions a day. The drainage tube inserted was about four inches in length in order to assist drainage. The child was made to lie on the stomach, but the change in position was not attended by any marked improvement. Tedious as the closure of the sinus was, yet the child's returning colour and ravenous appetite afforded a satisfactory sign that she was on the right track. It was not, however, until July 23rd that she was discharged well, with a good covering of flesh and in excellent spirits.

No good account of the child prior to admission was ever obtained, but what there was is consistent with typhoid fever. The record is epitomised as much as possible, but the temperature chart tells a great deal. Thus, on Feb. 27th and 28th the evening rise was 104°; on March 11th, 12th, and 13th it was 102°; on March 24th and 25th and April 5th it was 104°; the morning temperature being invariably subnormal or normal. In June lower variations were present, and towards the end of July the feverish symptoms had gone.

Remarks by Mr. LEDIARD.—Although the sequence of events cannot be considered as proved, I am of opinion that the child had typhoid fever, with ulceration of the bowel, perforation, and an intra-peritoneal abscess, which discharged itself through the umbilicus. The chest symptoms passed away very early, so that tubercular disease was eliminated from consideration. I heard during June of this year—that is, about a year since the child was last seen—that she was well and attending school. In looking for references to umbilical fistulæ, I find that Mr. Erichsen (8th ed., vol. ii., p. 857) states that they arise from perforation of the small intestine by chronic ulceration, usually tubercular, with the formation of a circumscribed abscess amongst the coils of the intestine, finally discharging at the umbilicus; but he makes no allusion to typhoid fever. West (5th ed., p. 117) mentions a case where from a quarter to half a pint of sero-purulent fluid escaped daily from the umbilicus of a child eight months old, the cause being peritonitis; also another case of acute peritonitis, where a puncture of a prominent umbilicus was followed by the discharge of forty-eight ounces of pus. Hilton Fagge (vol. ii., p. 248) says: "In some of those rare cases of strumous peritonitis in which the abdomen becomes distended with pus, the umbilicus gives way and allows the fluid to escape." Amongst the complications of typhoid mentioned by Fagge is peritonitis, which generally depends on a perforation of the bowel or sloughing of a swollen mesenteric gland, and he further quotes cases going to show that pus in the abdominal cavity is known as a sequel of the peritonitis of typhoid, due to perforation, which pus makes its way externally or into the bowel; he does not allude to the umbilicus as a mode of exit. In vol. xvii. of the Transactions of the Clinical Society of London, three cases of peritoneal abscess in children are recorded by Dr. Goodhart. The first case was a girl of eleven, and the symptoms and progress of the case are very similar to mine. The discharge had, however, no faecal fetor. The origin of the discharge was due to typhoid fever. The other two cases were treated by incision. From these few references it is clear that discharge [illegible] from the umbilicus may be tubercular, but is not necessarily so, and that, in the absence of evidence of [illegible] typhoid lesion will account for some of the other [illegible] peritonitis, in the form of a localised [illegible] through the umbilicus or elsewhere [illegible] of typhoid is obtained there [illegible] where a child makes so [illegible] which lasted for about [illegible] to be met with in tuber- [illegible] the abdomen usually con- [illegible], whilst the tube was retained [illegible] out of the sinus.

Reviews and Notices of Books.

An Introduction to the Study of Embryology. By ALFRED C. HADDON, M.A. Cantab., Professor of Zoology in the Royal College of Science, Dublin. With 190 Illustrations. Pp. 336. London: Charles Griffin. 1887.

THIS work is a condensation of our present knowledge of embryology intelligently arranged and well adapted for self-study, as the Germans express it. It is divided into eight chapters, which are thus occupied—1. The Maturation and Fertilisation of the Ovum. 2. Segmentation and Gastrulation. 3. Formation of the Mesoblast. 4. General Formation of the Body and Development of the Embryonic Appendages. 5. Organs derived from the Epiblast. 6. Organs derived from the Hypoblast. 7. Organs derived from the Mesoblast. 8. General Considerations. It is difficult, of course, rigidly to limit the description of the parts derived from the several layers of the blastoderm in compound organs—as, for example, in the case of the eye and ear; but upon the whole there is little overlapping, and these sense organs in particular are wholly given under the head of "Organs derived from the Epiblast." Mr. Haddon's qualifications for undertaking so important a work as the present are that he was engaged for a considerable period in working at development, especially of invertebrata, in Dohrn's Marine Biological Station at Naples, and has published one or two good memoirs on the subject. He has thrown himself thoroughly into his work, and seems to have exhausted all the literature of embryology since the date of Balfour's unfortunate death. Much interest is added to the details of development by suggestions as to the cause of the first appearance of the different organs. The reader will find remarkably good accounts of the different forms of placenta, of the development of the heart, and of the genito-urinary system, in which all recent work is included. We venture to give a short extract from the section on the placenta which will serve to show the mode in which Professor Haddon deals with his subject. After having described the allantois in the bird and the peculiarities of the chorion in the lower mammals, he goes on to say that the nature and position of the villi of the chorion vary considerably.

"The villi fit into depressions of crypts of the uterine wall, the conjoint structure being known as the placenta. The placenta of the Rodentia, Insectivora, and Chiroptera is usually dorsally situated and discoidal, as in the rabbit, and is coextensive with the area of contact between the allantois and the subzonal membrane. In these forms the yelk sac is in contact with the larger portion of the subzonal membrane. In Edentata the placenta may be discoidal (Loricata), or dome-shaped (Pilosa), or zonary (Tubuli-dentata)—that is, occupying a broad band round the chorion, leaving the ends free from villi, or diffuse (Squamata.) In the dog the large vascular yelk sac does not fuse with the subzonal membrane. The allantois first grows out on the dorsal side of the embryo, where, coalescing with the subzonal membrane, it forms (at first) a discoidal placenta. The villi soon extend, so as to form a zonary placenta. The zonary placenta is found in the carnivora, hyrax, and elephant. The extension of the placenta over the whole of the chorion results in what is termed a diffused placenta. This is characteristic of the Perissodactyla, the Simia, the Tragulina, the Tylopoda, the Sirenia, the Cetacea, and the Lemuroidea. The collection of the villi into groups constitutes what is known as a cotyledonary placenta. This variety is confined to the Pecora."

The mode of formation of the decidual and non-decidual placenta is then given, and finally an excellent *résumé* of the recent researches of Kupffer, Selenka, Hensen, Spee,

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and Heape on the field mole, mouse, rat, guinea-pig, and mole. The illustrations are numerous and intelligible, and the work may be regarded as fairly representing the present state of embryological knowledge. It is handsomely got up, and has a very good index.

OUR LIBRARY TABLE.

On Holidays. By RODERICK MACLAREN, M.D. Edinburgh: Oliver and Boyd.—This is an address delivered by Dr. Maclaren in his capacity of president of the Carlisle Medical Society. The subject is one pecularly *apropos* to the present season, and it is handled with the facility and force of an experienced traveller. Dr. Maclaren lays it down as an axiom that "a considerable amount of contrast to ordinary life is an essential condition of a successful holiday. I would have the man who lives at the seaside go to the hills, the town man go to the country, the country man to the town; the man who leads an active stirring life should loaf, the sedentary man go for a walking tour." This is in the main sound, but the contrasts between ordinary life and holiday time must not be too severe. The sedentary brain-worker, with soft muscles and weak heart, should not propose to himself a month of severe mountain climbing, or a prolonged walking tour at the rate of thirty miles per diem. There are few commoner errors than to imagine that severe physical exercise is a panacea for an overwrought brain. Dr. Maclaren thinks that of all forms of holiday the Swiss tour is the best for the Englishman, as the contrast of climate thus secured is great, and the scenery is of unsurpassed magnificance. He advises tourists to Switzerland to make for the characteristic feature of the country—the snow mountains and glaciers,—and thinks that the bulk of the holiday should be spent in this region. Much useful and trustworthy information is given regarding mountain-climbing and glacier-walking. The writer regards these pleasures, when wisely ordered, as almost free from serious risk. For men past their prime, whose livers and kidneys are no longer so active as formerly, Dr. Maclaren recommends a holiday at a German spa. He thinks the sea voyage presents exceptional advantages for "men under middle age who are somewhat run down by mental work and worry, who are not fit for, or in need of, much exercise; secondly, for spare old men who are bad sleepers and have healthy livers." The writer concludes with the description of a tour to Tangier, borrowed from the note-book of a relative. Dr. Maclaren's own experience is so considerable that such extraneous aid was hardly necessary, and it does not add to the value of his *brochure*.

Health Resorts at Home and Abroad. By M. CHARTERIS, M.D. Second Edition. Pp. 212. London: J. and A. Churchill. 1887.—This edition differs from the first chiefly in the addition of Malvern to the English, Royat to the French, and Wildbad to the German watering places described, an account of the American health resorts of Saratoga and Richfield Springs, and a useful table giving the comparative analyses of groups of springs. The alphabetical list of health resorts has been considerably extended, and rearranged according to the countries in which they are situated, but the information afforded respecting them is meagre. Dr. Steinschneider's [illegible] is again issued with the book.

Vittel (Vosges, France): Medical, Picturesque, and Anecdotal. By PAUL RODET, M.D. Pp. 222. London: J. [illegible].—The object of this book is to bring [illegible] of the mineral waters of Vittel. This is of [illegible] formation, having been erected only in 1880. The [illegible] of the Grande Source closely resemble those of the Source du Pavillon at Contrexéville, differing chiefly in having a smaller proportion of salts of lime. They are stated to be found very useful in diseases of the urinary organs, gout, diseases of the liver, and constipation. The book, however, is not confined to a description of the spa, and of the cases in which it is likely to prove useful, but gives a good account of the Vosges and its people, with a considerable amount of information respecting the antiquities of the place, the customs and usages of former times, the manners and character of the people, their superstitions and prejudices. There is also a description of the principal places of interest within reach of Vittel, and the best means of visiting them. It will be found a useful guide to anyone visiting the picturesque scenery of that part of France. There are two good maps of the country round Vittel and Gérardmer. The chief defect in the book is the want of an index.

Schinznach in Switzerland; its Situation and Therapeutic Advantages. By Dr. DE ZYMOWSKI, Resident Physician. With a Preface by Dr. ARTHUR HASSALL.—The baths of Schinznach, once known as the baths of Hapsburg, are of ancient date. The spring which supplies them was discovered as far back as 1692. It is said to contain the largest amount of sulphuretted hydrogen of any waters, on the presence of which its curative properties mainly depend. The water as it issues from the spring has a temperature of 91·4° F. It is used principally in the forms of baths and inhalations, and to a less extent for drinking. The baths have recently undergone great enlargement and many improvements. The establishment, consisting of a series of pavilions, is very commodious and complete. Schinznach is situated between Basle and Zurich, on the river Aar, and in the midst of very pretty scenery. The *brochure* of Dr. de Zymowski is very carefully prepared, and is founded on a lengthened experience. In it every necessary detail in reference to the establishment itself and the maladies for which the water is successfully employed will be found.

The Journal of Physiology. Edited by MICHAEL FOSTER. Vol. 8, No. 2.—This part contains:—1. MacMunn: Further Observations on Myohæmatin and the Histohæmatins, with a plate. 2. W. Hale White: On the Histology and Function of the Mammalian Superior Cervical Ganglion, with a plate. 3. J. Rose Bradford: On the Physiological Action of Ulexin. 4. J. Bradford: On the Electrical Phenomena accompanying the Excitation of the so-called Secretory and Trophic Nerve Fibres in the Salivary Glands of the Dog and Cat. 5. W. B. Ransom: On the Influence of Glycerine on the Liver. Lastly, the Proceedings of the Physiological Society, Nos. 2, 3, and 4.

Ambulance Sermons: being a Series of Popular Essays on Medical and Allied Subjects. By J. A. AUSTIN, M.D. Pp. 384. London: Redway. 1887.—To call these ambulance sermons is a misnomer. They consist of a series of papers intended for the instruction of the general public, which appeared weekly in the columns of the *Norwood Review*. They might be described as popular papers on anatomy, physiology, pathology, the practice of medicine and surgery, and several other topics. They are written in a style which, we presume, takes well with the class for whom they are intended. We can but regret the publication of works of this description.

The Scottish Sportsman and Tourist. By ROBERT HALL, pp. 559. London: Simpkin, Marshall, and Co. 1887.—This work cannot fail to prove useful to tourists who desire to spend their holiday amidst the beautiful scenery of Scotland, and especially to those of them who are lovers of the gentle art. It gives a brief description of the different counties, arranged alphabetically, with the towns and villages in each, the lochs and rivers, and the shootings. After reading the description of several of the places with which we are well acquainted, we are of opinion that the work has been carefully compiled and the information it contains is to be relied on. There is an excellent map, which of itself is fully worth the price of the whole volume.

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Analytical Records.

AERATED COCAINE WATER—A NON-ALCOHOLIC STIMULANT.

(SHILLINGFORD & Co., BICESTER BREWERY.)

THERE can be no doubt of the genuineness of this preparation, as the alkaloid can readily be separated by the ordinary method and its properties observed. A distinct paralysing action on the tongue was observed in the evaporated ethereal extract in addition to the bitter taste. Of course, the selection of the cocaine is the only difficulty in the manufacture, and this has evidently been effected with due care.

NATURAL KARLSBAD SPRUDEL SALT.

(PREPARED AND EVAPORATED FROM THE KARLSBAD WATER BY THE KARLSBAD MINERAL WATER COMPANY.)

Our analyses agree with those of the well-known Karlsbad water, except that we did not find lithium. We have, however, no reason to doubt that this is the genuine crystallised salt of the spring. The agents are Messrs. Ingram and Royle, 52, Farringdon-street, E.C.

SELLERS' AERATED SALINE APERIENT WATER.

(JOHN SELLERS, FARRINGDON-ROAD, LONDON.)

An artificial mineral water in which the characteristics of some of the well-known continental springs have been imitated successfully. Artificial mineral waters have at least one advantage over the natural ones, since it is easy to keep their composition absolutely constant, whereas some variation is apt to occur in the natural ones. The present preparation may certainly be described as a useful and safe aperient.

RUBINAT-CONDAL MINERAL WATER.

(J. W. VICKERS, NICHOLAS-LANE, LONDON.)

This very powerful aperient water is said to come from the Condal spring at Rubinat, Lérida, Spain. Its chief constituent is sulphate of sodium, but other sulphates and some chlorides are present, as well as a distinct trace of iron. The total solids were found by us to amount to 4175·5 grains per gallon, and a sample analysed by the Professor of Chemistry in the University of Barcelona contained no less than 7050·764 grains, a most unusually large quantity.

ANTI-RHEUMATIC MUSTARD OIL.

(MOSS, RIMMINGTON, & Co., SELBY.)

There can be no doubt that this preparation is what it is described to be, pure mustard oil, the true sulpho-cyanate of allyl. Gently heated, or distilled with water, the light ethereal oil known as crotonitril, which is always present in natural mustard oil, passes over, while the oil itself boils at 150°C. (312°F.) It can be applied easily by rubbing, and is a convenient and useful remedy.

BROMO-SODA.

(PREPARED BY W. R. WARNER & Co. AGENTS: F. NEWBERY & SONS, LONDON.)

This is an effervescing preparation of bromide of sodium and caffeine. Each is easily found by analysis, and the only novelty seems to be the use of the sodium instead of the potassium salt. The sodium compound does, in fact, agree better with some stomachs, and in some nervous affections the bromo-soda will be valuable.

COMPOUND SYRUP OF HYPOPHOSPHITES.

(LORIMER AND Co., HANGRAVE-PARK-ROAD, LONDON.)

This is a well-prepared mixture of various hypophosphites with minute quantities of quinine and strychnine. The constituents and the quantities of each present are very properly described upon the label, so that the physician will have no doubt as to what he is using. Our own analysis confirms the statement of the manufacturers in regard to every one of the constituents.

OVER-PRESSURE IN AUSTRIAN SCHOOLS.

THE Austrian Minister of Public Instruction has just issued a report, compiled at his special instance, on the "Ueberbürdung der Mittelschüler," or the over-pressure prevailing in intermediate schools. Dr. Joseph Heim leads off with a distinct admission that, except for pupils who are unusually favoured in mind and body, the Austrian system of middle-class education is chargeable with over-pressure and all its attendant evils. This state of things had long been suspected, and two years ago the Minister of Public Instruction subjected these schools to some wholesome reforms from the purely hygienic point of view, with the result of putting into more prominent relief the harm they do by mental overstrain. The working capacity of the young, it is found, has been greatly exaggerated, and to relieve the *courbature cérébrale* thereby induced, it proposed, among other innovations, to make a better division of the school holidays by giving never less than from twelve to fourteen days' respite from work at Christmas and at Easter. The curriculum of study is not blameworthy, but the method of study (according to the report) is particularly so; and practical reforms are suggested in diminishing or doing away with the abuse of written exercises and that of committing too much to memory. Dr. Heim concludes by suggesting the formation of a committee, to consist of schoolmasters and medical men, with a view to reforming the traditional modes of instruction and to consulting the physical not less than the mental growth of the young. His general report is then followed by four special ones, on which his conclusions are chiefly based. The first of these is by Dr. Adolf Löffler, who finds that the reformer must take special cognisance of the matter of instruction, and, for one thing, reduce its quantity; that a maximum of the hours of school attendance must be fixed; that home tasks must be regulated; and that a less exacting system of examinations must be devised. The second is by Dr. Hans Adler, who deals with the best mode of sparing the eyesight of the scholar. The third is by Dr. Leopold von Schrötter, who discusses the questions of physical development and ailments peculiar to the young; and the fourth and last is by Professor Theodor Meynert, who considers over-pressure in its effects on the nervous system and on the mind. This Austrian official document, in which schoolmaster and physician have worked harmoniously to ascertain the truth, and in which they give their conclusions with caution and calmness, should be welcomed by those among ourselves who are anxious that an all-important, while much agitated, subject should be approached in the spirit of science, correcting abuses where they exist, while withstanding all innovation conceived in panic and brought forth in imprudence.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual meeting of the Medico-Psychological Association was held at 11, Chandos-street, Cavendish-square, on Wednesday, July 27th, 1887, under the presidency of Dr. F. Needham. There was a numerous attendance of members. A vote of thanks was accorded to Dr. Savage, the retiring President. Dr. Clouston was elected President for the year 1887-8, and it was decided that the next annual meeting should be held in Edinburgh. The Association's certificate of competency in psychological medicine was stated to be now held by twenty-four gentlemen, who had satisfactorily passed the necessary examination, and the Association Prize and Medal were reported to have been awarded to Dr. Wigles-worth for his essay on Pachymeningitis. The Gaskell Prize (£30) has been awarded to Dr. Mortimer, of the Portsmouth Asylum. At the afternoon meeting Dr. Needham read his presidential address, which was followed by a long discussion on the subject of the new Lunacy Bill, in which discussion part was taken by Drs. Maudsley, Wood, Clouston, Rayner, Manning (of New South Wales), Urquhart, and Hack Tuke, and Mr. Clarke Bell, president of the Medico-Legal Society at New York. The members and visitors subsequently dined together at Greenwich. The following gentlemen passed the examination:—E. M. Thompson, M.D., Bellaghy, Castle Dawson, county Derry; W. Arnison Slater, M.R.C.S., Fisherton House, Salisbury; Edgar English, M.R.C.S., Manor-road, Stoke Newington; Samuel Simpson, M.B., D.Ch., Bethlem Hospital; Robert Nairn, M.R.C.S., L.R.C.P., Bethlem Hospital; J. Desmond E. Mortimer, M.R.C.S., Portsmouth Borough Asylum.

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THE LANCET.

LONDON: SATURDAY, AUGUST 6, 1887.

THE draft of the Charter which has been adopted by the Councils of University and King's Colleges for presentation to the Privy Council, which we have printed on another page, marks an important stage in the history of educational work in London. It will hardly be believed by many that these two rival institutions, considering their origin and past history, could have been brought into accord and joint action, even for their common benefit; but the march of time has softened down the bitter feelings and mitigated the asperities which were left as a legacy by their founders, and the two Colleges have, by the necessities of a large reform in the educational methods at present existing in the metropolis, and the hopeful prospect of a formation of a Teaching University in London, been driven into a combined action and a close communion. The wise aims of the founders of the University of London, which were so ruthlessly disregarded when the professors and teachers were deprived of all connexion with the University in 1858, and when certificates of studentship were dispensed with in all the Faculties except Medicine, are now likely to be carried out, but by another and a new body. The University of London since then has confined itself to examining, and has well and ably discharged this function. The number of candidates who have passed through its portals has enormously increased, and is still increasing; but in restricting its usefulness, so far as collegiate students are concerned, it has completely changed its character and objects, and has deliberately chosen to follow a path which was never dreamt of, much less intended, by its founders and its early friends. Instead of exercising a due and proper influence on the "higher teaching agencies in the metropolis, and making London a great seat of learning," it is now only an examination centre for the empire, and has no local utility and is of no local benefit. The more closely its work has been adapted to an imperial end, the greater has been its departure from its original purpose. Hence the necessity for a real Teaching University in London is now as great, or even greater than, when the University of London obtained its Charter in the year whose jubilee it is now celebrating. It could scarcely have been expected that the largest and most important colleges affiliated to the University would bear the new departure of 1858 with equanimity. The secession of Owens College in 1880, and the great strides made by that college since its incorporation with the University College of Liverpool into the Victoria University, have necessarily given a powerful impetus to the movement in favour of establishing a similar institution in London. The admitted need for giving London students proper facilities for obtaining medical degrees, and the impossibility of so modifying the University of London as to meet this want, have also encouraged the supporters of this movement. A University conferring degrees in Medicine only is almost without a precedent, and will be opposed by nearly every University graduate of standing and influence in the kingdom, as well as by the other medical corporations; whilst a real Teaching University in London, with power to confer degrees in Arts, Science, and Medicine, must have the sympathy of all who are interested in the educational welfare of the metropolis—excepting, of course, those who are officially or closely connected with the existing University, and who cannot be expected to favour the foundation of an institution designed to carry out the work for which their own Charter was originally granted. The secession of Owens College was a successful protest against their system, and has obviously influenced the present application for a Charter by the two largest London Colleges—indeed, the only fully equipped Colleges in London,—so that London, like other cities, may have a local University for its students. The reasons for the creation of a Teaching University for London and the adjacent district, with its four millions of inhabitants, seem to us so urgent that we would fain hope that the present University, so much wider in scope and aim, will not, by a narrow and selfish opposition, repeat the mistake of the older universities when its own formation was under consideration. The objection to placing the examinations and the conferment of degrees in the hands of the teachers is of little real importance, and could only be advanced by the most thorough-going worshippers of the examination-by-result system. We could hardly have believed that this old conceit of Lord SHERBROOKE, which would seem to have been buried in the controversy about Owens College eight years ago, would again be seriously brought forward. Teachers, when assisted by external examiners as assessors with equal authority, make the best examining board; and if there were any valid objection to the plan so generally followed, it would have been discredited and discarded long since. But with the so-called exception of London, such a system is at present adopted by all the English and Scotch Universities, old and new alike. Even in the case of London most of the examiners are teachers, and many of them must of necessity examine their own pupils; so that if this ground of objection is to be adopted by the Senate, it will first have to look at home, for the Senate can only appoint examiners, generally teachers, and cannot influence their decisions or results.

The new Charter is drawn on a wide basis, and gives no pre-eminence to the medical departments of King's or University Colleges, but provides for the admission of all the medical schools in the metropolis, so as to form a Medical Faculty. Looking on the two Royal Colleges as the representatives of the London schools, it allots to them the same number of representatives on the Senate, and therefore an equal power, as is given to University and King's Colleges. It is yet to be hoped that the Royal Colleges may join in this important educational movement; but if they still decline, we suppose that the constitution of the Senate will be modified so as to secure a direct representation of the schools, instead of the more convenient one at present suggested. The only paragraph in the Charter to which exception can fairly be taken is in Clause 5—"Provided that no ordinary medical degree shall be conferred on any person who shall not previously have obtained a qualification for registration under the Medical Acts." This,

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doubtless, is inserted in deference to the oft-repeated desire that no new qualification for practice should be added to those which are already in existence, and which are universally allowed to be far too numerous. It will turn aside a large amount of opposition, but must necessarily increase the cost of the new degree.

THE Dublin meeting of the British Medical Association will be memorable for the remarkable Address in Medicine delivered by Professor GAIRDNER. No one can have listened to his words, and no one can now peruse them, without being struck with the command of his subject that the orator exhibited, and with the weighty, almost judicial, character of his utterances. His theme was the old one, "Are we better than our fathers?" and was suggested by the famous passage in which Sir WILLIAM HAMILTON asks whether the practice of medicine has made any advance since the days of HIPPOCRATES. The learned philosopher may have put this question with a half cynical intent, or, on the other hand, he may have been so shaken by the diversity of medical doctrines and practice as to intend it in all seriousness. It was taken up and answered, as Professor GAIRDNER says, by Dr. WARBURTON BEGBIE before the Association twelve years ago, yet no one will deem the question unworthy of a fresh examination, especially when this is made by one so competent and so well versed in medical doctrine as Professor GAIRDNER. He has, as he truly says, been a teacher of medicine all his life, and is therefore in a position to speak with authority upon the great revolution which has taken place in the methods of medical practice.

No one, of course, will take it in its literal sense that the practice of HIPPOCRATES, or rather of his interpreter GALEN, has continued unshaken to the present day. Undoubtedly there are some points of detail which have not varied, for which even modern physicians are indebted to the sagacity and foresight of the ancients. But have we departed from the tradition of their work? Are we really so much in advance as we boast ourselves? In other words, Has medicine yet emerged from empiricism? Has it ceased to pin its faith to vague theories? Is it, as Professor GAIRDNER puts it, really more *stable* than it was a century ago? This, after all, is the real test of advance in the healing art; and, tried by these questions, there are, it must be confessed, many signs of absolute want of progress. In truth, there is no physician who will not confess that, in spite of the very notable achievements in the building up of the science of medicine, and in basing our practice upon the firm foundation of observed facts, there are yet wide regions in which we are still groping in the darkness, where we rely upon the "art" that clings to us from the past. It is slow and weary work, this casting off of old traditions and searching for the sure ground of fact; but it is being done, and that with increasing energy and hope. Professor GAIRDNER, in his calm and impartial survey, showed us what comfort we may glean from such reflections, and we may confidently look forward to a time when rational medicine will prevail; though, in spite of the many disheartening indications we could point out of the spread of quackery among the public. For [illegible] not only the medical man who has to be imbued with [illegible] spirit, his patients also sadly need enlightening upon the subject. The old faith in medicine as a mysterious and wellnigh miraculous power has not yet died out, and it is fostered by the unscrupulous, who trade on ignorance and folly. But how is it with ourselves—we the legitimate heirs of Hippocratic medicine? Are we really worthy of the laudation we are so apt to indulge in, and have we wholly thrown off the shackles of tradition? It seems to us that Professor GAIRDNER supplied an answer to this question, and, indeed, the only possible answer. He showed that, strictly speaking, we have no data of comparison between the medical practice of our day and that of HIPPOCRATES or GALEN. We have their dicta and their principles, but we have no clinical records sufficiently detailed to contrast the efficacy of their methods with that of our own. No one can deny the great service rendered by "the Æsculapian priest who first emancipated the art of medicine from the trammels of priestly control on the one hand, and of philosophic dogmatism on the other," and, wide as is the interval between his days and ours, there is still much in the Hippocratic tradition that remains unshaken. In order, however, to point the contrast between the old and new medicine more strikingly, Professor GAIRDNER selected the name of CULLEN, who a century ago faithfully maintained the principles of that tradition. CULLEN'S teaching was sound and well-reasoned, and yet it was shaken to the roots by the fanciful and extravagant doctrines of BROWN. For a time the Brunonian system dominated the medical world, which was never more unstable in doctrine than at the close of last century.

"It seemed," said Professor GAIRDNER, "as if the medical mind, oscillating between the claims of humoralism and solidism, and vitalism, could find no resting-place, but was constantly exposed to be drawn out of the path of traditional medicine by any new theory which presented a certain amount of apparent simplicity and plausibility—all the more if it contemptuously dismissed, as unworthy of serious study, the laborious and positive acquisitions of clinical and pathological fact, which had even then been largely gathered in, especially by Morgagni, as to the natural history of disease; and this was exactly what the Brunonian system did."

Well, the Brunonian system enjoyed its brief day of triumph, and has now fallen into merited oblivion. The progress of science has, we may trust, put an end once and for all to extravagances of that sort, although, to be sure on a minor scale we even now occasionally meet with generalisations which go far beyond the limits imposed by the facts on which they are based.

Contrasting the times of CULLEN and BROWN with the present, Professor GAIRDNER sought for evidence of a greater stability in medical doctrine now than then. He surveyed the field of modern medicine, and showed that in some respects, especially in the overwhelming rush after new remedies, we have not much to boast of. There is no gainsaying that in some directions medicine has attained as great a stability as it is possible to conceive, but the problems are so vast and numerous that we cannot marvel at the uncertainty in which we often still remain. Happily, however, we are no longer dominated by any theoretical system of universal application, and we are daily striving to rid ourselves of all that is empirical in practice. We have this advantage over CULLEN, that

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we are learning more of the nature of disease and of the action of remedies than was known to him, and our practice is becoming simpler and sounder in proportion as that knowledge widens. Amongst the hopeful signs of an increasing stability in medicine, Professor GAIRDNER adduced the advance of sanitation, the recognition of the self-healing powers in acute disease, the banishment of venesection (or rather its rational restriction) as a remedial measure, and the more enlightened practice of feeding the fever patient rather than bleeding or over-stimulating him. These are, indeed, great signs of progress, and separate us from the practice in vogue long after CULLEN'S day by an immeasurable distance. Up to that time it might have been questioned whether Sir W. HAMILTON'S query was not justified, but no one dare assert it now. The Hippocratic tradition has been broken in its strongest link. Professor GAIRDNER himself has been the witness of this revolution, and has taken no small part in furthering it. There is no doubt that in these respects at least we have gained wisdom, and it has come to us not through the adoption of any theory or as a revulsion from "orthodox" practice, but as the outcome of that patient investigation of natural phenomena of the healthy and diseased body and its environment which forms the basis of scientific medicine. That the gain is a substantial one is to be seen in the instance cited by Professor GAIRDNER of the treatment of fevers; for although the precise value of antipyretic methods is not fully proved, there can be no question of the gain derived from the change from lowering to restorative methods, and the substitution of easily assimilated food for excessive doses of alcohol. There still remain many branches of medicine in which art lags behind science, and there are prejudices and traditions, both among the laity and the profession, to be eradicated before we can be satisfied with real progress. Therefore it was well to be reminded of our position, and no occasion could have been more appropriate than that of which Professor GAIRDNER has availed himself, when medical practitioners from all parts were gathered together to hear of "new things," and to exchange experiences. His address will have served the useful purpose of impressing his hearers with a befitting sense of humility, and encouraging them to further effort in the cause of rational medicine.

IN the long interval of the sessions of the General Medical Council the profession looks with some interest to the action of the Executive Committee, which is invested with the powers of the Council with regard to certain questions, and which was enlarged at the last meeting of the Council. The Executive Committee met on the 25th of June, and we may well suppose was fully occupied in dealing with several questions which had been referred to it. Our readers may remember that at the meeting of the General Medical Council in November last, its attention was drawn to the subject of Unqualified Assistants, or rather to its own resolution (April 21st, 1883) on the subject—especially referring to charges of gross misconduct in the employment of unqualified assistants and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract, and to the fact that such charges are, if brought before the Council, regarded by the Council as charges of "infamous conduct" under the Medical Act. The Council in November resolved to make public these views on this subject. Until the meeting of the Executive Committee last week no steps seem to have been taken to give publicity to the Council's serious estimate of such conduct and such collusion between qualified practitioners and unqualified persons. As will have been seen by our last issue, copies of the resolution passed have been formally published in the Journals of the profession, so that henceforth there will be no excuse for not knowing how such conduct will be punished by the Medical Council. It is only fair that support should be given to the Council when it thus does its duty and tries to protect the public from all unreasonable and illegal uses of unqualified persons. Another duty delegated by the Council to its Executive Committee in May last was that of carrying out the Council's resolutions in regard to the Inspection of Examinations. It is understood that part of the business of the Executive Committee at its meeting last week was to prepare a letter of instructions to the inspectors under the new Act, on whom the arduous duty is devolved of inspecting the examinations in Medicine, Surgery, and Midwifery of all the examining bodies in England, Scotland, and Ireland within a period of twelve months. Strictly speaking, the Act requires the inspectors to ascertain the sufficiency of the examinations as a test of competency to practise. They are not required to interfere in the examinations, but to report on their sufficiency or insufficiency, and any other matters in relation to such examinations on which the General Council may require them to report. At the meeting in May the Council resolved that it should be an instruction to the inspectors to give special attention to the quality of the Practical Examinations and to the sufficiency of the means and appliances which are in use in them for testing the qualifications of candidates. We may be sure that the instructions of the Executive Committee covered this and all other important points. Amongst other matters relegated by the Council to its Executive Committee was the reception and consideration of applications for the Registration of Foreign and Colonial Degrees under the Medical Act, 1886. This is a matter of great importance. On the one hand, many gentlemen holding foreign degrees are very anxious to see them recognised and registered. On the other hand, it is the clear duty of the Council not to proceed to register foreign and colonial degrees in any haphazard way, but after due inquiry and consideration. Even in the case of gentlemen already on the Register in virtue of British qualifications, but holding foreign degrees till now unregistrable, the Council is bound to satisfy itself as to the nature of the examinations to be passed in order to obtain such degrees. To do this is a process which requires time. It is not sufficient to learn even the proportion of rejections to passes in such examinations. This might be large, and yet the examinations might not, in the judgment of the Council, be "proper" examinations. Nevertheless, it is clearly not the design of the Act that the Council should be fastidious or hypercritical, and if it showed any disposition to be so it is liable to be overruled by the Privy Council. The Privy Council will not

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however, be likely to show any disrespect to the judgment of the Council formed on sound data. The great majority of applications for the registration of foreign and colonial degrees are from practitioners already on the Register, and most of these hold the degree of Brussels. There are 222 applications in all, and of these 177 are under Clause 16, from practitioners already registered. The work of inquiry is proceeding, and the Executive Committee has appointed a sub-committee to prepare a report as to the evidence of satisfactoriness in foreign degrees. We gather that various other matters occupied the attention of the Executive Committee, some of which were serious, and will probably have to stand over for the judgment of the General Medical Council.

THE greater part of the water supply of London is, it is well known, drawn from the Thames above Hampton. Twenty years ago it was a matter of keen controversy whether such a supply was suitable for the metropolis, and a Royal Commission was appointed to inquire into the matter. The report of the Commissioners was signed on June 9th, 1869, and their conclusions were so definite and so strongly worded that from that time to the present they have been pretty generally accepted as final. It is not surprising. The Commissioners in their summary pointed out difficulties of a grave kind in regard to each of the alternative schemes laid before them, and expressed their deliberate opinion that the present supply was sufficient in quantity and quality. As to the quality, they said: "We are of opinion that there is no evidence to lead us to believe that the water now supplied by the companies is not generally good and wholesome." The opinion was, however, supplemented by several admissions which tended to diminish its value. Thus we read that "perfect filtration is highly essential to the good quality of the water supplied"; "that this process is at present in many cases very imperfectly performed"; and further on (to take the most important qualification of all), that "when efficient measures are adopted for excluding the sewage and other pollutions from the Thames and the Lea and their tributaries, and for ensuring perfect filtration, water taken from the present sources will be perfectly wholesome and of suitable quality for the supply of the metropolis." We have said that these conclusions stopped for a time all further discussion, for the dicta of a Royal Commission of experts are not to be lightly set aside. And yet from the beginning there was no consensus of opinion in their favour. For one thing, the Commission was imperfectly constituted. The members were worthy of respect, and two or three were eminent, but no one was a physician or a chemist, and as water supply is above all a question of public health, this defect was serious. Then, again, the conclusions themselves were contradictory; for whereas in one passage the present supply was described as "generally good and wholesome"—which surely implies a satisfactory state of things,—in another a condition which is practically impossible was [illegible], that efficient measures should be adopted for excluding sewage and other pollutions from the river. Some [illegible] was undoubtedly done by the Commission, for the London companies were stimulated to increased exertion in regard to filtration and constant supply, and Londoners now reap the benefit of the agitation. But scientific sanitarians have never been satisfied, for the certainties, to say nothing of the risks, of pollution in such a water supply are too obvious to escape attention from those who know anything of the laws of zymotic disease. For ourselves, we may fairly claim that we have never hesitated in our view of the case, and have always stated our belief that the present water supply of London is fraught with incessant danger, and that, however smoothly things may go at present, there is a permanent possibility that at any time a serious calamity may occur. That dread sanitary teacher, the cholera, whose lessons are always respected, and to whom England probably owes ten times more lives than deaths, has once more cast his shadow, though not as yet his substance, over us, and once more there is some sign of public interest in the purity of the water we drink. The terrible example of Spain is not yet forgotten, and we have therefore some hope in asking once more the question, Is our water supply safe? Serious assertions in respect to it have reached us, and we have thought it our duty in the public interest to institute new inquiries, the results of which we shall duly lay before our readers.

THE Court of Appeal has decided against the Medical Council in the appeal by the Council against the judgment of the Divisional Court (Mr. Justice MATHEW and Mr. Justice A. L. SMITH) in favour of Mr. PARTRIDGE'S application for a *mandamus* to the General Council of Medical Education of the United Kingdom to restore his name to the Register of Dentists kept under the Dentists Act of 1878. The facts will be remembered by our readers. They are stated thus in *The Times* report:—

"The applicant had practised as a dentist in the metropolis since 1867, but he never registered in respect of this qualification. In 1878 an Act was passed requiring dentists to be registered under that Act, the General Council of Medical Education of the United Kingdom being made the governing body. In 1878 Mr. Partridge obtained from the Royal College of Surgeons in Ireland a diploma in dentistry, and as a licentiate of this body, which was one of the medical authorities referred to in the Act, he applied for and procured registration under Section 6 of the Act. The diploma had been granted on the terms that the holder should not seek to attract business by advertising or by any practice considered by the College unbecoming, and that the diploma might be cancelled on its being proved to the satisfaction of the President and Council that he had done so. In 1885 the Royal College of Surgeons in Ireland cancelled the diploma on the ground that Mr. Partridge had advertised for business, and upon this being brought to the notice of the General Council, they directed his name to be erased from the Register. It was argued for Mr. Partridge that the General Council had only power to erase his name for some cause specified in section 13, which provides that where a registered person has been convicted of an offence, which if committed in England would be a felony or misdemeanour, or been guilty of any infamous or disgraceful conduct in a professional respect, that person shall be liable to have his name erased from the Register. It was argued on behalf of the General Council that Section 11 bound them to keep a Register, and that that must mean a correct Register, and as the diploma, by virtue of which Mr. Partridge got registered, had been taken away, he was not entitled to be on the Register."

This decision is scarcely likely to be further contested.

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The opinion of Justices MATHEW and SMITH was regarded by lawyers as pretty decisive and very authoritative, though it left the applicant in the absurd position of being entitled to be replaced on the Register after the Body from whom his diploma had been received had withdrawn it, and the Council in the absurd position of being required to keep a man on the Register who had ceased to have a registrable qualification. But mere absurdity does not constitute illegality; and the Medical Council, or its legal advisers, must bow with what grace they may to a decision of the Court of Appeal, which negatives one of their favourite principles of procedure—to remove from the Register, without further inquiry, a man whose diplomas have been withdrawn.

The Council has this consolation, that the judgment of the Court in no way derogates from the Council's high judicial functions. It does not question the right of the Council to remove Mr. PARTRIDGE'S name from the Dentists' Register if it shall see fit to do so. On the contrary, it rather asserts all this in a way to magnify the responsibility of the Council. The Court of Appeal lays down only that the Council erased the name in a wrong sort of way. It did not institute an inquiry into the facts and satisfy itself of the nature of the conduct attributed to Mr. PARTRIDGE. The Council should have acted without reference to the College of Surgeons of Ireland and their reasons for withdrawing their licence. Had it done so, the result might have been altogether different. His lordship said "the *mandamus* must go, but the fact of its going would not take away the power of the General Medical Council to exercise their jurisdiction under Sections 13 and 16, and if on inquiry the Council came to the conclusion that the applicant had, by breaking the conditions imposed upon him by the local medical body, been guilty of disgraceful professional conduct (and if he wilfully broke the condition, his professional conduct might be thought disgraceful), they would erase his name from the Register." Such a judgment will throw much more responsibility on the Medical Council and much less on the medical authorities. Each of these in turn has been too apt to shirk such responsibility; but this judgment will at least clear the air and let the Council know its duties.

Annotations.

"Ne quid nimis."

THE ARMY MEDICAL DEPARTMENT.

WE observe with much satisfaction that Sir Thomas Crawford, at the meeting of the British Medical Association, entered his protest against the course which the Parliamentary Bills Committee had taken on the question of relative rank. He gave an unqualified contradiction to Mr. Hart's statement that the officers of the department were afraid to make any representations on the subject, as it would "not hasten" their selection for promotion. Sir Thomas was supported in his opposition to the report by Dr. Ince, late of the Indian Service, Deputy Surgeon-General Joynt, and Mr. Macnamara, who is an old army medical officer. Sir Thomas Crawford moved that the paragraph on relative rank be omitted from the report, and referred back to the Council for reconsideration. After some discussion this course was adopted, Mr. Hart stating that he did not object to it provided it was "not regarded as a vote of censure on the committee." Sir Thomas Crawford disclaimed all idea of censuring the committee, but it is difficult to regard the resolution in any other light. We are glad, for the credit and honour of the department and of the profession, that the Director-General has taken this course, and that he has been so well supported in it by the members of the Association. The *plébiscite* of the army medical officers we consider an unwise and unwarrantable act, one which, apart from its bearing upon the discipline of the department, cannot but be interpreted as an undeserved reflection on its distinguished head.

A CLINICAL EXAMINATION!

WHAT constitutes an examination in clinical medicine? The ordinary mind conceives it to be the examination of a candidate by the bedside of a patient, with all the appliances and reagents at hand for making a thorough investigation and record of the case. That, too, is the sense in which it is interpreted by the universities, and so has it been interpreted until this year of grace by the body which one might expect to set a worthy example in the matter—viz., the Royal College of Physicians. But, whether from the association with the College of Surgeons and the force of example or not, it has strangely deviated from this principle since the two bodies took possession of the Hall on the Embankment. Thither are now summoned the halt and lame, and candidates for the licence of the College are "taken over" these cases, of whom, we are assured, there is a plentiful supply, who are not too ill to attend. This is a poor substitute for the hospital ward, and in adopting it the College has wittingly placed itself on a level with the Society to which it professes to be so superior. What can be the reason? Is it to save trouble? Perhaps it is, and that may be the reason why the examiners concur in it. But such a ground should not weigh for an instant, either with those who regard the matter from the point of view of the candidate, or from that of the public who demand a thorough qualification, or even from that of the dignity of the College. Have we not been told that London is the greatest storehouse of clinical material in the world? Do we not know that the number of beds in its hospitals and infirmaries can be reckoned by the thousand? And yet the College of Physicians must descend to this paltry substitute for a thorough clinical examination. No matter how numerous the candidates, there need be no difficulty in assigning them cases in hospital wards; whilst there would be no great difficulty in appointing assistant examiners to conduct this part of the examination if the burden were found to be too heavy for the staff of examiners. We do not hesitate to say that the examination, as at present conducted, does not, and cannot, attain the level it ought to reach; and that so long as this style of conducting it is pursued no one can say that in clinical medicine the College of Physicians applies as good a test as the Universities.

ACUTE HEPATIC CIRRHOSIS.

THE varieties of hepatic cirrhosis are very numerous, and the tendency is rather to increase their number, whilst the desire must surely exist to put this seeming chaos into order. Much light has yet to be thrown on the acute forms of cirrhosis, with which we seem to be becoming more and more familiar. M. Debove has contributed an account of an interesting case to the "Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris," No. 13. The whole duration of the clinical history was not more than five months, and for the first three of these the woman, aged thirty-four, merely complained of some general symptoms not specially referable to the liver, the first symptom

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affection of which organ was marked jaundice, and on admission to the hospital it was found that the liver extended five fingers' breadth below the margin of the thorax. Fever, jaundice, hæmorrhages, enlargement of the spleen, diarrhœa, and but slight ascites, were the principal symptoms. Three weeks before death the liver progressively diminished in size, till at the necropsy it was found to be level with the edge of the ribs. The cirrhosis had chiefly affected the periphery of each hepatic lobule, and was in this sense allied to the monolobular form of Charcot, for the amount of connective tissue increase was about sufficient to replace that of true liver tissue, so that the volume of the organ was not far from normal. Further examination showed, however, that a peri-cellular sclerosis had also taken place, and that the connective tissues around the portal system as well as around the hepatic veins were increased; the surface and section of the organ were granular. The remaining true liver cells were either fattily degenerated, recalling the fatty cirrhotic type, or else granular and atrophied. Debove believes that neither alcohol nor syphilis was operative in the causation of the disease, which he was unable to explain.

THE METROPOLITAN ASYLUMS BOARD.

THE Metropolitan Asylums Board again on Saturday received reports of the freedom of their institutions from cases of small-pox, but one patient suffering from this disease having been admitted during the fortnight preceding the day of meeting. Scarlet fever, however, is more prevalent, the numbers under treatment having increased during this period to 594, altogether 634 cases of fever remaining in the hospital. The need for the provision of further accommodation had to be considered, and it was decided that the Ambulance Committee should be asked to advise as to the reopening of the North-Western Asylum at Hampstead. The Board also received, through the Local Government Board, a communication from the Surrey magistrates respecting the accommodation of harmless lunatics; the county asylums were full, and it was thought that room for a larger number of chronic imbeciles could be found in the asylums of the managers. The Board at the present time has 5408 patients of this class under treatment, as well as 552 boys on board the *Exmouth* training ship.

FRUIT AS A FOOD.

No great time has elapsed since we had occasion to make a few remarks on the value of fruit as a form of light diet, and to refer to a few simple rules which those who partake of it do well to observe. Taken in the morning, fruit is as helpful to digestion as it is refreshing. The newly awakened function finds in it an object of such light labour as will exercise without seriously taxing its energies, and the tissues of the stomach acquire at little cost a gain of nourishment which will sustain those energies in later and more serious operations. It is an excellent plan, with this object in view, to add a little bread to the fruit eaten. While admitting its peculiarities of these valuable qualities, however, and while also agreeing with those who maintain that in summer, when the body is, at all events in many cases, less actively employed than usual, meat may be less, and fruit or vegetables more largely used as a food, we are not prepared to allow that for [illegible] an exclusively vegetarian regimen is that naturally advisable. Meat provides us with a means of [illegible] albuminoid material, which is indispensable in the [illegible] assimilable form. It affords us in this [illegible] only an important constituent of tissue growth, but [illegible] of the whole process of nutrition. It has [illegible] real, definite, and great value in the ordinary diet of man, and the wholesomeness of fruit combined with farinaceous food as an alternative dietary is not so much an argument in favour of the vegetarian principle, as a proof that seasonable changes in food supply are helpful to the digestive processes and to nutritive changes in the tissues generally.

HEALTH CONDITION OF HOLIDAY RESORTS.

THE Registrar-General, in his Quarterly Return, just issued, publishes his usual table of the recent mortality statistics for the registration districts and sub-districts containing forty-six of the principal seaside and inland holiday resorts. This table gives the death-rate from all causes, and from the principal zymotic diseases in each of these watering places of England and Wales. It appears that they had an aggregate population estimated at rather more than a million persons in the middle of this year. Among this population the mean annual death-rate during the three months ending June last did not exceed 15·5 per 1000, which was 1·7 below the mean rate in the aggregate of the rural districts of England and Wales. The death-rate from the principal zymotic diseases in those watering places was as low as 1·03 per 1000, against 1·50 in the whole country, excluding the seventy-eight largest towns. It is therefore evident that, taken in the aggregate, the health condition of these holiday resorts during last quarter, judged by their mortality statistics, was eminently satisfactory. Bearing in mind the small population of some of these watering places, and the short period of time embraced by the Return, any attempt to estimate the comparative healthiness of the individual health resorts from these figures of the Registrar-General is to be strongly deprecated. As regards the information relating to the mortality from the principal zymotic diseases, it should, however, afford satisfaction to those proposing to visit Herne Bay, Margate, Bognor, Weymouth, Lyme Regis, Tenby, Aberystwith, Beaumaris, Buxton, and Matlock, to know that during the three months ending June last not a single death from any of the principal zymotic diseases was registered in any of these towns; while in but fourteen out of the forty-six watering places did the death-rate rate from these diseases exceed 1 per 1000. Only in three of the older health resorts did the zymotic death-rate exceed the general average for the whole country.

ST. GILES'S-IN-THE-FIELDS.

THE report for the year ending March 25th, 1887, by the Board of Works of St. Giles's gives an interesting account of sanitary progress in this well-worked district. Of the more important improvements, that of the Shelton-street area undoubtedly comes first, and the Board are to be congratulated on the perseverance with which they have endeavoured to induce the Metropolitan Board to put in force the Artisans and Labourers' Dwellings Act of 1875. We have recently given account of the inquiry held by Mr. D. Cubitt Nichols for the Secretary of State for the Home Department, the result of which has been that the Home Secretary has now brought in a Bill to obtain powers for the clearance of this area. The provisions of Torrens' Act have enabled the District Board to improve a large number of houses in Dudley-street and a common lodging-house in Black-horse-yard; and for the better control of houses let in lodgings some valuable regulations have been adopted which have been confirmed by the Local Government Board. Mr. Lovett gives as the death-rate of the whole district 22·9 per 1000: that of St. George's, Bloomsbury, being 16·5, of St. Giles's North 21·7, and of St. Giles's South 31·7 per 1000. Speaking of the high death-rate in the last sub-registration district, Mr. Lovett says that undoubtedly the principal cause of this is the insanitary condition of the

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Shelton-street area, Drury-lane, where the death-rate for the past year was as high as 53·7 per 1000. In comparison may be considered the rates of mortality in the model dwellings which now stand on the site of other unhealthy buildings which have been removed. Thus in the Great Wild-street block, having a population of 1437, the death-rate was 21·5 per 1000, and the birth-rate 43·8; and of 820 people in the Little Coram-street block the death-rate was 18·2 per 1000, and the birth-rate 53·6 per 1000. St. Giles's undoubtedly sets an example to its neighbours, and shows how much good can be done when the sanitary improvement of a district is seriously undertaken by a competent health officer and an active sanitary authority.

THE INFLUENCE OF METEOROLOGY ON MEASLES.

DR. CAMERON, in his second quarterly report on the health of the borough of Huddersfield for this year, discusses the high mortality from measles and the accompanying lung diseases. He reminds his authority that on a former occasion he pointed out that an epidemic of this disease had coincided with a somewhat high barometric pressure, an increasing temperature, considerable variation of day and night temperature, and a scarcity of rain. The poison of measles was, according to his view, prevented by the heavy atmosphere and the absence of wind from getting freely away from the close courts and yards; these courts also lacked the wholesome washing effect of rain, and the infection was kept active by the warmth of day, and the slight condensation produced by the chill of night, and spread rapidly to those who were susceptible of its influence. These conditions, which were characteristic of a similar mortality in 1832, were repeated, some of them in an aggravated form, in 1887. During the second three months of the year the barometer has averaged 30 in., and in none of the thirteen weeks included in that period has it averaged less than 29·6 in. The daily range of temperature has averaged 18°F., and the total rainfall has been only 3·09 in. Together with such rain as fell during the seventh, ninth, and in the week following the termination of the quarter, there was a marked reduction in the rate of mortality. Latterly, whooping-cough seems to have been similarly influenced, and during the quarter as a whole these two diseases caused together a mortality reaching 3·06 per 1000. The details thus contributed are of the greater interest because precise information as to the relation of infectious and other diseases to meteorological conditions is so scanty.

FASHION v. SCIENCE AND HUMANITY.

From a very remote, we may even say a pre-historic, period, it has been the custom of human beings to provide themselves with garments at the expense of the lower creation. From a time almost if not quite as early, animals have been slain to furnish food for man. In our own day, also, both practices exist in operation side by side. While, however, the necessity for flesh as an article of diet is generally admitted, provided that it be used in moderation and combined with vegetable food, the need for taking the life of animals in order to clothe the body, it must be allowed, has been to a great extent obviated by the progress of textile industry, which gives us as woollen fabrics most of what we require for daily wear without depriving a living creature of one drop of blood. Fancy, taste, luxury, utility—one or all of these,—it is true, still order the destruction of countless fur-bearing and feathered beings of a lower grade than ourselves; and we are not prepared to say that, in obeying the mandate, at all events of the last-named authority, man exceeds the privilege of his lordly position. When, however, we find him, at the bidding of a mere fashion, persecuting the life of some harmless and to him otherwise useless race of animals, and this even to the extent of extermination, we blush for the cruel heart of our so-called civilisation. When, for instance, little birds, whose only fault is their beauty, are sacrificed by thousands in a year, in order that their feathers or their bodies should adorn the "softer sex" of our species in hours of enjoyment, we are bound in creature kindness to those helpless members of the world's great family, to condemn the barbaric fancy which is so heedless in its self-esteem. Artificial substitutes can be found for ornaments of this kind, and the counterfeit is not by any means a despicable imitation. The desire for their more general adoption is not, we are sure, limited to ourselves, nor is the hope that other Governments will copy the recent practice of our own by restricting the indiscriminate slaughter which has already lost to the world not a few interesting and beautiful forms of animal life.

THE LUNACY BILL.

AN announcement was made by the Leader of the House of Commons on Monday evening last, to the effect that, among others, the Lunacy Acts Amendment Bill would be dropped by the Government. It is much to be regretted that the tardy act of justice to medical practitioners which the sixth clause of Lord Halsbury's Bill would have effected should be still longer delayed. That a medical man whom professional duty and the course of events have placed in a position in which he must form an opinion as to a patient's sanity, and certify it, should be liable, and that for an indefinite period, to a civil action at the suit of the lunatic with all its incidents of heavy law costs and its contingency of sentimental damages, is a serious blot upon English law. The measure of protection which the abortive Bill would have conferred is all that the profession has ever asked, but it is nothing more than the most obvious justice imperiously demands. On this account we much regret the abandonment of the Government Bill, and we think also that it is hardly fair to medical men that a matter of so great importance to them should have been left to share the fate of a measure so comprehensive and so intricate as the derelict Bill. Surely the sixth clause is sufficiently complete in itself, and of sufficient importance to be passed as a separate Act. In that case the Parliamentary process would have been extremely simple, and the measure might well have gone through without trenching unduly upon the precious remainder of an already protracted session.

CATARACT OPERATIONS IN BRUSSELS.

DR. COPPEZ, chief of the ophthalmic department of the Hospital of St. Jean Brussels, has recently published a report of his twelve years' experience in the management of cataract. He has had 218 cases of soft cataract, including the idiopathic, acquired, congenital, and traumatic varieties. Of these, 104 were treated by aspiration. Secondary cataracts to the number of 168 were treated by various well-known methods. Prouff's operation, which has not come into very general use, is strongly recommended by Dr. Coppez when the capsule is not too thick. It consists in making a small incision in the situation of the old wound and destroying the opaque membrane with an ordinary cystotome. The number of hard or semi-hard cataracts operated upon was 1059; of these 692 were extracted with iridectomy, 113 after a preparatory simultaneous iridectomy, and 254 by means of a simple flap operation. Dr. Coppez now decidedly prefers De Wecker's simple small flap operation. Those who prefer von Graefe's operation consider that De Wecker's plan gives rise to prolapse of the iris and causes so much difficulty in getting rid of the cortical portions that secondary

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cataracts are rendered much more common after this than after von Graefe's operation. Dr. Coppez has found, however, that by injecting eserine into the anterior chamber the hernia of the iris does not occur as frequently as is supposed, he only having met with this complication twenty times out of 254, and when it does occur, if it is left alone and not excised, it does not, he says, give rise to such trouble as the pinching up of the iris in the angles of the wound during the combined operation. As to secondary cataract, he met with it 120 times out of the 692 combined operations, and only ten times out of the 254 simple operations, which figures speak for themselves. Dr. Coppez now reserves the combined operation for cataracts complicated by central corneal opacity, by posterior synechiæ, or by high ocular tension, and for the second eye in double cataracts where the simple flap operation has proved unsuccessful in the first eye. He is opposed to any artificial maturation, preferring to operate in case of necessity on incomplete cataracts by ordinary methods. If any cortical portions remain he removes them a few days subsequently by the aspirator.

UNREGISTERED DEATHS.

THE facts disclosed at a recent inquest held by Dr. Diplock at West Drayton suggest uncomfortable doubts as to the due accuracy of our registered statistics of mortality, if not of our system of registration. It appears that recently the body of an infant aged eleven months was buried in the parish churchyard without any order for burial from the coroner or the usual certificate of registration from the registrar. As a matter of fact, the child was scalded with boiling water during a quarrel and struggle between the parents, and died from "scalds and neglect," as was proved at the inquest which was held after the body was exhumed. The sexton gave evidence at the inquest, and denied that he knew he was acting illegally in burying without a certificate, stating at the same time that he had on other occasions buried persons without such certificate. The present case sufficiently proves the danger to society from such ignorance or evasion of the legal provisions for securing the due registration of deaths; but it is eminently unsatisfactory to hear that Dr. Diplock in January last had his attention officially called to similar illegal acts by London undertakers, and that a communication made by him on the subject to the Home Office resulted in no action being taken in the matter. It is clearly enacted in Section 17 of the Births and Deaths Registration Act of 1874 that "the person who buries or performs any funeral or religious service for the burial of any dead body as to which no order or certificate is delivered to him, shall, within seven days after such burial, give notice thereof in writing to the registrar, and if he fail so to do shall be liable to a penalty not exceeding ten pounds." The law, therefore, imposes a penalty upon every sexton and officiating minister concerned in the burial of any body without the production of the necessary authority for the burial, unless notice of such burial is sent to the registrar of the district in which the death occurred. As the offence is one committed against the Registration Act, we are at a loss to know why Dr. Diplock should have reported the circumstance to the Home Office, which does not now take official cognisance of civil registration. It would appear that upon the Registrar-General rests the responsibility for instituting a prosecution in such cases, and we fear that nothing short of the publicity which would result from prosecutions would effectually put a stop to this careless neglect of legal enactments, the observance of which is so important in the interest of public safety. It cannot be too generally known that, under the present state of the law it is not illegal to bury the body of a person whose death has not been registered, liability to a penalty of ten pounds is incurred if the registrar of the district is not informed within seven days of the burial.

ARMY MEDICAL SCHOOL AT NETLEY.

ON Friday, the 30th ult., at the close of the fifty-fourth session of the Army Medical School, the results of the examinations were declared, and the various prizes instituted in connexion with the school were given to the successful candidates by Sir Henry Acland, K.C.B., F.R.S., in the presence of Sir T. Crawford, the Director-General, Sir Galbraith Logan, retired Director-General, and a number of distinguished officers of the British and Indian Medical Services. Sir Henry, in his address, paid a well-merited tribute to the valuable labours of Sidney Herbert, Edmund Parkes, and Florence Nightingale in connexion with the department, and bore testimony to the important services done in the promotion of sanitary science by the medical officers of the army. He impressed upon the students the necessity, in these days of progress, of increased attention in scientific and literary culture, and appealed to them to be careful to maintain the character of Englishmen and English gentlemen. After the conclusion of the official work the company adjourned to the ante-room of the mess-house, where Sir Galbraith Logan presented to the Director-General, on behalf of the Army Medical Staff, a portrait of Sir Thomas Longmore, to be hung in the ante-room. It is a three-quarter-length portrait, by Mr. George Reed, and was exhibited last year at Burlington House. It was painted for a number of the medical officers of the British and Indian Services, who desired, as a recognition of the services of Sir Thomas Longmore, to place his portrait in the chief scene of his work. At the same time an illuminated address in an album was presented to Lady Longmore. Sir Thomas returned thanks for himself and Lady Longmore, after which the company adjourned to luncheon in the mess-room. A list of the successful candidates for commissions and of the prizemen will be found in another column.

"SUSPICIOUS" DISEASE IN SPAIN AGAIN.

A NUMBER of "suspicious cases" have recently occurred in Madrid, which some people, remembering how, at the beginning of the last outbreak of cholera, all the cases were returned merely as "suspicious," are afraid are veritable cases of that disease, especially as it is raging in Sicily at the present time, and there is a good deal of communication between Italy and Spain. The leading medical journal remarks that cholera has never been known to break out primarily in an inland town without previously manifesting itself on the coast. The idea was started that the persons attacked must have drunk poisoned milk, and the milk, or at least some milk, was sent to the municipal laboratory, where nothing more injurious than a little carbonate of soda was detected. It was then suggested that white lead might have been put into the milk in mistake for carbonate of soda. This, however, would appear to be most unlikely, and, as carbonate of lead is insoluble, detection would have been tolerably certain. Altogether there would seem to be an entire want of positive evidence to indicate the milk as the source of infection, especially as it is stated that many of the affected persons had not been in the habit of drinking milk. This is said to have been notably the case in a deaf and dumb asylum, whose inmates, together with the servants and teachers, have been amongst the sufferers. The food sold in the town has also been examined, with the usual result that a good deal of it was found to be adulterated. Still, nothing has been discovered to prove that any large quantity of

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arsenic, lead, or other toxic substances capable of producing colic and intestinal disorder has been mixed with the food; so the origin of the "suspicious cases" still remains involved in obscurity, though it is to be hoped that it will not be allowed to remain in that condition, even should the malady be found to be of a zymotic character.

DEATH OF THE CROWN REPRESENTATIVE OF SCOTLAND.

THE death of Dr. Fergus is noticed in our obituary columns. It is a lamentable occurrence, of which we cannot forbear editorial notice. Dr. Fergus was a conspicuous citizen of Glasgow, a leading medical practitioner, and a much-respected member of the Medical Council. He was one of three brothers who all made their mark in our profession. His late brother John was an able physician and Professor of Medical Jurisprudence in King's College. His brother Walter died but recently, and was for over thirty years medical officer to Marlborough College. Andrew Fergus was one of those men who are invaluable in any community or body with which they happen to be associated. Cholera invaded Glasgow on two occasions, and found a spirited enemy in Fergus. He not only seized the practical points of treatment, but was one of the first to grasp the true principles of sanitation and to give them that impetus which has made Glasgow comparatively healthy. Besides the high offices he held in the profession, and in spite of his large practice, he found time to serve in the Town Council for several years, and to be a leading politician in Glasgow. He had the honour, not enjoyed so far by any general practitioner, to be chosen, in the time of Lord Beaconsfield's ministry, to represent the Crown for his Division of the kingdom.

ST. ANDREWS GRADUATES' ASSOCIATION.

THE annual meeting of this Association was held at 11, Chandos-street, Cavendish-square, on the afternoon of Tuesday, July 26th. Drs. B. W. Richardson and J. H. Paul were re-elected president and hon. treasurer respectively, the former having held office thirty, the latter twenty-eight years. The account of the hon. treasurer showed a balance of £65 16*s.* 9*d.* in favour of the Association. A contribution of twenty guineas was voted to the students of the University to assist them in founding a Students' Union similar to the well-known institutions at Oxford, Cambridge, and Edinburgh; and the Association requested and obtained permission of Surgeon-General Gordon, C.B., to print a limited number of copies of his Address on Medicine in Ancient India for distribution among the members of the Association.

THE ALLEGATION AGAINST A HOSPITAL.

ANOTHER charge against one of our large hospitals has recently been published. It is stated that a man who was seriously ill was refused admittance to the hospital, although producing an order for admission from his club doctor, and was sent in a condition of grave danger to the infirmary, where, after much difficulty, he was admitted. We have caused inquiries to be made, and find that the man was examined and found to be in a maniacal state after a fit in the street, and a club certificate was produced which said that he was under treatment for epilepsy. There was no cardiac disease; and as a man in the condition of the patient was able to be moved he was sent to the infirmary—cases of such character, unless of the greatest gravity, not being admitted to the hospital. No recent order for admission was produced, and the doctor who sent him could not have known the rules of the hospital, to the medical staff of which it is, of course, left to say when a patient is a proper case to be admitted. The friends appeared to have acted upon the suggestion of the hospital authorities, and made no objection as to removal. It is, of course, right that such complaints should be considered, but surely it is also right that the members of hospital staffs should not be annoyed in the discharge of their duties by charges which only require investigation to be disproved.

SOUTH LONDON AND THE HOSPITAL SUNDAY FUND.

MR. NELSON HARDY, in a letter to the *Standard*, complains that the south of London gets less out of the Hospital Sunday Fund than it sends. We would remind Mr. Hardy of the dictum of a great authority that "it is more blessed to give than to receive." It has been the happiness of South London to be well supplied by two large and rich hospitals, endowed generously by the liberality of men who lived long ago. Such endowed hospitals have been excluded, with general approval, from the benefit of the Fund. Should they unfortunately become dependent, like other hospitals, on casual and voluntary support, they might come to claim a share of the Hospital Sunday Fund. But it is too soon to anticipate such an unhappy state of things. The other ordinary and unendowed hospitals on the south side of the metropolis receive grants on the same principles precisely as similar institutions in other parts of London. Mr. Hardy's complaint should be fairly stated at the annual meeting of the constituents, as well as to the Distribution Committee.

THE SMOKE NUISANCE ABATEMENT BILL.

THIS Bill, of which we gave some account last week, suffered shipwreck in the House of Lords on Monday evening. The opposition took the somewhat unusual shape of an amendment, on the motion to go into committee, to the effect that before the law for the prohibition of smoke is extended to private dwellings, it is desirable that the purpose and intention of the existing Acts be more fully carried into effect either by amendment or better administration. Upon a division the amendment was carried by a small majority, and in view of the objections to which we have already referred we cannot greatly regret the loss of the measure. Our own view found fitting expression at the lips of the Lord Chancellor, who is reported to have said that although he sympathised with the objects of the promoters of the Bill, the measure itself was so ill-digested clumsy, inconvenient, and totally inoperative for the purpose for which it was designed, that he hoped it would not be agreed to.

SCENES AT EXECUTIONS.

No one can pity the despicable coward who, having murdered his victim in cold blood, crouches in horror before the scaffold on which the penalty of his crime is to be paid; but it is discreditable to our administration of justice that the execution of the last dread sentence of the law should be the occasion of a scene in which the malefactor has to be "half-dragged and half-carried by five warders" to doom, and when on the scaffold struggles so violently that the executioner has difficulty in performing his hideous task and is "quite unnerved." We cannot desire that the punishment of death—so long as it is inflicted for deterrent purposes—should be shorn of its terrors to the public mind; but we do most certainly think that there should be no room or occasion for scandal in connexion with its infliction, and it *is* a scandal that the victim should be able to recoil or resist. Electricity and the lethal chamber have been again and again suggested as alternative modes of putting murderers to death. The authorities do not, it would appear, feel justified in adopting either of these expedients.

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We confess that our sympathies are with those who entertain a fear lest luxurious and easy modes of execution might deprive the gallows of the very little moral influence it at present exerts. Meanwhile, it must not be forgotten that something is due to the sentiment of humanity which is supposed to pervade that section of the nation which is not, at least overtly, criminal.

THE PRESENT AND FUTURE OF WORKING WOMEN.

WE have felt it to be our duty to draw public attention in former issues of this journal to the hard conditions which trade custom has with singular injustice assigned as the lot of very many working women. It is therefore with lively satisfaction that we notice the indications of a systematic endeavour on the part of certain representative members of the community to understand, and as far as possible to alleviate, the hardships of a class whose troubles are certainly greater than its complaints. Mr. Walter Besant, in a recently published letter, proposes the meeting of a conference towards the end of the present year to discuss the whole question of female labour, and a committee, including several well-known names, has already been appointed to carry the scheme into execution. Overwork and underpay, it has been truly said, are terms which briefly describe the purport of the market regulations under which women in the present day find employment. The inordinately long working period, the wage, far too often absurdly inadequate to the effort, which it pays, the evil of close and ill-ventilated workrooms, the absence of necessary conveniences, and the very faulty dietetic arrangements, each of them a common grievance in the world of warehouse life, will, we cordially hope, receive due consideration in the deliberations of the coming congress. It is, however, most necessary to the fruitfulness of its praiseworthy endeavours that the body of evidence bearing upon the condition of working women, in its moral, social, and monetary aspects, should be as full as inquiry can make it within the time allowed for investigation. We would therefore strongly advise the many men and women whose daily visitations bring them in contact with the industrious poor to collect and forward all possible information bearing upon this important subject to Mr. Besant, at the Adelphi Hotel, Adam-street, Strand, W.C.

GASTRIC MOVEMENTS.

DR. GRUNDZACH reports in a Polish medical journal some cases of "atrophic catarrh" of the stomach where the glandular elements were considerably atrophied, and where the gastric juice existed only in very small quantity, and contained scarcely any hydrochloric acid. Notwithstanding this, the gastric movements were normal, so that the food did not remain longer than usual in the stomach, thus [illegible], according to the author's view, that the acidity of the contents of the stomach is not, as many physiologists teach, the cause of the gastric movements.

THE DRAINAGE OF MELBOURNE.

The necessity of maintaining the purity of rivers is beginning to be felt by some of our colonial fellow-subjects. Steps, for example, are being taken in Melbourne to improve the condition of the Yarra Yarra, which, it seems, is made to receive the whole of the sewage of the city as well as the refuse of numerous manufactories situated on the banks of the stream. The *Age* suggests the adoption of a system of drainage similar to that in existence in London; but we venture to hope that the citizens of Melbourne will exercise sufficient intelligence to enable them to avoid the mistakes which Londoners have made in respect of sewage disposal.

DR. KLEIN ON THE GROUSE DISEASE.

OUR contemporary the *Field* published in its issue of July 23rd a report by Dr. Klein of an inquiry he has been undertaking into the nature of the grouse disease, which has been prevalent on the moors of Ayrshire and Cumberland during this spring and summer. He visited several moors, and examined a large number of birds the subjects of the disease. The most constant anatomical changes were congestion of some parts of the intestines, great congestion and discolouration of the liver and kidney, and in some cases also of the lung. In some cases there was peritonitis. In all the birds taeniæ (T. calva) were present in the small intestine, in some in great numbers; and in one or two instances there was perforation of the bowel, other than from the effects of shot. Of the three views hitherto advanced concerning this disease—viz., that of Dr. Farquharson that it is of the nature of an infective disease, that of Dr. Cobbold that it is due to the strongylus pergracilis in the intestine, and a view advanced sixty years ago that it is due to penetration of the intestine by taeniæ,—Dr. Klein was at first disposed to accept the last, for he found no evidence of pathogenic microbes in the organs and tissues, and none of the birds examined contained the strongylus, whereas in all taeniæ occurred. But he was soon led to abandon this idea, seeing that the tapeworms occur in grouse which have not died of the disease, and that the presence of these parasites would not account for the diseased condition of the liver. Accordingly, he submitted the liver to microscopical examination, and detected in suitably prepared specimens certain corpuscles about two to four times the diameter of the liver cells. These bodies occurred in large numbers, and were of various shapes—cylindrical, spindle-shaped, irregularly elongated, or furnished with processes. They were nucleated protoplasmic bodies, and were apparently of the type of fungi known as plasmodia. In some of the larger branches of the veins of the liver forms were met with resembling spores of plasmodium. The presence of such fungi in the blood-vessels of the liver, and perhaps of the intestine also, would sufficiently account for the morbid changes detected; but Dr. Klein reserves his final conclusions until these bodies have been studied in the fresh and living state, and their distribution in the diseased animals and the mode of entrance into their bodies have been ascertained.

COCAINE INTERNALLY.

DR. L. FREY, of Békés, having as a patient a young woman who had mitral insufficiency and hypertrophy of the heart associated with hyperæsthesia of different parts of the body, which caused extreme irritability of the stomach and constant vomiting, so that for some days she had scarcely twenty minutes' intermission, tried digitalis, opiates, ice, cold applications, &c., but without any effect. He then determined to try cocaine internally. He gave three-quarters of a grain dissolved in water, which was followed by a cessation of the attacks of vomiting for two hours; another dose gave the patient six hours' rest, after which a violent attack of vomiting came on. The third dose stopped the vomiting altogether, after which all the other symptoms from which the patient suffered rapidly improved.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Loncq, formerly Professor of Medicine in the University of Utrecht.—Dr. Lubanski, formerly of Val-de-Grâce, the author of the feuilletons in *L'Union Médicale*, signed with the *nom de plume* "De Bray."

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THE CROWN PRINCE OF GERMANY.

THE base of the growth having become slightly more elevated at one point, Dr. Morell Mackenzie has thought it desirable to apply the electric cautery at this spot. For this purpose his Imperial Highness came to London on Tuesday, and an application was made the same day. The result was found to be entirely satisfactory on the following day, no inflammatory reaction having been set up, and the Crown Prince returned to Cowes on Thursday. The general health is excellent, and the voice very good.

MEDICAL HONOURS.

ON the 2nd inst. the Queen held an Investiture of the Orders of the Bath and St. Michael and St. George at Osborne. Amongst others the following Knight Commanders of the Order of the Bath were introduced into the presence of the Sovereign who conferred upon them the honour of Knighthood, and invested them with the insignia of the respective divisions of the second class of the Order into which they have been admitted—viz.: Military Division: Surgeon-General John Harrie Ker Innes; Inspector-General of Hospitals William Mackenzie, M.D., Indian Medical Service; Inspector-General of Hospitals and Fleets James Jenkins, Royal Navy. Civil Division: John Simon, Esq., M.D., late Medical Officer, Privy Council Office; Arthur Mitchell, Esq., M.D., Commissioner in Lunacy in Scotland.

THE CHOLERA.

THERE fatal cases of cholera are officially reported as having occurred this week at Malta. The authorities appear to be doing what they can to prevent the spread of the disease by removing suspicious cases to the lazaretto, and by thoroughly cleaning out the houses. In consequence of the existence of the malady on the island, quarantine is imposed at Gibraltar and Madrid on vessels arriving thence. At Catania the disease during the last week has not, it appears, diminished in violence, from fifteen to twenty deaths being recorded daily. The disease has extended to the prisons and monasteries. In the provincial towns (especially at Anderno, Paterno, Francofonte, and Cerami) the epidemic seems on the increase, whilst more favourable reports come from Syracuse and Calabria. According to a recent telegram from Bombay, cholera prevails to a serious extent at Peshawur, where 300 deaths occurred from the disease during July.

THE LETTING OF UNHEALTHY HOUSES.

IN one sense we are glad to find that actions for damages against landlords for letting houses in an unwholesome state are on the increase. Recently a case has been tried before Mr. Justice Cave at the Maidstone Assizes. The plaintiff alleged that a house had been let to him on the assurance that the sanitary arrangements were perfect, but that in consequence of the drain defects blood-poisoning and other illness affected his family, necessitating abandonment of the house, medical fees, and resort to the seaside for convalescence. The peppermint test as applied to the drains revealed leakage into the house of sewer air, and both as to this point and the sickness a number of witnesses were called. The defendant, himself a builder, was ready with a large number of witnesses to prove the precise contrary, but in the end the jury returned a verdict for the plaintiff for £142 and £60 damages. On behalf of the defendant notice of appeal was given, and if the appeal is heard we may have some decision as to the precise responsibilities in regard to details of house sanitation, both of landlords and tenants, which will be of material value as a precedent.

UNIVERSITY COLLEGE, LONDON.

DR. GRAILY HEWITT has been appointed by the Council of University College Emeritus Professor of Obstetric Medicine in the College and Consulting Obstetric Physician to the Hospital. Dr. Angel Money, Mr. Bilton Pollard, and Dr. H. R. Spencer have been respectively elected assistant physician, assistant surgeon, and assistant obstetric physician to University College Hospital.

COMMON LODGING-HOUSES.

THE Government of New South Wales have under consideration the question whether common lodging-houses shall be administered by the police authority or by the Board of Health, and no doubt good reasons can be shown for placing this duty upon either body. There is something to be said in favour of entrusting this supervision to the police, seeing that common lodging-houses are largely resorted to by the criminal class. This argument was urged at the time houses of this nature in London were the subject of legislation, but underlying this reason was the undesirability of entrusting the power of control to existing sanitary authorities. The ventilation, lighting, warming, and general condition of these premises, and, above all, the dealing with cases of infectious disease, can more conveniently be undertaken by sanitary officials, and we may hope that the uncertainty of administration that existed in London may not in Australia be found to be sufficient reason for removing this branch of sanitary work from its natural position.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—The new Laryngological Clinic under Dr. Fraenkel is now in full work, and is attended by a large number of patients. It is fully recognised by the authorities as a place for study, being replete with every instrument and convenience.

Jena.—Dr. Theodore Ziehen has joined the Medical Faculty, his inaugural dissertation being on "Sphygmographic researches on lunatics."

Lille.—M. Debierre, *agrégé*, has been transferred from Lyons, to replace M. Assaki.

Madrid.—Dr. Don Benito Hernando, of Granada, has been appointed to the Professorship of Therapeutics.

Marseilles.—M. Rietsch, *Docteur ès-Sciences*, has been appointed to the Professorship of Chemistry.

Montpellier.—The candidates for the chair of Therapeutics have been arranged in the following order:—1, M. Pécholier; 2, M. Hamelin.

Poitiers.—M. Lachaize, Professor of Anatomy, has been transferred, at his own request, to the chair of Physiology, M. Buffet-Delmas will now lecture on Anatomy.

DURING the present summer session there have been 8512 medical students in the universities of the German Empire, who have been distributed as follows:—Berlin, 1140; Bonn, 371; Breslau, 390; Erlangen, 262; Freiburg, 433; Giessen, 119; Gottingen, 248; Greifswald, 528; Halle, 330; Heidelberg, 240; Jena, 213; Kiel, 292; Konigsberg, 270; Leipsig, 713; Marburg, 302; Munich, 1186; Rostock, 121; Strassburg, 221; Tubingen, 272; Wurzburg, 861.

COMPLAINTS have reached us as to the method of conducting the recent examination for the diploma in Public Health at Aberdeen University. We refrain from comment until we have made thorough inquiries.

A BACTERIOLOGICAL INSTITUTE is to be established at Tiflis. Some £500 is available for the purchase of instruments.

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THE death, on the 17th ult., from pneumonia, of Dr. Joseph D. Hutchison of Brooklyn, is announced. For several years Dr. Hutchison served as Health Commissioner of Brooklyn, and he was also the author of several works and papers on Surgery. He was a delegate to the International Medical Congress held in London in 1881.

THE commencement of a new Spanish journal to be devoted to military medicine and surgery is announced. The title is *La Revista de Sanidad Militar*. The editors are Drs. Aycart and Quintana. A Spanish naval medical journal is already in existence.

THE Commission sent by the Italian Government to Catania with a view to examining on the spot the best means of combating the cholera epidemic, has just been reinforced by Professor Mariano Saluzzo.

THE Italian Government has just created a corps of sanitary police, and has placed at the head of the new body, Dr. Pagliani, Professor of Hygiene in the University of Turin.

AT the ordinary weekly meeting of the Cardiff Board of Guardians on the 30th ult., Dr. Paine announced that the epidemic of small-pox recently raging in that town had practically passed away.

THE twelfth Congress of the Italian Medical Association will be held this year at Pavia, from the 19th to the 24th of September.

Pharmacology and Therapeutics.

AN IMPROVED CAUSTIC PASTE.

DR. JULES FELIX, of Brussels, having found existing caustics unsatisfactory from the great pain which is caused by their application, from the difficulty of limiting their action precisely to the part desired, from their deliquescence and from various other causes, has devised a form of caustic paste which he has been using for some time past with the best results. It does not cause severe pain or set up any general reaction; the eschar is hard and well defined, so as to be easily detached. It is also a powerful antiseptic and haemostatic. It is not deliquescent, but keeps its consistence, which is that of putty, well, and so lends itself easily to manipulation. The hands should be wetted when applying it. They are not in any danger of being acted on. The paste is allowed to remain for from six to twenty-four hours according to the amount of eschar which it is desired to form. The formula for the paste is as follows: Mix in a mortar the following substances in powder:—Starch, 37 grms.; wheat flour, 112 grms.; bichlorides of mercury, 1 grm.; dry chloride of zinc, 110 grms.; iodol pure, 10 grms.; croton chloral, 10 grms.; bromide of camphor, 10 grms.; crystallised carbolic acid, 10 grms. Then add gradually a sufficient quantity of distilled water to form a homogeneous paste without lumps of the consistence of putty. This paste will keep an indefinite length of time.

BORATE OF AMMONIUM IN PHTHISIS.

Borate of ammonium has been found by Professor Lashkevich of great value in phthisis. Internally he gives five grains three times a day in solution, either alone or combined with codeia, hyoscyamus, or other sedatives. This he finds produces a marked effect on the expectoration, and in some cases where the affection had only reached an early stage a distinct diminution of the pyrexia was observed. The solution was also employed with advantage as an inhalation (in the form of spray?), reducing the expectoration and alleviating irritating and painful conditions of the mouth and throat.

ALKALINE MERCURIAL SOAP AS AN ABSORBENT.

Dr. Svetukhin, chief of Professor Lashkevich's clinic in St. Petersburg, in some therapeutic notes contributed to the *Russkaya Meditsina*, mentions that various preparations have been recently employed in the wards for the purpose of promoting absorption of pleuritic effusion. Iodine ointment is too mild and too slow in its action to answer the purpose, and the odour of iodoform ointment is so strong that it interferes too much with the comfort of the other patients, and so is found to be unsuitable for hospital practice. It was found that iodine ointment could be advantageously supplemented by soft soap (sapo kalinus viridis) inunctions, or by rubbing in unguentum hydrargyri. The most valuable of all applications for this purpose was, however, found to be a preparation called sapo kalinus hydrargyrosus, which is made by mixing in certain proportions metallic mercury, unguentum hydrargyri, caustic potash, and olive oil, so that the resulting soap contains a third of its weight of mercury, the unguentum hydrargyri of the Russian Pharmacopoeia containing half its weight of mercury. This is agitated with hot water so as to form a good froth and lightly rubbed into the skin. It has the advantage over ung. hydrargyri in being much more easily rubbed in, in not irritating the skin and thus causing eruptions, and, lastly, in not so rapidly setting up stomatitis or salivation. From half a drachm to a drachm of this mercurial soap is used for each inunction. After from six to ten applications some diminution may be detected in the effusion, and after twenty inunctions the whole is usually found to have disappeared. Of course, favourable results can only be looked for in cases of simple effusion; they cannot be obtained in empyema.

CYANIDE OF ZINC IN CARDIAC AFFECTIONS.

Cyanide of zinc exerts, according to Professor Lashkevich, a beneficial effect on some cardiac cases which cannot be obtained by other means. In cardiac neuroses it acts quickly and certainly. Palpitation, want of rhythm, and pain in the region of the heart are quickly affected, sometimes indeed cured, by this drug. The dose is from a tenth to an eighth of a grain three times a day. Similar beneficial effects are produced when there is organic cardiac disease. The regulating action of cyanide of zinc in valvular insufficiency is less marked than its effect on cardiac neurosis; nevertheless, there were cases in the wards where it acted better than other cardiac remedies, as digitalis, convallaria majalis, adonis vernalis, &c. In this respect it acted particularly satisfactorily in cases where other remedies could not be given without producing derangement of the gastro-intestinal system. Here it improved the action of the heart, thus increasing the secretion of urine, moderating the pulse, and diminishing the dropsy due to irritation of the gastro-intestinal canal. In a case of nervous palpitation with hysterical anuria, cyanide of zinc diminished the palpitation, and at the same time caused the secretion of urine to recommence.

A NEW SOURCE FOR BORAX.

From some analyses made by Señor Emil Eisele of Valparaiso, and by Mr. J. Clark of London, of several samples of crude Chilian borax, it would appear that Chili is capable of producing at least as good borax as California, the quality being equal to a good deal of that which comes from Italy. The attempts which are being made to open up a borax industry in Chili would therefore seem likely to prove successful.

CARBOLATE OF MERCURY IN SYPHILIS.

Dr. Schadeck has employed carbolate of mercury both internally and hypodermically in syphilis with remarkable success. He gave it in thirty-five cases in the form of a pill without finding it give rise to any gastric disturbance. The formula was—R Hydrargyri carbolici oxydati, 3 dr.; pulv. glycyrrh. q.s. ut f. massa pil. ex qua form. pil. No. 60; from two to four pills daily after food. This preparation was originally used by Gamberini in 1886. Dr. Schadeck also employed the carbolate of mercury in ten cases in the form of hypodermic injections, which he administered in the glutal region, causing the needle to penetrate the muscles deeply. The liquid used was a mucilage containing 2 per cent. of carbolate of mercury in suspension. In this way his results were as satisfactory as when the preparation was given by the mouth.

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BRITISH MEDICAL ASSOCIATION.

FIFTY-FIFTH ANNUAL MEETING,
HELD IN DUBLIN, 1887.

THE annual meeting was held this year in Dublin, and commenced its sittings on August 2nd. When contrasted with similar gatherings, it must be regarded as having been an unqualified success. Although the real work of the Association did not commence until Tuesday, yet Monday was a busy day at the reception-room, which was crowded by visitors from an early hour.

On Tuesday, at 11.30 A.M., in the Examination Hall, Trinity College, the first general meeting was held. Dr. Withers Moore, the out-going President, referred to the love and veneration felt towards Dr. William Stokes, who was present at the previous Dublin meeting. He could not have believed that the prosperity of the Association could have increased so rapidly. He thought they should not depend too much on their excellent representative Council, but principally on the professional ardour and the goodwill of individual members. He had now the pleasure of introducing their distinguished President, Dr. Banks, and he offered him his sincere wishes for a happy and prosperous year of office. Dr. Banks then took the chair, and offered on the part of the Branch Council a most cordial welcome to the members of the Association. Mr. Wheelhouse of Leeds moved that the thanks of the Association be offered to Dr. Withers Moore, and that he be elected a vice-president for life. Sir Thomas Crawford seconded the resolution and spoke highly of the courtesy of Dr. Withers Moore. Dr. Banks put the resolution, which was passed by acclamation. Dr. Moore responded in suitable terms.

Sir WALTER FOSTER moved the adoption of the Report of Council, of which the following is an abstract:—

In response to an invitation from the medical corporations, colleges, and the profession in Dublin, the Association have again the privilege of holding its annual meeting in Dublin, a city not less renowned for the zeal and ability of its scientific workers than for its genial hospitality and the charm of its social life. The Association continues to increase both at home and abroad, and at present 400 new members await the completion of the formalities necessary for their due election. The financial condition of the Association is satisfactory, and the investments amount at present to £17,566. The Parliamentary Bills Committee has been largely occupied with the question of the abolition of relative rank and its consequences to army medical officers, and has determined to use its best endeavours to obtain such a distinct acknowledgment of their rank as shall be satisfactory. The Committee of Medical Defence has felt itself unable to recommend the Council to lend the support of the Association to the proposed "British Medical Defence Society." The Scientific Grants Committee has made grants to the amount of £345, of which £63 8*s.* 10*d.* has been returned unexpended. The Middlemore Prize for the best essay [illegible] in Ophthalmic Science" has been equally [illegible] Messrs. Berry and Frost; and the [illegible] to Dr. Cory for an investigation as to the communicability of syphilis in vaccination. As regards the payment of the travelling expenses of the [illegible] representatives on the Council of the Association [illegible] attending meetings in London, the Council have approved of the following resolution:—That in the opinion of the Journal and Finance Committee it is essential for the welfare of the Association that a sum of £2000 should be invested out of the surplus every year, and that the payment of the expenses of members of the Council should be by fees as follows: members residing within 100 miles of place of meeting, one guinea; over 100 miles, two guineas; over 250 miles, three guineas; and over 400 miles, five guineas. [illegible] spoke of the present meeting as likely to [illegible] of the Association, and referred to the loss they had sustained by the death of Dr. Chadwick, whose place they could not well fill. [illegible]

An amendment was moved to the adoption of the report by Dr. STRANGE, who, although a member of Council and an ex-president of the Association, spoke against the payment of representatives. On several occasions it had been brought forward and regarded as uncongenial to the spirit of the Association, and quite foreign to their feelings. The Branches had been asked their opinion, but not the Association directly. He looked on the proposal to pay the representatives as a new departure, and one which should not be taken. It would also, if adopted, cause enormous expense.

Mr. HOLMAN, in a few words, seconded the amendment.

Mr. FITZPATRICK thought the payment of travelling fees only as a desirable proposal, and was of opinion that it was the object of the present Council to try to keep out the provincial members of Council.

Mr. HART stated that, on the contrary, the Metropolitan Branch were in favour of representatives being paid.

Dr. JOHN INCE thought payment was objectionable, and that a mercenary spirit prevailed too much among the profession.

Dr. CHARLES DRYSDALE spoke in favour of provincial representatives being paid.

Mr. HART said that the opinion of the Council had been taken three times, and they objected to it; on the fourth occasion they relented, and a vote of the Branches was taken on the subject.

Mr. JACOB believed that the interests of representatives of provincial Branches should be considered in the matter, as, practically, the management of the Association was in the hands of the London men.

Mr. WHEELHOUSE said that although he should not feel degraded by taking his fare, yet felt it might well be spent on other objects of usefulness.

Mr. THOMPSON (Omagh), as a provincial surgeon, also spoke against the payment of representatives.

The amendment was carried by a large majority—57 to about 12—and then put as a resolution.

Mr. FITZPATRICK moved as an amendment that first-class fares should be paid, which was lost by a large majority.

The meeting adjourned for an hour, and on re-assembling,

Sir W. FOSTER moved, "That the best thanks of the Association be given to Mr. N. C. Macnamara for his able services as treasurer during the past three years, and for the great interest he had shown in the welfare of the Association, and that he be elected a vice-president for life."

This was seconded by Sir THOMAS CRAWFORD, K.C.B., and passed unanimously.

Mr. MACNAMARA said it had given him much pleasure during the past three years, as the work was congenial; but he thought all the credit was due to Mr. Fowke, who was always ready in the interests of the Association.

Professor GAIRDNER moved that Mr. Holman be appointed treasurer for the ensuing three years, which was seconded by Dr. MYRTLE, of Harrogate, and carried unanimously.

Mr. HOLMAN duly returned thanks.

Mr. HART moved the Parliamentary Bills Committee's Report, and said with regard to the army medical officers, the committee had received the thanks of many hundreds of the medical officers for what they had done in their behalf.

Mr. SIBLEY seconded the adoption of the report.

Sir THOS. CRAWFORD, K.C.B. (Director-General of the Army Medical Department), regretted to find fault with the action of the committee. He promised that while he had a connexion with the medical department of the army he would do everything in his power to bring its officers into harmony with the civil members of the profession. In January last certain alterations had been made in the pay warrant, and amongst these changes was one which included the whole staff of the army. Statements had appeared in the *British Medical Journal* to the effect that the new Warrant had deprived medical officers of the only rank they held in the army. Week after week the statement was reiterated that the only rank which army medical officers possessed had been abolished. He maintained that this was not so, and that the Queen's Commission issued to every officer showed it. He read the terms of the commission which surgeons held in the army, and pointed out that there was no reference in it to relative rank. The Secretary of State for War had written that the new Warrant had not affected the rank of any medical officer in the army. Relative rank, Sir Thomas Crawford stated, was not the only rank the medical officer possessed, and he could not agree in the statements made regarding relative rank by the *British Medical Journal*, the tendency of the articles in that *Journal* being to mislead the public and the army at large. He believed that army

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medical officers had not lost, but rather gained, by the late Warrant. All these changes in the working of the Army List had been done by himself, and not by the Secretary of State. He maintained that the army medical officers had not lost anything, but the *Journal* had stated the reverse. He thought it right to say that, as regards the making of complaints by those who believed they had a grievance, no man's mouth was shut, and anyone could lay his grievance before his chief, or even bring it before the Secretary of State, without being in danger of being treated unjustly. Mr. Hart had addressed the medical officers of the army asking for answers to be filled up, treating it as a confidential document, and promising to publish only an analysis of the returns sent in. He thought that the titles suggested for army medical officers by the editor they had no real claim to, and he regarded those titles as a degradation.

Dr. JOHN INCH, as a retired surgeon-major of the Indian army, thought the subject of relative rank was rank rubbish, and trusted the editor would at once extinguish the disagreeable subject. A medical officer would be always ranked according to his own medical and professional position.

Deputy Surgeon-General JOYNT thoroughly endorsed all that Sir Thomas Crawford had said.

Sir THOMAS CRAWFORD then proposed as an amendment that the paragraph on relative rank be omitted from the report, and referred back to the Council for reconsideration.

Dr. HAUGHTON approved of the matter being referred back for consideration. When will it come on again?

Sir THOMAS CRAWFORD.—In about twelve months.

Mr. HART.—Oh no; it will come on at the committee meeting in October.

Dr. HAUGHTON.—Then let it go back.

Mr. HART said that the whole of the Medical Department of the army was boiling with discontent.

Sir THOMAS CRAWFORD rose to order. There was not, within his knowledge, a single representation to any of the authorities to such an effect.

Mr. HART said that the opinions stated there that day were the opinions of an enormous majority of the medical officers of the army. When Sir Thomas stated that he had no representation to that effect officially, it only proved that the representations were not officially made to Sir Thomas Crawford. If any officer individually made such a complaint it would not hasten his selection for promotion.

Sir THOMAS CRAWFORD said the editor of the *British Medical Journal* was not justified in making such a statement as that. There was no justification for making such a statement about his (Sir Thomas Crawford's) management of his department, and to say that officers were "selected" was wholly unwarrantable.

Mr. HART said Sir Thomas took a wrong view of his observations. What he (Mr. Hart) said was that the medical officers of the army and the combatant officers were under this disadvantage—that if they felt that they had a grievance and held views which were known to be held in disfavour by the heads of their department, they were not allowed to make any collective statement, and if they individually made statements, rightly or wrongly, they felt that they were doing themselves an injury. The Secretary of State for War in the House of Commons refused to allow the medical officers to make a collective statement, and the Parliamentary Bills Committee of that association had done right in allowing the officers to express their opinions, which collectively they dare not do. He (Mr. Hart) considered it very disadvantageous to the service that these opinions should be given publicity to, and for weeks he refused to insert any letters on the question. The letters he received, however, grew in number, and telegrams collectively from officers, saying, "This station is in a state of the greatest discontent; the answer of the Secretary for War is causing the greatest dissatisfaction," were daily received [illegible]. It was only the other day that he received from [illegible] telegram signed by 200 medical officers, and enclosing a very handsome cheque, which he did not ask for, "to defray the expense of circulars to take individual opinion." [illegible] been done was done with the sanction and by the advice of the most eminent men in the army, and their [illegible] to obtain the wishes of the service. With this [illegible] had framed a circular asking each officer which of [illegible] he would approve of. One of the gentlemen [illegible] that the agitation proceeded from a low [illegible] visiting [illegible]

Sir THOMAS CRAWFORD explained that this expression was used in a letter which he had read, and was not used by him personally.

Mr. HART said those who were moving in the matter were men occupying the most eminent positions.

Mr. MACNAMARA said he was in the army for many years, and never had the slightest hesitation in approaching the head authorities and making known any grievance he had. The circular was clearly an incitement to the officers of the British Medical Service to insubordination. (No, no.) The British Medical Association was tempting them to commit an act which they were afraid to commit in any other way. Why don't they go to Sir Thomas Crawford or the Secretary of State? As an officer of long-standing in the service, it went very much against his feelings to hear that the British Medical Association should in any way countenance action of this kind.

Sir THOMAS CRAWFORD read an annotation to a communication which appeared in the *British Medical Journal* of May 7th, and which urged that the grievances of the service should be taken up by the colleges and other schools, and that Mr. Hart would give all information to those requiring it.

Mr. HART.—Hear, hear.

Sir WALTER FOSTER said he had been very much struck by the very able statement of Sir Thomas Crawford. He was also struck by the fact that three retired medical officers had got up to support him. From this they were justified in saying that the universal discontent referred to does not exist.

Mr. HART.—I will not object to the matter being referred back, provided that is not regarded as a vote of censure on the committee.

Sir THOMAS CRAWFORD said he had endeavoured all along to convey that he intended no censure.

The report was, after some further conversation, referred back.

Dr. NORMAN KERR moved that the Report of the Committee for Legislative Restriction for Habitual Drunkards be received and adopted, which was seconded by Dr. E. P. THWING of New York, and adopted.

The meeting then adjourned until 8.30 the same evening, when the President delivered his address. In this Dr. BANKS, following the example of many of his predecessors, confined himself to matters of local interest, particularly those connected with the Dublin medical institutions, and the changes and improvements which twenty years have brought about. He commenced by giving a historical sketch of the connexion of medicine with the Dublin University, a brief account of the College of Physicians and the careers of some of the most famous of its early Fellows, the Dublin School of Medicine, and the Royal University of Ireland, and concluded by defending the Association from a charge which had been brought against it, and others of a cognate character—namely, that its members met chiefly, if not altogether, for amusement and recreation. To this he gave an emphatic denial, for labour took the first place, and then came recreation and social intercourse, the value of which, he admitted, was highly appreciated. Virchow, in his address at the last meeting of the Association of Naturalists and Physicians at Berlin, after pointing out that the greater part of the time at their disposal should be devoted to earnest work, said: "Aber nach der Arbeit ziemt es zich wohl der Erholung und dem freundschaftlichen Verkehr ihr Recht zu lassen." The original statutes of the Association laid it down that the chief object of the meetings was to make the members personally known to each other. No one proclaimed this with more force than Alexander von Humboldt in opening the meeting fifty-eight years since. He said: "Die Hauptzweck dieser Gesellschaft ist die personliche Annäherung derer welche dasselbe Feld der Wissenschaft bearbeiten."

At the conclusion of the address Sir WALTER FOSTER suggested that some outstanding business should be transacted before the meeting separated.

A vote of thanks to the President was proposed by Dr. HAUGHTON, seconded by Sir SPENCER WELLS, and adopted with acclamation. After some further discussion, which resulted in nothing, the Congress adjourned.

At the second general meeting of members, held on Wednesday, the report of the Council for the place of the annual meeting for 1888 was under consideration, and further to report the election of the President of Council. To the latter office Mr. Bridgewater of Harrow has been elected, and the invitation from Glasgow to hold the annual

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meeting for 1888 has been accepted. Professor Gairdner had been elected President-elect of the Association. The following motion was adopted with acclamation:—"That the cordial thanks of the Association be given to Sir Walter Foster, M.P., for the able way in which he has presided over this Council during the past three years, for his great attention to the affairs of the Association, and for his advocacy of the various measures in Parliament, whereby the influence and power of the Association and the medical profession has been materially advanced, and that he be and is hereby elected a vice-president for life."

The address in Medicine was then delivered W. T. Gairdner, M.D., F.R.C.P., Professor of Medicine in the University of Glasgow, an abstract of which appears in another part of our present issue.

THE PAIL SYSTEM AT MANCHESTER.

THE English system of utilising water as the motive power for conveying away the sewage of towns has never met with very unanimous or enthusiastic approval abroad. For many years, in France especially, a fierce contest has raged between those who would imitate the English example and those who, on the contrary, maintain that a sewer is of more danger than use. As yet it is only a distant echo of the dispute that reaches our shores. We receive scientific deputations who come in the name of foreign municipalities and examine our sewers; and, as often as not, return with the impression that the system would in nowise be applicable to their country. We read to-day that a very narrow majority of the Paris Municipal Council is in favour of the "tout à l'égout"; and to-morrow we shall be informed that by an equally narrow majority this, the English system, has been condemned. The same is the general result of the debates at the Société de Médecine Publique et d'Hygiène Professionelle. But in England this neck-to-neck race between the French advocates and opponents of our system of water drainage excites but little attention. Now, however, there are evident signs of awakening. Our population is increasing so rapidly that it becomes daily more difficult to know how to dispose of our sewage without contaminating our water supply. The latent feeling that a wicked waste is perpetrated by the unscientific course of throwing into rivers and the sea that which should be utilised to fertilise the soil has recently found voice. Dr. G. V. Poore, in a most powerful address delivered at the anniversary meeting of the Sanitary Institute of Great Britain, has put the question in a vivid light. So strong is this indictment of the present sewer system, that the first impression produced is the desire to know what remedy is proposed, rather than a disposition to challenge and discuss the necessity of any alteration. Dr. Poore advocates small allotments and the utilisation of household refuse and soil as garden manure. This he has tried practically and successfully; and it might be applied in new districts where the population does not exceed 100 to the acre or 50,000 to the square mile, allowance being made for roads, &c. Unfortunately, it is not everyone who has the time or taste for gardening; and, however perfect in theory, it would scarcely be safe to trust every household to bury its own soil, even though this were to produce 784 lb. of potatoes per annum for each of twenty cottages built on one acre and containing altogether 100 inhabitants.

Practically, when dealing with towns there are two methods to suggest in the stead of sewers—namely, pneumatic drainage or the pail system. For the former the best illustrations are the Berlier system as applied to the west-end of Paris, and the Liernur system of Amsterdam. In England, we have at Manchester a very elaborate application of the pail system, and under the present circumstances it will not be out of place to briefly review what has been done in this respect. For this purpose our representative proceeded to Manchester, and with the courteous assistance of Sir Joseph Heron, the town clerk, and Dr. Leigh, the medical officer of health, was able to see in all its details the application of the pail system.

It was in 1868 that the Health Committee of the Corporation of Manchester was appointed to carry out the pail system. At that time the death-rate amounted to 33 per 1000 inhabitants. The city then contained 60,000 open cesspools, which overflowed into the sewers. In some cases there was only one closet for a dozen houses. In other respects the town was in an equally benighted condition; there were no fever hospitals, no means of disinfection, no public baths, no slaughterhouses, &c. We now find that what is termed the city of Manchester has a population of 376,895, and a floating day population of 150,000 men, who come in from the neighbourhood for the transaction of business. For the accommodation of these half-million people there are 66,000 dry ash closets, 40,000 dustbins, 11,000 waterclosets, 50 public urinals, and 4000 middens, besides the conveniences provided at the railway stations. The contents of the closets and urinals flow through the drains and sewers into the little stream called the Irwell, which divides Manchester from Salford. The pollution of the Irwell, taken in connexion with the Manchester Ship Canal that is about to be built, opens out a complex question which cannot be touched upon at present, though it will demand the earnest attention of both sanitary and financial reformers.

To remove the pails containing the dry ash and soil and the metallic dustbins a staff of 240 men with 130 horses has to be maintained. The horses travel some fifteen miles a day. Each van contains twenty-four pails, and weighs, when empty, 38 cwt., and when the pails are full the average weight is 56 cwt. The closet contents and domestic refuse collected by the vans amount to about 3000 tons per week. It must, however, be noted that Manchester is a town that is especially adapted to this method. It is a town of small cottages spread over a very large space. In the central districts, where there are very large houses several stories high and closely packed, the pail system has not been applied, and it has been necessary to tolerate no less than 11,000 waterclosets for the accommodation of these more luxurious dwellings. As compared with such towns as London, the example of Manchester could only apply to outlying districts where there are cottages or villas with gardens. The Manchester pail-closet is placed at the further extremity of the back yard of each cottage. There are generally two closets back to back, and between them is the movable receptacle for the house refuse. The ash or cinder is thrown on a rough sieve, so placed that the larger cinders fall into the dustbin while the fine ash goes into the pail placed under the closet seat. A little door between the two closets opens out into a narrow passage running behind the cottages. Along these passages the scavengers or night-soil men come to fetch the pails. By opening the one door they are able to withdraw the two pails and the dustbins, and replace them by empty, clean receptacles. The one passage does of course, for two rows of houses; and the scavengers, having emptied two closets to the right of the passage have two similar closets to empty on the left side. Thus, the closets stand in groups of four along the passage that divides the back yards of the rows of cottages. Under this passage also is often placed the drain for slop and washing water, so that it is not necessary to pass pipes through the houses to reach the street sewer for the purpose of carrying away rain or slop water. Each closet has a ventilating shaft that is carried to the roof of the cottage.

We visited a considerable number of these pail closets, some in the poorest quarters of Manchester, and most readily acknowledge that they were remarkably free from bad odours. In London, in poor quarters, it will be found that the closets are often out of order. The flushing apparatus will not work; very frequently there are no means whatsoever of flushing provided; at other times the trap is broken or stopped up, and, from one cause or another, offensive odours arise. In Manchester the worst we saw was a little superficial dirt, the evidence of carelessness, but nothing that could endanger health by the introduction of unknown quantities of sewer air. It is true that the drain in the passage behind Beaumont-street does not seem to be properly laid. The central part of the passage is at a lower level than the two extremities, and here the water had overflowed through the gullies. Unpleasant pools of stagnant water rendered it difficult to pass, and the inhabitants assured us that this was of frequent occurrence. The backyard of one of the cottages was also in a filthy state. It required re-paving; dirty water and soil had accumulated on the ground; but, with the exception of missing flagstones, there was no structural defect. The fault lay with the inhabitants, while the overflow from the drain had no connexion whatever with the pail system. The pail, it seems, is not likely to soon get

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out of order, or be misused. It is removed once or twice a week, and thus no accidents can long remain unnoticed. With waterclosets grave and dangerous defects may exist which might not be detected for months or years. Altogether, so far as the risks of bad drainage are concerned, one would certainly prefer a Manchester to a London slum. The dirt, such as it is, is superficial dirt, and the odours are those of the house itself, and not of the sewers that come from great distances and receive specific germs from a vast area. One structural defect should not have been sanctioned. In several instances the ventilating shaft from the closets was built of bricks and conducted upwards within the wall of the cottage. Considering that bricks are highly porous, and that rooms are hotter inside than out, a certain amount of air from the shaft would be drawn through the bricks into the rooms. Unconsciously persons may sleep with their faces right against the porous ventilation shaft of the closet. Under such circumstances, it would be better not to have any shaft at all. The emanations of the closet should ventilate into the open, at the far end of the back yard, instead of being conducted towards the house through a porous brick shaft. Such shafts, if necessary at all, should be run up outside the walls and rendered absolutely air-tight. With this exception, and though our representative took care to visit some of the poorest neighbourhoods, the pail system seemed to work in a very satisfactory manner. The disposal of the contents of the pail represents a totally different phase of the subject, which must be reserved for another occasion.

(To be continued.)

THE LUNACY COMMISSIONERS' REPORT.

THE Report recently issued by the Commissioners in Lunacy exhibits upon the whole a very satisfactory picture of the national mental health. The annual increase of dementia, which until two years ago was the most persistent and withal the most melancholy feature of the Commissioners' annual record, has at length given place to a movement in the opposite direction, and although the aggregate number of patients under their charge is larger now than at any previous date, yet the increase both in 1885 and 1886 has been less than proportional to the growth of population, so that the percentage has fallen.

"The fact of a proportional decrease," say the Commissioners, "in the figures of last year upon those of its predecessor, which was then a solitary exception, is repeated this year. The rate has now fallen, for lunatics of all classes, to 28·64 per 10,000—a drop of ·34 since 1885. The returns of two years, however, do not afford a sufficient basis upon which to form an opinion as to the causes of this apparently favourable record; and the decline may, indeed, prove by further experience to be rather temporary than permanent."

This cautious statement is abundantly justified by the facts, and, indeed, hardly, as we think, represents their full import. Thus, turning to the table from which the above figures are taken, we observe that the proportions have been worked out not only for the total figures quoted, but also severally for eleven different groups into which they are split up. These groups, with one exception, show the same general characters as the aggregate—that is to say, the past two years have registered a reduction upon the figures to 1885. Even in the exceptional class—that of male pauper lunatics—the percentage at the beginning of 1887 was fractionally less than at the beginning of 1885, although greater than at the beginning of the intermediate year. Thus even the exceptional case falls almost within the rule, and it may fairly be said that the improved mental health of the people at large is a benefit in which all classes share. It will, we think, be evident that a feature which is thus reflected in every section of the analysed figures is much more remarkable than any merely general result, and justifies a more sanguine view respecting the public health than the Commissioners are disposed to put forward.

Turning now to the invalid community, it is obvious to remark that of the 81,000 patients under treatment at the present time, a very preponderating proportion are chronic cases in which any final recovery cannot be expected. But we are glad to notice in the present report indications of increased attention to remedial treatment, and a very gratifying improvement in the number and proportion of recoveries. It is, indeed, true that the very exceptional record of 1885 has caused that of 1886 to show somewhat badly by comparison, but as the eye sweeps the ten years' column given in the report it becomes obvious that in spite of oscillations in both directions a marked upward tendency is observable, and has, upon the whole, been well maintained until the present time. One fact to which it is impossible not to attach the greatest significance in this connexion is thus referred to in the report:—

"In the treatment of the insane, great importance should be attached to the subject of their useful employment. Our aim constantly is to encourage the efforts of superintendents to devise suitable occupations, and to induce their patients to engage in them; and, with the view of ascertaining as nearly as we can the extent to which such efforts have been successful, we have instituted a comparison of the results attained in the years 1877 and 1886 respectively. ..... We find, then, that in 1877 the numbers usefully employed at the time of our visits to all the county and borough asylums bore to the total number of patients the proportion of 56·65 per cent.; while in the year 1886 the proportion was 61·87 per cent. There has thus in ten years been an increase of 5·22 per cent."

The Commissioners add that the superintendents are fully alive to the importance of this subject, and that progressive and substantial improvement may be looked for in this direction. The difficulty, however, of finding suitable occupation, always great, is specially so in the case of the wealthier classes, who furnish patients for the most part to private licensees. Not only have the prejudices of the patients themselves to be studied, but sometimes also the less excusable prejudices of the patients' friends. In this way serious and most unnecessary obstacles are thrown in the path of the medical adviser, and for the present he must circumvent them as best he can. But it may be hoped that the gradual diffusion of information as to the true principles of sound practice in the treatment of the insane will tend to smooth away difficulties of this sort, and to secure for the practitioner in the performance of his arduous task all the assistance that is to be derived from the loyal co-operation and support of his patients' natural guardians.

ETIOLOGY OF SCARLET FEVER.

(Concluded from page 235.)

DR. J. A. RUSSELL, chairman of the Public Health Committee of the Town Council, said that the history of the recent outbreak of scarlatina in Edinburgh pointed to the impossibility of stamping out the disease, or even of limiting such epidemics, under the present conditions, where a stringent law of disease-notification exists in cities and no corresponding safeguard in the rural districts whence they draw their milk supplies. Another source of difficulty is, that it is by no means easy to diagnose slight cases of scarlatina, which are therefore those most likely to pass unobserved and to give rise to milk infection. He was not satisfied that this possible factor had been sufficiently excluded in the Hendon case. In the recent epidemic cause and effect had now been definitely brought to light, though with great difficulty, from the lack of authentic information in regard to cases of disease outside the boundary of the city. The case of the North Merchiston Board School was of great interest in showing the delimitation of infection to the area supplied with contaminated milk. At this school are children from two distinct districts, separated by the Union Canal; and it was striking to note how at the commencement of the epidemic, and for a considerable time after its outbreak, only those from the district with contaminated milk supply were affected, the other district represented at the school remaining entirely free from epidemic scarlatina. In conclusion, he strongly urged the necessity of extending the clauses of the City Police Act which deal with infectious diseases to outlying rural districts.

Dr. J. O. ARTHUR commented on the valuable work done by Drs. Jamieson and Edington, and on the impetus it had

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given to the close investigation of the cause of the disease. There were certain points on which he disagreed, from personal observation, with the conclusions that might be drawn from their paper. He felt it necessary specially to insist on the fact that the disease is infectious from its very onset; that mouth and throat washes, however constantly applied, cannot prevent the risk of infection with the mucous discharges; that inunction should not be trusted to as a certain method of rendering the desquamation innocuous, and that it is of doubtful advantage, since the continuous application of a germicide substance may interfere with the healthy action of the skin. In regard to milk infection, he held that in typhoid fever it had to be recognised as a proved source of the disease. Not so with any certainty in scarlatina; and in the present instance, though it had been shown how contamination might have taken place, it had not been proved that it had in reality occurred.

Dr. HUNTER, Linlithgow, spoke of the important influence of environment upon the action of the *contagia* of disease, referring to the different effects produced by one virus, in puerperal cases, according as it gains access to the genital tract or to the system in the usual way. In the cervical glandular enlargements, the throat is probably the more satisfactory area to attack with antiseptics, as it is the source of irritation, rather than to apply counter-irritation to the neck, as Dr. Jamieson recommended. In regard to Dr. Jamieson's methods of disinfecting the throat and skin surfaces, he must say it was practically impossible, except in the case of a well-appointed hospital with abundant skilled assistance, and that in the case of children the system was peculiarly difficult.

Dr. ANDREW SMART referred to his reports on the cattle plague, published twenty-one years ago, in which he found a singular resemblance to the descriptions of the Hendon disease as pictured in the reports of Messrs. Power, Cameron, and Klein. He was convinced from this comparison that the Hendon disease was a mild sporadic type of rinderpest; and he further referred to the fact that when his reports were published he stated his opinion that the disease is the bovine analogue of human scarlatina.

The PRESIDENT asked Dr. Smart whether, in the year of the cattle plague, there was any corresponding outbreak of scarlatina among the inhabitants of Edinburgh.

Dr. SMART replied, that though he did not attach any peculiar significance to the fact, there were five times as many cases of scarlatina in Edinburgh during 1866 as in the last twelve months, although the latter period corresponded in part to an epidemic of the disease.

Dr. W. RUSSELL doubted the identity of the diseases in which Dr. Smart's pathological record showed there were certain elements of similarity. Were that identity proved, it would be difficult to explain why in countries where rinderpest is common there are not frequent epidemics of scarlatina.

Dr. JAMES RITCHIE referred to the many points that still needed discussion, and moved the adjournment of the debate, which was agreed to.

The PRESIDENT, in summing up the results of the discussion of the evening, spoke in high praise of the elaborate research conducted by Dr. Edington in Professor Chiene's laboratory. Among other points referred to, he wished especially to direct the earnest attention of the Society to the risks of infection. In bringing forward his plan of prophylaxis, Dr. Jamieson had no intention of abrogating the ordinary and very necessary precautions of isolation, and the disinfection of fomites in the usual way; and it was to be hoped there would be no laxity of view or of practice in this important matter.

The Society then adjourned.

AGRA MEDICAL MISSIONARY INSTITUTION. — The institution at Agra for training natives as medical missionaries has recently been placed in connexion with the Edinburgh Medical Missionary Society. Dr. Valentine is the principal. The students are connected with missions of every Protestant denomination; they attend the course of instruction given in the Government Medical College, and undergo the same examinations as the candidates for Government service. The cost of maintaining a student during the four years of medical study is only £64. The number of students at present is sixteen; but there is accommodation for forty.

THE ALBERT UNIVERSITY OF LONDON.

DRAFT OF CHARTER AS APPROVED BY THE JOINT COMMITTEE OF UNIVERSITY COLLEGE, LONDON, AND KING'S COLLEGE, LONDON, AND ADOPTED BY THE COUNCILS OF UNIVERSITY AND KING'S COLLEGES.

(The insertion of the passages in square brackets [ ] is contingent upon the Royal College of Physicians of London and Royal College of Surgeons of England being associated with the University.)

VICTORIA, by the grace of God, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, to all to whom these presents shall come, greeting.

Whereas University College, London, originally incorporated by Royal Charter and reincorporated by Act of Parliament, and King's College, London, also originally incorporated by Royal Charter, and reincorporated by Act of Parliament, lately presented to us in our Council a humble petition under the common seals of these Colleges and thereby represented to us (among other things) as follows:—

That there exists at present in London an urgent demand for the extension of the benefits of university education and for the better encouragement of learning and research, and that it is expedient there should be constituted in and for the London district a University providing for its students the best attainable teaching in all the subjects included in its Faculties, together with the necessary appliances and aids to study, and commending to its students systematic courses of teaching and methods of study, for the efficiency of which it should become responsible; and by the same petition humbly prayed us to be pleased to grant a Charter to a body of persons, to be appointed as therein described to be a University in and for the London district, having power to grant degrees in the Faculties of Arts, Science, and Medicine, with power to add other Faculties; and that we would be pleased to make such orders in the premises as to us in our Royal wisdom and justice might seem meet; now know ye that we, having taken into our Royal consideration the said humble petition, do, by virtue of our prerogative Royal, and of our special grace, certain knowledge and mere motion, by these presents for us, our heirs and successors, will and ordain as follows:—

I. *Foundation of the Albert University of London.*—There shall be and there is hereby constituted and founded a University, in and for London, with the name of the Albert University of London, by which name the Chancellor, and other members of the Albert University of London for the time being shall be, and are hereby, constituted one body corporate, with perpetual succession, and a common seal, and with power, without any further licence in mortmain, to take, purchase, and hold, and also to grant, demise, or otherwise dispose of real and personal property; which University shall have the constitution and powers, and be subject to the regulations, in this our Charter prescribed and contained; and which University is in this our Charter referred to as the University.

II. *Colleges in the University.*—University College, London, and King's College, London, shall be and are hereby constituted Colleges in the University. Other Colleges may from time to time be admitted as Colleges in the University in the manner and subject to the conditions in this our Charter prescribed.

III. [*Association of the Royal College of Physicians of London and the Royal College of Surgeons in England with the University.*—The Royal College of Physicians of London and the Royal College of Surgeons of England shall be associated with the University in the manner in this our Charter prescribed.]

IV. *Medical Schools in the University.*—The Medical Schools of University College, London, and King's College, London, shall be Medical Schools in the University. Every other Medical School in London which is recognised as efficient by any body having power to grant a qualification for registration under the Medical Acts may claim to be admitted as a Medical School in the University in the manner and subject to the conditions in this our Charter prescribed.

V. *University Degrees and Certificates.*—The University shall have power to confer degrees in the Faculties of Arts, Science, and Medicine, and in such other Faculties corresponding to the provinces of study and educational work occupied by the University as shall from time to time be determined by the Council of the University, on all persons, male or female, who shall have pursued a regular course of study in a College or Medical School in the University, and shall submit themselves for examination. Provided that no ordinary medical degree shall be conferred on any person who shall not previously have obtained a qualification for registration under the Medical Acts. The University shall also have power, in the case of students of the University who shall have been resident students of any other University in our dominions, to accept the examinations and periods of residence and study passed by them at such other University as equivalent to such examinations and periods of study in the University as the Council constituted by this our Charter shall from time to time determine. Provided that the Council shall not allow a degree to be conferred on any such student unless such student shall have pursued a course of study in a College or Medical School in the University during such final portion of the period of study as may be determined by the Council and shall have passed the final examination of the University in that course of study. The University shall also have power to admit by special grace graduates of other Universities in our dominions to similar and equal degrees in the University. The University shall also have power to admit to honorary degrees in the University such persons, being at the constitution of the University Fellows of University College, London, Fellows of King's College, London, or past students of the said Colleges, and such other persons as are worthy, in the estimation of the Council, of this distinction. The University shall also have power to grant to students of any College in the University, after such examinations, in such mode and on such conditions as to the University from time to time shall seem fit, certificates of proficiency in any branches of knowledge. The University shall also have power to examine into the efficiency of schools at any academic institutions, and to grant certificates of proficiency to scholars and members thereof. The University may appoint lecturers independently of a College or Medical School to give instruction in any subject, whether it be or be not included in a Faculty.

VI. *Visitor.*—We reserve to ourselves, our heirs, and successors to be the Visitor of the University.

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VII. *Authorities of the University.*—The authorities of the University shall be the Chancellor of the University, the Vice-Chancellor of the University, the Council, the assemblies of the several Faculties in the University, the Boards of Studies of the several Faculties, and the Convocation of the University.

VIII. *The Chancellor.*—The Chancellor shall be the head of the University, and may preside over meetings of the Council and of Convocation. The Chancellor shall hold office during his life or until his resignation. ———————————— shall be the first Chancellor of the University. In the event of a vacancy occurring in the office of Chancellor within ten years from the date of this our Charter, we reserve to ourselves, our heirs, and successors the right of nominating to the office. Thereafter the Chancellor shall be elected by the Convocation of the University.

IX. *The Vice-Chancellor.*—In the absence of the Chancellor, the Vice-Chancellor of the University shall exercise all the functions of the Chancellor, except the hearing of appeals under any provision of this our Charter. The first Vice-Chancellor shall be appointed by the Chancellor from among the members of the Council, and shall hold office for two years from the date of election, or until he shall cease to be a member of the Council, whichever shall first happen. His successors shall from time to time be elected by the Council from among the members of the Council, and shall hold office for one year. The Vice-Chancellor may appoint a member of the Council as a pro-Vice-Chancellor to exercise his functions in his absence.

X. *The Council.*—The Council shall consist of the persons following—namely: first, the Chancellor; secondly, persons appointed by this our Charter, and their successors appointed by the Lord President of our Council, and by the Convocation of the University, as in this our Charter provided; thirdly, persons representing the several Colleges in the University; fourthly [persons representing the Royal College of Physicians of London and the Royal College of Surgeons of England fifthly], persons representing the several assemblies of the Faculties in the University. Except as in this our Charter provided, every member of the Council shall hold office for the term of five years, and shall be capable of reappointment or re-election. Any member who shall cease to be qualified, or shall become incapacitated to act, or shall notify his resignation to the Council, or shall for the space of two years consecutively be absent from all meetings of the Council, shall thereupon cease to be a member of the Council. The following six persons shall be members of the Council from the the date of this our Charter:——— On any such person or successor of such person ceasing to be a member of the Council, the Lord President of our Council shall appoint a fit person as his successor, provided that after the expiration of ten years from the date of this our Charter, the Convocation of the University shall elect a fit person to succeed to the first, the third, and the fifth vacancy so caused, and on any person so elected, or a successor of such person ceasing to be a member of the Council, shall elect a fit person to be his successor. The persons in the Council representing University College, London, shall be three persons chosen by the Council of the College. The persons in the Council representing King's College, London, shall be three persons chosen by the Council of the College. On the admission of any College other than University College, London, and King's College, London, as a College in the University, the number of its representatives, not exceeding three, shall be determined by the Council. [The persons in the Council representing the Royal College of Physicians of London shall be three persons chosen by the Fellows in Comitia of the College. The persons in the Council representing the Royal College of Surgeons of England shall be three persons chosen by the Council of the College.] The persons representing each of the assemblies of the Faculties of Arts, Science, and Medicine shall be four persons appointed by the assemblies of such Faculties respectively. If any other Faculty shall be established by the University, the persons representing such Faculty in the Council shall be such number of persons to be elected by the assembly of such Faculty not exceeding four as shall on the establishment of the Faculty be determined by the Council. Any College represented on the Council, or any assembly of a Faculty may, at any time after six years from the constitution of the University, present a memorial to the Council requiring its number of representatives, or the number of representatives of any other College or assembly of a Faculty, to be taken into consideration, with a view to its increase or decrease, and the Council shall thereupon refer the matter to the several Colleges and assemblies of the Faculties other than that presenting the memorial, and after receipt and consideration of such of the reports as may be received within three months from the date of reference, the Council may increase or decrease the number of representatives to which such memorial relates. Provided that within six months after the promulgation of the decision of the Council any College or assembly of a Faculty may appeal to us in our Council against the decision of the Council of the University. The acts of the Council shall not be invalidated by the existence of any vacancy among its members.

XI. *Powers of the Council.*—The Council shall be the governing body of the University, and shall direct the form, custody, and use of the common seal, and shall have the management and control of the affairs and property of the University, and shall appoint a registrar and any other officers necessary for conducting the business of the University. The Council shall have full power to make and alter or revoke statutes for regulating all matters concerning the University, and may exercise and do all powers and things by this our Charter granted or authorised to be exercised or done by the University. Provided, first, that it shall not be lawful for the University, by any statute or otherwise, to adopt or impose on any person any test whatsoever of religious belief or profession; and provided, secondly, that any statute made by the Council be not repugnant to the law of England, or to the general objects, or any provision, of this our Charter. Provided, thirdly, that the Council, in determining the curriculum of each Faculty, and making regulations respecting the examinations or degrees of the Faculty shall proceed on the recommendation of, or after submitting the proposal for consideration and report to, the assembly of the Faculty.

XII. *The Assemblies of the Faculties.*—The assemblies of each of the Faculties of Arts and Science, and of any other Faculty that may hereafter be established by the University, shall consist, in the first place, of such persons doing professorial work in the Colleges included in the University in respect of that Faculty, as shall be designated by the governing body of each College, and for this purpose University College, London, and King's College, London, shall, at the constitution of the University, be deemed to be included therein in respect of the Faculties of Arts and Science. The assembly of the Faculty of Medicine shall consist, in the first place, of such persons doing professorial work in the Colleges and Medical Schools in the University as shall be designated by the governing body of each College or Medical School. The persons whom a College or Medical School shall be entitled to designate as members of the assembly of a Faculty shall be such as are giving regular instruction to classes in the College or Medical School in one or more of the subjects included in the Faculty. Provided that, except in the case of the persons designated as aforesaid before the first election of the Council by the assemblies of the Faculties, the designations of persons to be members of the assemblies of the Faculties shall not take effect without the approval of the Council, or on appeal to the Chancellor, his approval of the same. The assembly of each Faculty shall consist, in the second place, of such of the examiners of the University in subjects included in the Faculty, not being otherwise members of the assembly, as the Council may appoint members of the assembly; provided that such examiners shall not vote in the assembly of the Faculty on the election of members of the Council. It may consist, in the third place, of such persons engaged, or who have been engaged, in University teaching in London in subjects included in the Faculty as shall be nominated in that behalf by the assembly of the Faculty and approved by the Council.

XIII. *Powers of the Assemblies of the Faculties.*—The assembly of each Faculty shall have the following powers—namely: Of prescribing the mode of conducting the proceedings of the assembly and of registering the same, and of reporting the same to the Council; of electing members of the Council, and of the Board or Boards of Studies of the Faculty; of discussing and of declaring an opinion on any matter whatsoever relating to the University, including any matter referred to the assembly by the Council; of delegating from time to time to the Board or Boards of Studies of the Faculty the power of making recommendations and reports to the Council.

XIV. *Establishment of New Faculties.*—Before establishing any new Faculty the Council shall refer the matter to the assemblies of the Faculties for consideration and report. When a new Faculty has been established, the Council shall determine which of the Colleges in the University shall be deemed to be included in the University in respect of such Faculty.

XV. *The Boards of Studies.*—There shall be a Board or Boards of Studies in each Faculty, which shall consist of, first, members of the Faculty elected from time to time by the assembly of the Faculty from amongst its own members; secondly, such of the examiners of the University in the subjects of the Faculty as are members of the assembly of that Faculty. The Council shall have power to refer matters to the Boards of Studies, either separately or conjointly, for consideration and report; provided that a copy of each such report shall be transmitted forthwith to the assembly of each Faculty concerned. The Boards of Studies shall have power to meet with each other in conference, either by themselves or by their committees, to prescribe the mode of conducting their own proceedings, and to report directly to the Council, either separately or conjointly, on any matter relating to the subjects of their Faculty or Faculties.

XVI. *The Convocation of the University.*—The Convocation of the University shall consist of the Chancellor, Vice-Chancellor, and registered graduates of the University for the time being. All graduates of the University of three years' standing shall be entitled to register, and for this purpose a Register shall be kept, which shall be conclusive evidence that any person whose name appears thereon at the time of claiming to vote in Convocation is entitled to vote, and that any person whose name does not then appear thereon is not so entitled; provided that the holder of an *ad eundem* or honorary degree shall not, as such, without the consent of Convocation in each case, be entitled so to register. The first meeting of Convocation shall be called by the Vice-Chancellor, at the expiration of ten years after the date of this our Charter. At that meeting the Convocation shall elect a chairman, who shall hold office for three years, or until his previous death or resignation, but a chairman going out of office shall be re-eligible. The Council shall, as often as may be required for the election of members of Council, and may at such other times as to them seems fit, convene a meeting of Convocation. If at any time twenty members of Convocation, by writing under their hands, require the chairman to convene a meeting of Convocation, he may in his discretion do so. Notice of all meetings of Convocation shall be given in such manner as the Council shall prescribe. No question shall be decided at a meeting of Convocation unless at least thirty members are present, but in the election of members of the Council, members of Convocation shall be entitled to vote by voting papers in such form, and to be signed, verified, and transmitted in such manner as the Council shall prescribe.

XVII. *Powers of Convocation.*—The Convocation shall have the following powers—namely: Of prescribing the mode of conducting the proceedings of the Convocation and of registering the same, and of reporting the same to the Council; of electing the Chancellor of the University after the first vacancy in the office which shall occur subsequently to the expiration of ten years from the date of this our Charter; of electing members of the Council as aforesaid; of discussing and of declaring an opinion on any matter whatsoever relating to the University, including any matter referred to them by the Council.

XVIII. *Members of the University.*—The members of the University shall be the Chancellor, the Vice-Chancellor, the members of the Council; the members of the assemblies of the Faculties; the registrar, graduates, and students of the University. The students of the University shall be such students in any College or Medical School in the University as shall have been admitted as students of the University under the regulations of the Council.

XIX. *Examinations.*—The examiners of the University shall be such members of the assemblies of the Faculties, and such external examiners, as the Council shall from time to time appoint to be examiners. All examinations of members of the University shall be conducted jointly by external examiners and by examiners being professors, physicians, surgeons, lecturers, or teachers in a College or Medical School in the University; and for this purpose at least one external examiner shall be appointed by the Council for each subject forming part of the course of study required for a degree. For each examination the Council shall form a board, or boards, consisting of all or some of the examiners, to which the examination papers shall be submitted previously to the examination.

XX. *Place for Meetings.*—Unless and until the University shall possess other buildings proper in this behalf, all meetings directed to be held

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under this our Charter shall be held, and all degrees granted and examinations for degrees held by the University shall be granted and held in buildings provided by the Colleges of the University or otherwise with the approval of the Council. Nothing in this our Charter shall prevent the University from conferring any degree by special grace on any qualified person in his absence.

XXI. *Property.*—Notwithstanding anything in this our Charter, the University shall not at any time hold real property in our United Kingdom exceeding the annual value of ten thousand pounds (according to the value of such property at the time of its acquisition) over and above the value of the site, buildings, and hereditaments of the University used and occupied for the immediate purposes thereof.

XXII. *Fees.*—The University may demand and receive for degrees and other distinctions, and for certificates of proficiency and other certificates, and on examinations conducted by the University, such fees as the Council shall from time to time appoint; and the produce of all such fees shall be applied in or towards discharge of the expenses of the execution of this our Charter. Every member of Convocation shall pay such fees, at such times, and with such liberty to compound for the same, as the Council shall from time to time direct, and on default may be removed from the Register.

XXIII. *Contributions of Colleges and Medical Schools.*—In case the produce of such fees is insufficient to meet the ordinary expenses of the management of the University, together with the expenses of conducting examinations and conferring degrees, the Council may require from the several Colleges and Medical Schools in the University contributions for defraying those expenses; and in fixing the amount thereof the Council shall consider a report to be made in each case by a committee, consisting of seven members of the Council, of whom three at least shall be of the six members appointed by this our Charter, or their successors; which committee in making their report shall have regard to the relative magnitude and resources of the several Colleges. Any College or Medical School may, within two calendar months after the receipt of any such requisition from the Council, appeal against it to the Chancellor of the University, whose decision shall be final.

XXIV. *Fellowships and other Emoluments.*—The University from time to time may found and endow fellowships, scholarships, exhibitions, and other prizes, for which funds may by devise, bequest, donation, grant, or otherwise be supplied, and may make regulations respecting the same, and the tenure thereof, but not so as in any way to interfere with the regulations respecting the entrance or admission of students to any College or Medical School in the University.

XXV. *Admission of Colleges and Medical Schools.*—The Council, after considering in each case a report to be made by the assembly or assemblies of the Faculty or Faculties in respect of which the application is made, may accept the application of any College in the London district to be admitted as a College in the University on the Council being satisfied—first, that the College is established on a basis justifying the expectation of its permanent existence, and is under the independent control of its own governing body; secondly, that the College possesses a sufficient staff, buildings, and appliances, with adequate arrangements for teaching and study, in the Faculty or Faculties in respect of which the application is granted. A Medical School admitted to the University shall be admitted in respect of the Faculty of Medicine. If any Medical School shall apply to be admitted to the University in respect of any Faculty other than the Faculty of Medicine, the claim shall be considered and decided in the same manner, and subject to the same conditions as in the case of a College claiming to be admitted to the University, except only as regards the condition that it is under the independent control of its own governing body. In case the Council refuse any such application, the College or Medical School applying may appeal to us in our Council against such refusal. The governing body of a Medical School admitted to the University in respect of any Faculty other than the Faculty of Medicine shall be entitled to designate professors and lecturers of the School to be members of the assembly of the Faculty, subject nevertheless to the same conditions and provisions as are hereinbefore contained with regard to the persons whom a College shall be entitled to designate as members of the assembly of a Faculty, and with regard to the approval required before such designations take effect.

XXVI. *Authority over Colleges.*—A College or Medical School in the University shall not in any way be under the jurisdiction or control of the Council, except as regards the regulations for the duration and nature of the studies to be required of the students of the College or School as a qualification for University degrees or distinctions.

XXVII. *Exclusion of Colleges.*—The Council may, from time to time, revise the list of Colleges and Medical Schools in the University, and on its appearing that any College or Medical School has ceased to possess the qualifications for admission in this our Charter prescribed, or is in other respects no longer efficient, the Council, after considering a report to be made in each case by the assembly or assemblies of the Faculty or Faculties in respect of which the College or Medical School has been included in the University, may exclude that College or Medical School from the University. On such exclusion members of the Council representing or elected by that College shall cease to be such; and the professors and teachers of that College or Medical School shall cease to be by virtue of their office members of the assembly of any Faculty of the University, or examiners of the University; but the students of the University, then members of that College or Medical School, shall, if the requisite instruction is given therein, be allowed by the University to complete in that College or Medical School the courses of study necessary for the attainment of the degrees of the University. No member of a College or Medical School excluded shall, on account of such exclusion, be deprived of any right, privilege, or emolument possessed by him by virtue of any degree, reward, or distinction granted to or conferred on him by the University. Provided that not less than one year before a proposal to exclude a College or Medical School from the University is considered by the Council notice in writing of such proposal shall be given to the College or Medical School; and no such exclusion shall take effect until the expiration of six calendar months from the date of the decision of the Council; and within those six months the College or Medical School may appeal to us in our Council against such exclusion.

XXVIII. *Definition of London District.*—The London district for the purposes of the University shall mean a radius of fifteen miles from Somerset House.

In witness, &c.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chelsea.—Dr. Seaton in his annual report for 1886 discusses the question of the means of spread and prevention of the principal infectious diseases that have prevailed, and he refers especially to the high mortality from diphtheria. He believes that defective house-drainage has little or nothing to do with this disease. Unquestionably, infection in schools and elsewhere plays a wide part in the spread of diphtheria, but there can be little doubt that people having congested and inflamed fauces do suffer from a disease akin to diphtheria when their throats are exposed, by inhalation, to emanations of sewer air. Without ignoring what Dr. Seaton so strongly presses—namely, the infectious character of the disease,—we think no one would be justified in setting aside the possible influence, as regards the spread of the malady, of defective conditions of sewerage and house-drainage. The current sanitary work of the year has consisted in such matters as the systematic removal of nuisances, the inspection of lodging-houses, disinfection, and inspections and analysis of foods, drugs, and medicine. In one instance a case of typhus occurred in connexion with conditions of overcrowding. The death-rate for the year was 20·4 and the birth-rate 33·1 per 1000 of the inhabitants.

Wandsworth.—This district is cut up into six portions for medical officer of health purposes. On the whole area the birth-rate was 34·5 and the death-rate 17·1 per 1000. The deaths under one year of age to every 1000 births were 164, as opposed to 150 in England and Wales as a whole, and to 169 in the great towns. Amongst the cases of infectious disease isolated in the Metropolitan Asylums Board hospitals were 4 from small-pox, 76 from scarlet fever, and 34 from enteric fever. Following upon the general review of the whole distict, each officer contributes a local summary. Dr. Kempster, referring to the past need for additional sewer ventilation by means other than street surface ventilators, expresses approval of the up-cast shafts, which have effected much improvement; Dr. Oakman, in giving details as to sanitary work, refers to the fact that to 405 closets water has been laid on, an improvement of the first importance in an urban district; Dr. Newsholme, dealing with the question of dust-destructors, explains the precautions to be taken as regards the one for Clapham, and expresses the opinion that the results of its working will be altogether satisfactory if carried out on the lines indicated. In the other sub-districts detailed accounts of work effected are given.

Leicester Urban District.—The death-rate for this borough during 1886 was 19·6 per 1000, which compares favourably with the average of 21·2 during the past ten years; and, apart from measles, there was no serious outbreak. As to notification of infectious diseases, Dr. Tomkins's opinion is to the effect that as regards erysipelas such notification is for sanitary purposes of very slight service, and that the money spent on it is little better than wasted. The bulk of the cases are of a trivial character, and he advocates their removal from the list. The general antagonism to the system as a whole has steadily disappeared in Leicester, and some of its most prominent medical opponents are now amongst its warmest advocates. The knowledge gained of infectious disease generally has turned out to be of the utmost value, and the view is expressed that the system should be applied to the population as a whole. Compared with 1885, which was by no means an unfavourable year, the following diseases show substantial reductions in mortality: scarlet fever, a decrease of 30 per cent.; measles, 25; diphtheria, 60; whooping-cough, 50; and typhoid fever, 50; but diarrhœa stands out once more as a blot upon an otherwise fair record, 256 deaths having been occasioned by it against 186 during the preceding year. The mean temperature during the third quarter was in excess of the mean for the past 115 years, and the rainfall was 2·46 inches below the average for the past seventy years. Norwich alone, lying as it does in a hollow, with a damp subsoil in the lower parts of the town, exceeded in its diarrhœa mortality that of Leicester. The subject of the etiology of the disease has engaged much

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of Dr. Tomkins's attention, and he is known to be aiding Dr. Ballard in his extended investigation into the subject. Summing up some of his own views, Dr. Tomkins reports that in the "diarrhœa area" of the town the micro-organisms or their germs exist in tenfold abundance compared with other parts; that from the bodies and organs of patients dead of diarrhœa micro-organisms have been obtained; and that cultivated specimens when taken into the body are capable of producing diarrhœa. It is not, however, stated that the diarrhœa organism has been isolated. In so far as general causes are concerned, warmth, moisture, and dead organic matter, with the absence of light and air, are potent factors in the production of the disease. The general body of the report indicates steady progress, and contains advice as to future action for the improvement of health in the borough.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5766 births and 4115 deaths were registered during the week ending July 30th. The annual rate of mortality in these towns, which had increased in the preceding five weeks from 17·6 to 22·2 per 1000, further rose last week to 23·2. During the first four weeks of the current quarter the death-rate in these towns averaged 21·4 per 1000, and was 0·5 above the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 12·7 in Huddersfield, 13·9 in Derby, 14·1 in Brighton, and 14·5 in Sunderland. The rates in the other towns ranged upwards to 27·2 in Birkenhead, 27·7 in Plymouth and in Leeds, and 30·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had increased in the preceding four weeks from 486 to 1173, further rose last week to 1301, owing to the continued increase of the mortality from diarrhœa; they included 921 from diarrhœa, 163 from whooping-cough, 121 from measles, 46 from scarlet fever, 25 from diphtheria, 24 from "fever" (principally enteric), and only one from small-pox. These zymotic diseases caused the lowest death-rates last week in Plymouth and Cardiff, and the highest in Birkenhead, Leeds, and Leicester. Diarrhœa caused the greatest mortality in London, Leeds, Preston, and Leicester; whooping-cough in London, Norwich, and Birmingham; measles in Manchester, Salford, and Birkenhead; and scarlet fever in Blackburn and Bristol. Of the 25 deaths from diphtheria in the twenty-eight towns, 20 occurred in London. Small-pox caused 1 death in Sheffield, but not one in Greater London, or in any of the twenty-six other large provincial towns. Only one case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The mortality from diarrhœa did not considerably exceed the average for the season. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 199 to 174, further fell last week to 160, and were 30 below the corrected average. The causes of 87, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Brighton, Bolton, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sheffield, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·8, 19·5, and 20·9 per 1000 in the preceding three weeks, declined again to 19·9 in the week ending July 30th; this rate was 3·3 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 6·5 and 18·3 in Perth and Glasgow, to 22·7 in Dundee and 28·1 in Leith. The 497 deaths in the eight towns last week showed a decline of 26 from the number in the previous week, and included 41 which were referred to whooping-cough, 39 to diarrhœa, 12 to scarlet fever, 4 to "fever" (typhus, enteric, or simple), 4 to measles, 3 to diphtheria, and not one to small-pox; in all, 103 deaths resulted from these principal zymotic diseases, against 84, 93, and 103 in the preceding three weeks. These 103 deaths were equal to an annual rate of 4·1 per 1000, which was 3·2 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 46, 43, and 37 in the preceding three weeks, rose again last week to 41, and included 11 in Glasgow, 9 in Edinburgh, 9 in Dundee, and 6 in Greenock. The 39 deaths attributed to diarrhœal diseases corresponded with the number in the previous week, but were 5 above the number in the corresponding week of last year; they included 15 in Glasgow, 7 in Edinburgh, 6 in Dundee, 5 in Paisley, and 4 in Leith. The fatal cases of scarlet fever, which had been 11 and 5 in the previous two weeks, rose last week to 12, of which 9 were returned in Glasgow and 3 in Dundee. Two of the 4 deaths from "fever," 3 of the 4 from measles, and 2 of the 3 from diphtheria occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 65 and 77, in the previous two weeks, declined again last week to 62, and were one below the number returned in the corresponding week of last year. The causes of 48, or more than 9 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 26·6, 27·9, and 29·9 per 1000 in the preceding three weeks, further rose to 30·9 in the week ending July 30th. During the first four weeks of the current quarter the death-rate in the city averaged 28·8 per 1000, the mean rate during the same period being but 22·8 in London and 19·4 in Edinburgh. The 209 deaths in Dublin last week showed a further increase of 7 upon the numbers returned in the preceding three weeks; they included 22 which were referred to measles, 16 to diarrhœa, 3 to "fever" (typhus, enteric, or simple), 3 to diphtheria, 3 to whooping-cough, 2 to scarlet fever, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had increased in the eight previous weeks from 21 to 48, further rose last week to 49, and exceeded the number in any previous week of this year; they were equal to an annual rate of 7·2 per 1000, the rates from the same diseases being 3·9 in London and 3·4 in Edinburgh. The fatal cases of measles, which had been 36, 28, and 21 in the preceding three weeks, were last week 22. The deaths attributed to diarrhœa, however, declined from 21 to 16. The three deaths referred to diphtheria exceeded the number registered in any previous week of this year; while the fatal cases of the other zymotic diseases all but corresponded with recent weekly numbers. The deaths of infants showed a further considerable increase, whereas those of elderly persons were fewer than in any recent week. Five inquest cases and 5 deaths from violence were registered; and 68, or very nearly a third, of the deaths occurred in public institutions. The causes of 24, or nearly 12 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Deputy Surgeon-General Duncan Alexander Campbell Fraser, M.D., to be Surgeon-General, vice J. Hendley, C.B., retired (dated June 21st, 1887); Brigade Surgeon Robert Walter Clifton, to be Deputy Surgeon-General, vice D. A. C. Fraser, M.D. (dated June 21st, 1887); Surgeon-Major Alexander Ferrier Churchhill, M.B., to be Brigade Surgeon, vice R. W. Clifton (dated June 21st, 1887). The undermentioned Surgeons-Major are granted retired pay with the honorary rank of Brigade Surgeon:—Thomas Campbell Tolmie and Charles Frederick Richards, M.B. (dated August 3rd, 1887).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Surgeon George William Frederick Armstrong, M.D., has been placed on the retired list of his rank (dated June 25th, 1887).

The following appointments have been made:—Surgeon Christopher Pearson, to the *Gannet:* Surgeon Charles W. Hamilton, to the Royal Marine Division at Eastney; Surgeon George L. Baker, to the *Excellent:* and Mr. Joseph H. Wallis to be Surgeon and Agent at St. Thomas and St. Anthony.

ROYAL NAVAL ARTILLERY VOLUNTEERS (Liverpool Brigade).—Griffith Richard Griffith, M.B., to be Surgeon (dated July 29th, 1887).

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THE HONORABLE ARTILLERY COMPANY OF LONDON.—The commission of the following officer is renewed for five years from July 14th, 1887:—Surgeon William Peter Rawlins.

ARTILLERY VOLUNTEERS.—2nd Lancashire: Surgeon J. C. Cormack resigns his commission (dated July 30th, 1887).—1st East Riding of Yorkshire: Acting Surgeon E. Clarkson resigns his appointment (dated July 30th, 1887).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment): Surgeon A. H. Dolman resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the Battalion on his retirement (dated July 30th, 1887).—1st Volunteer Battalion, the King's Own (Royal Lancaster Regiment): Surgeon and Honorary Surgeon-Major J. Robinson resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated July 30th, 1887).—2nd London: Acting Surgeon F. E. Fenton resigns his appointment (dated July 30th, 1887); Adam Robert Hamilton Oakley, Gent., to be Acting Surgeon (dated July 30th, 1887).—4th Volunteer Battalion, the South Wales Borderers: Acting Surgeon S. B. Mason to be Surgeon (dated July 30th, 1887).—4th Volunteer Battalion, the Norfolk Regiment:—Acting Surgeon E. T. Prior to be Surgeon (dated July 30th, 1887).

Correspondence.

"Audi alteram partem."

"DISEASE AND MEDICAL ATTENDANCE AT WORKHOUSES."

To the Editors of THE LANCET.

SIRS,—In your issue of the 23rd ult. you devote a leading article to the subject of an inquest at St. George's-in-the-East Workhouse on the body of a woman aged eighty-seven years. I have not seen a detailed account of the inquest, and I take your statement to be perfectly correct. As, however, some of your inferences are calculated to mislead not only the profession, but the general public, I shall, I hope, be pardoned if I point out one, at least, of the errors into which you have fallen, through, I am sure, an earnest endeavour to advance not only the public interest, but that of the profession generally.

In your article you lay stress upon the question of admitting a "second medical opinion" into the workhouse, and suggest that such should be provided at the expense either of the ratepayers or of the relatives of the inmate. A second opinion *is* provided by the guardians to all, or nearly all, of the metropolitan workhouses, and to the one in question, in the form of an assistant medical officer; and the medical officers, in my experience, are generally ready to accept any suggestions offered by their assistants, whilst the assistants, on the other hand, are obliged to seek the advice of the medical officer when any doubt arises as to the treatment of any inmate. If the near relatives (in this instance a nephew) of the inmate are anxious about his condition, and at the same time are in a position to pay a practitioner, not a medical officer of the workhouse, a consulting fee, I hope I shall be forgiven if I suggest that it is not creditable to them that the person in question should ever have been admitted into the workhouse, and thus cast as a burden upon the already heavily pressed ratepayer.

With reference to the admission of an outside second opinion at the request of the friends, I think that, on carefully considering the question, you will see the utter impracticability of such a system, and I venture to say that there is not even a medical guardian in London who would make himself responsible for such a proposal. Must the poorer and more struggling ratepayers be still further oppressed by being compelled to pay for affording "pleasure" to the relatives of aged inmates of workhouses which are already provided with *two* doubly qualified medical practitioners?—ratepayers whom I know in many instances are unable to pay for ordinary qualified advice, and are obliged to seek the advice of the host of unqualified "doctors" which infest this union and advertise medicine and advice for fourpence. To them, indeed, "the limitations of art are becoming painfully apparent." In a large proportion of cases, if external medical advice were admitted into the workhouse *at the dictation of friends*, the persons whom we should be asked to consult with would be the unqualified practitioners of whom I have spoken. Both the medical officer and the assistant medical officer are obliged to be doubly qualified practitioners; but the advice with which many of the poorer ratepayers are obliged to be content is often unqualified, or confined to one qualification of an inferior order.

If, therefore, you can use your great influence in elevating the tone of the class of practitioners who are employed both by the poorer ratepayers and those people bordering upon pauperism, you will not only greatly benefit the people at large, but you will thus make your suggestion a little more practicable, although its adoption would still destroy the individual responsibility so necessary in the management of large public institutions.

With reference to the question of the medical officer not having been summoned, that is evidently a negligence on the part of the night nurse, the following being in this union the rule set for her guidance: "In all cases of doubt or emergency to summon the medical officer." There is at the present time an honest endeavour being made, both by guardians and medical officers, to improve not only the nursing, but the medical attendance in workhouses and infirmaries. In some places qualified clinical assistants have been appointed to assist the staff, and in others the appointment of consulting physicians and surgeons is under consideration; whilst in nearly all unions the guardians place no restrictions on the medical officer sending to special or general hospitals cases which, in his opinion, would be benefited by special treatment and maintaining them there.

I am, Sirs, your obedient servant,

HENRY J. DIXON.
Assistant Medical Officer of the Infirmary and Workhouse of the Greenwich Union.

August, 1887.

THE SEWAGE OF LONDON.

To the Editors of THE LANCET.

SIRS,—There is a grave question of public health now in imminent danger of being dealt with in a manner which may, and probably will, result in the production and perpetuation for some time of a serious nuisance. It is reported that the Metropolitan Board of Works, by a small majority, being in fact a minority of the Board, have reversed the policy hitherto followed, and for the last two years with complete success, with regard to the deodorisation of the London sewage, and have sanctioned the revival of processes which abundant and costly experience has shown to be unavailing and productive of evil. Under these circumstances the attention of all sanitarians must be earnestly directed to the subject, and I implore your powerful aid in laying the matter before the profession as the natural guardian of public health.

It will be remembered by your readers that the river Thames was in the year 1884 in a deplorable state, and that, after much agitation and strong expressions of opinion on the part of a Royal Commission and of the Home Secretary, the Board at last adopted measures to abate the nuisance which undoubtedly existed. Some thousands of barrels of chloride of lime, or so-called bleach, were thrown at intervals into the outflowing sewage. The effect was that while the specific odour of the sewage exhaled by the Thames at the outfalls at Barking and Crossness, and for some miles up and down the river, was no doubt destroyed, another complication of nuisances was developed, emanating more particularly from the mud-banks at low water and from deposits roused by the shipping, and exceeding in intensity those previously existing. When this unforeseen result had been recognised, the Board, mindful of its high duty, commenced in the autumn of 1884 to use manganate of soda for the deodorisation of the effluent sewage. As only small parcels of this deodorant could be bought in trade, and these at a very high price, the Board during the winter of 1884-85 erected special works for its production, and manufactured such a supply that during the summer of 1885, bleach having been almost entirely abandoned, and the trade supply of manganate having been increased and greatly

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cheapened, deodorisation was carried out by manganate and sulphuric acid. This was effected at the outflow stations, Barking and Crossness, as well as at various stations within the metropolis, upon the flowing contents of the sewers. The results were so satisfactory that there were no reasonable complaints as regards either the sewers or the river during the entire season. In 1886 more manganate was used, and at a greater number of stations than in the previous year, and had again the desired effect, so that the Thames remained in an unexceptionable condition. As the processes appeared expensive, the Board obtained the opinion of a committee of chemists, consisting of Sir F. Abel, and Professors Odling, Williamson, and Dupré, who entirely approved of all that had been done, and, if I am correctly informed, particularly of the use of manganate and sulphuric acid as opposed to chloride of lime. In the meantime the Board proceeded to complete its contemplated arrangements for the purification of the sewage by precipitation. The works necessary for the treatment of the sewage at Barking were given into the hands of a contractor; the plans for those required at Crossness were prepared by the engineers. An experimental steamer, intended for the removal of the sludge to the sea, was constructed, and is now lying ready for service at Erith. Nevertheless, two years will probably elapse before the whole of the contemplated works can be completed, and the precipitation of the whole of the sewage by lime and protosulphate of iron, and the deodorisation of the effluent by manganate, can be carried out. The Board has from time to time given permission to enterprising individuals, amongst whom there were even foreigners, to practically try their particular schemes with the aid, and even at the expense of the Board. Nobody would object to such generosity, as it would afford the best means for all that is good to assert itself, and for useless propositions to show their futility. I believe that the Board literally derived no information whatever from its liberality. The river Thames, as far as it is affected by the London sewage, is already in a state causing considerable apprehension to those who may be considered to be responsible for it; owing to the effects of a very dry season, it will probably be as bad as, if not worse than, it was in 1884. Then the evil odour was never entirely subdued, but only changed, and as some say, aggravated. If the precedents of 1885 and 1886 be not at once followed, and deodorisation with manganate and sulphuric acid be carried out both at the outfalls and at numerous stations within the metropolis, the consequences will be the production of a great nuisance, highly disagreeable, and not without danger to health and life. It is said that the Board, under the advice of Sir Henry Roscoe, M.P., and in opposition to the experience of the last two years, and setting aside the advice of the committee of chemists above mentioned, and their own officers, are going to resume the application of chloride of lime to the unprecipitated sewage discharged into the river, and discontinue altogether the use of manganate at the outfalls as well as at the metropolitan stations on the sewers. This will probably appear to all persons who have followed the progress of the subject from the chemical, medical, and public health standpoint, to be a retrograde movement. For not only has the use of bleach been condemned by the clearest experience, as engendering a nuisance of a new and peculiar kind on all the mud-banks within reach of the sewage, but the mere manipulation of the chloride of lime by workmen in confined spaces during the three hours of sewage discharge is so detrimental to the health of the labourers that it ought never to be imposed upon them. Manganate and sulphuric acid, on the other hand, have no smell, their action never results in the production of smelling products, and they do not destroy those minute vegetable and animal organisms which are essential for the rapid purification of water from admixed sewage matters. By bleach or chloride of lime, on the other hand, they are mostly destroyed, and this is the main reason for the prevalence of foul smells following the use of bleach.

[illegible] ayers, sanitarians, and inhabitants of the border [illegible] Thames below Greenwich should therefore join in [illegible] against this intended retrograde movement, and [illegible] respectfully and firmly urge upon the Metropolitan [illegible] Works the immediate resumption of the processes [illegible] which the experience of two years has [illegible] to be efficient and protective to the public.

I am, Sirs, your obedient servant,

[illegible] Park, Vic. SANITARIAN.

"A DOCTOR'S INCOME."

To the Editors of THE LANCET.

SIRS,—If you do not consider the subject closed, will you allow me the privilege of the opener of a debate—the right of reply? I notice that you, in your article on the subject (for which, by the way, the profession owe you a debt), and all those who have joined in the discussion, are agreed that matters are as I have stated. But when it comes to discussing remedies, it is another matter. You have scarcely referred to those I have suggested. No one has expressed any warmth in favour of my proposals. No one has made any feasible alternative proposal. This is sad, as it seems to imply that poverty is our certain and unavoidable lot for many a long year, and no remedy is available. I may mention that I expressly excluded *London* hospitals from my consideration; so that a London hospital physician's criticism is beside the mark. I have myself practised as a London consulting physician, and acknowledge the truth of the picture he drew; but it was the county hospitals I referred to as ruining the general practitioner. I have received many letters on the subject, and one conclusion seems inevitable—there is one class of practitioners, and only one, which is doing fairly well, and that is the class that has inherited the trade instincts of our predecessors the apothecaries. A chemist once said to me that he never knew a "college gentleman" who did well in private practice, and he had come to the conclusion that college life spoiled a man for *business*. What he meant is exemplified by the following extract from the ledger of a medical man who understood *business* in the same sense that the chemist did: "Consultation fee, 5*s*.; bottle of mixture, 3*s*. 6*d*.; two pills, 2*s*. 6*d*.; application for throat, 2*s*. 6*d*.; brush for applying ditto, 1*s*.; total, 14*s*. 6*d*." I ought to state that the patient was a very rich man, and well able to pay a good fee; but is there no hope for a medical man unless he is business-like enough to sell a penny camel's hair brush for a shilling? I am, Sirs, yours obediently,

Southborough, Tunbridge Wells. E. PAGET THURSTAN, M.D.

TRACHEOTOMY AND INFLATION IN THE TREATMENT OF A STILLBORN CHILD.

To the Editors of THE LANCET.

SIRS,—Permit me to reply to Mr. Jennings' letter in your issue of July 23rd, which I have only just seen. It seems to me that the explanation there given of stillbirth—that it is due to a valve-like action of the epiglottis preventing inspiration—is a little too simple. I know that it was not so in my case, for this reason: during the time I was trying to pass a catheter into the larynx by the mouth, I held the epiglottis and tongue forward with my finger, effectually preventing any valve-like action, but no air entered the lungs on attempted inspiration. I think that the presence of mucus and meconium in the trachea, and probably also in the larynx, was at least the chief cause of the inability to inspire. Moreover, after tracheotomy, the child not only breathed but was aided in doing so by inflation, yet the resulting expansion of lung was not enough to maintain life. Is it likely that if the larynx could have been cleared by any manœuvre, and inflation replaced by artificial respiration, the expansion would have been greater? Artificial respiration has always seemed to me a very feeble proceeding in a stillborn child with flaccid muscles and yielding chest walls. What I meant to suggest was that such stillborn children—and *a fortiori* those in whom the heart is beating, but who make no effort at respiration—require, not permission to breathe, but the most energetic compulsion to do so; and it was with the idea of indicating a new method of such compulsion, to be used as a last resource, that I ventured to publish the case. I do not know whether intubation of the larynx, of which I have no experience, might replace the tracheotomy in the procedure.

I am, Sirs, yours &c.,

Tufnell Park, N., July 30th, 1887. CHARLES SCOTT WATSON.

AT Bolton a young lady has been poisoned through a chemist's mistake in dispensing a prescription. Hydrocyanic acid was used instead of hydrochloric acid. The jury returned a verdict of "Death from misadventure," and appended a strong censure upon the druggist and his assistant.

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NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE NEWCASTLE ROYAL EXHIBITION.

THE attendance at our Exhibition must be considered very satisfactory—now approaching a million visitors. So far there has been no serious accident, but a female attendant ran a very serious risk the other day by touching an electric battery, from which she received such a severe shock that she has not yet recovered. The model dwelling house is now complete, and receives a large amount of attention from visitors. Mr. H. E. Armstrong has compiled a very useful guide, pointing out the sanitary points of the dwelling. The house is a permanent structure, and most of the materials have been given by the tradesmen of this city.

NEWCASTLE DISPENSARY.

Owing to the death of Dr. Holland a vacancy has taken place in the honorary medical staff of our dispensary. The selection in the first place is by a committee. Canvassing is prohibited, and also publication of testimonials in the public press, which is a great improvement on the former modes of election. An honorarium is attached to the post.

DURHAM COUNTY HOSPITAL.

A very sad occurrence took place on Monday last at the Durham County Hospital, when a nurse committed suicide by cutting her throat. The deceased was an American, and came to Durham some months ago. She attended to the out-door patients of the hospital, and was known all over the town as "Nurse Alice." Some time ago she became ill and depressed, and was admitted into the hospital for treatment.

NEWCASTLE INFIRMARY.

A very alarming accident took place near the Central Station in this city on Monday, when a collision took place in a workmen's train. About a score of the passengers were more or less injured, but I believe, with the exception of three cases, the injuries are fortunately not of a very serious nature.

A holiday "epidemic" has set in here "with some severity" among our *confreres*, and being somewhat under its influence, this will, I trust, sufficiently account for the brevity of my present communication.

Newcastle-on-Tyne, August 4th.

EDINBURGH.

(From our own Correspondent.)

ROYAL HOSPITAL FOR SICK CHILDREN.

THE managers of the Sick Children's Hospital have taken the action which it was anticipated they would adopt, and have instituted a permanent surgical division in the hospital arrangements. The re-arrangement of the wards to suit the new conditions is not as yet complete, but the appointment of surgeon to the institution has been already made, Mr. Joseph Bell having been appointed for a period of three years. Mr. Bell recently retired by rotation from the post of senior surgeon to the Royal Infirmary, where he had been teaching clinical surgery for fifteen years. The loss of his valuable services as a teacher was at that time generally regretted, and his present appointment to another teaching post will be received with a corresponding feeling of cordial satisfaction by all well-wishers of the Edinburgh School.

UNIVERSITY GRADUATION CEREMONIAL.

The annual Graduation Ceremonial in Medicine and Law took place on August 1st, when 55 graduates received the degree of M.D., and 199 those of M.B. and C.M., at the hands of Lord Inglis, Chancellor of the University. The honorary degree of LL.D. was in the first place conferred upon Professor Asa Gray, Dr. Gunning, the generous benefactor of the University, and Mr. Robey. Six of the theses presented by candidates for the degree of M.D. have been awarded gold medals for their high excellence. These are Dr. G. A. Atkinson's thesis on the Chemistry and Pharmacology of the Nitrites and Nitro-glycerine; Dr. A. Bruce's on the Developmental Anatomy of the Brain and Spinal Cord; Dr. John Gibson's on Waxy and Hyaline Degenerations; Dr. W. G. S. Miller's on the Myology of Seals; Dr. Philip's, on a Study in Phthisis, Etiological and Therapeutic; and Dr. Stevens' paper on Tests for certain Constituents of the Urine, and the Conditions in which they occur. The following scholarships and prizes were also presented:—The Murchison Scholarship in Clinical Medicine to Walter S. Colman; the Gunning Victoria Jubilee Prize in Chemistry to Hugh Marshall, B.Sc., for an experimental research in the Oxidation of Cobalt Salts by Electrolysis; the Ettles Scholarship to George Owen Carr Mackness, B.A., M.B., C.M., the most distinguished Bachelor of Medicine and Master of Surgery of this year; the Beaney Prize to Andre Arthman Bruere, M.B., C.M., and William Aldred Turner, M.B., C.M., equal; the Buchanan Scholarship to William Fraser Wright, M.B., C.M., and the James Scott Scholarship to John George Havelock, M.B., C.M. Professor Sir Douglas Maclagan delivered the address to the graduates.

THE PROMOTER'S ADDRESS.

Professor Sir Douglas Maclagan delivered the annual address to the graduates. He stated that this was the third occasion upon which, in due rotation with his numerous colleagues, the onerous and responsible duty had fallen to his lot. After a passing reference to the hazy prospect of a Universities Bill, which might have been his theme, but which had vanished for the present from the academic horizon, he set in order before his hearers the fields of professional life now opening before them, and indicated those spheres of labour and those landmarks of conduct which he desired they should choose. Commencing with civil practice, he described, in felicitous language and with apt and classic illustration, the pleasures and the sorrows incident to it; giving words of sound advice on the question of professional ethics, and expressions that may well be remembered with gratitude by his hearers in hours of difficulty and discouragement. Next, he considered the openings for professional work in the Services; and, taking up in the first instance the Navy, he drew a picturesque delineation of its main features, showing its advantages in the pleasant, useful, and healthful life which it affords, and adding a word of warning as to the dangers of letting slip the near view of the realm of medical progress which every member of the profession should strive to keep possession of. In turning to the consideration of the Army Medical Department, Sir Douglas Maclagan regretted that he had at present not much to say of an encouraging nature. This was a source of real vexation to himself as the son of an army medical officer, whose medal with its six clasps he preserved with filial pride, and who was entitled to say, in a more appropriate and befitting sense than their old friend Horace, "*Militari non sine gloria.*" He hoped, however, if it were ever his lot to address them or their successors on this topic, that he would be able to commend this branch of the service to their favourable consideration. After a few sentences devoted to the career of medical missionaries, to which some of his hearers had devoted their lives, he summed up his address in an eloquent appeal, setting forth the high ideal placed before the medical practitioner, and the noble and unvarying effort by which alone it can be attained.

Edinburgh, August 2nd.

DUBLIN.

(From our own Correspondent.)

BRITISH MEDICAL ASSOCIATION: DUBLIN MEETING.

THE Dublin meeting may be described as a conspicuous success, and an exceptionally large number of members have arrived in this city to take part in its proceedings. These include some very distinguished members of the profession resident in Italy, France, Switzerland, Germany, and America. The front hall over the entrance to Trinity College has been fitted up as a reception room, and is available for visitors; while a postal and telegraph office is

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placed in the immediate vicinity for the use of the members. All the rooms required for the various meetings were provided in Trinity College. The Sections of Medicine, Surgery, Obstetric Medicine, Therapeutics and Pharmacology, and Pathology were held in the Medical School, and the remaining sections and sub-sections in the Museum buildings of the University. The President's address was delivered in the Dining Hall, and the general meetings were held in the Examination Hall, where also the addresses in medicine, surgery, and public medicine were delivered.

HONORARY FELLOWSHIPS.

At a meeting of the Royal College of Surgeons in Ireland on Wednesday, the 3rd inst., the Honorary Fellowship was conferred on Mr. J. Eric Erichsen, Mr. Jonathan Hutchinson, Mr. Charles Macnamara, Mr. Patrick Heron Watson, and Sir George Macleod. On the same day the College of Physicians formally conferred their Honorary Fellowship on Dr. Robert Barnes, Dr. Charlton Bastian, Sir Andrew Clark, Dr. William Tennant Gairdner, Dr. J. F. Charcot, Sir Dyce Duckworth, Dr. James Matthews Duncan, Sir William W. Gull, Dr. J. Hughlings Jackson, Sir George Edward Paget, Dr. Richard Quain, and Dr. Thomas Grainger Stewart. Sir Andrew Clark, Sir George Paget, Drs. Barnes, Bastian, Gairdner, and Stewart returned thanks.

MERCER'S HOSPITAL, DUBLIN.

Last week before the Vice-Chancellor, Mr. O'Grady sought for an injunction to restrain the governors and Dr. Knight from removing him from his position as senior surgeon and governor of the institution. On June 8th a notice of motion was given by Dr. Knight for a meeting of the governors on the 27th inst., to the effect that Mr. O'Grady be removed from his office. The Vice-Chancellor in delivering judgment said: "If he made the injunction, it would preclude absolutely the governors from holding the proposed inquiry. It would be the duty of the governors to investigate the facts, and form a decision in the exercise of their judgment, and for that decision they would be responsible to some tribunal." The application was therefore refused, the question of costs to stand over.

BELFAST.

(From our own Correspondent.)

THE LAGAN NUISANCE.

A DEPUTATION, representing the inhabitants of Cromac Ward, residing in the vicinity of the banks of the Lagan, appeared before the Harbour Commissioners of Belfast at their last meeting, and presented a memorial stating that the river Lagan is becoming more and more dangerous to public health, the stench in the mornings being quite unbearable, even as far as three-quarters of a mile from the river itself. The memorialists think the cleansing of the banks and bed of the river is most urgently required, and they ask the Harbour Board to do this. It was also stated (and I think with truth) that no drainage scheme, though carried out immediately, could bring the Lagan into a proper sanitary condition, unless the filthy matter so long allowed to accumulate is first of all removed. Among other speakers, Dr. Henry Bingham, Dr. Gibson, and Dr. Charles Kevin, all of whom practise in the neighbourhood of the Lagan, and who know well its present utterly abominable condition, urged strongly that the evil should be remedied. Sir Edward Harland, Bart. (the chairman of the Harbour Board), in replying to the deputation, remarked that the Board over which he presided were not a sanitary authority; but if they had the legal power they would be very glad to accede to the request of those present. He said, on behalf of the Harbour Commissioners, they would take means of communicating with the Town Council as to some joint action which should be legally taken in hand with a view to the removal of the mud banks. He thought they might look forward confidently to the banks being entirely removed, and he did not think it would be wise for them to wait until the whole drainage scheme should be completed. If the banks were cleansed by artificial means he did not think they would long remain so. It is hoped that action will soon be taken by the authorities, as the nuisance occasioned by the Lagan is at present extremely bad. Owing no doubt to the long drought, the smells have this summer penetrated to very long distances from the place in which they originate. On Monday last two deputations on the same subject appeared before our Town Council. The first wished to strengthen the opinion of the members of the Council, who were understood to be in favour of locks being placed on the river Lagan, while the second deputation, which represented 700 ratepayers, urged that steps should be taken to remove the mud banks. After a speech from the Mayor and a long discussion, it was decided to appoint a committee to take into consideration the prayers of the two deputations, and to confer with the Harbour Commissioners on the subject.

ST. JOHN AMBULANCE ASSOCIATION.

During the past few months classes in connexion with this useful Association have been conducted in Belfast by Dr. Mackenzie, Dr. S. Smith, and Dr. Lewers, and in Maghera by Dr. Harris. The number attending was large, and a great many were successful at the examinations. Dr. J. A. Lindsay is the local secretary, and it is owing to his energy that the interest in the Association in Belfast has been revived.

HOSPITAL FOR DISEASES OF THE SKIN.

The annual report presented at the meeting of the friends of this hospital (of which Dr. H. S. Purdon is honorary physician), held last week, shows that during the year 1149 patients were treated, being the largest number yet attended to in any one year. While the number of patients seeking relief is steadily increasing, the amount of the annual subscriptions is not increasing in proportion; but it is satisfactory to find that the donations from patients show a considerable increase. The treasurer's statement shows that the expenditure is very slightly greater than the income.

Belfast, August 3rd.

PARIS.

(From our own Correspondent.)

THE PASTEUR INSTITUTE.

THE statistical account of persons treated at the Pasteur Institute during the month of June has been published. As usual, the patients are divided into three classes. 1. Those bitten by animals proved to be rabid either by inoculation of the medulla or by the development of rabies in other individuals bitten. 2. Those bitten by animals proved to be rabid by veterinary observation. 3. Those bitten by animals suspected of rabies. It will be remembered that in the discussion at the Academy of Medicine concerning the cause of death in some cases brought forward by M. Peter, the partisans of M. Pasteur refused to admit the diagnosis of rabies when the proof positive had not been afforded by inoculation of the medulla. Applying, then, our system to the study of the Pasteurian statistics, if a clinical professor cannot diagnose rabies in man by bedside observation, and must wait until he has inoculated rabbits with his patient's nerve centres in order to know what is the nature of the disease, it stands to reason that a similar degree of certainty should be exacted for veterinary observations upon animals. M. Pasteur's categories of patients might then be reduced to two. 1. Persons bitten by animals proved to be rabid by inoculation. 2. Persons bitten by animals suspected of rabies by veterinary surgeons or others. The proportions the two classes bear to one another are as 10 to 1: in the June return 14 only of the patients out of 159 having been bitten by animals proved to have been rabid by inoculation. By far the greater number—113—belong to the category of those bitten by animals *proved* rabid by veterinary observation, a proof that we may accept with some reserve when it is offered concerning a method that has been backed by no inconsiderable amount of official pressure. Of the 159, 32 individuals are admitted to have been bitten by animals "suspected only of rabies"—which I take to be a euphemism for "unnecessarily frightened." Against these 159 saved from a more or less imaginary rabies, we have four new deaths, two of which are mentioned in the statistics, the other two in the public papers and in the *Journal de Médecine de Paris*. 1. Paul Hurot, bitten on May 30th, and treated from May 31st to June 13th; seized with rabies

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July 1st. 2. Jules Bourgeot, bitten April 24th; treated from April 27th to May 16th; died July 11th. No charge is brought against this patient by the Pasteur Institute; but Hurot is said to have been an inveterate drunkard. 3. Desclide, bitten in May, died of paralytic rabies on July 21st, sixty days after the bite and forty-five after the end of the preventive treatment. 4. Gerde, bitten on March 27th, and treated at the laboratory for thirteen days from March 29th. On July 20th there was weakness in the legs, and the patient—a female servant—fell down. There was pain in the right arm and extreme weakness in both; also hydrophobia. The following day a white frothy liquid was vomited, and death took place without any other symptom than weakness.

CHARBON.

The *Semaine Médicale* publishes a letter from Professor Koch of Berlin correcting a statement made by M. Pasteur in his letter to the Imperial and Royal Society of Vienna concerning the opinion of the German school about vaccination against charbon. M. Koch says that they have by no means been converted in Germany to vaccination of cattle. If, in France, of the 200,000 sheep vaccinated annually, the mortality from charbon is only 1 per cent., whereas of the unprotected animals ten times as many die, on the other side of the Rhine the figures are very diverse. Six different series of experiments, collected by M. Schutz, professor at the Veterinary School of Berlin, have shown that the mortality is sensibly the same in vaccinated and unvaccinated animals, and the practice has been nearly entirely abandoned.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of the College, held on Thursday last, Mr. J. B. Bailey was admitted to the office of Librarian. It was agreed that the museum and library be closed during the month of September.

The following report of the Committee of Management was read, and, after discussion, approved and adopted:—

That, in compliance with the request of the two Colleges, they have prepared a scheme for carrying out the examination for the Conjoint Diploma of Public Health, and have adopted the following recommendations on this subject to the two Colleges—viz.: 1. That the regulations relating to the examination, drawn up by the committee and accompanying this report, be adopted. 2. That for the present the examiners for the Diploma of Public Health be paid on the same scale as that adopted hitherto at the Royal College of Physicians—i.e., ten guineas for twelve or less than twelve candidates, and a capitation fee of four guineas for all candidates over that number. 3. That the Committee of Management be authorised to nominate, for election by the two Colleges, four examiners to conduct the examination in Public Health.

The Committee have carefully considered the letter of May 14th last from Mr. James Bankart and the accompanying memorial from several of the recognised provincial hospitals, calling the attention of the Colleges to the injury done to students entering at such hospitals by those regulations of the Examining Board in England which, by defining the intervals which must now elapse between the several examinations of the Board, no longer permit a whole year's attendance at the commencement of the student's career, on the practice of such hospital being counted as one of the required four years of professional study. On this subject the Committee have adopted the following as their report:—That this committee cannot recommend to the Royal Colleges any change in the regulation for the Conjoint Examinations, according to which the Colleges do not admit any candidate to either part of the Third or Final Examination till the expiration of two years after his having passed the Second Examination. That according to the second report of the Statistical Committee of the General Medical Council (p. 15) the average time occupied in medical study—between registration and the Final Examination—is approximately five years. That therefore it is still in the power of provincial hospitals to take a part in the training of students, not only by providing opportunities for acquiring professional knowledge before the commencement of the first year of study at a recognised medical school, but also by providing instruction in Chemistry, Chemical Physics, Materia Medica and Pharmacy, the required examinations in which may be passed in the preliminary period above indicated.

The Committee also submit the following recommendations for approval and adoption—viz.: 1. That candidates who withdraw from a part or parts of an examination for which they have sent in their names shall not be admissible to such part or parts until the expiration of six months, without the special permission of the Committee of Management. 2. That paragraph 9, Part II., of the scheme for constituting an Examining Board in England be amended so as to provide that the period occupied by the Oral and Practical Examination of each candidate on Materia Medica and Pharmacy be "not less than ten minutes," instead of "not less than fifteen minutes."

The Committee further suggests to the two Colleges the propriety of permitting portions of the Examination Hall, at times when they are not required for the examinations of the Examining Board in England, to be used by other institutions, especially those connected with medical education, on terms to be arranged by the Committee of Management.

The fifth report of the Committee on the Extension of the College Premises was read, approved, and adopted, and it was decided to spend £500 in repairs of the front of the College.

Sir W. MacCormac was appointed an Examiner in Surgery, in the place of Mr. Bryant, and Mr. Bryant was elected to fill the vacancy caused by the resignation of Mr. Hutchinson. Mr. Bryant was also elected a member of the Board of Examiners in Dental Surgery.

It was agreed that the annual meeting of the Fellows and Members be held on Thursday, Nov. 3rd, at 3 P.M. Further memorials, in opposition to the memorial of Dr. Wilks, were received from Mr. Bryan, and acknowledged.

The next quarterly meeting will be held on Thursday Oct. 13th.

Obituary.

ALEXANDER GORDON, M.D.

IT is with deep regret we announce the death of Dr Gordon, who for many years was the leading surgeon in Belfast and the north of Ireland. Although for some time he has not been in very robust health, his death was quite unexpected. On Thursday, July 28th, a short time after taking breakfast, he complained of a severe headache, and retired to bed, where, soon after, marked symptoms of cerebral hæmorrhage set in, from which in a short time he died in his sister's house at Saintfield, and, by a strange coincidence, in the same room in which sixty-nine years previously he was born. Dr. Gordon was a member of one of the oldest and most highly respected families in the north of Ireland. His father was a medical man in Saintfield, county Down, and on the church in that town there is a memorial stone (indicating that it was rebuilt in 1776) to which his grandfather's name, A. Gordon (treasurer), is appended. At the present time the brother of the deceased, Dr. Wm. Gordon, J.P., practises in Saintfield.

Dr. Alexander Gordon from an early age exhibited a decided taste for the study of medicine, and after having received his early education in Belfast and in Edinburgh, he took the M.D. of the latter university in 1841, when he was twenty-three; he also in the same year became a licentiate of the Edinburgh Royal College of Surgeons. Soon afterwards he began private practice in Belfast, and was appointed Demonstrator of Anatomy in the Royal Academical Institution, Dr. Drummond being at that time the professor. In 1847, on the death of Dr. Coffey, who lectured on surgery, Dr. Gordon was appointed to his chair; and in 1849, when Queen's College, Belfast, was opened, he was transferred to the new College as Professor of Surgery. Thomas Andrews, Dr. Burden, and Dr. Gordon were the only professors who had lectured in the old academical institution who were appointed in the new College. Dr. Gor

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continued as Professor of Surgery in Queen's College until last summer, when, owing to failing health, and especially to defective eyesight, he found it necessary to retire. He was succeeded by one of his favourite pupils, Dr. Thomas Sinclair.

For a great portion of his professional life Dr. Gordon was surgeon to the Royal Hospital, and at one time he was president of the Belfast Pathological Society. During his long professional career he contributed many original papers to the medical journals. He wrote several articles on "Fractures of the Lower End of the Radius," and a "Treatise on the Fractures of the Lower End of the Radius, on Fractures of the Clavicle (and their treatment by a new clavicular apparatus), and on the Reduction of the Recent Inward Dislocations of the Shoulder Joint (by manipulation)." In this book many views peculiar to himself will be found, and in it the celebrated Gordon's splint (known all the world over) for the treatment of Colles' fracture is described, as well as an apparatus for treating fractures of the clavicle. He also wrote papers on "Fractures of the Thigh Bone," and on "A Peculiar and Unique Dislocation of the Femur upon the Pubes," &c. For a lengthened period he was a prominent member of the medical profession in Belfast, and from his close connexion with the medical school, he was brought intimately in contact with the students, on whom he had a very marked influence, owing to his great originality and independent character. He had a thorough knowledge of anatomy, and, while on nearly every branch of surgery he held original views, there were certain subjects which he was very fond of teaching. We question if any man has ever had a better knowledge of fractures, and he has left behind him, in the Pathological Museum of Queen's College, a collection which in number and variety is almost unequalled. Being of a mechanical turn of mind, he designed many ingenious forms of splints and other surgical apparatus. Hernia was another of his favourite subjects; in practice, he was almost always able to reduce such a condition, and he taught that the great majority of hernias could and should be put up without operation. It was his custom to spend the hour previously to his college lecture in the anatomical room, where, owing to the kindness of his friend and colleague (Professor Redfern), he utilised the opportunities afforded for teaching surgical pathology. It was here that the thoughtful student was so impressed with Dr. Gordon's wonderful tactile powers, with his great originality, and with his accurate knowledge of surgical anatomy. When the British Medical Association visited Belfast in 1884, Dr. Gordon was asked to take part in a discussion in the medical section on a favourite subject of his—chronic rheumatoid arthritis. He produced on those present a marked impression by the specimens of this condition which he exhibited, and by the originality of his views on a subject which, as he said, he had been studying for thirty years. He had a very large consulting practice; indeed, his opinion was almost invariably sought by anyone in the north of Ireland who had a surgical affection. He was popular with the students, who respected him as a man who who had a thorough grasp of the subjects he taught, and who, in every department of surgery, had views original to himself and different from the stereotyped teaching of the ordinary text-books. A fine portrait of him (presented by his students) is placed in the Examination Hall of Queen's College, Belfast.

Dr. Gordon was a man utterly destitute of all cant. In private life those who came in contact with him could not fail to be impressed by his great simplicity of character, by his sterling honesty, and by the freshness and originality of his views on almost every subject. He was very fond of a country life, and several years ago he built a residence on some property which he owned near Comber, on the margin of Strangford Lough. Here during the summer it was his custom to reside from Saturday to Monday, although he was not allowed to be free from professional duties, as on these days large numbers of the country people came to get his opinion. He was interred on Saturday last in Saintfield Church-yard, within a short distance of the historical ground where in '98 the battle of Saintfield was fought. The funeral was private, but, in addition to his own relatives, a few of his personal professional friends (all of them former pupils) were present, and helped to carry to his last resting-place the remains of one for whom they had the most profound respect. Dr. Gordon leaves a widow, a son, and one daughter.

DR. ANDREW FERGUS,

OF GLASGOW.

WE regret to announce the death of Dr. Andrew Fergus of Glasgow. Dr. Fergus was born in the year 1822, in the town of Newcastle, where his father was minister of the Scotch church. He was a student at King's College, London, and at Glasgow University. Like several other distinguished men, he was a pupil of Messrs. Greenhow and Ingham of North Shields. After obtaining the diploma of the Royal College of Surgeons of England he commenced practice in Glasgow, and in the year 1866 he obtained the M.D. of the University of Glasgow (*honoris causâ*). On three different occasions he was elected president of the Faculty of Physicians and Surgeons of Glasgow, and under his auspices, and mainly through his influence, the Faculty abolished its single diploma and united with the Edinburgh corporations to grant the triple qualification. While he was president, also, the Faculty instituted an examination for the Fellowship. For three years he was president of the Philosophical Society of Glasgow. Since the opening of the Western Infirmary he had been a representative of the Faculty at the Board of Managers, and latterly was convener of the Medical Committee. Ten years ago he was chosen by the Queen to be her representative for Scotland on the General Medical Council, and at the expiry of his term of office he was reappointed. He was also president of Anderson's College, and took a great interest in the formation of the West of Scotland Technical College.

In all his public positions Dr. Fergus's opinion was much valued, for he combined great sagacity with excellent business tact, so that everything left to his charge was well and efficiently done. As a practitioner he was much loved and respected by his patients, and had gathered around him the leading families in Glasgow and the west of Scotland. He had also a large consulting practice, and having the very essential advantage of being a general practitioner, he was justly considered an all-round man, and his advice was sought for in almost every variety of circumstances. As a scientist he gained deserved fame from his careful investigations on the action of sewer gases on the water supply, and successfully demonstrated at a meeting of the Philosophical Society how they exercised a deleterious influence on leaden pipes.

From the sketch of his life thus given it is easy to understand how much his death is lamented by all who knew him. The city of his adoption mourns, and the grief may be said to be universal, for in his long and active career Dr. Fergus had made many friends among the rich and the poor. As a physician and citizen his record is very clear and unstained. He lived an upright life. He was an affectionate husband, a wise father, and in all the prominence of the exalted positions he occupied he was a worthy and exemplary public servant, and a thorough representative of the profession he adorned. He is survived by a widow, one daughter, and three sons. The eldest son is worthily following in his father's footsteps as a medical practitioner; the second is a surgeon-dentist; and the youngest is a distinguished alumnus in medicine of the University of Glasgow.

W. CONNER LYSAGHT, M.R.C.S., L.R.C.P. LOND.

MR. W. CONNER LYSAGHT entered as a student of the Bristol Medical School in 1879. In the course of his studies he showed much assiduity in his work, and his successes at the school prove his ability to have been above the average. He held the post of assistant demonstrator of anatomy, and, after qualifying, became medical tutor during 1885-86. In this latter capacity his qualifications as a teacher and governor became apparent, and his kindly and courteous manner won the respect of those with whom he had to deal. So recently as June last Mr. Lysaght was elected to fill the post of assistant resident medical officer to the Bristol Royal Infirmary, and, although his tenure of office was so short, it was sufficiently long to show that the earlier indications of his professional skill and enthusiasm had not been falsely represented. On July 17th, Mr. Lysaght manifested the earlier symptoms of scarlet fever, which unfortunately pursued a malignant course, and ended fatally on July 24th. Whether this illness was contracted from a patient on whom

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he had performed tracheotomy some days previously, and in which case he considered it necessary to apply his lips to the wound in order to suck out the blood from the trachea, or whether he simply "caught" it among the out-patients, it is difficult to say. Any way, he died at his post and in the execution of his duties—died honourably, and died esteemed and regretted by all who had had the pleasure and honour of knowing and working with him.

CESARE BRAICO.

IN the history of the Italian war of independence—the "risorgimento," as it is called—few chapters are more interesting than that which describes the part taken in it by medical men, of whom not the least deserving and conspicuous was the able physician whose name is given above. He was born in the Kingdom of the Two Sicilies, at Brindisi in 1822, and he early devoted himself to the study of medicine in the Neapolitan School. He had barely graduated when he became politically "compromised," and in company with patriots like Spaventa, Poerio, and Settembrini, he shared the weary horrors of a Bourbon prison, from which, however, unlike his comrades in adversity, he was fortunate enough to effect his escape. He fled to England, and, like Pantaleoni, employed himself in professional study and in the occasional furtherance of patriotic schemes till 1859, when the policy of Cavour set the cause of Italian unity on wheels. At Turin he became known as one of the most fearless of the "party of action," and thence he passed to Genoa; from Genoa, as one of Garibaldi's "Thousand," to Quarto, and thence again to Marsala.

Braico was a right-hand man of Bertani in the care of the sick and wounded, and so frequently in aiding the latter did he venture under fire that he had on eleven occasions to fight like a common combatant to extricate himself from a position of jeopardy. Singularly enough, his wounds were never more than of the slightest, even when on the famous 1st of October, 1860, at Capua, he earned the praise of Garibaldi for heroism shown in the grand assault, when hundreds of red-shirts were falling around him. When Italy was proclaimed a kingdom in March, 1861, his fellow townsmen of Brindisi elected him as their representative in the parliament just assembled at Turin. Then in the peaceful arena of debate, he encountered many of his old comrades of the prison and of the battle field, and again made himself conspicuous as alternately the opponent or the auxiliary of Cavour or Garibaldi, Poerio or Crispi, Spaventa or Cavioli, Fanti or Bertani, Ricasoli or Nicotera.

Like Bertani, he distinguished himself in all legislation connected with the public health, and in recognition of his services in this department he was made "Presidente del Consiglio superiore di Sanità" at Naples. After years spent in the effective discharge of the duties of this post he was called to Rome to act as superintendent of State archives; but he did not long enjoy the comparative ease of this tranquil berth. Symptoms of failing mental power rapidly declared themselves, and he had to be removed to the Manicomio on the Janiculan, where he died on July 27th, in the sixty-fifth year of his age.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following candidates having conformed to the bye-laws and regulations, and passed the required examinations, were admitted Licentiates of the College:—

Alexandre, John Francis Gaston, St. Bartholomew's Hospital.
Althorp, Charles Frederick Manning, St. Paul's-road, Bradford.
Arnison, William Drewill, Allensdale-town, Northumberland.
Ashworth, P., Delauney-road, Higher Crumpsall, Manchester.
Bannister, Marmaduke, Acomb-street, Manchester.
Barber, Frederick Samuel, Broomfield-terrace, Bradford.
Barret, Edward E., Springfield-road, St. John's Wood.
Birch, Charles Ormond, Harley-street.
Booth, George, Low Pavement, Chesterfield.
Bright, Archibald Leonard, St. Bartholomew's Hospital.
Bullivant, Samuel, Gordon-street.
Bury, Frederick C., Upper Brook-street, Manchester.
Bullock, Henry Maurice, St. Thomas's Hospital.
Caddy, Arnold, St. George's Hospital.
Close, John Borrill, Fulham-road, South Kensington.
Cook, Samuel Bird, Ivydale-road, Nunhead.
Cort, John Giles Denison, Charing-cross Hospital.
Cosens, Charles Hyde, Huntley-street, Bedford-square.
Crisp, Ernest Henry, Marlborough House, Balham Hill.
Dane, Harold, Finchley-road, Hampstead.
Davies, Albert Barnes, Frederick-place, Mile-end-road.
Davies, Hughes Reid, Hill-street, Rutland Gate.
Day, E. Irving, Endsleigh, Dunheved-road, Thornton Heath.
De Lisle, Albert, St. Bartholomew's Hospital.
Dixon, Charles Harvey, St. Mary's Hospital.
Drake-Brockmann, Herbert Edward, St. George's Hospital.
Ellison, E. H., Daleiren-road, Amhurst Park, Stamford Hill.
Evans, William Norman, Thurlow-road, Hampstead.
Field, Oliver, Battledown Gates, Cheltenham.
Fisher, Thomas Hammond, Manchester-road, Stockport.
Fisher, William Featon, Pembridge, Isle of Wight.
Fowler, Thomas Webb, Wycombe House, Coventry.
Fox, Frederick G. Townsend, St. Bartholomew's Hospital.
Gilford, Hastings, Beech-grove, Redhill.
Gilpin, William J., Harrington-street, Regent's Park.
Godfrey, Thomas Henry, Billing-road, Northampton.
Gould, John Edwin, Albert-street, Regent's Park.
Green, George Sydney, Kildare-terrace, Westbourne Park.
Hamel-Smith, Lionel, Sydenham-road, Croydon.
Harries, William, Stanhope-street.
Harris-Liston, Llewellyn, University College Hospital.
Hastings, Edwin Birchall, Denmark-hill, Wimbledon.
Hendley, Arthur Gervase, St. Bartholomew's Hospital.
Hitchings, Robert, Groombridge-road, South Hackney.
Hubbard, Walter Lovett, The Grove, Clapham-road.
Joberns, William, The Grange, Aldridge, Walsall.
Johnston, Arthur Hammersley, Jamaica-road.
Kanthack, Alfredo Antunes, St. Bartholomew's Hospital.
Kelsall, Henry Trueman, London Hospital.
Larcombe, S. Slee, Cliftonville, Selsdon-road, West Norwood.
Lotz, Henry John, St. Thomas's Hospital.
Luard, Hugh Bixby, St. Thomas's Hospital.
Lubbock, Edgar Ashley, London Hospital.
Mair, Ludovic William Darra, St. Bartholomew's Hospital.
Nixon, John, St. Bartholomew's Hospital.
Parker, Frederick William, Brussels-road, New Wandsworth.
Phillips, G. Gordon Owen, Castletown-road, West Kensington.
Pound, Clement, Odiham, Hampshire.
Puddicombe, Edward Leonard, St. George's Hospital.
Rust, John, St. Bartholomew's Hospital.
Savery, Frank, Hastings Cottage, Grange Park, Ealing.
Savory, William Harmsworth, Douglas-road, Canonbury.
Skill, James Maurice, St. George's Hospital.
Solly, Reginald Vaughan, St. Thomas's Hospital.
Tanner, Charles Price, Houghton-place, Ampthill-square.
Theobald, Owen Le Mare, Manor-road, Holloway.
Thistle, William Brown, Stratford, Ontario, Canada.
Vernon, Arthur Heygate, St. George's Hospital.
Walker, James Pixton, Manchester.
Wilde, Leonard, Ebury-street, London.
Williams, William Griffith, Vincent-terrace, Colebrooke-row.
Wood, Hubert Moody, Barry-road, Dulwich.
Wooldridge, Arthur Tylee, Christchurch-road, Winchelsea.
Wordsworth, William John, Charlotte-street, Portland-place.
Wright, William Luard, Cambridge-terrace, Hyde Park.

The following officers have been elected in addition to those enumerated in our last issue:—Finance Committee: Sir Edward Sieveking, M.D.; G. Tupman Fincham, M.D.; C. J. Hare, M.D. Examiners: Chemistry and Chemical Physics: C. H. Ralfe, M.D.; A. J. Bernays, Ph.D.; W. J. Russell, Ph.D.; August Dupré, Ph.D.; William Foster, F.C.S. Materia Medica, Medical Botany, and Pharmacy: J. Mitchell Bruce, M.D.; Frederick Taylor, M.D.; D. Bridge Lees, M.D.; William Murrell, M.D.; Nestor Isidore C. Tirard, M.D. Elementary Physiology: William Ewart, M.D.; Vincent Dormer Harris, M.D. Physiology: W. H. Allchin, M.B.; Leonard Wooldridge, M.D.; Professor Schäfer. Osteology and Anatomy: John Curnow, M.D.; Henry Morris, F.R.C.S., L.R.C.P. Medical Anatomy and Principles and Practice of Medicine: Lionel Smith Beale, M.B.; W. H. Stone, M.B.; Octavius Sturges, M.D.; H. Gawen Sutton, M.B.; W. Butler Cheadle, M.D.; P. H. Pye-Smith, M.D.; Sir Dyce Duckworth, M.D.; H. Charlton Bastian, M.D.; William Cayley, M.D.; T. Tillyer Whipham, M.B. Midwifery and Diseases peculiar to Women: W. Overend Priestley, M.D.; Henry Gervis, M.D.; A. Lewis Galabin, M.D.; F. H. Champneys, M.B. Surgical Anatomy and Principles and Practice of Surgery: George Pollock, F.R.C.S.; Sir William Mac Cormac, F.R.C.S.; W. Morrant Baker, F.R.C.S.; Professor Humphry, F.R.C.S. Hygiene: Thomas Stevenson, M.D.; Edward Ballard, M.D.; Richard Thorne Thorne, M.B.; W. H. Corfield, M.D.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary ex-

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aminations for the diploma were at an ordinary meeting of the Council on the 4th inst. admitted Members of the College:—

Alexandre, John Francis Gaston, St. Bartholomew's Hospital.
Althorp, Charles F. Manning, St. Paul's-road, Bradford.
Archer, Ernest Richard Barnes, Trinity-square.
Ashworth, Percy, Delauney-road, Crumpsall, Manchester.
Bannister, Marmaduke, Wellington-street, Blackburn.
Barrett, W., Nile-street, Stockport-road, Ashton-under-Lyne.
Bennett, George Herbert, Windsor Villa, Plymouth.
Bird, Matthew Mitchell, Gloucester-road, South Kensington.
Bright, Archibald Leonard, St. Bartholomew's Hospital.
Brooks, Richard Philip, Tollington Park.
Bullivant, Samuel, Gordon-street.
Bullock, Henry Maurice, Overtown House, Isleworth.
Bury, Frederick Charles, Upper Brook-street, Manchester.
Caddy, Arnold, Redcliffe-square.
Carter, Arlingham, Wellington House, Gloucester.
Cole, Francis, Leadenhall-street.
Cook, Samuel Bird, Ivydale-road, Nunhead.
Cooke, Cecil Whitehall, St. George's-terrace.
Cordiner, Richard, East Heslerton, York.
Cort, John Giles Denison, Princes-street, Blackburn.
Crisp, Ernest Henry, Marlborough House, Balham Hill.
Dane, Harold, Finchley-road, Hampstead.
Davies, Albert Barnes, Frederick-place.
De Lisle, Albert, Great Ormond-street.
Drake-Brockmann, Herbert Edward, Hauteville, Guernsey.
Dunlop, James Crawford, Alva-street, Edinburgh.
Essery, William Joseph, Osborne House, Gunnersbury.
Field, Oliver, Battledown Gates, Cheltenham.
Godfrey, Thomas Henry, Billing-road, Northampton.
Gould, John Edwin, Albert-street, Regent's Park.
Hands, Charles Hubert, Deddington, Oxon.
Harris, William, Notts-square, Carmarthen.
Hastings, Edwin Birchall, Denmark Hill, Wimbledon.
Heatley, William, Grafton-street.
Hendley, Arthur Gervase, Crosfield, Bentley, Hants.
Hensley, Philip Henry Sandybrooke, Beaumont, Jersey.
Herring, Herbert Thomas, Spring-grove, Hampton-on-Thames.
Hewan, John, Belgrave-road.
Hill, Edward Brereton, Longfleet, Poole, Dorset.
Hoole, John, Maitland Park-road.
Hubbard, Walter Lovett, The Grove, Clapham-road.
James, John Angell, Bridgetown, Stratford-on-Avon.
Johnston, Arthur Hammersley, Jamaica-road.
Larcombe, Samuel Slee, Cliftonville, West Norwood.
Lewis, Ernest Edward, Middlesex Hospital.
Lewis, Phillip King, Adelaide-road.
Lotz, Henry John, St. Thomas's Hospital.
Luard, Hugh Bixby, Lambeth Palace-road.
Maddox, Ralph Henry, Kirkheaton Rectory, Huddersfield.
Mair, Ludovic William Darra, Ledbury-road, Bayswater.
Marriott, Henry Tancred, Milner-street, Chelsea.
Mills-Roberts, Robert Herbert, Erllfair Blaenan, Festiniog.
Nash, Walter Gifford, Clavering, Newport, Essex.
Norton, John, The Chestnuts, Staplegur, Taunton.
Owen, David, Fenwick-street, Hulme, Manchester.
Phillips, Stanley Clyde, Victoria-place, Plymouth.
Puddicombe, Edward Leonard, St. George's Hospital.
Raby, Leonard, Treviddoe, Liskeard, Cornwall.
Roberts, Alfred Ernest, Upminster, near Romford.
Robinson, Frederick William, Granville House, Huddersfield.
Richardson, Wm. George, Copfield House, Gateshead-on-Tyne.
Rigg, Vincent John, Hartington-place, Eastbourne.
Savery, Frank, Grange Park, Ealing.
Savory, William Harmsworth, Douglas-road, Canonbury.
Smith, Edward Locke Cathcart, Blenheim-crescent.
Solly, Reginald Vaughan, St. Thomas's Hospital.
Stewart, Robert Wray, Hatherley-grove, Bayswater.
Stokes, John, Shoreham-street, Sheffield.
Tanner, Charles Price, Ampthill-square.
Theobald, Owen Le Mare, Manor-road, Holloway.
Thompson, Alfred William, Queen's-road, Birmingham.
Tidy, Stewart Alexander, "Glenelg," Springfield Park, Acton.
Tordoff, Sargen, Louis-street, Leeds.
Trevelyan, Basil Riddell Trevelyan, Coombe Down, Bath.
Watkins, Frank Augustus, Stowe Park.
Walker, James Piton, Great Ducie-street, Manchester.
Waterhouse, Herbert Furnivall, Roy. Med. Soc., Edinburgh.
Wawn, Edward Russell, Kirkleatham Vicarage, Redcar.
Williams, William Griffith, Nag's Head, Corwen.
Wood, Hubert Moody, Barry-road, Dulwich.
Woodward, William, Hill Park-crescent, Plymouth.

BRITISH MEDICAL SERVICE.—The following is the list of Surgeons on Probation in the Medical Department of the British Army who were successful at both the London and Netley examinations recently held. (The prizes are awarded for marks gained in the special subjects taught at the Army Medical School.) The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley:—

	Combined Marks.		Combined Marks.
Smith, H. E. H.	6195	Blenkinsop, A. P.	4975
*Gore, Graham W. P. ...	6150	Paterson, J.	4905
Alexander, G. F.	5860	Davoren, V. H. W. ...	4905
Spong, C. S.	5855	Wright, A.	4900
Leishman, W. B.	5850	Copeland, R. J.	4815
Woods, E. M.	5705	Girvin, J.	4780
Thomson, J.	5655	Luther, A. J.	4725
Rawnsley, G. T.	5460	Peeke, H. S.	4700
Reilly, O. W.	5200	Borradaile, A. L.	4600
Freeman, E. C.	5125	Smyth, R. H.	4575
Trask, J. E.	5120	Birt, T.	4555
Crofton, W. J.	5065	Hallaran, W.	4545
Forbes, N. H.	5065		

* Gained the Montefiore Medal and Prize of 20 guineas.

INDIAN MEDICAL SERVICE.—The following candidates were successful at the recent examinations:—

	Marks.		Marks.
Meyer, C. H. L.	6495	Fischer, L. G.	5505
Elliott, W. H. W.	6230	Vost, W.	5450
Murray, J.	6170	Garvie, J.	5275
Childe, L. F.	6135	Mc Evoy, W. G.	5250
Clark, W. R.	6130	Gilbert, C. E. L.	5240
Braide, G. F. W.	6080	Macleod, H. W. G.	5055
Marks, R. J.	5985	Manifold, C. C.	5045
Sunder, C. E.	5810	Irvine, G. B.	4950
Ker, M. A.	5755	Crawford, F. J	4870
Herbert, H.	5695	Simpson, D.	4860
Parry, T. D. C.	5575	Robertson, R.	4795
Jolliffe, A. R.	5560	Moore, T. C.	4770
Buchanan, A.	5550	Jacob, A. H.	4670
Hailey, P. O. W.	5545	Karney, W. H.	4645

Mr. Meyer gained the Herbert Prize of £20, with the Martin Memorial gold medal; Mr. Marks gained the prize in Pathology, presented by Sir Joseph Fayrer; Mr. Elliott gained the Montefiore second prize; and Mr. Murray gained the Parkes Memorial bronze medal.

THE Library of the Obstetrical Society of London will be closed from August 15th to September 15th.

THE seventh annual meeting of the Ontario Medical Association was held at Toronto on the 8th and 9th ult.

AN attempt is being made to establish a permanent Hygienic Museum in Warsaw.

THE Provincial Council of Antwerp has decided against the erection of a large provincial lunatic asylum.

IT is proposed to present Professor Alexander Williamson, F.R.S., with his portrait on the occasion of his retirement from the chair of Chemistry in University College.

AT a meeting of the representatives of the various local authorities in the Stourbridge Union on the 19th ult., it was decided that a hospital for infectious diseases be provided without the formation of a separate hospital board.

SUNSTROKE.—The excessively high temperature in Austro-Hungary has been attended with many cases of insolatio. In Buda-Pesth, sixteen gendarmes are said to have been prostrated by the heat, and placed under medical care.

THE jubilee bazaar in aid of the funds of the Kent and Canterbury Hospital closed at Canterbury on the 29th ult. The proceeds of the sale, including several donations, amount to upwards of £1400. The main portion of the deficit which it was hoped to pay off will therefore be met.

INTEMPERANCE IN BELGIUM.—A law consisting of sixteen articles has just been passed in Belgium with the object of checking alcoholic excesses. One of the clauses provides for the periodical examination of the character of the holders of licences and their mode of doing business, and another clause prohibits the giving of credit for drink.

MANCHESTER ROYAL INFIRMARY.—The annual meeting in connexion with this infirmary, and the affiliated institutions, was held on the 28th ult. From the report which was presented and adopted, it appeared that in 1876 the total number of persons treated at the infirmary and at the convalescent hospital amounted to 21,061, and the cost was £25,116. In 1886-87 no less than 37,548 patients received treatment, at a cost of £22,596. Thus the increase in the number of patients amounted to over 78 per cent., but the actual expenditure decreased £2520, or 10 per cent. The financial report was not satisfactory, the deficit last year amounting to £2855, and that of the present year to £2459.

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ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.—The directors of this institution have unanimously resolved that one of the wards of the hospital shall be specially set apart for the treatment of surgical cases, and that this arrangement shall subsist for a period of three years from and after November 1st next, and at the expiry of that time shall be subject to reconsideration. Dr. Joseph Bell has been appointed surgeon of this ward.

HYPNOTISM is said to be making great advances in France, where people are now being mesmerised for all sorts of diseases, and even bad habits. The latest outcome has been the attempted curing of the drink habit by what is called "suggestion," the patient, while "under control," being ordered to avoid intoxicating liquors of all kinds, and it is claimed that success has been obtained in this respect.

THE CULTIVATION OF IPECACUANHA.—The Madras Government, on the recommendation of its Surgeon-General, has determined to commence the cultivation of ipecacuanha on a small scale in the Nilgiris. The experiments at Ootacamund have shown that the plant, although not difficult to propagate, can only be successfully grown in a limited area possessing suitable climatic conditions; and it was considered unlikely that the cultivation would be taken up to any extent by private individuals.

MEDICAL MISSION AT NAZARETH.—Dr. Vartan, who has for many years acted as the agent of the Edinburgh Medical Missionary Society at Nazareth, has been engaged in building a permanent hospital, so as to be able to carry on his work more effectively. Recently, however, he has been obliged to give up the site and all the buildings to the Turkish Government. This has of course been a great disappointment to him and to all the friends who have contributed towards the work; but there is still hope that another site may be found, and the requisite firman obtained from the Turkish authorities.

ST. GEORGE'S HOSPITAL.—Dr. John W. Ogle on Wednesday, the 27th ult., distributed the prizes in the medical school of this hopital. The examinations passed by the successful candidates were extremely satisfactory, as the number of marks awarded by the different examiners amply testified. In a few prefatory remarks, Dr. Ogle recounted his experience, both in the hospital and in its school, in years gone by, and called the attention of his audience more especially to the many advantages they possessed over students of former days. He urged them strongly to perfect their knowledge of their profession by diligent study of its practice in the wards, and urged upon them the mental training which an examination afforded, even should the competitor be unsuccessful in obtaining the prize. The following prizes were then awarded:—General Proficiency Prizes: 1st year, Mr. R. M. H. Walford; Honorary Certificate, Mr. A. W. Read; 2nd year, Mr. L. W. Seymour; 3rd year, Mr. Cyril Ogle. Certificate of Proficiency in Medicine, Pathology, and Midwifery: Mr. H. Higgins. Treasurer's Prize, and the Brackenbury Prize in Surgery: Mr. F. W. Parker. Thompson Medal: Mr. A. H. Ward. Pollock Prize in Physiology: Mr. L. W. Seymour. Henry Charles Johnson Prize in Anatomy: Mr. Barkworth. Brackenbury Prize in Medicine, and William Brown Exhibition (£40): Mr. E. le Cronier Lancaster. Sir Charles Clarke's Prize: Mr. H. E. Drake-Brockman.

MEDICAL NOTES IN PARLIAMENT.

Smoke Nuisance Abatement (Metropolis) Bill.

IN the House of Lords on the 1st inst., Lord Stratheden and Campbell moved that the House go into committee on this Bill.—Lord Wemyss moved, as an amendment, that before the law for the prohibition of smoke was extended to private dwellings it was desirable that the purpose and intention of the Acts relating to smoke nuisance should be more fully carried into effect, either by their amendment or by their better administration.—The Lord Chancellor objected to the powers to be left to the local authorities as unprecedented. The object was a good one, but the Bill was ill-digested, clumsy, and inconvenient, and he believed it would be inoperative.—Lord Monkswell thought that some of the objections made to the Bill were not well founded, because the Home Secretary could revise the penalties.—Lord Crawford was of opinion that some of the provisions relating to private houses would be intolerable.—Lord Hobhouse supported the Bill, and Lord Brownlow opposed it.—Lord Rosebery believed that the better course in this matter would be to give to the metropolis a body to manage its municipal affairs and to let that body deal with the smoke nuisance; but, as their lordships had read the Bill a second time and referred it to a Select Committee, he thought that to adopt the amendment would be to show a disregard, if not a contempt, for former decisions of the House.—Lord Denman spoke in favour of the amendment.—On a division, the motion for going into committee was rejected by 30 to 12.

The Margarine (Fraudulent Sale) Bill.

On the 2nd inst., on the order of the day for going into committee on this Bill, Lord Wemyss rose and appealed to Lord Basing to postpone the Committee on the ground that the report of the Select Committee of the House of Commons on the subject of the Bill had only just come into their lordships' hands. This suggestion gave rise to an animated discussion, in which Lord Wantage, Lord Granville, Lord Bramwell, Lord Rosebery, and Lord Thring supported Lord Wemyss; and Lord Powerscourt, Lord Egerton, Lord Milltown, Lord Stanley of Preston, Lord Basing, and Lord Fitzgerald opposed him. Ultimately Lord Cranbrook recommended Lord Basing to move that the House go into committee. This Lord Basing did, and the motion was carried by 50 to 15.—Their lordships having gone into committee, Lord Granville announced that the minority in the division just taken would refrain from taking any part in discussing the Bill until it reached another stage. The various clauses, with some unopposed amendments, were ordered to stand part of the Bill, and the preamble and the title were agreed to.

Fever at the Gold Coast.

In the House of Commons, on the 26th ult., in answer to Mr. Conybeare, Sir H. Holland said that "black water fever" was not a specific disease, but was a name given by certain doctors on the Gold Coast to a specially severe form of the ordinary remittent fever of West Africa. The rainy season this year had no doubt been more than usually unhealthy, but there was no reason to attribute this in any special way to want of good sanitary arrangements and good water. Indeed, the papers recently laid before Parliament (C. 5071, pp. 104 and 241) showed that a great deal had been done in the way of improvement in these matters, and the efforts of the Government were being continued. The statement that 50 per cent. of the European residents had died, was, he had every reason to believe, greatly exaggerated. He had received no report of the election of a Board of Health at Cape Coast, or of any petition to the Governor on the subject.

Drainage in North-west London.

In answer to Mr. Bartley, Mr. Ritchie said that the Local Government Board had not received any complaint as to the drainage arrangements of the Hendon sanitary authority at Alperton. If any such complaint were made to the Board it would receive attention. He added that the Board had that day received a letter from the sanitary authority in which they entirely deny that the works are carried on in a satisfactory manner.

Ventilation of the House.

In reply to Mr. Warmington, Mr. Plunket said that his attention had been from time to time directed to the offensive smells prevalent in the House and its corridors, and very recently. He was perfectly satisfied that they did not proceed from any defect in the drainage of the palace, which is, he believed, now in as perfect a state as modern science could make it. He had no doubt that these smells came from outside. Observations were being made, but they had not yet been able to trace the smells to their true origin.

On the 1st inst. Mr. Esslemont asked the First Commissioner of Works whether he had any reason to believe that the noxious air in the House was due to the artificial system of ventilation; and whether, by way of experiment, he would allow the present system to be discontinued for a few days in order to allow fresh air to be admitted from the windows in the roof.—Mr. Plunket said he had no reason to believe that the air in the House was noxious, and what the hon. member called the artificial system of ventilation consisted simply in this—that the air which members had been breathing was drawn out through the ceiling so that fresh air might constantly enter the more freely from below. He could not advise that the experiment suggested by the hon. member of discontinuing this system should be tried.—In reply to a further question by Dr. Kenny, as to whether the suggestion made by the hon. member for Mid-Cork as to straining the air introduced into the House had been taken into consideration, Mr. Plunket said that such experiments had been tried.

Metropolitan Cemeteries.

On the 2nd inst., Mr. O. V. Morgan asked the Secretary of State for the Home Department, with regard to the proposed new burial ground for South London, whether he was aware that the cemeteries of Bethnal-green and Victoria-park, and of Stoke Newington at Abney-park, were sanctioned without application to Parliament; whether he was aware that by 16 and 17 Vict., c. 134, s. 6, it was enacted, "When any new site has been selected an ordinary letter stating the fact and requesting approval of the same shall be addressed to the Home Secretary;" whether he was aware that the Battersea Burial Board was prepared to carry out any suggestions he might make as to sanitary arrangements; whether he was aware that the chairman of the Sutton Local Board advocated the establishment of the cemetery as a great boon to the inhabitants of that town; and whether he was now prepared to give his sanction to the proposed cemetery.—Mr. Mathews replied that the cemeteries named in the hon. member's question were, he believed, formed under the powers of the Cemeteries Clauses, 1846. The 16 and 17 Vict., c. 134, did not, so far as he could discover, contain the words quoted by the hon. member. His answers to the third and fourth questions was in the negative. The opening of a new burial ground and burials in Sutton had been prohibited by Order in Council, for the protection of the public health; and he was still considering whether he was justified in sanctioning the opening of a new and large cemetery in that district, as to which he was now receiving frequent communications.

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BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Les Anesthésies Hystériques, des Muqueuses et des Organes des Sens, et les Zones Hystérogènes des Muqueuses. Par Dr. L. Lichtwitz. pp. 182.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

The Throat and its Diseases. By Lennox Browne, F.R.C.S.E. Second Edition, rewritten and enlarged. pp. 614, with Illustrations, some coloured.

BLAKISTON, SON, & Co., Philadelphia.

Anæmia. By Fred. P. Henry, M.D. pp. 136.

The Polyclinic. Vol. IV. Edited by H. Leffmann, M.D. pp. 380, Illustrated.

CASSELL & Co., London, Paris, New York, & Melbourne.

Syphilis. By Jonathan Hutchinson, F.R.S., LL.D. pp. 532, with 8 Chromo-lithographs.

CHURCHILL, J. & A., New Burlington-street, London.

Surgical Emergencies. By Paul Swain, F.R.C.S. Fourth Edition. pp. 229, with Illustrations.

On some of the Mental Affections of Childhood and Youth. By J. Langdon Down, M.D.Lond. pp. 307.

Health Resorts at Home and Abroad. By M. Charteris, M.D. Second Edition. pp. 212, with Map.

Illustrations of Clinical Surgery. By Jonathan Hutchinson, F.R.S. Fasc. XIX. Plates 71—74. 6s. 6d.

Surgery, its Theory and Practice. By W. J. Walsham, F.R.C.S., &c. (Students' Guide Series.) pp. 744, with 236 Illustrations.

Lectures on the Surgical Diseases of the Urinary Organs. By Reginald Harrison, F.R.C.S. Third Edition, rewritten and enlarged. pp. 583, with Illustrations.

FISCHER G., Jena.

Beiträge zur pathologischen Anatomie und Physiologie. Herausgegeben von Dr. Ernst Ziegler und Dr. G. Nauwerck. Zweiter Band, erstes Heft.

KEGAN PAUL, TRENCH, & Co., Paternoster-square, London.

Matter and Energy. By B. L. L. pp. 85.

LEWIS, H. K., Gower-street, London.

Experimental Researches in Artificial Respiration in Stillborn Children, &c. By F. H. Champneys, M.A., M.B.Oxon., &c. pp. 153.

Massage as a Mode of Treatment. By Wm. Murrell, M.D., F.R.C.P. Third Edition. pp. 143, with Diagrams.

Sterility and Impotence in Man. By Dr. R. Ultzmann. Translated, with Notes and Additions, by Arthur Cooper. pp. 100.

LONGMANS, GREEN, & Co., Paternoster-row, London.

Pulmonary Consumption, its Etiology, Pathology, and Treatment. By C. J. B. Williams, M.D., LL.D., F.R.S., and C. T. Williams, M.A., M.D.Oxon. Second Edition, enlarged and rewritten by Dr. C. T. Williams. pp. 446, with 4 Coloured Plates and 10 Woodcuts.

LIVINGSTONE, E. & S., Teviot-place, Edinburgh.

The Anatomy of Surgery. By John M'Lachlan, M.B., M.R.C.S. pp. 768, with 74 Engravings.

NEW SYDENHAM SOCIETY, London.

A Text-book of Midwifery. By the late Prof. Otto Spiegelberg. Translated from the Second German Edition by J. B. Hurry, M.A., M.D.Cantab. Vol. I. pp. 551, with Illustrations.

OLIVER & BOYD, Edinburgh.

Notes on Surgery for Nurses. By Joseph Bell, F.R.C.S. Ed. pp. 136.

REPUBLICAN PRESS ASSOCIATION, Concord, N.H., U.S.A.

Transactions of the New York State Medical Association for 1886. Vol. III. Edited by A. L. Carroll, M.D. pp. 601, with Illustrations.

SPON, E. & F. N., London and New York.

Food Adulteration and its Detection. By J. P. Battershall, Ph.D., F.C.S. pp. 328, with Illustrations.

STABILIMENTO TIPOGRAFICO DEI CLASSICI, Italiani. Napoli.

Trattato della Difteria. Per il Cav. Dott. Vincenzo Cozzolino. Vol. I.

TRÜBNER & Co., Ludgate-hill, London.

Morality and Utility: a Natural Science of Ethics. By G. Payne Best, B.A., M.B.Cantab. pp. 200.

TURNBULL & SPEARS, Edinburgh.

Hints on the Breeding and Rearing of Farm Animals. By Thomas Walley, M.R.C.V.S., Principal of Dick's Veterinary College, pp. 68.

A Horse's Troublous Life, the Life of a Dairy Cow, the Life of a Dog, with Animal Characteristics. By Thomas Walley, M.R.C.V.S. pp. 57.

WATT, A. P., Paternoster-square, London.

Three Lectures on the Forms of Nasal Obstruction in relation to Throat and Ear Disease. By Greville MacDonald, M.D.Lond. pp. 80, with Plates.

WHITTAKER & Co., White Hart-street, Paternoster-square, London.

Technical School and College Building. By E. C. Robins, F.S.A. pp. 244, Illustrated.

WREDEN, F., Braunswelg.

Militärmedicin: Kurze Darstellung des Gesamten Militär-Sanitätswesens. Von Dr. H. Frölich. S. 760, mit 37 Abbildungen in Holzschnitt.

Atti della Reale Accademia Medica di Roma; Anno XII., Vol. II., Serie 2.—Descriptive Catalogue of the Specimens illustrating Surgical Pathology in the Museum of University College, London; by Marcus Beck, M.S., &c., S. G. Shattock, F.R.C.S., and C. Stonham, F.R.C.S.; Part II.—Transactions of the Pathological Society of Philadelphia, Vol. XII.; edited by W. E. Hughes, M.D.—Walks in the Ardennes; edited by Percy Lindley (Smith and Son, Strand). 6d.—How he Did it; the Story of Harry Furniss's Artistic Joke, told by his Lay-Figure. 1s.—A Guide to the Choice of a Site for Residential Purposes; by a Member of the Geologists' Association (Sutton, Redhill). 6d.—Receipts for Fluid Foods; by Mary Bullar and J. F. Bullar, M.B.Cantab., &c. (Lewis, Gower-street).—On Holidays; by Roderick Maclaren, M.D.—Untersuchungen über Heterogenese; von Dr. A. P. Fokker (Noordhoff, Groningen).—The Climate of Llandudno; by James Nicol, M.D.; Second Edition.—"The Ten Tribes;" by Alder Smith, M.B., F.R.C.S.—Ein Beitrag zu den Operationen der Cephalocelen; von Dr. B. Flothmann (Henser, Berlin).—Examination Cards (Minor Surgery, &c.); by A. T. Schofield, M.D., F.R.C.S.—Pocket Shorthand Instructor complete (Fourth Edition).—The Physiological Effects of Artificial Sleep, with some Notes on Treatment by Suggestion; by Dr. M. Roth (Baillière, Tindall and Cox).—Sherryana; by F. W. C.; with Illustrations by Linley Sambourne.—L'Ospedale Lina.—Rendiconto Statistico, 1881-86; pel Dott. E. Salvia.—Report and Narrative of the Trial at Christchurch, New Zealand, of Thomas Hall and Margaret Graham Houston charged with attempting to Murder Kate Emily Hall. 1s.—The Curability of Insanity and the Individualised Treatment of the Insane; by J. S. Butler, M.D. (Putnam's Sons).—Magazines for August: Good Words, Sunday Magazine, Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Scribner's Monthly.—Atlas von Beleuchtungsbildern des Trommelfells; von Dr. K. Bürkner.—Journal of the College of Science, Imperial University, Japan Vol. I., Part 3.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BACON, ALFRED T., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Sixth District of the Leeds Union.

BARKER, JOHN, M.B.Durh., M.R.C.S., has been appointed Medical Officer of Health for the Reeth Rural Sanitary District; and Medical Officer and Public Vaccinator for the Muker District of the Reeth Union, vice Turner, resigned.

BRIDGMAN, HENRY EDWARD, L.R.C.P.Lond., M.R.C.S., has been appointed Assistant Surgeon to the Burton Infirmary.

CLARKSON, EDWARD, L.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Fourth District of the Ongar Union.

EVANS, EVAN, M.R.C.S., L.S.A., has been appointed Medical Officer for the Llanelly District and the workhouse of the Llanelly Union.

HOOPER, ALFRED, M.R.C.S., L.S.A., has been appointed Assistant Surgeon to the Burton Infirmary.

JACK, CHARLES, M.D., C.M.Glas., has been appointed Medical Officer of Health for the Horsforth Urban Sanitary District.

JOHNSTONE, WILLIAM, has been appointed Analyst for the Borough of St. Ives.

LODGE, SAMUEL Jun., M.B., B.S., has been appointed Medical Officer of Health for the Tong Urban Sanitary District, vice Lodge, resigned.

MATTHEWS, VALENTINE, M.R.C.S., L.S.A., has been appointed Surgeon to the Westminster General Dispensary.

MONTAGUE, A. J. HELM, M.B.Dunelm., L.R.C.P.Lond., M.R.C.S., has been appointed House-Surgeon to the East Suffolk and Ipswich Hospital, vice Taylor, resigned.

MORGAN, G. F. ELLIOT, M.R.C.S., L.R.C.P.Lond., has been appointed House-Surgeon to the Hartlepools Hospital, vice Paige, M.B., resigned.

MORITZ, SIEGMUND, M.D., M.R.C.P.Lond., has been appointed Assistant Physician to the Manchester Hospital for Consumption and Diseases of the Throat.

OLIVER, M. J., M.B., C.M.Ed., has been appointed Demonstrator of Anatomy in the Medical Department of the Yorkshire College.

PROFFITT, WILLIAM J. W., L.R.C.P.Lond., M.R.C.S., has been appointed Assistant Surgeon to the Burton Infirmary.

REID, IRVINE K., M.D.Aber., has been appointed Medical Officer in the Government Medical Service of British Guiana.

SHAW, HUGH GROSVENOR, M.R.C.S., L.R.C.P., has been appointed House-Surgeon and Visiting Surgeon to the Southport Infirmary, vice J. C. Voight, M.D., resigned.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

CUMBERLAND INFIRMARY, Carlisle.—Resident Pupil. Fee, to include board, £20 for six months.

DIOCESE OF NEW WESTMINSTER, British Columbia.—Medical Missionary. Stipend £150, with lodging, and liberty of private practice.

FEMALE LOCK HOSPITAL, Harrow-road, W.—Assistant House-Surgeon. Board and lodging, but no salary.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £120 per annum.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary £150, with free house.

PAROCHIAL BOARD OF PENNYGOWN AND TOBOSAY. — Medical Officer. Salary £100 a year.

SALFORD UNION INFIRMARY.—Assistant Medical Officer. Salary £140 per annum, with furnished apartments.

SUNDERLAND INFIRMARY.—House-Physician. Salary £80, rising £10 annually to £100, with board and residence.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior Resident Surgeon Apothecary. Salary £100 per annum, with furnished residence and board.—Junior Resident Surgeon Apothecary. Salary £80 per annum, with furnished residence and board.

Births, Marriages, and Deaths.

BIRTHS.

ARMITAGE.—On May 22nd, at Emu Bay, Tasmania, the wife of Joseph Armitage, M.B.Oxon., M.R.C.S., of a daughter.

COCKELL.—On the 30th ult., at Forest-road, Dalston, the wife of Fredk. B. Cockell, Jun., M.R.C.S., of a son.

GRÜN.—On the 26th ult., the wife of Edward F. Grün, M.R.C.S., of a son.

PAULLEY.—On the 22nd ult., at Pulham Market, Norfolk, the wife of Legge Paulley, L.R.C.P.Ed., M.R.C.S., of a son.

VIVIAN.—On the 1st inst., at Chase Side, Southgate, N., the wife of R. T. Vivian, L.R.C.P.Ed., M.R.C.S., of a son.

WALTER.—On the 28th ult., at Marshfield, Gloucestershire, the wife of W. Ernest Walter, M.R.C.S.Eng., L.S.A., of a daughter.

MARRIAGES.

COWEN—HUXLEY.—On the 27th ult., at St. Michael's, Brixton, George Cowen, M.D., B.Ch., B.A., to Marion, youngest daughter of W. T. Huxley, Esq., of Brixton.

FRASER—RUTTER.—On the 27th ult., at Brixton Independent Church, E. Fraser, M.D., to Helena Blanche Rutter, daughter of D. F. Rutter, of The Limes, St. John's-road, Brixton, S.W.

FRIZELL — EVERETT. — On June 17th, at the Presbyterian Church, Singapore, Thomas Frizell, B.A., M.D., M.Ch., J.P., to Annie, eldest daughter of George Everett, Esq., of Brixton, London.

FURNER—O'REILLY.—On the 28th ult., at the Church of the Sacred Heart, Kilburn, by the Rev. George Bampfield, B.A., assisted by the Rev. Father Cox, O.M., J. Duncan Campbell, younger son of William Campbell Furner, of Salisbury-road, Brighton, and grandson of the late William Furner, J.P., D.L., County Court Judge, to (Minnie) Mary Elizabeth Eleanor, only daughter of the late Michael O'Reilly, M.D., and Mrs. O'Reilly, of Bishop's Stortford, Hertfordshire.

MACKENZIE—FEDDON.—On the 27th ult., at St. Augustine's, Highbury, London, William James MacKenzie, M.B.Glas., to Susannah (Susie), twin daughter of J. Monkhouse Feddon, Esq., of Highbury New-park.

PAINE—SAYERS.—On the 28th ult., at St. Margaret's, Lee, W. H. Paine, L.R.C.P.Lond., M.R.C.S., to Clara Emma, third daughter of W. J. Sayers, of Lewisham, S.E.

STACY—THORN.—On the 27th ult., at St. Philip's, Heigham, Norwich, John Herbert Stacy, L.R.C.P., L.R.C.S., to Naomi Ellen, elder daughter of Charles Thorn, of Norwich.

DEATHS.

DOLMAN.—On the 28th ult., at the Wardwick, Derby, Arthur Henry Dolman, M.R.C.S., L.S.A., in the 57th year of his age.

FERGUS.—On the 29th ult., at Bath-street, Glasgow, Andrew Fergus, M.D., M.R.C.S., Crown Member for Scotland of the General Medical Council, and ex-President of the Faculty of Physicians and Surgeons, Glasgow, aged 65.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 4th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 29	29·98	W.	69	64	117	73	62	...	Cloudy
,, 30	30·04	W.	63	58	116	78	56	·07	Hazy
,, 31	30·10	N.	64	61	109	76	59	...	Cloudy
Aug. 1	30·23	N.E.	62	56	119	77	54	...	Fine
,, 2	30·29	N.	63	57	118	76	57	...	Fine
,, 3	30·40	E.	63	57	109	76	55	...	Hazy
,, 4	30·38	S.E.	64	57	110	76	55	...	Hazy

MEDICO-PSYCHOLOGICAL ASSOCIATION.

EXAMINATION IN PSYCHOLOGICAL MEDICINE, JULY 25–26, 1887.

PASS EXAMINATION.

(It is not necessary to answer more than four of these questions.)

1. Give the symptoms, bodily and mental, of general paralysis of the insane, distinguishing between the several stages through which it may run. Note the different mental forms which may characterise the invasion of the disorder.
2. With what other diseases may acute delirious mania be confounded? Give the differential diagnosis.
3. What forms of mental disorder may be classed under "alcoholic insanity"?
4. Enumerate the bodily and mental symptoms of mental stupor with melancholia. In what does it differ from mental stupor without melancholia ("primary dementia")?
5. Give the treatment (general and medical) of a case of puerperal mania.
6. In what form and dose would you prescribe hyoscyamine, hyoscine, hydrobromate, urethane, paraldehyde, and hypnone?

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

MEDICAL MEN AND THEIR ACCOUNTS.

SOME patients seem to have a pleasure in writing a grumbling letter to *The Times* instead of promptly paying their medical accounts. The last instance is that of a gentleman who describes himself as a "victim," and complains that he is charged for twelve months' professional medical attendance and medicine £47 9s. He calls the charge "enormous for attendance on one person." It is by no means necessarily so. It may be quite a moderate one. There are no rules in the medical profession which forbid a medical man in general practice to furnish particulars when asked to do so. Indeed, it is proper that he should comply with such a request; but it is unkind to ask him unless the case is very clear. Medical men are always ready to give any reasonable information as to their charges; but to ask them to spend their scanty hours of rest at Christmas in giving long clerical details of attendance is unreasonable.

Mr. T. White.—The method is described in the current (July) number of the journal of the Chemical Society, in an abstract of a paper by L. Spiegel (*Chem. Centr.*, 1887, 363, 364).

Andw. McL.—The qualifications named do not justify the use of the title "Physician."

Juvenis.—The matter shall not be overlooked.

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HOSPITALS AND HOSPITAL WORK.

THE *Sunday at Home* is publishing an interesting series of papers headed as above, from the pen of Mrs. Brewer. The Westminster is the hospital under notice in the August number of the magazine. The history of the institution dates from the year 1715, when the condition of sick prisoners in London, and of the sick poor generally, excited the sympathy of four gentlemen—Henry Hoare, Robert Witham, Patrick Cockburn, and William Wogan, who, having collected some funds, secured rooms in the house of a lady in Westminster, which formed the nucleus of the future hospital. In 1720 this small band of workers opened an establishment in Petty France, among the very poor of Westminster, where they carried on their benevolent labours for four years, Dr. Colbatch working always gratuitously with them until 1723, when he ceased to belong to them. Soon after a dissension arose among the committee respecting an appropriate site for the institution, the result of which was that the minority separated themselves and founded a hospital at Lanesbro' House, known now as St. George's Hospital, whilst the majority fixed upon a house in James-street. In this building the hospital carried on its work for 100 years, and in 1834 it removed to its present position.

Motor Nerve.—Our correspondent will find the subject fully discussed in any of the standard works on physiology.

Dr. T. Hall Redwood.—The method is described in the *Analyst*, October, 1886, page 197.

A Sufferer should consult a local medical practitioner. We do not prescribe.

Dr. W. Duncan.—The paper has been received, and will appear shortly.

THE BROWN DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to say that in answer to a further appeal I have received the following additional contributions to the above fund. I remain, Sirs, yours faithfully,

G. STANLEY MURRAY, M.D.

23, Upper Richmond-road, Putney, Aug. 1st, 1887.

Amount already acknowledged	£26	16	0	F. M. Corner, Esq. ...	£0	10	6
W. Allingham, Esq. ...	5	5	0	Mr. H. W. Kiallmark ...	0	10	6
Dr. W. Denman	2	2	0	Dr. Augustus Brown ...	0	10	6
Dr. Hughlings Jackson...	2	2	0	Dr. Norman Kerr ...	0	10	0
Sir Edwin Saunders ...	2	2	0	Dr. Heywood Smith ...	0	10	0
Wm. Adams, Esq. ...	2	2	0	Dr. E. W. F. Stivens ...	0	10	0
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USE OF COCAINE IN MINOR SURGERY.

To the Editors of THE LANCET.

SIRS,—Having lately seen several letters in your columns speaking satisfactorily of cocaine as a local anæsthetic, perhaps the following case may be of interest to some of your readers.

A young woman aged thirty came to me a short time ago with a sarcoma of three years' growth from the outer surface of the lower jaw, at a point corresponding to the right molar teeth. I decided to remove it; and as she strongly objected to chloroform, I injected a 4 per cent. solution of the hydrochlorate of cocaine in the neighbourhood of the tumour, and gave the growth itself a thorough soaking with a 20 per cent. solution of the drug. I then removed the tumour, with the result of little or no pain and a rapid recovery without a bad symptom. The tumour was a spindle-celled periosteal sarcoma.

I am, Sirs, yours very truly,

St. David's, Aug. 2nd, 1887. J. GWYTHER HARRIES, L.K.Q.C.P., &c.

THE THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—By a printer's error the name of Mr. Haward, F.R.C.S. Eng. was substituted for that of Dr. Haward, M.R.C.P.L., F.R.C.S. Eng., in the list of the Council of the Therapeutical Society. Dr. Saundby has asked me to withdraw his name, and Dr. Rayner, M.R.C.P.E., President of the Medico-Psychological Society, has kindly consented to join the Council. I am, Sirs, yours truly,

Longridge-road, W., Aug. 2nd, 1887. A. G. BATEMAN, Hon. Sec.

To the Editors of THE LANCET.

SIRS,—As my name has appeared in the list of the Provisional Council of this Society, will you permit me to announce that I have withdrawn from all connexion with it.—I am, Sirs, yours faithfully,

Birmingham, Aug. 4th, 1887. ROBERT SAUNDBY.

GAELIC MEDICINE.

THE Edinburgh Advocates' Library possesses a valuable collection of Gaelic MSS., many of them embodying such medical science as was professed and practised in the Western Highlands of Scotland between four and five hundred years ago. To one of these the accomplished occupant of the Celtic chair in the University of Edinburgh, Prof. McKinnon, has recently called attention, as having, like its congeners, belonged to the MacBeaths, or Bethunes, or Beatons, who for many generations were physicians of high repute, particularly in the islands of Mull and Islay. Of Irish pedigree, which was equivalent among these islanders to having "come over with the conqueror," these Bethunes were occasionally called in by the Scottish kings, and one of them, "Ferchard Leche" (Farquhar the Healer), cured King Robert II. of a sore and serious illness, for which, as a reward, he was made body physician to His Majesty, and received "the lands of Mollenes and two parts of Hope in Sutherland," as well as the islands lying between Store Head in Assynt and that point of Armadale in Farr. The physician being "himself of kingly descent," doubtless owed to this circumstance the "right royal" character of the "fee." Prof. McKinnon mentions a "Fergus Beaton" as having the following ancient Irish MSS. in the Irish character—to wit, "Avicenna, Averroës, Joannes de Vigo, Bernardus Gordonus, and several volumes of Hippocrates." These documents are in the Advocates' Library Collection, and their subjects are "medical and medico-astrological." They contain a Latin medical treatise, with a translation and commentary in Gaelic. The first chapter is on "fevers—*febris est calor non naturalis*, &c. Then follows a Gaelic paraphrase, with or without explanation." The treatise is divided into chapters, sections, and subsections, in regular scientific order. Further on proverbs and maxims, moral as well as medical, are given in Latin, always accompanied by Gaelic equivalents—e.g., "*quod male incipitur male finitur*," "*per calidum et humidum vivimus*," "*per frigidum et siccum nutrimur*," and so on. A calendar is also given, to which are appended general observations, stating the food and drink appropriate to each month, when it is proper to bathe, when to bleed in the right or in the left arm, what thunderstorms and gales portend, &c. The frequent reference made to the eyesight is curious, and is explained by Prof. McKinnon as indicating diseases of the visual organs due to defective housing and peat-smoke. Impaired eyesight, it may be remarked, is a very common failing in the Irish recruit, often leading to his rejection, at the present day. When a really exhaustive history of medicine comes to be compiled—a work only possible under division of labour,—these Gaelic MSS. will inspire an interesting and instructive chapter.

Enquirer.—We would advise our correspondent not to move further in the matter. He began wrongly by not waiting for the order to examine; and it is only reasonable that the magistrate should wish to consult with the medical man, though the latter is not bound to give him the information. It is necessary to bear in mind that it rests with the magistrate to decide as to the amount of fee to be awarded.

A. K.—The letter was received.

A MEDICAL BIOGRAPHICAL DICTIONARY.

To the Editors of THE LANCET.

SIRS,—It has often occurred to my mind that the important services rendered to our science by various eminent men are deserving of some fuller record than the bare name of the physician or surgeon within brackets, after some description in a text-book. Frequently one is left in doubt as to how much the writer and how much the name in brackets is responsible for. In the Medical Directory we have a record of the professional "men of the time," but of the great men we are yearly losing we are apt, after a time, to have difficulty in finding any detailed account of their labours. Many eminent men escape that "new terror added to death"—a biography; yet I am not singular in wanting to know something of the history and work of the distinguished and disinterested men who have in the past raised our profession to its present place in the very front rank of science. Your own obituary notices supply excellent material for a Biographical Dictionary, and might be considered to obviate the need for a special work, but it is to a limited number that possession of a series of THE LANCET is possible, and to few more that access to it is practicable.

I am, Sirs, yours faithfully,

July 27th, 1887. T. HUME, Surgeon Major.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Thomas Longmore, Netley; Dr. Cullingworth, Manchester; Mr. Jonathan Hutchinson, London; Mr. C. Fenwick, M.P., London; Dr. Norman Kerr, London; Dr. Menzies, London; Mr. W. Curran; Dr. Gordon Holmes, London; Dr. de Watteville, Dr. W. H. Barlow; Dr. Percy Wilde, Bath; Dr. C. R. Walker, Chesterfield; Dr. G. H. B. Macleod, Dublin; Dr. Suckling, Birmingham; Mr. G. Bischof, London; Mr. S. Keith, Edinburgh; Dr. Douglas, Bournemouth; Mr. J. G. Harries

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LETTERS, *each with enclosure*, are also acknowledged from—Dr. Jones, Hammersmith; Mr. O'Hanlon, Spennymoor; Messrs. Whitfield and Co., Birmingham; Mr. Brockelhurst, London; Messrs. Oliver and Boyd, Edinburgh; Mr. Godfrey, Northampton; Messrs. Mumford and Co., Bradford; Mr. Husband, Leeds; Mr. Vergo; Messrs. Harris and Co., Birmingham; Mr. Williams, Liverpool; Messrs. Hills and Co., Dover; Mr. Miller, Chelsea; Mr. Guest, Darlington; Mr. Walter, Marshfield; Mr. Gardner, Armitage; Mr. Moring, London; Mr. Lewis, Birmingham; Mr. Smith, Staffordshire; Mr. Turner, Mexborough; Dr. Dixey, Edinburgh; Mr. Shirtliff, Kingston-on-Thames; Mr. Pace, Newcastle-on-Tyne; Dr. MacLean, Harpenden; Messrs. Cassell and Co., London; Mr. Berry, Coventry; Dr. Ritchie, York; Dr. Messen, Pretoria; Dr. Lindsay, Belfast; Mr. Raven, Broadstairs; Mr. Fuge, Taunton; Mr. Hepworth, Kidderminster; Dr. Beaman, Newton-le-Willows; Mr. McLintock, Salop; Dr. Sprigge, Penley; Miss Carson, Burton-on-Trent; Dr. Dalgleish, Trowbridge; Mr. Tunstall, Warrington; Mrs. Bodger, Chichester; P. L.; Chemist, Clapham; J. H., Scarborough; A. B., Stratford; Mrs. M., Eastbourne; C., Blackburn; Lady Superintendent, Cambridge; A. B.; The Maltine Manufacturing Co., London; Medicus, London; Argonaut; Jayenne; Deaconess Townson, Chester; B., Rusholme; E. B. G., Shropshire; Milton Chemical Co., Glasgow; Medical, Stoke-on-Trent; M. A. T., Tunbridge Wells; D. W., Mansfield; M.B., Edinburgh; Medicus, Darwen; The Matron, Bridgewater; M.R.C.S., Southampton; M. S. D.; Sister in Charge; T. W., London; M.D., Morecambe; M.D., Crewe; Fides, London; B.A., Harrogate; Alpha, London; York, London; Surgeon, Minchinhampton; C. E., Southsea; M.D.; Carbol; Holiday; Lennox.

Vaccination Inquirer, Consett Guardian, Glasgow Evening Times, Glasgow Herald, Western Daily Mercury, Liverpool Courier, Educational Times, West Surrey Times, Oldham Standard, Animals Institute Review, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 9.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, August 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, August 12.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 13.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Clinical Lecture
ON THE
TREATMENT OF GASTRALGIA.

By SIR JAS. SAWYER, KNT., M.D., F.R.C.P.,
SENIOR PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

GENTLEMEN,—I do not propose to-day to attempt a complete exposition of the nature and cure of gastralgia. I desire to draw your attention to some salient features of practical import in the definition, etiology, symptomatology, and diagnosis of the disorder, and especially to point out to you a means of treatment in which I have found confidence, based upon a long and frequent experience of satisfactory results.

Gastralgia is a very painful affection. The pain has marked characteristics as to position, duration, and onset, and as to its sexual, constitutional, and temperamental associations. The disorder has been variously called gastralgia, cardialgia, and gastrodynia. The nomenclature of the Royal College of Physicians authorises the last name, and it gives "stomach-ache" as a popular synonym. The malady is usually held to be a neurosis, affecting the gastric nerves. According to Dr. Leube gastralgia is limited essentially to the sensitive sphere of the gastric nerves.[1] That the disorder is a neurosis is not quite proven—indeed, it is scarcely demonstrable. But the idea is a good "working hypothesis," which I commend to you. Romberg distinguished two forms of gastralgia: one, which he called gastrodynia neuralgica, he held to be a hyperæsthesia of the gastric branches of the pneumogastric nerves; the other, which he called neuralgia coeliaca, he regarded as a hyperæsthesia of the solar plexus. Although Romberg has indicated what he thought to be the signs and conditions upon which a clinical differentiation of these varieties of gastralgia might be established, I agree with Niemeyer that in a given case it cannot be determined whether the patient's pains occur in pneumogastric or in sympathetic distribution. As Henoch [illegible], although the distinction may rest upon a correct theoretical basis, it is one which is inapplicable and worthless in practice.[2] It has been objected that the term gastralgia is unscientific, because it is only the name of a symptom. In practice, however, and especially in private practice, we meet with many cases for which I know of no other name; and I apply the name to a clearly conceived and clearly defined condition. I call a case one of gastralgia in which pain, deep-seated and paroxysmal, in or about the stomach, of a neuralgic or quasi-neuralgic character, is the leading symptom. But this statement is inseparable from the following important qualification. Pain of the character and position described can only be regarded as that of gastralgia when it is unaccompanied by marked evidences of gastric or gastro-hepatic catarrh, and when, also, it is wholly unaccompanied by physical signs of structural disease either in the stomach or in its neighbourhood. The latter part of this definition involves an essential and a negative conclusion. A negative conclusion, of course, in any case is proverbially difficult. Such a conclusion should only be formed in a supposed case of gastralgia after a complete examination of all the circumstances. Further, a diagnosis of gastralgia should only be held in the conduct of a case of pain in the gastric region as a conclusion which is subject to frequent diagnostic revision; that is, such a diagnosis can only be continued when repeated physical exploration fails to reveal any other, coarser, interpretation of the patient's suffering. I desire to impress this last statement upon you as an important clinical caution, which you must especially remember when your patient is a man at or beyond middle life. In such a person the danger of mistaking a graver and more fatal condition for gastralgia is especially imminent. The diagnosis of gastralgia is one which should never be lightly made, nor negligently maintained. Pain in the gastric region you should always remember, may long appear to be simply gastralgic—that is, independent of any local organic basis,—when the appearance of a tumour, or the discovery of an aneurismal pulsation, or a sudden gastric or intestinal hæmorrhage may prove a diagnosis so comparatively favourable to be tenable no longer.

Romberg's short and vivid description of an attack of the severest gastralgia has been accepted as classical. Let me read it to you. He wrote: "A violent contracting pain at the pit of the stomach supervenes suddenly, or after being preceded by a sense of oppression; it generally extends to the back, there is a sense of fainting, the face is fallen in, the hands and feet cold, and the pulse small, cramped, and intermittent. The pain attains such a pitch as to cause the patient to scream out. The region of the stomach is either swelled and distended like a ball, or, as is more frequently the case, it is drawn in, and the abdominal parietes are tense. It is common to find pulsation at the epigastrium. Pressure is not only well borne, but the patient frequently forces the pit of the stomach against some firm object, or compresses it with his hands. Sympathetic sensations occur in many instances in the thorax, under the sternum, or in the pharyngeal branches of the vagus nerve, while they are seldom met with in the superficial parts." This is Romberg's account of a typical and violent seizure of that form of gastralgia which he called cœliac neuralgia or paroxysmal hyperæsthesia of the solar plexus. You may accept his clinical portrait as accurate, although it is doubtful whether he was correct in localising the pain solely in nerves of the sympathetic system. Under the heading of gastrodynia neuralgica you will find in Romberg's excellent book a faithful clinical description of the milder cases of gastralgia, or "attacks of painful sensations in the stomach," especially as they are manifested in association with the nervous temperament, and with the reflex expressions of sexual irregularities in women. I have ventured from my reading and clinical experience to form the opinion that Romberg did not describe two distinct diseases under the several names of cœliac neuralgia and neuralgic gastrodynia, but merely one and the same affection, which I have been accustomed to call gastralgia, as he met with it in different degrees of severity. Of course a dual interpretation of painful neuralgic affections in the gastric region has an anatomical basis in the dual nerve supply of the stomach—namely, in the innervation of the organ by nerves of the sympathetic system, and also by the vagus. But, truly, in the words of Leube, "in the present state of uncertainty with regard to the mode of action of the gastric nerves, especially with regard to the conditions of sensation, and in view of the anastomotic connexions between the vagus and the sympathetic in the stomach, such a division of cardialgia appears to be both theoretically and practically untenable."

Gastralgia may occur at any age. It is rare at the extremes of life. It is rarer in children than in old people. It is most commonly met with in early middle life. Like all neuralgias, it follows hereditary constitution, and is especially associated with the nervous temperament. I advise you to study temperaments. In them you will find many clues to morbid tendencies. Temperaments denote distinct types of physical form, of habits, and of capacities. A man of nervous temperament is mostly slightly built, and he is generally in a hurry. He is hyper-sensitive to all influences, and to pain amongst them. All his movements are quick, and he has a strong tendency to "fidget" with his ideas or with his extremities. His speech betrays him: he talks volubly, abruptly, and earnestly, often splitting up his phrases, or recalling and correcting them, and especially modifying qualifying words.[3]

As in all neuralgias, women are more liable to gastralgia than men. As, also, in all neuralgias, the manifestation of gastralgia is favoured by every condition which reduces the vigour of a patient's "general health." Gastralgia is a frequent neuralgic development of hysteria; and, in women who are not hysterical, its incidence is often determined by the prostration of anæmia or by the exhaustion which arises from prolonged uterine discharges. In men gastralgia may be a consequence of sexual excesses or of masturbation. All these circumstances must be remembered and dealt with in the causal diagnosis and effective treatment of the disorder.

The diagnosis of gastralgia is not usually difficult. Pain is the leading symptom. When we are satisfied as to the

[illegible] Van Niemeyer's Text-book [illegible]
[illegible]: Text-book of Practical Medicine.

[1] Romberg's Nervous Diseases of Man. Translated for the Sydenham Society by Sir Edward Sieveking, M.D., &c.

[2] I have given a fuller account of the nervous temperament in my Contributions to Practical Medicine.

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genuineness of pain in the region of the stomach, its correct interpretation largely depends upon an accurate appreciation of various diagnostic data *per viam exclusionis*. I cannot deal exhaustively with this part of the subject to-day. I desire, however, to give you these three cautions, which I have learned in practice: (1) Gastralgia is not a wasting disease. (2) It is not safe to diagnose cancer of the stomach until you can *feel* the cancer. (3) Do not diagnose ulcer of the stomach until you have *seen* blood from the stomach, either in hæmatemesis or melæna. You may take it as a clinical truth, as the late Dr. Wilson Fox clearly insisted, that pain arising in the stomach when the organ is empty, and relieved by the ingestion of food, is almost diagnostic of its nervous origin and nature.[5] Sometimes the pain of ulcer or cancer of the stomach may for a time appear to be relieved by taking food, but such a condition is highly exceptional. There is sometimes a kind of gastric "sinking," even amounting to craving for food, in gastric catarrh, and with greater rarity probably in gastric ulcer; the local discomfort is not, however, relieved by feeding, but, on the contrary, usually made worse. There is another diagnostic sign of great importance in the recognition of gastralgia. It is this: firm pressure over the region of the stomach relieves the local pain. Some patients find this out for themselves, and press a closed hand or the upper rail of a chair strongly against the epigastrium, and so find relief.

My chief object in drawing your attention to the subject of gastralgia is to explain to you a plan of treatment which I have found very successful. I can tell you of a drug which cures gastralgia. Before you prescribe it, however, you ought to find out if there be any prominent pathological concomitants or causal antecedents of the disorder, and deal with them. Anæmia, sexual excess, overwork, work under wrong conditions, uterine discharges, masturbation, &c., must be appropriately met. But for the cure of the gastralgia something more is usually necessary. Of all the directly therapeutic results in medicine with which I am acquainted, one of the most demonstrable is that which can be produced by the suitable exhibition of arsenious acid in uncomplicated gastralgia. I give one-twenty-fourth of a grain of arsenious acid, made into a pill with two grains of extract of gentian, thrice daily, between meals. The use of this remedy must be continued for a few weeks. In a case of moderate severity no other medicinal treatment is necessary. The gastralgic pains become less frequent and less severe, and recovery is steadily and surely attained. In severer cases I use some form of counter-irritation to the epigastrium, and I usually employ a rubefacient liniment of ammonia. In the severest cases vesication by a fly-blister is of service, and the blistered surface should be kept raw for some days by means of a daily dressing of savin ointment. But you must not rely upon treatment by drugs alone. Every hygienic adjuvant which tends to raise the strength of the patient is of high value in the cure of gastralgia. I especially advise you to make sure the sufferer feeds well and fully. The diet should be generous. A "dyspeptic" regimen makes a case of gastralgia worse. When you are satisfied there is no, or but slight, gastric catarrh in the gastralgia of a fairly vigorous adult, you should direct a dietary after this plan:—Breakfast: bread-and-butter or dry toast, with some fresh white fish, or some cold chicken or game, or a mutton chop, with a breakfastcupful of cocoa or weak tea or coffee. Dinner (1 P.M.): fresh beef or mutton, with bread, potatoes, cooked green vegetables, a fruit tart or a farinaceous pudding, with a glass of light bitter ale. Tea (at 5 P.M.): bread-and-butter or dry toast, with a small cupful of cocoa, tea, or milk-and-water. Supper (not later than 9 P.M.): white fish, or some cold chicken or game, or a little cold meat, with bread, and a glass of ale.

[5] Reynolds' System of Medicine.

TAUNTON AND SOMERSET HOSPITAL.—At a recent special meeting of the governors of this institution, called with reference to the gift of £5000 by an anonymous donor towards the jubilee extension fund, it was resolved that £800 should be paid for the site of the proposed nursing institute, and as this property belonged to the hospital, the sum will be paid into the general fund. The remainder of the money, after paying for this building, the children's ward, and the out-patient's department, will be invested as an endowment for the support of the nursing institute. It was stated that the fund amounted to £10,489.

ABSTRACT OF THE

Address in Public Medicine

Delivered at the meeting of the British Medical Association at Dublin,

BY THE REV. SAMUEL HAUGHTON, M.D.,
SENIOR FELLOW, TRINITY COLLEGE, DUBLIN.

AFTER welcoming the members of the Association to Dublin, Dr. Haughton said that the natural rights of every human being born into the world might be shortly summed up as follows: liberty, air, water, food, heat, and light. The most important of these were air, water, and food. Without air, we live three minutes; without water, we live three days; without food, we live three weeks. Instincts stronger than reason compel us from our birth to seek these natural rights for ourselves; by force, if necessary; our progress has, however, been slow in recognising the equal claims of others to the enjoyment of these natural rights. In 1851 the window tax was abolished, after having deprived millions of their fair share of sunlight and air for more than one hundred and fifty years. In principle, this was as monstrous a tax as that levied upon urine by the Roman Emperor, Vespasian.[1] The supply of pure water to the poorer classes was as defective as that of sunlight and air. In 1836, the first year of complete registration, the water supply of London was 36 million gallons daily, much of which was drawn from the tidal portion of the River Thames, more or less imperfectly filtered; but owing to the doubtful purity of the water supply, many persons preferred for drinking purposes the water derived from surface pumps, some of which were in the immediate vicinity of churchyards. In 1845 the water supply of London had increased to 45 million gallons daily; in 1858 it was 75 million gallons; in 1886 the supply reached 180 million gallons daily. In the good old times Ireland was not much better off. The City of Waterford depended chiefly for water supply upon its own surface wells. One of these, which appears to have been in great demand, was analysed by Sir Charles Cameron, who declares it to have been, without exception, the worst water he had ever met or read of. On closely smelling this water, a faint urinous odour was perceptible, and the amount of ammonia contained in it exceeded the quantity he had found in some specimens of Dublin sewage.

Discussing the death-rate and density of population, Dr. Haughton observed that the death-rate of a population was the number of deaths for 1000 living persons of all ages in a year. The density of a population was the number of persons residing in a square mile. It is well known that after the density of population exceeds a certain limit the death-rate begins to increase, so that the density of population must be regarded as one of the causes of death-rate, though only a secondary cause. The first person who attempted to reduce the relation between density and death-rate to a mathematical form was the late Dr. Farr, who rendered such important services to the science of vital statistics. He selected seven groups of districts of England and Wales arranged according to density of population, and compared their death-rates; from these data he derived the following formula:—

$$m' = m \left(\frac{D}{D'}\right)^{0\cdot11998}$$

where m, m' are the death-rates of any two places, and D, D' the densities of population at the same two places. This is equivalent to assuming that the relation between density and death-rate may be represented by a parabolic curve, of the form[2] $Y^n = px$. Dr. Farr assumed that n and p are constant, and from this assumption derived his formula, in which, however, the column of differences is too large, and gives the large probable error $\epsilon = +$ or $- 3\cdot11$ in the death-rates. If we assume that the values of n and p vary at different parts of the parabolic curve, we can readily find formulæ for calculating, in which the probable error is

[1] ——— Iucri bonus est odor ex re
Qualibet ———

[2] This form of parabolic curve represents also in meteorology the relation between radiation and temperature.

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reduced to less than one-third of that of Dr. Farr's formula. The values of n which he employed are—

$n = 0{\cdot}118$ between 19 and 25 death-rates.
$n = 0{\cdot}135$ „ 25 and 32 „
$n = 0{\cdot}105$ „ 32 and 40 „

By using these values we find that the column of differences gives the mean probable error $e = +$ or $- 0{\cdot}97$ which is less than one-third of the mean error of Dr. Farr's table. For the use of persons not familiar with mathematical tables Dr. Haughton has constructed the following table of death-rates calculated from densities, the use of which is obvious.

Death-rate.	Density.	Death-rate.	Density.
15	146	28	4,332
16	156	29	5,580
17	165	30	7,140
18	175	31	9,051
19	186	32	13,480
20	287	33	18,059
21	434	34	23,615
22	645	35	31,673
23	939	36	41,371
24	1,347	37	53,665
25	1,804	38	69,293
26	2,527	39	88,648
27	3,324	40	112,990

This table enables us to determine the average death-rate when we know the density of a population, but the actual mortality depends on other causes, which vary from place to place. In order to make full use of it, we must form a standard of perfect health. Dr. Farr selected for this purpose sixty-four localities in England and Wales where the mortality of the people ranged on an average from 15 to 17 per 1000, and fluctuated only slightly from year to year. The inhabitants are 973,070, living on 4,797,315 acres. This gives a density of 3155 to the square mile. From the preceding table the mortality of the whole population of England and Wales at that density would be 26·21, so that in these healthy districts upwards of 10 lives per 1000 are yearly saved by the absence of causes which injuriously affect the other parts of the country, and this happy million of country folk have 10,000 fewer funerals to attend each year than any other million in the community. The inhabitants of this Arcadia follow agricultural pursuits, are scattered thinly over an open country, often on high ground, so that the impurities which they produce are dispersed and diluted in the air and water. They do not breathe each other's breath in theatres and churches; they do not drink water sullied by impurities; they do not drink poison in gin palaces; their minds are not overwrought by dissipation, passion, or intellectual effort; yet, in Dr. Haughton's opinion, they purchase their low death-rate at a great cost. The value of life does not depend on its mere length; it depends on the number and value of the thoughts of the liver. These people do not live, they only vegetate; they are in happy ignorance of Greek and Latin, and have never heard of Swift and Pope, of Molière and Voltaire, of Shakespeare and of Newton. They are a dull race, and he should prefer living among a livelier people, where he could live and take his chance of a share in the 10,000 additional funeral feasts and baked meats. Comparing the calculated with the actual death-rates of London, Edinburgh, and Dublin, Dr. Haughton pointed out that in all three cities the former exceeded the actual death-rate, showing that all the cities have a death-rate less than the average, and the column of differences indicates the total effect of the sanitary causes acting in favour of each city—viz.:

London	13·89
Edinburgh	15·55
Dublin	4·02

Thus the sanitary causes acting in favour of Edinburgh and London were nearly four times as great as those in Dublin. Setting aside the absence of epidemic disease, these causes are—air, water, food, clothing, lodging, and drainage.

With respect to water Dublin is better off than most other towns, but large districts of Dublin are very badly provided with fresh air and good lodging, owing to the continued existence of overcrowded tenement houses; and he could testify himself, from personal observation extending over forty years, that in winter time large numbers of children suffer severely from the want of good food and fuel. With regard to the drainage of Dublin it is admittedly bad.

Dr. Haughton said that he had on a former occasion expressed the opinion, and given his reasons for it, that Dublin is unfavourably situated, as compared with other towns, with respect to drainage. If this be so, it ought to be a strong incentive to its inhabitants and local authorities to combine all their resources and intelligence to devise a scheme of main drainage, which would possess all the well-known medical qualities of the perfect cure, by acting *cito, tute, jucunde*. For every 1000 men, women, and children living in the ill-drained and overcrowded liberties and slums of Dublin, five more must die each year than die among 1000 of the inhabitants of the suburbs of Dublin.

He had seen cholera in 1866 and small-pox in 1871 leave their congenial haunts amid the dwellings of the Dublin poor, and carry terror and death into the homes of the rich. And at such times the fever hospitals received hundreds instead of tens of pounds, and thousands instead of hundreds—offerings to the fetish of Pestilence, of as little value as the large sums cast into the temple treasury at Jerusalem, because they were wrung from the pockets of the rich by a terror as abject as their former selfishness was mean.

From tables of the death-rate of Dublin, which he quoted, Dr. Haughton said that the following inferences may be fairly drawn from the foregoing figures;—1. That the death-rate of both city and suburbs is greater than it ought to be. 2. That during the last five years, in which the Corporation of Dublin have spent much money on street sewers, paving of streets, domestic scavenging, and clearing of unhealthy areas, a saving of life amounting to 3 in 1000 a year has been effected, and nearly 4000 lives saved from death during that time. 3. That the death-rate of the township population has remained stationary during the whole fifteen years. The results of the expenditure on sanitary improvements may appear small, but they are only the beginning of a better state of things, and he had no doubt that the improvement would proceed at an accelerated pace, like a stone rolling down a hill: *vires acquirit eundo*, every thousand pounds spent on sanitary work enabled the next thousand pounds to do more work and cause a greater amount of benefit.

Dr. Haughton concluded by quoting tables showing that the death-rate is nearly in the inverse ratio of temperature.

ON LATERAL CURVATURE OF THE SPINE.

BY RICHARD BARWELL, F.R.C.S.,
SENIOR SURGEON, CHARING-CROSS HOSPITAL.

IV.

THE considerable osseous changes described in my last paper[1] originate, as I have shown, in certain bad postures of the trunk, forced on it either by pelvic obliquity by certain occupations or habits, in either case persisting for months and years. Hence stand out in still stronger light the importance of early detection and treatment. The slow progress of such defect of growth can only be met by a gradual method of cure, which, like the disease itself, must be persistent, therefore must not be violent or of a kind which by weight and rigidity of appliance, by restraint of natural movements, injuriously affects the health. Yet the treatment must be real. Mere posturing and calisthenics alone do no more, and can do no more, than prevent a tendency to crooked spine—in other words, they are by themselves powerless to cure a lateral curvature, though they may avert one which as yet is only threatened.

The treatment which I advocate is one that *leads* the spine aright rather than *forces* it into this or that attitude. It consists in one part of substituting for the muscular acts, which produce deformity such as tend to restore symmetry, and in another part of counteracting by elastic and yielding power the lateral deviation as well as the morbid twist. The former devices, which I term "adjuvants," therefore naturally fall into two classes—those that act against the curve, and those that are directed against rotation. For an account of the first class I must refer to what has been said in my previous papers concerning pelvic obliquity and its influence on the spine, more especially to Figs. 1, 2, and 3,[2]

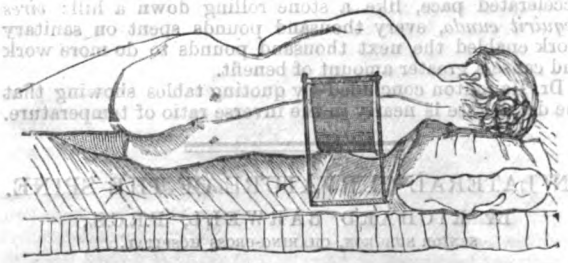
[1] THE LANCET, July 23rd. [2] Ibid., June 25th and July 9th.

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which show that its effect does not stop at the loins, but is continued up into the dorsal region. Advantage may therefore be taken of an artificial obliquity by means of the *sloping seat* (Fig. 4), and in some cases by some additional thickness to the heel of the left boot. If the patient ride, she must do so on the wrong side of the horse—i.e., with the left leg in the pommel.[3] The *loop girth*[4] is also a valuable appliance for those cases in which the lumbar curve is somewhat strongly marked. The *lateral swing* (see Fig. 6) is directed against both deviation and rotation; its method of use for lumbar curvature has been already described. For dorsal curve it must be placed somewhat higher on the figure, as in Fig. 8. The patient uses it, of course in her customary nightdress, for about twenty minutes night and morning at the commencement of treatment, the period being gradually increased. She must lie in it, not completely on the right side, but a little turned over on the back, by which means the weight of the body acts both against lateral deviation and rotation.

The adjuvants aimed at the counteraction of rotation require some explanation. One of the agents, if not the chief one in turning the upper on the lower part of the trunk, is the serratus magnus, which may be regarded in conjunction with the rhomboids as a fleshy mass inserted into the nine upper ribs, whose mode of attachment to the spine indicates the lever-like use to which the muscle puts them in turning each vertebra; in this point of view the posterior costa of the scapula is to be regarded as a mere intersection. Thus it is evident that any position of shoulder which decreases the distance between that edge of bone and the insertion of the serratus diminishes on that side the backward pull of the muscle on the ribs, while postures which augment that distance add to that action on those bones. As the serratus is a powerful respiratory muscle, and also is one of those that

FIG. 8.



supports the scapula in its position and upholds a great part of the weight of the shoulder, we can take advantage of these functions, thus: the patient is to acquire the habit of keeping the left forearm behind the waist—a not ungraceful posture, which may be assumed at any time and in any place. A more potent aid, but which can be only periodically practised, is what I have called the *respiratory exercise*. In each of two walls facing each other a staple is fixed, from which cords, rendered elastic by the intercalation of accumulators, pass to the neighbourhood of a chair midway between the walls. On the chair is placed the wedge-shaped cushion, on which the patient sits, high side to left. She then crosses her right arm in front, her left arm behind the body, grasping in each hand the cord, which must be at a tension of at least 2 lb., and which is provided with a suitable handle. Thus placed, she takes long, slow, and deep breaths; about twelve is sufficient in the beginning, afterwards the number may be considerably increased.[5] Another device, valuable for slight rotation by itself, or as an addition to the other means for severer cases, is to weight the left arm. This is done by a strip of lead one-eighth of an inch thick, three-quarters of an inch broad, and ten or eleven inches long, weighing about four ounces; it is covered with thin mackintosh and a silk ribbon somewhat longer than the metal, so that it may be tied on the arm about the insertion of the deltoid. I am often asked if my patient is to lie several hours a day on the back. This is the remains of an antiquated mistake; and many a girl has been condemned to very serious loss of health by continuous and long-continued recumbency. Lying on the back, although in that attitude the spine is of course straighter than when it supports the weight of the body, has no curative effect whatever; if too much practised it only weakens the muscles, so that when the patient gets erect the spine only yields more to the superincumbent load. Therefore my answer to the question is to let her lie down as soon as she feels fatigued, and after any exercise, even though unconscious of fatigue, for about half an hour. Quite young people, healthy and strong save for the commencing curve, often say they never feel the back tired; nevertheless, it is well to relieve the erector spinæ from work for a considerable part of the day—for instance, while reading or learning tasks by rote—occupations that harmonise badly with the supine position. I tell them, therefore, to do all this sort of work while lying on the front of the body; and to this I add that the right arm is to lie by the side or under the chest, while the left elbow is placed on the couch and the head reposes on the left hand, thus again throwing work on the serratus of that side. Some complain that lying in this way caused pain in the loins, because this part is hyper-extended; that may be entirely obviated by putting a rather thick pillow under the body, about the level of the umbilicus. It must be understood that these aids are not all used simultaneously in any one case, nor in many are they all used throughout its management; the influence of nearly all of them is at any given moment

FIG. 9.

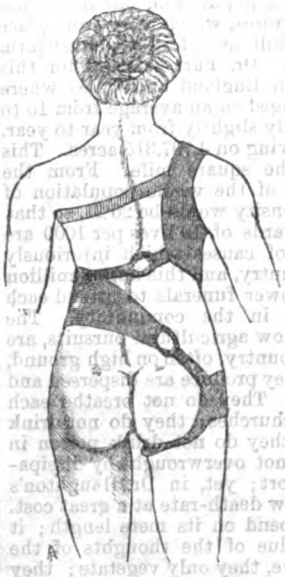
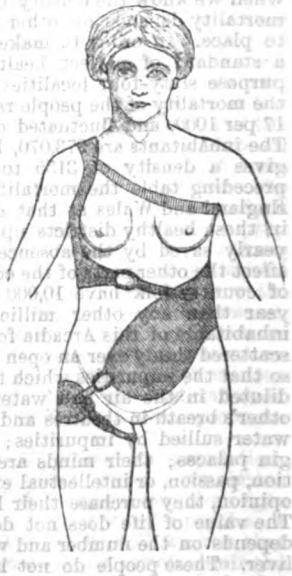


FIG. 10.



slight, but the cumulative effect of persistent use is very considerable.

More important, probably, are certain mechanisms to be explained immediately. I have already stated that "although in all cases of scoliosis the vertebra which has deviated most is also that which is most rotated; yet curvature and rotation do not in different cases bear the same proportion to each other." Hence a very important difference in the direction of the power to be applied to the spine. Let us first suppose a case in which lateral deviation is the chief factor, the patient standing upright with her back to the surgeon. Most certainly, especially if not in the frequent habit of making these examinations, he will put his hands at the patient's sides opposite the chief point of dorsal and of lumbar convexity, and then, by pressing them in opposite directions, will endeavour to find how much force is required to straighten the spine, which he will succeed partially or entirely in doing. The bandage called *dorso-lumbar* effects permanently what those hands do temporarily—pressing, that is to say, each convexity towards the middle (straight) line. (See Figs. 9 and 10.) It is constructed by adding to the loin bandage already described[6] a dorsal piece made of the same material; its shape is shown in the figure. The two straps provided with rings that pass across the body, back and front, from the lower corners of the dorsal piece, are the active forces; the little strap higher up, shown in lighter

[3] Throughout this description of treatment a curvature, convex to the right in the dorsal, to the left in the lumbar region, is assumed.

[4] Ibid., July 9th.

[5] I need hardly point out how in this position the action of the serratus on the ribs is minimised on the right and augmented on the left side.

[6] THE LANCET, July 9th.

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colour, is inch-wide elastic webbing (haberdasher's flat elastic); it merely guarantees the upper part of the dorsal piece from slipping. The power of this appliance acts in the direction of the radii of the curves, that which has the most mechanical advantage; yet being elastic, it in no way hinders healthy exercise, is by no means uncomfortable, but the reverse, and can be worn imperceptibly under the patient's daily dress.

The *rotation bandage*, which at first glance looks almost identical, has a very different action, and is to be employed when rotation is strongly marked. When both deformations are pretty severe, it is better to begin with that just described and at the proper time, difficult to define in writing, substituting the rotation belt. The alteration can be carried out by the bandagist in a couple of hours, for it has the same shaped loin and shoulder piece; but the straps—i.e., the forces—act differently. The only point of connexion between the loin and dorsal part is the strap running across the front of the body (Fig. 12), the "front cross strap." From the back, upper, and lower corners of the dorsal piece a webbing loop encircles the left upper part of the chest and shoulder; it is, of course, rendered elastic, and is provided with means of adjustment. In putting it on, when the dorsal piece is in place, the loop is first arranged with a proper degree of tension, and then, also with appropriate tenseness, the front cross strap is adjusted. As this is done

FIG. 11.

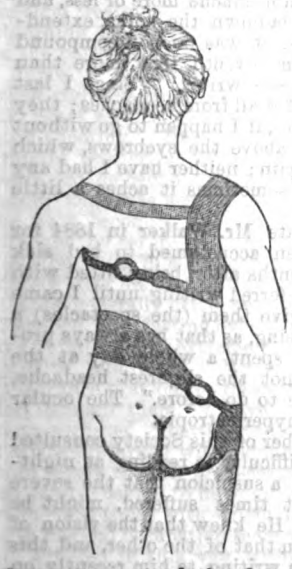
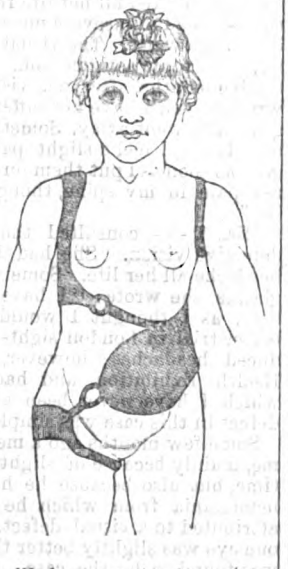


FIG. 12.



the upper part of the figure will be seen to turn (see Figs. 11 and 12) and to respond to every little additional tension of the front cross strap by an increased untwisting of the spine. Moreover the rings, both of the front cross strap and of the loop, play with every inspiration thus in a way that is easily understood, but too long to explain, every breath is a little step towards rectification of rotation. I devised this form of belt about two years and a half ago, and find that many cases such as previously I could only benefit are quite amenable to this treatment.

The prognosis of spinal curvature depends partly on the age of the patient, partly on its severity, and partly on its cause. Thus, scoliosis from severe rickets or from solidification of one lung is not to be cured—merely benefited. Lumbar curvature, arising from inequality of growth in a lower limb (pelvic obliquity), not the result of disease (morbus coxæ, infantile paralysis, &c.), is quite curable; indeed, if taken early, the management is preventive rather than curative. Such inequality nearly always corrects itself at due age, the limb which grew quickest ceasing to grow first; we have only to prevent the resulting lateral deviation becoming fixed. There is a certain senile dorsal curvature which is incurable; it is connected with a peculiar atrophy of the bones, and is not the subject of my paper. All other forms not depending on lung disease are curable in the first and second stage, and may be greatly benefited, even in the first part of the third, provided the patient be not too old—say over thirty. The treatment and alleviation of severe curves in persons somewhat advanced in years cannot be here described.

ON HEADACHE, DUE TO ERRORS OF THE REFRACTIVE MEDIA OF THE EYE.[1]

BY T. H. BICKERTON.

GENTLEMEN,—It is not my intention, in this short communication, to dilate upon the subject of headache in general—this would, indeed, be beyond my province; but I wish to draw attention to a cause of headache which, though it of late years has attracted some notice, is still but little recognised, and does not appear to receive by any means that attention which it deserves.

The cause of headache that I would wish to bring prominently forward is this: (1) That disorders of the refractive apparatus of the eye will give rise to headache; and (2) that the headache produced by these disorders may vary from the slightest, such as are barely noticeable to the most intense, in which the head pain is so great as to suggest the possibility of actual disease of the brain. If it can once be proved that headache may be caused by errors of refraction and other equivalent complaints of the eye, then, seeing what a large proportion of our population are affected by these errors, it would not be unwise to discount this factor in every case of headache, for which there is no definite cause before we seek for another. To oculists, and to those medical men who believe that ocular trouble is a cause of headache, the above statement may appear unnecessary; but anyone looking through the vast amount of literature written on the subject of headache will be struck by the fact that there are few of the eminent men who so wrote who recognised the eye as even a possible cause of the troubles which they have described with so much exactness. Where the eye is mentioned, it is to describe some special sensations referred to this organ, which sensations are considered to be symptoms of the complaint. That I am correct in my statement may be seen by a reference to Bristowe's "Medicine," to Quain's "Dictionary of Medicine," to "Headache, its Natural Causes and Treatment," by Dr. Day, to Reynolds's "System," or to Ziemssen's "Cyclopœdia of Medicine," for in not one of the works mentioned will there be found a single line which would suggest refractive errors of the eye as a possible cause. Ziemssen, after having mentioned the known causes of headache, goes on to say (vol. xi., p. 137): "A large group of cases still remain in which no anatomical causes of the pain can be shown to exist, and in which we seem compelled to admit the presence of abnormal conditions of excitation of sensory nerves ramifying on or in the head; these are the cases which may with some propriety be included under the head of 'nervous headache.'" Again, he says, "To what special locality, however, we should refer these nervous headaches is still unsettled, and we can only offer guesses at the truth"; and still further he makes the remark that "we not unfrequently meet with very puzzling cases in which literally no cause can be discovered." The fact therefore—if it is a fact—is not generally known to the profession, and all absence of notice of it in these standard works on medicine shows that it had not occurred to physicians to look to defects of the eye to explain headaches whose cause was obscure. My argument is that in similar obscure cases, where all the known causes of headache have been eliminated, it will be found that a large number of these headaches are due to some error of refraction of one or other eye, or of both.

That there is a direct connexion between a refractive error and headache and nervous symptoms was first publicly demonstrated, I believe—or, at any rate, the attention of the profession was first specially attracted to the connexion,—by the now historical case which was related by Mr. Brudenell Carter to the Clinical Society of London in the session 1874-75, and since incorporated in his work on "Diseases of the Eye" (p. 564). In his case a young gentleman studying for honours at Oxford was mysteriously attacked by head symptoms of much severity. These symptoms were attributed by the Oxford practitioner, by his home medical man, and by the eminent London physician whom he consulted, to some affection of the brain. On their recommendation he left Oxford, and took a voyage to Australia, but, returning no better, he was advised to abandon the idea of succeeding to his father's

[1] Read at the Liverpool Medical Association, Nov. 25th, 1886.

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large commercial business, and to also break off a marriage engagement he had made when in health. He was taken to Mr. Carter by his father, "with the statement that he had some obscure and intractable brain disease, and with a request that he would make an ophthalmoscopic examination in order to see whether it could throw any light upon the state of the cerebral circulation." Mr. Carter found him to be myopic and ordered glasses. Three weeks afterwards his patient was well, and two years after this he had "the satisfaction of hearing that the cure was permanent."

Since that time there have been other writers, both in this country and abroad, who have called attention to the same subject, and amongst many may be mentioned the names of Brailey, Higgens, Lauder Brunton, Hewetson, and Weir Mitchell, and the result of their observations bids fair to revolutionise the opinions held respecting the causes of headache, and to simplify in many cases, and to an extent undreamt of, one of the most troublesome complaints to which flesh is heir. My belief, and it is a belief which becomes more and more strengthened each day, is that a large number of headaches are due to faulty conditions of the eyes, and in order to support this statement I will venture to bring under your notice a number of the cases which have led me to this belief. I have gone carefully through the first thousand cases of refractive errors which have been under my care since my attention was drawn to this question, and I find that in 277 of these headache was a distinct symptom. I do not say that the headache occurring in each case was at all comparable; in some cases it was but slight and was only felt at intervals, in others it was of the utmost intensity and constant, and in many it was associated with marked nervous symptoms. One point that I would call special attention to is that, except where sent by medical men, not one of the individuals suffering from headache came on that account. They came because of defective vision, and the history of headache was only elicited by inquiry. The following are the cases I refer to.

Mr. R. C. H——, aged thirty-seven, consulted the late Mr. Shadford Walker in the year 1882 on account of dimness of vision. He had never had good sight, and although he had on many occasions tried to get suitable glasses, he had not been able to find any that were of much use to him. Of late years he found his sight "weaker," being unable to read or write for more than a few moments together, a persistence in reading making him feel dull and sleepy. For years he had suffered from headache, and periodically accompanying these headaches were bilious attacks of much severity. During these attacks his sight used to go altogether. This gentleman did not associate his headaches and bilious attacks with his eyes, though he was well aware his vision was not good. The special error of refraction in this case was one of compound myopic astigmatism. Glasses were ordered, and from that time not only has his vision been very greatly improved—he being now able to read all day with ease and comfort,—but his headaches and bilious attacks have entirely disappeared.

Miss J. E——, aged forty-two, companion to a lady, and having to do a great deal of reading and sewing, consulted the late Mr. Shadford Walker in July, 1881, for defective vision. Some eight or nine years ago after prolonged reading for some hours she became dizzy and fell down. Throughout the whole of her life she has suffered from what the doctors have called "bad bilious attacks." These consisted in severe aching and throbbing pain in the head, especially at the top and across the forehead, and in a sickening feeling in the stomach. For some time past the headache has been constant, being felt from the time she awakes in the morning until she goes to sleep at night. For some years she has worn glasses which she had picked up from an optician, and which she now finds are but of little use to her. Since the glasses—which corrected the high compound hypermetropic astigmatism existing in each eye—were ordered for her, now more than five years ago, this lady's head symptoms and bilious attacks have entirely disappeared, and she is able to fulfil her duties to her mistress and to herself with entire satisfaction.

Mrs. R——, aged thirty-one, consulted the late Mr. Shadford Walker in 1884, because a few months earlier she had accidentally discovered that the vision of the left eye was not so good as that of the right. The history she gave was that for the last eight or ten years she had suffered from headache; during the last five very severely. Attacks of severe neuralgic headache would come on apparently without cause, which blinded her and rendered her prostrate; and these attacks only passed off after a night's rest. Her condition was one of compound hypermetropic astigmatism. Correct lenses were ordered her, and six months after she writes thus: "I am glad to be able to tell you that I have never suffered from one really severe headache since wearing the glasses you ordered. I wear them entirely in the house, as it is less trouble than having to constantly put them on when reading, writing, &c. If by chance I go to a concert, or pay calls, or go shopping, without my pince-nez, I am almost certain to have a slight attack of the headache or pain in the right eyeball, and which only comes on after being without the glasses for some time. I have not been in town since August, or would have called to tell you how pleased I am to be rid of those violent headaches."

Mrs. B——, aged thirty-eight, the wife of a clergyman, and having to do a large amount of her husband's writing, consulted the late Mr. Shadford Walker in 1884 because of defective sight. She had suffered from daily frontal headache as long as she could remember, at times being prostrated with it. Her ocular defect was simple myopic astigmatism. In a letter written six months after being fitted with glasses she says: "The glasses have been such a success that I cannot help feeling they ought to be still more so. Owing to their use I am thankful to say my headache has entirely disappeared."

Miss S. A. E——, aged twenty-three, sought advice in Oct. 1885, because of aching of her eyes after near work for the previous six months. On inquiry, it was found that she had suffered all her life from headache more or less, and that she had also severe neuralgia down the spine, extending to the waist. The visual defect was one of compound hypermetropic astigmatism. On Nov. 6th, 1886, more than twelve months after her visit, she writes: "Since I last wrote to you I have not suffered at all from headaches; they gradually went away. Sometimes, if I happen to go without my glasses, I feel a slight pain above the eyebrows, which goes as soon as I put them on again; neither have I had any real pain in my spine, though sometimes it aches a little bit."

Miss T—— consulted the late Mr. Walker in 1884 for defective vision. She had been accustomed to bad sick headache all her life. Some months after, being fitted with glasses, she wrote: "I have deferred writing until I came here, as I thought I would give them (the spectacles) a better trial in London sight-seeing, as that has always produced headaches; however, I spent a whole day at the Health Exhibition, and had not the slightest headache, which I have never been able to do before." The ocular defect in this case was simple hypermetropia.

Some few months ago a member of this Society consulted me, mainly because of slight difficulty in reading at night-time, but also because he had a suspicion that the severe hemicrania from which he at times suffered, might be attributed to a visual defect. He knew that the vision of one eye was slightly better than that of the other, and this was found to be the case. On writing to him recently on the subject, he wrote to say: "Since I have worn the glasses you ordered me my headaches have greatly diminished in force and frequency."

A case which has been one of great interest to me is the following. In the spring of 1883 a lady consulted Mr. Walker on account of short sight. She was married, thirty-eight years of age, and what at once attracted attention was the perfect whiteness of her hair. For the previous nine years she had suffered from almost constant severe frontal pain and parietal headaches, and to these she attributed the whiteness of her hair. Her letter, dated the 7th of this month, more than three years after her first visit, will explain itself: "In answer to your inquiries about my headache, I can truly say that since I was examined by Dr. Walker and yourself I have suffered less and less from the violent pain I was so frequently prostrated by. This is due, no doubt, partly to the use of glasses and partly to improved digestion, and also gradually the intense internal inflammation and irritation have been overcome, and I am now so much stronger in consequence that I can live a more rational and active life. I hope you will understand that I consider you very greatly helped me to freedom from headaches, but I feel sure glasses alone would not have cured them all. One has headaches from so many causes, and I had so much pain to bear, and was in such an unnerved condition, that I seldom passed many hours consecutively without headaches of one kind or another. I sometimes now feel the old strained feeling in one eye, and then follows a headache, but

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I avoid trying my sight as much as possible, and try to be content not to be able to see, instead of forcing my eyes as I used to do."

A somewhat similar statement to the one above is made by a lady, a teacher, who came concerning her sight in 1883, who also stated that she had suffered from headache all her life, and that the medical gentleman to whom she went before consulting the late Mr. Walker had greatly alarmed her by saying she was suffering from brain disease. In her letter of November 7th, 1886, occurs this paragraph: "My headaches have greatly diminished since I began the use of glasses, though I can scarcely think the glasses alone can have caused the improvement, as my headaches date from early life."

Both these cases are especially interesting, inasmuch as both admit that the headaches they suffered from have been greatly diminished by the use of glasses; but both also attribute the diminution to other causes as well. The one cannot believe that the glasses alone have caused the diminution, "because her headaches date from early life," but she evidently forgets the fact that she has had the possession of her eyes all her life also; and the other believes that the improvement in the general health is a main cause. Granted; but what is it that has caused that improvement? I have a strong opinion that the use of the glasses, by relieving the almost constant and severe headache, has had a great deal to do in permitting the improvements of the general health, if for no other reason than that the eminent medical treatment which she had undergone previously to obtaining glasses had been followed by a continued decline in the patient's health.

James P ——, aged thirty-one, joined the English army when eighteen years of age, and was discharged after nearly six years' service, because, as he says, "he could not make good shooting." He then took to the occupation of a lithographic printer, at which he has continued since. Five years ago he began to suffer from simple headache, which before long was accompanied by pain across the forehead, the pain becoming shortly after very acute. He next was attacked by severe bilious and sick headaches, and he thus describes them in a statement which he wrote for me immediately after his first visit to me. It runs as follows: "These attacks generally came on in my leisure time on Saturday afternoon, and, lasting over Sunday, accompanied by excessive vomiting and extreme prostration, also deprived me of appetite and sleep. My eyes always bore a bloodshot appearance previous to these attacks, with a burning sensation through them. I have taken many remedies, but all to no purpose. They allayed the pain for a short time, but it always returned with redoubled force. Every attack was more severe than its predecessor. This continuation of pain has lately begun to have an effect upon my mind, being troubled at times with suicidal intentions, and making my daily life and occupation seem a burden to me." But he had not suffered in this way without seekin g relief. He tells me that he has seen, in America and in this country, between ten and fifteen medical men. To one gentleman in New York, who had made a specialty of headache, he paid the sum of five guineas, and for this moderate fee he received an examination lasting for more than an hour and a half, and some purgative pills. Coming over to England and settling in Liverpool, he applied, as a last resource, to the Royal Infirmary, and having told his tale to Dr. Davidson, that gentleman informed him that his troubles were most probably due to his eyes, and kindly sent him on to me. An examination showed his ocular defect to be one of high compound hypermetropic astigmatism, and this was without much difficulty corrected by glasses. Almost from the day on which he began to wear his glasses his troubles began to diminish in frequency and in intensity, and they have now almost ceased. He says he is a different creature, able to do his work with ease and comfort and with satisfaction to his employer, which formerly had not been the case, and able to take a pleasure in life which had long been unknown to him. This man had known for many years that his vision was defective, yet he had never associated this defect with his troubles, nor until he met Dr. Davidson had the question of his vision been put before him.

In a case which was sent to me some little time ago by Dr. Cranstoun Dale, the following history was given by the lady herself: "I have suffered from headache for twenty-five years, the pain being chiefly across the forehead and top of the head. For the last eighteen months the pain has been almost constant, and is sometimes so bad that I have to lie down and have a bandage tied tightly round my head. I have never gone to bed for eighteen months without having a bandage round the head. At times the pain is intense—my brain feels on fire, and my head seems as if it was opening and shutting. My vision for distance is very good, but as soon as I do any near work my eyes burn and prick and the headache comes on. It has never occurred to me that my eyes and my headaches are connected, but Dr. Grimsdale tells me that very probably it is so." This lady had simple and unequal hypermetropia, and since being accurately fitted with correcting lenses her troubles have steadily diminished.

A similar case to this was that of a hospital nurse, sent to me on account of severe headache by Dr. Cameron, and in this case also the constant use of glasses has been followed by complete relief.

These, then, are the cases (the relation of which I trust has not been wearisome) which I have selected out of a number of very similar ones, which have come under my notice, and which have led me to attach an importance second to none to the great influence which errors of the refractive media of the eye have in the production of headache. When one sees, as I have seen, headache from the simplest to the more intense, headache intermittent or constant, in some cases associated with indigestion, biliousness, and vomiting, in some with giddiness and faintness, and in others with languor, sleeplessness, and general debility; when one sees not only the headache but all its varied concomitants vanish by the means of accurately fitted glasses—then I say it is impossible to come to any other conclusion than that errors of the refractive media of the eye are answerable for a large number of our every-day headaches, a number quite unsuspected by the profession at large. And in saying this I would wish most particularly not to be misunderstood. I do not for one moment suppose that all headaches are due to ocular trouble—far from it; but I do believe that a very large minority are due to this cause. In one respect I labour under the disadvantage of not seeing general practice, and therefore have not the opportunity of seeing the many varied conditions of health which lead to headache irrespective of a definite cause. I therefore ask to be forgiven if I appear inclined to overrate the importance of the specialty at which I am engaged, and I have the satisfaction of knowing that there are many practitioners who have a vast experience of headache, and that they will be able either to bear me out in my conclusions, or, on the other hand, to correct me.

THE INTERPRETATION OF DISEASE.

By H. CAMERON GILLIES, M.B.

III.

THE LIFE-SAVING VALUE OF PAIN AND DISEASE.

THE value of a thing is properly determined by its utility. When I speak of the value of pain and disease, I mean to emphatically assert the usefulness of these to mankind. Pain and disease are very closely related. The pain is, indeed, the immediate cause of the *dis*-ease. We cannot have pain without *dis*-ease, but we may have disease without pain. Disease, in the latter sense, is an expression for a pathological structural change; but it is not *dis*-ease in the etymological, original, and, I may say, more correct use of the word.[1] I shall not, however, attempt to be too severely exact in the application of these terms, but shall use them with comparative freedom, as of almost identical value, for the purpose of this paper. I do not concern myself with definitions of pain. It is not the Whence nor the How of pain that is of practical interest, but the Wherefore—its meaning, intention, and purpose. Someone—perhaps Sir James Paget—has said with great beauty and truth that "pain is the prayer of a nerve for food." That is perhaps the finest and most comprehensive definition of pain in all our literature, and it is quite sufficient for our purpose. The "textural death" from "privation" calls for sustaining and repairing food. That is pain, and that is its purpose.

[1] "Before King Henry crossed the seas,
And o'er to France he did transfleet
Lest that the Scots should him *disease*,
He constituted captains meet."—CHEVY CHASE.

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I have, for myself, a very commonplace rendering, or rather paraphrase, of *pain* in the expression, *there is something wrong*. It does not look at all learned or ingenious, but I have found it very useful. I shall employ it in what follows for the sake of brevity and point.

If I take up a too hot poker in my hand, pain comes at once, to tell me in the most convincing manner *there is something wrong;* and I throw the hot poker away at once. If it has not in any way injured the skin, there is no pain now; but if it has, the pain remains till all is right again. Perhaps a "bad blister" is the result. But is not this blister the most beautiful possible provision for saving the deeper parts from injury by interposing a pad of water between the superficial skin and the tissues beneath? The pain and the disease here are surely of the highest value in saving me from worse things, which, without their intervention, I could not escape.

If I get a pin or a treacherous tack into my skin anywhere, pain at once declares *there is something wrong;* and it goes on persistently, and even more loudly as the delay, with the same declaration till the offending thing is extracted—till the wrong is righted,—then all is peace again. A sensation of pain may continue after the removal of the cause, but this also serves the great purpose of ensuring the repair of the injury done. It is the prayer of the nerves of that part for food—for the materials of repair; and it does not leave off till the measure of mischief done is put right—till the *status quo ante* is restored.

Suppose that I have eaten some indigestible or badly cooked food, or partaken too freely of the ten thousand "dishes" that the ingenuity of the modern kitchen devises for the civilised palate. My stomach cannot digest it. It rebels, or rather justly resents the injury. Spasms, cramps, and colic declare that *there is something wrong*. The offending indigestible is vomited perhaps, or a smart dose of physic gets rid of it. The pain ceases, for all is now well.

A healthy man, comfortable in life, with a good digestion and not much to do, drinks too freely of malt liquors and the heavier wines. Notwithstanding the many warnings from his head and stomach, he perseveres in his full living and and in his drinking, till one early morning, very likely after a special indulgence on the previous day, a twinge in the great toe and a cruel pain waken him to tell him *there is something wrong; you must stop that port*. He has gout. He calls on his doctor, and "gets his sewers flushed," as I heard Dr. Alfred Carpenter put it. His clogged systems again flow freely, and if he avoid his malt liquors and his wines and his too much eating, he will keep free from gout and in good health. But if he go back to his old ways, he will certainly have rough teaching sooner or later. His pain and his *dis*-ease are his best friends, if he only knew it.

The case of the spirit-drinker is still more emphatic. He drinks the "devil in solution" day by day and night by night; and notwithstanding that morning by morning a splitting headache tells him *there is something wrong*, he heeds it not, but goes for "a hair of the dog that bit him." He gets up steam at the expense of his physiological capital. His working account is exhausted, over-drawn. He is fast on his way to physiological bankruptcy. His energy gets dissipated, nervous sensibility diminishes, and the value of pain diminishes day by day. At last there comes a time—a terrible time—when he has a headache no longer. The headache goes and all his physical pain. But there come the "horrors" of delirium tremens. Cats, dogs, mice, lice, snakes, scorpions, devils, come to lash him into the conviction that *there is something tremendously wrong*. This is the end of the tether. It is either suicide or some other terrible unnatural death—if not perfect obedience, and recovery even at this very last. Surely it were better to have listened to the headache and the former sufficient warnings of pain than to have incurred this fearful reward of disobedience.

The case for the utility of pain and disease is so far, I think, very plain and easily accepted. It is the valuable active check upon errors and indiscretions that would injure the health and endanger the life of the individual. Let me present the matter from another point of view.

Pain never comes where it can serve no good purpose. Pain is eminently merciful, if I may so put it. That is a fact of so great significance that we cannot easily comprehend all it implies. Say that a man is smashed in a railway accident. If his injuries be such that he *cannot recover*, he suffers no pain at all. He dies of shock, as the surgeons say. But that, I submit in all humility, is a wrong view of the case, a wrong interpretation of the natural facts. The man dies because vital parts of the organism have been destroyed in the collision; and this condition of shock, this insensibility to useless pain, is the most merciful provision that can be conceived.

But to get more light on the matter, say that the man is not mortally wounded, but has received some severe injury—say a compound fracture of the thigh. There is a period of shock here also, *but it passes away after a time;* and then if the limb has not been properly set and fixed, and the wound cleansed and dressed, pain comes with full force to impress that *there is something wrong* which requires to be put right. But if in the period of shock the injury has been properly attended to, there is no pain to speak of after the shock is over. The thing is as right as it can be in the circumstances, and there is therefore no unnecessary pain. So much is this a recognised truth that the surgeon's best proof of having done his work well is the freedom from pain, as the presence of excessive pain after a limb is set is the inevitable evidence that the setting is in some respect at fault—that *there is something wrong*,—and that the limb must be taken down and reset. Could anything be more beautifully admirable than this temporary insensibility to pain?—"shock" as it is called—Nature's time of grace in which the injury should be attended to. I cannot think of this shock, but with the profoundest admiration and reverence; yet our medical traditions, and even our present day literature, declare it an evil or a dangerous state, which should be got rid of, if at all possible. We should be very thankful that it cannot be got rid of till it has served its good purpose. It is strange that we should regard this condition as harmful, which we imitate with the aid of chloroform to enable us to do our work properly. I venture to put it that shock is in direct proportion to the violence of the injury, and inversely as the vitality or capital energy of the individual. Surely this shock is one of the greatest blessings of our existence, when it does away with unnecessary and otherwise unavoidable pain. But if the injury be not attended to in due time—before shock has passed off,—as surely is it a beneficent compulsion that makes us attend to it. That is what the shock and the pain do. I will venture on another very interesting proposition.

The measure of pain which attends an injury or a disease is a prophecy, in that same measure, of recovery. The pain attending an injury or a disease varies as the vitality, as the promise of life. The scratch of a pin will put an infant into convulsions; an old man would perhaps not feel it at all. We see old people and weakly people suffering little or no pain from injuries that would cause acute and serious constitutional disturbance in the young and vigorous. A physician to one of the Paris hospitals for aged women illustrates this well. "They get up in the morning," he says, "and make their beds. They have breakfast and perhaps go about a little. They say they feel tired. They lie down to rest—and die. When the lungs are examined afterwards, they are found so far diseased that life was quite impossible any longer." Yet they suffer no pain at all. Pain in their case would serve no good purpose. There is no pain. Their potential energy is run out; their promise of life is *nil;* they die without any suffering. It is an easy matter to be satisfied that *pain is as the vitality* of the individual, and I follow it no further.[2]

But the *power of repair also is* and must be directly *as is the vitality* and the promise of life. This needs no proof. Therefore, and as plain as anything can be, *pain is in direct proportion to the powers of repair*—that is, to the probability of recovery. My proposition, then, is proved.

The wisdom of our popular philosophy is on this matter, as on several others that could be named, in advance of our scientific attainments. We have heard in the common talk of the people in remote parts of the country how they did not like a depressing disease or a violent injury not attended with pain. They always looked on such a state as ominous; but when the sufferer began to complain it was to them a good sign. It is in our knowledge now that almost all inevitably fatal diseases are not attended with pain. Pain in such cases would serve no good purpose; there is no pain.

Now let me say at once that there are serious exceptions—apparent exceptions—to this law of pain. Say that the injuries to the man in the railway accident are such that he

[2] "The quantity of pain thou feelest is indicative of the quantity of life, of talent, thou hast; a stone feels no pain."—*Carlyle, Journal*, 1830.

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does not die in the first period of shock, but recovers sensibility and suffers much pain, but dies. That looks like useless pain and suffering, and fatal to my theory. Let us see. Fifteen or twenty years ago, that is almost certainly what would have been the course of a bad compound fracture of the thigh—shock, recovery to sensibility, great suffering, and death. But in our day we never look for the death, in a healthy man, from compound fracture of the thigh. Has this pain, then, this apparently useless suffering, ending in death, which had through long centuries rang in our pitying ears, that *there was something wrong* in our treatment of compound fractures—has it been of no avail, to no purpose? Did it not lead Joseph Lister to put the matter right some years ago, from which time we may justly say that there has been no such needless pain, no such suffering? The life-long devotion of valuable men has extended the recovery in our lives very much even within these last twenty years, and there is every reason to believe that it shall be yet extended a good way further.

To my mind, then, as long as that limit is not attained by care and skill at which for any disease recovery is in the natural intention impossible, so long must such acute physical pain as seems to be outside this law of purpose mean that *there is something yet wrong* which must be put right. This must dispose of every seeming exception, and pain that is apparently purposeless must be taken to indicate something wrong, which we do not as yet understand, and are therefore not able to put right. Pain is in these therefore our invaluable stimulus or incentive to earnest effort. We may be quite sure that when we understand its meaning we can put it right, and pain shall cease.

Pain comes at the right time. This may seem an unnecessary assertion if it be proved and accepted that pain always comes for good. Whenever it comes must be the right time. But I wish to bring the point into prominence for an interesting purpose. If Mr. B—— had continued with "nothing particular the matter," daily and steadily going down hill, he would most certainly have died. But his pleurisy came to save him. So severely, however, did the acute stage draw on the possibilities of his physiological resources that it was just a toss whether he would get round the corner. He did go round, but without a single ounce, as would seem, of power to spare. It must be manifest that if he had gone a few days later in being compelled to take care of himself, he could not have recovered. Is it not our experience that all distinct cases of acute disease are similar in this respect—that when they "get the turn" they have nothing to spare? And is it not very interesting that all kinds of acute disease have approximately the same period? Does it not indicate that there is something like a *disease point* in the constitution of every individual, below which the energies of the body cannot be exhausted without danger and without the physiological protest of acute disease? The point is analogous to, and perhaps identical with, the *recovery point*, which I referred to in the case of accidental injuries. As the *melting point* of ice is the *freezing point* of water, so, to my mind, the point at which the natural intention is upwards towards recovery or downwards towards death is one and the same. There is in proof of this the other interesting fact that the period of indisposition or of declining health before an attack of acute disease is approximately and relatively equal to the period and care necessary to recovery. The way up hill is the same distance as the way down.

I have had under my care a young business man—a man of great force and fine *go*, with a highly-strung temperament. His physiological expenditure is consequently very high. He is subject to most violent headaches and acute feverish attacks, lasting from one to three days; but in that short time he loses several pounds in weight, so severe is the attack. That man is as satisfied as I am that his headache is saving his life, for the attacks never come but when he has overdone himself; and as surely as he so does the attack comes and lays him up. This is the natural protest against his physiological extravagance. It pulls him up sharp—in time, and teaches him most effectively that he must not forget his body in his business. I would not prevent these headaches if I could; I am sure they save him from worse things. Indeed, he understands the matter so well now that he takes the first monitions and saves himself from even his headaches; and he would be the first person to affirm that they always come at the right time, notwithstanding they are often inconvenient and always disagreeable.

Bradley, K.

PILOCARPINE IN TWO CASES OF PUERPERAL CONVULSIONS; DEATH IN ONE CASE.

By ROBERT KIRK, M.D.Ed., F.F.P. & S.Glasg.,
OUT-DOOR PHYSICIAN-ACCOUCHEUR TO THE GLASGOW WESTERN INFIRMARY.

THE success which has attended the use of pilocarpine in some cases of puerperal convulsions renders it important that failures should also be noticed. I therefore put on record the following two cases, in one of which the drug did not avert a fatal result.

I was hastily summoned one day about 1 P.M. to see a primipara, aged twenty-five, in convulsions. I found that her ordinary medical attendant, Mr. Young, was temporarily absent, but that he had seen her in the forenoon after the onset of the eclampsia, and had ordered fifteen grains of chloral, which, however, the patient had almost immediately vomited. On my arrival the patient was in a comatose state, but very shortly afterwards she was violently convulsed. She was said to be in the eighth month of pregnancy, and there was considerable, but not excessive, anasarca of the face and lower extremities; skin cool; pulse 90, full and resistant. At this juncture Mr. Young arrived, and he informed me that the urine was albuminous, and that labour was in progress. We agreed to try pilocarpine, and accordingly a disc containing one-third of a grain was administered hypodermically. I then took my leave, but afterwards learned from Mr. Young that though the most profuse perspiration had ensued, and had lasted for several hours, the convulsions and coma were not in the least degree modified. The child was expelled (stillborn) some hours after my visit, and the mother died the same evening. I should add that when the failure of the pilocarpine became evident to Mr. Young, he again administered chloral.

The second case occurred in connexion with the out-door midwifery department of the Glasgow Western Infirmary, and is interesting as an instance of recovery from purpura hæmorrhagica during pregnancy and complicated with convulsions. The patient was a multipara, between thirty and thirty-five years of age, in about the seventh month of gestation, and was said to be a habitual drunkard. I first saw her about 3 P.M. Her face was of a dusky hue, and there was an ecchymosis on the lower eyelid on the right side, as if from a fall or blow. There were numerous purpuric spots, about the size of small peas, on the forearms and legs, and the skin generally presented the same dusky hue as the countenance. The surface was quite cool; pulse 80, strong and full. The catheter drew off one or two drachms of highly bloody urine; but there was no œdema of the legs or face. Every ten minutes or oftener the patient was seized with severe general convulsions, remaining drowsy, but capable of being partially roused in the intervals. Labour was in active progress, and the os moderately dilated. I regarded the prognosis as not very unfavourable, apart from any kind of treatment, but at the urgent entreaty of relatives that something should be done, a disc containing one-third of a grain of pilocarpine was injected hypodermically. The child was born about half an hour afterwards, and had plainly been dead for some days. Copious perspiration resulted in the mother; the convulsions soon ceased, and she made a good recovery, with the subsequent aid of iron and small doses of turpentine.

Remarks.—I am scarcely disposed to regard the result in the latter case as due to the pilocarpine, believing that it would probably have happened independently, while it got a fair chance in the first case, which was quite a typical one and not of unusual severity. I may, perhaps, refer here to one or two points which seem of some interest in connexion with puerperal eclampsia. In the first place, every practitioner should make it an invariable rule to ask every female who comes to engage his services at her confinement whether her legs are swollen, and if so the urine should be at once examined, and proper treatment, if necessary, adopted. It is remarkable that the patient herself will seldom volunteer this information. I cannot but here record my strong conviction of the superiority of a diuretic to a diaphoretic system of treatment in this and other forms of acute nephritis; this was much insisted on by the late Dr. Hughes Bennett and others, but still seems to be a moot point amongst authorities. Another point is as to the actual

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moment of the onset of eclampsia. Is this more apt to occur during sleep and in the recumbent posture than in the erect posture and when the patient is awake? When we consider that very considerable œdema of the legs, in pregnant females more especially, will often almost entirely disappear in a single night after rest in bed, it seems not unlikely that the recumbent position may predispose to an attack. But the question has a practical bearing beyond this. When the patient recovers, we know how rapidly the anasarca disappears and free diuresis takes place. But in this process there are two distinct stages which do not necessarily keep pace with each other, and in point of fact probably never do so. The absorption of the effused serum may occur to a considerable extent, though the kidneys may altogether fail to eliminate it. I am inclined to believe that in this lies a prime element of danger in these cases. I have never seen a patient die of convulsions in actual labour, even when this has extended over twenty-four hours, and such an occurrence is surely comparatively rare; every death I have seen took place some hours after delivery. The efficacy of bloodletting, and to some extent that of pilocarpine, from the considerable elimination of fluid in the perspiration effected by the latter, may perhaps be partially explained in this way. But if so, would it not be better, when called to a case in which there is considerable œdema of the legs, to at once drain the latter of serum by a few incisions, or by Southey's tubes? I mean to put this in practice in the first suitable case.

THE DUODENUM: A SYPHON TRAP.

BY MAYO COLLIER, M.S. LOND., F.R.C.S. ENG.,
SENIOR ASSISTANT-SURGEON, NORTH-WEST LONDON HOSPITAL; ASSISTANT DEMONSTRATOR OF ANATOMY, LONDON HOSPITAL MEDICAL COLLEGE.

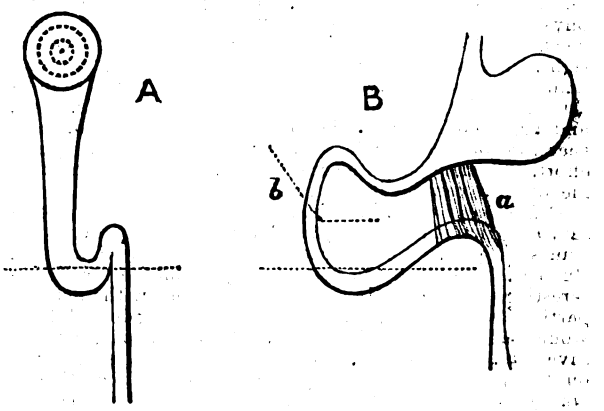
WE may take it for granted that all gases generated in the jejunum, ileum, and large intestines pass onwards towards the anus, and there sooner or later escape. Fetid gases—except those generated in the stomach and duodenum—never pass upwards, not even during vomiting due to hernia, obstruction, and other causes. Physiologists, it would appear, have never busied themselves to find an explanation for this apparent breach of the laws of gravity. The intestinal canal is a tube with various dilatations and constrictions, but at no spot except the pylorus does the constriction completely obliterate the lumen of the tube, and here only periodically. It is perfectly evident, then, that, unless some system of trap exists in the canal, gases are free to travel from below upwards in obedience to the laws of gravity, and would, as a matter of fact, sooner or later do so. From the straight course and vertical position of the œsophagus, a very slight pressure of gas in the stomach easily overcomes the closure of its cardiac sphincter and allows of escape. When the stomach has digested its contents and the pylorus is relaxed, gases generated in the duodenum can and do ascend into the stomach and so escape. Normally no fetid gases are generated in the stomach or duodenum. If we follow the course of the intestines down, we find that the duodenum presents a remarkable curve.

Now, there are some points of great interest in connexion with this remarkable, almost circular, curve of the duodenum. In the first place, this curve is a constant feature in all mammalians. Mr. Treves says it is one of the most constant features in the anatomy of the intestines in man, and, speaking of mammalians in general, that the curve of the duodenum varies in shape, but is never absent, becoming more complex in some of the higher primates, but seldom less distinct than in man. In birds the duodenum always forms a long loop embracing the pancreas.

A second point of great interest is the absolute constancy and fixation of its terminal portion at the point of junction with the jejunum, more correctly termed second ascending or fourth portion. Mr. Treves says that this fourth portion is never less than an inch, and is practically constant. It extends along the side of the left crus of the diaphragm opposite the second lumbar vertebra, and is there firmly fixed to the front of the aorta and crus of the diaphragm by a strong fibro-muscular band, slinging it up and absolutely retaining it in position. This band has been termed the "musculus suspensorius duodeni," but is chiefly composed of white fibrous tissue, and is more of the nature of a ligament than a muscle. This ligament is always present, and its position is never altered. The curve of the duodenum may descend as far as the iliac fossa, but the terminal portion is always maintained by this band in its normal position.

Another point of great constancy is the position of the pancreas and its relation to the curve of the duodenum. The duodenum always curves round the head of the pancreas, and is, as it were, moulded on it and retained in position by it. In birds the duodenum always forms a long loop embracing the pancreas. Further, the ducts of the liver and pancreas always open into the centre of the duodenum, either separately or by a common opening.

Now, the absolute constancy of the curve of the duodenum, the complete fixation of its fourth portion, the position of the pancreas, and the place of entry of the ducts of the pancreas and liver, are all component parts of a syphon trap, whereby gases generated below the duodenum are prevented from passing upwards. A reference to the accompanying diagrams will make this quite clear. A is a diagram of a



syphon trap copied from Parkes' hygiene. B is a very diagrammatic outline of the stomach and duodenum. *a* is intended to mark the position of the fibrous band, or musculus suspensorius duodeni; and *b* the position of entry of the ducts of the liver and pancreas. The duodenum, then, is a syphon trap, and a most efficient one. Now, the efficiency of a syphon trap depends not only on its shape, but what is absolutely essential is that the curve must be kept constantly full of fluid, without which it ceases to be a trap, and would allow gases to ascend freely. The position of the place of entry of the ducts of the pancreas and liver assures that this *sine quâ non* shall be present. The discharge of the secretions of the pancreas and liver, although more active during and after feeding, is practically constant, and so ensures in an admirable manner that the curve on which the efficiency of the trap depends shall be constantly kept full, not only with fluid, but, as I would suggest, antiseptic fluid. There is no other trap in the intestinal canal, but the peculiar position of the colon would no doubt have more or less effect in preventing gases ascending through the ileo-cæcal valve.

New Cavendish-street, W.

A PHASE OF ENTERIC FEVER,

WITH NOTES OF FOUR ILLUSTRATIVE CASES.

BY JOHN CLERK, M.B.,
PHYSICIAN SUPERINTENDENT TO THE JOINT BURGHS FEVER HOSPITAL, KNIGHTSWOOD, GLASGOW.

ACCORDING to the report given in THE LANCET of February 13th, 1886, the greatest diversity of opinion prevailed among the members of the Medical and Chirurgical Society in regard to the true nature of so-called typho-malarial fever. Out of an analysis of eighty cases at Suakim, seventy were of the ordinary enteric type, but some "were so modified by climatic causes as to merit the designation of malarial-enteric." One member thought the cases might be of a dysenteric nature, while another held that the typho-malarial form departs in the most complete way from enteric fever, "being really a distinct fever that

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simulates typhoid only to a very limited extent." Those who are cognisant of the vagaries of enteric fever will feel inclined, I think, to agree with the following remark gleaned from the same report. "The cases of fever seen in tropical climates were, in his experience, true enteric fever, presenting its clinical features during life, and its morbid appearances in fatal cases. As regards typho-malarial fever, there was no evidence of its existence as a new and perfectly distinct disease, although of course a malarious subject might be attacked with typhoid fever, and exhibit symptoms of both diseases." This surely is the common sense view of the matter. The term typhoid (meaning, *like typhus*) was adopted when the characteristics of these two diseases were insufficiently known, and led no doubt to a great amount of confusion of thought, the one malady being often looked upon as a variety of the other. In the present instance, the adoption of the term "typho-malarial" looks very like a repetition of the typhus-typhoid mistake. That the malarial poison may co-exist with enteric in the same person, just as the poison of scarlet fever may, no one need doubt, but this surely is no reason why such co-existence should give rise to compound names which seem to point to a combination of two poisons in the same individual, giving rise to a disease different in its nature from either of the two original ones. If, as is stated in a recent number of THE LANCET,[1] the temperature in typho-malarial cases is generally different from that of enteric fever, if the absence of rose spots is invariable, and if there is no ulceration of Peyer's patches, nor of the solitary glands of the ileum, then typho-malaria is distinct enough from enteric fever and deserves a new name to distinguish it from other maladies, but only when it is proved to be a new disease. Until the mass of evidence is sufficient to put this beyond question it is certainly wiser to leave it without a name than give it one which can only lead to error and confusion. In describing the Suakim fever (typho-malaria) Dr. Squire makes mention of the following among other symptoms: "The onset is sometimes more sudden than that of enteric fever, and bilious vomiting is often an early and persistent symptom. Diarrhœa is frequently but not invariably present, the stools being greenish, or resembling those seen in enteric fever." Cases presenting such symptoms as these are sometimes also designated "bilious-remittent," but the bilious-remittent are considered by such an authority as Murchison to be true cases of enteric fever. To solve such questions as present themselves in the foregoing remarks an accumulation of evidence is absolutely necessary—evidence as to symptoms during life and morbid appearances after death; and it is with the view of aiding inquiry that I venture to give short notes of the following four cases, of which bilious vomiting and green motions formed very characteristic features.

CASE 1.—T. G——, aged twenty-nine, was admitted into the Joint Burghs Hospital on September 25th, 1886. He stated that he was in his ordinary health on Sept. 22nd. On the 23rd he went to his work, but had to come home owing to severe headache, with vomiting and purging. On the 24th the stools were, he says, of a dark colour, and he had severe pain over the abdomen.—Sept. 25th (day of admission and third day of illness): Purging continues; no pain and no gurgling in right iliac region.—Fourth day: Since 8.30 last evening till now, 11 A.M., he has passed eight motions of about four ounces each; five of these bloody; three, a mixture of blood and greenish liquid; sediment of motion composed of flocculent mucus, small clots of blood and thin epithelial flakes tinged of a beautiful bright green. Six motions of about two ounces each had been passed during the day, mostly green. Morning and evening temperature 99·6°; pulse in the evening 108.—Fifth day: Two dark jelly-like motions passed during the night, about two ounces each. Pain referred to right of umbilicus to-day. Pupils slightly less than normal.—Sixth day: Passed two slight dark motions during the night; all pain is gone.—Seventh day: Three loose motions during the night; no appearance of blood in any of them. Pulse 90; temperature 99°. Tongue has a whitish coating of fur in the centre; no pain in abdomen; pupils dilated; seems much better.—Tenth day: Has continued to improve, and is now quite recovered.

CASE 2.—J. C——, aged twenty-seven, labourer, was admitted on Sept. 29th, 1886 (said to be the eighth day of illness). He says he has had severe purging.—Ninth day: Six loose green motions during the night. Two rose spots on abdomen. Evening temperature 103°.—Tenth day: Twelve loose green motions during last twenty-four hours. Temperature 103°.—Eleventh day: Nine loose greenish-yellow motions in last twenty-four hours. Three loose yellow motions during the day, and at 4.30 P.M. a green loose motion with a fair quantity of blood, and three more of the same nature between that time and 9 P.M. Abdomen distended. Temperature 102°; pulse 120.—Twelfth day: Passed three loose motions containing considerable quantities of blood. Temperature 102°; pulse 114.—Thirteenth day: Rested well during the night. No motion. Pulse intermits.—Fourteenth day: Three motions, one light green, two a mixture of green and yellow with a fair quantity of blood.—On the fifteenth day, four green motions; on the sixteenth day, three bloody and two green; on the seventeenth day, two loose yellow motions. On the twenty-eighth day of illness the evening temperature was normal and the diarrhœa stopped. The man made a good recovery.

CASE 3.—G. C——, aged twenty-two, domestic servant, was admitted on April 27th, 1886. Said to have been taken ill on April 18th. Complained of headache, pain in the small of the back, and general malaise. This continued during the following week with failure of appetite and occasional retching. On admission no rose spots were noticed. The tongue was covered with whitish fur, and the patient felt very thirsty.—Eleventh day: Gurgling and slight pain in right iliac region. Suffers from coldness of feet alternating with almost unbearable flushes of heat.—Twelfth day: Passed a restless night. Tongue dry, with brownish fur, and papillæ of apex enlarged. Three rosy spots on abdomen.—Thirteenth day: Three fresh rosy papules to-day. Strawberry appearance of tongue, very marked. Passed two loose green motions during the day. Evening temperature 104°.—Fourteenth day: Four green motions in the last twenty-four hours, and the patient vomited some green fluid last night. Retention of urine gave rise to severe abdominal pain; relieved by hot fomentations.—Fifteenth day: Two green motions were passed in the last twenty-four hours, and she vomited freely a liquid "green as grass." Feels very sick. A few more lenticular rose spots to-day.—On the sixteenth day she passed five loose green motions; on the seventeenth three; on the eighteenth and nineteenth days very little; on the twentieth day four in the twenty-four hours. After this she gradually improved, although occasionally she had attacks of bilious vomiting and passed green stools until the thirty-fourth day, when she had a relapse, of which she died on the forty-sixth day of her illness. Though the diarrhœa was not at any time excessive, the motions were markedly green, or else slightly tinged with green, between the thirteenth and twentieth days. During the period of relapse the bowels were constipated, and only on three occasions did she pass small, slightly greenish motions. As many as thirty-five rose spots were counted on the chest and abdomen alone at one time, and with the relapse there appeared a crop of rosy papules of small size.

CASE 4.—H. C——, aged seventeen, was admitted on April 29th, 1886, but it was impossible to get a reliable history of her illness. She was said to be ill for more than three weeks before admission. There was gurgling and slight pain in the right iliac region, and two or three rose spots were marked on the abdomen. Her bowels were slightly constipated, but she had had on several occasions severe attacks of bilious vomiting, which left her very sick, and with a bad taste in her mouth. It is unecessary to go more into detail. At the post-mortem examination the ileo-colic valve and adjacent portions of ileum and large colon presented the usual ulcerated appearance.

The presumption in favour of Case 1 being enteric was that he came from an infected locality, but there was no eruption, and the temperature was not characteristic. Of the other three there was no doubt.

[1] Jan. 8th, 1887.

BEQUESTS TO THE MONTROSE INFIRMARY.—The late Mrs. Winifred Nicol, formerly of Brighton, has directed that after the death of her husband the clear residue of her estate, estimated at £5900, is to be divided equally amongst thirteen hospitals and charities, of which the Montrose Infirmary is one. Mr. Nicol, who is eighty-four years of age, disputes the will. The late Misses Trail of Aberlady have bequeathed £500 to the same institution.

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CASE OF

ACUTE ASCENDING PARALYSIS; PARTIAL RECOVERY.

BY J. LEWTAS, M.B. LOND.,
INDIAN MEDICAL SERVICE.

As cases of acute ascending paralysis are of somewhat rare occurrence, and as the following case differed in some of its features from the type described in text-books, I venture to think that a short account of it will interest some readers of THE LANCET.

S. S——, a man fifty years of age, came to hospital on Oct. 19th, 1886, complaining of pains about his shoulder blades and in the back of his neck, attended occasionally with a slight degree of fever. Little importance was attached to what appeared to be a case of muscular rheumatism. No symptoms of nervous disease declared themselves until five days after his admission—viz., on Oct. 24th, when, on rising in the morning, he found that he could not in walking lift the right foot clear of the ground; he either dragged the foot, or else, to avoid doing so, had to swing the entire limb outwards from the hip. Sensation in this leg was unaffected; the right patellar-tendon reflex was exaggerated. The left leg was free from nervous symptoms of any kind. The pains in the upper part of the back mentioned above continued. On Nov. 1st a rather large vesicle ("bulla") appeared suddenly on the front of his left patella, and burst on the same day, leaving a purple, discoloured base. On the 3rd he noticed that he sometimes passed urine unconsciously in bed, and at other times that, although conscious that he was about to pass urine, he was yet unable to restrain it if a urinal was not brought quickly. On the 6th a second bulla appeared behind his left thigh. Up to this date the left leg had continued free from paralysis, but that of the right had so far increased that he was now unable to move it when walking, or to draw it up when lying in bed. On the 7th both motor and sensory paralysis began to appear in the left leg. On the 9th his state was as follows:—Tactile sensation was entirely absent on the left side from the toes to a point half an inch below the nipple; while on the right side it was absent from the toes to a point four inches below the nipple. There was a band of hyperæsthetic skin at the upper limit of these areas of anæsthesia. Sensibility to pain was absent throughout both lower limbs, and as far upwards as the iliac crests on both sides. A current from fifty Leclanché elements was, however, painfully felt throughout both legs. Paraplegia was absolute; the legs were drawn up upon the thighs, and these towards the abdomen. Both urine and fæces were passed unconsciously. The patellar-tendon reflex was lost on both sides. The disease seemed to be of syphilitic origin, as he had contracted syphilis two years before, which was followed by sore-throat and an eruption.

On Nov. 7th the man was put upon a course of bichloride of mercury, with iodide of potassium. This specific treatment was soon followed by a marked improvement. On Nov. 11th, being the eighteenth day since the onset of paralysis, tactile sensibility had returned to both sides of the chest and abdomen, but not to the legs; the knee jerk was still absent on both sides. About this time he began to complain of acute pain in the skin over the right hypochondriac region, and this unaccountable symptom persisted for nearly a fortnight. On Nov. 12th two bedsores appeared over the sacrum, one on each side of the middle line. On the 13th and 14th his abdomen became tensely tympanitic, and his chance of recovery seemed small, as his breathing was much interfered with. This distension, however, yielded at last to assafœtida and enemata. On the 15th sensation returned in both legs, and he was able to move slightly the left ankle joint. On the 17th the motor paralysis of the right leg was still absolute, but the knee jerk on that side had returned, while on the left side it was still wanting. On the 18th, with much effort, he could just move the toes of his right foot. About Nov. 15th his left foot and ankle became œdematous; this œdema, which did not extend above the ankle, disappeared in about four days. On the 19th another vesicle appeared on the outer side of the left leg, about midway between the knee and the ankle. The raw surfaces left by previous vesicles had all become ulcers, which had extended both in depth and area. The mercurial treatment was partly suspended for a few days in consequence of what appeared to be threatening salivation, but as a partial relapse of all, or nearly all, the nervous symptoms ensued, the treatment was resumed in full. On Nov. 26th the knee jerk had returned on the left side also. From this date onwards he continued to regain motor power in both legs. On Dec. 16th, having been fifty-three days in hospital, the patient was sent to his home; he was then able, unassisted, to move himself in bed from a lying to a sitting position on the side of it, but could not stand up; he was also sensible of impending evacuations either of rectum or bladder, and able to provide against them, although not able to postpone them. On Feb. 24th, four months after his seizure, I heard that he was able to walk slowly with the support of a stick.

Remarks.—That this disease was caused in some way by syphilis is proved, I think, by the history, by the early and rapid improvement under mercurial treatment, and by the temporary arrest of this improvement during a temporary diminution of the dose of bichloride of mercury. The imperfect symmetry of the symptoms was remarkable; for example, the right leg was paralysed when the left was still unaffected; yet the knee jerk disappeared first on the left side, and did not return on that side until a week after it had returned on the right. Again, whereas three bullæ and subsequent ulcers appeared on the left limb, none appeared on the right. The two bedsores on the sacrum were, however, symmetrical. Between Oct. 24th and Nov. 2nd there was no elevation of his temperature, but from Nov. 2nd to the 13th there was a daily evening rise averaging 2°, but on two occasions amounting to 5° above the normal. A further discussion of the case would be out of place in a clinical record; but I would notice, in conclusion, two variations from the type of this affection as described by Drs. Gowers and Ross—viz., the occurrence of several so-called bedsores and the considerable loss of sensation. The bedsores had the characters distinctive of those which occur in some diseases of the spinal cord; they appeared suddenly, their contents were dark-coloured, the raw surfaces left when the bullæ burst became spreading ulcers, and most of them occupied situations such that pressure could have had no part in causing them. Again, the loss of sensation, although transitory, was well marked. Yet Dr. Gowers[1] says, regarding the former, there is "no tendency" to their occurrence, and, regarding the latter, "there is no considerable loss of sensation." With respect to "a malady so rare that experience accumulates slowly,"[2] universal statements can hardly yet be hazarded.

A CASE OF

ABSCESS OF THE LIVER IN A CHILD THREE YEARS AND A HALF OLD.

BY J. FARRELL EASMON, M.D., &c.,
RESIDENT SURGEON, ACCRA; ASSISTANT COLONIAL SURGEON AND ACTING CHIEF MEDICAL OFFICER OF THE GOLD COAST COLONY.

THE patient, Affuak D——, was brought to me at my official quarters on the morning of Jan. 20th, 1887, with the following clinical history. Three weeks ago a swelling was noticed for the first time in her right side, and this had been getting larger ever since. Some six weeks before, the patient suffered from *artiridi* (Accra) or "bilious" fever; the fever came on every evening, accompanied with much shivering, and ending in profuse perspiration and the discharge of high-coloured yellow urine. She was losing flesh daily, and latterly vomited whenever food was taken. She complained of no local pains and had never had dysentery (*for-keh-lah*, Accra) since she was born, in May, 1883. She allowed her mother to touch the tumour freely, but would not suffer me to get near her for purposes of examination.

I admitted her the same day into the General Hospital (new site) under my care, and with the assistance of my colleague, Dr. Woodburn Heron, put her under chloroform. Examination revealed a large, tense, prominent tumour occupying the entire right hypochondrium, and extending inwards into the epigastric and downwards into the hypogastric regions, with a distinct bulge anteriorly below the ribs. The tumour was dull on percussion, and there were

[1] Diseases of the Nervous System, vol. i., p. 276. [2] Ibid., p. 279.

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obscure signs of fluctuation. Introducing the finest needle of the aspirator I obtained pus; I now withdrew this and introduced the second largest aspirating trocar and drew out nine ounces of thick yellow pus, odourless and without clots. The abscess cavity (a single large one) was then thoroughly washed out with ten ounces of a solution of chloride of zinc (half a grain to the ounce), an injection made of successive portions of two ounces at a time, and finally two ounces of the solution left in. An antiseptic pad was placed over the puncture, and a flannel bandage put firmly on around the abdomen and thorax. Complete anæsthesia was maintained throughout the operation. The patient was put on beef-tea diet and milk *ad lib.*, with five-grain doses of chloride of ammonium three times a day. At my evening visit I found the patient up in bed and evidently quite contented. She had complained of no pains. The temperature from 97° before the operation had risen to 99° in the afternoon, but there was no feverish feel about her.

Jan. 21st.—8 P.M.: Passed a good night; slept well; one stool this morning. Temperature 98°.—5 P.M.: Temperature 101°. Feverish and restless; no stool since last note; skin dry. Ordered: mist. alb. (hosp.), six drachms; syr. simpl., six drachms; ft. hst. statim. Tepid spongings later on if necessary.

22nd.—The temperature continued to rise last night till midnight, when it reached 103°. As the skin was acting fairly well, the tepid spongings were omitted; no rigors. After midnight the bowels began to act, and with their action the temperature began to fall, till at 6 P.M. it was 98°. During the day the bowels acted four times. Quinine in doses of one grain and a half, with three minims of dilute hydrochloric acid, were now added to each dose of the ammonium chloride mixture. Evening temperature 99°.

23rd.—Morning temperature 97°; evening temperature 99°. Three stools during the day.

24th.—Morning temperature 97°; evening temperature 100°. Three stools during the day. The tumour is slightly increased in size.

25th.—10 A.M.: Temperature 99°. The patient was feverish and restless during the night; no distinct rigors, however. Has had two stools during the morning. Under chloroform the abscess was aspirated, and five ounces of creamy yellow pus, without any perceptible smell, evacuated. The cavity was thoroughly washed out with a solution of chloride of zinc of the same strength as before, and an ounce of the solution finally left in.—5 P.M.: Temperature fell to 98° after the operation, but rose again to 99° during the afternoon. The patient has had three stools since 10 A.M. Seems cheerful.

26th to 29th.—With an average number of three stools each day, the temperature varied between 97° and 99° on the 26th, 98° and 100° on the 27th, and 98° and 103° on the 29th. The general condition up to the evening of the 29th seemed satisfactory; the patient cheerful, and taking her food well.

30th.—10 A.M.: The patient was feverish and restless all night; no rigors, however, or profuse perspiration. The skin at present is hot and dry, the temperature being 100°, and the little patient looks altogether ill. She was put under chloroform and the abscess again aspirated; six ounces of thick, brownish-yellow, fetid pus, with numerous flakes of broken-down liver tissue and clots, were with some difficulty evacuated through the largest size aspirating trocar. The cavity was then thoroughly washed out with (first) twelve ounces of a solution of chloride of zinc, one grain to the ounce, and finally with about ten ounces of a solution of half the strength, two ounces of which were eventually left in. Slight hæmorrhage occurred in the abscess towards the end of the operation. And now the question of a free opening and insertion of a drainage tube again presented itself, but this time more forcibly. Taking into consideration the extreme restlessness of the little patient, the difficulty invariably experienced when she was being put under chloroform, the violent contractions of the abdominal muscles, which on the first occasion threatened rupture of the wall of the abscess, and as the cavity had been thoroughly washed out, I decided not to make a free incision. An antiseptic pad of flannel bandages was accordingly applied as before.—5 P.M.: Temperature 101°. Three stools since last note. The child was up playing with her sisters, and apparently quite happy.

The next and the following days the temperature oscillated between 98° and 101°, the bowels acting regularly. On February 1st the dose of quinine was increased to three grains three times a day. On the evening of this day the temperature rose to 103°, but after this it gradually fell, with slight oscillations, till Feb. 8th, when it was 98°; and from this date it remained normal till the patient left the hospital. She rapidly gained flesh, and all signs of further liver trouble disappeared.

On Feb. 7th, and also on the 20th, before discharging her from the hospital, I made a careful examination of the liver, but all signs of recent mischief had disappeared. Seen five weeks after her discharge from hospital, she had gained flesh and was looking quite well.

Remarks.—Besides being interesting as a sequel of malarial fever—an uncommon result on the Gold Coast, so far as my experience extends,—this case is noteworthy on account of (1) the age of the patient, (2) her sex, and (3) the successful result of the treatment. For these reasons I desire to place it on record.

Accra, Gold Coast, West Africa.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF HYDROPHOBIA; DEATH; NECROPSY.

(Under the care of Dr. ORD.)

THIS case is chiefly remarkable for the long period of time which elapsed between the inoculation and the development of the disease, which ran an acute course. It would appear that in the majority of instances hydrophobia develops during the four months which immediately follow the infliction of the bite; in this case it was apparently two years. Much temporary relief was obtained by the use of the ether spray applied to the back of the neck. For the following account we are indebted to Mr. S. W. Wheaton, house-physician.

The patient, aged six years and a half, a well-nourished boy, was admitted on May 16th. He was bitten over the left eye two years previously by a dog supposed by the bystanders to be mad. The wound was very slight, and was not treated in any way. After complaining of tenderness over the left eye for some days, he was observed on the evening of the 15th to be rolling on the floor and complaining of headache; he also complained of a pain in the abdomen and toothache on the left side. On being put to bed he refused food, and when anything to drink was brought near him he struggled and tried to knock it over. On the 16th he began to make a peculiar cry, and had "catching of his breath"; he became very excited when touched or when offered anything to drink. He was therefore brought to the hospital.

When admitted the boy was in a condition of great excitement and extreme terror; the pupils were widely dilated; he was constantly looking about wildly, and was very excited when anyone approached him, but after a time quieted down. The respirations were very irregular, and occasionally there were spasmodic contractions of the diaphragm, producing a peculiar noise, like a long-drawn hiccough, ending in a shrill scream. He lay upon his back, with legs drawn up and head retracted; there was active rigidity of both arms and legs. When anything was offered him to drink he jerked about in the bed violently, and tried to knock it over with his hands; directly fluid entered the mouth it was ejected violently, his face became livid, the pupils dilated, respiration interrupted, extremities rigid, and back arched. There was a small superficial scar over the left eyebrow, but no redness over it; also bright injection of the fauces, but no swelling; the submaxillary glands were a little enlarged, but not tender; but pressure over the larynx was especially painful. When micturating he had an attack of general convulsions; the urine contained a large amount of albumen, but no sugar, and a deposit of

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ammonium urate was present. Bowels confined. He was fed by the nasal tube, and bromide of potassium was given.

On the 17th the patient continued still in a condition of wild excitement, and the sight of a cup of milk produced general convulsive movements, which began to recur every ten minutes; in the intervals he was quiet, would talk to the nurse, and complained still of toothache. At 11 A.M. the convulsions became more frequent, and he was constantly ejecting frothy fluid from the mouth. The ether spray was applied to the back of the neck, after which the convulsions ceased, and he drank for the first time by the mouth. He remained quiet until 12.30, when the paroxysms returned, and ether spray was again used; after this he was quiet until 4 P.M., when he had a severe convulsive attack, with great rigidity of arms and legs, retraction of the head, and arching of the back, and was ejecting frothy mucus from the mouth mixed with grumous fluid. The ether spray was applied again, but this time, on feeding, some of the fluid was ejected from the mouth. After this he spoke sensibly, was much amused with a watch and a penny, but said that the bed was full of spiders. At 6 P.M. he was again seized with general convulsive movements, and vomited a large amount of grumous fluid; the pupils became greatly dilated; he appeared to have hallucinations, laughing and looking about wildly. Respiration gradually ceased, the heart continuing to beat for nearly one minute after the last expiration.

At the post-mortem examination nothing abnormal was found except great congestion of the organs, especially the lungs.

HALIFAX INFIRMARY.

PURULENT DISCHARGE FROM THE EAR, FOLLOWED BY DIFFUSE SUPPURATIVE MENINGITIS; DEATH; NECROPSY.

(Under the care of Dr. S. C. SMITH.)

WE are indebted for the notes of this case to Mr. J. P. Gray, house surgeon.

Thomas M——, aged twenty-six, admitted April 22nd, 1887. Has had purulent discharge from the ear for ten years. A week before admission he began to have severe pain just behind the right ear, and on the night before admission he first noticed that he could not shut his right eye.

On admission the man was pale but well nourished, with a rather anxious expression. There was a profuse offensive discharge from the ear. At the bottom of the meatus was a prominent red granulation. He was quite deaf in this ear, and had been so for several years. A watch, however, placed on the head could be heard distinctly. He had total right facial paralysis. He answered questions readily, and had no hemiplegia. Urine: sp. gr. 1024; acid; no albumen or sugar. Temperature 101·2°.

He continued in this condition for three days, his ear being syringed out frequently. The discharge was still very profuse.

April 26th.—The temperature had suddenly risen to 104·2° this morning. Is dull and apathetic, and becomes confused when asked questions. Pupils equal and act to light.

27th.—Patient has become semi-comatose. Plantar reflex lost on left side, and partial loss of sensibility in left leg, but no loss of power; no loss of power or sensation in left arm. Delirious at intervals. The same evening the left leg had become paralysed and completely anæsthetic. Left arm had lost power, but did not seem to be anæsthetic at all. Accordingly, Dr. Smith trephined, at 7 P.M., over the mastoid cells with a one-third of an inch trephine. No pus was, however, reached. The head was shaved and the ear syringd out with a 1 in 20 carbolic lotion and stuffed with iodoform, in order to make it as aseptic as possible, with a view to possible trephining higher up on the following day. Temperature 103·8°.

28th.—Patient completely comatose. Total left hemiplegia and hemi-anæsthesia. Cheyne-Stokes' respiration. No pus from trephine wound. Left cornea quite insensitive, but pupil acts very sluggishly to light. Temperature 101°. Right pupil also acts to light.

29th.—Right pupil dilated, and does not act to light. Right external strabismus. Right cornea anæsthetic.—11 P.M. Spasmodic twitchings in left hand and arm, lasting about two minutes at a time. The head also turns to the left. Stertorous breathing. Pulse 170; temperature 102·6°.

30th.—Died at 8 A.M. Temperature just before death 106°.

Necropsy, four hours after death.—Right hemisphere bathed in thick fetid pus, flattened, and very hyperæmic. About eight ounces of pus were collected. The base of the brain was also bathed in it. On the posterior surface of the right petrous bone was a small hole in the dura mater, admitting a fine probe. On stripping off the dura mater, a hole was found in the roof of the tympanum, through which a probe could be passed into the tympanum and out at the external meatus. For about half an inch all round the upper end of this unnatural foramen, the dura mater had been separated from the bone, so as to form a small abscess cavity (of old standing probably), which had apparently burst through the dura mater about the time of admission, and caused the cerebral symptoms. The brain on section was found quite healthy.

CROMER COTTAGE HOSPITAL.

A CASE OF CHRONIC EMPYEMA TREATED BY ESTLANDER'S METHOD; CURE; REMARKS.

(Under the care of Dr. H. MCCLURE.)

R. W——, aged twenty-one, was admitted on Nov. 29th, 1886. Family history fairly good. His present illness dates from a pleurisy six years ago. In November, 1883, he was in Cromer Cottage Hospital with an empyema of the left side, and under free drainage the discharge ceased. In April, 1885, pus was again issuing from the side; the point of exit was enlarged, free drainage secured, and the discharge again ceased. From this time he continued in indifferent health till May, 1886, when he was admitted to the Norwich Hospital with an open empyema. He left the hospital after a residence of two months, the discharge still continuing, and in September the side burst at another point higher up, so that now there were two openings, both giving exit to fetid pus. This state of matters continued up to the time of his admission in November.

On admission the patient was found to be fairly well nourished, but anæmic, with rather livid features and with most marked clubbing of the fingers, cough, and expectoration. The heart's impulse was half an inch below the nipple and an inch and a half to the right of the nipple line. The respiratory sounds over the right lung were normal; on the left side no true vesicular murmur was heard, except in a small space under the clavicle; dulness not absolute behind from half-way down the scapula. There were two openings in the chest wall, one below the eighth rib in the axillary line, the other in the sixth interspace, both discharging fetid pus freely. Both openings were enlarged, and a metal sound passed into the upper gave vent to a gush of very fetid pus, a loculated collection evidently having been tapped. Two large drainage tubes were then inserted.

The patient seemed to improve at first, the general health was better, and the discharge less, and, further, the upper opening closed; but at the end of three months there had been no material progress made. The discharge from the lower opening was still free; iodoform insufflations were used, keeping the discharge aseptic. There were also cough, lividity, and most marked clubbing of the fingers. As the side had been discharging pus for nearly a year, with a history of bad health for eighteen months, and there being not the slightest prospect of the empyema healing, resection of the ribs was determined on, and this was carried out on March 4th, 1887. Mr. Fenner kindly consented to help, and Mr. Mackintosh gave the A. C. E. mixture. An incision was made along the sixth rib, beginning about two inches outside the nipple line and reaching about four inches outwards. The periosteum was bared, and an incision made through it along the rib. About an inch of the rib in the middle of the incision was removed, being raised by a periosteum elevator and cut through with ordinary bone forceps. A further incision was then made from the inner point of the first for three inches downwards, the skin reflected, and the seventh rib bared, and a piece of about two inches and a quarter in length removed in the same way; the corresponding pieces of periosteum were also excised. The pleura was then snipped through with scissors, and was found to be almost an inch thick. There was now a large gaping hole in the chest wall of over an inch in diameter. The finger was introduced and the cavity thoroughly explored; it was found to reach backwards for three or four inches from the opening upwards, where it was roofed by the lung for about two inches, and downwards about three inches. It was bounded in front by the pericardium, through which the heart's pulsations were distinctly felt by the finger. The cavity throughout

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seemed lined with a smooth and glistening membrane, and some adhesions in it were broken down by the finger. There was no troublesome bleeding until the pleura was cut through (only one vessel having to be tied), when there was a very profuse gush, which, however, was soon arrested by plugging the opening for a minute or two with carbolised wool. Some iodoform was then dusted into the cavity, a full-sized drainage tube introduced into the upper part of the wound, the edges of the wound brought together by a few silver sutures, a large pad of antiseptic wool adjusted, and the side firmly bandaged with a wide roller. The patient took the anæsthetic badly; there was considerable cough and vomiting, which rather embarrassed the proceedings; but the operation itself did not occupy more than a quarter of an hour. The after shock was rather alarming, but the patient had a comfortable night, a hypodermic injection of morphia having been given.

The after history was happily uneventful. There was no febrile disturbance (the thermometer on three occasions only registered as much as 100° F., the temperature at all other times being normal); the discharge, somewhat profuse for the first fortnight, steadily declined. The drainage tube was removed on April 20th, and a week later the discharge had practically ceased; there remained only a slight fungated small spot, which did not heal until two little pieces of necrosed rib came away.[1] He was discharged from the hospital on May 16th, and presented himself shortly afterwards with the wound quite healed. He had gained in weight and looked ruddy; his breathing was better, he said, than it had been for years, and clubbing of the fingers was not noticeable. The respiratory sounds were heard fairly well on the affected side, both before and behind, and there was distinct flattening of this side, more particularly just over the site of the operation, where there was a marked depression. The left side measured two inches and a half in circumference less than the right.

Remarks by Dr. MCCLURE.—Mr. Godlee's lectures on the surgical treatment of empyema, published in THE LANCET of Jan. 1886, suggested the treatment in the foregoing case. Of the seven cases operated on by Mr. Godlee only one had then healed. I think this case a very successful instance of the operation introduced by Estlander, and brought more especially to our notice by Mr. Godlee. I may say my patient was refused admission to a London hospital for disease of the chest by reason of the chronicity of the case. There is one point I should like to call attention to before concluding. For the first three or four days after the operation we had considerable hæmoptysis. What was the cause of this? I am inclined to think there must have been some expansion of the lung rupturing small vessels by a process of stretching. Besides, about a month after the operation, when changing the dressing, a violent fit of coughing seized the patient, and the drainage tube, which had been considerably shortened, was driven forcibly from the chest, followed by a gush of pus, though the discharge had been very slight for several days previously. Mr. Godlee, in his valuable lectures already referred to, says: "It is quite impossible for the lung to be distended by any inspiratory effort; this would be opposed to the law of physics." Be that as it may, I am inclined to think we had here another expansion of lung; at any rate, the patient's breathing seemed very much better after this, and the discharge rapidly ceased.

[1] The patient was shown at the May meeting of the Norwich Medico-Chirurgical Society.

PRIZES FOR PAMPHLETS ON HYGIENE.—The Spanish Society of Hygiene invites essays suitable for publication in the form of pamphlets or tracts, on the following topics: 1. The Hygiene of Work in Second Childhood. 2. Methods of obviating the Evil Effects produced on the Sight by faulty Conditions of Schools, and of the Methods of Instruction. A prize of £10 will be given for the best essay on each subject. Foreigners may compete, and the essays may be written in Spanish, French, Italian, Portuguese, or Latin. The length should be that of a 16-page pamphlet. The MSS. must not be signed, but must bear a motto, and accompanied by a sealed envelope bearing the same motto outside, and containing the name of the writer within. The essays must be addressed to "La Sociedad de Higiene, Madrid, No. 22, Madrid," before September 30th, 1887. The award will be announced at the opening of the academical session.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FIFTH ANNUAL MEETING, HELD IN DUBLIN, 1887.

AT the second general meeting, on Aug. 3rd, Professor GAIRDNER delivered the address in Medicine, and, on the motion of Dr. LITTLE, seconded by Dr. BASTIAN, a vote of thanks to the giver of the address was carried with acclamation.

Sir THOMAS CRAWFORD then moved: "That, inasmuch as many members of the British Medical Association are aggrieved by the practice of those public institutions which limit the sphere of selection of their medical officers to candidates holding the higher qualifications of certain colleges, this Association shall adopt such measures as it may think best to induce the Medical Council to make it clear to the public that the higher registrable qualifications of the Colleges of Physicians and Surgeons of the United Kingdom are of equal value, or, if they are not, that the Medical Council will take steps to make them so, in order that the candidates holding such qualifications may be equally eligible for such appointments without reference to the nationality of the college from which their qualifications have been obtained." In these days of union he hoped they were all unionists. At all events they, as medical men, were unionists all over the country. Let it not be said any longer that those holding the qualifications of the Colleges of Surgeons and Physicians in Ireland could be excluded from getting positions in public institutions in England, but let them stand on an equal footing with their brethren in all parts of the kingdom. He would like to appeal to the meeting, and to ask whether the excellent address they had listened to was not testimony of the ability of Scotch physicians, and whether the splendid address they heard last night did not do credit to the Dublin University. The grievance they had was that certain English hospitals did not permit candidates holding Dublin and Scotch qualifications to compete for their positions. This was not altogether a doctor's question—it was a parent question also; and every man bringing up a child for the medical profession should consider it. He asked them to adopt the resolution not alone in the interest of their brethren practising in England, but in the interest of the public at large.

Sir CHARLES CAMERON seconded the resolution. He held that the Irish medical men were in no way inferior to the English, and he called on all laymen, as well as on members of the Association, to support the motion. The addresses they had listened to within the past few days showed that men of the highest attainments existed in Ireland; their colleges had sent forward men of the highest attainments, and it was too bad that those men should be tabooed in the way they had been. The Medical Act of 1858 abolished what must be regarded by every medical man as odious monopolies. It might be said that this was a lay grievance, and that they had not power to interfere, but they had the power to put moral pressure on.

Dr. HAUGHTON said the Medical Council had nothing to do with the higher qualification. They had to see that no person entered the profession who was not able to cure a broken leg or arm or who was not able to cure typhus fever. He had a friendly amendment, which Sir Thomas Crawford consented to accept, containing nothing but advice. It was, "That the Association is of opinion the diplomates of Irish and Scotch universities and corporations should possess the same privileges in respect of public appointments as are enjoyed by the diplomates of the other divisions of the United Kingdom."

Dr. WADDEL seconded the amendment, which he believed would effect all that Sir Thomas Crawford required.

Dr. SIBLEY said it was quite notorious that the degrees conferred by different universities represented a totally diverse standard. They were asked now to say that the qualifications were equal. He moved the previous question.

Dr. HOMER FITZPATRICK said he stood there as an Irishman, but he asserted also the rights of Englishmen and Scotchmen. He thought it would be very unwise for the

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Association to agitate under every grievance that may occur. In any case, they had no power to interfere with private institutions maintained by voluntary subscriptions.

Sir WALTER FOSTER mentioned that the Council had twice refused to pass this motion. What was proposed to be done was to pass a resolution directing the various bodies in English hospitals and dispensaries to put the three qualifications to be had in the United Kingdom on a level. The qualifications were not of equal value. That of Edinburgh was not of the same standard as those of London and Dublin. He warned them against being turned aside by sentimental grievances, and against passing a resolution which would be merely waste paper.

Dr. STEWART (Clifden) read an advertisement which appeared in the English papers for a surgeon for the Liverpool Royal Infirmary, and which stated that the applicants for the position should possess the qualifications of the English universities. Although the hospitals were privately managed institutions, they were supported by the public, who desired the election of the best men. He asked Sir Walter Foster, would he to-morrow, if there were a vacancy in the hospital of Birmingham, stand up and say, "You are excluding men who are equal in every respect"?

Sir WALTER FOSTER rose to speak, but was ruled out of order.

The amendment was then carried by an overwhelming majority.

At the third general meeting on Aug. 4th, the address in Surgery was delivered by Professor EDWARD HAMILTON, Surgeon in Ordinary to the Lord-Lieutenant.

Sir GEORGE PORTER moved, "That the best thanks of the Association be given to Mr. Hamilton for his able and interesting address," which was seconded by Mr. WHEELHOUSE, and adopted with acclamation.

It was announced that Dr. Ward Cousins' prize of £20 had been awarded to Dr. Rentoul of Liverpool.

Dr. GRIMSHAW moved the adoption of the reports of the Scientific Grants Committee, which was seconded by Dr. BURNEY YEO, and adopted.

The report of the Collective Investigation Committee was also adopted, and the meeting adjourned.

At the fourth and concluding general meeting, on Aug. 5th, the address in Public Medicine was delivered by Dr. S. HAUGHTON.

Dr. THORNE THORNE moved, and Surgeon-General CORNISH seconded, a vote of thanks for the address, which was adopted.

Dr. E. WATERS moved, "That the cordial thanks of the members of the British Medical Association be given to the Provost and Senior Fellows of Trinity College, Dublin, and to the Senate of the Royal University of Ireland, for giving the use of their magnificent buildings for the meeting," which was seconded by Dr. KIDD and adopted.

Thanks were also passed to the President and members of the Dublin Branch to Surgeon-General Hassard and officers of the medical staff, and to various others, for what they had done in making the meeting so successful.

THE SECTIONS.

MEDICINE.

Aphasia.

At the meeting on Wednesday, Aug. 3rd, at 10.30 A.M., a discussion on Aphasia took place, which was opened by Professor CHARLTON BASTIAN. He began by expressing his belief that the functional activity of motor centres and of outgoing currents generally lie outside the sphere of mind. We become aware of movements which have been affected through sensory impressions of a kinæsthetic order, whose seat of registration is, as the author contends, in the so-called, but wrongly called, "motor region" of the cortex. The speaker dwelt upon the importance of distinguishing between memory and recollection, holding that the former may be active even where no consciousness of the process exists. This is the kind of revival of activity which principally occurs in kinæsthetic centres anterior to the repetition of movements, whether in speech, in writing, or other less specialised acts. Recollection always implies consciousness, and this more vivid form of revival occurs especially in auditory and visual centres. We have four kinds of word memory, two of which (the auditory and the visual) are especially active during silent thought, whilst the other two (viz, the glosso-kinæsthetic and the cheiro-kinæsthetic) become subconsciously revived during the expression of our thoughts either by speech or writing, the seat of their revival being in the so-called motor centres. Different kinds of amnesia are produced by lesions or defects in one or more of these centres for word memory, or it may be from mere defect in the commissures by which these word centres are brought into relation with one another. Sometimes a lesion in one of the commissures will lead to a speech defect which is clinically indistinguishable from a defect due to disease of one of the word centres, and this is one point upon which Dr. Bastian lays much stress. It is a point of much importance in reference to doctrines of localisation. In ordinary persons (that is, in those who are neither congenitally blind nor congenitally deaf) the four memories of words are mainly called into play in definite couples—viz., the auditory and the glosso-kinæsthetic revivals taking place during ordinary speech, and the visual, together with the cheiro-kinæsthetic revivals taking place during ordinary writing. In reading aloud, however, or in writing from dictation, the process is rather more complicated, three centres of word memory being necessarily active in each. It is certain that the visual and the auditory word centres must be brought into intimate relation with one another by means of two sets of commissurial fibres (visuo-auditory and audito-visual). It is possible that the parts of the general auditory and visual centres in relation with word impressions may be as distinctly defined as are the analogous parts of the kinæsthetic centre in relation with speech movements. It is certain there is one variety of amnesia in which the part of the auditory centre in relation with words is specially at fault (causing "word deafness"), and also that there is another variety in which the part of the visual centre in relation with words is specially at fault (causing "word blindness"). It is impossible to specify the precise situation of either of these word centres, though it is highly probable that they are near the posterior extremity of the Sylvian fissure, in, or in the immediate neighbourhood of, the anterior part of the occipital lobe. As to the situation of the other two word centres more definite statements can be made. The glosso-kinæsthetic centre is in Broca's convolution, while the cheiro-kinæsthetic seems to be located just above in the posterior part of the second frontal convolution. These two centres, which, following Ferrier, many regard as motor, Dr. Bastian considered to be sensory centres. The reasons in favour of this view he had elsewhere stated. Just as the auditory and visual word centres are connected by commissures, so is each of them connected with its functionally related kinæsthetic centre. Thus, we have the audito-kinæsthetic commissure connecting the auditory with the glosso-kinæsthetic centre; and the visuo-kinæsthetic commissure connecting the visual with the cheiro-kinæsthetic centres. If we employ the term "internuncial" for those fibres which pass outwards and downwards from the kinæsthetic centres of the cortex to the true motor centres in the medulla and spinal cord, then it becomes clear that for the proper study of speech defects it is needful to consider the results of lesions (*a*) in the different kinds of word centres, (*b*) in the different commissures by means of which these centres are connected with one another, (*c*) in certain internuncial fibres, and (*d*) in certain motor centres. The effects of lesions in these different situations was then considered. It was pointed out (1) that destruction of the auditory word centre would cause not only "word deafness," but also a complete aphasic condition; (2) that destruction of the visual word centre would cause not only "word blindness," but also agraphia, the lesion here, as in the previous case, being far away from the frontal convolutions; (3) that lesions of the commissures between the auditory and the visual centres give rise to extremely interesting forms of speech defect; (4) that lesions of any part of the commissures between the auditory and visual and the two kinæsthetic word centres would cause complete aphasia, indistinguishable clinically from that which would result from defects in these latter centres themselves—a doctrine which is of extreme importance from the point of view of cerebral localisation; (5) that the island of Reil lies over part of the course taken by these fibres, and hence we may account for the long-recognised fact that aphasia occurs with lesions in this situation; (6) that sub-cortical lesions of the internuncial fibres from Broca's convolution would produce a quite different kind of defect, in which, though the patient cannot speak, his mind is not in the least

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affected, and he can communicate his thoughts freely by writing; (7) and that bulbar lesions produce an essentially different kind of defect so far as mind and speech are concerned, though the power to do writing may or may not be retained, according as the hand escapes or shares in the paralysis.

Professor GAIRDNER (Glasgow) said that having had an opportunity at the Liverpool meeting a few years ago of introducing a discussion on aphasia, he could hardly be expected to take a part in the present one without repeating himself to some extent. But as Dr. Bastian had just presented them with a new and individual view with respect to the whole subject, it was impossible to avoid indicating, in some degree, a feeling either favourable or adverse as regards what had been said. There was much to be said in favour of Dr. Bastian's views, especially as regards that very interesting and instructive part of them wherein he shows that in early infancy we are probably building up or evolving one set of centres, those required for spoken words; and then at a considerably later period quite another set of centres, those which are in operation for written language, through the eye and the hand. He would not follow Dr. Bastian throughout his exposition, but there was something attractive, and probably true, in this distinction. A good deal might be learned in relation to aphasia through the close observation of the first processes of speech in the infant; and the very remarkable study of M. Taine, published a few years ago, in which he gave details of experience, day by day almost, of the case of his own child, might prove a quarry for physiologists and pathologists to work in. Another way of studying the subject of aphasia was to take note of the rudiments of aphasic disability, sometimes even as regards particular words and phrases, which almost every man—at all events every man at all advanced in life—can usually find in himself. Several facts of this kind were taken notice of, as already adduced in the Liverpool discussion. But in true cases of pathological aphasia there were still many remarkable apparent anomalies to be brought into terms of law; and perhaps Dr. Bastian's views would help, as Dr. Gairdner thought they would, to explain such cases as that of the late Lord Denman, which, though mentioned at Liverpool, had by no means received sufficient attention, the peculiarity being that, although Lord Denman was all but completely aphasic as regards enunciation, he was apparently intact in his other faculties, and not only continued able to read largely in several languages, but employed his relatives to copy out what he read with particular approval, that it might be sent to his friends as his only possible way of maintaining a correspondence to which he was prompted by his warm and vivid interest in all current matters. A case which Dr. Gairdner intended to have presented at the discussion in Liverpool was interesting from a different point of view. It was that of a man paralysed on the right side and aphasic in all the ordinary senses of the word, both in the sense of word-blindness and word-deafness. This man, however, could play dominoes, and manifested in every way possible to him a complete command of intelligence as regards numbers. After a long time and many experiments of this kind, always with the same results, he discovered, almost by accident, that his own age was wrongly inscribed on the ticket attached to his bed. This led to further investigations, and it was then found that, although he was as impervious as ever to the mere verbal symbol for numbers, whether written or spoken, he could easily recognise Arabic numerals, and could with his left hand either write them in order, or indicate them when shown on the dominoes, *en vice versâ*.

SURGERY.

At the meeting on Wednesday, August 3rd, Sir GEORGE POLLOCK, F.R.C.S.I., on taking the chair as President of the Surgical Section, said that his first and pleasing duty was to return thanks for having been elected president of the Surgical Section of the British Medical Association. He considered it a very great compliment to preside over so many distinguished surgeons. He gave them a hearty welcome to Dublin, and hoped it would be a profitable meeting. Owing to a resolution that presidents of Sections were recommended not to give any formal address on the opening occasion, he would only say a few words. This was a wise rule, as papers of great value were often left over for want of room owing to the lengthy addresses delivered by the presidents. He referred to the great value of the papers brought before them, and hoped the discussions would prove interesting to them all.

Hernia.

Mr. MITCHELL BANKS (Liverpool) opened the discussion on the subject of the Radical Cure of Hernia. The operation which he adopted was removal of the sac and stitching the pillars of the ring. The operation was as simple as could be devised; and he gave statistics of 106 cases (thirty-eight of which were strangulated hernise) showing very satisfactory results. In children the wearing of a good truss in the majority of cases was quite sufficient without any operation. Patients should be watched for years; and he had very great doubts as to the pillars of the ring being closed thoroughly. There was in reality, in his opinion, no radical cure.—Mr. MACEWEN (Glasgow) described an operation by which he placed the sac of the hernia on the abdominal aspect of the inguinal ring, the details of the method having been published in the Annals of Surgery for August, 1886. Thirty-two cases had been operated on without a death. By an ingeniously constructed model he showed the steps of the operation and the method by which the needles were passed.—Mr. KHETLEY (London) referred to some cases treated by means of the injection of fluids—viz., concentrated decoction of bark. He believed that interference with the sac, except in skilled hands, was dangerous.

Mr. C. B. BALL (Dublin) read a paper on Twisting of the Sac in Radical Cure of Hernia, and described his method of torsion of the sac, which was grasped by a broad forceps, gradually twisting it, the finger at the same time freeing the neck. A catgut ligature was applied round the sac, tied, and cut off, sutures passed to prevent slipping, and the dressings painted over with a solution of salicylated potash. Of twenty-two cases operated upon by this method all recovered, scrotal abscess being the only bad result. He considered the wearing of a pad after the operation inadvisable. In large and bulky hernise torsion answered admirably, and in congenital hernise a modification of the operation was required. In one case of double hernia one operation cured the two.

Mr. BARKER (London) thought that the operation for radical cure was still *sub judice*. He only operated after trusses had failed. He described his operation, which was without risk. He had operated thirty-five times on twenty-nine individuals. He used silk ligature, hand twisted, and preferred it to catgut or kangaroo. Drainage was not necessary, nor a truss after the operation; on the contrary, he considered it injurious.

Mr. KENDAL FRANKS (Dublin) read a paper on the Radical Cure of Hernia. He also considered the wearing of a truss after operation injurious, as it had a tendency to cause reabsorption of the lymph effused. He made the skin incision on a higher level than the inguinal canal, and cleared the sac, which was excised, silver sutures being passed through the pillars of the ring. He was of opinion that closure of the inguinal canal was a very important procedure. The canal was closed by being glued to the aponeurosis of the external oblique.

Mr. MURPHY (Sunderland) read notes of a case in which a radical cure of hernia was performed by an unusual method. A man aged fifty, who wore a truss, suffered from symptoms of strangulation, and, dreading surgical interference, took the matter into his own hands. With a razor he made an incision down on the sac, cutting it off, and passing through the spermatic cord. He lost a good deal of blood, but made a good recovery. The pillars of the ring were brought together, and so far there had been no return of the rupture.

Mr. RABAGLIATI (Bradford) in a communication on the Radical Cure of Hernia, detailed three cases, all of which were successful, one having been operated on twice before by another practitioner. He removed the sac by the knife, and approximated the pillars of the ring by sutures.

Mr. MAYO ROBSON (Leeds), in a paper detailing twenty-five cases of radical cure of hernia, said in a good many of the cases strangulation had taken place, and in the remainder trusses were found to be useless. He used Wood's operation with strict antiseptic precautions, and the greater number appeared to be permanently cured. Two deaths occurred, both from acute bronchitis. He thought Mr. Macewen's operation promised great advantages.

Mr. THORNLEY STOKER (Dublin) read a communication on the Theory and Practice of Operation for the Radical Cure of Hernia. He referred specially to the radical cure

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of inguinal hernia, and thought to allow silver sutures to remain permanently was unsound both in theory and practice. The closure of the inguinal walls was of great importance, and the lymph exuded was not due to the action of the sutures. In operating, the sac was exposed and carefully isolated, included in two catgut ligatures, and divided; torsion of the sac was advisable, and sutures through pillars tied button fashion over a leaden disc. As regarded artificial support after operation, he considered it usually as unnecessary, but in cases where some support is advisable Harrison's apparatus could be recommended; this consisted of a pelvic band and two thigh pieces, with perineal band, straps passing over the shoulder.

Mr. WALSHAM (London) said he had experience of about twenty cases by the radical cure, and preferred Mr. Banks' operation. The sac should be cleaned well up to the internal ring; he regarded this as important. The sutures he used were kangaroo. As regarded results, he had during the past six years only one case which was not radically cured. He did not recommend wearing a truss.

Mr. WARD COUSINS (Portsmouth) had operated on 120 cases, fifty for radical cure. He performed the operation in adults only when they were very bad cases, so that his principal patients were among children, who bore the operation well. He had no fatal result. Thirty of the cases were perfect cures; for the rest, sufficient time had not elapsed to form a positive opinion. He believed that trusses were very seldom properly applied. A pad applied after the operation (composed of an air-bag) had given satisfactory results.

Mr. HEUSTON (Dublin) read a paper on a Case of Strangulated Femoral Hernia, with Gangrenous Fallopian Tube and Ovary contained in the Sac. The patient, an unmarried lady, aged seventy, was operated on for strangulated hernia. Gimbernat's ligament was excised, the sac opened, and a loop of intestine returned; the sac also contained the right Fallopian tube and ovary, the former structure being in a gangrenous condition. The tube and ovary were removed, and the sac twisted, ligatured, and excised. The wound healed by the first intention, and the patient was out of bed on the sixteenth day. So far as he knew, there were only seven cases of femoral hernia of the kind described. The twisted neck of the sac he thought an important point. He used chromicised gut.

Mr. THOMSON (Dublin) thought the Section ought to be congratulated on the admirable discussion that had taken place. The different methods of treatment for the radical cure which had been brought forward showed that they had not arrived at a perfectly definite operation. He thought the improvement introduced by Mr. Ball to be the best method for treating hernia by the radical treatment. He had operated by this method on several occasions, and could recommend it strongly.

Professor KOCHER (Berne) had operated in seventy cases, and the method of operating he considered a very important consideration. It was important to distinguish between large and small herniæ. The suggestions of Messrs. Ball and Macewen he believed to be of great importance. He thought a good ligature of catgut or silver wire could be depended upon better than on the lymph effused.

Mr. WHEELER (Dublin) gave his own experience in operating for the radical cure of hernia, without entering into the discussion of the best methods of treatment. Where the sac was very large he excised it, and invariably used silk sutures, having an objection to silver. In children catgut was sufficient. In thirteen cases between the ages of nine months and eight years he had fairly satisfactory results; three were failures, but he had no fatal result. He used a pad, but not a truss, after the operation.

The PRESIDENT of the Section (Sir George Porter) thought operations of this kind were the safest they could employ.

Mr. MITCHELL BANKS, in replying, said the discussion had been carried on in the most harmonious manner. He thought one of the principal topics of the discussion was the removal of the sac. The torsion of the sac had proved to be of great service, and he hoped to use it and Mr. Macewen's method on the first opportunity. The simplest operation would be the one most extensively done. He advocated a truss, an elastic pad, and a light truss afterwards.

Spinal Abscess.

At the meeting on Thursday, Aug. 4th, Mr. LAFFAN (Cashel) read a note on the Treatment of Spinal Abscess. Cases which opened spontaneously or otherwise terminated in death. He recommended the plan suggested by Mr. Treves, of cutting down directly on the diseased bone, removing it, and tapping the abscess from the proximal end. Mr. Treves omitted the dorsal region, where Mr. Laffan wished to extend the operation, and also would not wait until signs of the abscess appeared. The pleura might be opened, but pneumothorax was less to be dreaded than that sinuses should form.—Mr. ILLINGWORTH (Lancashire) and Mr. FREMER deprecated the suggestion.—Mr. GIBNEY (N.Y.) said it was the rule in New York not to open abscesses early, as collections of pus were often absorbed, and it was the safest procedure to let them alone.

Abdominal Surgery.

Sir SPENCER WELLS read a paper on the Comparison of the Cæsarean Section with Porro's Operation. He had one case of each. In the Cæsarean section the fœtus, however, was only in the fifth month. The patient whose uterus and ovaries he removed died afterwards from cancer. The true Porro's operation was not the entire removal of the uterus. He wished to discuss the question in those cases where the child could not be removed by craniotomy or evisceration. Would it be preferable to use the Cæsarean section alone, or complete the operation by the removal of both ovaries and part of or the entire uterus?—Mr. IMLACH (Liverpool) thought Porro's operation an easier operation than that of Cæsarean section. He believed the time would come when the child could be removed in cases of pelvic obstruction without removal of the ovaries or uterus.—Sir SPENCER WELLS was surprised to hear Mr. Imlach say that Cæsarean section was the more difficult operation. He said that the enucleation of uterine fibroma was unsatisfactory, and he differed from Mr. Imlach in thinking it extremely hazardous. He concluded his remarks by referring to the electrical treatment then being discussed in another Section.

Mr. TAYLOR (Birmingham) brought forward a communication on a case of Cholecystotomy for Gall-stones, with remarks on the treatment of the blocking calculus. He detailed the case of a lady operated upon, in which four large stones were removed, but one was found to be wedged in the cystic duct, and had to be left. The operation was completed by securing the incision in the gall-bladder to the abdominal wall, leaving a drainage tube, and having the gall-bladder well syringed out twice daily. In a fortnight this impacted stone was removed, and the case did well.

Mr. H. ALLINGHAM'S (London) paper was entitled Inguinal Colotomy: its advantages over the Lumbar Operation, with special reference to a method for preventing Fæces passing below the Artificial Anus. He detailed the steps of his operation, which would require diagrams and more space than can be afforded to describe thoroughly. He pointed out the advantages of inguinal colotomy as compared with the lumbar operation, laying stress also on the position of the patient, which rendered the securing of the sigmoid flexure more easy.—Mr. BARKER (London) had performed three cases of inguinal colotomy, and preferred it to that in the loin. He did not consider it necessary to form a spur, as insisted on by Mr. Allingham, in order to conduct the fæces out of the abdominal cavity.—Mr. MAYO ROBSON (Leeds) said that the question of the difficulty of finding the colon was seldom referred to in books, but it existed very often. In cases of obstruction inguinal colotomy was not advisable.—Mr. LAFFAN mentioned Mr. Nunn's inflator. It was as easy to perform it as to extract a tooth.—Sir SPENCER WELLS thought opening the cæcum was sometimes to be preferred to left lumbar colotomy.—Mr. BALL (Dublin) said that occasionally a meso-cæcum was present, and then a wound of the peritoneum was necessary. An incision along the linea semilunaris offered many advantages. He exhibited his clamp for preventing the passage of fæces into the peritoneal cavity during the operation of colotomy.

Suture of the Patella.

Mr. HECTOR CAMERON (Glasgow) read a paper on Suture of the Patella, with a new suggestion dealing with a shortened rectus muscle. He believed that a permanently short ligamentous union was as good as union by bone. Almost all cases, however, where the union was a ligamentous one, were liable to tear. After wiring the patella he had his patients up in three weeks. He exposed the fragments, drilled opposite the centre of the fracture, used silver wire, twisted the ends and hammered them flat, and left them as a permanent clamp. Where the lower fracture was much smaller than the upper, he drilled from the lower surface. In his last

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three cases there was no drainage of the joint. Shortening of the rectus muscle very often occurred; and if there were any uniting bands he cut them away, and in extreme cases incised the muscle, as suggested by Mr. Rutherford. These incisions were two in number, oblique, but did not entirely divide the muscle, the portion left on one side being incised on the other.—Mr. KEETLEY (London) had sutured eleven patellæ, and regarded the operation as a satisfactory one. No delay should take place in the operation. He tucked the ends of the wires against the fragments, as suggested by an American surgeon. The tissues outside the joint should be drained.—Mr. THORNLEY STOKER entered his protest against the very frequent use of suturing the patellæ. In recent cases he thought there was great danger in the operation.—Mr. MAYO ROBSON believed the operation to be surrounded by dangers in recent cases.—Mr. BARKER said that in the large metropolitan hospital to which he belonged suturing the patella was very rarely performed; they used a plaster-of-Paris case.—Mr. GOWANS (Newcastle) had no hesitation in performing the operation in both recent and chronic cases.—Mr. THOMPSON (Omagh) thought that in the immense majority of cases the plaster-of-Paris treatment, as used in University College Hospital, answered admirably.—Mr. MACEWEN said that under strict antiseptic precautions the operation was one which ought to succeed. In cases of shortened rectus V-shaped incisions were sometimes of advantage.—Mr. CAMERON, in replying, said excellent results for a time occurred when ordinary means were used, but they did not last, not being permanent. He did not recommend it to be a general operation.

Mr. PHILIPPS (London) read a paper on the Treatment of Ulcis Cruris by a New and Successful Method of Dr. Unna. He had used Dr. Unna's treatment in sore legs and could recommend the method. The affected parts are covered with fine cambric soaked with water, the cambric removed, and a tracing conveyed to paper. A glue composed of gelatine, oxide of zinc, and water was then applied to the healthy parts up to the limit of the sore. Over the sore a pad is placed, and around the leg a roller applied, traction being made from the healthy skin towards the ulcer. The dressing was removed in three or four days, the duration of the treatment lasting from four to six weeks. The results were very satisfactory.

Morbus Coxæ.

At the meeting on Friday, Aug. 5th, Mr. J. KELLOCK BARTON (Dublin) read a paper on the Operative Treatment of Morbus Coxæ. He described the steps of the operation—viz., a crucial incision was made over the trochanter, a small trephine used, and Volkmann's scoop applied, so as to remove the soft cancellous structure, more or less passing into suppuration. He used a drainage tube, and here was a practical point: this drainage ought to be maintained for a very considerable time. The operation gave immediate relief, and the results were very gratifying, and permanent also if drainage was kept up for at least two or three months, and the cavity of the bone occasionally washed out. As regarded excision of the hip joint, he considered it should be performed when the health of the patient failed, and when the possibility of death from exhaustion might cause anxiety, or the supervention of amyloid degeneration. The operation was done to save life and restore the use of the limb. When rest and other treatment had failed, then excision might be relied upon as eminently useful. It was surprising the reparation that occurred after excision. He alluded to a case where five inches below the trochanter had been removed, and yet this patient has only a shortening now of two and a quarter inches to two and a half inches, due to filling up of fibrous material. He exhibited a young girl from whose femur five inches had been taken away, and yet the shortening was only about two and a half inches.

Cachexia Strumipriva.

Professor KOCHER (Berne) read an interesting communication—viz., Cachexia Strumipriva and Myxœdema, which affections he considered identical. Cachexia strumipriva was due to destruction of the thyroid body. He had experimented on dogs and monkeys by removing the entire thyroid gland, and produced symptoms of cachexia strumipriva in those animals. As regarded the use of the thyroid gland, he did not know whether it had anything to do in the formation of blood-corpuscles, but he regarded it as useful in removing some excrementitious modifying something in the blood which might be otherwise injurious. He thought cachexia strumipriva was analogous to uræmia, the retention of some noxious portion of the blood acting on the nervous system.—Mr. GODLEE thought an important point was in the reference to complete and incomplete removal of the gland.—Mr. T. STOKER had removed the entire gland in two cases; the division of the isthmus of the gland was entirely useless except in checking the dyspnœa.—Mr. JESSOP (Leeds) said the communication was a most interesting one, and might have been read in either the Pathological, Physiological, or Surgical Sections of the Association. He performed tracheotomy for dyspnœa in one case, with ultimately good results on the tumour. He thought setons or sloughs formed by actual cautery of use, and incision of the isthmus for urgent dyspnœa.—Mr. GOWANS (Newcastle) asked Professor Kocher if cachexia strumipriva had as low a temperature as myxœdema, and if the pathology of the two diseases was similar.—Mr. G. STOKER (London) thought the function of the gland had not the power attributed to it.—Professor KOCHER, in reply, thought the gland was a secreting organ, and might be of service in removing something detrimental from the blood. If the smallest portion of the enlarged gland were left, the goitre recurred; the division of the isthmus was only to remove dyspnœa. He said the clinical appearances of both affections were the same—the same low temperature, scanty hair, and dry skin. No mucinoid substances formed, at least not in every case. He now commenced by excising one side of the goitre, which often stopped the dyspnœa of the other. On the opposite side he enucleated the pathological tissue.

Trephining in Cerebral Disease.

Mr. WHEELER'S (Dublin) paper was on Trephining in Mastoid and Tympanic Disease and Cerebral Abscess. He believed that the majority of operators did not select the proper site for the operation. Of sixteen cases which came under his notice of tympanic and mastoid disease with abscess of the temporo-sphenoidal lobe, the most usual site of cerebral disease, fourteen operated on recovered, and the remaining two died. The site he recommended was to bisect vertically the mastoid process, and in front of this he used the trephine on a level with the external auditory meatus, so as to reach the temporo-sphenoidal lobe. All his cases had recovered. Mr. Wheeler showed vertical sections of the head with and without the brain, to demonstrate that the lateral sinus was not touched, but the tympanum, dura mater, mastoid cells, and temporo-sphenoidal lobe.—Mr. BARKER (London) recommended as a site for the operation a point considerably above the meatus for trephining; he thought it a matter of great difficulty to diagnose an abscess of the temporo-sphenoidal lobe.—Dr. DRUMMOND (Newcastle-on-Tyne) detailed a case of cerebral abscess where aphasia was due to pressure. The pus having been drawn off, the patient recovered consciousness and power of speech.—Mr. JESSOP said the cerebral disease was due to the ear affection, and Mr. Wheeler's use of the trephine was the proper plan to meet the abscess in the brain.—Mr. PRATT (Dublin) considered the results of the operation most satisfactory. He had seen eight cases; the six operated on recovered, the remaining two died. He thought the lower operation the best for drainage purposes.

Litholapaxy in Boys.

Mr. WALSHAM (London), in his paper, Litholapaxy in Male Children, called attention to Bigelow's operation in children, and contrasted it with suprapubic or perineal lithotomy. He regarded the after-results in suprapubic lithotomy as being very serious. The objection in litholapaxy in children to the small size of the prostate and genitals was chimerical. The bladder was not very roomy, but many operators preferred a small surface, and it was expansile. As to the alleged narrowness of the urethra and its tendency to laceration, his answer was that it was not so narrow as was generally thought, especially when the meatus was excised. The extreme sensibility of the urethra was exaggerated, and in some cases he had operated without chloroform. He alluded to Surgeon-Major Keegan's experience in India, and laid down certain regulations in performing the operation.—Mr. W. COUSINS agreed with the author as to the suitability of the operation, especially for small stones.—Mr. CORLEY (Dublin) said that Surgeon-Major Keegan had informed him that he would operate on the youngest child if he could find an instrument small enough to use.

Tetanus

Mr. AUSTIN MELDON (Dublin) read a paper on the Treatment of Tetanus. He wished the members to test a

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plan of treatment which in his hands had been singularly successful, and to place on record the results of treatment with different drugs in 937 cases of acute tetanus collected by him. In his first case, twenty years ago, he divided the nerve with only temporary relief, and he had since that time tried in succession Calabar bean, Indian hemp, curare, quinine, alcohol, and opium, with an invariably fatal result. Some years since he tried a combination of hyoscyamus, belladonna, and conium in a bad case, which recovered under this method, and since then several other cases, with satisfactory results. Of 17 cases in which these drugs were administered by him he had 13 recoveries and 4 deaths. The following statistics of 937 cases collected by the author of the paper are of interest:—In 370 cases treated by chloral, 83 recovered and 287 died; 135 treated by curare, 23 recovered and 102 died; 60 by nicotine, 3 recoveries, 57 deaths; 96 by opium, 4 recoveries, 92 deaths; 21 by conium, 3 recoveries, 18 deaths; 76 by cannabis indica, 12 recoveries, 64 deaths; 28 by bromides, 2 recoveries, 26 deaths; 103 by alcohol, 25 recoveries, 78 deaths; 17 by belladonna, conium, and hyoscyamus, 13 recoveries, 4 deaths; 41 by all other remedies, 17 recoveries, 24 deaths. All cases in which the first symptoms commenced later than the fifteenth day are excluded from this return.—Mr. JESSOP thought that such a successful result in cases of acute tetanus was unexceptionable, and he hoped Mr. Meldon would give fuller details.—Mr. WHEELER asked had nerve stretching been adopted?—Mr. MELDON said he had published several cases, and hoped to publish more; he had tried nerve stretching without permanent relief.

Treatment of Joint Disease.

Mr. SWAN (Dublin) read a communication on the Influence of Periosteal Section and Bone Drainage in Arresting certain Diseases of the Joints. He said that in children the joint most frequently attacked was the knee joint, and he selected this articulation as most commonly illustrative of those conditions of disease which might be combated by the method suggested. The cases suitable were as follows:—Extension of inflammation and its products from adjoining bones; the formation of abscess and its discharge into the joint; perforation of the encrusting cartilage, the sequel to carious or tuberculous bone; acute inflammation of the epiphysis and subsequent implication of the joint; the detachment of the periosteum from the extremities of bones, and the discharge of subperiosteal effusions into the joint. He described two cases as illustrative of the treatment recommended. In conclusion, he regarded counter-irritation in these cases as at best but a stereotyped empiricism, and rest a partially rational abstinence from treatment, but which would invariably terminate in the necessity of at least giving exit to products of disease under unfavourable conditions to excision, or to entire loss of the limb.—Mr. GIBNEY (New York) asked what fixation apparatus was used, and the time the treatment lasted. He had used igneo-puncture with good effects.—Mr. SWAN said rest was used after section of the bone until pain in the limb and passive movement of the joint had ceased. He thought bone drainage was better than igneo-puncture.—Mr. ILLINGWORTH (Lancashire) exhibited a new form of splint for the treatment of fractures into and in the vicinity of the elbow joint. He had found that fractures treated by the ordinary rectangular splint did not always give satisfactory results. He used a Gooch's splint, the hand lying prone, and in this way the axes of the arm, forearm, and hand were continuous.—Mr. FOY and Mr. HALL thought keeping the arm and forearm extended ought not to be recommended.

Mr. WARD COUSINS (Southsea) made some remarks on the treatment of retention of urine by aspiration through a capillary catheter, and exhibited the instrument. It was important to distend the urethra before and behind the stricture with oil when using his catheter.

Mr. STEELE (Clifton) gave a communication on the Radical Cure of Varicose Veins. He advocated removal of portions of the varicosed veins, a method which had proved satisfactory in his hands during the past ten years. He used Esmarch's bandage, and broke off the varicosed portion of the vein with forceps. The cases were perfectly cured in from four to six weeks by this method.

PHARMACOLOGY AND THERAPEUTICS.

This Section met in the Medical Theatre, under the presidency of Dr. Whitla (Belfast), and attracted a large and appreciative assembly. Amongst those present were Sir Andrew Clark, Sir Walter Foster, Mr. Wheelhouse, Professor Charteris, Professor Leech, Dr. Little, Professor Cuming, Professor Quinlan, Professor Walter Smith, and Dr. M'Hugh.

Dr. WHITLA began his address by alluding to the fact that this was the fourth year of the existence of the Section of Pharmacology and Therapeutics, which, under the presidency of his predecessors, Dr. Maclagan, Dr. Fraser, and Dr. Lauder Brunton, had passed successfully through its initial period. He deplored the unhappy position of pharmacology in this country owing to the mistaken interference of the Legislature, but he reminded the Section that the mere relief from harassing restrictions would be but a small step towards the accomplishment of great results, and urged the importance of a thorough testing and sifting at the bedside of the facts elicited by experimental research. The need of the day was not more additions to the already vast number of new remedies, but rather a more precise and scientific knowledge of how the remedies in our hands should be best utilised in the treatment of disease. It was discouraging to see how small a portion of current medical literature was devoted to therapeutics, for it should never be forgotten that successful treatment was the real *raison d'être* of medical science. Yet the fashion of the hour was to attach an undue importance to even the most superficial and fallacious physiological experiments, and to ignore the published results of clinical experience. What was needed was some machinery for bringing to a focus the accumulated experience of the profession upon the action and therapeutic value of the new drugs which the progress of pharmacology was continually putting into our hands. He thought the British Medical Association afforded the requisite machinery ready at hand, and he proposed that it should be utilised in the following manner: A portion of the journal of the Association might be set apart for the discussion of questions of therapeutics and placed under the management of a competent committee, who should from time to time select certain drugs and invite contributions tending to throw light upon their properties and uses. In this way the attention of the profession generally would be concentrated upon certain remedies, and the rich results of clinical experience would be gathered in. It would be seen that this method need not interfere with the working of the Collective Investigation of Disease Committee, of which the value had been chiefly seen in other fields than those of therapeutics. Much, no doubt, would depend upon the manner in which this suggestion should be carried out, and the responsibility of the Committee would be a serious one; but the great gain would be that many would be encouraged to watch and record the results of new remedies, and others would be induced to make known the accumulated experience of clinical observation, which otherwise they might never have thought of publishing. The suggested machinery might be utilised for another and similar purpose viz., for establishing a sort of popular control by the profession at large upon the national Pharmacopœia. That work reflected much honour upon its three distinguished editors, and the improvements recently introduced had been very great; but its tendency was constantly to lag behind the bulk of the profession in such important matters as therapeutics and posology. It was in such particulars that a *plébiscite* of the whole profession would be of most essential value. It would be possible to propose such queries as to whether a drug of doubtful value should continue to be retained, or some new claimant for attention admitted to the pages of the Pharmacopœia, and thus the general results of practical men might be brought to bear upon a matter that vitally affected the interests of the profession and the progress of medicine.

The President's address was listened to throughout with much attention, and warmly applauded at the close. The discussion which followed dealt with several questions of very vital interest to the profession, and may be expected to issue in important results.

Professor LEECH moved a resolution to the effect that a committee be appointed to collect information to be utilised in the production of the next edition of the Pharmacopœia. He said he was struck how little medical men relied upon the Pharmacopœia in their choice of drugs, and would give his hearty support to any plan which might be suggested whereby the feeling of the profession in general regarding the value of remedies could be ascertained.

Sir ANDREW CLARK characterised the President's address

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as "lucid, able, earnest, practical, and important." He differed from Dr. Whitla, however, in one point—viz., as regards the value of the statistical method in arriving at the truth in questions of disease and treatment. No doubt the method was full of temptations to fallacy, but its great utility had been shown in the statistics regarding the various methods of treatment in acute rheumatism. Statistics had proved two things in this case: first, the immense value of the salicylates in the control of symptoms; and secondly, the necessity of continuing the treatment for a considerable period, even although all symptoms were allayed. He deplored the small share of attention given to practical therapeutics, of which no doubt the explanation was that many people did not believe in treatment. For his part, he did not hesitate to class himself among the believers in medicines. Disease was not a *thing* but a *state*, and just as certain things produced states of disease, so other things had power to remove them. He gave a striking case of the speedy relief of an urgent case of bronchial catarrh by hourly doses of one twenty-fifth of a grain of tartar emetic. He denied that the results of experiments upon animals could be at once transferred to the case of man, but nevertheless these experiments were of priceless value, chiefly for their suggestiveness. He cordially supported the proposals of the President.

Sir WALTER FOSTER concurred with Sir Andrew Clark regarding the great value of the President's address. He regarded it as a scandal that we did not devote our main efforts to the cure of disease. He thought scepticism upon the action of remedies was a most paralysing influence, and held that carelessness about treatment infallibly led to carelessness about diagnosis. We were being flooded with "eclectic" remedies from America and elsewhere, recommended only by chemists' circulars. No remedy ought to come before the profession without some scientific sanction. The Collective Investigation Committee had a scheme on hand which would cover many of the suggestions of the President. It was of great importance that the knowledge which was being slowly gathered by practitioners all over the country upon such a drug as strophanthus, for example, should be brought together and made available. The researches in pharmacology of Rutherford and Fraser would have been far more fruitful in their therapeutic applications if some machinery had been available for putting their conclusions to an extended test.

Professor QUINLAN (Dublin) briefly supported the resolution proposed by Dr. Leech.

Dr. LITTLE (Dublin) expressed himself as a strong believer in the efficacy of treatment. He deplored the small space given to the subject in the leading text-books. No doubt the subject was one of great difficulty, as we seldom found two cases so exactly alike as to afford proper material for a therapeutic experiment. He advised greater simplicity in the administration of drugs as a means of facilitating the observation of their results. He begged to move, "That a committee be formed to carry out the scheme sketched in the President's address."

This resolution superseded that suggested by Dr. Leech.

Professor CUMING (Belfast) seconded the resolution. He said he was, perhaps, open to the charge of not being a very enthusiastic therapeutist, but he felt safe in following the lead of such a chief among the *coryphæi* of medical science as Sir Andrew Clark. Some men, perhaps from the constitution of their minds, preferred to look upon disease chiefly from the etiological and pathological standpoint. It was impossible, however, not to be struck with the immense effect of drugs upon the human body.

The resolution was then put and carried unanimously.

Professor CHARTERIS proposed, "That the suggested committee be constituted as follows: Sir Andrew Clark, Dr. Little, Dr. Duffy, and the officers of the Section."

Mr. WHEELHOUSE expressed his confidence that the Council of the Association would carry out any suggestions emanating from that Section, and, if necessary, provide any [illegible] that might be necessary.

Professor WALTER SMITH (Dublin) supported the resolution, which was unanimously passed.

Dr. [illegible] then called upon Professor Unna of [illegible] to give a demonstration upon "Improvements in the [illegible] of the Skin."

[illegible] said he preferred to follow the *à priori* method, and to regard his subject rather from the physiological [illegible] The absorptive power of the skin was a very [illegible] the normal horny layer, forming a powerful bulwark against the absorption of remedies. In many cutaneous diseases the mode of application was of more importance than the selection of the drug. Certain remedies had a chemical, others a mechanical action. Of the former, caustic potash and soft soap were long used to soften the horny layer, but he regarded salicylic acid as preferable, because it was more powerful, and its action was more easily estimated than that of the other remedies. Of mechanical means of treatment he would mention the sprays. He had succeeded in curing eczema by the pure alcohol spray, and fungoid growths by a pure chloroform spray. The oleates seemed to act best when applied with the ether spray. The excretions of the skin were three in number: (1) water gas, or insensible perspiration; (2) fluids; (3) fatty matters. In the application of our remedies, we must consider whether we wished to promote absorption (thus necessarily limiting secretion), or, on the other hand, promote secretion (thus necessarily limiting absorption). The water bath restrained the fatty secretion, while the oily preparations applied to the skin restrained the watery secretions, and were, in reality, a species of clothing. We get the maximum of effect with medicaments applied to the skin under some impermeable substance. Powders, pastes, and gelatines gave absorption at its lowest limits. He then gave a practical demonstration of the application of some of his remedies, and exhibited some of the preparations made for him. One feature of these is the substitution of plasters for ointments, as being more cleanly and more easily handled.

Professor McCall Anderson, Mr. Malcolm Morris, Mr. H. G. Brooke (Manchester), and Professor Walter Smith took part in the discussion which followed.

At the meeting on Thursday, the first business was to hear a paper from Professor QUINLAN (Dublin), upon Strophanthus. The botanical characters, distribution, and varieties of this plant were fully described, and several interesting specimens were exhibited. Opinions had fluctuated as to which was the most active part of the plant, but the usual view was that the seeds were the most important. The natives of Central Africa, who used it as an arrow poison, obtained the active principle by crushing the seeds between stones. The preparation in common use was a tincture of the seeds, of a strength of 1 in 20. It had been said that this tincture should not be made into a mixture, but should be put separately into the vehicle on each occasion of use. The speaker had, however, regularly prescribed it in mixture without any ill effects. The active principle, strophanthine, had not been satisfactorily crystallised. It was a very active poison, $\frac{1}{30}$ gr. being sufficient to destroy a good-sized dog; $\frac{1}{200}$ gr. might be regarded as an average dose for man. Speaking of the therapeutics of this drug, Professor Quinlan regarded it as a valuable heart tonic. Its action was to strengthen rather than to stimulate the heart. He had found it of special service in prolonged typhoid fever, with feeble first sound and threatened cardiac failure. Its rapidity of action was extraordinary, the effect usually showing itself in fifteen minutes. In cardiac obstructive disease he had seen much relief follow its use. In fatty heart there was some benefit, but usually it was very fleeting. In anæmia with functional bruit it was useful. It did not lose its effect, nor did it (like digitalis) tend to accumulate in the system.

Professor LEECH (Manchester) followed with an address upon Sparteine, the active principle of common broom. He commented upon the extreme diversity of results reported by various experimenters upon this remedy. Some said it acted upon the brain, others upon the cord, others upon the heart and kidneys. He had carried out a series of researches with the view of settling some of these disputed points. One thing was certain about sparteine—it was a perfectly safe drug. He had himself taken five-grain doses without any unpleasant effect. He had found that it produced no effect upon either the brain or cord, but he was satisfied that it was a fairly powerful diuretic, though not so certain or potent as digitalis. In eight cardiac cases in which he had tried it, the increase in the quantity of urine had averaged ten or twelve ounces per day, and the stoppage in the use of the drug had been followed by the cessation of this increase. Like digitalis, it was useless in many advanced cases of heart disease, but he had known it to succeed where digitalis had failed. In acute kidney disease sparteine was useless, but it had a diuretic action in some chronic renal maladies. It had few disadvantages. Dyspeptic troubles were the only thing complained of, and these were not usual.

The PRESIDENT remarked that Professor Leech's observa-

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tion filled an important gap. The results of experiments upon sparteine had been singularly conflicting, a fact which was probably largely owing to the very different doses employed by different observers.

The chief business of the day was then entered upon—viz., a discussion upon "The Therapeutics of the Uric Acid Diathesis." This was introduced by Dr. BURNEY YEO in an address which commanded the attention of a large auditory for nearly an hour. He said he would endeavour to confine himself to the practical aspects of the question. The pathology of the condition in which uric acid was present in excess in the organism was still doubtful. Murchison regarded the liver as primarily at fault, and with this view Professor Latham was disposed to concur. According to this theory, the essential condition present was the non-metabolism of glycosin into urea. Garrod, on the other hand, regarded the kidney as the active producer of uric acid. Ebstein placed its production in the muscles and marrow of bones. Frerichs held that the essential point was the perverted metabolism of albuminoid substances into urea. Bouchard denied that the presence of uric acid in excess was the chief feature in the morbid condition in question. One thing appeared certain—that the uric acid diathesis had its foundation in the imperfect metabolism of food, especially albuminoids. He (Dr. Yeo) would define it as "mainly a disturbed retrograde metamorphosis." Turning to therapeutics, he would point out that in all therapeutic questions three things had to be taken into account: 1, the pathogenic factor; 2, the constitutional factor; 3, the remedial factor. The two former were highly variable, and only the last had any claim to constancy. He would deal with the various remedies in detail. 1. Diet, regimen, and mode of life. There could be no doubt that, next to heredity, errors in eating and drinking were the most potent causes of the uric acid diathesis; but it was an error to assume that all gouty people had been intemperate. Ebstein regarded a tendency to obesity as a potent factor in the production of the condition, and advocated a dietary to check fat formation. He did not, however, entirely exclude fatty matters from the dietary. He allowed cabbage, peas, &c., but no turnips. He (Dr. Yeo) thought that no good results followed from prohibiting the moderate use of animal food. Senator advises a minimum of fats, and especially prohibits the yelk of egg. As regards alcohol, he thought it would be better for some persons, especially women, to abstain altogether; in others a moderate use of alcohol was not objectionable. Malt liquors and bad wines were to be carefully avoided. He regarded the cheap clarets in common use as particularly injurious. He held strongly that the *quality* rather than the *kind* of wine was the really important point. As a general rule, those wines were best which had a diuretic action. A small quantity of alkaline water might be advantageously added to the wine. Still Moselle was good, and was now much used. Exercise in moderation was important as tending to improve the general health, but it must be borne in mind that gout was very common in those who took a great deal of exercise, and that women, who led comparatively inactive lives, suffered far less than men. A warm, dry, equable climate was useful. All climatic conditions which interfered with the action of the skin were hurtful. He advised the regular use of considerable quantities of water, preferably hot water. Turning to drugs, colchicum had been much assailed of late years, but he had never observed the ill effects which some authorities attributed to its use. Garrod, Sir Thomas Watson and Graves had all borne witness to its value. He believed that its chief action was upon the liver. It had also sometimes a diuretic and diaphoretic action. As regarded the salicylates, he could not agree with Germain Sée that salicylate of soda was the best remedy which we possessed. The benzoates had been highly recommended, but he was not convinced of their utility. Guaiacum, in spite of the high commendation of Garrod, seemed to be generally neglected. Iodide of potash was very useful. Alkalies were in almost universal favour, but Dr. Latham did not think highly of them. There was a disposition at present to exalt unduly the merits of lithium, in comparison with soda and potash. He thought bicarbonate of potash was the most certain diuretic of the group. Magnesia and lime had been largely lost sight of, but the success attending the administration of the waters of Contrexéville (which contained large quantities of these salts) should direct our attention to them. He thought Bath was likely to be as useful as Contrexéville, and it was a much more attractive place. The mineral constituents of the waters at these two resorts were similar.

A discussion followed in which the following members took part: Dr. Latham (Cambridge), Dr. Myrtle (Harrogate), Dr. Kent Spender (Bath), Sir George Paget, and Dr. Kenny.

At 4.30 P.M. a special meeting of the Section was held to witness a demonstration by Mr. MALCOLM MORRIS of the Treatment of Ringworm of the Scalp. There was a crowded attendance, and Mr. Morris's able exposition was heard with much interest and attention.

At the meeting on Friday, August 5th, Dr. WHITLA (President) took the chair.

Dr. HARKIN (Belfast) read a paper upon the Treatment of Epistaxis. He believed that the liver was often at fault in this affection, which he regarded as the analogue of bleeding hæmorrhoids. He advised the administration of chlorate of potash, either alone or in combination with iron, and the application of a blister over the hepatic region. He had found chlorate of potash curative in some cases of an allied disorder—viz., the hæmorrhagic diathesis. It was difficult to say how this drug acted, but he thought highly of its value in all cases of sub-oxidation and altered metamorphosis. Some cases of epistaxis possibly arose from splenic congestion, and he had tried cupping over the spleen with success.

Dr. SANSOM (London) then gave a valuable address upon the Treatment of some forms of Aortic Disease. After a few remarks upon mitral disease, in which he said he had come to the conclusion that digitalis was our most efficient remedy in mitral regurgitation and convallaria in mitral stenosis, he gave an analysis of a large number of cases of aortic disease, from which he concluded that the two commonest causes of this form of cardiac affection were (*a*) rheumatism and (*b*) atheromatous degeneration. He had found these two causes about equally common. Aortic disease attained its maximum frequency in early adult life. In childhood, according to his observations, the mitral valve was affected in proportion to the aortic as 5 to 1. This accorded with general experience. He proposed to confine his remarks upon treatment strictly to one class of case—viz., aortic disease, arising from rheumatism; and he wished it to be distinctly understood that his observations did not refer to any other branch of the subject. He would divide rheumatic cases into two groups—(*a*) those in which there were no symptoms referred to the heart, and (*b*) those cases in which symptoms referable to the heart were present. As regards the former class, patients sometimes sought advice for the most diverse maladies. He related a case of a lad who consulted him for incontinence of urine, and in whom well-marked aortic disease with hypertrophy of the left ventricle was found to be present. In cases of aortic disease without cardiac symptoms, it might be laid down as an absolute rule that all agents which tended to increase the force of the ventricular systole were absolutely hurtful. Compensation being already perfect, such agents could only serve to disturb the equilibrium. Pain at the heart was an essential and early symptom in aortic disease, while it was well known that pain was not an essential symptom in mitral disease. The pain in aortic disease might attain the intensity of a true angina. Whether hypertrophy or dilatation should be the first to follow disease of the aortic valve was purely a question of nutrition. If nutrition were well maintained, hypertrophy would come first; if nutrition were imperfect, dilatation would precede. As regards the very important question of the administration of digitalis in aortic disease, medical opinion and experience had varied much from time to time. The present tendency was rather in favour of its administration, a view supported by so good an authority as Dr. Oliver of Newcastle-on-Tyne. While carefully guarding himself against an absolute expression of opinion, Dr. Sansom pointed out certain drawbacks to the use of digitalis—viz., (1) It may increase the distress and aggravate the symptoms present. In some of his cases where digitalis had had this effect he had seen great relief follow the administration of five-minim doses of tincture of aconite and the inhalation of nitrite of amyl. (2) Digitalis sometimes caused sickness. (3) In some cases where much temporary relief was obtained by its administration sudden death had followed, apparently as the result of its use. Yet, in spite of these dangers and drawbacks he believed that digitalis was sometimes of service in the *early* stage of aortic disease and for a *limited* time. If given in the same manner and for the same length of time as was usual in mitral disease, great evil would result.

Dr. COX (Dublin) followed with some remarks upon the Treatment of Acute Endocarditis and Pericarditis. He advo-

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cated blistering over the heart, and the employment of perchloride of mercury, iodide of potassium, and turpentine.

Professor CHARTERIS (Glasgow), Vice-President of the Section, read a paper upon the Climatic Treatment of Consumption. He urged that patients should be recommended to remain away for two or three years. Hence, a place like Colorado, where invalids might find some occupation, had a great advantage over Davos. He related the particulars of a case of his in which severe hæmoptysis had come on during the voyage across the Atlantic. All remedies proved futile, but the hæmorrhage ceased upon arrival in New York. This patient was now doing well in Colorado. Another patient of his, after wintering at Davos, had subsequently died of rapid phthisis. He strongly urged the paramount necessity for consumptives adopting an out-door life, and quoted, with approval, the remark of Sydenham, that "quinine was not a more sure remedy for ague than was horseback exercise for consumption." He could not adopt Koch's views that the tubercle bacillus was the *vera causa* of the disease.

Dr. DRYSDALE (London) followed with some remarks upon the same subject. He believed in the curability of consumption, and had found a considerable number of instances of medical men who had recovered from the disease. He was formerly much in the habit of prescribing sea voyages, but now leaned to the high altitude treatment.

Dr. SYMONS ECCLES (London) then gave a demonstration of the manipulations employed by him in the application of Massage. The great interest felt in the subject was manifest from the crowded and attentive auditory which had assembled to hear Dr. Eccles. A couch was provided, and the various processes were thoroughly explained and illustrated upon the living subject. *Effleurage*, or stroking the muscles; *pétrissage*, or kneading the muscles; and *tapotage*, or tapping the muscles, were successively performed. Dr. Eccles employed lanoline for his hands, and gave his opinion that it was much to be preferred to vaseline or oily preparations. His cases would be subsequently published. He had used massage with great success in chronic dyspepsia, to the exclusion of all medicinal remedies; also in the treatment of stiff and painful joints. In reply to questions from the audience, Dr. Eccles said that massage was a very simple process, but that some persons were unable to perform it properly, simply from the want of the requisite manual dexterity. It might be performed two, three, or four times daily, according to the circumstances of the case. If the patient complained of fatigue after the process, it was an indication that it had been performed to excess. To guard against the possibility of rupturing a gastric ulcer or similar condition, a very careful diagnosis was indispensable before massage was performed. He related the case of a gentleman who was a cripple from a painful knee-joint affection, and who after six weeks' massage was able to walk two miles without fatigue or pain.

At the conclusion of Dr. Eccles' demonstration, the consideration of the Climatic Treatment of Phthisis was resumed.

Dr. MORLEY DOUGLAS (Sunderland) spoke highly of Las Palmas in Grand Canary as a health resort for consumptives. He thought it far superior to Madeira or Orotava, for the last of which somewhat extravagant claims had recently been put forward. The climate of Orotavo was not bracing, as had been alleged, but relaxing, there being excess of cloud. It had been described as a dry climate, but the mean daily range of temperature (so low as 5) was evidence of a humid atmosphere. Orotava was out of the range of the dry north-east trade wind, whereas Las Palmas came under its influence. This latter resort had a magnificent beach, fine drives, and good accommodation. Hygienic measures were being attended to. The water supply was much better than at Madeira. The results of treatment at Las Palmas has been very encouraging.—Mrs. Dr. GARRETT-ANDERSON made some observations on the general question. She strongly condemned sending advanced cases of consumption upon long sea voyages.

The proceedings of the Section soon afterwards concluded with the usual votes of thanks.

PATHOLOGY.

The Section met for the first time on Wednesday, Aug. 3rd, SAMUEL GORDON, M.D., presiding. In the unavoidable absence of the President, Dr. A. W. FOOT, Vice-President, took the chair, and opened the Section with a few introductory remarks.

Pathology of Empyema.

Dr. MARKHAM SKERRITT introduced the discussion on the above subject, which led to the following remarks.

Dr. RUSSELL was of opinion that in some cases resection of ribs was of great benefit. In cases treated early it was not usually necessary; in neglected cases it was of use. He considered it best to aspirate once or twice before making a free opening, so that the lung being relieved of pressure the parietal and pulmonary pleura may become adherent. Acute fetid empyema occasionally occurred on the left side. He considered that these cases began as diaphragmatic pleurisy, that the inflammation extended through the diaphragm, and that the fetor was due to the neighbourhood of the colon. This fetor was similar to that which occurs in abscesses adjacent to the bowel.

Dr. JACOB considered that the reason why collapse did not occur in many cases when the pleural cavity had been freely opened was because the greater part of the pleural cavity had been previously obliterated by adhesions. Why some effusions became purulent was not clear. He considered that empyemata were empyemata almost from the beginning, and that the serous stage was very short. In children pus had been found very soon after the initial rigor. He approved of preliminary aspiration before making a free incision through the chest wall.

Dr. ACLAND reviewed the various statements raised in the discussion. He was of opinion that the spontaneous evacuation of pus from the pleural cavity did not, as a rule, or in any large number of cases, take place in the direction of least resistance. He thought that a probable explanation of the fact that exit frequently occurred high up and anteriorly might be that the exact spot was determined by the position of the primary lesion which started formation of pus. He did not agree with the opinion that the admission of air into the pleural cavity was not generally followed by collapse of the lung. He instanced a case in which, when air was admitted into the pleural cavity in a previously healthy man, pneumothorax was at once produced. He thought that if the discussion resulted in some scientific investigations on this point the debate would not have been in vain.

Dr. FOOT considered that age and the general condition of the patient had more influence on the question whether the effusion was to become purulent or not than the nature of the local injury. In young people there is a tendency to rapid proliferation of leucocytes. He had noticed a curious tolerance of purulent, and intolerance of serous, effusions, some purulent effusions having lasted two years without marked symptoms.

Dr. MARKHAM SKERRITT, in reply, said that the formation of pus, according to the general opinion, was due to constitutional state. He used to aspirate as a preliminary step to opening the pleural cavity freely. He had now given up this mode of treatment, considering that it only causes a loss of time, and does not make it more probable that the pus left in the pleural cavity after the aspiration will be absorbed. Dr. Clifford Allbutt noticed that many cases of empyema went on for a considerable time without the occurrence of hectic fever, but that after aspiration hectic came on. He considered that there was little or no probability that aspiration will cure a case, and that it only allows more time for adhesions to form and bind down the lung more firmly.

Nature of Contagium in the Exanthemata.

Dr. G. THIN, in his paper on this subject, after explaining the reasons which had induced him to read only the part of his paper which had reference to scarlatina, went on to analyse the evidence which had been recently put before the profession by Mr. Power, Dr. Klein, and Dr. Edington. On examining the circumstances of the Hendon outbreak, he had satisfied himself by personal interviews with farmers that the cow disease at Hendon attacked two other herds supplying together nearly 500 families, and that no scarlatina was in these instances communicated. On these two farms there were three cases of poisoned fingers by the discharge from the sores of the udder, with the result of septic inflammation. In another case a milker scratched a pimple on his eyebrow, from which erysipelas spread over the head. Dr. Klein's investigations did not seem to him conclusive. He was inclined to attribute the symptoms and pathological changes in the animals observed by Dr. Klein to septic poisoning. He could not agree with Dr. Klein in considering that he had communicated to those

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animals anything like scarlet fever. Dr. Klein's description of the cultivation characters of his streptococcus much resembled those given by Flugge of *Streptococcus pyogenes*, and by Dr. Edington of his *Streptococcus rubiginosus*. The most important point in Dr. Edington's research was, he thought, the absence of his bacillus from the desquamation scales till the fifteenth day, and its existence in the blood in the early stages before the other cocci known to be present in the blood and tissues were found. Dr. Thin acknowledged the value of Dr. Klein's and Dr. Edington's researches from the point of view of bacteriological research, but he did not consider that in either case the evidence was sufficient to induce us to consider it proved that in their respective organisms these investigators had found the veritable cause of the disease. He further urged the importance of comprehensive researches being at once made to determine whether animals were capable of developing scarlet fever, and to determine the number and nature of the organisms present in the blood in scarlatina. The cow disease at Hendon and the other farms might have been cow-pox, but he thought it more likely that it was the false cow-pox of Hering.

Professor MACFADYEAN said that the subject of Dr. Thin's paper was one of engrossing interest, and had more than an average interest for him, as his time was largely devoted to the study of diseases on the borderland of human and veterinary medicine. He had studied very carefully the history of the investigation into the Hendon outbreak, and he was not convinced that the udder disease was the cause of the scarlatina. The disease in the cows was of a very contagious character, and yet it appeared that instances of its prevalence in a herd were very rare, for, if it were not so, epidemics of scarlatina from this cause must be of every-day occurrence. He had made some investigations into eruptive diseases of the udders of cows before and since the Hendon outbreak, and he had seen numerous cases of an udder eruption which grew with the lesions described by Dr. Klein. It might be they were not identical, and certainly they had not caused scarlatina outbreaks. He thought that both Dr. Klein and Dr. Edington erred in not in the first place attempting to infect the calves and other animals with material taken direct from cases of human scarlatina. One calf he had fed with a very large quantity of desquamation, and another he had inoculated with blood from scarlatina patients, and yet these animals never developed a symptom of scarlatina.

Dr. SIMS WOODHEAD said he had been very much interested in Dr. Thin's paper. He thought that he had placed his finger on the weak spot in Dr. Klein's chain of evidence. In many cases it seemed to him that the pathognomonic features of scarlatina had been lost sight of, and similar conditions had been allowed to pass muster as the true scarlatina. After what they had heard of the resistance of the calf to both feeding and inoculation experiments, it did seem peculiar that Dr. Klein should only be able to produce any serious symptoms in parturient cows, or just those animals in which he had previously been able to produce certain pyæmic conditions. Dr. Edington had pointed out to him that his *Streptococcus rubiginosus* cultivated from scarlatinal blood was very like Dr. Klein's *streptococcus*, and Dr. Thin had, again, pointed out that they were very like the *Streptococcus pyogenes*. It should always be remembered that in the blood from scarlatinal patients there were numerous micro-organisms, and nothing was more probable than that the organisms above mentioned, which were so frequently associated with certain forms of inflammatory disease, should make their way into the blood, and so give rise to certain conditions when inoculated into a susceptible (parturient) cow. Dr. Woodhead was able to confirm what Dr. Thin had stated in regard to local abscess and lymphangitis following inoculation from a pustule.

Professor CROOKSHANK said that Dr. Thin's paper was of especial interest to him, as he had followed the researches in connexion with the contagium of scarlet fever very closely, and had recently published in THE LANCET a critique on the conflicting results obtained by Drs. Klein and Edington. The subject must be regarded as still *sub judice*. Dr. Edington's research was fairly complete, but still he was of opinion that an examination of the skin under other conditions and in health was most essential, and, indeed, might well have claimed attention from the very first. Dr. Klein's researches were also very elaborate, but the evidence adduced appeared to be in some particulars very weak. He instanced the omission of first proving that scarlatina could be communicated to a monkey by direct inoculation of blood or desquamation from a scarlatinal patient before concluding that the Wimbledon monkey died of scarlatina. Professor Crookshank concluded by saying that he hoped Dr. Klein would continue to prosecute his researches with redoubled energy, and strengthen his evidence in these particulars; but until then he thought he was fully justified in saying that Dr. Klein had so far only isolated a streptococcus which was intimately associated with a peculiar eruptive disease of the udders and teats of cattle, and that further evidence was necessary before it could be accepted as the veritable contagium of scarlatina.

Pathology of Bright's Disease.

Dr. W. R. THOMAS expressed an opinion that all cases of contracted kidney are originally caused by the passage through them of certain materials in the blood which have to be excreted, and which in their passage give rise to irritation, and ultimately cause the pathological changes. Some of these are introduced from without, as alcohol and lead; others are formed within the organism, as phosphates, urates, oxalates, &c. When alcohol is taken the chemist can prove its presence in the urine, showing that it or some of its constituents have been excreted. Lead can be readily found in the urine after it has been taken in. Patients who undergo too much exertion mentally, or who have had much mental worry, invariably pass a quantity of phosphates, which are most frequently found about midday—that is, after the bulk of the day's work has been done. Gouty patients pass urates and uric acid in large quantities for years often before actual renal disease occurs. Others who suffer from oxaluria pass also generally phosphates as well. Dr. Thomas felt confident, from examinations of a large number of cases, that all cases of contracted kidney are preceded by some one or other of these appearances, that albumen then appears, at first in small quantities. This gradually and steadily increases, and at last, if the disease is not cured by appropriate treatment, all the microscopical and other evidence, with symptoms of contracted kidney, show themselves.

Dr. ANDERSON thought that the disease spoken of by Dr. Thomas was in most instances not of a primary but secondary nature. The primary expression, in his opinion, was nervous, or existed possibly in the blood, producing a large excess of phosphates in the urine, and was accompanied by dyspepsia and inaction of the liver. Dr. Anderson thought that Dr. Thomas's paper was an exposition of what might be termed a temperance paper. It showed the necessity for temperance in the use of, if not of abstinence from, alcohol, and that the most frequent renal irritant was the quantity of alcohol daily introduced into the system.

Dr. WOODHEAD stated that he could not altogether agree with Dr. Thomas as to the pathology of granular contracted kidney. He had made post-mortem examination of numerous cases of alcoholic granular kidney, and of several cases of both lead poisoning and gouty kidney, and he must confess that by far the greater proportion of cases must come under the atrophic group. He considered that the most marked changes were in, and commenced in, the terminal vascular system, especially in and near the glomeruli. The walls of these vessels were altered. There were also changes in the glomerular epithelium, a loss of function, and then a loss of function in the convoluted tubules. He did not wish to say that the tubules might not also be more or less implicated in the first instance, but he did say that there was no such formation of fibrous tissue as had been often described. Excretion was carried on under great difficulties, and there was always a tendency for the disease to advance.

Actinomycosis Hominis.

Dr. MARKHAM SKERRITT read an abstract of a paper on the above subject. He had published a full account of his case in the *International Journal of Medical Sciences*. He illustrated his remarks with drawings, and with the liver in section, showing the character of the morbid growth *in situ*.

Professor CROOKSHANK said that he had elsewhere committed himself to the opinion that there were very possibly different forms of actinomycosis in animals, and, again, that the disease which had been described in this country as actinomycosis in man differed in the appearance of the fungus from the not so uncommon disease in animals. On the occasion of a paper by Dr. Acland at the Pathological Society

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of London, Professor Crookshank drew attention to this very marked difference in the appearance of the fungus between Dr. Acland's case in man and the fungus (in his own specimens) from cattle. He drew attention to some sections of the bovine disease from different cases, and in all the peculiar club-shaped structures were present, and in these nothing approaching the network of mycelial filaments which characterised Dr. Acland's specimens could be seen. He understood that Dr. Skerritt's specimens gave the same characters as Dr. Acland's, while Dr. Israel's original case, on the other hand, gave the characteristic fungus as seen in the cow. He therefore looked forward with great interest to studying Dr. Skerritt's specimens, as some explanation of these differences was very necessary.

Dr. ACLAND said that he did not consider the disease which had been described was proved to be the same as that which occurs in cattle. It was seen that the clinical study of the two cases was very similar, with the exception that suppuration occurs much more frequently in man than in cattle. He did not think that the microscopical appearances shown were sufficient to show the identity of the two classes of cases. He believed, and gave evidence to support his belief, that a new disease had been described, due to a definite organism. There was at present no ground for believing that the cases which had occurred in man in England were due to infection from cattle.

Leucin and Tyrosin.

Dr. ANDERSON in 1879 read at Cambridge a thesis on this subject, in which occurred the following statement: "The presence of leucin and tyrosin in the urine of man, in the course of numerous diseases, shows that it is the function of the healthy liver to decompose them partly into urea, and to thereby prevent their undue accumulation within the system." Since 1879, many objections, of which the following are some, have been raised: "That leucin and tyrosin appear only in cases of acute atrophy, and in some few of the exanthamata; that they are never otherwise present in fresh, but only in putrefactive urine; that the instances of their appearance in fresh urine are apparent and not real; that they are stated by the author to be present in diseases having no apparent direct connexion with the liver. He replied to these objections. He pointed out how impossible it was for the blood as a whole, or even part, during health to be entirely free from them, and how much more liable it was in disease to be contaminated with them. He spoke of their dialysability, and of their presence in many perfectly fresh pathological fluids. He explained the methods employed for obtaining perfectly fresh urines, &c., and compared the behaviour of so-called pseudo-leucin and tyrosin with that of the true substances. Replying to those who ignorantly assert their non-clinical value, even if present, he showed the fallacy of these assertions. Replying to the objection that leucin and tyrosin are results of putrefactive change of peptones present in fresh urine, he asserts that, in most instances, the only peptonoids present in such urine are leucin and tyrosin, and that this was confirmed by repeated experiments.

(d) BACTERIOLOGICAL DEMONSTRATIONS.

The laboratory adjoining the physiological theatre, in which this Section held its meetings, Professor Crookshank exhibited a series of pathogenic and non-pathogenic microorganisms, both cultivations and preparations, under a large number of microscopes. The *Plasmodium malariæ* of Marchiafava and Celli and the semilunar bodies of Laveran, also found occasionally in the blood of malaria patients, were demonstrated as realities, and therefore, whether of any etiological importance or not, at least deserved attention as objects of interest. Now that King's College, London, has taken the lead in giving lectures and practical instruction in this department of pathology, as well as affording facilities for original research, and has set apart for this purpose a spacious and most completely equipped laboratory, medical men in this country will have a good opportunity for obtaining a practical acquaintance with the subject, and be able to form a more just estimate of the laborious researches which have elevated bacteriology into a distinct science. In the absence of such laboratories and places of instruction in this country, Professor Crookshank has done good service by having given on these occasions demonstrations of the practical side of one of the great questions of the day—the relation of bacteria to disease.

OBSTETRIC MEDICINE.

In this Section, which, if we may judge from the very large numbers who attended, was one of the most popular of the Dublin meeting, Dr. MACAN (Master of the Rotunda Hospital) presided, and gave a short and practical inaugural address, in which he drew attention to the value of a careful palpation of the uterus through the abdominal walls as well during labour as in the puerperal state. Further, he recommended that every woman should be examined two weeks before labour, so as to correct any malpresentation. Those who are thoroughly masters of the art of abdominal palpation will not need to make so many vaginal examinations—a point of considerable importance in the opinion of those who practise antiseptic midwifery. Dr. Macan then drew attention to the great importance of the "Dublin method" of treating the third stage of labour, and in a case-book of the Rotunda Hospital (1843), when Dr. George Johnson was master, he showed that the expression "placenta pressed off" was often found. He said that when Spiegelberg in 1855 visited the British Islands, the points that struck him most, from an obstetric point of view, were the Dublin treatment of the third stage of labour and the use of chloroform. He favours the Dublin method. Dr. Macan then dwelt on the great importance of the bimanual method of examination, and advocated the dorsal position, by which one can palpate the ovaries, the tubes, and make out the normal position of the uterus; and by this method, which is easier for both doctor and patient, one can examine both sides of the pelvis equally well. Further, in this position one can best wash out the uterus and apply antiseptic irrigations. In conclusion, Dr. Macan invited any of those present who wished to visit the Rotunda Hospital and see the practice.

Discussion on the Prevention of Puerperal Fever.

This discussion was opened by Dr. PLAYFAIR, who, after dwelling on the importance of the subject, said that a woman confined in a hospital where thorough antiseptic precautions were in force was as safe as anyone in the most luxurious practice. He wished specially to discuss this subject in connexion with private and domiciliary practice, where antiseptics are by no means in general use. Believing that puerperal septicæmia was analogous to that met with in surgical practice, he said the essence of antiseptic midwifery was—(1) to prevent the formation of the poison; (2) to prevent its absorption; and (3) to destroy it if absorbed. He advocated a thorough management of the third stage, and said the hand should not be removed from the abdomen for twenty minutes after the expulsion of the placenta; during this time gentle frictions are to be kept up, and ergot or ergotin (hypodermically) should be given. He advocated an examination of the perineum after labour, so that any lacerations could at once be closed with gut sutures, after a bichloride of mercury douche had been given. In such cases iodoform dusted over the parts night and morning was recommended. He gave his rules for the nurse (as in his "Midwifery") and the accoucheur. As carbolic lotion chafes the nurse's hands, he advocates the use of perchloride of mercury solution, but does not recommend it as a routine practice for syringing after labour. The vagina is to be syringed twice daily with a solution containing Condy's fluid. In conclusion, he dwelt on the importance of attending to the sanitary condition of the house in which a woman was to be confined.

Dr. ROBERT BARNES (London) drew attention to the importance of considering the condition of a patient before and immediately after delivery, which had a direct bearing on the predisposition to puerperal fever. Antiseptic are not the whole of the precautions to be taken. The peculiar condition of the patient must be attended to.

Dr. KIDD (Dublin), while believing in antiseptic measures, thought the disease prevailed at times in the form of an epidemic.

Dr. ATHILL (Dublin) said he was the first master of the Rotunda who used antiseptic precautions. He laid great importance on attending to the health of a woman before her confinement. In anæmic women he gave iron or arsenic, ergot being the vehicle for giving these drugs. He had no faith in the use of ergot in the third stage, but thought that if given for a short time before the labour with strychnine or tincture of nux vomica it was most valuable. It was no use in a single dose, as it took too long to be absorbed.

Dr. BYERS (Belfast) asked those who believed that puerperal fever might be epidemic or might arise in other

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ways (cold) than from septic poisoning, how they explained the statistics of midwifery hospitals, where antiseptic measures were in force. He thought there was evidence to show that all cases were heterogenetic in their origin; and, in answer to the often-asked question, "How soon may a doctor resume practice who has himself been exposed to septic poison from a wound or scarlatina?" he said he believed that by baths, change of clothes, and thorough antiseptic washings of the hands, &c., the risk of carrying the poison was reduced to a minimum.

Dr. HUMISTON said he had just come from Germany, and had seen the obstetric physicians, after operating on the cadaver, wash and scrub their hands (nail-brush being used) for five minutes in a permanganate of potash solution, and then a second time in a basin with a corrosive sublimate solution, and immediately after take charge of a confinement, without any ill effects. He directed attention to the value of the urinometer in labour cases, a specific gravity below 1020 indicating, in his opinion, "breakers ahead."

Mr. LAWSON TAIT thought that by simplifying our ideas as to puerperal fever we were getting confused. He said there were two groups of cases—one class *systemic*, where we can do nothing, and the other *local*, where abdominal section and drainage are of great importance. It was hard, he said, to divide the groups of cases.

Dr. SLOAN (Glasgow) believed in the value of antiseptics, and directed attention to the importance of looking after the patient's surroundings, the value of fresh air (hence more puerperal fever in winter), of keeping the skin active (no sweating, and hence no chilling), of making few examinations, of a short second stage of labour, and of feeding the patients every two hours in the day and every four hours at night (hence no fainting). He had given up the routine use of the douche unless there is a necessity for it.

Dr. More Madden (Dublin), Dr. Cameron (Glasgow), Dr. Dill (Belfast), Dr. Molony (Arklow), Dr. Routh (London), Mrs. Garrett Anderson, Dr. Wallace, and the President also took part in the discussion, and Dr. Playfair replied.

Papers bearing on the Prevention and Treatment of Puerperal Fever were contributed by Dr. John W. Byers, Dr. More Madden, and by Dr. Robert Barnes.

Treatment of Fibroid Tumours of the Uterus by Electricity.

An interesting communication was made by Dr. Apostoli (Paris), with observations and complete statistics of all the cases so treated from July, 1882, to July, 1887, followed by a practical demonstration in the Rotunda Hospital by Dr. Apostoli himself. Owing to his inability to speak English, Dr. Apostoli's paper, which had been translated by his friend Dr. Woodham Webb, was read by Dr. W. Duncan, one of the secretaries of the Obstetric Section. In this communication Dr. Apostoli says it is five years since he adopted a proceeding which he defines as a galvano-chemical cauterisation of the uterus, vaginal, intra-uterine, or parenchymatous, and always monopolar. He points out that all the attempts made by his predecessors in the use of electricity were defective. The current of electricity was employed (1) in a vague and variable manner; (2) without dosage; (3) in a dose insignificant; (4) by a method always extra-uterine; and (5) by a method often dangerous. In 1882 Dr. Apostoli originated his new and rational way of using electricity, which he has since gone on modifying and improving. He claims to have supplanted the old method by a plan which is—1. Precise, by the introduction of new galvanometers of intensity, exact counters and measurers of the electric current. 2. Energetic. 3. Tolerable, in spite of the enormity of the doses, owing to the introduction of the wetted-clay electrode, which renders the cutaneous pole innocuous, and permits a current of signal medical intensity being transmitted through it easily and without injury. 4. Better localised. 5. Thoroughly under control. He applies to the diseased uterus a continuous galvanic current of an intensity and duration sufficient to produce the therapeutic effect required. This application is galvano-chemical cauterisation. 6. More scientifically exact. The positive pole is hæmostatic—anti-hæmorrhagic—in its action, sometimes instantly, or, again, gradually; it is the remedy, *par excellence*, in bleeding myomas; on the other hand, with the negative pole, we obtain a state of temporary congestion, without direct hæmostatic effect. It will render benefit in fibroids accompanied with amenorrhœa and dysmenorrhœa. He believes his method is—(1) Easy of application. (2) Simple. It is a skilful uterine therapeutic soundage. It needs a good galvanometer of intensity, a battery capable of yielding an adequate current of electricity, an inoffensive cutaneous electrode in wet potter's earth, an inattackable intra-uterine electrode in platinum, and a steel trocar for the galvano-punctures. (3) The current is mathematically dosable. (4) The seat of operation is optional. (5) It is of easy control. (6) It is antiseptic. (7) It is easily borne, as a rule. (8) It does not impose on the patients any forced exclusion. The positive pole is the remedy for bleeding, the negative for non-bleeding fibroids; but, further, if the negative pole is made *by puncture* to enter into the substance of the fibroid, it will ensure its diminution, and further, by a sort of *contrecoup*, will exert a hæmostatic action. Hence Dr. Apostoli gives these rules. Pole positive intra-uterine for the restraining of hæmorrhage; pole negative intra-uterine for non-bleeding tumours; while the indications for galvano-puncture are twofold—(1) as a matter of necessity, owing to uterine atresia, or where a sound, owing to displacement of the uterus, cannot be introduced; (2) by preference, if the punctures can be combined with intra-uterine cauterisation, so that one can expedite and make sure of effects which, with the cauterisations, only would be slower and more imperfect. Dr. Apostoli gives the following directions for galvano-puncture: 1. Antiseptic vaginal irrigation before and after each operation. 2. The puncturing instrument should be a small steel trocar or needle, and the punctures should be shallow, not deeper than 1-2 centimetres. 3. The puncture should be made in the most prominent part of the fibroid, if possible in the posterior cul-de-sac. 4. No speculum should be used. 5. The seat of any pulsation should be ascertained, so as to avoid wounding any vessels. 6. If there is any unusual hæmorrhage the vagina should be dilated with an expanding speculum, and, if necessary, pressure forceps should be put on the bleeding point. Dr. Apostoli claims that, as a result of this plan, every fibroid tumour will undergo a reduction appreciable by touch, and demonstrable by internal measurement. The reduction of the size of a tumour is generally associated with an accumulation of subcutaneous adipose tissue on the abdominal walls. Further, the regression of the tumour goes on after treatment has been suspended, it becomes liberated from its local attachments, and it tends to become more sub peritoneal and pediculated Again, from a clinical point of view, Dr. Apostoli asserts the results are not less striking. He says that ninety-five times out of a hundred all the miseries constituting the fibroidal condition are suppressed, such as hæmorrhages, the troubles of menstruation, dysmenorrhœa, amenorrhœa, nervous disturbances, the direct pains in the growth itself, and from mechanical pressure and the harassing series of reflex actions. Dr. Apostoli has, in the five years from July, 1882, to July, 1887, made, either privately or at his clinique, as many as 5,201 applications of continuous galvanic currents for most of the maladies included in the gynæcological nosology, which he thus enumerates in the following order:—(1) Fibroids of the uterus—polypi; (2) entire or partial hypertrophies of the uterus; (3) subinvolutions; (4) acute and chronic metritis and endometritis; (5) ulcerations of the neck of the uterus; (6) periuterine inflammations (perimetritis, parametritis, cellulitis, phlegmons); (7) ovarialgia; (8) ovaritis and periovaritis; (9) salpingitis; (10) ovarian and tubular cysts at an early age; (11) atresia; (12) hæmatocele. These 5,201 operations (during a period of five years) were made upon 403 patients. Of these he lost only two; in one he says he did not recognise the existence of a suppurating ovarian cyst which ended in death from peritonitis, in the other death was due to a puncture made too deeply. From July, 1882, to July, 1887, he has had under his care 278 patients with fibroids or hypertrophy of the uterus in some manifest degree, upon whom he has used 4246 applications of the continued current of electricity. He does not wish to convey the impression that all have been cured, but he affirms that when there has been no negligence, and where his advice has been fully acted on, 95 times out of 100 permanent benefit has been acknowledged. Among the patients who had not the will to let Dr. Apostoli finish what he had begun, and whose impatience led them voluntarily to seek removal of their tumours by excision, seven put themselves into the hands of six most eminent surgeons, and not one recovered from the operation. It is of great importance that this new method of treatment should be brought before the notice of

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the profession, and hence a full *resumé* of Dr. Apostoli's paper is given.

In the subsequent discussion Dr. PLAYFAIR (London) said Dr. Apostoli's paper was a model of accurate record; his opinion was that this new plan of treating fibroids by electricity had in it great possibilities. He had employed it in his own practice, after having visited Dr. Apostoli in Paris, and from his own experience he was certain of its hæmostatic properties. It was not, however, he thought, a simple method, and needed technical knowledge.—Sir SPENCER WELLS was struck with the improvement in the general health of the woman treated in this way, and with what was a very strange feature, the deposit of fat in the abdominal walls as the tumour disappeared. One of his own patients went to Dr. Apostoli with a fixed uterus, and after thirteen or fourteen applications she returned in much better health, and with an almost mobile uterus.—Dr. STEAVENSON (London) said what we were specially indebted to Dr. Apostoli for was that he has shown stronger currents can be used, and his potter's clay electrode was entirely new. He showed the instruments he had recommended.—Dr. SKENE KEITH (Edinburgh) and Dr. W. DUNCAN (London) both spoke in favour of the method, the former remarking on the great improvement in health that the patients seemed to undergo.—Dr. MACAN (Dublin) said the plan of treatment was, at any rate, expensive, and applicable to patients with long purses.

Owing to the kindness of Dr. Macan (Master of the Rotunda Hospital) many gentlemen had an opportunity of seeing Dr. Apostoli demonstrate his method of treatment in a practical way. Our own impression is that, although Dr. Apostoli may, like every enthusiast, over-estimate the power of electricity in gynæcology, yet that there are many conditions in which this line of treatment may prove most successful. Dr. Apostoli has now brought it fully and fairly before the gynæcologists of this country, and it is only just to him that they should (and we know some have done so already) give it an honest trial and report their experience.

Management of Anterior and Posterior Displacements of the Uterus.

In opening the discussion on this subject, Dr. HALLIDAY CROOM (Edinburgh) said that he quite realised the responsibility he incurred in endeavouring to lay down definite lines of treatment in such a vexed question as that of anterior and posterior displacements of the uterus. He divided them into two great classes—(1) those occurring in nulliparous women; and (2) those occurring in parous women. In the first class he believed the displacements were entirely congenital, due either to non-development or deformity, and he strongly recommended that mechanical interference should, as a general rule, be avoided, both in anterior and posterior displacements. He believed that in the majority of cases they gave rise to no symptoms, and when symptoms of dysmenorrhœa or pelvic distress were present, concurrently with them these symptoms were due to some affection of the uterine annexa, for which mechanical treatment was utterly unavailing. He did not deny that in some exceptional cases mechanical treatment was necessary, but these cases were so rare as not to affect the general fact. With regard to parous women, the case, he thought, was distinctly different. In the many symptoms arising from anterior displacements were due to some inflammatory process in or around the uterus, and the treatment should be directed to the removal of those inflammatory products, and not mechanically to the displacement of the uterus. With regard to posterior displacements in parous women, Dr. Croom thought that a distinction ought to be drawn. They, as a rule, were brought about mechanically, and, speaking generally, were the only forms of uterine displacement that required mechanical treatment. In the case of retroversion, if no adhesions were present, he believed that the uterus ought to be accurately replaced bimanually without the use of the sound, and retained in position by a Hodge pessary, or some other modification of that instrument. In retroflexion the Hodge pessary seemed to him inapplicable, and he believed that, as a rule, endeavours at replacement should be employed with care, and the uterus retained *in situ* with an ordinary ring pessary. In conclusion, he pointed out that there were some cases which required exceptional treatment, but in the main he advocated mechanical treatment for posterior flexions and versions only in parous women. Dr. [illegible] said no pessary in his opinion was curative. He regarded anteflexion as an exaggerated natural condition, and thought pessaries for this useless; but in posterior displacements he advocated the use of these supports as an aid, but not a means for cure. He did not use stems.—Dr. ROBERT BARNES (London) said pessaries were useful if there were no adhesions. He looked upon the ring pessary with horror, as it weakens the natural support and does nothing towards cure. He was sure a proper pessary would cure in time.—Dr. W. DUNCAN (London) thought the vast majority of flexions were not to be treated, as a flexion *per se* cannot cause trouble. The trouble in anteflexion was due not to any stenosis, but to the state of the endometrium. He advocated the use of the bimanual method instead of the use of the sound, and thought that in the majority of cases of flexion no mechanical treatment was necessary.—Dr. WALLACE had seen hundreds of cases of displaced uteri cured by pessaries, but the morbid condition was also cured, and no pessaries were of use till these conditions were made right.—Dr. ROUTH (London) thought the sound should be used, and believed in stem pessaries, if those who used them would see that the instrument went just beyond the flexion, and would keep the patient quiet in bed for some time after introducing the stem pessary.—Dr. KIDD (Dublin) had not lost faith in pessaries, and said in some cases of displaced painful ovaries he had found them most advantageous.—Dr. CAMERON said in Glasgow they had some very successful cases of displaced uteri treated by the "Alexander Adams" operation of shortening the round ligaments.—Dr. W. J. SMYLY (Dublin) drew attention to the importance of subinvolution of the ligaments as a cause of displacements. He showed that the best way to replace a uterus was by the fingers, and that until it was placed in proper position the pessary was of no use. He explained the action of the pessary, and thought cases were cured by it. In reference to cases of backward displacement, he pointed out that Schroeder had used gentle vaginal massage with good effect when adhesions existed.—The PRESIDENT (Dr. Macan) having called attention to the normal position of the uterus, said that his practice was to bring forward the uterus thoroughly, and then to insert a pessary to keep the cervix back. He had had exceedingly good results by such methods.

Dr. MORE MADDEN read a paper on the Treatment of some forms of Sterility, in which he advocated the forcible stretching of the cervix and catheterisation of the Fallopian tubes.

Dr. CAMERON read a paper on the Pathology of Abortion, and exhibited several very interesting specimens illustrative of this condition.—In the discussion on this paper, Mr. LAWSON TAIT said his practice at the Midland Hospital for Women in Birmingham was, in cases where from the history he suspected an abortion, to give ergot with bromide or chlorate of potassium for a week, and then, if there was still hæmorrhage, he introduced his alligator forceps, and cleared out the contents of the uterus.

Dr. W. J. SMYLY (Dublin) read a paper on the Diagnosis and Treatment of Diseases of the Endometrium, in which he showed the value of the curette, as well for diagnosis as for treatment.

Dr. ROBERT BARNES read a paper on the Theory and Treatment of Placenta Prævia, in which his well-known views were brought forward.—Dr. MURPHY (Sunderland) drew attention to the importance in such cases of bringing on premature labour, a view with which Dr. Kidd agreed.

Dr. O'CALLAGHAN read notes on a Month's Abdominal Sections, by Mr. Lawson Tait. Mr. Tait had allowed him to see his hospital and private practice for one month. During this period he saw Mr. Tait do thirty-five abdominal sections, all ending in recovery except one. The fatal case was one in which Mr. Tait removed one set of appendages, he having removed the other some time previously. Dr. O'Callaghan gave a *résumé* of the cases, and said Mr. Tait used no antiseptics, but relied on strict cleanliness and dry dressings.—Having been asked to speak, Mr. LAWSON TAIT said he made no selection of his cases; he never refused to operate on a case in his life. He drew attention to a case in which he had opened and drained the abdomen for suppurative peritonitis occurring during pregnancy. The case ended in complete recovery. He mentioned that one case recorded by Dr. O'Callaghan, in which he had removed the ovaries, was of extreme interest. He had seen six such cases, and five of these came from the Vale of Taunton. The history of these cases was as follows. A girl sixteen or seventeen years of age is seized with profuse hæmorrhage at each

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period, lasting often for fourteen or fifteen days. In such cases he found that all medicines failed, and the ovaries, when removed, were three times as large as normal, and had cysts. Mr. Frederick was at present examining the specimens. In the case recorded, twenty-four hours after the operation, the hæmorrhage ceased, and there had been no recurrence for a month. In these cases the ovaries, and they alone, caused the menorrhagia.—Dr. LAWRENCE having drawn attention to cases of puerperal fever with distended abdomen, Mr. Tait said his opinion was that no cases of puerperal peritonitis should be allowed to die without abdominal section.—Dr. W. DUNCAN spoke of the good results he had seen from the administration of drachm doses of bromide of potassium in the metrorrhagia of young girls.

Dr. A. D. SINCLAIR read a paper on Manual Dilatation as a means of Inducing Premature Labour.

PUBLIC MEDICINE.

This Section, held under the presidency of Sir THOMAS CRAWFORD, M.D., K.C.B., was well occupied throughout its sittings with an abundance of good papers. The principal ones were grouped under two special headings. The first raised the question of the best methods for dealing with the insanitary property now occupied by artisans and labourers, the subject being introduced by Sir Charles Cameron and Dr. Stopford Taylor. The latter drew attention to the circumstances which both in the past and in the present day had led to the dense aggregation of houses on area; and he referred to the action which it had become imperative to undertake in the city of Liverpool in order to deal with the grave evils which had arisen. Sir Charles Cameron also gave some account of the remedial measures which had been adopted in Dublin; but it is quite evident, both from the state of the existing buildings occupied by the poor and from the number of one- and two-storeyed houses which it has been found practical to erect in Dublin under recent works of improvement, that this question of open space about houses is by no means so pressing in Ireland as it is in our English towns and cities. In this country we also have to meet the tendency to imitate, in comparatively sparsely-populated districts, that which is done in the towns, the evils culminating in the erection in our northern counties of a class of house which is known as back-to-back. Under this system there is absolutely no open space to the rear of houses, and though under the conditions of their present occupancy it may be difficult to prove actual injury to health in individual cases, yet it must be admitted that the practice is in violation of one of the first principles of health. In his opening address to the Section, Sir Thomas Crawford had given a most gloomy account of the condition of recruits drawn from town populations as opposed to those coming from the rural areas, the inferiority of the town recruits being especially marked in the insufficient capacity of chest, the loss and decay of teeth, and the diminutive stature; and as the result of a lengthened debate, in which Dr. Grimshaw, the Registrar-General of Ireland, and Dr. Thorne Thorne of the English Local Government Board, took part, a resolution was proposed by Dr. Tatham, and seconded by Dr. John William Moore, the two honorary secretaries, to the effect that this Section, having regard to the great importance of securing through-ventilation of dwelling-houses, desired to express its emphatic condemnation of the system of building houses back to back, and to urge that measures should be taken under legislative enactment to secure a minimum amount of open space to the front and the rear of all newly constructed dwelling houses. The second main topic of debate related to the influence of modern preventive measures on the prevalence of infective diseases. The first group of papers dealt largely with the effects of modern sanitary laws, their value and defects being indicated and illustrated by the several readers of papers. As the result of the discussion which ensued, it would appear that, defective as our English system may appear in the eyes of those who are conversant with all its faults, the general sanitary administration of the sister island is infinitely more imperfect, and calls for improvement and reorganisation. As regards foreign diseases, a paper was read by Dr. Thorne Thorne, one of the vice-presidents, on the subject of Sea-borne Cholera; the preventive system adopted in this country being compared with the restrictive system of quarantine to which so many governments on the Continent of Europe still cling. The details of the epidemic of 1884-87 were brought forward to illustrate the more prominent facts, which went to show how utterly cholera had in its march ignored the lines of quarantine which had been raised to bar its progress, and how truly remunerative the expenditure incurred in this country had been; our alternative system involving true measures of prevention, which had saved a vast amount of life and spared us from much suffering and distress. In connexion with this system of disease prevention two other papers deserve mention. One, by the Registrar-General of Ireland, dealt with Class Mortality Statistics; Dr. Grimshaw showing the valuable indications which had followed on the classification of the population into social classes for the purposes of death registration. The other was by Dr. Churton of Leeds, the subject being the Registration of Plumbers, much on the lines so well undertaken by the Plumbers' Company in the City of London. On the value of this system the Section were unanimously agreed, and in the form of a resolution they expressed their conviction of the absolute necessity of the adoption of such a system under the auspices of a competent body in each portion of the United Kingdom. Amongst the incidental subjects brought under the notice of the Section was that of Burial Reform, by Mr. Frederick W. Lowndes of Liverpool, who strongly advocated cremation. The general feeling of the Section was distinctly condemnatory of the present system of burial, and also in favour of the alternative suggested in so far as health considerations went. But it seemed clear that a majority did not hold that the safeguards suggested against crime, and especially against poisoning, were sufficient to do away with a serious evil. Thus, inquests in all cases of cremation would certainly be prohibitory as a rule, and ordinary proofs as to death having been due to natural causes, even if based on post-mortem examinations carried out without the aid of special experts, would in many cases be quite valueless. Under these circumstances, the general feeling of the Section was that improvement in the disposal of the dead being at once called for, the change could best be effected in the direction of the system known as earth-to-earth burial. One subject was not dealt with in the Section, and this although some of the sanitary circumstances of Dublin came under discussion; and it is probable that the lavish hospitality displayed by the Irish capital had closed the mouths of all as to the state of the Liffey. But many whose pleasure or duty called them along the quays bounding that stream at low water and under the glorious sun, which characterised the week of the meetings, muttered silently against the enforced inhalation of the foulest and most fetid air which can well be found in any city in the world, and one of the best hopes they could express for the well-being of their courteous hosts and Irish fellow-countrymen was that the Corporation of Dublin would no longer delay dealing with an evil which has reached a stupendous magnitude.

THE ANNUAL MUSEUM.

The twentieth annual Museum was held in the Anatomical Department of the Medical School, Trinity College. It was arranged in four sections—viz.: 1. Food and Drugs. 2. Recent Books, Instruments, and Appliances. 3. Anatomical and Pathological Specimens and Drawings, Microscopes, and Microscopical Preparations. 4. Hygienic and Sanitary Appliances. In the Food and Drug Section there were thirty-five exhibits, seven of which were Irish. Moore (Belfast) had extracts of meat; L. Hoff, extract of malt; Harrington (Cork), materia medica cabinets and various pharmaceutical preparations; Burroughs, Wellcome, and Co. showed Wyeth's tablets; Feltoe and Sons, lime juice; while Evans, Sons, and Co., of Liverpool, showed an extensive collection of their well-known preparations, which include fluid extracts, concentrated liquors and waters, and coated tasteless pills. Among the Dublin exhibitors in Section 2 were Messrs. Boileau and Boyd, Corcoran and Sons, Fannin and Co., and Prescott. Messrs. Arnold and Messrs. Mayer and Meltzer (London) had also a valuable collection of surgical and medical instruments. Schall (London) had on exhibition various specimens of electrical appliances. Young J. Pentland, the medical publisher and bookseller of Edinburgh, exhibited some new and important publications at extremely moderate prices. In Section 3 there was a collection of anatomical and pathological specimens, with microscopes by Beck of London and other makers. Mr. F. Wetherall Stoney exhibited the head of a mummy taken from a tomb lately opened at Assouan on the Nile. In the section which dealt with hygienic and sanitary

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appliances, Messrs. Boyd (Belfast) showed the "Doctor's Ulster," of which they are the inventors and makers. Messrs. Fletcher and Philipson (Dublin) exhibited their patent accessible system of drainage, automatic flushing tank, and Hecla water heater. Messrs. Bellington Bros. (Liverpool) had also a good display. The Sanitas Company showed specimens of disinfecting fluid and antiseptic gauze. Non-arsenical wall papers were exhibited by Messrs. Woollams and Co. (London), &c. Besides these we may mention Ross's invalid furniture; the Longford wire mattresses; Kehoe's portable operating table; O'Brien's mineral waters, of excellent quality; Corcoran's splint for excision of the knee joint, devised by Coppinger. While Messrs. Fannin exhibited Neville's traction midwifery forceps; Duke's gynæcological instruments; Hayes' splint; Sir G. Porter's artery compress; Milne's antiseptic dressings; Hewitt's nitrous oxide gas and ether appliances; Mason's beef lozenges; Mr. Ormsby's surgical operation chart; Dr. Richard Hayes' ether freezing microtome, &c.

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.

DURING the meeting of the British Medical Association in Dublin last week, the summer general meeting of this Association was held in the museum buildings of Trinity College, and was presided over by Professor Gerald Yeo, in the absence of Sir Thomas Crawford. Dr. Stewart (provincial honorary secretary) reported that the Council had requested Sir Thomas Crawford to propose a resolution at the annual meeting, held that same afternoon, of the British Medical Association, bearing on the question of the exclusion from higher appointments in English hospitals of Members and Fellows of the College of Physicians in Ireland, and of Fellows of the Irish College of Surgeons. The efforts of the Association had been so far successful that, although the actual resolution proposed by Sir Thomas had not been adopted, a similar one having the same effect had been carried by an overwhelming majority. The Chairman proposed an alteration in one of the rules, making it necessary for one-fourth of the members of the Council to retire each year, which was adopted. The summer dinner took place subsequently at Morrison's Hotel, when fifty-six members and guests were present. The usual toasts were given, and the reunion was a very agreeable one.

THE INTERNATIONAL MEDICAL CONGRESS.

OUR New York correspondent furnishes the following information for the benefit of intending visitors to the Congress:—

The arrangements for the meeting of the International Medical Congress are progressing to a very satisfactory conclusion, and it may interest your readers to know some of the details, as far as they pertain to the comfort and convenience of foreign members. The Congress meets at Washington on September 5th (Monday) and continues until the close of September 9th (Friday evening). The rates of transportation by the various steamship companies are fixed as follows for members of the Congress: Antwerp to New York and return (Red Star Line), $100; Liverpool to New York and return (Inman Line), $100; Hamburg to New York and return (Hamburg Line), $90; Amsterdam to New York and return (Royal Netherlands Line), $80; Bremen to New York and return (North German Lloyd Line), $187 50c. The same rates are allowed for the families of members. The Cunard Line allows 10 per cent. reduction for members and their families; the White Star Line, from Liverpool, has fixed the same rate. The Anchor Line, Glasgow to New York and return, has fixed its rate for members at £20. The Compagnie Générale Transatlantique (Havre to New York) has fixed the rate at a reduction of 30 per cent., or 700 francs ($140). On arriving at New York members will meet a Committee of Reception, which will immediately provide hotel accommodation at reasonable rates, and afford them every possible facility for their comfort and convenience. The principal hotels for members are the Fifth Avenue, Bartholda, Victoria, Murray Hill, Gilsey, Brunswick, Park, and St. James's. Members of the Reception Committee can be found at any of these hotels. It is the intention of this committee to have full directions to foreign members furnished to all the steamship lines for their information in advance of their arrival. The journey from New York to Washington occupies about six hours. The members on arriving at Washington will find ample accommodation furnished by the Committee of Arrangements, of which Dr. A. Y. P. Garnett is chairman. The hotels are—Rigg's House, Arlington Hotel, Willard's Hotel, Metropolitan, and National. The average rate is $3 per day. When the final arrangements are all completed the programme will be published, and every steamship and each United States consul will be furnished with full particulars, with instructions to give information to all who may inquire.

Dr. A. Y. P. Garnett, chairman of Committee of Management, has issued a general programme of arrangements for the meeting of the Congress, of which the following are the principal details:—First day (Monday, Sept. 5th).—The Congress will assemble at Albaugh's Opera House at 11 A.M., and will be formally opened by the President of the United States, to be followed by a short address of welcome by the Secretary of State; address by the President of the Congress; report of Secretary-General and Chairman of Committee of Arrangements. Adjourn at 1.30 P.M. From 3 to 6 P.M., meeting of the Sections at their respective halls. Evening *conversazione* at U.S. Pension Hall, from 8 to 11 P.M. Second day (Tuesday, 6th).—Meeting at 10 A.M. at Albaugh's Opera House. General addresses by Drs. Flint and Semmola. Sections will meet at 11 A.M., and adjourn at the same hour, with Congress at 1 P.M. In the afternoon the Sections will meet from 3 to 6 P.M. In the evening it is expected that a reception will be given by the President of the United States, and the Corcoran Art Gallery will be thrown open to the members and their families. Third day (Wednesday, 7th).—The Congress will meet at 10 A.M. General addresses until 1 P.M. The Sections will meet, as usual, at 11 A.M., and adjourn at 1 P.M. Afternoon meeting of the Sections from 3 to 6 P.M. Evening reception to the members and their families by the citizens of Washington. Fourth day (Thursday, 8th).—General meeting at 10 A.M. Addresses, if not previously delivered. Meeting of the Sections at 11 A.M.; adjourn at 1 P.M. Afternoon, Sections meet from 3 to 6 P.M. General reception buffet banquet at U.S. Pension Hall, from 8 to 11 P.M. Fifth day (Friday, 9th).—General meeting at 10 A.M. Transaction of business affairs of Congress. Meeting of Sections at 11, and adjourn at 1 P.M. Afternoon, Sections meet from 3 to 6 P.M. Sixth day (Saturday, 10th).—General meeting at 10 A.M. Adjourn at 11, for visit to Mount Vernon. On Sunday or Monday, the day not yet determined upon, an excursion train will leave Washington with the foreign members and their families for Niagara Falls, under the escort of a part of the Committee of Arrangements, selecting the route which will afford visitors an opportunity to see some of the most interesting and thrifty portions of the country, as well as very beautiful scenery. In completing the details of this programme it may, however, be necessary to make some slight modifications.

The Congress being a society established for philosophical and scientific purposes, books, maps, and charts (not more than two copies in any one invoice), philosophical and scientific apparatus, instruments and preparations, casts, paintings, drawings, and etchings, specially imported in good faith for the use of said Congress and not intended for sale, are entitled to free entry under the provisions of the Tariff Act now in force in America.

A TRIP TO INDIA.—The P. and O. Company are bringing before the public in a practical form the fact that a trip to India and back, with a stay of from two to three weeks there, is capable of accomplishment within the compass of a two-months' holiday or even less. The Company's fine new steamer *Victoria* of 6500 tons, the latest and most luxuriously fitted of their large fleet, is to leave London on Oct. 1st for Bombay, touching at Gibraltar, Malta, Egypt, and Aden *en route*. A stay of twenty days at Bombay will give ample time for visits to places of interest in India, and on Nov. 11th the *Victoria* will return, calling at Naples on her homeward journey.

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THE LANCET.

LONDON: SATURDAY, AUGUST 13, 1887.

THE statements and petitions submitted to the Privy Council by the various bodies immediately interested in the formation of a new University with local privileges and duties in the metropolis have recently been made public, so that we can now judge of the value of the arguments that have been advanced on both sides of the question. The Royal Colleges in their draft petition and Charter simply ask for powers to grant degrees in Medicine and Surgery, under rules to be drawn up by a Senate of forty-eight physicians and surgeons—viz., the Council of the Royal College of Surgeons for the time being, and twenty-four Fellows of the Royal College of Physicians elected for that special duty. Such a Senate would also supervise all the arrangements for granting such degrees, except that by the Charter no degrees can be conferred on any person who has not already passed the qualifying examinations of the two Colleges either jointly or separately. This movement, which would practically convert the two Colleges into a University with a single Faculty—that of Medicine only,—has received considerable support on the ground that this plan affords the most promising commencement of a real University for London; many thinking that if degrees can be obtained by London medical students on equitable terms, the profession should demand nothing further, and leave the other Faculties to do the best they can for themselves. This position is quite untenable. Every University and every University graduate will, with perhaps the exception of London and its *alumni*, oppose a one-Faculty University. They will urge that it must be complete in Laws and Science as well as Medicine, or its prestige will be *nil* and its degrees worthless; and we fear that the opposition to this scheme on these and other grounds, especially the provincial objections to a residential clause, are underrated by its most conspicuous advocates. If such a scheme were approved by the Privy Council, it would certainly remove a real grievance now suffered by the London medical student, but would do nothing for the higher academic education of the metropolis; indeed, it would tend to delay for a lengthened period any solution of this difficult problem. If medical degrees were granted by the Corporations without any relation to or connexion with Arts and Science, the establishment of a complete local University would probably be postponed indefinitely. The reasons for promoting a Teaching University in London, so as to concentrate and afford due status to the bodies which give genuine University instruction in the metropolis, are well set out in the petition issued by the Association established for that purpose; and the essential standpoints of its position are—(1) the injurious effect upon University education in London of the severance of the work of examination for degrees from that of teaching, (2) the necessity of a regular course of attendance on the best attainable teaching as a preliminary to graduation, and (3) the direct and adequate representation and influence of the teacher in the councils and administration of the University. As the two Colleges which alone are fully equipped with chairs, provided with all the necessary aids and appliances for the most modern teaching, and able to undertake such work for the metropolis and the adjacent district, King's and University Colleges have applied for a Charter which would constitute them a University. They propose to form the Faculties of Arts and Science directly from their own bodies, and to take into such Faculties any other properly established and equipped College that should afterwards apply; whilst to form a Faculty of Medicine they would invite the co-operation of the other London medical schools, which should be represented either directly, or indirectly through the Royal Colleges—the better and more workable plan. If there were no jealousies to be overcome, the above scheme would seem to secure both objects—namely, due facilities for obtaining degrees for London medical students on fair terms, as in provincial and Scotch Universities, and the concentration and improvement of the higher education in the metropolitan district. But that the University of London will oppose the independent growth of its two oldest Colleges is evident by the statement which its special committee has drafted. An alternative plan for giving teachers a consultative voice instead of a mere administrative share in the University has been put forward. It reiterates the old objections to teachers being examiners, forgetting that nearly all its best examiners, past and present, have been or are teachers, and in many cases must examine their own pupils. It is also scarcely fair to ignore the fact that external examiners are now joined as assessors with the internal examiners in every other University, and that by this plan the objects aimed at by the London University are completely secured. The obvious inefficiency of a Senate in which teachers are almost absent for regulating and conducting a properly advised curriculum of study is not referred to. Such a Senate can lay down admirable examination rules and frame standards, but can have no adequate conception of a duly adjusted and proportionate course of teaching. Hence the reason why the University of London has become an Imperial Examining Board, and has neglected its proper local functions. There can be no doubt that there is plenty of room for both institutions—a Teaching University for the metropolitan area with its four millions of population, and an Examining Board for the empire, with its local habitation in the metropolis. The objects and aims of the two bodies are so different that any attempt to blend them into one institution would be fatal to both, and there is no reason why they should not flourish independently and even side by side. The success of the Victoria University is a good presage. If the midland district, with Birmingham for its centre and Mason's College as the chief college, were also to found a university, higher education in England would have every needful facility for its promotion, and the University of London would still have plenty of candidates for its degrees.

THE interest which now attaches to the probability of a connexion between the infective diseases of man and of the lower animals, coupled with the lack of information as to the causes of diphtheria, make such a report as Dr. GEORGE

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TURNER has presented to the Local Government Board more than usually instructive.[1] It appears that Dr. TURNER was last year employed by the medical department of that Board in making a series of investigations into diphtheria, and he has now submitted a summary setting forth certain facts which came under his observation during his work, and which in his mind indicate a relationship between that disease in animals and the same affection in the human subject. He does not for a moment imply that diphtheria as ordinarily met with may not be due in the main to personal spread in connexion with school attendance and otherwise, neither does he exclude as possible causes such conditions as overcrowding and bad sanitary conditions generally. But, after all these circumstances have been allowed to have their full weight, there still remains a number of cases, and these at times the initial ones in certain outbreaks, which cannot be explained in the ordinary way, and as to which some novel facts have come under his notice, both during his general work as a medical officer of health and in connexion with his recent inspections.

The transmission of diseases of animals to man is well known to take place, and the cases of anthrax and glanders may be cited as examples. Evidence, which some regard as conclusive, has been adduced to show that scarlet fever can be communicated to man directly from the cow through the agency of milk, and this in connexion with a disease in the animal not yet sufficiently defined; and there now appear strong grounds for believing that some such transmission can take place in diphtheria, and this from more than one animal source. In 1882 Dr. TURNER found that pigeons suffered from a disease in which the windpipe was covered with a well-marked and consistent membrane, resembling that found in membranous croup; and inoculation of other pigeons with this membrane led to the communication of the same disease. Then fowls were found to be suffering in a similar manner, and with this occurrence it was noted that on the farms affected diphtheria made its appearance as a sequel to the fatal ailment among the fowls. In 1886 similar cases were observed. Thus at Farnham Dr. TURNER found that the fowls had been affected at the same time as an epidemic of diphtheria was in progress amongst human beings; and the dissection of one of the chickens led to the discovery of a membrane in the trachea. Much the same disease was observed to occur amongst turkeys and fowls at Ash; it had also existed at Long Eaton in Derbyshire; and the disease had made great havoc amongst pheasants in parts of Surrey where diphtheria was also under investigation. Locally, the disease had in some cases been mistaken for such affections as "strangles," but no such possibility influenced the facts detailed by Dr. TURNER. At Tongham the purchase of a chicken from an infected farm was followed by a first attack of diphtheria in the house of the purchaser. Chickens and pigeons inoculated with true diphtheritic membrane from a child's throat were found to suffer from a disease in every point like that which may be termed "fowl diphtheria"; and other evidence is forthcoming to indicate a strong probability of identity between the disease affecting fowls and diphtheria in man.

In another district Dr. TURNER had previously found swine and horses suffering from a similar affection—it being in this case after, and not before, a prevalence of diphtheria in the human subject; but up to 1886 there was nothing to lead to the belief that the disease was communicable from such animals to man. In the case of cats, however, in several parts of the country a disease from which these animals have suffered appeared to have been the source of true diphtheria in a number of households, and fresh facts are being reported now that attention has been drawn to the subject. Cats have also contracted some throat affection from children ill of diphtheria, and Dr. TURNER reminds his readers that the inoculation of cats with diphtheritic material has apparently been successful in the hands of Dr. C. J. RENSHAW. Horses are known to suffer from a disease often styled "strangles," but the affection appears to have some real kinship with human diphtheria, and in certain cases referred to in the report diphtheria at farmhouses and elsewhere has occurred in the families of those having to do with horses thus affected. A large proportion of fatal attacks of diphtheria has also been observed to occur in the families of persons—such as shepherds, grooms, and blacksmiths—who have to do with the lower animals.

The materials put together in this report are most suggestive; they are likely to be of considerable service to medical officers of health and others engaged in the investigation of diphtheria occurrences; and they may form a clue to the origin of those isolated attacks which cannot be attributed either to personal communication or to other ordinarily assigned cause. Dr. TURNER does not profess to have conclusively demonstrated the transmission of diphtheria either from the lower animals to man or from man to the lower animals, and he admits that some of the evidence he brings forward may be open to many objections. But, on the other hand, he believes the facts detailed by him, and which only pretend to include some of the broader clinical and pathological resemblances between the maladies met with, may be of service as indicating a line of research which can be usefully followed out by many of those who devote their time to the study of the etiology of the infective diseases in man.

SIR THOMAS CRAWFORD, who was the hero of a discussion at Dublin, reported last week, on the "relative rank" question, also led a very lively debate on another thorny subject. He moved, in effect, that the members of the British Medical Association were aggrieved by the rules of certain public institutions which select their medical officers from those holding "the higher qualifications of certain Colleges," and that the Association should endeavour to induce the Medical Council to make it clear that the higher registrable qualifications of the Colleges of Physicians and Surgeons are of equal value, or, if they are not, that the Medical Council will take steps to make them so, in order that the candidates holding such qualifications may be equally eligible for such appointments without reference to the nationality of the College from which their qualifications have been obtained. Sir CHARLES CAMERON seconded the motion, and maintained that Irish medical men were in no way inferior to English. Sir THOMAS wisely accepted an

[1] Report of Dr. George Turner's Experience of Diphtheria, especially in its relations to the Lower Animals, partly obtained in the course of Inspections made for the Local Government Board in 1886. Eyre and Spottiswoode, London; A. and C. Black, Edinburgh; Hodges, Figgis, and Co., Dublin.

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amendment of a simpler character, but to a similar effect, by the Rev. Dr. HAUGHTON—viz., that the Association is of opinion the diplomates of Irish and Scotch Universities and Corporations should possess the same privileges in respect of public appointments as are enjoyed by the diplomates of the United Kingdom. This amendment was carried, in spite of the opposition of several able speakers, by an overwhelming majority.

The subject is not free from difficulties. Theoretically, it is clearly unreasonable that at this time of day a well-educated medical man holding his degree or diploma from Edinburgh, Glasgow, or Dublin should be ineligible for many hospital appointments in England. In many cases the old rule survives only because its narrowness has not been pointed out. But after this admission has been made, it has further to be allowed that there has been a basis of reason in the distinctive privileges of those holding the higher qualifications of England. It is notorious that until very lately the Fellowships of the Medical Corporations of Scotland at least could be practically bought, with little reference to professional attainments. It would obviously have been unfair to regard the Fellowship in such cases as of equal merit with those of the London corporations. Since this discreditable state of matters was brought to light and denounced, chiefly by ourselves, an examination test for the Fellowship has been instituted in the Scotch corporations. The Glasgow Faculty says its Fellowship examination is as stern as the examination for the Fellowship of the College of Surgeons of England. But we have no outside testimony to this effect. Were such testimony forthcoming in regard to the other Bodies and Nationalities, the English Colleges could not ask for the maintenance of the rule for one day, and if they asked, would not be listened to. It is a little curious to see a man of Sir WALTER FOSTER'S liberal sentiments maintain that this is a mere sentimental grievance beneath the notice of the Association. It is really a very serious professional grievance, and if the Association is not to grapple with it, we do not know to what body to look for redress. The Medical Council has no power in the matter, as Dr. HAUGHTON well said. Its responsibilities end with seeing that the examinations for the minimum qualifications guarantee competency in all branches of practice. It is a pity that the Council of Medical Education is not responsible for the higher grades of medical education. We have always urged that it should have jurisdiction over these as well as over the examinations which have to be passed for the ordinary qualifications. But Parliament has decreed otherwise, with too much consent from the medical authorities, most of whom seem only too well satisfied if even their higher examinations are reported mere guarantees of fitness for the ordinary duties of practice. Hospital appointments are presumed to involve exceptional duties, and to call for higher tests. The first thing to be done in this matter is for the Scotch and Irish bodies to show that their higher titles are only given on conditions as severe as those of England. If proof to this effect can be adduced—and it should easily be forthcoming—no English monopolies can be defended for a moment. It will still remain a question—a separate question—whether high professional appointments should not be given only to those with high professional qualifications. But it will no longer be seemly, or even tolerable, to maintain privileges for those holding the diplomas of a certain nationality as against those who have passed examinations of equal severity elsewhere. This question ought not to be lost sight of by the Association.

THE supporter of the doctrine that the particulate ingredients of the atmosphere are the chief cause of the insalubrity of cities will find much to sustain his contention in the brief but suggestive paper contributed by Dr. FRANKLAND to the current number of the *Nineteenth Century*. From the facts presented the proposition might easily be maintained that "a man carries with himself the elements of his own destruction." Many arguments of a seemingly valid sort may be educed from hygienic and antiseptic systems, calculated to prove that a germless atmosphere would be far more profitable to the majority of mankind than the atmosphere with which we have at present to be contented; and this notwithstanding the somewhat contrary position which Dr. FRANKLAND takes at the commencement of his paper, for he thinks it would require but little persuasion to convince most of us that air without organisms would be undesirable indeed. He proceeds to illustrate this view by a reference to the great utility and value of one micro-organism at least—the yeast fungus,—which is so widely and universally distributed, and whose disappearance from the breathing medium would cause us to "forego those numerous, complex, and much appreciated pleasures which are derived from the consumption of alcohol in its various forms."

For our own part, we believe there is already sufficient evidence to warrant a belief that the presence of micro-organisms in the respiratory fluid is very undesirable; whilst we confess at the same time that their exclusion would be practically impossible. Undoubtedly many of the germs in the air we breathe are for the most part harmless in their nature, though it is probable that even the innocuous varieties may require a slight expenditure of energy on the part of the human organism to neutralise the effect of their activities, since it is hardly likely that the act of destruction of a bacterium is unattended with the employment of some kind of force, and we know that the active protoplasm of living bodies is capable of destroying bacteria. Indeed, the theory implied in these considerations may be expanded. We may conceive, for example, that deterioration of health by a general weakening of the whole body might be the cause of many diseases, not so much by the agency of the mere debility as by the circumstance that the deterioration afforded the opportunity for the growth and development of organisms which, under the ordinary circumstances of good health, would have been quickly destroyed by the inherent vitality of sound tissues. The experiments of PASTEUR and TYNDALL, and the observations of MIGUEL and FRANKLAND, bear abundant testimony to the existence of a law which may not be expressible in such definite terms as that the number of microbes in the atmosphere varies inversely as the square of the distance from human habitations, but which nevertheless forcibly reminds one of this physical law. PASTEUR exposed twenty flasks containing putrescible substance in the open country of Arbois, and found that eight became turbid or contaminated with microbes. Of twenty exposed in the

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lower heights of the Jura mountains, only five became affected, whilst of twenty others exposed at the Montanvert, close to the Mer de Glace, at a height of 6000 feet, only one flask developed microbes. MIGUEL, by observations made at Montsouris in different seasons of the year, has shown how the distribution of microbes is dependent on the surroundings. FRANKLAND, employing a more recent and more acourate method, has shown very clearly that the maximum number of micro-organisms is to be found in the hottest months of the year. Thus, in a volume of air equal to about two gallons (ten litres) collected on the top of the Science and Art Department buildings at South Kensington, at a height therefore of some seventy feet from the ground, and so removed from any local disturbance of the air, he found that in August the number of micro-organisms exceeded 100, whilst in January there were but 5; there was a gradual rise in numbers from May to August, after which the fall in numbers was much more sudden. In the country the number of atmospheric micro-organisms was very appreciably smaller; and the more remote the place of observation is from houses, and from the frequented thoroughfares of traffic, the dust of which is always rich in refuse organic matter, the freer does the air become from suspended microbes. In reading Dr. FRANKLAND'S paper, one cannot but be struck with the remarkable concomitant variation between the number of micro-organisms and the unwholesomeness or wholesomeness of the places investigated. Every medical man knows the value of mountain air and of a sea voyage, and it is only in these places that the atmosphere can be said to be free from micro-organisms. The interiors of railway carriages are, as we all know, apt to become foul, but Dr. FRANKLAND'S estimation that more than 3000 organisms were found to be falling on the square foot in one minute whilst the train was passing half way between Cambridge and London, one window of the compartment being shut and the other only open four inches at the top, gives a mathematical expression to the fact, which, if any were wanted, is sufficient explanation of the fatigue of a journey, without invoking the aid of the theory of nerve vibration to account for the prostration which many suffer after a prolonged ride in the train. In point of numbers, however, the atmosphere of a barn where flail threshing was in operation puts the railway compartment in the shade, for there were no less than 8000 organisms falling on the square foot in one minute. The injurious effect of theatres and crowded places of amusement would find a sufficient explanation in the yield of micro-organisms, without taking any account of the diminution of oxygen or the increase of carbonic acid. At a conversazione at Burlington House the number of organisms reached 432 per ten litres of air.

THE discussion at the meeting of the British Medical Association on the subject of the report of the Parliamentary Bills Committee, to which we called attention last week, raised some very important questions, to which we think it necessary in the interests of the profession to refer. The first of these is whether the alteration in the wording of the Royal Warrant has in any way affected the rights, the status, the prestige of the army medical officers. The Parliamentary Bills Committee assert that it has deprived them of all rank; the Secretary of State for War states that it has not in any way altered their position—that they have the same rank under it, and the same privileges in all respects as they had under the previous Warrant. Which of these two statements are we to believe—that of the irresponsible committee above referred to, or that of the War Minister, who is liable to be called to account if he does not redeem his pledge? Another question raised is a very important one—that of the right of army medical officers to make a "collective representation" of their opinions when they differ from those of the responsible authorities; and credit was claimed for the Parliamentary Committee in having afforded the medical officers such an opportunity. Sir THOMAS CRAWFORD very distinctly stated that "every medical officer in the army having a grievance was at perfect liberty to address his chief." The question at issue, therefore, is whether a collective statement on their part—a round robin, in fact—is permissible. But if this were granted, how could it be confined to the medical department? Why not be extended to all the army departments? And if to the departments, why not to the officers of the staff and of the various corps? If granted to the army, why not to all the branches of the Civil Service? Simply because it would render the conduct of the public service an impossibility. It has been asserted—but we are not aware of any instance of it being adduced—that in consequence of the alteration in the wording of the Warrant military officers will refuse to acknowledge the army rank of medical officers, and deprive them of the privileges attaching to such rank. We do not believe any military officer will be so unwise; but if it did happen, there is an obvious remedy. A report of the circumstances to the Director-General would soon put matters right, and we should not envy the military officer the position in which he would find himself placed in consequence of such an act. To suppose that such a report would injure the officer who made it, or interfere with his prospects, would imply an utter ignorance of the manner in which the service is conducted. It is rather amusing to see the change which has come over the question at first raised on the subject of relative rank. In the document issued from the offices of the British Medical Association there is no reference to any injustice done by the recent Warrant. The whole matter is one of title. What would you like to be called? Will you have a purely military designation, or a purely medical, or a hybrid medico-military, or will you be content to remain as you are? This bears out the opinion we have repeatedly expressed, that at the bottom of the agitation is a desire on the part of some men to sail under false colours and assume a pseudo-military title instead of their correct and honourable professional designation. Whatever may be the result of this *plébiscite*, we do not believe that the teachers in the medical schools, or the profession generally, will be induced to support the attempt to sink the medical under the military appellation, nor do we think the War Minister is at all likely to adopt any suggestion of the kind.

AN Exhibition of Hygienic Appliances and of Articles of Diet, as well as of other matters connected with public health, will be opened at Boulogne-sur-Mer on Sept. 21st next. M. Pasteur has accepted the presidency of the Exhibition Committee.

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Annotations.

"Ne quid nimis."

MEDICAL ATTENDANCE IN WORKHOUSES.

THE two letters on this subject which have appeared in our columns are entitled to much consideration. But they do not militate against our main contention that where hundreds of people are congregated in great infirmaries they should have the benefit of a second medical opinion. One of our correspondents says that they have this already in the shape of a principal and an assistant medical officer. It is not generally held that a principal having an assistant, however qualified, is able to dispense with the advantages of the occasional suggestions of a consultant, or one in whom he can recognise an authority or experience superior to his own. This same writer, Mr. Henry Dixon, points out that the appointment of consulting physicians and surgeons is already under consideration in the case of some workhouse infirmaries, and Mr. Mickle, in his excellent letter, admits that the question is one open for discussion. It is not one to be hastily disposed of. The discussion involves no disrespect to the existing officers, and no want of sympathy with overburdened ratepayers. This country is rich enough to do all that humanity requires to its in-door poor, and there are consultants enough to be had without greatly oppressing the taxpayers. But the workhouse infirmaries are practically hospitals on a large scale, and though the bulk of the diseases are chronic and progressive, and but little under the control of art, there are many exceptions: and even the victims of the most hopeless diseases and degenerations have a claim of their own. We feel confident that the best medical officers will not feel either their responsibility or the interest in their cases lessened by co-operation with a consultant. We agree that such an appointment should be made by the guardians, and that it is not desirable or permissible that outsiders should be introduced at the mere caprice of friends. Mr. Dixon seems to think that the poor inside would be better off than the poor outside. He should remember that the hospitals of London, with all their highly educated and experienced staffs, are at the service of the poorest man who may need surgical or medical help.

PROFESSOR SIR GEORGE MACLEOD'S ADVICE TO YOUNG GRADUATES.

THE address of Sir George Macleod to the new medical graduates of Glasgow on the 28th of July was an admirable one. There was nothing pretentious in it in respect of novelty or philosophy, but as advice from a senior and a professor to men who had finished the academic part of their study and were about to encounter the stern duties of medical life, it should have effects in many a distant year. How shall we summarise Sir George's main points? He thinks medical men of the younger generation have much to rejoice at in being educated under what he terms the New Dispensation. By the discoveries of Pasteur, Medicine has been revolutionised and advanced more than in the preceding century. Such work he considers ample answer to Sir William Hamilton's scornful question, "Has the practice of Medicine made a single step since Hippocrates?" There is a wonderfully true paragraph descriptive of the triviality of the circumstances that may determine the career of young men just going out into the world, including the advice not to be too fastidious in the choice of a first appointment so that it secures experience. He enforces this by reference to the disproportion between the few vacancies by death arising in the profession, and the large additions to it by the new registrations. The annual average of the latter for eleven years is 1152; of the former, 588. The waiting-time for practice is to be used in reading much, but in working more, as Carlyle advised. The reading must be general as well as medical, and Baconian carefulness in the observation and record of facts must be practised, if Sir William Hamilton's words are not to be realised: "I think it more than possible that in fifty or a hundred years the business of a physician will not be regarded even in England as either a learned or a liberal profession." Perhaps Sir George scarcely does full justice to the profession in his allusion to the slipshod language and inconsequent reasoning of medical discussions. There is of course much truth in this, but there was never more severity of reasoning in medical discussions than there is now. His caution to men who have taken honours in the University is well put—not to make too much of that fact. His advice against a premature or ill-assorted marriage is much needed. It is not fair to the woman, and it sorely cripples the man. Not less opportune is his warning against mere fashion and quackery in the prescription of new drugs. He commends the high teaching of Hippocrates and the oath administered to his pupils: "With purity and holiness I will pass my life, and practise my art." Before his peroration Sir George Macleod sounds two apt notes of counsel. First: "In your dealings with professional brethren, avoid quarrels and petty jealousies," though he denies that such things are more common in our profession than in others. The second has reference to the "grave responsibility" of prescribing stimulants and narcotics: "My decided impression is that intemperance in such things is largely on the increase. . . . Avoid these agents, then, if possible, or, at least, limit and control their use, and do not risk incurring the anathema of having contributed to ruin a fellow-creature."

"MARGARINE."

IT has now been decided that the word margarine will be adopted as a generic name for all butter substitutes. We regret the decision for several reasons. In the first place, the word margarine conveys a definite idea to the mind of every chemist, and that idea is quite different from that intended by the Act of Parliament. The substance properly called margarine is the glyceride of margaric acid—the tri-margarate of glyceryl. This substance is not present in any butter substitute, and the use of the name is therefore misleading. It is as absurd as it would be to describe all bitter principles as quinine. Then we believe that the word margarine is calculated to raise an unjust prejudice against an article of food which, when properly made, is agreeable in flavour, of considerable dietetic value, and very cheap. Of course there are various qualities of butter substitutes, as there are various qualities of butter. Some are highly objectionable, and their manufacture and sale should be sternly prohibited. Any such manufacture in England ought in future to be impossible, as the new Act compels all manufactories to be registered. There will be greater difficulty with foreign brands, but it can doubtless be overcome by careful analysis. But as for good "margarine," its use ought to be promoted rather than hindered, and the enforcement of a name so unfamiliar to the public and so absurd to the scientific man as margarine is likely to be a hindrance. We fear the whole outcry arises less from a desire to protect the public against adulteration than from the hope that in this way protection may be gained for the farmer. If the sale of cheap butter substitutes could be greatly checked or annihilated, the price of genuine butter would undoubtedly rise, which would be good for the farmer though detrimental to the consumer. It is no part of our duty to argue the case of free trade or protection; but we think all will agree

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that if protection be desirable, it ought to be adopted openly and boldly, and not smuggled in by a side wind. Let us not be understood as offering the slightest excuse for adulteration. Our opinion in that matter is not likely to change, and we hold that the sale alone or in mixture of a butter substitute under the name of butter is a commercial fraud that ought to be severely punished. But, provided the article or the mixture be correctly described, we see no sense in checking by a name which to the great majority of mankind will appear opprobrious—the sale of a good and cheap substitute for butter. Surely it would be possible to find a name less open to objection from a scientific point of view and more fully expressive of its nature and use. The word "butterine" is too suggestive of a family relationship with milk-butter, which the article does not possess.

THE STATE OF THE THAMES.

THE Metropolitan Board of Works seem at last to admit that the tidal portion of the Thames is in a horrible and dangerous state. At any rate the Home Secretary admitted as much in reply to a question asked by Colonel Makins the other day. It is almost incredible that they should have ignored such a mass of evidence, including the evidence of their own senses, so long. They have resisted all advice tendered to them, and all pressure put upon them, and when at last forced from their position have retreated as slowly as possible, and have adopted the least satisfactory of remedies. Their disinfection of the sewage has proved, as it was bound to prove, a costly sham, and their new remedial works are all to be erected in the wrong places, and will certainly lead to no cure for the evil. The amount of the ratepayers' money which has been, and is still being, thrown away by the Board in respect to this great question will perhaps never be known, but it is certainly enormous. An army of labourers and skilled workmen is now at work, and will remain at work for a long time to come. Its labour and the cost which it entails with the steamers which are to carry the sewage sludge to the sea will all be thrown away, for no one believes that London will long remain satisfied with so paltry a substitute for a real remedy. With regard to the condition of the Thames as a source of supply of potable water for the metropolis, the question being one of such magnitude and interest at the present time, we have deemed it wise to send Commissioners again to investigate the state of the water in the vicinity of the intakes of the London Water Companies which derive their supply from the river Thames. The conclusions of our Commissioners, which will be found in another column, we commend to the serious attention of sanitarians.

BORACIC ACID AS A MILK PRESERVATIVE.

THE Vestry of Kensington recently referred to their medical officer of health (Dr. Dudfield) and public analyst (Mr. Cassal) the question whether the addition of a small quantity of borax, or, more properly, borax with free boracic acid, to milk was injurious to health, and should therefore be treated as an offence against the Food and Drugs Act. The question is an important one, for the more strongly we reprobate adulteration and punish its perpetration, the more necessary it becomes to be sure that the offence has been committed. The report of the scientific officers is now before us, and the results may be stated in a few words. There is no doubt that the above-named preservative is frequently used by farmers in the country and by milk vendors in towns, perhaps sometimes by both. The quantity used is said to be seven grains per pint for milk and four grains for cream. As there is a manifest possibility that it may be used twice over, not to speak of the risk of its being used in excessive quantity through carelessness or ignorance, the reporters are right in assuming that each quart of milk may contain twenty-eight grains of the preservative. This would mean an increase in the ash of 0·16 per cent., and even the half of this would be very perceptible in the analysis, for the ash of genuine milk seldom exceeds 0·7 per cent. It is manifest that this is no fraudulent addition in the common meaning of the term, for it does not add appreciably to the bulk of the milk, and cannot be used, as alum is in flour, to disguise a deficiency in quality. The antiseptic power of boracic acid is well known, and if it were proved to be innocuous its use would be commendable, as tending to prevent the waste of much valuable food material. But unfortunately its harmless character is more than doubtful. There is, indeed, but little direct evidence available, but that little is decidedly against the drug. The most important is the memoir of Professor J. Förster,[1] for a translation of which, published in another column, we are indebted to the courtesy of Mr. Charles Hancock of the Kensington Vestry. It appears from this research that even small quantities of boracic acid are capable of exerting a distinctly injurious action on the human organism, hindering the assimilation of albuminoids, even in articles as digestible as eggs and milk. Such an action would be most serious in regard to infants and objectionable for all, and we must therefore regard the use of the preservation in question as a dangerous adulteration, which ought to be strictly prohibited. The caution is well worthy the attention of public analysts.

"WHAT IS PAIN?"

"WHAT is pleasure?" "What is life?" "What is death?" It is astonishing to recall the number of unanswered, perhaps unanswerable, questions which have for ages excited the curiosity and exercised the ingenuity of intelligent thinkers. As knowledge extends its area and becomes more exhaustive and precise, hope is stimulated, and every now and again someone thinks and endeavours to persuade those around him that he has found, or is about to discover, the solution of one or more of these enigmatical propositions; but, as yet, all such beliefs and anticipations have ended in disappointment. The true test of success will be the possibility of shaping a satisfactory definition of the thing sought for. At present this is impossible in regard to each and all of the abstruse subject matters in question. Thus no one can define life or death, and pleasure and pain are equally incapable of definition, or even of accurate description. We think we know what it is to live and feel pleasure or pain, but when we attempt to express our thoughts by words we discover that the feat is impracticable. The answer to the question, "What is pain?" must therefore be, "No one knows." This is how far we have proceeded in the quest for a definitive answer. Pain is a sensation which more or less rapidly and acutely assails the faculty of endurance. In its commonest forms it is suffering produced by nerve excitation, the elements of the nervous apparatus being either directly or by a transmitted irritation mechanically disturbed: for example, *compressed* as in squeezing or bursting pain; or *stretched*, as when the pain is aching or tearing; *bruised* or *lacerated*, as when the pain is due to a cut or wound of some sort. It is not of course always the fact that these mechanical injuries to nervous tissue take place at the point to which pain is referred, because, being a sensation, pain is *felt* at some seat of sensation that is in connexion with the sensory apparatus affected, although it may be remote from the point where the impression is produced. In short, pain may be a message of suffering sent from some injured part through a chain of nerve-elements as a message of word-symbols is trans-

[1] Dingler's Polytechnisches Journal, 1884, p. 170.

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mitted by a telegraphic wire. The purpose of pain is doubtless protective. The sensation is the warning sign of injury, and cries for relief, not simply for the avoidance of suffering, but for the remedy of a state or condition which threatens the integrity of the tissue or organ in distress. It is in this light that pain should be regarded. It may be heroic to bear necessary pain, but to turn a deaf ear to the warning cry of pain is to commit an act of folly.

VACATION COLONIES ON THE CONTINENT.

SANITARIANS will hail with satisfaction the announcement that the system of sending town-bred children into the country for a few weeks during the summer holidays, which has already to some extent been carried out by many philanthropic individuals and associations, both in this country and on the Continent, is to be still further promoted by an International Congress at Zurich next year. A good deal of interesting information with regard to the progress of this movement in several continental countries is supplied in a pamphlet by M. Bion, a pastor in Zurich, which is published by the *Musée Pédagogique*, also in some articles which have appeared in the *Revue Pédagogique*, and in a paper by Dr. Delvaille of Bayonne in a French medical journal. In 1876 M. Bion took 68 Zurich children to the mountains of the Canton Appenzell, where they were distributed in sections of 20 or 30 amongst different localities under the supervision of masters and mistresses. This was repeated each year, the number of children and teachers partaking in the annual excursion gradually increasing. In France M. Cottinet inaugurated the movement in 1883 by sending 9 boys and 9 girls from Paris into country boarding schools where they were well looked after, but made to run about and play all day, with the exception of one hour devoted to instruction, and the necessary time for making their beds and washing and cleaning their clothes and themselves. In succeeding years much larger numbers of little Parisians were taken into the country. The success from a hygienic, to say nothing of the moral, point of view was all that could be desired. The average increase of weight amongst the girls was 2391 grammes during the month's holiday, whereas the normal increase in that time is put by Quételet at only 291 grammes. The mean growth, too, was 20 millimetres as against the normal monthly growth, as estimated by Pagliani, of 2 millimetres; that is to say, during the month in the country they increased in weight and in height something like ten times as much as such children under ordinary circumstances would do. In Italy vacation colonies have been taken from Milan, Venice, and Palermo into the country. In Germany four or five thousand children were sent in 1885 to inland or seaside watering-places. A congress was held in Berlin in 1881, under the presidency of Dr. Falk, which was attended by representatives from Austria and Switzerland, and a discussion held on the question as to whether taking colonies under the care of teachers and locating them in the temporarily vacant country schools is, on the whole, to be preferred to the plan of boarding the children out separately amongst peasant families in the country. Of course, each plan has its own advantages. From the pecuniary point of view, the Swiss pastor's experience is that there is little to choose between the two systems, as neither of them cost anything at all. In Denmark 7000 children were sent in one year to families who received them gratuitously. The children that cannot be taken a long distance into the country have in some places, as in Zurich, been assembled daily in buildings outside the town, well fed, and taken into the fields and the woods to play. The basis of selection is sometimes made the weight, or rather want of weight, of the children. Thus, according to Dr. Warrentrapp, the Frankfort children who were taken into the country one year weighed from two to twenty pounds less than they ought to weigh. These all gained from two to eight pounds during their three or four weeks' absence, and, what is more, continued to gain considerably for some months after their return.

THE EFFECTS OF HEAT AND DROUGHT.

THE excessive heat and drought are having a prejudicial effect upon the mortality returns, and this especially in the large towns and cities. Up to July 30th there had, during the six preceding weeks, been an increase in the general rate of mortality in London from 15·9 to 24·8 per 1000, and although there was a decline last week to 21·7, yet the death-rate this quarter has so far averaged 1·1 in excess of the mean rate during the corresponding period for the ten preceding years. Diarrhœa has been a prime cause in this increase. Thus, during the eight weeks ending July 30th, the fatal attacks attributed to diarrhœa and dysentery rose from 9 to 517. Last week there was a decline to 432, this being 144 in excess of the mean average for the week. Of this latter number 350 were infants under one year of age. During the same period 9 deaths were attributed to cholera or choleraic diarrhœa. This is 4 below the corrected average, and it is probable that the diminution may be due to the adoption of a more correct nomenclature as regards a disease which should certainly not be styled cholera. The long-continued drought is likely to be the cause of much inconvenience and serious mischief. In many places the water supply is already at its lowest ebb, and even where anxiety on the score of the quantity available is not immediately pressing, sanitary authorities and water companies are husbanding their supplies; so that at a time of the year when it is of all others most desirable to be lavish with water for the flushing of drains and sewers, the utmost economy has to be observed.

AN UNHEALTHY HOUSE.

ANOTHER decision has been given in favour of the tenant of an unhealthy house, and in this case the house was an unfurnished one, being in this respect different from the majority of those in which recent decisions have been adverse to landlords letting unhealthy houses. The case was tried before Judge Stonor, in the Brompton County Court. The plaintiff alleged that in taking the house in question he was assured that it was, as regards drainage and otherwise, in perfect order; and it is further alleged that, on the defendant's suggestion, the plaintiff obtained a written report from the sanitary inspector of the district to the effect that it was in a fair condition,—one or two alterations being, however, suggested. Evidence of sewer contamination soon became clear after occupation, and, skilled advice being sought, it was found that there was beneath the house an old barrel drain containing several inches of filth deposit, an absence of any disconnecting trap between the sewer and the back drain, defective bell-traps, old D-traps to the closets, and other conditions now so well known to be associated with conditions of drain poisoning and ill-health. The defendant, however, refused to remedy the evils, and the result was that the plaintiff got the work done and then applied to the Court for the cost of the work, his expenses, and the rent of apartments he had lived in during the execution of the works—some £30 in all. The judge advised the parties to come to terms, but as they failed to do this a verdict for the plaintiff for £25 and costs was given. The case is one of importance, and intending householders will do well to fortify themselves in a similar way by getting an

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assurance from the landlord as to the sanitary state of the house. Should this assurance prove untrustworthy, they will be able to act on the precedent which this case affords. Incidentally, we may observe that, unless inspectors of nuisances hold the certificate of a competent body as to their fitness for their duties, it is most unwise to trust to their opinion on such points as are involved in this case.

INJECTIONS OF CARBOLIC ACID AND HYPEROSMIC ACID.

No one probably lays claim to a complete knowledge of the pathological changes which give rise to the condition or conditions known as muscular rheumatism, but it may fairly be supposed that they include a hyperæmic state of the perimysium, together with some plastic infiltration and migration of white blood-corpuscles. Now it was shown by Binz that carbolic acid, salicylic acid, and several other substances possess the property of paralysing and killing leucocytes, and of preventing their migration. This led Dr. Edgar Kurz of Florence some few years ago to employ intramuscular injections of a 2 per cent. solution of carbolic acid in a few cases of muscular rheumatism. The results were astonishingly satisfactory, and were published in *Memorabilien*, 1882, from which source a notice appeared in many other journals; not, however, always very correct as to the doses employed, grammes having been mistaken for grains—a misconception which, however important, is often very difficult to avoid, as those who read many foreign medical journals know only too well, simply because abroad "gr." sometimes stands for grains and sometimes for grammes, and as a gramme is more than fifteen grains the consequences of a misunderstanding on this point may frequently prove serious. Dr. Kurz introduced from eight to forty syringefuls into the muscular tissue at a sitting, each syringeful consisting of a gramme of the solution. In no case was the urine discoloured, or any other sign of toxic action observed; the injections were practically painless, and their anæsthetic effect became apparent in half an hour. Since these observations were published Dr. Kurz has continued to employ this method with excellent results. He has also found it very efficacious in the inflammatory affections of the sheaths of tendons due to injuries, and generally in sprains where the ligaments, tendons, or muscles were affected. Some similar and even more universally successful results have this year been published by Professor Benedikt of Vienna from the use of the same solution in affections of the ligaments and tendons but more especially in acute rheumatism, where it appeared to act similarly to salicylate of soda, quickly reducing the pain, the swelling, and the pyrexia. The best results were, however, obtained by combining the two methods, particularly at the commencement of the disease, giving large doses of salicylate by the mouth and at the same time from one to three injections of carbolic acid daily. A somewhat similar form of treatment has been very successfully employed by Dr. Stekoulis of Constantinople in sciatica, an affection due to causes of very various nature, but frequently allied pretty closely with chronic rheumatic affections. The injection he used was a solution of hyperosmic acid, a substance which is in constant request by pathologists for hardening tissues for microscopical purposes. All the ten cases in which this remedy was employed were of considerable standing and very obstinate, Jacoby having recommended its use under such circumstances. A 1 per cent. solution was used, which, on account of the action of light upon it, was preserved in dark glass bottles. One gramme was injected deeply into the gluteal region close to the nerve, and this was followed by other injections extending along the course of the nerve to the number of something like a dozen. The pain caused by the injections was somewhat severe and burning, but it only lasted one or at most two minutes. At first the injections were repeated daily, afterwards every three or four days. Care was required never to insert the needle into the same point as before. Out of ten cases, eight were completely and one partially cured, one only remaining unbenefited. No unpleasant effects beyond a slight tenderness over the points where the needle had entered, and which did not last more than a day or two, were observed.

EARLSWOOD ASYLUM.

PROBABLY most persons are apt to associate with the term "idiot" an entire absence of the mental faculties, and a consequent total incapacity for acquiring knowledge or for doing work of the most elementary kind. The report which is annually issued by the managers of the Asylum at Earlswood, Surrey, goes far to prove that this is, in a majority of cases, an erroneous supposition. The institution during the year ending March 31st, 1887, contained 569 inmates. Of these between 300 and 400 receive some sort of education, and while in the case of some this implies but a trifling measure of success in instruction, there are not a few others whose naturally feeble intelligence has been materially strengthened in the school of the asylum. The subjects taught include speaking (in the case of deaf-mutes), reading, writing, arithmetic, religious instruction, singing, and in two cases mentioned in the last report piano-playing by the ear. The wholesome effect of such light instruction, judiciously communicated, cannot be disputed. Certain trades are also taught, and it is a fact at once creditable to the teachers and indicative of the latent capacity of the idiot and imbecile pupile, that a considerable part of the tailoring and shoemaking of the establishment is done by the inmates. Other trades, such as printing, brush, mat, and basket making, are also taught, with an encouraging degree of success. Recreations, in-door and out-door, very properly occupy a prominent place in the asylum *régime*. The health of the institution during the past year has, on the whole, been good. Several cases of diphtheria have, however, occurred, and the sanitary arrangements are undergoing a thorough revision, with the intention of bringing them up to the present standard of efficiency. The passing af the Idiots Act of 1886, which allows of the admission of weak-minded persons on the strength of a single and simply-worded medical certificate, will, it is believed, encourage many to avail themselves of the advantages of the establishment who have hitherto been deterred by the formal preliminaries required until very recently under the Lunacy Acts. The expenditure of so large a concern as the home at Earlswood is necessarily great at any time, and particularly at present, while sanitary and other improvements are being carried out on an extensive scale. We therefore hope that the liberal support which has brought the asylum to that state of public usefulness in which we find it now will forbid that its work should suffer from the present general diminution of income.

THE REGISTRATION OF "LOCUMS."

IN these summer months, when medical men are so dependent on the assistance of the *locum tenens*, it is often important to be able to ascertain the fact of their registration. This is easy enough if their registration has not been very recent. But where it has taken place in the current year it can only be verified by information from the registrar, and it can easily be imagined that there are difficulties in the way of supplying such information at anyone's request. Yet in the absence of it, it is possible for unscrupulous persons to pretend to be registered, and to palm

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themselves off as such on honourable practitioners, to the injury of their practice and of their patients. This is not a mere theoretical case. And we advise medical practitioners to be particular in asking all reasonable evidence of statements made by persons who are strangers to them. We often receive complaints that representations made are not confirmed by actual experience. It is only fair to the general body of gentlemen who lay themselves out for *locum tenens* work—many of whom are highly capable men—to use precautions against those who bring discredit on a most useful class. Of course registration is only a legal form of qualification, and is not more important than evidence as to personal qualification, for procuring which each practitioner must rely on himself.

LONDON FIRES.

THE great fire which on Saturday evening last destroyed a large portion of Mr. Whiteley's premises at Westbourne-grove has once more directed public attention to the undeniable insufficiency of the Metropolitan Fire Brigade for the important duty which is cast upon it. It is understood that the responsible authorities feel their deficiency most keenly in the matter of horses; but from the figures that have been made public it would seem that the force is not less under-manned than under-horsed, and that a substantial addition ought to be made forthwith to Captain Shaw's resources both in men and material. The total force includes 589 men. It could hardly be too much to assume that a score, or say nineteen, of these would at any given moment be incapacitated by sickness and the like causes, so that the whole force available could not be reckoned at more than 570. Then, again, a deduction of probably one-half must be made from this number for men off duty, thus leaving not more than 285 ready to answer a summons. The men are distributed through fifty-five stations, and if these are not to be wholly deserted a sufficient force must be left behind to average at least two men to each station. This modest provision would demand 110 men, leaving 175 at the disposal of the superintendent on duty at the fire. The number of men actually mustered at Westbourne-grove is said to have been 173; so that it would seem not only that the entire strength of the force was brought up for the emergency, but also that it was, considering the total strength of the brigade, a very strong and efficient muster. But, although the men respond well to a summons and do their work in admirable style, it is painfully obvious that their number is much too small. A second large fire would on Saturday night have greatly overstrained their powers; and a third, had such a misfortune occurred, would have utterly nonplussed Captain Shaw. Such a contingency as that ought not to be beyond the scope of our precautions.

RABIES IN DOGS.

THE report from the Select Committee of the House of Lords on Rabies in Dogs was issued on the 10th inst. The committee believe that while it cannot be absolutely demonstrated that rabies does not arise spontaneously, yet it is practically proved that subcutaneous inoculation with its virus is the only ascertained means of imparting the disease. The following are the recommendations of the committee:—(1) That when rabies is prevalent the muzzle should be enforced; (2) that the power of the police constable should be extended to authorise the slaughter of stray dogs; (3) that the symptoms of rabies should be endorsed on dog licences; (4) that local authorities should have power to order that dogs should wear badges which may identify their owners; (5) that in populous places local authorities should place restrictions upon dogs generally, and especially deal stringently with apparently ownerless dogs in their districts; (6) that in the event of its being conclusively proved that M. Pasteur's system provides a preventive remedy, facilities should be afforded for its application in England. In our next issue we purpose dealing at length with the report.

DUTCH FACTORY LEGISLATION.

THE Dutch Government, while prosecuting agitators, has thought fit to mitigate the cause of agitation by bringing forward laws for the protection of workpeople. Despatches from the Hague announce that the Committee of the Second Chamber advise the restriction of the work of boys and girls under sixteen years of age, and urge that young women under eighteen should be absolutely forbidden to work at night or on Sundays. The work-day must be divided by two hours' rest for meals, and the committee also advises that women should not be allowed to work till a full month after their confinement. Further, there are recommendations dealing with the inspection of factories and workshops by qualified officials. Laws are proposed to protect the health and personal security of workmen, and measures for creating a reserve fund for old age, deaths, accidents, and illness. How far all these beneficent suggestions will meet with the approval of the Legislature still remains to be seen. The agitation prevailing in the country points to the necessity of some such measures, and doubtless the statesmen of Holland will have the wisdom to yield rather than provoke a dangerous storm. Already, twelve years ago an important measure was enacted of this description. According to the law of September 19th, 1874, the employment of children under the age of twelve is forbidden. Exception, however, is made in cases of domestic service and farm labour. The penalty for breaking the above law is a fine of £2 10*s.* and from one to three months' imprisonment, together or separately. The new proposals actually before the Dutch Parliament go much further than the law of 1874, and undoubtedly the necessity of such legislation is becoming more and more apparent. The vast size of the factories, the presence of complicated, sometimes dangerous machinery, and the difficulties under such circumstances of securing efficient ventilation and drainage, render it more and more urgent to arm the authorities with the right of interference. It is also desirable that at the same time a competent staff of inspectors should be organised who possess scientific and practical knowledge to detect defects, and whose position would place them above the danger of corruption. The working classes themselves must also be able to assist in the detection of all defects that tend to deteriorate public health. They, at least, have the practical experience of the working success or otherwise of any measure introduced; and a little practice is often worth volumes of theory. In any case, and whatever may be the result of the present effort, the Commission of the Dutch Senate are to be congratulated on the useful initiative they have taken.

CHOLERA IN ITALY.

SINCE cholera first appeared in Calabria early in July, there has been a slow but steady extension of the disease. Rocella was at first the principal seat of the outbreak, but it soon appeared that the cholera which in an early part of the year had existed on the eastern coast of Sicily had broken out again, Catania having for some time past been implicated. Gradually the epidemic has extended over most parts of Sicily, the provinces of Calabria, Caltanicetta, Syracuse, Messina, Gergenti, and Palermo being affected. On the mainland a number of additional towns on the Calabrian coast, such as Palmi, Reggio, and Melita, have also been attacked. Then came news as to the extension of the

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disease to Malta, and to Resina in the bay of Naples. Since Malta was first attacked there has been a daily record of fresh cases, the largest number of attacks having taken place on the 9th inst., when as many as fourteen were returned. Hitherto the troops have remained free from the disease, which is limited to the poorest classes of the population. The last report of cases in Sicily was on the 7th, where fresh cases are stated to have occurred at Messina and Palermo.

THE QUALIFICATIONS NECESSARY IN RETAIL DRUG BUSINESS.

AN important case has been lately before the Justiciary Appeal Court, in the form of an appeal from the Sheriff Court, Edinburgh, against the judgment of Sheriff Rutherfurd in a prosecution against the Leith Depôt Company by Richard Brembridge, London, registrar under the Pharmacy Acts, 1852 and 1863. The essence of the case was that the firm consisted of seven persons carrying on business as wholesale and retail druggists and tea merchants, and advertising themselves as such, while none of them was registered as a chemist and druggist. On their side it was argued that, provided the actual seller and dispenser of the drugs was qualified as a chemist, the law was satisfied, and that the House of Lords had given a decision in this sense. The judges expressed their agreement with the judgment of the House of Lords. Lord Justice Clerk said the Act did not apply to partnerships, and he should very much doubt whether a member of the Corporation could be held responsible, even if the person who carried on the business was not qualified. But he reserved his opinion on that point. Lord Young was of the same opinion, and rather feelingly argued that such companies were in the interest of the public, as supplying drugs at more practical prices than were the rule of the trade.

PROFESSOR SIMON SCHWENDENER.

THIS able worker in the field of vegetable physiology completes a long series of academic triumphs at Zürich, at Munich, at Basel, at Tübingen, and at Berlin by his appointment to the post of Rector in the last named-school, where since 1878 he has filled with much distinction the chair of Physiological Botany. He had already laid the cause of science in Berlin under deep obligations as Director of the Botanic Institute and of the University Botanic Garden. Switzerland, of which he is a native, is justly proud of the high honour conferred on her son, and contrasts the cosmopolitan spirit of German science with the exclusiveness now showing itself in Russian academic circles.

FOREIGN UNIVERSITY INTELLIGENCE.

Cordova (Argentine Republic).—Dr. Johannes Frenzel, of Berlin, who is well known for his researches made at Naples under Professor Dohrn, has been appointed Professor of Zoology, with charge of the Zoological Museum. An eminent German, Dr. Burmeister, who was formerly a professor in Halle, is at the head of the University of Cordova.

Ghent.—Dr. la Housse of Antwerp has been appointed Professor of Human Physiology in succession to M. Mac Leod, who has been appointed to the Botanical chair vacated by the death of the late Professor Kickx.

Jena.—Dr. August Gärtner has been appointed Ordinary Professor of Hygiene and Medical Jurisprudence.

Montpelier.—M. Hamelin, *agrégé*, has been appointed to the Professorship of Therapeutics and Materia Medica. M. Cavalier, Professor of Mental Diseases, has been granted leave of absence for a year.

PROFESSOR VIRCHOW, immediately on the close of the summer session, repaired to Görlitz for the purpose of examining the excavations now being made in that district.

MR. GEORGE SMITH of Coalville gave evidence on the 8th inst. before the Select Committee on the Temporary Dwellings Bill. He stated that about 30,000 children lived in vans and other temporary dwellings in the United Kingdom. These children went without education to an alarming extent, and their homes were almost totally outside sanitary influence. He doubted if more than 2 per cent. of this number could read and write, and not one in a thousand had any religious training.

LADY ROBERTS has issued a circular appealing for aid in behalf of the "Homes in the Hills" which have been founded for the benefit of the nursing sisters now employed in the British military hospitals in India. The appeal is accompanied by a statement explanatory of the scheme for supplying nurses for the hospitals.

WE regret to have to record the death of Gustavus Charles Philip Murray, M.D., which occurred on Sunday last at his residence, 66, Great Cumberland-place, Hyde Park, W. We hope next week to give some details of the life of the deceased physician.

MR. MARK HOVELL has been appointed to accompany the Crown Prince of Germany to Scotland, and to carry out the treatment prescribed by Dr. Morell Mackenzie.

REPORT
OF
The Lancet Sanitary Commission
ON THE
THAMES AS A WATER SUPPLY FOR LONDON.

MORE than half of the water supply of London is drawn from the Thames. Formerly a great deal was drawn from a foully polluted area in the heart of the metropolis, but, warned by the lessons taught by successive visitations of cholera, the intakes were removed to places above the tidal portion of the river. The five great Thames companies draw their supply just above Hampton and below Sunbury, while the East London Company is permitted to draw a further quantity not exceeding 10,000,000 gallons a day from a spot a little higher up, but below Walton. Altogether 110,000,000 gallons a day may be drawn from the river. During last May the quantity actually taken was 86,795,375 gallons. The whole of it is filtered and stored in covered reservoirs before delivery.

The question which we have to consider is whether this water, collected and treated with due care, is fit for the supply of the metropolis, or whether it is exposed to such serious pollution, either continuous or occasional and accidental, as to make it necessary to seek for a new supply. It is hardly necessary to remind our readers that the question is no new one. It has been keenly debated for a long time, and about twenty years ago a vast mass of new evidence was collected. Eminent scientific men took opposite sides in the controversy, and supported their views with experiments and arguments which have added greatly to our knowledge, and have stocked no small space in our libraries. Dr. Frankland, to whom we owe our most trustworthy method of water analysis, was then, and is, we believe, still foremost among those who consider the present supply dangerous, while Dr. Tidy, with the able assistance of Mr. Crookes and Professor Odling, have uniformly maintained the opposite view. It would be hopeless to attempt even the barest sketch of the literature of the subject; it is enough to mention that the matured views of Dr. Frankland were stated in the sixth report of the Rivers Pollution Commission (1874), which is a model of sound scientific work, while the case for the water companies was ably pre-

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sented by Dr. Tidy in a paper published in the journal of the Chemical Society in May, 1880. Dr. Tidy's arguments, like those of Dr. Frankland, were supported by innumerable experiments, and there is no question of the accuracy of the analyses on either side. The Royal Commission on Water Supply, which reported in June, 1869, decided in favour of the present supply, provided, however, that efficient means were taken for the exclusion of sewage and other pollutions from the river and its tributaries. The commissioners, however, did not include in their number a single chemist or member of the medical profession, which detracts considerably from the value of their conclusion.

The present inquiry was of necessity limited in its scope. A full study of all the conditions which affect the purity of the water in the neighbourhood of the intakes was evidently impossible. But it was also unnecessary, for there is no dispute as to many of the facts, and in regard to others, illustrative cases are sufficient, because their typical character is self-evident. We selected for our study the region of the river which lies between the lowest intake, of the water companies just above Hampton, and Staines, a distance on the river of about eleven miles. Of course, we do not assert that no higher pollution is worthy of attention, but arguments founded upon it would be more open to objections, particularly to the well-known and important objection founded on the assumption that any pollution, however foul, is destroyed or rendered harmless in a flow of a few miles by natural oxidation assisted by living organisms, animal and vegetable. The assumption is a dangerous one, for it rests on no sufficient proof, and absolute proof would be required to justify its admission as a fact. We know that noxious matter is admitted into a river used as a water supply. We know also that sooner or later all noxious matter will be destroyed. But how long the process of destruction will take, what conditions are required for it, and what is the evidence by which its completion is proved are questions which cannot as yet be definitely answered. Noxious pollution above our London water supply is admitted by all, so that the burden of proof that it is harmless clearly falls upon those who assert that it is always and entirely destroyed before the water reaches the consumer. We presume, however, that no one would assert that excremental pollution only a few miles above a water company's intake involves no risk at all to public health.

Our recent inspection, by no means the first we have made in the same region, took place under peculiarly favourable conditions for the water. Long drought had reduced the river to a placid stream. Little water was passing over the weirs. Ditches and small tributaries were dry, and the river water was transparent and excellent in colour. Our observations and inquiries were made partly on land, but to a great extent in boats on the river, and we admit freely that if the water was as good as it looked, and could be kept so, it would, after efficient filtration, afford an excellent supply. Unfortunately, however, we were soon convinced that many and serious pollutions affected the river at all times, and that while all were disgusting, some were of a kind to constitute a permanent source of danger, especially in times of epidemic. It will save space if we classify the chief sources of pollution which we observed, offering a few remarks about each.

1. *Actual sewage.*—As far as we could discover there is very little actual sewage thrown from drains or privies directly into the river in the area under review. Our means of observation were limited, for of course we had no access to private grounds. The river everywhere is undoubtedly polluted, most seriously in its upper part, and the Bourne in its passage through Chertsey is a foul ditch which is certainly polluted. The Thames Conservators are, we understand, now using their powers to stop this defilement. The Abbey river, which runs close to Chertsey, is also, we believe, exposed to direct pollution, and we saw by the Willow-walk in Chertsey a foul ditch, almost empty at the time of our visit, which discharged through a grating into the river. At Staines it is admitted that there are one or two sewers that are in direct communication with houses and that the sewage passes in a raw state into the river. We were informed that very few houses are so drained, and that the town authorities are most anxious to disconnect them, but for the present the fact remains.

2. *House boats and barges.*—We have on previous occasions commented on the urgent danger to the London water supply occasioned by house boats and barges. It is true that the owners of house boats have recently been prohibited from defiling the river with their refuse, but who is to enforce the prohibition? Even if the owners are as particular as they ought to be, they cannot at all times supervise their servants, and are, moreover, often absent for days together. At night, especially, there must be frequent pollution, and who can say what character it bears? As to barges, there can be no doubt that the river, as it is the easiest, so it is the most common means of disposing of the excreta of the family. There were but few house boats or barges on the river at the time of our recent visit, but on previous occasions we have seen many. We do not know the amount of the barge population that travel by the intakes, but we believe it is considerable. The greatest danger arises of course at night, when the barges are moored. We have only to imagine a case of cholera occurring on a barge near Sunbury, or even farther up, to realise the danger.

3. *Bathing.*—It is impossible to estimate the number of persons who bathe in the river during the summer season, but it is certainly considerable. We have seen bathers below Sunbury Lock—that is, just above the great intakes. No one can blame the bathers, if they are allowed to bathe, but they certainly pollute the river in more ways than one, and it is not pleasant to think of drinking the bath water.

4. *Other pollutions.*—These may be best summarised in the words of the Rivers Pollution Commissioners (Sixth Report, p. 428): "The river is used for bathing, for the washing of sheep and cattle, and of dirty linen, and the putrid carcases of animals float upon its surface. It is the common waterway for a large amount of polluting matter, much of which is at times dangerous to the health of persons who use even the filtered water for dietetic purposes." We have little to add to this simple statement of fact. It is true that we did not see any dead dogs on our recent visits, but on previous occasions we have seen many, and on one occasion, about two years ago, we counted three swollen carcases between Hampton and Sunbury.

5. *Cesspools.*—The pollutions hitherto described are small in magnitude in relation to the volume of the river. It would be a great mistake to underrate the risk they involve; for we ought never to forget that the fearful outbreak of cholera in the East-end of London in 1866 was traced by Mr. Netten Radcliffe, after a careful inquiry, to two cases of cholera which had polluted the River Lea, and so the water of the East London Water Company. Nevertheless, they are small in comparison with the enormous pollution due to cesspools—a pollution the extent and significance of which has been greatly underrated. With a few exceptions, the whole of the excreta of the inhabitants of the Thames basin passes into cesspools. As to the majority of these cesspools, we have nothing at present to say, except that their constant proximity to wells involves perennial risk. But a large number of cesspools are close to the Thames or to the mouths of its tributaries, and many of these pollute the water supply of the metropolis in a serious and dangerous manner. Going up the river from Hampton, we find at Sunbury, Walton, Halliford, Shepperton, Weybridge, Chertsey, Laleham, and Staines, many houses, great and small, close to the water's edge. All these houses, or nearly all of them, drain into cesspools commonly sunk in very porous soil. The cesspools, we were repeatedly told, were slow in filling. One gentleman in Staines informed us that his had not been emptied for nine years, and we found at Weybridge, close to the mouth of the river, about six miles above the lowest intake of the water companies, a row of cottages where the cesspools were *within a few yards* of the river, and only required emptying once in three years. During flood times such cesspools fill rapidly, and as rapidly empty themselves into the river—that is, into the metropolitan water supply—when the flood abates. Staines is another notable example. The soil is low and porous, and the great majority of the houses are provided with cesspools. We were informed that the water rose and fell in these cesspools with the rise and fall of the river, but there can be no doubt that here, as elsewhere, along the banks of the river, the liquid portion of the sewage, most imperfectly filtered through a short layer of foul earth, finds its way into the Thames. There is now a public water supply for Staines, but there are still many wells, some of which are preferred by their owners to the new supply. We do not know whether this proves the inhabitants to be ignorant or the water supply bad.

6. *Floods.*—Another great cause of the pollution of the water supply is found in the floods which follow heavy rain. The action of floods in flushing cesspools we have already

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described. But the influence of the flood is not confined to the cesspool and the sewer. Every dirty hole and corner is washed out by it; the manured field, the slaughter-house yard, the factory, the pigstye, and the dunghill alike contribute, and the foul muddy torrent pours into the London water supply. Dr. Tidy properly distinguishes between primary and secondary flood water—that is, between the earlier and later washings of the dirty earth. The former are much more objectionable than the latter; but all that concerns us is the obvious fact that both alike go into the reservoirs of the water companies.

It will be evident from what has been said that our latest study of the question has confirmed our previous opinion, so often expressed in these columns, that the Thames is at present, and is likely to remain, an unsuitable source of water supply for the metropolis. For the sake of distinctness we offer a summary of our conclusions:—

1. The upper Thames is a highway of commerce, a vast and increasingly popular pleasure resort for rich and poor, and the natural drainage channel for a district already highly populated and certain to become more populous year by year. 2. Although such a watercourse should for every reason be kept as pure as possible, it must always be exposed to so much continuous as well as casual pollution as to be a dangerous water supply for London. 3. Although much has of late years been done by the London water companies in improving their supply, particularly by more careful filtration, there is no proof that they can now or will ever be able to exclude from the water which they supply to London all matters injurious or dangerous to health. 4. In any case, the pollutions to which Thames water is necessarily exposed are of such a disgusting character as to render its use for drinking purposes undesirable.

While formulating the above objections, which seem to us undeniable, we wish to give prominence to all fair arguments which have been adduced on the other side. We admit fully that, as a general rule, chemical analysis fails to point out anything certainly deleterious in the water supplied by the Thames companies; but on this point we would desire it to be remembered that recent experiments for the Local Government Board have led to the conclusion that "we must [at any rate until other methods of recognition are discovered] go beyond the laboratories for evidence of any drinking water being free from any dangerous pollution." Furthermore, we admit that modern researches in bacteriology, among which those of Dr. Percy Frankland deserve honourable mention, have shown that filtration is a more potent agent in purification than was at one time supposed. But granting all this, we are still obliged to reiterate our opinion that the risks attendant upon the use of a water supply so foul, and increasingly so, as that of the Thames should not be lightly incurred by the largest and wealthiest city in the world. The experience of Lausen, quoted in the sixth report of the Rivers Pollution Commission, seems to prove beyond a doubt that the poison of typhoid may undergo what appears a very efficient natural filtration without losing its activity; and the history of the late epidemic of cholera in Spain, as told by Mr. George Higgin,[1] reminds us too forcibly of our English experience not to suggest fears that should not to be laid aside.

It will naturally be asked, What alternative scheme of water supply is offered if the Thames is to be abandoned? There are many alternative schemes, each of which would give us a safer and better water supply than we now possess. Our limits prevent us discussing them at present; but lest it should be supposed that they are merely dreams of sanguine engineers, we will quote once more, in confirmation, a passage from the Sixth Report of the Rivers Pollution Commission (page 430):—"Abundance of spring and deep-well water of excellent quality can be procured in the basin of the *Thames* and within a moderate distance of London; and we are of opinion that the metropolis and its suburbs should be supplied on the constant system exclusively with this palatable and wholesome water."

[1] Nature, June 17th, 1886.

FEVER HOSPITAL FOR DUNDEE.—It is proposed to erect a fever hospital in Dundee at a cost of £9000. At a meeting of the Sanitary Committee of the Local Police Commission on the 4th inst., plans of the hospital were submitted, and the Committee approved of the erection of two pavilions and part of the proposed administrative department.

VON PETTENKOFER'S LATEST VIEWS ON CHOLERA.

No living epidemiologist has dedicated more time or greater talent to the study of cholera than von Pettenkofer of Munich. Three years ago, after the outbreak of the disease on the Mediterranean seaboard, and when Koch's discovery of a comma bacillus was still recent, he wrote a series of papers on the theme, papers which were translated in full and published in THE LANCET. Since then a good deal of fresh light has been thrown on the subject, and von Pettenkofer has utilised it to supplement or reinforce what he had already given to the world. This "revised version" of his views has just been concluded in the *Archiv für Hygiene*, and we now offer our readers a succinct digest of the fourteen sections (*Abschnitten*) in which it is contained.

Having confirmed by additional proofs, drawn mainly from the experience of Persia and England, his demonstration of the worthlessness of quarantine afloat and *à fortiori* of inland cordons, he passes on to what may be called the "pilgrimage theory" of the diffusion of cholera. Here, again, he ranks himself with the sceptics, and shows, in a masterly summing-up of the evidence adduced by Bryden, Cuningham, and Bellew, that while pilgrimages, by the hardships and privations which attend them, undoubtedly predispose to the disease, they never convey it.

The vindication of these views occupies the first three sections of his treatise, and in the fourth he proceeds to estimate the practical worth of the comma bacillus of Koch. For the pathologist and clinician this, he admits, is of undoubted importance—mainly in the differential diagnosis between cholera nostras and cholera Asiatica. But for the epidemiologist and the hygienist in quest of prophylaxis it has little or no value. In the epidemics that ravaged Munich and Heilbronn in 1873, what, he asks, would have been the practical gain if the comma bacillus had been known then? Nothing; or as little as the tubercle bacillus proves in the treatment of phthisis. The infant science of bacteriology shows that nothing can be achieved against the diffusion of cholera by restriction of communication, however elaborate, because we can never make communication of any kind, least of all human communication, absolutely germ-proof (*pilzdicht*). To the bacteriologist, he says, in effect, it is no marvel that in any place whatever the best sterilised broth quickly presents germ growths, if the place has not been made hermetically germ-proof. If you put a broth in the most artistically prepared box, with as many bolts and bars as you please, a box whose fabrication, shutting and opening, costs no end of money and pains, the tyro in bacteriology can tell you beforehand that all your trouble is thrown away if the seclusion from germs is not absolute. The tiniest trace of a non-germ-proof chink will suffice to introduce the enemy, where it will always find its nidus. Meat, sterilised at a high temperature and kept in air-tight tin boxes, can make the tour of the world and arrive fit for consumption at its destination; but if an opening, invisible to the naked eye, admits to the interior of the box, the meat will get "high," even in a temperate climate. Had germ-proof cases been the *sine qud non* of fresh meat conservation, this would never have been a successful enterprise; but it succeeds by other means than the exclusion of germs. Slaughtered in Australia, meat arrives at the London market fresh, not by being sterilised or made germ-proof, but simply by being conveyed in ice chambers, and thus reduced by cold to a condition in which no bacteria can live or thrive. As the air everywhere carries putrefactive germs, so communication with cholera localities always and inevitably brings with it the germs of cholera. So long as the contagionist school fails to render every avenue of communication with cholera localities germ-proof, all their precautions count for nothing, all their restrictions of communication are worthless, and they must bethink themselves of some other means to keep human flesh (so to say) from corruption. On this and similar grounds von Pettenkofer also holds the isolation of cholera patients and the disinfection of their evacuations as of no use, and, in the two following sections, confirms his position by an elaborate induction of facts.

From his argument against the efficacy of regulations which are founded on the assumption that the infection of healthy subjects proceeds from cholera patients and their

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excreta, von Pettenkofer comes to answer the question: "What, then, are we to do, if we admit free communication with the cholera-stricken, and assume that the infection proceeds from the cholera locality?" First, he takes into consideration the abandonment of the cholera locality itself—the so-called "cholera flight."

On grounds public as well as private he thinks it desirable that during an epidemic the population should abide on the spot, where, by personal care and management, they can protect themselves as thoroughly as if they had fled to another place; but still he is of opinion that cholera flight will always remain a practical question, to be dealt with practically. The magnitude of the flight depends on the intensity of the fear, and it is difficult to calculate whether this is greater if one assumes that the infection proceeds from the cholera patients (the contagionist view), or that it comes from the cholera localities (the localistic view). The fear, and the consequent flight can be prevented neither from the contagionist nor from the localistic standpoint; and in the case of persons who are not officially chained to the spot, we have no right to hinder them if they choose to go. That it is an effective prophylactic measure is proved, not merely in ships which leave an infected harbour for the high seas, where, as a rule, they remain exempt from the disease, or soon become so; but also in the abandonment of infected places on land, as is now practised successfully in British India in the case of all barracks and prisons as soon as cholera declares itself. The cholera flight is useless either when it is adopted too late, or when it is directed to a place which is also a focus of infection, or which becomes perhaps a worse quarter than that which is fled from. Having adduced most interesting illustrations from the movements of our garrisons in India, von Pettenkofer admonishes those who will and can run away not only to do so as soon as possible, but also to know whither they are going; for they might be exchanging "the frying-pan for the fire" (*aus dem Regen in die Traufe Kommen*). In this respect they will best be guided by the experience of former epidemics. On this subject and on the return of the cholera fugitives he gives a number of practical suggestions, and then passes on to show that, from the localistic standpoint (his own), cholera fugitives are not to be dreaded as importers of the disease. On this question he adduces a cogent array of facts all going to prove that cholera fugitives are freely to be acquitted of all charge of diffusing the epidemic, while only infections which are never more than exceptionally sporadic can be traced to them. If here and there, he says, the outbreak of an epidemic coincides with the arrival of a cholera fugitive, it is a case of casual coincidence merely, and the place would have been visited by the disease had no stranger come to it. How many thousands of fugitives in France since 1832 have fled from Marseilles and Paris to the cholera-exempted Lyons and Versailles without ever importing the epidemic? From cholera districts, he admits, one may here and there bring with him just as much of the locally-produced infective matter as may suffice to cause in another place a few sporadic cases; as, for instance, in 1854 an arrival from Munich occasioned three infections in the cholera-exempt Stuttgart, but these three produced no further infection, and the disease took no root. Besides, that any importation of the infective matter from cholera localities through travellers or fugitives can be prevented is shown by von Pettenkofer in a striking series of examples taken from the prisoners released from gaol in Laufen and Rebdorf during the last epidemic in Bavaria. While the disease prevailed in these two establishments there were ninety-four inmates set free, of whom each one, from the prison door to his permanent destination, and for more than six weeks, was followed by the police. These ticket-of-leave men, as we should call them, were scattered in the most various directions over Upper and Lower Bavaria, Swabia, and Neuberg, some even into the Upper Palatinate. *En route*, or on arrival at their destination, two of them fell ill of distinct asphyxial cholera, seven of cholerine and suspicious diarrhœas, but none of them died. These ninety-four fugitives, in fact, fared far better than the comrades they had left behind in their carefully superintended prisons, very many of whom died of the disease. Of these same ninety-four, moreover, of whom nine became ill outside the gaol, and who took the most diverse routes, not one communicated to the persons with whom for six weeks they were more or less in contact a single ailment bearing any resemblance to cholera. So, says von Pettenkofer, "from these two prisons we may learn how flight may be taken from a cholera district to the surrounding country without spreading the disease." And how were the prisoners set free? Only after a thorough bath, after laying aside every article they had worn within the walls, after getting fresh linen and clothes, and taking nothing with them from the establishment but a little money they had earned or saved. To these articles no infection could cling, in such quantity at least as to cause infection elsewhere; and as in the localistic view only the cholera locality and not the cholera patient produces the infective matter, so these nine patients outside the prison were unable, in the many places through which they passed and in which they sojourned, to communicate the faintest vestige of the disease. All the localities they came in contact with, several hundreds in number, remained free from cholera.

(To be concluded.)

THE PAIL SYSTEM AT MANCHESTER.

No. II.

IN dealing with the contents of the pails removed from the 66,000 ash closets of Manchester, the authorities have at least the advantage of treating a substance which does possess a commercial value. For many years the hope of deriving pecuniary benefit from the precipitation &c. of sewage water has been abandoned, but this is not the case with regard to the pail system. Nevertheless, this pail system, as worked at Manchester, is not managed on a commercial basis. Public health and public convenience are the first considerations; commercial advantages are relegated to a secondary position. It is needless to say that the working of the pail system has not been handed over to any private contractor, but is managed by the municipality of Manchester in the public interest. Such being the case, the first object held in view is not that of obtaining a concentrated and valuable manure, but of shielding the community from all nuisances or risks. If the commercial interests were paramount (and this would be the case should the enterprise be let out to a private contractor or a company), efforts might be made to prevent anything entering the pails except the soil. The municipality, however, justly conceive that such pails must occasion considerable nuisance; therefore, to deodorise their contents, it is arranged that the pails shall also receive the finer ash of each household. This ash is very effective in preventing bad odours; but, on the other hand, it greatly increases the difficulty and expense of converting the contents of the pails into a marketable form of guano. In this respect, therefore, there is a direct conflict between the interests of public health and the desire to realise financial profit. This situation points to the necessity of placing the management of all such works in the hands of those to whom money considerations are not of the first importance.

The pails are brought to the sanitary works, established by the municipality at Holt Town, Beswick, on the north-east side of Manchester. The prevailing winds would, we presume, not blow from the works towards the town. No sooner are the pails removed from the van than the lids are taken off, and the contents tilted over into a bottomless trough. Eight men are employed exclusively at this work, and it is calculated that each man empties about 1800 pails in a day. Other eight men seize and dip the emptied pails into a bath of water charged with a strong solution of carbolic acid. As a further precaution the bottom of each van is strewed to a depth of about half an inch with a carbolic acid powder; hence, if anything is spilt within the van, it falls on a disinfectant. Proceeding to a lower floor, we found that the soil, as discharged from the pails, falls on a revolving riddle from which there are two exits. On one side, the rougher materials, such as the larger pieces of cinder or any foreign objects accidentally thrown into the pail, fall on the ground. On the other side, the more liquid material is drained off into vats, whence it is discharged into a concentrator that holds 480 gallons. Here it is mixed with eight gallons of sulphuric acid, and heated to 230° F., under a pressure of 40 to 50 lb. of steam.

From the top floor, forty feet above, a twelve-inch pipe discharges water upon the gases evolved from the concen-

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trating machines. This naturally dissolves all soluble gases; further, these gases, passing away from this washing tower, are conducted into a flue placed in connexion with the thirteen boilers established on the works. These nearly suffice to consume all the organic matter, and convert it into water and carbonic acid. Nevertheless, the Health Committee of Manchester are not satisfied with this process, and now purpose to construct a chamber for the special purpose of receiving these gases and exposing them to a temperature varying between 1000° and 1500° F. This would ensure the absolute destruction of all detrimental organic matter.

The contents of the pails, when dried in the concentrators and converted into guano, possess, during the summer time, about 2·75 of ammonia and 3 per cent. of phosphates. Mr. C. Kilpatrick, the chemist in charge of the works, who ably described the whole process to us, explained that he analysed the guano every day, and added the required amount of phosphates and ammonia, so that the manure might always possess a uniform standard of strength and value. This is set down at 30 per cent. of organic matter, including 3 per cent. of ammonia and 8 per cent. of phosphates, thus generally entailing an addition of ½ per cent. of the former and 5 per cent. of the latter. Unfortunately for the success of this enterprise, the value of ammonia has greatly fallen of late years. In 1879, it was sold at from 18*s.* to 20*s.* per unit; whereas now it is only worth from 9*s.* to 10*s.* the unit. During the last year 16,200 units of ammonia were sold, and this at 10*s.* would only realise £8100, while six years ago the amount recouped by the municipality to defray its expenses would have equalled £16,200 for ammonia alone.

Fortunately the efforts of the municipality in other directions have met with greater success. The refuse from the slaughter-houses, the condemned fish, &c., are all brought to the sanitary works and advantageously utilised. In this animal boiling department a net profit of £500 a year is secured. The grease obtained is used in a variety of ways. A considerable saving is realised by employing it to lubricate the machinery. Then a portion is turned into soap mixed with carbolic acid, and given away for the purpose of washing premises after disinfection, &c. The soap is doubtless good chemically. It contains, we believe, 60 per cent. of fat and 8 per cent. of carbolic acid; but we must enter a protest against its abominable odour. The love of cleanliness and the appreciation of sanitary precaution will not spread among the people by the distribution, even gratuitously, of such offensive soap. The odour is undefinable, but it is powerful and sickly. Surely some improvement is possible. Among the various experiments that have been made in this department, may be mentioned the utilisation of the oil extracted from the fish that are destroyed, for the purpose of mixing with paint. When thus prepared, it is found that the paint dries much quicker. Mr. Kilpatrick is also seeking to volatilise the fish oil so as to make gas, which, he expects, will be superior in some respects to coal gas. Finally, we should not omit the great demand for dog fat. When a sufficient number of dead dogs can be collected, it pays to empty and clean one of the boiling vats so as to employ it exclusively for the extraction of dog fat. This fat can be sold at a comparatively high price.

The Holt Town Works are conveniently situated by the side of the Ashton Canal and the Lancashire and Yorkshire Railway. This position enables the managers to deliver the guano free of charge for carriage to a distance of fifty miles. Including sacks, in which it is packed, the manure is sold actually at £3 the ton, and has been extensively patronised by agriculturists in a variety of districts. The works of Holt Town occupy an area of 29,470 square yards; they cost to erect £130,000, and there is, besides, a chief rent of £737 15*s* 6*d*. Roughly speaking, some 250 tons of closet and other refuse are treated daily; and by burning and evaporation they are reduced to half their original weight. At the same time, they are converted into inoffensive material. The operation, however, is far from being inoffensive. We are not prepared to say that the stench is injurious to health, but it is certainly highly objectionable, and it pervades not only the works, but the whole neighbourhood. It is indeed most unfortunate that so many habitations should be so close at hand. The works stand between the boundaries of the townships of Manchester and of Beswick. In the nearest sub-sanitary district of the former we find the area is estimated at 44 acres with a population of 73 persons to the acre; but, if we take only the portion covered by occupied houses, the population is equal to 192 per acre. On the Beswick side it is about 90 per acre. In the part of Manchester where there is the most crowding, the population is equal to 234 persons per acre. These figures will show that the works are not far enough removed; and, when they were constructed, better account should have been taken of the growing propensities such a centre of industry was likely to manifest. Throughout the works, little saucepans, containing a solution of carbolic acid, are kept perpetually boiling over gas jets. How far this suffices to disinfect the emanations arising from heating and drying so much manure we are unable to say. One fact must be noted: the two nearest districts, Ancoats and Beswick, have, during the last two years, shown the highest death-rate of all Manchester. This may be due to many other causes, but it is, nevertheless, a sufficiently ominous symptom to awaken attention.

On the premises of the Holt Works everything is manufactured that is connected with the application of the pail system. For this various descriptions of labour are required. There is a sewing-room, for instance, where young women are employed making the bags for packing the manure and other articles. Some of these women, we find, are only paid 8*s.* a week, though they have to work, to say the least of it, in a very unpleasant atmosphere. This may be the competition rate of wages. Indeed, distress is so prevalent that women might possibly be obtained to do the work for even less. This is, however, a public institution, established for the public good, to preserve the public health; and though 8*s.* may be the competition rate of wages, we maintain that it is not a sanitary rate of wages. It is impossible for a woman to lodge, feed, and clothe herself decently on 8*s.* a week. To the honour and credit of Manchester, be it said, the manufacture of manure is not conducted on a strictly commercial basis. If, then, public health is first considered, why not also the health and comfort of the individuals who work at the depôt itself? The men earn at least from 4*d.* to 5*d.* an hour, the horsemen and carters 24*s.* a week, and the carriers 20*s.* a week; and there are, in all, 420 men employed at the Holt Works. We are not aware that women can live healthy lives on a much smaller sum than men. It would make but an imperceptible difference in the general outlay if public institutions were in such cases to set a better example.

The tinmen who make the pails receive 7½*d.* per hour, and the value of each pail is estimated at 6*s.* The lid is worth 5*s.*, but one lid suffices for two pails. Round the lid there is an indiarubber tubing, so that when pressed down the pail is hermetically closed. It has been found that these pails will last about ten years, therefore we may conclude that the pails cost a shilling per year each. They are made with sheets of galvanised steel, and are very handy and convenient in shape. The only complaint we heard concerning the pails arose from the carelessness of some persons, who, instead of reserving the pails exclusively for the night-stools and the fine ash, occasionally throw miscellaneous rubbish into them. This complicates matters a little for the men who empty the pails, but does not endanger in any way the sanitation of the town.

In conclusion, we should note that the entire cost of the nightsoil department amounted for last year to £106,886 10*s.* 10*d.*, to which should be added £4248 paid for liquidation of debt, giving a grand total of £111,132 10*s.* 10*d.* Against this must be set the total receipts derived from the sale of manure, mortar, bricks, and other things made out of the refuse; this amounted in all to £57,546 4*s.* 4*d.* Thus, the net expenditure for Manchester, with its population of 385,678 persons, only amounted to £49,340 6*s.* 6*d.*, and £4246 towards liquidation of previous debts. In spite, therefore, of the exceptional depreciation in the value of ammonia, the receipts covered more than half the total expenditure—a result which compares most favourably with water-carriage drainage, where it is all expenditure and there is no income.

Taking these circumstances into account, the town of Manchester may be warmly congratulated on the course it has adopted and the valuable example it has given. The experience acquired in this great manufacturing centre will be most useful to other communities, and will suggest a practical solution in many instances where objections are raised to the ordinary methods of drainage.

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DETERIORATION OF PHYSIQUE IN THE POPULATION.

IN his address as Vice-President of the Public Health Section of the British Medical Association, Sir Thomas Crawford, while admitting as one of the results of sanitary science a "perceptible prolongation of life," expressed his opinion that this was attended with "a perceptible deterioration or degradation of life in the lower order of people." This view he supported by reference to the results of the medical examination of recruits for the army, which in the quinquennium 1860-64 showed the rejections to have been only 372 per 1000 inspected, while in the five years 1882-86 they were 416 per 1000. "A careful examination of these tables led to the inference that the lower class, from whom the recruits for the army are chiefly taken, are of an inferior physique now to what they were twenty-five years ago." But while we reluctantly differ from so high an authority as Sir Thomas Crawford on military medical questions, a study of the tables in the Army Medical Department Reports has brought us to a very different conclusion. Before, however, stating the results of our investigation, it is necessary to call attention to two points which have an important bearing upon the comparison. First, in the four years 1860-63 the returns of recruits include those only who were examined at the head-quarters of districts, and secondary inspections are included in the general result with primary, which must obviously reduce the proportion of the rejections. It was in 1864 that the inspections at regiments and at depôts, and by civil practitioners, were first included in the returns. It must be obvious, therefore, that in any comparision with later periods the early defective years must be omitted. Secondly, owing to a change in the regulations, the decision upon certain disqualifications, which had previously been the duty of the recruiting officer before the recruit was sent for inspection, was transferred to the medical officer. The two most important of these were the height and the *apparent* age of the recruit. In the first five years referred to there was not a single rejection under either of these heads, while in the four years 1881-4 they averaged 2434 annually, or 44·4 per 1000 of recruits inspected. Sir Thomas Crawford included in his statement the returns to the end of 1886, but as the last published volume of the department reports is that for 1884 we are unable to make the comparison, with these corrections, to the later date. Taking as a basis, however, the four years 1864-7 and the four 1881-4, and deducting from the latter the rejections for height and age, and a few found "unfit within three months of enlistment," who are obviously not rejected recruits, but discharged young soldiers, we obtain the following results: In the four years 1864-7, of 99,701 recruits inspected, 40,873 were rejected, or 410 per 1000; while in the four years 1881-4, of 219,185 inspected, the rejections, exclusive of the three groups noted, were 81,023, or only 370 per 1000. If, then, the results of the examination of recruits may be taken as a measure of the physique of that class of the population from which they are drawn, there has apparently been an improvement instead of a deterioration. But we entertain strong doubts of its being at all a correct measure; between the two periods a very marked change was made in the constitution of the army, by which the number of recruits required for it was more than doubled. The necessity for this increase, added to greater facilities for invaliding men when found unfit, may very probably have led to some relaxation in the inspection, particularly with regard to some of the minor disabilities, and the state of the labour market may have exerted a considerable influence upon the class of men who presented themselves for enlistment. So far, however, as the returns bear on the question of the physique of the people, they certainly do not sustain the view advanced by Sir T. Crawford. There appears to be a somewhat widespread opinion that because the effect of sanitary improvement is shown chiefly in the reduction of infant mortality, therefore the result is obtained by the introduction into the population of a class of beings of inferior physical powers, who but for the removal of the active causes of disease would have fallen victims to them. But it seems to us that the changes which saved them must have had an important influence in improving the other classes, and that these saved lives merely take the place of the others in the physically lowest class, but that they are not necessarily inferior to those whose place they have taken in the scale of society, and who have been raised to a higher health platform as a result of the same measures.

THE USE OF BORACIC ACID AS A FOOD PRESERVATIVE.

To the Editors of THE LANCET.

SIRS,—The question of boracic acid as a so-called food "preservative" being one of public interest at the present time, I beg herewith to enclose you a full translation I have made (from the German) of Dr. Förster's views, as incidentally and partly referred to in the joint report presented by Mr. Cassal, F.I.C. (our public analyst), and by Dr. Dudfield (medical officer of health), at the last meeting of the Kensington vestry.—I am, Sirs, yours obediently,

CHARLES HANCOCK,
Member of Parkes Museum and of the Kensington Vestry.

Aug. 7th, 1887.

[TRANSLATION.]

Memorandum from Dr. Dingler's "Polytechnisches Journal" for the year 1884, p. 170, upon the Use of Boracic Acid as a so-called Food Preservative.

"As Professor J. Förster, in the journal of the proceedings of the German Chemical Society, points out, the applicability of the so-called antiseptic compounds for the preservation of food and drinks does not alone depend upon how far the same may be safely taken into the human body without any clearly noticeable results arising therefrom, such as those caused by doses of medicine, but it also depends upon what effect the use of the above named acid may produce if used as an addition to food and drink, especially if by its use a different operation takes place in the intestines, under the influence of the preserving salts, than would be the case were the ordinary food consumed in an unpreserved state; and should the effect be injurious, then it will become a question as to whether its use should not be restricted. Now, two classes of experiments have been made as to the effect of boracic acid if added in small quantities to daily food—first, on a so-called mixed diet; and secondly, on a diet consisting exclusively of milk and eggs. For three consecutive days nourishment was taken in the form of milk, bread, vegetables, &c., which analysis showed to contain the following: 475·7 grms. (dry substance), 17·33 grms. (nitrogen), 140·4 grms. (fat). Again, of the food taken and afterwards evacuated as fæces, as regards dry substance and nitrogen respectively the results were as follows:—

		Dry substance (*Trocken substanz*).	Nitrogen (*Stickstoff*).
Class 1.	Exp. 1: without bor. acid ...	12·4%	20·0%
,,	Exp. 2: with 3 grms.	14·8	23·9
,,	Exp. 3: without bor. acid ...	14·2	22·5
Class 2.	Exp. 1: with 1·5 grms. ...	6·2	4·2
,,	Exp. 2: without bor. acid ...	5·2	3·1
,,	Exp. 3: with 0·5 grms. ...	5·8	4·0
,,	Exp. 4: without bor. acid ...	4·6	3·0

Summing up the result of both classes of experiments, there can be no manner of doubt that the addition of boracic acid as a preservative—even in small doses, such as would not produce general or pharmaco-dynamic (*Pharmakodynamische Wirkingen*) effects in the human body—has an influence upon the digestive organs of man. This influence shows itself, too, in this: that it has been proved that the expulsion of fæcal matters, especially of those containing dry substance and nitrogen—even if only by a little—is, at all events, thereby increased. It is worthy of note that the effect of boracic acid can be distinctly recognised in the intestinal discharge, even after the addition of only 0·5 grm. in one day; while such discharge takes place in proportion to the quantity of the acid taken into the system, the effect continuing for some time after the acid is no longer added to the food. Further, it is of importance to point out that the influence can not only be noticed in a mixed food diet consisting of animal and vegetable matter, which in itself already contains a great deal of indigestible sub-

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stances, but even in the consumption of milk and eggs, which, according to the most varied experiments, become digested and absorbed (*resorbirt*) in the intestines, with the exception of a few particles on which the digestive juices have no effect. It may be explained thus: That the introduction of boracic acid into the intestinal canal is followed by an increased secretion of the digestive juices, and consequently the dry substance contained in the fæces becomes increased by reason of the fact that the normal residua of the intestinal juices are more abundantly supplied. On the other hand, it is quite possible that a lesser quantity of component particles of food—especially of nutritive substances, properly speaking—(if containing boracic acid), would be absorbed in the intestines, or even that on their way to the intestinal canal they might become mixed up with a large quantity of solid matters—e.g., *thin layers of epidermis* from the mucous intestinal membrane, or something of that kind in a normal state; and thus the quantity of fæces would be increased. The first-mentioned effect might be considered a favourable one; but in the latter two cases—i.e., decreased absorption or increased repulsion of cellular matter from the mucous membrane of the digestive canal would without doubt result in effects of an injurious character, effects which in the case of frequently repeated or continuous uses of the drug would in course of time be followed by evil consequences. Fæcal matter impregnated with boracic acid seems to differ hardly, or at all, in respect of water, nitrogen, mineral matter as well as of neutral fats and free fatty acids found in it, from normal fæces—that is to say, when the nutriment taken is the same. On the other hand, the quantity of the substance extracted is decidedly larger (containing as it does nitrogenous elements of decomposition appertaining to the digestive juices and fat acids, obtained by submitting, by means of an acid containing alcohol, to analysis those fæcal matters discharged as the result of a diet of milk to which boracic acid has been added) than the substance extracted from the ordinary milk fæces evacuated under similar conditions. At the same time in the ordinary milk fæces there is much less nitrogenous matter which is not dissolvable by any known process of analysis than is the case with the fæces obtained from a diet of milk and eggs to which boracic acid has been added. Consequently, the addition of the acid to food leads on the one hand to an increased secretion of bile, but on the other, what is of infinite importance, to an increased discharge of albuminous matter from the intestinal canal—matter which for the most part probably owes its existence in the system to the food consumed. This last-mentioned effect, operating upon the human intestines, must certainly be looked upon as anything but a desired one. Accordingly, boracic acid is not suitable as a food preservative to the degree people are inclined to think, but especially careful ought one to be as regards adding it to milk intended for the nourishment of infants."

THE NEW SYDENHAM SOCIETY.

The twenty-ninth annual report of this Society was presented at the meeting of the members on the 5th inst., from which it appears that during the year 1886 the following four works were issued:—1. A volume of Essays on Micro-parasites in their relation to special diseases. The essays constituting this were translated from French and German sources. 2. The twelfth fasciculus of the Lexicon of Medical 3. Dr. Creighton's translation of Prof. Hirsch's of Geographical Pathology and Histology was by the issue of its third volume, in December. February, 1887, the series for 1886 was concluded by of the thirteenth part of the Lexicon of Medical which brought the work up to near the end of the

The following works will constitute the series for the 1. The first volume of Spiegelberg's Mid- by Dr. Hurry (now in course of issue). fasciculus of the Society's Lexicon of 3. The sixth fasciculus of the Atlas of Diseases of the Liver and Calculi. of selected Monographs, comprising Raynaud's Disturbances of Circulation in the Extremities (Asphyxia of the Extremities), translated by Dr. Barlow. Klebs and Tommasi-Crudeli on the Nature of Malaria. Marchiafava and Celli on the Blood in Malaria-Infection, and on the origin of Melanæmia (Dr. Drummond of Rome). Neugebauer's Essay on Spondylolisthesis. Litzmann on Labour with Contracted Pelvis. Bandl on the Changes which occur in the Uterus and its Cervix during Pregnancy and Labour. Litzmann on Rupture of the Uterus and the Mechanism of its Occurrence. 5. Clinical Lectures on Diseases of the Nervous System, by Professor Charcot; translated by Dr. Thomas Savill.

The following are the works which, in addition to the above, are in preparation:—1. The second volume of Spiegelberg's Midwifery, to be probably the first issue for 1888. 2. Flügge on Micro-parasites; to be translated by Mr. Watson Cheyne. 3. A volume of Translations and Abstracts from the works of Professor Fournier. 4. A seventh fasciculus of the Atlas of Pathology, to comprise Diseases of the Brain and Spinal Cord. 5. Cohnheim's General Pathology; to be translated by Dr. McKee. 6. A volume of selected Monographs, chiefly from German sources.

From the financial report it appears that the receipts for the year amounted to £2718, and that a balance of £129 remained in the hands of the treasurer.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Batley Urban District.—This is an important and increasing district, where proper sanitary administration will effect much ultimate good. There are now no means of isolation, and this although the zymotic death-rate is decidedly above the average; and Dr. Swann distinctly tells his authority that infectious diseases must remain endemic until the sanitary arrangements of the place are much more advanced. Diarrhœa is one of the prevailing causes of death, and it must be largely ascribed to conditions favouring sewer pollution of air. Unfortunately the antiquated and foul midden privy widely prevails, leading to pollution of surrounding air and to soakage of soil. Disconnexion of house drains from the sewers is also much needed. These conditions call for energetic dealing with existing nuisances, and for preventive action by means of proper bye-laws regulating such matters. Some substantial progress is being made, and the town has fortunately an excellent and abundant water service. The general death-rate during 1886 was 19·6 per 1000 living.

Nottingham Urban District.—Dr. Whitelegge is able to open his annual report for 1886 by the satisfactory declaration that considerable sanitary progress was made in the borough during the year. The town has attained to the rank of fifth amongst the large English cities and towns in point of death-rate; preparations are in progress for the erection of a new fever hospital; disinfection is carried on efficiently on an ever-increasing scale; paving, sewering, and widening of streets are steadily in progress; and whilst back-to-back houses are on the increase in many of our northern towns, we are glad to read that in Nottingham this class of dwelling, which is incapable of proper through ventilation, is constantly diminishing in number. Together with such work there is a distinct saving of life, especially under such headings as typhoid fever, phthisis, and diarrhœa. The annual death-rate from all causes now stands at 18·9 per 1000, having fallen from an average of 21·2 for the eight years 1878-85; the population having in the meantime increased from about 172,000 to 233,000. The advantages of the system of compulsory notification of infectious diseases are still maintained, and they were last year exemplified in the case of enteric and scarlet fevers. Inhabited vans, cowsheds, dairies, slaughterhouses, and offensive trades are well kept under supervision, and inspection of food supplies is maintained.

West Kent Combination.—For the seven rural and five urban districts included in this combination, the general death-rate during 1886 was 15·8, and the zymotic rate 1·36 per 1000 living. The smallest rate from all causes was 11·6 in the Beckenham urban district; the largest was 18·8 in

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the Tenterden urban district. Separate reports have reached us as to several of these districts.—*Bromley Rural District:* The death-rate for this district was 14·4 per 1000 in 1886, as opposed to an average of 15·2 in the preceding ten years. Two deaths from diphtheria occurred in one house at Chelsfield; but Dr. Butterfield believes no other cases took place in his district. As an instance of the sort of disease that gets placed under the Registrar-General's heading "cholera," a case may be noted that occurred at Farnborough, where an old lady in her eightieth year died after taking six aperient pills, followed by a luncheon on cucumber. Unfortunately the dearth of water in parts of this district remains unremedied since the throwing out of the West Kent Company's Bill in 1885.—*Sevenoaks Urban District:* Here the death-rate was 14·8, and the zymotic rate only reached 0·7 per 1000 during 1886. But Dr. Butterfield expresses the conviction that the lives of infants are sacrificed to the unwillingness of mothers to supply their offspring with the natural breast milk, and he urges lady visitors to instruct and advise mothers properly in this respect. No case was admitted into the fever hospital, simply because no cases needed such isolation.—*Sevenoaks Rural District:* In this portion of Dr. Butterfield's district the death-rate was 16·5 per 1000 last year, the zymotic rate being 1·6. Among the latter, small-pox, measles, and diarrhœa were most prominent; and a special report is appended on the subject of small-pox at Edenbridge, the workhouse, and Hever. At the former place railway works were in progress, and the disease was imported through the navvies employed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5208 births and 4050 deaths were registered during the week ending August 6th. The annual rate of mortality in these towns, which had increased in the preceding six weeks from 17·6 to 23·2 per 1000, declined again last week to 22·9. During the first five weeks of the current quarter the death-rate in these towns averaged 21·7 per 1000, and was 0·6 above the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·2 in Brighton, 16·0 in Birkenhead, 17·1 in Halifax, and 17·5 in Bristol. The rates in the other towns ranged upwards to 27·8 in Huddersfield, 29·6 in Newcastle-upon-Tyne, 30·3 in Wolverhampton, and 39·3 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had increased in the preceding five weeks from 486 to 1301, declined last week to 1293; they included 973 from diarrhœa, 125 from whooping-cough, 93 from measles, 54 from scarlet fever, 30 from "fever" (principally enteric), 17 from diphtheria, and only one from small-pox. These zymotic diseases caused the lowest death-rates last week in Halifax and Cardiff, and the highest rates in Manchester, Sheffield, Leicester, and Preston. The highest death-rates from diarrhœa occurred in Derby, Portsmouth, Sheffield, Nottingham, Leicester, and Preston; from measles in Bolton, Manchester, and Oldham; from whooping-cough in Birmingham; and from scarlet fever in Blackburn. Of the 17 deaths from diphtheria in the twenty-eight towns, 7 occurred in London, 2 in Liverpool, and 2 in Portsmouth. Small-pox caused 1 death in Sheffield, but not one in Greater London, or in any of the twenty-six other large provincial towns. Only one case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 199 to 160, further fell last week to 158, and were 84 below the corrected average. The causes of 104, or 2·0 per cent., of the 4050 deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Plymouth, Bolton, Blackburn, and Cardiff; the largest proportions of uncertified deaths were recorded in Oldham, Norwich, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·9 and 19·9 per 1000 in the preceding two weeks, further declined to 17·1 in the week ending August 6th; this rate was as much as 5·8 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 10·6 and 15·8 in Aberdeen and Leith, to 21·1 in Perth and 28·2 in Paisley. The 428 deaths in the eight towns last week showed a further decline of 59 from the numbers in the preceding two weeks, and included 28 which were referred to diarrhœa, 22 to whooping-cough, 9 to "fever" (typhus, enteric, or simple), 7 to scarlet fever, 6 to diphtheria, 1 to small-pox, and not one to measles; in all, 73 deaths resulted from these principal zymotic diseases, against 103 in each of the preceding two weeks. These 73 deaths were equal to an annual rate of 2·9 per 1000, which was 4·3 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 39 in each of the previous two weeks, declined last week to 28, of which 13 occurred in Glasgow, 6 in Dundee, 3 in Edinburgh, and 2 in Leith. The deaths from whooping-cough, which had been 37 and 41 in the preceding two weeks, declined last week to 22, and included 11 in Glasgow and 5 in Dundee. The 9 deaths referred to "fever" exceeded by 5 the number in the previous week; 6 occurred in Glasgow and 2 in Edinburgh. The fatal cases of scarlet fever, which had been 5 and 12 in the previous two weeks, declined last week to 7, and included 5 in Dundee. The 6 deaths from diphtheria showed an increase of 3 upon the number in the preceding week, and included 4 in Edinburgh. The fatal case of small-pox occurred in Aberdeen. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 82 and 65 in the preceding two weeks, were 67 last week, and 7 above the number returned in the corresponding week of last year. The causes of 56, or 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had increased in the preceding four weeks from 26·6 to 30·9 per 1000, declined to 29·6 in the week ending August 6th. During the first five weeks of the current quarter the death-rate in the city averaged 29·0, the mean rate during the same period being but 22·6 per 1000 in London and 19·0 in Edinburgh. The 200 deaths in Dublin last week showed a decline of 9 from the increasing numbers in recent weeks; they included 29 which were referred to diarrhœa, 16 to measles, 4 to scarlet fever, 3 to whooping-cough, 2 to "fever" (typhus, enteric, or simple), 1 to diphtheria, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had been 48 and 49 in the preceding two weeks, further rose last week to 55, owing to the increased prevalence of summer diarrhœa, and were equal to an annual rate of 8·1 per 1000, the rates from the same diseases being 7·4 in London and 2·4 in Edinburgh. The fatal cases of diarrhœa, which had been 21 and 16 in the preceding two weeks, rose again last week to 29. The deaths referred to measles, which had been 21 and 22 in the preceding two weeks, declined to 16, a lower number than has been recorded in any week since May last. The 4 fatal cases of scarlet fever showed a further increase upon recent weekly numbers, while the 3 deaths from whooping-cough corresponded with the numbers in the preceding week. The deaths of infants showed a decline from the high number in the previous week, while those of elderly persons showed an increase. Two inquest cases and 2 deaths from violence were registered; and 38, or nearly one-fifth, of the deaths occurred in public institutions. The causes of 28, or 14 per cent., of the deaths registered during the week were uncertified.

THE SERVICES.

YEOMANRY CAVALRY.—Warwickshire: Surgeon T. W. Bullock is granted the honorary rank of Surgeon-Major (dated Aug. 6th, 1887).

ARTILLERY VOLUNTEERS.—4th Volunteer (Cinque Ports) Brigade, Cinque Ports Division, Royal Artillery: Acting Surgeon Otho Robert Travers is appointed Second Lieutenant (dated Aug. 6th, 1887).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Prince of Wales's Volunteers (South Lancashire Regiment): Surgeon J. H. Gornall resigns his commission (dated

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Aug. 6th, 1887).—Honorary Assistant Surgeon J. W. Watkins, M.D., to be Surgeon (dated Aug. 6th, 1887); Surgeon J. W. Watkins, M.D., is granted the honorary rank of Surgeon-Major (dated Aug. 6th, 1887).—16th Middlesex (London Irish): Philip Percival Whitcombe, M.B., to be Acting Surgeon (dated Aug. 6th, 1887).

Correspondence.

"Audi alteram partem."

THE SALICYL COMPOUNDS IN ACUTE RHEUMATISM.

To the Editors of THE LANCET.

SIRS,—In the address in medicine delivered at the meeting of the British Medical Association in Dublin the other day, Professor Gairdner made the remark that "the benefit derived in acute rheumatism from the salicyl compounds is very satisfactorily established." In the same number of THE LANCET, in which this remark appears, Mr. Greene of Wallingford reports a case of acute rheumatism in which salicin and salicylate of soda are stated to have "failed to exercise their so-called specific action."

Mr. Greene's case is a type of a number of similar ones which have been published of late years, all pointing to the same moral—the inefficiency of the salicyl compounds. As the most recent one of the kind, and one of the best reported, I shall, with your leave, take Mr. Greene's case as a text on which to found a few remarks on the subject with which it deals; this not for the sake of criticising Mr. Greene's very interesting case, but solely with the object of indicating and insisting on a point of much practical importance in the treatment of acute rheumatism.

On June 18th Mr. Greene's patient had pains in the limbs and joints, and some febrile disturbance. Nothing is said regarding treatment then. On the 21st there was considerable pain and swelling of the wrists, finger-joints, and ankles, and also profuse perspiration, having the characteristic rheumatic odour. The temperature was 103° and the pulse 120. The patient got twenty grains of salicin every three hours. This was continued for a week, during which time the temperature was fluctuating, but rarely rose higher than 102°, and the joint complications and rheumatic perspirations continued. On the 28th the temperature rose to 103°, and there was much restlessness. Salicin was given every two hours in twenty-grain doses. On the 29th the temperature rose to 106°, and in a few hours to 107·4°; the pulse was small and irregular, the face livid, and the patient delirious. The case had become one of rheumatic hyperpyrexia, and the patient was in imminent danger. The cold bath and ice to the nape of the neck were had recourse to with excellent results, and by judicious management a very alarming illness was brought to a favourable termination.

Such is a brief summary of the salient points in Mr. Greene's case. The special point with which I would deal is his assertion that the salicin failed to exercise "its so-called specific action." The facts as stated by Mr. Greene apparently quite bear out this assertion. The patient did get salicin regularly for a week, and the salicin failed to check the rheumatic process. "From June 21st to June 29th," says Mr. Greene, "my patient had taken at least 1280 grains of salicin, and in spite of this the temperature had risen to 107·4°." That is a perfectly accurate statement, and apparently a very telling one against the salicin, and quite justifying Mr. Greene's indictment. But only apparently, for what does it really mean? 1280 grains in eight days are 160 grains a day, or 6·6 grains an hour, a totally inadequate dose. As well might one give a man suffering from intermittent fever one grain of quinine every three hours, and say that the quinine failed to exercise its so-called specific action, as it certainly would in that dose. From the time that I first introduced salicin to the notice of the profession as a remedy in acute rheumatism in your pages (now more than eleven years ago), I have never ceased to insist that small doses are of no use, and that to get its full beneficial action the drug must be given in large and frequently repeated doses. In my book on Rheumatism, published in 1881, this point is thus referred to (p. 199): "To get its full beneficial effects, the remedy (salicin) must be given in full and frequently repeated doses. ....., Twenty to forty grains should be given every hour till there is decided evidence of its action. It will generally be found that before an ounce has been consumed, often before half that quantity has been taken, there is a marked improvement. ..... As the symptoms decline the dose may be diminished; but it is well not to do this too quickly or too early, for if the remedy be omitted too soon, or given in inadequate dose, the symptoms are apt to recur." The salicyl compounds are very rapidly eliminated from the system, and their full beneficial action in acute rheumatism can be got only by frequently repeated full doses. Mr. Greene's patient never had the chance of being under the influence of salicin; the twenty grains which he got at 12 o'clock had probably nearly all passed off from the system before the 3 o'clock dose was given.

I hope I have said enough to show that Mr. Greene's facts do not warrant his charge of failure against the salicyl compounds. I do not think that I exceed my right when I ask those who criticise the action of these drugs, with which my name is associated, to give them in that dose which I insist upon as essential to the production of their full beneficial effects.

One word on rheumatic hyperpyrexia. Hyperpyrexia is not a part of the rheumatic process. It is to be regarded as an accidental complication which may occur in any form of fever, but is most common in acute rheumatism. It is probably due to some idiosyncrasy on the part of the patient—some weakness or unusual susceptibility of the heat regulating apparatus in the nervous centres. In rheumatic hyperpyrexia the salicyl compounds, so potent in rheumatic pyrexia, are of no use. In that condition cold to the surface is the one effectual remedy. It cannot be too clearly stated that it is mere waste of valuable time to have recourse to any other treatment.

I am, Sirs, your obedient servant,

Cadogan-place, Aug. 7th, 1887. T. J. MACLAGAN, M.D.

THE ARMY MEDICAL DEPARTMENT.

To the Editors of THE LANCET.

SIRS,—At page 270 of THE LANCET of August 6th, 1887, you say, "The *plébiscite* of the army medical officers we consider an unwise and unwarrantable act, it cannot but be an undeserved reflection on its [the department's] head."

As one of the army medical officers who received the paper you call a *plébiscite*, I desire to enter my protest against such a statement. The document was regarded, both by myself and by all I spoke to on the subject, as a mere request by the journal to be favoured with individual opinions on the subjects mentioned. I am sure Sir Thomas Crawford would be the last man in the world to consider that an army medical officer expressing an opinion in a medical journal, even if that opinion were not in accord with his own, could be an undeserved reflection on his opinions, it would be a *reductio ad absurdum*. I took care, however, to head my remarks with the statement that these were my opinions, and as such might be right or might be wrong. But I had the courage of my opinions, and the editor was quite at liberty to publish my name, which I now subscribe to this protest.—I remain, Sirs, yours faithfully,

J. PERCIVAL HUNT, M.D., F.R.C.S.P.,
Barrister of Lincoln's-inn, Lond., Surg. Army Med. Staff, and a subscriber and contributor to THE LANCET for over 22 years.

SOUTH LONDON AND THE HOSPITAL SUNDAY FUND.

To the Editors of THE LANCET.

SIRS,—The subject to which I endeavoured to direct attention in the letter referred to in your annotation under the above heading, was that, while valuable institutions like Guy's were languishing in South London for lack of funds, the effect of the present mode of distribution of the Hospital Sunday Fund is to transfer some £8000 out of £10,000 collected on this side of the river, to institutions situated principally at the West-end, where it might be supposed they were not so urgently required as in the poorer districts of the south and south-east. It is evidently no answer to this to quote the *dare quam accipere* motto, since the suggestion is not that those who contribute the money should receive it back, but rather that it should be spent in something like a fair proportion among the institutions which

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minister to their needy neighbours. Nor, is it, I think, a valid reply, that the distribution is made in accordance with the fixed principles of the Fund, since that is a matter which has not been questioned. Nor, again, do I think it can be fairly said that it is too soon for Guy's, one of the "large and rich hospitals" you mention, to claim a share of the Hospital Sunday Fund. With 200 beds vacant for want of funds, with an income reduced from £40,000 to £25,000 through the agricultural depression, and yearly decreasing, obliged to appeal to the public for £100,000 in order to prevent a further reduction in the number of occupied beds, it seems to me that only ignorance of the facts can excuse (though it cannot justify) its further exclusion from the benefit of the Fund. I am happy, however, to agree with your concluding remark, that the matter should be brought before the annual meeting of the constituents, as well as before the Distribution Committee.

I am, Sirs, yours faithfully,

Dulwich, Aug. 6th, 1887. H. NELSON HARDY.

TRACHEOTOMY AND INFLATION IN THE TREATMENT OF A STILLBORN CHILD.

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent, Mr. Watson, in the case of apparently stillborn children which occurs so very frequently in the ordinary routine of practice, I have met with very great success by adopting a course of procedure and treatment which, if efficacious, at the least is apparently a rather rough mode of restoring animation. The child being born and put into the receiver, I let the funis bleed a few drops; then rub the child's body all over with spirit—brandy or gin, whichever comes the handiest; a few drops, diluted, are put into the mouth; a hot sponge is applied to the heart and head, and likewise down the spine; and the mouth cleansed. I get the nurse to put her mouth in close contact with that of the child, and so make a direct and complete inflation in this way, keeping up a complete and direct means of artificial respiration. I have not much faith in any other form or means of artificial respiration. Of course in chafing the child with the spirit as it lies in the nurse's lap, a few little pats upon the buttocks will help to promote circulation. The above treatment failing, I place the child in a warm bath, but have never met from it any success, as the little patient has always then given up the tenancy of its short life.

I am, Sirs, yours, &c.,

Grosvenor Villas, Ramsgate, August 6th, 1887. CHARLES CHITTENDEN.

EDINBURGH.

(From our own Correspondent.)

UNIVERSITY COURT.

AT the last meeting of the University Court, the course of Practical Pathology, conducted by Dr. William Russell, was recognised as a qualifying class in the University Medical Curriculum.

GUESTS AT THE UNIVERSITY.

Last week the University extended its hospitality to the members of the Association of Mechanical Engineers, who held their annual gathering in Edinburgh this year, largely in consequence of the proximity of the Forth Bridge, which is now in an advanced stage of construction. The Association was formally welcomed to Scotland by the Marquis of Tweeddale, and to the University itself by Sir William Muir. During their visit the members inspected the Forth Bridge, and other important engineering undertakings in the vicinity of Edinburgh, and a series of social festivities were held in their honour. At one of these, a conversazione given by the Lord Provost of Edinburgh in the Museum of Science and Art, an address was delivered by Sir William Thomson on the subject of Ship Waves, which was attended by a large and interested audience.

THE UNIVERSITIES (SCOTLAND) BILL.

The draft of the Government Bill for the better administration and endowment of the Universities of Scotland has been published in the leading Scottish newspapers. It is considerably altered since it was drafted by a Liberal Government in 1884, and it is in some respects distinctly an improvement upon that measure. It is in all respects a happy circumstance that it is to be brought forward so near the end of the parliamentary session, and at a time when the corporate bodies whose interests are involved are in a state of summer relaxation and indifference. This constitutes its chief chance of passing into law, since it may escape the outburst of polemical contention by which its predecessors have been encountered and disabled; and, since there is nothing unequivocally bad in the text as now drafted, and a great deal that is good and much needed in Scotland, it is to be hoped that Mr. W. H. Smith's suggestion will be taken, and that the Bill may be allowed to pass without serious molestation. Another point in its favour is the scepticism with which its reality is generally regarded by those most interested in it. They are so accustomed to the appearance and disappearance of these forensic Will-o'-the-wisps that they will now scarcely take the trouble to follow the course of this most recent example of its class. The public press consider the Bill doomed, and properly so, by its containing clauses of a reactionary or anti-popular tendency. This view is not taken by those in academic circles, and unless some specific obstruction arises, it is probable that the bulk of the Scottish members will take this view, and favour the passing of the Bill in a but slightly modified form from that in which it now stands. There can be no doubt that a commission of intelligent and impartial men, such as that contemplated in the Bill, and with powers such as those proposed, cannot but greatly improve the efficiency of the Scottish universities as at present constituted, by effecting reforms vitally important to their continued prosperity.

DUBLIN.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS: HONORARY FELLOWSHIPS.

THE Council having recently conferred the Honorary Fellowship on several distinguished Surgeons, as mentioned in our last issue, a meeting of the College was held last week for the purpose. In opening the proceedings Mr. A. H. Corley, the President, said it had been his good fortune to occupy the presidential chair during the celebration of Her Majesty's Jubilee. It was consequently his privilege to be present in Westminster Abbey at one of the most impressive ceremonies of the century. He had personal gratification in taking part in that day's ceremony in being the instrument of conferring honour on distinguished merit. Their Honorary Fellowship was a diploma which they deemed beyond money and beyond price. It was only bestowed upon those whom they looked upon as among the foremost of their profession. It had been objected that, as similar institutions in the neighbouring kingdom did not reciprocate, they should be still more chary, but they could not help looking on this feeling as narrow and insular. In the City of Colles and Cheyne, of Carmichael and Graves, they could afford not to aspire to honours unless spontaneously bestowed, and they could afford to rise superior to those narrow prejudices which would debar them from conferring honour where honour was due. Sir George M'Leod and Mr. C. Macnamara, the only visitors who were able to be present, then signed the roll, and were admitted Honorary Fellows of the College. The new Fellows having returned thanks the proceedings terminated.

THE DUBLIN MEETING OF THE BRITISH MEDICAL ASSOCIATION.

The past week has been a busy one in Dublin, and it is gratifying to find that the meeting was in every respect successful. Independently of the scientific meetings which included some excellent contributions in medicine and surgery, the members, so far as the social part of the programme was concerned, had their hands pretty full. On Tuesday, at four o'clock, a special choral service was held at St. Patrick's Cathedral, where the Lord Bishop of Meath preached a most eloquent sermon. A service was also held earlier in the day in the Roman Catholic pro-Cathedral. The soirée given by the President (Dr. Banks) and the members of the Dublin Branch at the Royal University on Wednesday evening was very successful, and the decorations of the ball-room, which were carried out under the personal superintendence of Sir William Stokes, reflected the utmost credit upon that gentleman's good taste

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On Thursday morning, in the new Leinster Hall, a breakfast was given by the Dublin temperance societies, and upwards of 300 sat down to a well-served repast. The same evening the public dinner took place, over 400 being present, and was honoured by the presence of his Excellency the Lord-Lieutenant. On Friday there was a garden party in the Fellows' Garden, Trinity College, which was well attended and very successful; an excursion to Christ Church Cathedral, when some interesting antiquarian details were given by the architect; and in the evening a conversazione, given by Surgeon-General Hassard, C.B., and the officers of the Medical Staff, in the Science and Art Museum. There was also a breakfast given to several members of the Association at the gardens of the Royal Zoological Society of Ireland, and every member present at the meeting had, if desired, his photograph taken and copies presented free of charge by an enterprising photographer. Dublin is noted for the hospitality of its citizens, and on this occasion it did not forfeit its usual reputation in this respect. Dr. Banks gave a banquet to leading members of the Association, at which the Lord-Lieutenant was a guest, and Sir George Porter followed closely in the good example set by entertaining several distinguished guests. I could mention many others who entertained their visitors in the most hospitable manner if it were at all necessary. Professor Rawdon Macnamara was unable to take any share in looking after our recent visitors owing, I regret to state, to severe illness, from the effects of which he is but now convalescing. The weather, it may be added, was all that could be desired, and the excursions which took place on Saturday were much appreciated by those who joined in them.

ROYAL UNIVERSITY OF IRELAND.

The Senate recently fixed the annual meeting of convocation for Friday, October 7th. The regulation permitting candidates to enter three times for the same examination on payment of a single fee has been repealed. The Senate have resolved to elect a curator, to take charge of all the University collections, instruments, &c., and be competent to act as examiner in one or more of the experimental or natural sciences.

MEDICAL HONOURS.

A London illustrated paper in its issue of the 6th inst. has given a portrait, and an excellent likeness it is, of a distinguished Dublin physician, and has stated that a baronetcy has been conferred upon him. I trust the announcement may be correct, for there is no member of the profession who will grudge Dr. Banks this mark of Her Majesty's approval; but at the time of writing this we in Dublin have had no official announcement of the fact. Several knighthoods have been gazetted, but the Jubilee Honours to medical men in Ireland have so far been conspicuous by their absence.

PARIS.

(From a Correspondent.)

FRENCH ASYLUMS.

THE Minister of the Interior has sent a circular to the Prefects calling attention to the fact that they are entrusted with the duty of periodically visiting public and private asylums, and explaining the great importance attaching to the discharge of this legal formality. The Minister enjoins one visit a quarter, and this to be made without the previous knowledge of the proprietor or superintendent of the establishment. The condition of the patients is to be ascertained, and all complaints heard; shower baths are to be abstained from as a mode of punishment; and a report is to be furnished after each visit of the general management of the asylum, detailing the care bestowed upon the patients, and the result of any inquiries which the visiting Prefect has thought it his duty to make with reference to any particular inmate. The removal of patients from one hospital to another before being definitely placed in a special asylum, a course of procedure which has been practised in certain departments, is strictly forbidden. The issue of this plainly worded circular is a step in the right direction, and the Minister of the Interior is deserving of all praise and assistance in his efforts, by no means too speedily taken, to do away with abuses in the control of lunatics in France.

HYGIENE IN FRENCH SCHOOLS.

The Academy of Medicine has to-day been occupied in the discussion of the conclusions come to by a committee appointed to report on intellectual overwork in schools and other places of education. After considerable discussion, in which MM. Lagenan, Trélat, Hardy, and Brouardel joined, the following conclusions were adopted:—"The Academy of Medicine calls the attention of the public authorities to the necessity of modifying, in conformity with the laws of hygiene and the necessities of the physical development of children and young people, the present arrangements of our scholastic establishments. It thinks that the colleges and lycées for boarders should be removed to the country; that wide, open spaces should be set apart for games; and that the class-rooms should be improved as regards lighting and ventilation." Without dealing with the course of study—which it desires to see simplified,—the Academy calls special attention to the following points:—Increase of the time for sleep as regards young children; for all pupils a diminution of the time devoted to study and classes—that is to say, to sedentary occupations—and a proportional increase of the time for amusement and exercise; the absolute necessity of submitting all the pupils to daily exercise in physical training proportioned to their age—namely, walking, running, jumping, formations, evolutions, regulated and prescribed movements, gymnastics with apparatus, fencing of every kind, games of strength, &c.

Paris, Aug. 9th.

Medical News.

VICTORIA UNIVERSITY: FACULTY OF MEDICINE.—The following gentlemen have passed the Final Examination:—

PART 1.—First Division: J. H. Barker, Owens College; F. E. Mathews, Owens College. Second Division: E. C. Lomas, Owens College.

PART 2.—F. C. Bury,* Owens College; F. G. Robinson, Owens College.

* Recommended for distinction in Medicine, Clinical Surgery, and Morbid Anatomy.

UNIVERSITY OF EDINBURGH.—At the graduation ceremony last week, the degree of Doctor of Medicine was conferred on the following gentlemen:—

‡J. Archibald, Scotland; *G. Armstrong Atkinson, England; ‡Thomas Ridley Bailey, England; Peter Bailie, Scotland; †G. Beckett Batten, India; J. Bowes, Scotland; ‡C. Boyce, Ireland; ‡R. Adams Brewis, England; *Alexander Bruce, Scotland; †J. Milne Chapman, Scotland; W. Jones Douie, Scotland; ‡Thomas Easton, Scotland; ‡Alexander Duncan Fraser, Scotland; C. Herbert Gage Brown, England; *J. Gibson, Orkney; W. Bruce Gowans, Scotland; †David Grant, Scotland; ‡Hugo M'Cauley Hardcastle, Egypt; James Heath, Ireland; ‡R. Dundas Helm, Scotland; Alexander Hewston, New Brunswick; J. Gilpin Houseman, England; †J. Hunter, Scotland; G. Irvine, Scotland; G. H. Kenyon, England; E. Dormer Kirby, England; David Laing, Scotland; ‡R. Laurie, England; C. Lewis Lightfoot, England; Duncan Romaine M'Arthur, Ceylon; Alexander Flyter Mackenzie, Scotland; R. Mackenzie, Scotland; ‡R. Mackinlay, Scotland; C. J. Russell M'Lean, Scotland; ‡Herbert Christopher Male, England; ‡J. Williamson Martin, Scotland; *W. Cornfoot Strettell Miller, Scotland; Daniel Mowat, Scotland; ‡J. Oliver, Scotland; ‡Donald Rose Paterson, Scotland; *R. W. Philip, Scotland; Adam Scott Purves, Scotland; ‡Daniel Ritchie, Scotland; ‡Ernest Roberton, New Zealand; †J. Robertson, England; Thomas Murray Robertson, India; ‡Frank Rothera, England; ‡Harry Scott, England; Joseph Stapleton, Australia; *John Stevens, Scotland; †Alex. Williamson Stirling, Scotland; †Henry Welch, England; ‡David Welsh, Scotland; ‡Claude Wilson, England; †Ralph W. Wilson, England.

* Those who have obtained Gold Medals for their Dissertations.

† Deemed worthy of competing for the Dissertation Gold Medals.

‡ Commended for their Dissertations.

The following candidates have passed the Final Professional Examination for the degrees of Bachelor of Medicine and Master of Surgery:—

Johnston Hamilton Acheson, England; C. M'Arthur Allan, Scotland; W. Allan, New Zealand; Douglas Hamilton Anderson, England; Jean Joseph André, Mauritius; Edmund Antrobus, England; Mihangel Ap Iwan, Wales; H. J. Bailey, England; John Barclay, Scotland; Herbert Llewellyn Barker, New South Wales; Benjamin Barnard, Mauritius; H. T. Barton, England; Gilbert Taylor Beatton, Shetland; C. H. Bedford, England; Albert Jobson Beebag, New South Wales; John Stothart Bell, Scotland; W. Leonard Bell, Scotland; W. J. Bell, England; Arthur Bentham, England; Wilfred W. Ogilvie Beveridge, Scotland; *Arthur Birt, England; Theodore Meyer Blumenreich, Scotland; G. Pirrie Boddie, Scotland; Douglas J. Mayhew Bone, England; H. E. Bower, England; C. W. Brown, Scotland; Daniel Walter Brown, England; James Brown, England; *Andrew Arthman Bruère, West Indies; Francis Oke Buckland, England; Ernest J. Burnett, England; Matthew Bernard Burton, England; T. W. Butcher, England; Francis John Butt, England; James Cameron, England; Walter Stuart Campbell, Scotland; W. Graham Campbell, Scotland; Ernest Christison Carter, England; G. Arnold Casalis,

* With distinction.

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Basutoland; C. G. Cassidy, England; Walter W. Chamberlain, England; W. Roger Chew, India; Albert Coleman, India; James Fotheringham Cownie, Scotland; John Cowper, England; Albert Edward Cox, England; Douglas Crawford, England; *Ernest Clement Sephton Daniel, South Africa; W. R. Davison, Ireland; Walter Denby, England; Frank Dendle, England; Henry Bryan Densham, England; Arch. Home Douglas, Scotland; Arthur Drury, England; C. W. Duggan, Scotland; J. Craufurd Dunlop, Scotland; Herbert Lavington Evans, England; Edward H. Ezard, England; John Malcolm Farquharson, Scotland; Alex. Dickson Fleming, Scotland; W. Alex. Fleming, New Zealand; Simson Canstairs Fowler, Calcutta; James Fox, England; Richard J. Fox, India; George Harry Gibson, Tasmania; Robert Wilson Gibson, England; Railton Gill, England; Sidney C. Godfray, Jersey; James Gibson Graham, Scotland; John Grant, Scotland; Archibald Cowan, Guthrie, Scotland; George Gibson Hamilton, Scotland; Vaughan Berkeley Harley, England; James Harrison, England; C. Harvey, England; J. G. Havelock, England; J. Hewat, South Africa; W. Hewat, South Africa; T. Eustace Hill, England; T. Daniel Hill Holmes, England; James H. Horsburgh, Scotland; W. Horton-Smith, England; Phadallah Elios el Howie, Syria; George T. W. Howison, Scotland; Hugh Clifton Hughes, Wales; Harry Rochfort Hunt, Ireland; J. Robert Hutton, England; T. Walter Irvine, Scotland; J. Bland Jameson, England; W. Ernest Jennings, India; W. Palmer Johnstone, South Africa; Geo. Elphinstone Keith, Scotland; W. Kemp, England; Henry Richard Kenwood, England; Peter Murray Kerr, Scotland; Alex. Kirkwood, Scotland; James Tyson Kitchin, England; J. Alex. Campbell Kynoch, Scotland; J. Lawrie, Scotland; James Timothy Castle Leishman, England; W. H. Lewis, Wales; Frank Liddell, Australia; Alex. Graham Speirs Logie, Scotland; Duncan Campbell Longden, India; T. Luson, England; J. M. Lyon, Scotland; Donald J. Macdonald, Scotland; Norman J. M'Kie, England; *G. Owen Carr Mackness, England; Alex. Macleay, Scotland; Daniel MacLeod, Scotland; James M'Leod, Scotland; David MacNish, Scotland; *Ralph Henry Maddox, England; *Christopher Martin, England; J. Wilson Martin, England; Alan Matheson, England; Kenneth Alex. Matheson, Scotland; T. Gordon Meikle, Scotland; James Graham Miller, Scotland; Robert Hair Mitchell, Scotland; Hugh Mayer Montgomerie, England; Fredk. Hughes Morison, England; G. Ernest Morrison, Australia; R. H. Mortlock, England; James Mowat, Scotland; Reginald Harry Noott, England; G. Fredk. Odhams, England; C. H. Lees Palk, England; W. Parker, Wales; W. Paterson, Scotland; W. Brogdon Paterson, Scotland; T. James Paton, Wales; Charles Sumner Patterson, England; George Young Polson, Scotland; J. Francis Pridie, Scotland; Ernest Edwin Pringle, Scotland; F. U. Purchas, Jamaica; C. Ramage, England; C. Bennett Reid, Trinidad; G. Archdall O'Brien Reid, India; G. Francis Rhodes, England; Walter Rigby, England; Hugh Lloyd Roberts, England; Duncan Robertson, Scotland; *Ross Francis Robertson, Scotland; W. G. Aitchison Robertson, Scotland; Henry Robinson, England; J. Kirkup Robinson, England; John Gomes d'a Rocha, Rio de Janeiro; Sydney James Roderick, Wales; Richard Sanders Rogers, Australia; François Auguste Rouget, Mauritius; Andrew Rowand, Scotland; C. Gaston Savary, Trinidad; Crichton Bait Scarth, Scotland; *Kenneth Mackenzie Scott, England; Walter Scott, England; Ebenezer Shaw, Scotland; W. Cameron Sillar, England; James Bertie Simpson, Scotland; James Christian Simpson, Scotland; Arthur Edward Sloman, England; Gaius Turner Smith, Canada; James Leggue Murray Smith, Scotland; W. Johnson Smyth, Ireland; James W. Somerville, Scotland; *W. Carr Sprague, England; Walter H. Skinner Stalkartt, India; C. Butler Stiles, America; Alex. Reid Stoddart, Scotland; James Strother, Scotland; C. Leonard Terry, England; J. Bolton Thackwell, India; R. Thin, Scotland; G. Ritchie Thomson, Scotland; H. W. Marett Tims, England; Walter H. Wolff, Tasmania; J. Tomlinson, England; Fredk. C. Tothill, England; Maximilian Lincoln Trechmann, England; *W. Aldren Turner, Scotland; G. Wade, Scotland; Thomas Walcot, England; Quintin MacAdam Wallace, Scotland; Hardress James Waller, India; *T. Hamilton Ward, England; *Herbert Furnivall Waterhouse, England; G. Alfred Watson, India; Joseph Riley Watson, England; James Peter Watt, Scotland; J. W. Wells, England; Joshua Chaytor White, Ireland; Philip Jacob White, India; T. Whitelaw, Scotland; James Richard Whitwell, England; Alfred H. Williams, New Zealand; John Cadwaladr Williams, Wales; Charles Blair Wilson, Italy; G. Wilson, Scotland; James Wilson, Scotland; W. Wilson, England; Percy Wisewold, Australia; *W. Fraser Wright, Scotland; J. W. Wyncoll, England; Lawrence Gabriel Henry Pasmingham Wynn, England; Walter Wynne, Wales; Edward Brooke Young, Scotland.

* With distinction.

UNIVERSITY OF ABERDEEN.—During the past year the following candidates received the degrees specified:—

DEGREE OF M.D.—Lewis Daniel Alexander, Kilcreggan, Greenock; Joseph Carbery, Matale, Ceylon; Walter Smith Cheyne, Aberdeen; Alex. Gordon Davidson, Wartle; Matthew Dickson, Liverpool; Robert Hume Falkin, Clifton; T. Fiddes, Urmston, Manchester; J. Gerard, Aberdeen; David Hardie, Brisbane, Queensland; Patrick Letters, Dundee; Irvine Kempt Reid, King's Lynn; Ernest Barret Smith, Twickenham; James Taylor, Keith; Andrew Whyte, Brecon, Wales; J. Kennedy Will, London; James Wilson, Croydon, Surrey; J. T. Windle, Ovenden, Yorkshire.

DEGREES OF M.B. AND C.M.—W. Alexander, Fyvie; Alex. de Wet Allan, Aberdeen; C. Augus, Rhynie; Walter H. Atherstone, Cape Colony; Alex. T. G. Beveridge, Aberdeen; Fredk. Booth, Preston, Lancashire; J. Harley Brooks, London; Alfred Tennyson Brown, Banchory; James Bryce, Aberdeen; †J. Souter Butter, Letham, Forfar; James Orevie, Newburgh, Aberdeen; W. Christie Crowe, Aberdeen; J. J. Young Dalgarno, Peterculter; *David Macdonald Davidson, Mauritius; G. Davidson, Logie-Coldstone; T. Finlayson Dewar, Arbroath; C. Edmund Duff, Turriff; G. Hubert Ede, Wonersh, near Guildford; W. Boucher Evans, Maidstone, Kent; †A. Cornwall Ferguson, Aberdeen; Arthur Daniell Forbes, London; James Winton Fraser, Arbroath; T. Henderson Fyfe, Aberdeen; D'Arcy Harvey, Portland, Dorset; J. Duncan Hendry, Woodside, Aberdeen; G. Henry, Aberdeen; J. Eatough Holden, Bolton, Lancashire; †J. Johnstone, Port Chalmers, New Zealand; G. Alex. Kelman, Fearn, Ross-shire; †G. W. England Kerr, Bunchrew, Inverness; W. Leith, Turriff; G. R. D. Macdonald, Aberdeen; A. D. Mackinnon, Kilbride, Broadford, Skye; J. T. Macphail, Woodside, Aberdeen; Farquhar M'Rae, Tain; Guy Seymour Leslie S. Manning, Christchurch, New Zealand; J. Melvin, Aberdeen; R. Morrison, New Deer; J. Coutts Myles, Aberdeen; Patrick J. Smith Nicoll, Aberdeen; R. Henderson Nicolson, Aberdeen; J. Pearson, Sheffield; James Pirie, Elgin; Robert Rennie, Glenbuchat; D. Ross, Aberdeen; †Jonathan Shand, Keith; W. Booth Skinner, Torland; B. Smith, Aberdeen; C. H. J. Souter, Emmaville, N.S.W.; J. Souter, Aberdeen; †W. St. Clair Symmers, South Carolina; †T. Hector Thompson, Stonehaven; C. T. Dyer Urquhart, Aberdeen; J. Skirrah Abernethy Walker, Banff; Fredk. W. Walker, Darlington; G. Watt, Aberdeen; James Webster, Aberdeen; Creswell J. White, Chippenham, Wilts; and George Nicol Wilson.

* Highest academical honours. † Honourable distinction.

DIPLOMA IN PUBLIC HEALTH.—James Johnstone, Port Chalmers, New Zealand (with credit); G. W. England Kerr, Bunchrew, Inverness (with credit); George Watt, Aberdeen.

The following candidates have passed all the Examinations for, but do not receive the diploma in Public Health until they graduate:—

Alexander Ford Mackenzie, Alfred Morrison Saunders.

The John Murray Medal and Scholarship to the best graduate of the year was conferred on

David Macdonald Davidson.

The Thompson Fellowship was awarded to

James Johnstone.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the Examiners, held in Glasgow, the following candidates, having passed the respective examinations, obtained the triple qualification:—

Arthur W. Sandford, Edinburgh; W. B. Fellowes, Nottingham; Percy St. Johnstone, Birmingham; Douglas Wardleworth, Bury; Garibaldi Watson, Glasgow; Andrew C. Hunter, Paisley; J. C. Deuchar, Glasgow; James Mason, Glasgow; T. A. Davidson, Belfast; Alex. D. M'Lean, Partick; J. M. Ormond, Natal, South Africa; Manoel G. Pereira, Glasgow; David W. Scott, Glasgow; T. C. Jones, Corwen; J. Kennedy, Glasgow; David Lees, Glasgow; David L. Hamilton, Milford, Armagh; Alex. W. Pithie, Greenock Infirmary; Alfred E. Lackner, Edinburgh; J. Dunn, Ballykelly, Londonderry; Fredk. E. Welby, Edinburgh; J. Oldershaw, Liverpool; Jerome E. Vassaly, Scarborough; Richard H. Ward, Bromsgrove; Joseph Kelman, Airdrie; and W. R. Jones, Belfast.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the Examiners, the following candidates were admitted Licentiates:—

J. E. J. Deane, Rhymney, Monmouthshire; Alfred W. Statter, Wakefield; Fred. W. Burnett, Leeds.

The following were admitted Licantiates in Dental Surgery:—

W. Thompson Madin, Birmingham; John G. Wallis, Hull.

ROYAL UNIVERSITY OF IRELAND.—At the Summer Examinations the following obtained the Diploma in Sanitary Science of the University:—

Lawrence Corban, Henry A. Cummins, and Charles Fredk. Knight.

AT the recent annual meeting of the Falkirk Association for providing Trained Nurses for the Sick Poor it was resolved to establish a cottage hospital in the town.

A MASSAGE INSTITUTE FOR VIENNA. — Vienna is about to possess a great Massage Institute under the direction of Dr. Mezger. The general arrangements will be under the control of Herr Schüff.

SANITARY INSTITUTE OF GREAT BRITAIN. — The autumn congress of this Institute will be held in the town of Bolton on September 20th and following days, under the Presidentship of the Rt. Hon. Lord Basing.

IN a supplementary estimate in connexion with the Civil Service and Revenue departments, issued on the 5th inst., a sum of £2000 is put down as a grant in aid of the expenses of the Victoria University.

AT the last meeting of the Berlin Medical Society, Professor Virchow announced that Dom De Costa Alvaredo, a Portuguese physician, had, to show the esteem in which he held German medical science, bequeathed a sum of about £3000 to the Society.

DR. GIBSON, J.P., died suddenly of heart disease on the 8th inst. at Orton, Westmoreland. The deceased had published several local works, his last, "Legends and Historical Notes on North Westmoreland," having had a large circulation.

ON the 6th inst., on the occasion of the dedication at Barkingside of eighteen new cottages and of "Gairna House" to the cause in which he is engaged—viz., work among orphan and destitute children—Mr. Barnardo appealed for a hospital for his village. The cost of the proposed building is estimated at £3500, and of this sum £2000 has already been subscribed.

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THE SCOTTISH UNIVERSITIES.—A Bill has been introduced into the House of Commons by the Lord-Advocate, the object of which is to make provision "for the better administration and endowment of the Universities of St Andrews, Glasgow, Aberdeen, and Edinburgh, and for the improvement and regulation of the course of study therein.

SAVING LIFE AT SEA.—The Select Committee of the House of Commons appointed to inquire into the efficiency of the present methods adopted to save life at sea are of opinion that the provisions of the existing Acts are inadequate and not suited to the requirements of the modern mercantile marine, and that these Acts ought now to be amended.

CAVENDISH COLLEGE, CAMBRIDGE.—The following statement has been sent to us for publication:—"It is proposed to form a new Association to take over and work this College, of which the special object is to enable young men to graduate at the University at an age earlier than is customary at other colleges, and to do so at as little expense as possible. Students can enter the College at sixteen and obtain the B.A. degree before they are twenty years of age. The unfinished state of the buildings, together with other circumstances, have hitherto hindered the success of the College, but an offer of £10,000 has now been made for the completion of the building provided means be found to place the College in other respects on a satisfactory footing. To do this £10,000 more is wanted, and for this sum an appeal is now made to the friends of education throughout the country. The claim of the College to support is based on the advantages which it offers to the very large class who desire a University education but cannot long defer the time when they will be earning their own livelihood. At a meeting of Cambridge residents held in Trinity College, the Master presiding, the desirability of forming the new Association under the no-profit clause of the Companies Act, 1867, so that it will be able to receive benefactions, was affirmed; and a committee, of which Mr. J. H. Flather, bursar of Cavendish College, is secretary, was formed to obtain subscriptions. It is believed that the County College Association is willing to make arrangements for the transfer of the College to the new Association, and it is very desirable to get this done, if possible, before the beginning of the Michaelmas term, so that the appeal is an urgent one."

MEDICAL NOTES IN PARLIAMENT.

Margarine (Fraudulent Sale) Bill.

In the House of Lords this Bill was on the 9th inst. read a third time. On the question that the Bill do pass, Lord Denman moved that "margarine" be changed to "rine" in the title of the Bill, and Lords Camperdown, Wemyss, and Rosebery supported the amendment, Lords Forteacue and Fitzgerald opposing it. On a division the amendment was rejected by 29 to 9.—Lord Wemyss, in moving the omission of Clause 7, which gave a power of inspection of margarine manufactories to police officers, stated that such power was without precedent in the case of ordinary manufactures, and would be a bar to improvements in process and machinery. The amendment was agreed to, and the Bill was then passed.

Hospitals for Women in India.

In the House of Commons on the 4th inst., in reply to Sir J. Lubbock, Sir J. Gorst stated that the reasons given by the Government of India for limiting to five years the appointment of a female medical officer to the Cama Hospital at Bombay were:—(1) The possibility of hereafter providing for the maintenance of the Cama Hospital on the grant-in-aid system; (2) the fact that the medical education of women in India is yet only in its infancy. The Secretary of State knew no reason why there should be any difference in the conditions of service of male and female medical officers, and he would commend an equality of treatment to the consideration of the Government of India. The Secretary of State has not heard of the suspension of any benefactions for the erection of hospitals for women in India from doubt as to the continuance of the employment of medical women by the Government in India.

Medical Officers in India.

On the 8th inst., in answer to Sir G. Balfour, Mr. Brodrick said that if reference were made to the Estimates for the present year it would be seen that the numbers and ranks of the medical officers on the Indian establishment who belong to the British Medical Staff are shown. A return could be given, if moved for, of the number of medical officers serving in India, in the colonies, and at home for any particular year. The Army Estimates did not purport to show the effective charge for any person serving in India, and it would be contrary to the whole principle on which the Estimates are prepared to include a charge for the medical officers in India.

The Vaccination Acts.

In reply to Mr. Pickersgill, Mr. Ritchie said that the penalties under the Vaccination Acts imposed in a metropolitan police-court are payable to the Receiver of Police under Sec. 47 of the Act 2 and 3 Vic., cap. 71, the statute under which the metropolitan police-courts were established. The sums so received by the Receiver are paid by him into the Exchequer. The law officers three or four years ago, when consulted on the subject, advised that whereas in these cases the penalties imposed were to go to the Crown or to such an officer as the Receiver of Police, the Crown was entitled, in the public interest, to apply for the enforcement of the penalty.

The Condition of the Thames.

On the 9th inst., in reply to Mr. Bigwood, Mr. Ritchie said that he had not received any complaints this year as to the state of the river Thames between Teddington and Isleworth. He had been furnished with a report from the assistant engineer to the Thames Conservators, who states that the expression "deplorable condition" cannot apply to the reaches between Teddington and Richmond, which have been recently improved by the Conservators, and is a very exaggerated description of the reach from Richmond to Isleworth. The assistant engineer to the Conservators, Mr. Ritchie added, says that the works which have been carried out by them have removed the whole of the shoals on the Surrey side between Teddington Lock and Richmond Bridge, and on the Middlesex side between the Lock and Orleans House, that dredgers and a large staff of men are at work continuing the improvements downwards, and that the section of river below Richmond Bridge will be taken in hand immediately. The expenditure incurred on these works up to June 30th last is stated to be £15,950, in addition to £21,000 previously expended upon the improvement of the navigation channel.

Lunacy Districts (Scotland) Bill.

On the 10th inst. the Lord Advocate moved the second reading of this Bill, stating that its object was to restore a power which existed before the Act of 1877, by which lunacy districts could be properly adjusted.—Mr. E. Robertson moved the rejection of the Bill, and the debate was continued by Sir G. Balfour, Mr. M'Ewan, Mr. G. S. Will, and others. Eventually the Bill was read a second time.

Births, Marriages, and Deaths.

BIRTHS.

BADDELEY.—On the 30th ult., at Newport, Salop, the wife of C. E. Baddeley, M.B.Lond., of a son.

BRISBANE.—On the 6th inst., at Park-road, Regent's-park, N.W., the wife of J. Brisbane, M.D., of a son.

CARTER.—On the 4th inst., at Putney-hill, S.W., the wife of Frederick H. Carter, F.R.C.S.Eng., of a daughter.

MAPLESON.—On the 6th inst., at Nottingham-place, W., the wife of Horsley Mapleson, M.R.C.S., L.S.A., of a son.

PEDLEY.—On the 6th inst., at Idmiston-road, West Norwood, the wife of M. Denison Pedley, F.R.C.S.Ed., L.D.S.Eng., of a daughter.

RICHMOND.—On the 3rd inst., at Greenhithe, Kent, the wife of Sylvester Richmond, M.D., of a son.

RUSSELL.—On the 27th ult., at Skipton-in-Craven, Yorks, the wife of William Russell, M.B., &c., of a son.

SUTTON.—On the 3rd inst., at Whitehall, Pontesbury, Salop, the wife of Alfred Martin Sutton, M.B.Lond., M.R.C.S., of a son.

UPTON.—On the 8th inst., at Rio Lodge, Brighton, the wife of Alfred Upton, L.R.C.P.Lond., M.R.C.S., L.S.A., of a son.

VINCENT.—On the 4th inst., at Beech House, East Dereham, Norfolk, the wife of Henry Bird Vincent, M.R.C.S., of twin sons.

MARRIAGES.

ARMITAGE—PLAYNE.—On the 9th inst., at St. Luke's, Moldenhead, Walter Stanley Armitage, M.R.C.S., L.R.C.P. Ed., to Ellen Armitage, third daughter of Alfred Playne, M.B., of Maidenhead.

CHÈVES—BRUCE.—On the 2nd inst., at Holy Trinity Church, Brompton, James Trelawny Chèves, M.R.C.S., L.S.A., to Bella, eldest daughter of Alexander Bruce, Q.C., of Hamilton, Canada.

HODGSON—IRDALE.—On the 9th inst., at St. Paul's Church, Carlisle, by the Hon. and Rev. the Earl of Mulgrave, assisted by the Rev. W. E. Strickland, M.A., Vicar, George Goodfellow Hodgson, M.R.C.S., of Bootle, Liverpool, to Josephine, youngest daughter of the late Joseph Iredale, Esq., of Portland-square, Carlisle.

MASON—JOHNSON.—On the 3rd inst., at the Parish Church, Knighton, Leicestershire, by the Rev. Edmund J. F. Johnson, M.A., Vicar of Elmore, Gloucestershire, brother of the bride, Hugh Herbert Mason, M.R.C.S., of Abbey Lodge, Barking, Essex, youngest son of the late William Mason, M.R.C.S., of Burton-on-Trent, to Susanna Louisa Roberts, second daughter of the late Edmund Johnson, of The Firs, Knighton.

MASON—WILKINSON.—On the 4th inst., at St. Pancras Parish Church, J. Wallis Barron Mason, M.D., to Mary Jane, elder daughter of the late Chas. Wilkinson, of Watford.

MAUGHAN—BECKETT.—On the 6th inst., at Great George-street Chapel, James Maughan, M.D., to Annie, eldest daughter of George Beckett, Esq., of Liverpool.

PETTIFER—KEELAN.—On the 3rd inst., at St. Paul's Church, Avenue-road, S.W., by the Rev. Cornish, Edmund C. Pettifer, M.B.Lond., of The Limes, Tillingham, Essex, to Minnie, youngest daughter of the late Henry Keelan, Esq., of Erin House, Dehra Doon, Deputy Superintendent, Great Trigonometrical Survey of India.

DEATHS.

HUTCHINSON.—On the 4th inst., at Woburn-place, Russell-square, W.C., Francis Hutchinson, M.D., aged 82.

MACDOUGALL.—On the 1st inst., at Kilblain House, Chesterfield, Aymer R. MacDougall, M.B., M.R.C.S.E., aged 39.

MURRAY.—On the 7th inst., at Great Cumberland-place, W., Gustavus Charles Philip Murray, M.D.

VAUGHAN.—On the 5th inst., James Vaughan, Deputy Inspector-General, R.N., of Alfred-place, Thurloe-square, S.W., aged 73.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BERRY, JOHN B., M.D., C.M.Ed., has been appointed Medical Officer for the South Keighley District of the Keighley Union.

BRITTON, THOMAS, M.D. St. And., S.Sc. Cert. Cantab., has been re-appointed Medical Officer of Health for the Brighouse Urban Sanitary District, for the Queensbury Urban Sanitary District, and for the Shelf Urban Sanitary District.

COLLINSON, T. A., M.R.C.S., L.S.A., has been appointed House-Surgeon to the Durham County Hospital, vice H. S. Walker, M.R.C.S., L.R.C.P., resigned.

DAVIDSON, JAMES, has been appointed Analyst for the County of Dumfries and the Burghs amalgamated with it for the purposes of the Food and Drugs Act.

EVANS, E., B.A., M.B., B.C.Camb., M.R.C.S., has been appointed Medical Officer of Health to the Llanelly Union Rural Authority, Medical Officer to the Llanelly District, G. W. R., Dafen Tinworks, Bryngwyn Collieries, and Surgeon and Agent to Admiralty Sick Quarters, Pembrey, vice Thomas, resigned.

FAIRLIE, WILLIAM J., M.B., C.M.Ed., has been appointed Medical Officer for the Stanwix District of the Carlisle Union.

GIBSON, CHARLES J., M.B., C.M.Ed., has been appointed Medical Officer for the Shifnal and Stockton Districts and the Workhouse of the Snifnal Union.

HARE, C. J., M.D.Cantab., F.R.C.P.Lond., has been appointed Consulting Physician to University College Hospital.

HEWITT, W. M. GRAILY, M.D., F.R.C.P. Lond., has been appointed Consulting Obstetric Physician to University College Hospital.

MACDONALD, JAMES, M.A., M.B., C.M.Ed., has been appointed Medical Officer for the Caldersgate District of the Carlisle Union.

MACKNESS, GEORGE O. C., B.A.Oxon., M.B., C.M. Ed., has been appointed Resident House-Surgeon to the Edinburgh Maternity Hospital.

MELSON, GEORGE HYDE, M.B. Lond., M.R.C.S., L.S.A., has been appointed Resident Medical Officer to the General Hospital, Birmingham, vice T. S. Wilson, M.B.Ed., resigned.

MONEY, ANGEL, M.D.Lond., M.R.C.P., has been appointed Assistant Physician to University College Hospital.

MORRIS, EDWARD, M.R.C.S., L.S.A., has been appointed Medical Officer for the Midland District of the Midhurst Union.

OZZARD, A. TRONSON, M.R.C.S., L.S.A., has been appointed Medical Officer in the Government Medical Service of British Guiana.

POLLARD, BILTON, F.R.C.S. Eng., B.S. Lond., has been appointed Assistant Surgeon to University College Hospital.

SHAW, WILLIAM W., M.R.C.S., L.S.A., has been appointed Medical Officer for the First Kirkham District of the Fylde Union.

SPENCER, HERBERT R., M.D., B.S.Lond., has been appointed Assistant Obstetric Physician to University College Hospital.

SUNDERLAND, S., M.D., L.R.C.P., has been appointed Physician to the Royal Hospital for Children and Women, Waterloo-road, vice W. B. Hadden, M.D., M.R.C.P., resigned.

TAPLIN, BENJAMIN D., M.R.C.S., L.R.C.P. Ed., has been appointed Medical Officer for the Acton Burpel District of the Acthom Union.

WILLIAMS, JOHN, M.D., F.R.C.P.Lond., has been appointed Obstetric Physician to University College Hospital.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL HOSPITAL.—House Governor. Salary £300 a year, with board and apartments.

BRADFORD INFIRMARY.—Junior House-Surgeon. Salary £100 per annum, with board, residence, and washing.

BRISTOL ROYAL INFIRMARY.—Assistant Resident Medical Officer and Pathologist. Salary £80 per annum, with separate apartments, board, and laundry.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house.

FEMALE LOCK HOSPITAL, Harrow-road, W.—Assistant House-Surgeon. Board and lodging, but no salary.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum, with apartments, board, and attendance.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary £150 per annum, with board and residence.

PAROCHIAL BOARD OF PENNYGOWN AND TOBOSAY.—Medical Officer. Salary £100 a year.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Pathological Curator.

SUNDERLAND INFIRMARY.—House-Physician. Salary £80, rising £10 annually to £100, with board and residence.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior Resident Surgeon Apothecary. Salary £100 per annum, with furnished residence and board.—Junior Resident Surgeon Apothecary. Salary £80 per annum, with furnished residence and board.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Resident Medical Officer. Salary £60 per annum.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 11th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 5	30·25	E.	65	59	117	77	53	...	Fine
,, 6	30·13	E.	68	63	120	87	59	...	Overcast
,, 7	30·00	N.	77	65	120	84	61	...	Fine
,, 8	30·20	N.W.	68	59	121	87	58	...	Fine
,, 9	30·18	N.W.	67	60	119	83	60	...	Fine
,, 10	30·10	N.	62	57	118	74	56	...	Fine
,, 11	30·10	E.	58	55	...	...	54	...	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE HUTTON FUND.

THE Secretary of the Hutton Committee begs the insertion of the final list of subscriptions. The amount collected has been invested in railway stock in the name of trustees for the benefit of Mrs. Hutton and her daughters, for whom it will form a permanent source of income.

Amount already acknowledged ...	£1067	12	6	Mrs. Swabey	£5	0	0
Sir Hugh Hume Campbell	25	0	0	Miss Lloyd	5	0	0
Mrs. Arundell Yeo ...	20	0	0	Dr. J. B. Fleming ...	3	3	0
Mrs. Wingfield... ...	20	0	0	Earl of Gainsborough...	2	2	0
Dr. Gibbons	5	5	0	Lady White	2	0	0
J. Astley Bloxam, Esq.	5	0	0	Dr. Whipham	1	1	0
					£1161	3	6

Dr. Hair.—Architects in designing churches are not guided so much by considerations of cubic space as by allowance for sittings, each seat usually being given thirty by twenty inches. To this must be added the space for passages. The total area, including passages and chancel, is for each sitting from nine to ten square feet.

Mr. W. W. Thompson.—We do not know which article is referred to. Any way, it is better to be guided by the advice of a qualified medical practitioner in the matter.

Mr. J. H. Sykes.—We must decline to answer the question.

ARSENIC EATING IN STYRIA.

To the Editors of THE LANCET.

SIRS,—As some doubt has been thrown upon this point, while the practice is otherwise fraught with considerations of a therapeutical or medico-legal interest, I venture to send you an authentic local pronouncement on the same, and to intimate that this was procured for me by a friend who had to visit her relatives in that country on her way with her husband to Bombay. Writing from Cuddalore, in the Madras Presidency, under the date of July 9th last, she says: "Herewith the information you asked for about arsenic eating; and as it was given me by my cousin, who is one of the doctors of the Lunatic Asylum at Gratz, you may rely upon it." I subjoin this gentleman's statement:—"The arsenic is taken by the Caryuthian and Styrian mountaineers principally. They take it with the view of getting good wind to enable them to climb their hills. They eat from half a grain to a grain a day, and begin with very small doses. When they wish to stop they are obliged to do so very gradually, for when suddenly stopped symptoms of arsenical poisoning set in. It does not appear to have any injurious effect on them; but when they get ill this drug has to be given to them along with the other medicines that are prescribed for them at the same time."

I am, Sirs, your obedient servant,

St. Leonards-on-Sea, Aug. 4th, 1887. W. CURRAN.

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"DR. O. UPLAVICI" AND DYSENTERY.

WITH reference to our annotation of July 23rd on the Amœbæ of Dysenteric Stools a somewhat important verbal mistake occurred, which originated in and went the round of several German journals. These "erudite centralblätter" are now being subjected to some good humoured banter at the hands of the French journals for their ignorance of the fact that "O. Uplavici" is not an observer's name at all, but the Bohemian for "On Dysentery." All the credit which is given to the non-existent "Uplavici" really belongs to Prof. Hlava. It is only fair to say that the blunder having once been made it very naturally passed current, even a Russian journal making the same mistake. We have been unable to find any word at all like "uplavici" meaning dysentery either in Russian or Polish. The editor of the Russian journal in pointing out the mistake remarks that it ought everywhere to be corrected, lest the non-existent "Uplavici" should creep into treatises on medicine as an authority on dysentery!

Clean Wall.—If the walls were damp, the size would probably form a suitable medium for some bacteria, and unquestionably for mould fungi. If the walls were thoroughly dry, the organisms would not develop. But desiccation will not destroy spores; so that if we suppose that scarlet fever, for instance, is due to a microbe, we can quite understand how fresh outbreaks may arise from an infected room. We are of opinion that it is more healthy to discard wall-papers altogether in favour of distemper; but if wall-papers are employed, all the old papers should be removed and the walls well washed when repapering becomes necessary.

Enquirens.—We are unable to supply the information desired.

L. G. S.—The coroner is right.

CASE OF DISLOCATION OF THE FIRST PHALANX OF THE INDEX-FINGER, BACKWARDS.

To the Editors of THE LANCET.

SIRS,—I am urged by my principal, Mr. Sanderson, to bring this case to your notice on account of its rare occurrence in country practice.

R. J——, of Loftus, aged thirteen, on the morning of July 16th dislocated the index-finger of the right hand, backwards, by getting his hand caught in the leather band belonging to a revolving wheel at a ginger-beer manufactory. About half an hour after the accident the patient came into the surgery, saying he had put his finger out of joint. The finger was seen to be straight and immovable. The projection of the edges of the bones were very distinct, rendering diagnosis easy. Reduction was easily accomplished by holding the patient's hand in one's right hand, and placing one's right thumb upon the proximal end of the displaced phalanx, then grasping the index-finger with one's left hand and pulling the finger gently, and at the same time pressing the proximal end of the phalanx forward over the distal end of the first metacarpal bone. The bone slipped into position with a very audible click. The finger was then bandaged, and no swelling has resulted. The boy is now using his finger in his work as before, whilst he says that he has not felt any inconvenience at all from the accident. Mr. Sanderson informs me that although he has been in practice here over twenty years, he has never before had a dislocation of the index-finger, whereas he has had almost all other kinds of dislocations.

I am, Sirs, yours faithfully,
Loftus-in-Cleveland, July 27th, 1887. JAMES S. R. MILLER.

THE BROWN DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—Please allow me to acknowledge the following contributions to the above fund.—I am, Sirs, yours faithfully,

G. STANLEY MURRAY, M.D.

20, Upper Richmond-road, Putney, Aug. 9th, 1887.

Amount previously received	£57	6	0	T. Taylor, Esq.	£0	10	0
Sir Wm. Jenner, Bart. ...	2	2	0	Dr. G. C. Dale	0	5	0
Sir Andrew Clark, Bart.	1	1	0	Dr. H. T. Sylvester ...	0	5	0
Dr. A. W. Orwin.. ...	1	1	0	R. B.	0	5	0
Dr. Granville Bantock ...	1	1	0	Anonymous	0	3	6
F. H. Gervis, Esq. ...	0	15	0	E. J. Parrott, Esq. ...	0	2	6

A. Goff.—Such questions as that mentioned by our correspondent are touched upon by us from time to time solely in the interests of public health. We cannot undertake to treat them from a merely social or economic point of view. To do so would be to travel beyond our province as medical journalists.

Dr. James Oliver's paper is marked for insertion.

CHARGES FOR WIVES AND CHILDREN IN CLUBS.

To the Editors of THE LANCET.

SIRS,—Would any gentleman inform me what is the usual amount paid per annum by members of clubs for medical attendance on their wives and children, midwifery not being included? The men themselves pay 4s. per annum.

I am, Sirs, yours truly,
Aug. 3rd, 1887. CLUB.

BENZOIN FOR ULCERATED LEGS.

Two Russian practitioners have recently pointed out the value of benzoin in the treatment of ulcers. Not, of course, that the virtues of this resin are at all unknown, as the existence and extensive use of friar's balsam during many centuries testify; benzoated lard, too, is frequently used as an application for ulcers. The strength of this is, however, very different from that of the ointments employed by the Russian writers. Dr. Voskresenski, a military surgeon, found that an ointment composed of two drachms of powdered benzoin with half an ounce of cerate and half an ounce of lard caused a number of ulcers on the limbs of soldiers of the 13th regiment, to which he was attached, to heal, some of them having existed for several years in spite of various other methods of treatment. Dr. Dorogoff, who practises in a country district where there are a number of Tartars and other Asiatics, whose nomadic and uncleanly habits are very favourable to the development of ulcers on the legs, writes in the *Ruskaya Meditsina* that, being unable to obtain indiarubber bandages for these people, he was very glad to try Dr. Voskresenski's plan, as it was cheap and simple. It proved a great success even in cases where nearly the whole of the lower limb was covered with ulcers. The preparation he employed differed in strength from Dr. Voskresenski's. Under its use the surface rapidly became covered with granulations, the induration left the edges, and the ulcers gradually cicatrised over, although he did not oblige the patients to lay up. He therefore strongly recommends this form of treatment as especially suitable for country practice where patients are obliged to work in the fields.

Mr. John J. Myers should apply at the office of the Crown Agents for the Colonies, Downing-street, W.

Rolyat will find the question treated in another column.

THE JURISDICTION AND PAYMENT OF CORONERS.

To the Editors of THE LANCET.

SIRS,—A Local Government Bill being imminent, and a reform of our coroners' courts no less so, it appears to me that the jurisdiction of a coroner should be made coterminous with a Parliamentary division or group of divisions. As a Parliamentary division is the basis for the scheme of local government, it would be an anomaly that coroners should continue to be appointed, so that their jurisdiction would extend into, and their payment be made by, various portions of various Parliamentary divisions. The same argument applies to the appointments of medical officers of health.

I am, Sirs, faithfully yours,
Thaxted, Essex, Aug. 4th, 1887. WM. SUNDERLAND, M.R.C.S., &c.

Intending Medical Emigrant had better perhaps refer his budget of questions to the editor of "India and the Colonies." We know of no source whence the whole of the information desired may be obtained.

Mr. G. Bishop.—Yes.

BALDNESS.

To the Editors of THE LANCET.

SIRS,—I observe you have an article on the above subject in the current number of THE LANCET. I consider the effect of hats in producing baldness cannot be over-estimated. They do so by obstructing the circulation of blood to and from the scalp. Were hereditary predisposition the main factor in the production of baldness, the affection would obviously be equally common in both sexes, which it certainly is not, but is especially prevalent in the male sex, whose hats obstruct the circulation, whilst those worn by the opposite sex do not.

I am, Sirs, yours faithfully,
Aug. 2nd, 1887. OBSERVER.

J. Y. (Glasgow).—Angelo Nannoni of Florence. No history of lithotomy can be complete without reference to the improvements effected in the operation by that great Tuscan practitioner. He was born at Incisa in 1715, and rapidly rose to be the head of the Tuscan school in surgery and surgical therapeutics. His cast of mind was essentially philosophical, and Italians have compared him to the late J. Henry Green among ourselves. His writings fill an honoured place in the medical libraries of the peninsula. He died July 30th, 1790.

Enquirens.—We must adhere to our rule.

THE MOXON MEMORIAL.

To the Editors of THE LANCET.

SIRS,—As it is highly desirable that the subscription list of the Moxon Memorial should be closed forthwith, and as several gentlemen who gave their support have not yet forwarded the sums promised, may I request through your columns that those who have not yet sent in their subscriptions should do so without further delay?

I am, Sirs, yours faithfully,
B. CLEMENT LUCAS, Hon. Treasurer.
18, Finsbury-square, E.C., Aug. 9th, 1887.

ERRATUM.—In the paragraph headed "Carbolate of mercury in syphilis," in our last issue, p. 277, the quantity of carbolate should have been stated as 1/2 grains, not 5 grains.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Harkin, Dublin; Dr. O. Dudfield, London; Dr. Sansom, London; Dr. Danford Thomas, London; Dr. H. V. Carter, Bombay; Dr. W. H. Dickinson, London; Dr. McKee, Dublin; Mr. Tidman, London; Dr. Stanley Murray; Dr. T. F. Pearse, London; Dr. J. S. Orchard; Mr. David Jones, Cwmaman; Mr. J. T. Richards, Birkenhead; Dr. Dash, King's Lynn; Mr. Groves, Dorchester; Mr. Cooke, London; Mr. Crawford; Mr. J. Hardie, Manchester; Mr. Howe, Weston, Vt.; Mr. Lane, San Francisco; Mr. S. Haigh, Milton-under-Wychwood; Messrs. Pocock and Co., Vauxhall; Mr. A. F. Mickle, London; Messrs. Hampton and Son, Pall Mall; Mr. W. Sunderland, Thaxted; Messrs. Smith and Son, Birmingham; Dr. M. Jackson, Barnstaple; Messrs. Hewlett and Son, London; Mr. Girdlestone, Melbourne; A. Goff; Mr. Clement Lucas, London; Mr. N. Hardy, Dulwich; Messrs. Wood and Co., New York; Mr. Bell, Exeter; Mr. Pepper, London; Messrs. Smith and Co., London; Mr. W. E. Thursfield, Vienna; Dr. T. J. Maclagan, London; Mr. Chesshire, Birmingham; Mr. Berry, Wigan; Dr. W. Duncan, London; Dr. Chittenden, Ramsgate; Mr. Dillway, Chelmsford; Dr. T. M. Mills, Innsbruck; Mr. Steenberg, Preston; Dr. G. Macdonald, London; Mr. Harwood, Bristol; Mr. J. Hayward, London; Mr. Naismith, Ayr; Mr. Yates, Bath; Mr. Dyer, York; Mr. Normald, Chichester; Mr. MacLeod, Edinburgh; Mr. Paterson, Leeds; Mr. Pike, Gloucester; Mr. Fox, Birmingham; Mr. Fleming, Glasgow; Dr. Harley, London; Dr. Warburton, Tizpur; Mr. Dutch, Crewe; Mr. Birchall, Liverpool; Mr. Lane, London; Mr. Maw, Bradford; Mr. Restall, Stroud; Dr. Curxtyr, Bombay; Dr. Store, London; Dr. Steele, Florence; Mr. Gurner, London; Mr. Fraser, Haymount; Messrs. Lee and Martin, Birmingham; Dr. Buchanan, Glasgow; Messrs. Clark and Co., London; Mr. Scott, Manchester; Dr. Cooper, Lawrence Kirk; Mr. Beswick, London; Mr. Sampson, York; Mr. Beales, Great Yarmouth; Mr. Sharman, Halifax; Lieut.-Colonel Gordon, Bristol; Rolyat; L. G. S.; R. F. W.; M.D., Maidenhead; G., Preston; Medico, Chichester; M. A.; Clean Wall; A.B., Twickenham; M.B., C.M., 1887, London; M. M.; Lady Superintendent, Liverpool; P. S.; Doctor, Loudon; M. W., London; Doctor, Paddington.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Evans, Cork; Mr. Frampton, Weston-super-Mare; Messrs. Edmondson and Co., Skipton; Mr. Marrick, Truro; Dr. Laseron; Messrs. Thompson and Son, Manchester; Mr. Boyce, Birmingham; Messrs. Savory and Moore, London; Mr. Gibson, Westmoreland; Mr. Pitman, North Wales; Mr. Bennett, Mayfair; Mr. Scott, Penrith; Messrs. Woolley and Sons, Manchester; Dr. Crespi, Wimbourne; Messrs. Burroughs and Co., London; Mr. Finley, Wimbourne; Messrs. Wright and Co., Bristol; Dr. Pavy, London; Mr. Davidson; Messrs. Bullock and Reynolds, London; Mr. Hulme, Birmingham; Messrs. Arundell and Co., London; Mr. Griffin, Dublin; Mr. Eastwood; Messrs. Clayton Bros., Pimlico; Mr. Crell, London; Mr. Wainewright; Messrs. Wyley and Co., Coventry; Mr. Ranson, Weston-super-Mare; Mr. Haward, Tendlebury; Mr. Baron, Manchester; Dr. Allwright; Mr. Botwood, Ipswich; Mr. Lupus, London; Mr. Hemming, Bridgend; Messrs. Hogg and Son, London; Mrs. Carson, Burton-on-Trent; Mr. Reid, King's Lynn; Dr. Patterson, Boston; Mr. Saunder, Manchester; Dr. Jones, Treherbert; Mr. Phillpot, Hemel Hempsted; Mr. Ascot, Preston; Mr. Macvicar, Worksop; Mr. Hawkins, London; Dr. MacDougall, Carlisle; Mr. Barbour, Edinburgh; Mr. Houlgrane; Dr. Highmore, Bedale; the Rev. Lester, Molton; M. Q.; M. S., Earl's-court; Doctor, Stow-on-Wold; E. R., Tunbridge Wells; Matron, Bedford; D. T. H., Huddersfield; B., Manchester; K., London; D. P., Walworth; A. B. C.; Beta, Cardiff; C. M., London; Medicus, Dublin; Lady Superintendent, Liverpool; Spero; Secretary, Liverpool Northen Hospital; O. P. Q., London; M. B., London; Secretary, Manchester Hospital; M.D., Scarborough; L., Aberdeen; J. C. H.; Medicus, Northampton; C., Oldham; J. D., Bedford; Medicus, Aberdeen; A. B. C., Harwich; J. A. M., Lancashire; Surgeon, Highbury; Non Greaze, Penzance; Nurse, Newcastle-on-Tyne; Alpha; Dispenser, Hackney; G. C., Southsea; Medicus, Chelsea; Medicus, Southport; Medicus, Hull; T., Oldham.

Black and White, Dublin Daily Express, Ilfracombe Estates Gazette, Liverpool Evening Express, Ross Gazette, Night and Day, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 16.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, August 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—4 P.M. Dr. Samuel West: On Pneumothorax (Bradshawe Lecture).

Friday, August 19.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 20.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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The Bradshawe Lecture

ON

PNEUMOTHORAX,

Delivered at the Royal College of Physicians, Aug. 18th, 1887.

BY SAMUEL WEST, M.D., F.R.C.P.,

ASSISTANT PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL; PHYSICIAN TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK; AND PHYSICIAN TO THE ROYAL FREE HOSPITAL.

MR. PRESIDENT,—By appointing me, Sir, to deliver this lecture, you have paid me an honour which I am proud to acknowledge; and although, for the moment, the feeling of honourable distinction is lost in one of responsibility, still the confidence which your judgment always inspires relieves some of the anxiety I feel lest my ability should not prove equal to the task you have imposed upon me.

I have chosen Pneumothorax as the subject of my lecture—a subject so large, however, that I cannot undertake to deal with the whole of it within the time placed at my disposal, and I intend to limit my remarks to those parts which present especial interest or which call for further elucidation.

Of the causes to which pneumothorax is due, phthisis is the chief. This is the primary lesion found in at least 90 per cent. of all cases. When from the remaining 10 per cent. are excluded those cases in which pneumothorax is the result of gangrene or acute inflammatory destruction of the lung, or the consequence of injury to the lung or walls of the thorax, the percentage of the other assigned causes becomes very small; 2 or 3 per cent., perhaps, will include them all. It would be unprofitable to spend time in considering most of these groups, and I wish to refer to only two: first, that in which pneumothorax has occurred in apparently healthy persons; and, secondly, that in which the pleural cavity has been laid open by injury.

Many cases have been recorded, especially in recent years, of pneumothorax in the apparently healthy; but, as in these recorded cases recovery seems always to have taken place, there has been no opportunity of proving or disproving conclusively the existence of a pulmonary lesion. The question is thus raised whether it is possible to rupture the healthy lung by any force which respiration can bring to bear upon it. To this question an affirmative answer must be given. The violent paroxysms of whooping-cough and the straining of parturition afford clinical evidence that the lung may be ruptured by expiratory efforts. The condition, however, which is commonly produced is not that of pneumothorax, but that of subcutaneous emphysema.

A careful experimental study of this subject has been made by Dr. Champneys upon the lungs of infants.[1] When the lung is over-distended and gives way, the air first makes its way beneath the pulmonary pleura, stripping it easily off for some distance from the surface of the lung. It then passes along the root of the lung to the mediastinum, and following thence the course of the cervical fascia it reaches the subcutaneous tissue of the neck, whence it may spread over the whole body. If the pleura give way, the place of rupture is to be found usually near the root of the lung; but although pneumothorax did now and then arise in this way, the usual result was that already described—namely, emphysema of the mediastinal tissue and of the neck. Sometimes by artificial respiration after tracheotomy the air has taken the reverse direction, and, tracking downwards from the tracheotomy incision along the deep cervical tissue, has reached the mediastinum, or even the subpleural tissue, and occasionally the pleura has been ruptured and pneumothorax produced.

These experimental observations are confirmed by clinical evidence. Dr. Champneys records twenty-seven necropsies[2] after tracheotomy. Mediastinal emphysema was found in [illegible] and in two of these pneumothorax was present. The pneumothorax in one of them was double, and the cause of death. In eighty-two necropsies[3] at the Children's Hospital mediastinal emphysema was found in five, but pneumothorax in none. Wilks and Moxon[4] mention two cases of pneumothorax after tracheotomy, and connect it with mediastinal emphysema. Dr. Angel Money,[5] examining twenty-eight similar cases with especial reference to this point, found mediastinal emphysema in no less than sixteen and pneumothorax in two, but in both of these the pneumothorax was associated with mediastinal emphysema. In most of these cases artificial respiration had been performed.

It seemed desirable, considering the delicate texture of the infantile lung, to repeat these observations upon the adult, and I did this, with the result of confirming in the main the conclusions at which Dr. Champneys had previously arrived. I noticed also in my experiments the same important and curious fact to which Dr. Champneys has referred—namely, the difficulty of obtaining bursting pressure by means of water, owing to the permeability of the lung to water while it is still air-tight. The lung seemed almost like a sponge, so that the water flowed from it with such readiness when distended that the pressure could not easily be maintained.

The pressures at which rupture took place varied much in different cases. In four cases it reached two and a half inches of mercury, in one two, and in another four; so that what Dr. Champneys found in infants is true also in adults—that the normal resistance of the lung is widely different in different persons. My own observations were made upon the lungs after removal from the body, and the bursting pressures thus obtained are no doubt much below those which would be required when the lungs are *in situ*. In the only case in which I was able to attempt this experiment upon the dead body, the air did not appear in the neck until a pressure of nearly eight inches of mercury was registered, and pneumothorax was subsequently found on both sides. This experiment agrees with the statement made by Hutchinson, that the cells of the lung can resist a pressure of from three to nine inches of mercury when expanded as in health.[6]

I append the actual notes made at the time of experiment, and I wish to acknowledge with thanks the assistance I have received from Mr. Willoughby in this work:—

1. Left lung; adult man about fifty. Septicæmia after osteo-myelitis of femur. Lower lobe good deal collapsed, especially on posterior and lower part; no consolidation, no old adhesions. Lung expanded readily in all parts, except where there was collapse. The pressure was raised to two and a half inches of mercury, and the lung then burst at the posterior and middle part of upper lobe, about two inches from root of lung. When rupture occurred the pleura was suddenly stripped off over a space about the size of a five-shilling piece, and then it gave way, the hole measuring about one-eighth of an inch. The tube was next tied into the bronchus of the lower lobe; as the pressure rose some of the collapsed portions expanded, but not all. The lung finally ruptured suddenly on the posterior border, where the lung lies at the side of the spinal column. Here the pleura was suddenly stripped off the lung for the whole length of the lobe (six inches), and this gave way with a rent about half an inch long. On opening the raised part of the pleura the lung was found to be ruptured in several places; for the most part the holes were minute, but in one, which corresponded with a small portion of collapse, the hole was nearly one-eighth of an inch in diameter.

2. Left lung; adult man about fifty. Lung good deal collapsed; small fibrous nodules felt through the pleura, scattered throughout the lung; an old fibroid cicatrix at the apex. The lung distended readily (even the collapsed portions), and resisted a pressure up to four inches of mercury. At this pressure it gave way in the posterior and middle portion of the upper lobe; the pleura stripped off for a space about the size of a shilling, and then burst by a small aperture. The tube was fixed in the lower lobe, and the pressure was now raised to nearly five inches of mercury before any considerable rupture occurred. This took place at the posterior border, close to the root of the lung, but the pleura did not strip off, as in the last case. Before this pressure was reached many small patches of interstitial emphysema developed all over the surface of the lobe, but none of them burst. On section a fibrous nodule was found in the apex, and small nodules (so-called "peri-bronchitis") scattered throughout both lobes.

[1] Med.-Chir. Trans., vol. lxv.; and Artificial Respiration in Stillborn Children, 1887.
[2] Loc cit.
[3] Loc cit.
[4] Lect. on Path. Anat., 2nd ed., 1875, p. 308.
[5] Med.-Chir. Trans., vol. lxvii., p. 101.
[6] The causes of death in the cases from which the lungs are taken were not pulmonary, but in some the lungs had undergone a good deal of post mortem change.

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3. Right lung of a boy. The cannula was tied in the bronchus and the lung inflated; at a pressure of two and a half inches of mercury it burst. The air came out of minute apertures around the inferior bronchial vein and along the posterior and mediastinal borders; some air seemed to come from the vein itself. The inferior lobe burst first, but there was a large slit accidentally made in the upper lobe before the experiments began. Where the lung burst, except close to the root, the pleura was first raised. It was not stripped off in large pieces, but in pieces varying from a large pea downwards in size.

4. Left lung of male, aged about fifty-five. Died after gastrostomy for stricture of œsophagus. Upper lobe particularly emphysematous, lower lobe not so much so; otherwise healthy. Air was forced into the lower lobe only as the upper one was cut. At a pressure of two inches of mercury the pleura was suddenly slightly raised in two or three places near the vein, and air came up also through the vessels. The holes were very minute in the lung-substance, and the pleura raised was about the size of a pea in each place.

5. Left lung of male, aged sixty-six, who died after cancer; stomach emphysematous, but otherwise healthy. At a pressure of two and a half inches of mercury the pleura was suddenly raised up over an oval space, longest diameter two inches, shortest three quarters of an inch. The part raised was the part covering the lower lobe where it was opposite the upper (that is, between the two lobes), and near the root.

6. Left lung of male, aged about fifty, who died suddenly from bursting of aneurysm of aorta, situated where thoracic becomes abdominal aorta. The aneurysm burst into the right pleura. Air was forced in, and at a pressure of two and a half inches a part of the pleura, one inch and a half long and one inch wide, was suddenly raised from the lower lobe close to the root. At the same time air came up through both artery and vein. The hole in the lung itself could not be seen; the hole in the pleura, which was raised, was a quarter of an inch in diameter.

A pressure of eight or nine inches of mercury is far beyond anything that even an adult can produce by expiratory effort; and it is clear, therefore, that it can only be in cases where the normal resistance of the lung is greatly reduced that in the absence of any disease of the lung pneumothorax can be produced. The lung is, therefore, capable of resisting in most cases the highest pressure that the most violent expiratory efforts can bring to bear upon it, and the question may well arise whether in those cases in which the lung has given way the absence of a local lesion can be without hesitation assumed. However this may be, it is clear that when rupture of the lung occurs, the result is usually subpleural, mediastinal, and cervical emphysema, and only very rarely pneumothorax. This conclusion clinical observation abundantly confirms. Although every text-book speaks of emphysema among the complications of whooping-cough, pneumothorax is by most writers not even mentioned, and so far as parturition is concerned, Dr. Matthews Duncan allows me to state that, although emphysema is by no means uncommon, he has never yet seen a single case of pneumothorax produced during parturition.

If now we turn to the cases recorded in which pneumothorax has occurred in the apparently healthy, it is remarkable that in so many there is a complete absence of any history of forcible respiratory effort. In some the pneumothorax developed actually during sleep; in others when the patient was sitting still or walking quietly. In a few it occurred during effort, but in many of them the efforts could not for a moment be compared in violence to those of parturition or whooping-cough. It is therefore probable that in these cases the lungs were not really sound. This conclusion raises another question of importance. If the lungs were not sound, is it not remarkable that recovery should so often occur? In the first place, it is well known that lesions may exist in the lung which no skill in physical diagnosis may be able to detect, and that such a lesion is capable of producing pneumothorax the following case provides proof:—

A man, aged fifty-six, was admitted into St. Bartholomew's Hospital with some shortness of breath; and, on examination, he was found to have pneumothorax of the right side. He gradually sank and died; and, on the post-mortem examination, the only lesion in the lung to be found was a small cavity with caseous walls, the size of a hazel-nut, near the root of the lung. This had ruptured into the pleural cavity.

But it might be objected that pneumothorax due to the rupture of a phthisical cavity would hardly recover. Such an assumption is not warranted by clinical experience.

Martha L——, aged nineteen, was admitted into the Chest Hospital, Victoria Park, with phthisis of the right apex. About a fortnight later pneumothorax was discovered on that side. She had had an indefinite attack of sickness, to which no importance had been attached, a few days before I saw her. The signs of pneumothorax were characteristic. No fluid developed, but after a few days the air began slowly to disappear, and in about nine weeks had completely vanished. The lung had re-expanded, and the breathing was audible as before over the whole side. While the pneumothorax on the right side was getting well the mischief in the opposite lung was rapidly advancing, and the patient was sinking of consumption. She was removed from the hospital against advice, and I heard that she died a few days later. The signs of pneumothorax had completely disappeared for more than a fortnight before her departure from the hospital. In such a case there can be no reasonable doubt of the phthisical nature of the lesion, and yet recovery was complete.

In another case in which complete recovery without effusion took place,[7] I have repeatedly examined the chest with great care, and have always failed hitherto to obtain any definite signs of local lesion. The patient has, however, had three or four attacks of slight hæmoptysis, and I think the probabilities are in favour of a phthisical lesion. It is now four or five years since the patient had pneumothorax, and he continues in his usual health.

From these facts, therefore, that lesions may exist in the lung, which cannot be detected, and that recovery from pneumothorax may be complete even when the lesion is presumably phthisical, supported as it is by the experimental and clinical evidence already brought forward, we are led to the conclusion that in many, if not all, of the cases occurring in the apparently healthy, a lesion, which may even be of a phthisical nature, has really been the cause of the affection.

I turn now to the second class of cases to which I wish to refer—namely, to that in which the pleural cavity has been laid open by injury. The mechanism of pneumothorax in these cases is thus described: "The elastic pulmonary tissue is always to a certain extent on the stretch. It is always, so to speak, striving to pull asunder the pulmonary from the parietal pleura; but this it cannot do, because the air can have no access to the pleural cavity. When, however, the chest ceases to be air-tight, and air is introduced into the pleural chamber, the elasticity of the lungs pulls the pulmonary away from the parietal pleura, and the lungs collapse."[8] This quotation expresses concisely the physiological doctrine of the day. It is not, however, completely correct, for the chest may cease to be air-tight, and yet air may not enter the pleural cavity. If, however, air does penetrate between the layers of the pleura, the lungs collapse, as they are stated to do, by virtue of their own elasticity. Experiment upon animals, as well as observation of disease and injury in man, establish the truth of this latter statement; but there are not a few instances in which, in spite of the pleura being opened, collapse of the lung does not occur, and air does not therefore enter the pleural chamber. In considering the whole question, these instances must not be disregarded. There are two great classes of such cases: first, that in which the pleural cavity has been laid open by an external wound; secondly, that in which, without any external wound, a communication between the lung or some other air-containing viscus and the pleura has been made by an internal lesion.

In the first class of cases, where the side of the chest may have been laid open by a tear or cut, the lungs are sometimes seen torn and bleeding in the floor of the wound, but still in close apposition to the walls of the thorax. A very striking case of this kind is recorded in the St. Bartholomew's Hospital Reports for 1876.[9] A wood-turner, aged thirty-three, stabbed himself in the head, chest, and abdomen with a chisel. The wounds of the head and abdomen were not very severe, but the wound in the chest, situated on the left side between the fifth and sixth ribs, was three inches long. Through it the lung could be easily seen wounded and bleeding. This wound in the chest was closed with strapping and oiled lint. Two days later there was emphysema, but

[7] Clin. Soc. Trans., vol. xvii., p. 56. [8] Michael Foster, Phys.
[9] Surgical Appendix to the Statistical Tables.

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this soon cleared up, and in four weeks the patient recovered completely without any further trouble.

The second class of case, in which, without any external wound of the thorax, the lung is torn and the pleural cavity opened, is still more interesting, as it is also much more frequent. Simple fracture of the ribs is one of the commonest of surgical injuries. Pneumothorax, however, in these cases is extremely rare, and yet it is clear that both layers of the pleura are torn across and the lung opened, from the fact that air has made its way into the subcutaneous tissue, producing surgical emphysema. It is hardly necessary to bring forward proof of such a well-known fact, but it may be useful to quote one case in point, the most remarkable I have myself met with. I made the post-mortem examination upon the body of a woman who had been crushed by a waggon. There was no external wound beyond bruising, but several ribs were fractured, and a considerable amount of subcutaneous emphysema developed. The lungs had been severely injured, it was evident, for the patient had expectorated a good deal of blood. At the necropsy several ribs were found fractured, and the lung extensively torn over an irregular area about two inches in diameter; but in spite of this the lung was everywhere in apposition with the chest walls, and there was a complete absence of pneumothorax. The pleural cavity was free from adhesions. The case puzzled me much, and, having at the time no better explanation to offer, I assumed that the lungs must have become hitched over the protruding and jagged ends of the bones, and have been in this way prevented from collapsing.

Without bringing further evidence forward, I am expressing, I believe, only the common experience when I say that with simple fracture of the ribs pneumothorax is very rare, and surgical emphysema very common. This is a great difficulty, and various solutions have been proposed. It has been asserted that in such cases the pleural cavity has either been completely obliterated by previous disease, or that adhesions rapidly formed round the wound have sealed the pleural cavity. This theory is *a priori* improbable. It has no clinical facts to support it, and it is disproved by post-mortem examination. It is by others asserted that air does enter the pleura, but that it is rapidly absorbed again, so that its absence after death is accounted for. When so careful a clinical observer as the late Dr. Hilton Fagge[10] endorses this view, the need of reconsideration of the whole question is evident. These explanations are unsupported by clinical observation, and are one and all disproved by post-mortem examination. The fact, therefore, that the pleural cavity may be laid open, and yet that collapse of the lung with consequent pneumothorax may not occur, must be accepted, and an explanation sought.

The normal elasticity of the lung was calculated by Donders[11] to be equivalent to seven millimetres of mercury. Michael Foster rates it somewhat lower—namely, at five millimetres.[12] Hutchinson agreed with the higher estimate, as the result of direct determination upon the lungs of two criminals immediately after death. If for the present purpose the higher estimate be accepted, it follows that when the lung does not contract after the pleura is opened it must be kept on the stretch by some force greater than seven millimetres of mercury; and there seems to be no place for such a force to exist, unless it be in the pleura itself; and if here, it is probably to be found in the cohesion between the two serous surfaces. A theory of this kind seemed to admit of easy investigation, and it was put to the test in the following manner.[13] Two discs made of mahogany were taken. They measured two inches (five cubic centimetres) in diameter, were smooth on the surface, and had a groove cut round the margin. Over these, pieces of stomach were tightly stretched, with the peritoneal surfaces outwards, care being taken to select pieces which would lie as smooth and even as possible. These two discs so covered moved very freely over one another; but when they were pulled straight asunder, considerable force was required to separate them. In order to estimate this force, one of the discs was connected with the arm of a balance, and while the other was fixed fast weights were placed in the [illegible] until the two were pulled apart. I found in [illegible] my experiments that about [illegible] It was thought that the force

[illegible] Med., vol. i. p. 966.
[illegible] Zeitschr., vol. iii. 1853, p. 296.
[illegible] vol. v., p. 1058.
[illegible] in a paper communicated to the
[illegible]

which kept these discs together might have been atmospheric pressure, and in order to eliminate this two similar discs were taken, perforated in the centre by a hole a quarter of an inch in diameter. Corresponding with this hole in the lower disc, a cut half an inch long was made completely through the membrane. The retraction of the membrane converted this slit into an oval hole, and in this way, when the discs were placed in apposition, a free communication was provided between the air and the space between them. I found, however, that the same weight was still required—namely, 325 grammes—to separate them. A similar slit was made next in the upper disc and membrane as well, but this, too, made but a few grammes difference. The result of these observations is to prove that there is some force other than atmospheric pressure[14] by which these two smooth surfaces are held together, and, without using the term in too technical a sense, I may speak of it as cohesion.

The next point to be determined was this—Was this cohesion greater or less than the elasticity of the lungs? Accepting, for the sake of the calculation, the higher estimate made by Donders—namely, seven millimetres of mercury—it was found that a column of mercury of this height, with a circular base of five cubic centimetres in diameter, weighed 185·6 grammes.[15] The weight required to separate the discs was 325 grammes, so that there was an excess of about 140 grammes in favour of the force which kept the discs together. If this weight be reckoned out in terms of mercury, it is equivalent to 12·5 millimetres as opposed to seven millimetres, giving thus an excess of 5·5 millimetres.

Having thus roughly established the correctness of the theory, I endeavoured next so to modify the experiment as to imitate somewhat more closely the conditions which exist in nature. I took a bell-jar, the mouth of which was about three inches in diameter. The top was bored so as to provide for the insertion of a perforated cork, into which a glass tube could be fitted and communication made in this way between the external air and the interior of the jar. Over the mouth two pieces of stomach were stretched with the peritoneal surfaces in contact. By exhausting the air the membranes were made to bulge inwards; they remained, of course, in contact. A slit was now carefully cut through the outer membrane, forming an oval hole about half an inch long and a quarter of an inch wide. This hole provided for the access of air between the membranes, just as in the case of the discs. When the air was now exhausted, the two membranes still remained in contact as at first, and it was only after considerable bulging that they separated and air passed between them. A manometer was now connected with the interior of the jar, so that the pressure could be measured. By means of a special modification of the mercury manometer, the reading could be converted at once into its equivalent in inches of water.

7·0 millimetres of mercury = 3·8 inches of water.
12·5 " " = 6·8 " "

The jar was now exhausted until the negative pressure indicated was 3·8 inches of water. At this pressure, the equivalent of the elastic tension of the lung, the membranes remained in contact. The exhaustion was continued until a pressure of 6·8 inches of water was reached, but still the surfaces remained in contact. The pressure could even be slowly still further reduced to 10 or 12 inches of water before the surfaces separated and air passed between them. When the pressure was relieved they again passed into contact, often so completely that the original experiment could be repeated. More often, however, unless the membranes had been very carefully stretched, a few small bubbles of air remained, which had to be pressed out with the finger to make the contact perfect.

It is not to be wondered at that with the bell-jar experiments higher values were obtained for the force of cohesion than with the discs. It is clear that although I had discs of five centimetres in diameter covered with membrane the actual surface of contact was something less than this, and the results obtained were therefore below the real value. While this value was in all probability too low, I accepted for the purpose of comparison the highest estimate of the

[14] Cohesion between two smooth glass plates is independent of atmospheric pressure. (Draper's Medical Physics.)

[15] A disc of five centimetres in diameter has an area of $5^2 \times 0{\cdot}7854 = 19{\cdot}635$ square centimetres. Seven millimetres of mercury upon the square centimetre = 9·45 grammes. A pressure of seven millimetres of mercury upon a disc of five centimetres = $19{\cdot}635 \times 9{\cdot}45 = 185{\cdot}6$ grammes.

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elasticity of the lungs, so that on both accounts the difference arrived at was less than the real difference.

With the bell-jar experiment certain precautions are necessary. The two pieces of membrane must be such as will stretch uniformly. This makes the parietal pleura itself not a very suitable membrane for experiment. It is much thinner in the parts corresponding with the ribs than it is in the parts corresponding with the intercostal spaces. The thinner parts yield most on exhaustion of the jar, so that the surface is thrown into furrows, and the tension on bulging differs in consequence in different parts. This affects greatly the results. The stomach is more suitable; but even with this, care must be taken in the selection of the parts used, for when stretched the large bloodvessels act as bands, and if they be included folds are also produced.

The membranes also must be so stretched as to have as nearly as possible the same tension in each. If this be done the surfaces may remain in contact at much greater negative pressures; it may even be at 2 inches of mercury before separation is effected. This result was so much in excess of what I anticipated that I sought for some explanation of it. While the membranes were on the stretch, therefore, at this pressure, I gently raised the edges of the slit with a blunt probe, so as to admit a little air between the membranes here, and I found then that the two layers separated at once. I repeated the experiment at different pressures. As the pressure was reduced more and more, the ease with which air passed between the layers when the edges were raised became less and less, until when the pressure was below 12·5 millimetres of mercury—that is, below the pressure at which the force of cohesion had been estimated,—in spite of the edges being freely separated by the probe, the membranes did not separate, but directly the outer layer which had been lifted up was allowed to fall, it passed again into close contact with the other, and the air which had been admitted was forced out. This experiment appears to me to be conclusive.

The figures given above are actual numbers obtained in particular experiments. The numbers differ a good deal in different observations, their variations depending upon differences in the stretching of the membranes, and in the condition of their surfaces at the time of experiment. Without laying, therefore, any special stress upon the actual values obtained, these observations establish, I consider, the existence of a force between the pleural surfaces much in excess of the elasticity of the lungs, and sufficient therefore to maintain the lungs in apposition with the walls of the thorax, even when air has free access to the pleural cavity.

Pneumothorax can, therefore, be no longer regarded as a condition to which there is an inherent tendency in the healthy body, but, on the contrary, as a condition brought about by the forcible separation of the pleural surfaces, and in this respect exactly analogous to the distension of the subcutaneous tissue, which occurs in surgical emphysema; and, considering the frequency of subcutaneous emphysema and the rarity of pneumothorax in simple fracture of the ribs, to which reference has been made, it would seem to follow as a corollary that the force required to distend the subcutaneous tissue must be less than that required to separate the layers of the pleura. Pneumothorax, therefore, so far from being, as it is commonly regarded, a passive process, and inspiratory in origin, is really expiratory in its initial stage, and requires an active force to produce it; and surgical emphysema, so far from implying, as Fagge asserts, the necessary antecedence of pneumothorax, may in reality be a protection against it, the air making its way in the direction of least resistance, beneath the skin rather than between the pleural surfaces. It is evident, further, that where the pleura is laid freely open, so that the air passes away without hindrance or expiration, the liability to pneumothorax will be still furthur reduced, for the expiratory pressure requisite to overcome the cohesion of the pleural surfaces will be absent.

By means of the discs I have been able to investigate some of the conditions which modify the force of this cohesion. In the first place, the surfaces must be absolutely smooth, for any roughness prevents close contact. This is one of the reasons why stomach well stretched over the discs is more suitable than pleura, the mucous membrane forming a cushion into which any little unevenness will sink. I have frequently found that the same pieces of pleura which would not give good results when spread directly on the discs answered admirably as soon as they were stretched with a piece of stomach beneath them.

The surfaces in contact must be neither dry nor wet, but simply moist, as are the normal surfaces of the pleura. If dry, they will not cohere at all; if wet, the force of cohesion is greatly reduced. The cohesion is, however, not between the membrane and the surface of the fluid, for a disc floated on water, blood, or serum requires but little force to raise it out. What is essential appears to be an extremely fine film of fluid, a capillary film, if I may call it so, between the two surfaces. It may be that the cohesion varies with the nature of the fluid; but, so far as I have gone at present, I do not find, with my rough methods of investigation, any perceptible difference between serum, blood, or water. The reason abolition of this cohesion by the presence of even a small excess of fluid is important, for there will be, on this account, less resistance to the entrance of fluid than of air into the pleura. This force of cohesion has a general bearing in physiology, for it will exist wherever serous surfaces are in close contact; in the peritoneum therefore, and in the pericardium as well as in the pleura. In the peritoneum its tendency will be to keep the intestines partly distended, and in this way it will diminish resistance to the passage of its contents along the tube. It will be, perhaps, in the joints that one of the most interesting illustrations of its usefulness will be found, for it is compatible with the freest movement possible of the surfaces upon each other. It may, perhaps, prove to be one of the most important means by which the head of the femur is kept in the acetabulum, but it will come also into play even in the hinge-joints. Since the force appears to be directly proportional to the extent of surface of contact, it will continue to be the same so long as the extent of surface of contact does not vary, and in the hinge-joints, therefore, so long as this is the case, the same amount of force will be exerted, whatever be the position of the joint, to keep the ends of the bones in place. The effect of excess of fluid in diminishing or even abolishing this force is well illustrated by the looseness which develops in the joints when effusion takes place into them.

But to return to the pleura, with which we are now more especially concerned. The existence of this force of cohesion is sufficient to explain satisfactorily many of the clinical difficulties which present themselves, and which led me to institute these investigations.

Among the physical signs of pneumothorax, the chief interest centres in the variations of pleural pressure and their consequences. If the observations to which I have just referred be correct, it is clear that pneumothorax, in its initial stage, must be an active process. Some force will be required to overcome the normal cohesion between the two layers of pleura, and to separate them. This must be obtained by expiration, and pneumothorax, therefore, in its initial stage is an expiratory process, and not essentially different in its production from surgical emphysema. As soon, however, as separation has been effected the elasticity of the lung will come into play, and air will enter the pleura until its retractility is completely satisfied, and, according to the observations of Donders (*loc. cit.*), this will continue until the lung occupies, in its collapsed state, not more than one-eighth of its original volume. Air, therefore, may enter, or fluid collect in quantity enough to occupy the space thus left in the pleura, without the development of any increased intrapleural pressure.

In considering the pleural pressures in pneumothorax, a sharp distinction must be drawn between the pressure during inspiration and that during expiration. The expiratory pressure will, of course, be always positive. Only when there is a large patent opening, so that air can pass freely out, will the expiratory pressure approach to zero. It will, however, differ widely in different cases, depending upon the force of expiratory effort.

With the inspiratory pressure the case is quite different. Air will continue to enter through the opening into the pleura until the pressure within, in the position of the deepest inspiration, is equal to that of the atmosphere. When this point is reached no more air can enter; and if, as is usually the case, the opening be valvular, so that no air can escape, the pressure on inspiration will remain at zero. If the inspiratory pressure now rises, some other cause must be at work, and in most cases this is found in the development of effusion, either serum or pus; and a positive inspiratory pressure may therefore be taken as indicative of the presence of fluid. The converse, however, is not true; for fluid may be present in considerable quantity, as already stated, and yet the inspiratory pressure be not raised above zero. Under one condition only could the inspiratory pres-

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sure rise above zero without fluid—namely, when, after the closure of the opening, the body temperature had been raised several degrees; but as such a rise in temperature is nearly always due to the development of fluid effusion, a difficulty is not likely to arise.

The next point of interest is the respiratory oscillation—that is, the difference between the pressures on inspiration and expiration—measured, of course, during ordinary quiet, not forced, respiration. This has been variously estimated in health. [By Donders at 1½ mm. of mercury, by Hutchinson at 3 mm., by Adamkiewicz from 3 mm. to 5 mm., by Hegel and Spehl at 3·6 mm. (quoted Heynsius, xxix., 265; Pflüger's *Archiv. f. Physiol.*).] The majority of observers value it at about 3 mm. of mercury, or about an inch and a half of water. This is found to be the respiratory oscillation in many cases of pneumothorax. It is, however, often in excess of this, especially when there is dyspnœa, the excess being due then chiefly to the rise of pressure on expiration.

There are two conditions under which the respiratory oscillation in pneumothorax is observed to be even less than normal. In the first the opening is widely patent, and air passes without any hindrance in and out of the pleura; in the other the opening is closed, and the inspiratory pressure is high. What is observed in this latter case is this: on first introducing the trocar, before air or fluid has been removed, the respiratory oscillation is small, perhaps not more than half an inch of water; but after relief of the tension, as the inspiratory pressure falls, the respiratory oscillation increases often much beyond the normal. The explanation of this is, I think, to be found in the effect produced by the high pressure upon the opposite lung. This lung, by the raised inspiratory pressure, has been partly collapsed, and the walls of the thorax have been allowed to expand, so that they are in the position of deep inspiration. The high expiratory pressure prevents the normal elastic recoil of the lung on that—that is, the unaffected—side. As soon, however, as the pressure is relieved, the elastic recoil comes once more into play, and the respiratory oscillation increases.

The following selected cases of pneumothorax with effusion illustrate the statements which I have just made:—

CASE 1.—Male, aged twenty-two. Hydro-pneumothorax. Recovery.

		In. of water.
First paracentesis	Inspiratory pressure	= + 6⅛
	Expiratory „	= +13¼
	Respiratory oscillation	= 6⅛

The patient was an apparently healthy young man, of considerable muscular power. The high respiratory oscillation was due to dyspnœa, and depended chiefly upon the very high expiratory pressure. Forty ounces of serum removed.

		In. of water.
Second paracentesis	Inspiratory pressure	= + 6½
	Expiratory „	= + 8
	Respiratory oscillation	= 1½

The fall is observed chiefly in the expiratory pressure. Twenty ounces of serum were removed. From this time the patient rapidly improved, and left the hospital perfectly well. He has been frequently seen since, and he has been in active work for nearly three years. He appears in perfect health, and it is now almost impossible to say which was the side affected.

CASE 2.—Male, aged twenty-one. Hydro- (later pyo-) pneumothorax; death from rupture of an aneurysm of the pulmonary artery.

		In. of water.
First paracentesis	Inspiratory pressure	= + 1
	Expiratory „	= + 5
	Respiratory oscillation	= 4

Twenty-eight ounces of serum were removed.

		In. of water.
Second paracentesis	Inspiratory pressure	= + ⅛
	Expiratory „	= + 2⅛
	Respiratory oscillation	= 1⅛

Thirty-six ounces of serum were removed.

Subsequently an abscess formed in the seat of puncture, which was found later to communicate with the pleura. A free incision became necessary. Some days after this the patient suffered from severe hæmoptysis, and blood passed from the incision as well. Death resulted from exhaustion consequent on the hæmorrhage, and on post-mortem examination a ruptured aneurysm of the pulmonary artery was found.

CASE 3.—Male, aged twenty-two. Hydro- (later pyo-) pneumothorax. Death. A large opening into the lung was found.

		In. of water.
First paracentesis	Inspiratory pressure	= + 3½
	Expiratory „	= + 8½
	Respiratory oscillation	= 4½

Thirty-six ounces of serum were removed.

		In. of water.
Second paracentesis	Inspiratory pressure	= + 1
	Expiratory „	= + 6
	Respiratory oscillation	= 5

Hardly any fluid was obtained.

		In. of water.
Third paracentesis	Inspiratory pressure	= − ¼
	Expiratory „	= + ¼
	Respiratory oscillation	= ½

Fluid not reached.

Fourth paracentesis: Pressures the same.

Forty ounces of pus were removed.

The conditions were clearly entirely changed at the time of the last two paracenteses. The conclusion was drawn, from the small respiratory oscillation of a quarter of an inch only on each side of zero, that a large opening must have developed in the lung. The patient died shortly afterwards, and this was found to be the case.

CASE 4.—Male, aged twenty-four. Pneumothorax with sero-purulent fluid. Death.

Inspiratory pressure	= + 6¾	inches of water
Expiratory „	= + 8¼	„
Respiratory oscillation	= 1½	„

Thirty-four ounces of sero-purulent fluid were removed.

CASE 5.—Male, aged thirty. Pyo-pneumothorax. Death.

Inspiratory pressure	= + 1½	inches of water
Expiratory „	= + 2½	„
Respiratory oscillation	= 1	„

Eighteen ounces of pus were removed.

Subsequently pus discharged itself at the seat of puncture, and an incision was made. The patient died shortly after.

CASE 6.—Male, aged forty-six. Hydro-pneumothorax.

		In. of water.
First paracentesis:	Maximum pressure	= + 9

Seventy-four ounces of serum were removed.

		In. of water.
Second paracentesis	Pressure on ordin. insp.	= + 1½
	„ deep „	= − 1
	Expiratory pressure	= + 4
	Respiratory oscillation	= 2½ or 4½

No fluid was obtained.

The variations in inspiratory pressure showed that the opening from the lung was closed to inspiration as well as to expiration. The patient left the hospital greatly improved. He returned, however, about two months later with a discharging empyema. The side had fallen in greatly, so that the ribs were close together, and signs of phthisis had developed at both apices.

All the preceding cases confirm the statement made, that when the inspiratory pressure is positive the presence of fluid may be inferred. As already stated, however, the converse is not true—namely, that if the inspiratory pressure be not raised fluid is absent. The following case illustrates this fact:—

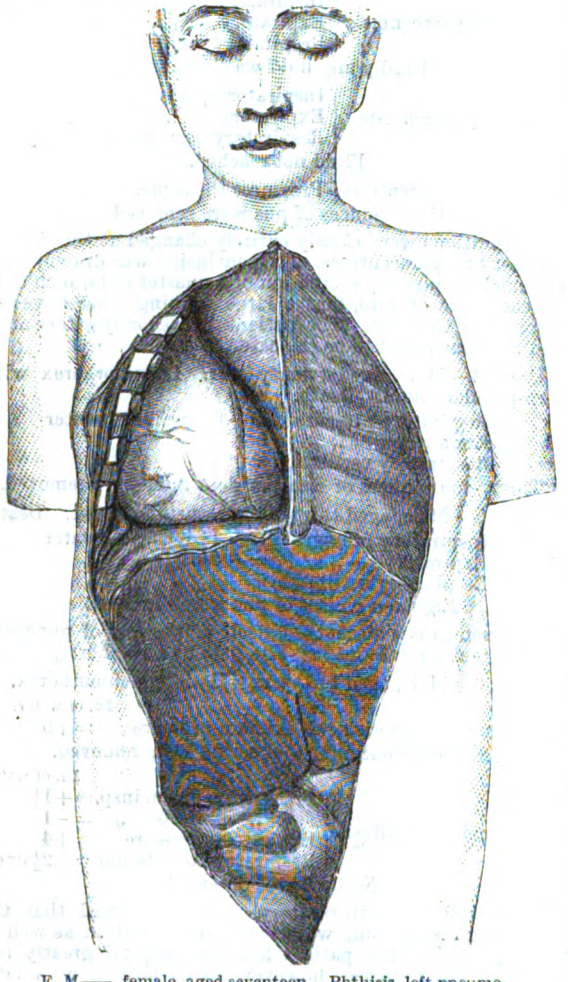
CASE 7.—Male, aged thirty-one. Pneumothorax with effusion. On paracentesis the inspiratory pressure was zero, but seventy-four ounces of serum were removed. After this the fluid was gradually absorbed, and the patient left the hospital feeling well, although the fluid had not quite disappeared.

Certain results follow from the alterations in pleural pressure just described, the most important and characteristic being, of course, the displacement of organs, especially of the heart. This displacement, it is known since Dr. Douglas Powell's experiments, is not due to pressure, but to the retractile power of the lungs themselves, and therefore is not necessarily associated with a rise in intra-pleural pressure; but it is clear that when the pressure is positive the displacement will be increased.

The heart, when displaced, is not, as was once supposed, rotated, but simply drawn or pushed bodily over. I append a drawing, for which I am indebted to my friend Mr. E. O.

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Bark of Birmingham, a former resident medical officer at the Chest Hospital, Victoria Park. In this it will be seen that the relation of parts is the same as when the heart is in its normal place; the only twisting or rotation which takes place—and it is but very little—is that necessitated by the curving of the ribs. The displacement is the same in kind, whether it be to the right or to the left side, and whether by air or by fluid.



E. M——, female, aged seventeen. Phthisis, left pneumothorax. The chest was opened by an incision down the middle line of the sternum, which was sawn through, and the costal cartilages on the right side having been divided, the front wall of the right pleural cavity was removed, leaving the left side unopened. At the upper angle of this opening was a large, rounded, tense tumour. This was the left pleural sac distended with gas and pushed considerably beyond the right border of the sternum, nearly reaching the end of the second rib. Directly below this was the pericardium, on opening which the heart was seen to be entirely on the right side of the chest, the apex being behind the right border of the sternum; the front of the heart consisting of the right ventricle, with a narrow border of left; scarcely any twisting on the axis, but the mediastinal structures, bronchi, and great vessels, all pushed over to the right side, the trachea passing nearly behind the right sterno-clavicular articulation. The right lung was only visible at the lower external angle of the opening, where the anterior border slightly overlapped the pericardium. On opening the left side of the chest a considerable gush of air took place, and the tumour of the left pleura became flaccid, but did not entirely recede behind the sternum; the heart returned more than an inch towards the left side. The left lung was adherent to the chest wall posteriorly down to the third rib; anteriorly and latterly the lung was free, except that the small tongue of the upper lobe, which lies ordinarily in front of the heart, had a firm band passing from its apex to the pericardium. There were two openings in the pulmonary pleura communicating with cavities in the lung. The pleural cavity contained a considerable quantity of pus, and the costal pleural was thickened, and covered in many places with pyogenic membrane.

In spite of the extreme displacement of the heart which occurs, cardiac murmurs due to displacement are, I believe, very rare. I have also been unable to satisfy myself of the actual existence of the sharp bending in the vena cava which the late Dr. Moxon described in displacement, and to which he referred some of the cases of sudden death in large pleuritic effusions. When the intra-pleural pressure is high, the veins running upon the inside of the thorax may be compressed, and the interference to the circulation through them will show itself by distension of the superficial veins of that side, and also by distension of the veins of the arm and neck. It might be supposed that when air or fluid are present together in the pleura, the air would probably be readily absorbed as the pressure arises. This, however, is by no means the case. I shall return to this point later.

One result attributed by many writers to great distension in pneumothorax my own observation does not confirm. It is stated that by the high pressure the percussion note may lose its tympanitic character, and become muffled or even dull. I have never been able to obtain the slightest evidence at the bedside to support this assertion, and a few experiments I have made go far, in my opinion, to disprove it.

The access of pneumothorax is usually sudden, and marked by characteristic severe symptoms, but in some cases these initial symptoms are slight, or even, it may be, entirely absent. These cases are described as latent pneumothorax. They are met with usually in the course of advanced phthisis, for to a bedridden patient it matters little whether a lung be useless on account of phthisis or because of the collapse which results from pneumothorax. Latent pneumothorax is, however, sometimes met with in phthisical patients who are not in bed, and even occasionally, though of course much more rarely, in the apparently healthy; that is to say, pneumothorax is sometimes discovered in these cases where there is nothing, or very little, in the clinical history to fix the date of its access. I know of no satisfactory explanation of the absence of initial symptoms in these cases, but I have myself met with it a few times.

The prognosis of pneumothorax is, of course, unfavourable. When it occurs in the ordinary course of phthisis, the mortality is very high. My own statistics show that about 90 per cent. of these cases die within the first month.[16] Weil's mortality-rate is lower—namely, about 50 per cent.[17] It is difficult to attach much statistical importance to small numbers, and the truth probably lies somewhere between these two extremes. Each case must, however, be judged upon its own merits. In any particular case the prognosis will be determined chiefly by the cause of the affection, and by its effect upon the patient, and next by the character of the effusion which may develop.

I wish, however, now only to speak of the cases in which recovery occurs. This may take place in one of two ways: either by the gradual conversion of the pneumothorax, through the development of fluid and the disappearance of the air, into a case of fluid effusion, which heals in the usual way; or by the simple disappearance of the air without the development of any fluid at all.

In the first group of cases the exudation is, of course, usually serous, but not invariably. In the case of a man, aged twenty-two, suffering from pneumothorax, on the first paracentesis pus was withdrawn. On the second paracentesis, about a fortnight later, the fluid was found to be sero-purulent, and finally it became serous. Recovery was ultimately complete.

The second class of case—namely, that in which recovery takes place without any effusion—is, of course, much less common, but still not altogether rare. I described, in the Clinical Society's Transactions, vol. xvii., p. 56, one such case, and I collected records of twenty-four other cases from literature, although the list did not pretend to be complete. Since that paper was written I have seen two or three other instances myself, and a few more have been reported, so that the number of recorded cases of this kind is now not very small, and as attention has been directed to them it is probable that this number will be soon further increased.

This rapid removal of air is familiar in experimentally produced pneumothorax. It is, in fact, I believe, difficult to maintain an artificial pneumothorax long in a healthy animal, because the air so quickly disappears. Fluid effusion may also in like manner be rapidly removed, and in both cases alike the lung may very rapidly re-expand. The common explanation given of the re-expansion of the lung after fluid effusion is not altogether satisfactory. The walls

[16] THE LANCET, May 3rd, 1884.
[17] Deutsch. Arch. f. Klin. Med., vol. xxix., p. 364.

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of the chest fall in; adhesions, it is assumed, have formed across the pleural cavity, and as these contract the lung is pulled out so as to be again in contact with the parietes of the thorax. This may be the correct explanation, but it seems improbable, for adhesions are quite as likely to form over the lung and bind it down, and, in fact, the existence of adhesions in this position is often assumed to explain cases in which the lung has not expanded. This theory assumes, moreover, that the pleural cavity must, as a matter of course, after fluid effusion, be obliterated, and I do not think that this is always the case in the pleura any more than it is the necessary and invariable consequence of effusion into the joints. Whether this explanation be sufficient or not for the cases of long-standing pleuritic effusion, it is clearly inadequate to explain the cases of rapid absorption of fluid referred to. Cure by the formation and gradual contraction of adhesions is slow, and requires many weeks or months to complete itself, but in the cases we are now considering recovery is often accomplished in as many days.

What is the mechanism, then, by which the lungs in such cases are re-expanded? They collapse, it is known, by virtue of their own elasticity, with a force equivalent to about 7 millimetres of mercury. If they are to be re-expanded, some force is required for the purpose which shall be greater than this. When they are brought out so that the two layers of the pleura are in close contact, cohesion comes into play, as I have shown, to keep them out, but to get them so far a force greater than 7 millimetres of mercury will be necessary. Where is this force to be found?

The question, perhaps, is simpler in the case of fluid than it is in the case of air. The fluid may be removed in many ways: by absorption, by transudation, or by the pump-like action of the respiratory movements upon the lymphatics of the pleura. The existence of this last process as a factor in the removal of the fluid depends upon the demonstration of stomata in the parietal and visceral layers of the pleura. Recklinghausen first demonstrated stomata on the peritoneal surface of the diaphragm; Dybkowski in the costal pleura; and, although their real existence has been denied recently by Sappey, Klein, in his work on the "Lymphatics of the Lung," has no doubt of their existence, and thus describes the part they take in absorption: "It is quite clear," he says, "that the respiratory movement of the lungs is a factor that plays a most important part in the process—that is, of absorption by the lymphatics. When the lungs expand, as during inspiration, it will necessarily have the effect that the stomata of the surface are opened widely, and that the inter-muscular lymph spaces of the lung (of the guinea-pig), as well as the proper lymphatic vessels of the pulmonary pleura, become distended. Under these conditions the lymphatic system will become filled with material that happens to be in the pleural cavity, and that is able to pass through the stomata. During expiration, on the other hand, the stomata as well as the lymphatic spaces and proper lymphatic vessels will become compressed, so that their contents will be discharged into the efferent trunks." He further states elsewhere that the existence of stomata is actually demonstrated in inflammation by the bands of coagulated fibrin which are found plugging them. In the case of pathological effusions into the pleura this arrangement of the lymphatics cannot fail to be of the highest importance. It is often observed that a large effusion remains stationary for a long time when left alone, but that removal of a part of the effusion by paracentesis is followed by a rapid disappearance of the remainder. Paracentesis is followed, as I have shown above, by a return of the respiratory movements, which had been more or less impaired by the large effusion, and the consequence of this will be that the lymphatic pump will be restored to action. It is evident that in this process we have a power sufficient of itself to produce the force requisite for the re-expansion of the lung.

In considering the removal of fluid from the pleura, that peculiar property of the lung must not be forgotten of which mention has been made. I refer to the ready permeability of a still air-tight lung to fluid under pressure, so that it is possible that a part of the exudation may be actually squeezed through the lung as through a sponge, and, when it has reached the bronchi, may be got rid of partly by expectoration and partly by absorption. Perhaps this is an explanation of the so-called profuse watery bronchitic expectoration occasionally met with in large pleuritic effusions, and which is usually attributed to pulmonary congestion. I think this theory might be tested by chemical examination of the sputum, for such a transudation would probably be more richly albuminous than that of ordinary bronchitis. It is not likely, however, that this process can be of much importance in ordinary cases, on account of the frequent absence of any considerable pleural pressure, and because of the collapsed condition of the lung on the affected side. It may, however, play its part in relieving tension to some extent, and aiding in this way the lymphatic pump to get once more to work.

Lastly, we have to consider the removal of fluid by absorption, with especial reference to the consideration whether it may be capable of producing the force requisite for the re-expansion of the lung. I do not know of any experiments bearing directly upon this question—that is, the question of the force developed by absorption within the body. Exudation (which, I suppose, may fairly be regarded as the counterpart of absorption) may take place under considerable pressure, for proof of which we need not go beyond the pleura itself, as the pleural pressures in many cases of effusion demonstrate. We have only to imagine the process reversed, and more than the required force will be available.

It is possible that, so far as mere exudation goes, there may be no essential difference between dropsy and inflammation, and that in both the exudation may be due to obstruction, with this only difference, that in dropsy the obstruction has usually a more or less distant origin, and in inflammation a local cause in the inflamed part. If this be so, the cessation of inflammation will remove the obstruction, no more exudation will occur, and the effusion will be ready for absorption. If, as Draper assumes,[18] in opposition to the commonly accepted doctrine, the interchange of gases in the blood in the capillaries is sufficient—as I must confess it appears to me to be—to produce a current onwards in the blood, we may have in this a force of some magnitude to aid in absorption, a kind of capillary aspiration, if it may be so termed. At any rate, in the absence of direct experiment, we may, I suppose, assume that we may have the same force available in disease to remove pathological fluid from the pleura which, in health, is active to keep the pleura empty.

The removal of gas from the pleura is a still more complicated problem. The conditions we have to deal with are these two gas-holding cavities: first the lungs containing gas of a tolerably constant composition; secondly, the pleura containing gas which differs, in many respects, from that in the lungs;—these two cavities being separated by a complex membrane richly supplied with bloodvessels. We know that the gas is quickly and completely removed from the pleura, and under such conditions that, at the last, not less than 7 millimetres of negative mercury pressure is produced. The process by which the gases may be removed are these—diffusion, simple absorption, and absorption aided by chemical combination:

The percentage composition of the air in the vesicles of the lungs may be taken to be the following:[19] N=79·557; Co^2=4·380; O=16·033, and this probably remains fairly constant, the exchange between it and the atmospheric air in the larger tubes being provided for to a great extent by diffusion.

The air in the pleura varies in composition. If the air enters from without through a wound in the thoracic walls, it is of course to begin with simply atmospheric air. If the air enters through a perforation in the lung, it will have the composition of the air in the vesicles as given above. If the openings remain patent, the composition of the pleural gas may change but little; if, however, the openings be closed, changes in its composition at once take place, and these changes have been used to determine the question of the patency of the perforation. The earliest analysis of the gas in the pleura in pneumothorax was made by Dr. Davy,[20] who found that the O varied from 2·5 to 5·5, the Co^2 from 6·0 to 8·0, and the N from 88 to 90 per cent. More recent analyses[21] show that after remaining for some time in the pleura, the oxygen almost completely disappears, while the carbonic acid and nitrogen increase, the former very considerably. An analysis of Demarquay's[22] will illustrate this:—O = 0·49; Co^2 = 11·16; N = 88·35.

There are, so far as I know, no systematic analyses of the gases made during the stages of disappearance of a pneumothorax, so that the subsequent changes can be only a

[18] Medical Physics, 1885, p. 308.
[19] Michael Foster's Physiol., 1878, p. 265.
[20] Philosophical Transactions, 1800.
[21] Ewald, Reich. u. Dubois Reyn. Arch., 1875, p. 167.
[22] Gaz. Méd., 1865, 496.

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matter of inference. In the end, however, all the gas, whatever be its composition, is removed. It is evident, however, that diffusion simple is quite inadequate to explain even those changes which are known to occur; for although at a given time, owing to unequal rapidity of diffusion of the different gases, the relative composition of a mixture might be changed, diffusion could in the end only lead to uniform composition of the two exposed mixtures, and the gases in the pleura could not therefore by diffusion be made to disappear. Gréhant[23] has further shown by experiment that, when the circulation is intact, little, if any, interchange of gases takes place through the pleura. If his observations be correct, it follows that, in the removal of gas from the pleura, we have to deal only with the same processes as are concerned in the exchange of gases in the lungs; and that what we have to consider is the action of circulating blood upon the gases contained in the pleura. In these processes, diffusion enters only so far as to provide for the passage of the gas into the blood-plasma, where the other processes —namely, absorption and chemical combination—come into play. The only difficulty here is that the blood is exposed on two sides to gases of different composition; and it might be supposed that, when the tension of gases in the pleura became less than that of the same gases in the vesicles of the lungs, no further removal of these gases from the pleura would occur.

Although the blood absorbs oxygen, carbonic acid, and nitrogen, still these gases were not all found to obey in the blood the laws which govern the absorption of gases in fluid, and it was inferred that the gases entered into loose chemical combination in the blood. This has been proved in the case of oxygen and carbonic acid, and is possible also, though to a much less degree, in the case of nitrogen.

The complete disappearance of oxygen from the pleura after pneumothorax is illustrated by two series of physiological observations. Analysis of the gases contained in the lungs after suffocation by obstruction of the trachea or bronchi shows that the oxygen is reduced to almost exactly the same amount as that in the analysis given of the air in pneumothorax — namely, about 0·4 per cent. Again, in experiments on respiration in a closed space, analysis shows a similar complete absorption of oxygen from the air of the chamber in which the animal is confined. There is, therefore, no difficulty in accounting for the complete disappearance of the oxygen from the pleura.

The carbonic acid, though partly absorbed, exists similarly in loose chemical combination both in the serum and in the cells of the blood; but there is this difficulty with carbonic acid, that while oxygen is naturally absorbed from the air in respiration, carbonic acid is naturally returned to it; and the analysis of the gas in pneumothorax seems to show that the carbonic acid does at first actually increase in amount, not only relatively to the nitrogen, but absolutely, so as to even reach 12 per cent., an amount considerably in excess of the carbonic acid tension in venous blood. These facts admit, however, of another and, I think, a more probable interpretation. If, as we suppose, the changes between the blood and the gas in the pleura are the same as those between the blood and the air in the lungs, there will be for every volume of oxygen absorbed an almost equal volume of carbonic acid discharged; so that in the end, when all the oxygen has disappeared, its place should have been taken entirely by carbonic acid. There ought, on this assumption, to be about twenty volumes of carbonic acid, the nitrogen remaining the same, but none of the analyses given show more than 12 per cent. The conclusion, therefore, may be drawn that the difference—namely, eight volumes—has been already absorbed. This interpretation has the advantage of removing the difficulty previously referred to, of the apparent increase at first of the carbonic acid.

A similar apparent accumulation of carbonic acid takes place, it is stated, in the vesicles of the lung, when the bronchus leading to them has become plugged, the lung in that part, on the absorption of the carbonic acid, becoming atelectatic. It is, however, in the end all removed. As experimental evidence of this is quoted the complete atelectasis which is produced by suspending a lung in water after it has been filled with carbonic acid.[24]

The nitrogen exists in the blood, it is believed, chiefly in simple solution, although the possibility of weak chemical combination cannot be absolutely excluded. The ease with which the nitrogen may be removed from the blood is demonstrated by the experiment of allowing an animal to breathe an innocuous gas containing oxygen, but free from nitrogen. Under these circumstances the whole nitrogen is discharged from the blood. According to Reynault and Rieset, there is naturally found in the expired air of health a slight excess of nitrogen; but it is also shown by other observers that under certain conditions nitrogen may be absorbed to some extent during respiration.

Now, although I do not know of any experiments which actually demonstrate the force which may be developed by the absorption and chemical combination of these gases in the blood, still it is extremely probable that in both of these processes there may be a far greater force developed than that which we require for the re-expansion of the lung. Into this problem the question of time hardly enters; for, if these processes be active at all, whatever influence time may have will be all in their favour. If, however, we may measure the force of interchange by its rapidity, it is clear that we must have great forces to deal with; for we find that in the twenty-four hours no less than 900 grammes of carbonic acid are excreted and 744 grammes of oxygen absorbed; and, in spite of this, there are contained in the entire blood of the body at any given time a total quantity of only 4 grammes of carbonic acid and oxygen combined.[25] Such a statement shows the extreme rapidity with which the exchange of gases is carried on; and we may, I think, fairly argue from the rapidity to the force of exchange.

The preceding speculations are necessarily somewhat crude; still the facts which have to be explained are well established—namely, the rapid disappearance of the air and fluid, and the consequent rapid re-expansion of the lung. Incomplete as is our present knowledge of the actual processes concerned, it is evident that in many of them there are sources of power sufficient to provide the force of which we are in search.

I wish that I could have spoken of the treatment to be adopted in the different forms of pneumothorax. There is much to be said upon this question. I must, however, leave this and many other interesting parts of the subject untouched, for the time at my disposal has reached its limit.

When I selected pneumothorax as the subject of this lecture, I did so because it had long been with me a favourite clinical study. I was aware that much had been already done, but I did not realise how much still remained for investigation. I can hardly hope that in this short lecture I have been able to throw much light on the many complicated questions which have arisen, but I shall be content if I have rendered more visible some of the shadows which still rest upon this field of knowledge.

[23] Gaz. Méd. de Paris, 1877, No. 49; 1878, Nos. 13 and 15.
[24] Landois and Stirling, Phys., p. 287.

NOTES UPON THE OPERATION FOR HARE-LIP.

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To obtain the most artistic result in the operation for hare-lip several practical matters demand attention; chief amongst them is this, that the line of operation be so planned that the cicatrix eventually prove as inconspicuous as it is possible for it to be. It should not descend straight from the nostril to the free border of the lip or it will be sure to invite attention, especially where it traverses the mucous border; and if the operation be done in the old-fashioned way the lower end of the linear scar is apt to be permanently indicated by a triangular notch in the free border of the lip. Then, the healing should be prompt, and the line of union thick and strong, and there should be eventually no white dots upon the surface marking the passage of hare-lip pins.

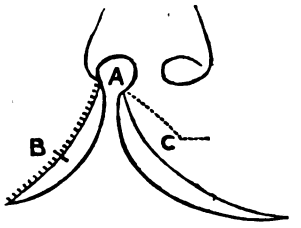
Supposing that the cleft extend into the right nostril, as in Fig. 1, the operation is begun by paring off the mucous membrane from the right side (but without removing any skin) through the whole thickness of the lip, and that not in the vertical direction only, but outwards almost to the angle of the mouth. (Arteries are best secured throughout the operation by forci-pressure forceps.) The mucous border of the lip on the left side of the cleft is to supply the lower

[25] Ibid., p. 281.

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border of the right side of the lip; and for this purpose it does not suffice to bring a thin tail of mucous membrane across the cleft—a thick, bold, serviceable flap is needed. This is got by making an incision through the lip with a fine scalpel, from A to C; then, when the sides of the cleft are drawn together by the finger and thumb, the raw surfaces A B, A C are brought together in the vertical line, and are secured by four or five interrupted sutures of fine wire which pass deeply through the substance of the lip, whilst the full part of the labial flap is brought across beneath the vertical incision to form the prolabium. The rest of the flap, which is not merely mucous membrane, is brought to the right side of the lip, being trimmed and adjusted as circumstances demand. (Fig. 2.) Each case may need some special modification of procedure—"one must cut one's coat according to one's cloth,"—but the general plan of the operation as described above remains. There is an economy of tissue, for the mucous membrane on one side of the cleft only is

FIG. 1.

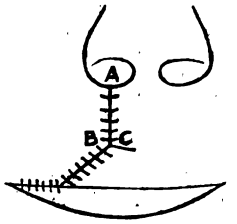


Single hare-lip; lines of incisions shown by dots.

wasted; that of the more promising side, with a good deal of the lip tissue, is brought down to form the border of the new lip. It may be that some weeks after the wound has soundly healed a finishing touch or two may be needed.

I have now altogether given up the use of hare-lip pins in the operation, and since doing so I have dealt with some of the very worse double clefts that I have ever seen, and to my entire satisfaction. The pins were originally used, no doubt, to keep the strain off the sutures, but the introduction of the improved waterproof strapping has rendered them entirely superfluous. A great disadvantage of the pins was that they were apt to leave the points where they passed through the skin marked by permanent and unsightly scars. To diminish the risk of this to the utmost I had been in the habit of withdrawing them at the end of twenty-four hours, but more recent experience shows that one can obtain better results by discarding them altogether. The sutures should be of fine silver wire passed deeply, and of

FIG. 2.



Lines of incisions adjusted by fine sutures, no pins being used.

horsehair which has been soaked in warm carbolic lotion; the latter answer particularly well for adjusting the mucous membrane. Sutures have also to be used freely and deeply along the dental surface of the vertical and oblique wounds; they should be arranged as carefully as are those upon the dermal surface. They complete the adjustment of the edges, they steady the tissues, and they prevent food and the tip of the tongue from getting into the wound. For applying them the lip must be thoroughly everted. On a few occasions I have met with a hare lip after operation in which the bond of union was only of the thickness of the skin; I apprehend that if this posterior set of sutures had been used the adhesion would have been through the whole thickness of the lip. I have never had my attention called to scars upon the tongue or gum from irritation caused by these sutures, and consequently I leave them to find their own way out; the sutures upon the front of the lip I begin to remove on the second day.

When the operation is finished I cover the lip with a scrap of absorbent wool, and, drawing the cheeks well together with the finger and thumb, I steady them by a piece of waterproof strapping, the wide ends of which reach nearly to the ears, whilst the middle part is narrowed in proportion to the depth of the lip.

It is to be noticed in Fig. 1 that the line of incision A C is prolonged for some distance upwards and outwards through the lip; unless this be done the border of the lip does not lie level, a slight kink being found in it. But on making this secondary incision the flap comes smoothly across.

SOME BACTERIOLOGICAL OBSERVATIONS IN CONNEXION WITH SUMMER DIARRHŒA.[1]

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THE mortality caused by summer diarrhœa is at first sight almost staggering to those who pay little heed to vital statistics. During the three months ending September, last year, no less than 15,900 deaths were attributed to diarrhœa in England alone; had but a quarter of this number been caused by any other disease, not only the professional but the public mind would have been startled thereby. Then why this comparative apathy that exists in regard to diarrhœa? The reasons are various. First, the very large proportion of these deaths occur amongst infants and young children; in some of our large towns a veritable slaughter of the innocents occurring annually in the summer months. Probably another reason is to be found in the fact that diarrhœa is not one disease, but is in many cases only a symptom or accompaniment of other ailments, and has not one common cause, but both in etiology and pathology presents much variety. Even its place in our nomenclature of classified diseases has been, and is, subject matter of dispute; for whilst generally it is agreed that it should be placed in the zymotic group, reasons have been adduced to show that it does not rightly belong here. One feature of much interest is the varying prevalence and fatality of this disease, in different towns, and in different parts of the country, and an inquiry directed especially to this point has been in progress under the direction of the Local Government Board for some years past, without, up to the present, yielding any satisfactory explanation of the same; and as yet no results have been published, though such men as Drs. Power, Ballard, Klein, and Cash have been engaged more or less in the work. As to the immediate cause or causes concerned in its production the ground is no more clear. Heat, dampness, improper food, artificial feeding, maternal neglect, wet subsoil, dense populations, peculiar geological or meteorological conditions, congenital debility, foul air, organic emanations, &c., have one and all been put forward as its cause or causes, and doubtless most of these play a certain part in its production, but very little consideration will serve to show that none of these alone afford us a solution of the problem. Of all these, the only one that exists constantly, and without which the disease in epidemic form is not met with, is a high temperature; and yet that heat alone is not the sole cause is seen on comparing different towns and districts where the temperature, as registered by the thermometer, is practically the same. For instance last summer, whilst in Wiltshire, Dorset, Hereford, Shropshire, Rutland, Westmoreland, and North Wales the death-rate was less than ½ per 1000, in Middlesex (extra metropolitan), Warwickshire, Leicestershire, and Yorkshire it was seven times as fatal. Or, taking the large towns, in Bristol the mortality was only 1 per 1000; in Huddersfield and Halifax only about 1·5, and in Derby 2·5; whilst in Salford and Preston it was nearly 5½ per 1000, in Leicester 6·23, and in Norwich 8·24. It cannot be supposed—and, indeed, is easily disproved—that the variations in feeding, or maternal care, or density of population in the above places are such as to cause a mortality nearly ten times as great in some of these towns as in others. Another fact which has been too much lost sight of in connexion with this subject is, that, although it is young children

[1] A paper read before the Manchester Medical Society.

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who chiefly die, the disease is by no means confined to them, and I can show that for every case of diarrhœa occurring amongst children under five years of age there are probably four times as many above that age who suffer in the same way. In Leicester, out of 9700 patients, of whom particulars have been obtained, only 2400 were children under five years old. If we come to consider and examine more closely the prevalence of this disease in the various districts of a large town, after making due allowance for the influence exerted by all the above-mentioned supposed causes, we are led to the same conclusion as when comparing different towns with each other—i.e., that there appears to be some factor at work in some districts which is absent in others, and the theory that it is due to some form of germ life has been advanced with considerable plausibility. For even those who put forward as the cause such influences as over-crowding, foul atmosphere, organic emanations, and sewer air must admit that the deleterious effects of these things is not simply because the air is foul, or the emanations organic, or the air derived from sewers, but because each and all of these are laden with something, probably the germs of bacterial life, and to which germs the resulting ill-effects are most probably due. So wonderful and interesting are the discoveries made of late years respecting the connexion of disease with these low forms of life, and so captivating is the study of them, that, undoubtedly, we are in danger of going too far and pushing theories further than we are warranted by ascertained facts; it behoves us therefore to sift and weigh well all evidence or observations brought forward in support of a bacterial origin of any disease, and no one is more conscious of the incompleteness and points open to criticism in the few facts which I am about to notice than I am myself.

Leicester, the town to which I am medical officer of health, stands pre-eminent amongst English urban populations in two respects: first, it is the headquarters of the opponents of compulsory vaccination, the vaccination laws being to-day practically in abeyance there; and, secondly, it has for many years stood above all the other large towns for the prevalence of, and mortality from, summer diarrhœa, thus affording a large field for the observation of this disease. This unenviable notoriety has attracted the attention of the Local Government Board, who have sent experts to make special investigation into the subject. By local observers also much time has been expended and work done, with a view to ascertain what are the factors to which this excess of diarrhœa is due. But it would take up too much time to attempt to go through this work in detail. The late medical officer of health, indeed, after paying much attention to the subject, gave it as his opinion that the cause was to be found in the emanations from the sewers, which in the lower parts of Leicester are in a notoriously bad state, being flat, without fall, too small in size, most of them never free from deposit, and often liable to be overfilled and flow back into the cellars and low-lying parts of the town; but actual proof of this theory is not forthcoming. Leicester is situated in the valley of the Soar, with rising ground to the east and west. All the older part of the town lies in the hollow or flat district, whilst the newer parts (as the town has extended) are built on the rising hills on either side, these being at the highest point some 100 feet above the low-lying district. The soil (alluvial drift) in the flat part is variable in character, much of it being clay, whilst irregularly distributed patches of sand and gravel are also met with. It is in this lower, flat part of the town where diarrhœa is most prevalent; and finding that, for years past it was in this area diarrhœa most prevailed, I thought it well to try to ascertain whether the air of this district would yield to experimental research any definite results, or different ones from those of the air in other parts; at the same time to examine the organs of the body in fatal cases for any corroborative evidence as to the cause of the disease.

By the employment of the methods of cultivation now in common use by bacteriologists, I believe I have arrived at a few certain definite results. And here I may remark that although during last summer more than 200 deaths have occurred, and notwithstanding that I have received the hearty co-operation of the medical men of the town, in only five instances have I been able to obtain a post-mortem examination within a sufficiently short time after death to be of any use for the purposes here required, for unless the examination of a body be made within at most six hours from death, any results obtained are quite unreliable. Of the chemical and pathological features of the disease I have nothing new to say, but it may be noticed, in passing, how very shrivelled and pinched in many cases is the expression after death from this disease, reminding one much of the faces seen in cholera. Another fact that arrested my attention, was the comparatively slight naked-eye pathological changes met with. The spleen, the kidneys, liver, &c., were apparently normal; in a few instances the mesenteric glands were somewhat enlarged, but by no means constantly so. The chief lesions were seen (as of course might be expected) along the mucous membrane of the intestinal canal; but very different were these to those met with in typhoid fever. The inflammatory changes extended more or less throughout the entire length of the intestinal canal, being most severe along the ileum. Small ulcers were in most instances present, but there was none of the localisation of these to Peyer's patches, as in enteric fever, nor was the cæcum found to be affected more than other parts of the canal.

The general results of the examination of the various organs, with a view to ascertain the presence or otherwise of micro-organisms may be summed up as follows. From the blood (taken from the heart) no results were obtained, with the exception of once doubtfully from the right ventricle. From the spleen no cultivations could be obtained. From the mesenteric glands three of the cases furnished growths. From the kidneys abundant growths were obtained. From the ulcerations in the coats of the intestines (as of course was to be expected) the growths were abundantly profuse. From the first growth of micro-organisms obtained successive cultivations were made, with a view, if possible, of obtaining a purer growth, as the original ones were very mixed, containing micrococci and bacilli of various forms and sizes, but the attempt was not very successful. The material chiefly used in the cultivations was nutrient gelatine, this being found best adapted for that purpose. The temperature at which the cultivations were carried on was about 20 C. (68° F.), and a difference was observable in the rate of growth between the three sources—that is, between the growths from the intestine, the glands and the kidneys. In those from the intestinal coats the growth was more rapid, so that within three days the whole of the gelatine had become used up and liquefied, and the liquid swarming with micro-organisms. In those from the kidneys and mesenteric glands the rate of growth was much slower, but the changes that could be seen taking place from the point of inoculation were the same in character, the mass slowly becoming fluid, until at the end of a week no difference was to be seen between these and the former. The resulting growths from the intestines, kidneys, and mesenteric glands respectively, examined microscopically, showed but little difference. The photographs shown give some idea of the organisms seen. The bacilli, when compared with those of Asiatic cholera, are shorter and thicker. The reaction of the gelatine in each case becomes markedly alkaline; and one other fact worth notice is that in all there is developed a powerful offensive odour, even to the fourth and fifth generation, the latter of which cannot contain more than the two-millionth part of 1,000,000 of the original inoculation, and yet with this immense dilution the odour is as characteristic as in the first growth. From this we may to some extent realise the enormous power of reproduction these micro-organisms possess, seeing that in these tubes before you now swarming with microbes only a many-millionth part of the original material can possibly be present.

But probably of much more significance than the foregoing are the results of the examination of the atmosphere. I have examined the air of the streets of the lower parts of the town, air from the sewers in the same district, and compared it with the air of the higher districts where the disease is comparatively absent, with the following results:—Examined on the same lines as before by means of cultivations in nutrient gelatine, the air in the streets of those parts of Leicester where the disease most prevails, and where the sewers are in the worst condition, as to cleanliness &c., the number of organisms per cubic metre, varied from 2000 to upwards of 5000 or 6000, the latter being obtained from air from sewer ventilators in the middle of the streets. Whilst in the air of the more open and higher districts they varied from 60 or 80 to 800 or 900 per cubic metre. The growth of these was slower than in those cultivations derived from the organs of the bodies, but with the air from the sewers the gelatine was ultimately liquefied in the same manner, and in these cultivations an odour was perceptible

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of the same offensive chraracter, but much slighter in degree to that before mentioned.

Thus far all that has been shown is that in the organs of the body after death, and from the air, &c., certain microbes have been obtained, and that these have been artificially cultivated in nutrient media; but no direct evidence is forthcoming to show their connexion with the disease. I am, however, able to assert from actual experiment that a very small dose of these artificially cultivated microbes will produce a smart attack of diarrhœa; and although it is far from being proved that this diarrhœa is the result of some form of bacterial life, as the four essential conditions for any such proof are not yet forthcoming—i.e. (1) the presence of a distinct and specific organism in the blood or tissues of those suffering from the disease, (2) the artificial cultivation of these apart from the body, (3) the production of the disease by introducing these into a healthy body, &c., and (4) the presence of the same organism again in the body when such disease is introduced,—yet I would submit that one is justified in saying that there is evidence to connect these organisms with the prevalence of the disease; and although this slight contribution to a most obscure and difficult subject is little more than preliminary to the complete study of the etiology of summer diarrhœa, and is open to criticism at every point, I have thought it not out of place to bring together, as it were, to a focus what little in the intervals of other work I have had the opportunity of doing.

Town Hall, Leicester.

A CASE OF HYDROPHOBIA AND A CASE OF TETANUS.

BY H. HANDFORD, M.D., M.R.C.P.,
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W. P——, a powerfully built carter, aged thirty-two, was admitted under my care into the Nottingham General Hospital, at 8 A.M., on Feb. 3rd, 1887, said to be suffering from hydrophobia. He had been bitten by a stray dog four months and a quarter previously. No further information could be gained about the dog except that it was not known in the neighbourhood in which the patient lived. The wounds were on the back of the third and fourth fingers of the right hand; they were not cauterised. He treated them with domestic remedies, and they healed in a week or ten days. The scars were quite evident, and had not become painful or irritable. When I saw him a few hours after his admission and examined him, though I led him up to the subject several times, he markedly avoided any mention of his having been bitten, or of his difficulty in swallowing, until directly asked. There was a very evident unwillingness to talk or even think of the subject. This at the time seemed to me to point strongly in favour of the genuine nature of the disease, for at the outset there were many difficulties in the diagnosis of hydrophobia, which had been first made by the patient himself before coming to the hospital. He had been a soldier, had had "fever" in India, and had been very intemperate. His mother died insane, and a brother has "fits." There was some doubt whether the patient had been drinking for the previous fortnight, during which time his wife said he did not seem in his usual health, but he did not speak of the bite. The patient himself said that three days before his admission he began to feel ill and thought he had a "cold." He was sleepless, restless, dizzy, and had momentary losses of vision. He consulted a medical man, who prescribed for him. After he returned home, as he was washing, he screamed directly the water touched his face. Shortly afterwards he noticed some difficulty in swallowing. He then made the diagnosis of hydrophobia for himself, went again to his doctor (whom he had not previously told either of the bite or of his difficulty in swallowing), and he confirmed it. A few hours later he walked to the hospital and asked to be admitted. He complained of difficulty of swallowing, and of a feeling of constriction over the upper part of the sternum. His expression was very anxious, eyes rather wild and staring, and he spoke with an appearance of enforced calmness. The temperature was normal; pulse 56, and quite regular; *respiration 22, and markedly irregular*, being frequently interrupted by deep sighs. My attention was directed to the character of the respiration by my colleague, Mr. White, whose experience extends to six or seven cases, in all of which irregularity of respiration was very noticeable. There was no huskiness or alteration of the voice, and no frothing at the mouth or spitting till a few minutes before death. His tongue was fissured, soft, flabby, and coated in patches with a thin white fur. He complained of loss of appetite and thirst, and had taken very little food for three days. He vomited several times the day before his admission. His urine was rather concentrated, sp. gr. 1024, and contained no albumen. At 10 A.M., two hours after his admission, the case was taken by Dr. Williams, and much of the following is taken from his notes. The patient was quite rational and could give a clear account of his illness. He asked for something to drink almost as soon as he came in. He would not let the nurse hold the cup, but grasped it himself quietly and firmly and swallowed the water at one gulp. During this act he became much excited. He would not have more than a tablespoonful of water in the cup at a time. He said he had no difficulty in swallowing, all his difficulty being in getting the cup to his mouth. When he was about to be washed, as is usual, he became much excited, and said to the sister of the ward, "Don't bring water near me." He asked to be sponged instead, but said if he had to be washed he would do his best not to scream. The noise of pouring out water at this time did not affect him. When washed he shuddered and sighed like a person in a cold bath, and turned his head away from the water, but was otherwise unaffected till his face was to be washed, when he asked for the sponge and himself rubbed his face violently. In doing so he squeezed out a few drops of water, which trickled down his face and caused a slight convulsion. When I saw him at mid-day he was quite calm and rational. On my requesting to see him drink, he asked me to stand away, turned his head from the locker on which the cup stood, reached out his hand, seized the cup, *and brought it rapidly to his mouth with very irregular, jerking movements*, took a large mouthful and swallowed it with marked effort, accompanied by very slight facial spasm and some *general excitement*. The process of swallowing was much like that of a child taking disagreeable medicine. There was nothing that one could fairly call a convulsion at this time, but there was probably incoördination of the muscles of deglutition. At 8 P.M. I saw him again, and he said he felt much better. His temperature remained normal, his expression was less anxious, pupils widely dilated, pulse full, quiet, and regular. During the day he had taken about a teacupful of rice pudding without much difficulty, and had drunk about a pint and a half of milk. He was so much improved at this time that a medical friend who saw him with me, and who had previously seen several cases of hydrophobia, entertained much doubt as to the genuineness of the disease. The patient was ordered an enema of chloral and bromide of potassium. It was given at 8.30 P.M. without difficulty, and he went to sleep between 11 and 12 P.M. After some broken sleep he finally woke at 5 A.M. on Feb. 4th, and suddenly manifested marked delusions, and became furiously maniacal. He had illusions of sight, and wanted to go through the window. He was a very powerful man, and it was with great difficulty that he could be restrained in bed. There were intervals of comparative calm, during which he could be reasoned with, but without effect. He expressed a wish not to hurt anyone, but during his furious delirium made determined efforts to bite the hands of those restraining him. The excitement was greater than anything I have witnessed in delirium tremens or in mania. He was treated by the hypodermic injection of morphia. At this time the noise of pouring out water gave him a convulsion. He was perspiring profusely, and the act of wiping the face with a handkerchief caused a spasm, as also did the draught of air caused by moving a towel near him. He said he was hungry, and called for meat. Some bread-and-butter was given him. He masticated it, but could not swallow it. He took water from a spoon, but refused a cup; the act of swallowing caused great excitement, and also spasms of the muscles of deglutition, lasting on the whole nearly a minute. In the intervals, though appearing rational, his statements were incorrect. For instance, he said he had been bitten only five weeks ago, and on the knee. The day before he had given a correct account. Talking of the dog or of the bite agitated him greatly. Among other illusions he saw a dog under the bed. He made most heart-rending appeals to those restraining him in bed, and taunted them with gloating over his misery. His death took place somewhat suddenly, apparently from

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failure of the heart, twenty-eight hours after his admission into the hospital, and on the third day (little more than forty-eight hours) after difficulty of swallowing was first noticed. Half an hour before death he could swallow milk, but sputtered out some of it. From this time he was frothing at the mouth, hawking up and spitting saliva. Twenty minutes after death rigor mortis had commenced, and the temperature in the rectum was 108·8°. There had been but little spasm of the trunk or limbs during life, though much voluntary effort. No priapism or sexual excitement was detected.

The body was examined three hours after death. Rigor mortis was strongly marked, and post-mortem lividity of the dependent parts of the body was distinct. The spinal cord was removed first. The blood was dark and remarkably fluid. Nearly two pints of blood escaped during the removal of the cord. The brain was next removed. There was a moderate amount of subarachnoid effusion and congestion of the small vessels in the pia mater. The cortical grey matter of the brain and the adjacent white substance for about one-third of an inch had an evident pink flush, due to capillary congestion. There were no hæmorrhages visible to the naked eye. The larynx was examined, and the interior (especially the false cords) was dusky and much congested. The heart was dilated, but empty. The other organs appeared healthy. Parts of the medulla and of the cervical cord were at once placed in powdered boric acid and forwarded to the Brown Institute, and I hear, through the kindness of Mr. Victor Horsley, that rabbits inoculated with them died of typical rabies. Other parts were carefully hardened in bichromate of ammonia solution, but sections showed nothing beyond an unusual fulness of the vessels, many of which were thromboses, but this was probably a post-mortem effect. No cellular infiltration or unusual number of leucocytes could be found, either in the medulla near the origin of the vagus nor in the cervical cord, though carefully looked for. In two cases of rabies in the dog sections of the medulla and cord were examined, but nothing beyond marked fulness and dilatation of the vessels could be found. There was no cellular infiltration or distinct evidence of an inflammatory condition. The disease is apparently too little localised and too rapid in its progress for coarse tissue changes to be found.

In this case difficulty of swallowing was not a particularly prominent symptom, neither would changes in the medulla account for the furious maniacal excitement which with its sudden onset were the marked features of the case. During the early stage the symptoms were so slight, and their progress so little, that many considered the case one of nervous mimicry; while those who only saw him during the stage of delirium, taking into account the family history of insanity and the drinking habits of the patient, looked upon it as acute mania. The complete clinical picture, however, leaves no doubt, even if the inoculation experiments had not been performed. To sum up the special features of the case, the incubation period was long—four months and a quarter,—the early symptoms very slight and slow in progress, the outburst of delirium very sudden and its intensity unusually great, and the stage of excitement very short—seven hours.

As a contrast to the above, I may give a few details of the following case of tetanus which came under my care a few weeks later. It was at first supposed to be idiopathic tetanus—a disease of very doubtful existence—but a careful search resulted in the discovery of a wound. The history is as follows:—

On Monday, April 4th, J. W——, a labourer, aged twenty-eight years, noticed a sore on the sole of his foot, caused by a nail in his boot; the place had inflamed and "gathered," and was very painful. (On admission into the hospital this sore was completely healed, and not in any way painful.) On Tuesday he rested from work. On Wednesday he worked in the market all day. On Thursday morning he complained of his jaws feeling stiff. On Friday morning he walked a distance of two miles, and on reaching home burst into tears, saying he had fallen down four times. His jaws were now much more firmly closed, and he complained of great pain and a feeling of constriction round the lower part of the thorax, and of dizziness. He went to bed, and shortly after had an attack of opisthotonos. On Saturday his jaws were very firmly closed, and he was given twenty grains of chloral every two hours. In the evening the dose was increased to thirty grains. On Sunday he was much better. On Monday he was admitted into the hospital. He was very drowsy from the chloral, but when roused gave a clear account of his illness. He could open the mouth well, and during the day took three pints of milk without difficulty. The tonic spasm of the muscles closing the jaws had almost entirely passed off, neither was there any permanent arching of the back (from tonic spasm of the erector spinæ) or hardness of the abdomen. Possibly this was the effect of the large doses of chloral, which, however, had no effect upon the clonic spasms, which came on, without any apparent irritation from noise or draught, every two or three minutes. The spasm of the diaphragm, as evidenced by a sharp inspiration and pain at the epigastrium, was marked during each convulsion. The ease with which fluids could be taken without bringing on any spasm was remarkable. The patient was so drowsy on admission that the chloral was not resumed till evening, when he was ordered thirty grains every four hours, and he had the last dose at 5.45 A.M. on Tuesday. During the night he took only half a pint of beef-tea, as the difficulty of swallowing had increased. On Tuesday morning, at 6 A.M., it was not thought safe to give him any more chloral, as he was very drowsy; face inclining to be dusky; breathing noisy, 43 per minute; pulse 134 per minute; pupils contracted, but reacting to light. The general clonic spasms, which the previous evening had been from twenty to twenty-four in the hour, were still sixteen or eighteen—that is, coming on rather more frequently than once in four minutes. During the day he received nutrient and stimulant enemata, but the spasms continued at the rate of from four to fifteen in the hour, and he died at 7 P.M., the pulse failing some time before the respiration. Death took place on the sixth day after the commencement of the symptoms. An inspection of the body was made twelve hours afterwards. There was no undue fluidity of the blood, and no naked-eye change in any of the viscera. Portions of the spinal cord and of the posterior tibial nerve on the affected side were prepared for microscopic examination.

The points of interest are: the temporary improvement under the use of chloral; the cessation, to a very large extent, of the tonic spasm, and the facility in swallowing; the failure of the chloral, though pushed as far as was safe, to materially influence the general clonic convulsions, which remained severe till the last few hours of life; death from failure of the heart, rather than from spasm of the respiratory muscles during a convulsion, as is common.

A CASE OF HYSTERICAL SPASM SIMULATING TETANY.

BY F. FOORD CAIGER, M.D. LOND.

E. S——, a general servant, unmarried, was admitted into the Paddington Infirmary on Jan. 27th in a very prostrate condition. It was afterwards ascertained that she had always been delicate, but had had no serious illness until two years ago, when she was admitted into the Kensington Infirmary suffering from general weakness. Her teeth then became bad, and she had severe neuralgic pain in the face, and at the same time suffered from "cramps and fits." She stated that she then went out of her mind, and was removed to Leavesden Asylum, where she remained six weeks, and eventually went out to service. In her situation she was underfed, and at the same time was worked very hard. The catamenia have always been regular in time, but profuse. On the night of the 24th she was suddenly seized with cramps, beginning in the left hand and foot, extending up the limbs, and affecting the left side of the trunk, which gave her great pain. At the same time the left side of the face became rigid. This, in its severity, passed off in about half an hour, but continued more or less until she was brought to the infirmary three days later.

On admission the following notes were taken: Pale woman; very prostrate; surface cold; respiration hurried and shallow; complaining of painful cramp in the left arm, leg, and side. The fingers of the left hand are flexed, and adducted at the proximal joints and extended at the distal. The thumb is rigidly flexed into the palm, which is hollowed by contraction of the hypothenar muscles. The hand is thus bent into the form of a rigid cone. The wrist is partially flexed, and the forearm semiflexed and pronated, with some degree of rigid adduction of the shoulder joint. An analogous condition is present in the foot, the ankle

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joint extended, and the leg straightened. The spasm likewise affects the muscles of the abdomen and the scapular group, the latter being very painful; and in the same manner the left pectoral and intercostal muscles. It is not obvious whether the diaphragm shares in the spasm. The left side of the face is rigidly fixed, and she is able to open her mouth but little, owing to contraction of the orbicularis oris and the muscles closing the jaw. There is partial but marked aphonia. All these spasms can be overcome by force slowly applied, but it gives her great pain. When the mouth is opened and she is told to protrude her tongue, it is done with difficulty, and it markedly deviates to the left. The left pupil is smaller than the right, but both react to light. There is blunted sensation over the whole of the left side of the body, including the tongue and conjunctivæ. Anæsthesia is complete in the foot, leg, hand, and forearm, but she complains of tingling in the finger tips. Patellar reflexes are natural and equal on the two sides. Subcutaneous œdema is present on the left side of the face, the extensor aspect of the left wrist and forearm, and the anterior tibial region of the same side. Temperature 99·2°; pulse 90; respiration 40, shallow and painful. Heart, lungs, and abdominal viscera natural. Bladder somewhat distended. Tongue coated. She complains of headache, shortness of breath, painful cramps, and inability to pass her urine.

On the following day it was noted that she had passed a restless night, but the muscular spasm had passed off, with the exception of that affecting the hand and foot, which still retained their characteristic form, and the spasm had persisted during sleep. She had passed urine, and was in comparative comfort, her respiration being quite unembarrassed. She was now able to open her mouth, and it was seen that all the teeth in the right upper jaw were carious, loose, and tender, with a painful spongy condition of the gums in their neighbourhood. The anæsthesia remained much the same. The left pupil was still smaller than the right, but the aphonia was only partial, and deglutition was less difficult. Temperature 99°; pulse 84.

For some days after this the patient's condition remained much the same. She was subject to paroxysmal aggravation of the spasms, recurring from four to six times in the twenty-four hours. In the intervals nothing beyond the contraction of the fingers, wrist, and foot was noticeable, and the continuance of the anæsthesia to a less degree. The paroxysms for the most part came on in the night, and some degree of spasm persisted during sleep.

On Jan. 30th I had the opportunity of witnessing the onset of one of these fits. It began suddenly, with a kind of snort. The hand, wrist, and foot then became more rigidly contracted, whence the tonic spasm quickly spread to the left side of the trunk, face, and neck. The left masseter was obviously contracted. Though quite conscious, she was unable to speak or move the left side of her body, and the breathing became stertorous and hampered through rigidity of the left side of the thorax. The pulse was accelerated; the pupils not dilated. After about fifteen minutes the attack passed off, and she returned to her usual condition. As soon as she was able to speak, she complained of great pain in the affected teeth. This pain, which was of a neuralgic character, spread all over the right side of her head. The scalp on the same side was very tender to the touch. She stated that these attacks were invariably preceded by aggravation of pain in the teeth and head. No effect was obtained by firm pressure applied to the ovarian region. The rigidity remaining constant in the hand and wrist, I tried the local application of chloroform, as recommended by Aran in Trousseau's Clinical Lectures. This was applied, sprinkled on a piece of lint, which was lightly bandaged round the wrist and forearm. In less than five minutes the spasm had completely relaxed, and for the first time since admission she was able to open her hand and move the fingers freely in all directions. The same plan, with like success, was tried with the foot, and at various times with different groups of muscles which were the seat of painful spasm, the result in each case being invariably the same. Muscular relaxation was also obtainable by plunging the hand and forearm into ice-cold water. This effect, however, was but transient. On no occasion could the spasm be reproduced by compression of the main bloodvessels of the limb.[1] The electric reactions were carefully tested. The result showed great diminution of electric irritability in the muscles of the affected side when tested with the constant current. The muscles of the right arm readily reacted to a current of ten Léclanché cells (KC), whereas twenty-six were necessary to obtain the faintest reaction on the left side. The qualitative reactions showed no abnormality. The cutaneous sensibility and muscular contractility to faradism were much diminished on the left side corresponding to the anæsthesia. It was only when the spasm was aggravated that it became painful, but at these times it caused her much distress.

On Feb. 4th, believing that her condition was in great measure referable to the painful and irritating state of her upper teeth, of which it seemed, as it were, the reflex expression, I caused her mouth to be thoroughly cleared of the offenders. Eight carious stumps in all were removed, including the central incisor on the right side, which was loose and intensely tender. At first the result seemed very satisfactory, for, with the exception of a slight attack shortly after the operation, she remained entirely free from spasm for three days, and the anæsthesia began to clear up in the extremities. The event, I am bound to confess, was very disappointing, for in ten days' time the spasms were as bad as ever. The aphonia, however, did not return. But from this time the nature of the affection underwent modification. The spasms began to show less marked resemblance to those of tetany, and the general features of the case became more distinctive of hysteria. The form of the hand became less typical, the fingers no longer taking the form of a cone with the thumb flexed across the palm. The wrist was often fixed in a state of extension, and the anæsthesia became more variable. Her mental condition, too, became less satisfactory; she evinced great irritability of temper, was emotional and disobedient, and took a morbid delight in annoying the other patients. At the same time she developed some transient delusions: saw faces looking at her through the window; imagined that the nurse had a spite against her, and declared that she saw the sister of the ward putting powders into the battery. Tenderness developed in the left ovarian region, and she had occasional auras. That her volitional control was much weakened was evinced both in her mental and physical actions. The power to overcome the contraction of one set of muscles was easily initiated by the application of the faradic current to the nerve supplying the opposing group, acting apparently as an adjuvant to her motor impulses. The spasms were always reduced by faradism, and this was used for a few minutes night and morning as a routine treatment, with the addition of a cold shower bath in the morning. By these means the frequency of the spasms was in great degree reduced and the anæsthesia lessened.

On the 25th the anæsthesia suddenly changed over to the right side and was complete, with the exception of the senses of sight and hearing. Occasional spasms occurred in the right arm and leg, and the symptoms became very variable. She became so troublesome and disobedient that on March 12th she was discharged from the infirmary.

Although from the beginning the hysterical element in the case was sufficiently obvious, yet certain of the symptoms were by no means characteristic of that complaint. I refer chiefly to the presence of fever, the distribution of the spasms, the marked affection of the muscles of the face and jaw, and the inequality of the pupils. On the other hand, the typical cone-shaped form taken by the hand and foot, the contraction of the wrist and ankle, which persisted in the intervals and during sleep, but were invariably reduced by the local application of chloroform or cold, their periodic and paroxysmal aggravation and diffusion, causing a condition of painful cramp, the rise of temperature, acceleration of pulse, and the presence of subcutaneous œdema in the parts most affected, bear a striking resemblance to those more severe forms of tetany so graphically described by Trousseau. A peculiar point was the unilateral distribution of the spasms. The connexion, too, with a diseased condition of teeth was interesting; and although the relief obtained by their extraction was but temporary, and therefore disappointing, yet the symptoms underwent modification from the

[1] I have since tried the local application of chloroform in this way in several cases of painful muscular spasm of varied origin, and in all with more or less success. In one of painful torticollis secondary to cervical caries the relief obtained was most marked. In another case of persistent spasm of the arm and leg of more than six months' standing, but whether of functional origin or due to organic lesion I am in doubt, probably the former, temporary remission of spasm lasting from half an hour to several hours could always be obtained by this means. I throw this out as a hint, as I think it, though obviously nothing new, worthy of more extended trial.

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time of their removal, and did not again present the features so suggestive of tetany.

I regard this case as valuable, inasmuch as it tends to support the growing belief in the impossibility of drawing a hard-and-fast line between the so-called functional diseases of the nervous system. In this patient the neurotic diathesis was marked in every phase of her malady. Inheriting directly from her mother a legacy of nervous instability, what wonder that she should be prone to the development of nervous disorder, which found expression both in her psychical and physical processes. Whether the case be regarded as one purely distinctive of hysteria, or whether it be looked upon as one of hysteria in which a group of symptoms conforming to the type of tetany were superadded as a consequence of some other morbid process, is, I think, a matter of speculation.

Lindfield, Sussex.

TWO CASES OF CYSTITIS, WITH UNUSUAL COMPLICATIONS.

BY GILBERT BARLING, B.S., F.R.C.S.,
ASSISTANT SURGEON TO THE GENERAL HOSPITAL, BIRMINGHAM.

CASE 1.—A gentleman, aged twenty-seven, consulted me in January last for frequent and painful micturition, which had been troubling him for a few days. My first note of him, made January 8th, was: Micturition twelve times in the last twenty-four hours; necessity for immediate expulsion when the demand arose; pain in the perineum and at the end of the penis after micturition; temperature practically normal. Urine faintly alkaline, but not ammoniacal; sp. gr. 1018; a slight deposit of pus and mucus; *albumen nearly one-half of a column.* Microscopic examination showed pus and a few blood corpuscles, but *no casts*, after a most careful search. There was no œdema or headache, and except for the local trouble the patient felt little the matter with him. With complete rest in bed and milk diet he rapidly improved, and on Jan. 14th the micturition was less frequent and painful; the urine contained more pus, but no blood, and the albumen was only one-fourth of a column, and there were still no casts to be found. He then commenced to take small doses of copaiba.—Jan. 17th: The albumen was reduced to one-sixteenth of a column, and he was in all respects better.—18th: Aching pain in the right knee joint, which was rather hot and swollen.—20th: Right knee full of fluid; slightly painful; no inflammatory blush over it. Left ankle slightly swollen. No fever; no sweating. Pulse 76. Joints fixed on a McIntyre's splint and covered with evaporating lotion.—22nd: Urine almost free from pus; albumen one-eighth of a column. Micturition almost as in health. Joints much the same. Tongue furred. Anorexia. Pulse 80; temperature 99°.—25th: Right knee still very tense; left ankle better, but left knee distended with fluid, and similar to the condition of the right on Jan. 20th. No sweating or fever. Tongue very furred.—28th: Pus and albumen have disappeared from urine. Right knee and left ankle diminishing in size; left knee very tense.—31st: Phalangeal joint of left great toe red, swollen, and tender; other joints much better, and now treated with mild counter-irritation. Tongue still very furred.—Feb. 4th: All the joints better. Tongue cleaner. Desire for food returning.—20th: The swelling has disappeared from all the joints except the left ankle. The tongue is clean, and the urine healthy. Soon after this the patient went to the seaside, and resumed his business at the end of a month. There is no doubt that the attack was produced by exposure to the extreme cold at the end of December, 1886.

CASE 2.—H——, a labourer, aged forty, was in the General Hospital under my care in September, 1885, suffering from cystitis. His trouble commenced six months previously, when he was under treatment in a cottage hospital for fracture of the femur. Owing to his recumbent position he had difficulty in micturating, which ended in retention ten days after his admission. The bladder was emptied once with the catheter, and soon after he noticed blood in his urine, which became thick, and later contained pieces of grit. The hæmaturia continued until he came to the General Hospital, when he also complained of frequent micturition, pain in the perineum, and especially of pain in the glans penis after micturition. On sounding, patches of calculous matter were detected, some of them appearing to be fixed on the surface of the bladder. Rectal examination revealed no thickening of the base of the bladder. The pathologist, Dr. Bull, reported on the urine as follows: "Colour yellowish-red; alkaline; ammoniacal: specific gravity 1015; *albumen half a column.* Microscopic examination: Triple phosphates, blood, pus, vesical epithelium, and a few doubtful granular casts." After a week's rest in bed, with careful emptying of bladder and washing out with boracic acid solution, the condition of the urine had improved somewhat, the albumen had diminished to one-third, and prolonged search failed to find any casts; but the patient was much worn by pain and broken rest, so I performed the "Boutonnière" on Sept. 29th, partly to evacuate the small concretions that the sound detected, and partly for the purpose of draining the bladder. A few grains of free calculous matter were removed, and some adherent patches were scraped off; but the most important condition found was a patch of ulceration about two inches in diameter on the trigone and its neighbourhood. The ulcer was of considerable depth, and surrounded by numerous warty elevations coated with calculous matter, suggesting to my mind that I had to deal with a malignant growth; I therefore removed some of the warty parts for further examination, and secured a drainage tube in the bladder. Microscopic examination of the warts showed nothing but granulation tissue in various stages of development. On Oct. 5th the tube was removed, as it was beginning to annoy the patient, who otherwise made an excellent recovery, interrupted only by an attack of epididymitis on the eighth day. On Oct. 22nd some urine passed by the urethra was examined; it was slightly ammoniacal, and contained a thick cloud of albumen, a little pus and blood, and some phosphatic crystals. A week later there were only a few pus-cells, and a trace of albumen in the urine, and the patient was discharged on Nov. 7th, reporting himself some weeks later as being perfectly well.

Remarks.—I have described these two cases together, as they had in common what is, I believe, a very unusual condition in cystitis uncomplicated with nephritis—viz., severe albuminuria, which I presume was dependent upon a large serous exudation from the blood-vessels of the mucous membrane of the bladder, and perhaps of the upper urinary tract, or, in the second case, from the ulcerated bladder surface. The joint complication in the first case did not closely resemble either urethral arthritis or acute rheumatism, being of a much milder type than is generally noticed in the former, and without the severe pain, sweating, and fever of the latter. The rapid and complete recovery after drainage in the second case was most satisfactory.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON THE LOCAL TREATMENT OF PSORIASIS.

BY JOHN KENT SPENDER, M.D. LOND.,
PHYSICIAN TO THE ROYAL MINERAL WATER HOSPITAL, BATH.

I IMAGINE that dermatologists are coming to the conclusion that the more circumscribed a skin disease is the more is it a purely local affair, requiring to be treated mainly with outside methods. If a person has, for instance, two or three dull-red mahogany-looking patches of psoriasis, now and then perhaps somewhat inflamed, but always so abrupt in margin that a pen or pencil line can be drawn round them, we should think first and almost solely of remedies applied to the visible disease, whatever may seem fitting to be done as internal confederates and helps.

Now, if there be any disease for which thermal bathing is almost always successful, it is the common *psoriasis diffusa* when treated with the Bath mineral waters. Adults and children come who are "white as snow and scaly as hoar frost"; and without taking any drugs (usually so called) they often leave Bath in less than six weeks (unless the disease be chronic and very defiant) with the skin physio-

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logically sound and texturally pure. Nothing within the range of what is termed balneo-therapeutics is more trustworthy than this. A contrast to this generalised condition of things was lately seen in an Irish gentleman sent to me by Mr. Malcolm Morris, who had on the skin of the pubes a symmetrical dark-red patch, absolutely dry and very irritable. The patient left Bath without much benefit; the lenient influence of a hot alkaline water did not penetrate far enough to alter the deep pigmentation of the dermal structures, although the hypertrophy of superficial layers of cuticle seemed to be modified and "tamed down." Shortly after this Mr. Morris told me that he quickly cured his patient's malady by a combination of chrysophanic acid and lanoline.

One of the objects of this short paper is to give my experience of Auspitz's method, which consists in creating an artificial cuticle or film with certain substances dissolved in chloroform or gutta-percha.[1] This cuticle is made by dissolving one part of purified gutta-percha in ten parts of chloroform, which forms an excellent medium for fixing the application, as it adheres firmly and without alteration for several days. It is thin, chemically neutral, and does not cause tension or pain. Dr. Payne has further illustrated the subject in the last number but one of the St. Thomas's Hospital Reports. He proposes a solution of chrysarobin (20 grains) in a fluid ounce of liquor gutta-percha. This is to be painted with a brush on the affected places (from which the scales have been removed as much as possible by soft soap) once or twice a day, so as to form a perpetual film. The action is more rapid, and there is no staining of the clothes. The principle is capable of variation in detail, but Dr. Payne claims for the plan that it is specially neat and cleanly for the purposes of private practice. Chrysarobin thus applied, adds Dr. Payne, supersedes all other remedies. Perhaps this last assertion is too absolute, as there are not a few people who instinctively dislike any varnish which *seals up* the skin and shuts in the natural secretion of the smallest cutaneous area. Otherwise, I can heartily commend Dr. Payne's modification of Auspitz's method used within narrow limits. The principle has already been tested in the treatment of eczema. Under the protective guardianship of a gelatine enamel, irritation subsides, and a healthy epidermis is developed within a few days. Here everything depends upon the temporary exclusion of air, with all its impurities of dust and tribes of germs.

[1] Annales de Dermatologie et de Syphiligraphie, vol. v., No. 1.

INJURY OF THE HEAD, IMMEDIATELY FOLLOWED BY SYMPTOMS OF COMPRESSION; TREPHINING; RECOVERY.

BY GEO. HERBERT WILLIAMS, M.R.C.S. ENG., L.R.C.P. EDIN., LATE HOUSE-SURGEON, ROYAL INFIRMARY, MANCHESTER.

ON May 3rd, 1887, about 10 P.M., I was called to see A. W——, a lad of nine, with the following history:—Two hours previously, the child had tripped at play and fallen on the left side of his head. He was, however, able to run home, where, complaining of pain, dimness of vision, and sickness, he was enjoined to lie down and rest.

On my arrival, two hours later, I found the patient lying on his back, and my attention was first directed to a contusion over the left temporal bone about the size of a Tangerine orange. No fracture could be felt at the seat of injury. The left side of the body was affected with clonic convulsions; the right hemiplegic; pupils widely dilated; conjunctivæ insensible to touch, and breathing stertorous. After a consultation it was decided at once to trephine over the seat of injury, as the only prospect of relief from imminent death. The coma was so profound that no anæsthetic was necessary. After carefully incising the periosteum, and turning it back, a circle of bone was removed, as near the seat of injury as possible, when a considerable amount of venous blood was immediately poured out. The finger was then introduced, and swept round the inside of the skull, but as no clot or spiculum of bone could be found, and the symptoms being still unrelieved, I nicked the dura mater, and incised it the length of the trephine wound, when the convulsions and hemiplegia almost simultaneously disappeared. The soft parts were then replaced, and the skin flaps brought together with a few points of suture, a drainage-tube being introduced, the length of the wound. The little patient was then removed to bed, and slept soundly for about four hours.

On my next visit—ten hours after the operation—I found him sitting up in bed calling lustily for breakfast. From this date the recovery was rapid and satisfactory. On the twentieth day the wound was quite healed, with a fair deposit of new bone, and the boy was out at play.

Remarks.—I must admit that, as there was no fracture or depression, I expected to find a clot on the dura mater, which, as already stated, was not the case, and yet one can scarcely think that the venous blood that followed the removal of the circle of bone was sufficient in itself to relieve the right hemiplegia. It is just possible the left convulsions may have been caused by *contrecoup*; but whatever the true pathology of this interesting case may be, I feel convinced in my own mind that the well-marked relief was brought about by incising the dura mater, and thus relieving the intra-cranial pressure.

Lockwood, Huddersfield.

POISONING BY LABURNUM SEEDS.

BY SYDNEY H. A. STEPHENSON, M.B. EDIN.

ON March 23rd, 1887, a number of girls, who were convalescent from ophthalmia, went into their play-yard after their dinner at 12.30 P.M., where they picked up and ate some laburnum seeds. The seeds had been blown over into the yard from some neighbouring laburnum trees. The nurse in charge, on going into the yard at about 3 P.M., found a girl vomiting, and in the course of a few minutes five other girls commenced to vomit; they were all very white, complained of pain in their heads, and were shivering. The nurse could ascertain no cause for their sudden and simultaneous illness, which she thought might be due to something they had eaten at dinner, and which had disagreed with them. When I saw the children at 3.30 P.M. they had been put to bed; they all denied having eaten anything in the play-yard, and it was with some difficulty that I elicited the real facts from the eldest of them. Their individual states were as follows:—

CASE 1.—Age twelve years. Had eaten two seeds, and had vomited four times. This patient was lying flat on her back in bed, shivering violently; her face was shrunken and her lips were very white. She answered questions in a whisper, and with difficulty; said that she had pain in her head. Her pupils were equally dilated, acting both to light and to accommodation. Pulse feeble, 124 per minute; temperature in axilla 98°.

CASE 2.—Age nine years. Had eaten four seeds, and had vomited three times. General state similar to the first case. Pupils active and dilated. Pulse 132 per minute; temperature 97·4°.

CASE 3.—Age six years. Had eaten one seed, and had vomited once. Was pale and shivering. Pupils dilated. Pulse 100 per minute; temperature 97·6°.

CASE 4.—Age eight years. Had eaten three seeds, and had vomited twice. Complained of great pain in her head. Pupils dilated. Pulse 106 per minute; temperature 97°.

CASE 5.—Age four years. Had eaten one seed, and had vomited three times. Pupils dilated. Had headache. Pulse 120 per minute; temperature 97·4°.

CASE 6.—Age five years. Had eaten one seed, and had vomited five or six times. Very pale, and shivering a great deal. Pupils dilated. Pulse 136 per minute; temperature 97·2°.

Two other children had eaten some (two or three) seeds. Neither of them had vomited; but both were very pale, had dilated pupils, rapid pulses, and temperatures below 98°. Later in the day, at 5 P.M., about two hours and a half after the time the rest of the children are supposed to have eaten the seeds, two other girls commenced to vomit, complained of headache, and had dilated pupils and rapid pulses. In all the cases the vomited matters consisted of particles of food mixed with brownish-coloured mucus, which in the first case was slightly tinged with blood. At 8 o'clock in the evening the sixth case was covered from head to foot with an eruption of large red patches, much resembling scarlatina. This had quite disappeared by 10 A.M. on the following morning. All the patients were well on March 25th. The treatment adopted was to inject ether hypodermically, and then to give large draughts of tepid

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salt water, which in every case produced copious emesis. At night the patients were given an ordinary purgative. The evidence as to the number of seeds they had each eaten rests upon their own statements, corroborated in most cases by two of the elder girls, who had given the seeds to the younger children.

I do not find many cases of poisoning on such a large scale by laburnum seeds recorded. Bonney, in THE LANCET for 1841, records that eleven boys were poisoned at Brentford by eating from one to five seeds apiece. One case had somewhat serious symptoms, but all recovered. The general mildness of the symptoms was attributed to the fact that they took the poison immediately after dinner. In 1856 twelve children were poisoned by the seeds at Otley, and all recovered. Dr. Hair, in the *British and Foreign Medico-Chirurgical Review* for 1869, gives particulars of a similar set of cases which occurred at Carlisle. Mr. Boyd Joll, in the *British Medical Journal* for 1879, records cases amongst an unspecified number of children, whose ages varied between six and fourteen years, and who all recovered. The symptoms in the cases I record were fairly uniform, and very similar to those given by the above-mentioned authors. All my ten cases had active dilated pupils, rapid pulses, headache, blanched features, and temperatures of 98° or below; and eight out of the ten had vomited without the help of emetics. No purging, abdominal pain, or tetanic convulsions occurred in any of the cases.

Lambeth Old School, West Norwood.

DYSPNŒA AND ASTHMA.

By BENJAMIN WALKER, L.R.C.P. ED.

THE clinical lecture on "Dyspnœa, especially on the Dyspnœa of Asthma and Bronchitis, and the effects of the Nitrites upon it," by Dr. Fraser, in THE LANCET of July 9th, is a most valuable contribution to the pathogeny of this symptom. He has logically and convincingly proved that it is due to spasm of the involuntary muscular fibres, "that stenosis of the bronchi due to spasmodic contraction of the bronchial muscles is a frequent cause of the dyspnœa of ordinary bronchitis." And "as nitrites lessen the contraction of non-striped muscle, it appears to follow that the râles which accompany the dyspnœa of asthma are produced by spasmodic contractions of the bronchial muscles, that the dyspnœa is mainly the result of spasmodic constriction of the bronchial tubes, and that therefore the old doctrine which attributes the asthmatic paroxysm to spasm of the bronchi is in all probability the correct doctrine."

For the last six years I have successfully treated the dyspnœa of asthma and bronchitis on the above theory of its causation, though not by the remedies of Dr. Fraser. The treatment by the nitrites advocated by him does not seem from the cases adduced to produce very stable and permanent results, though the symptom is momentarily relieved. Thus in the first case adduced complete relief was afforded after the inhalation of nitrite of amyl for a minute or two, but in five or six minutes "both the râles and dyspnœa were present in their original abundance and severity," and the same result followed two more applications of the same remedy. The two cases used as illustrations before the class were also at once relieved—one by the nitrite of amyl and the other by nitro-glycerine, but we are not informed whether there was a recurrence of the dyspnœa shortly after; and Dr. Fraser goes on to say that he has "not obtained any facts which would justify the preference of any one of the nitrites."

The object of this communication is to call attention to the action of hyoscyamine in this affection, and indeed in the treatment of spasm of involuntary muscular fibre, wherever existent—whether in the bronchi or hollow viscera (stomach, bowels, bladder). Given in the dose of half a milligramme ($\frac{1}{130}$ gr.), according to the urgency of the case, every half-hour or hour, until the spasm disappears, it is rare for the patient to be unrelieved after two or three doses; in cases of great urgency the first dose may be in the form of a hypodermic injection for quicker absorption. When relief is afforded, it may be given less frequently (two or three times a day), and gradually left off. I have never been disappointed with its action; it relieves the spasm promptly and efficiently, and the patient has no dread of an immediate recurrence of the dyspnœa. A young woman who is subject to occasional attacks of asthma came to me on June 7th and was quite relieved in twenty-four hours. She did not, however, continue the remedy at longer intervals for some days, as she should have done, and so had a recurrence three weeks later. She was, however, quite cured after four or five days' treatment, and has since remained well. Her previous attacks occurred in March, 1887, May, 1886, and December, 1885, when the same treatment was equally, and as quickly, successful; so that the intervals of immunity vary from three to ten months. I usually give with the hyoscyamine small doses of strychnine (the arseniate or sulphate), in half-milligramme doses, as a tonic, and to counteract the tendency to adynamy.

In spasm of the stomach or bowels, in dysentery, in strangulated hernia, and in retention of urine due to spasm of neck of bladder, hyoscyamine in small and frequent doses is invaluable, and will be the first remedy thought of by anyone who once gives it a trial in these affections. I would refer the reader to a paper on "Advanced Pharmacy" in THE LANCET of Dec. 10th, 1881, in which this method of treatment by the alkaloids in small and repeated doses is advocated in preference to the crude preparations of the Pharmacopœia.

Spondon, Derby.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

A CASE OF ACUTE ULCERATIVE ENDOCARDITIS; DEATH IN EIGHT DAYS; NECROPSY; REMARKS.

(Under the care of Dr. JULIUS POLLOCK.)

THIS would appear to be one of those examples of malignant endocarditis in which no cause for the development of the disease can be found, there being an absence of history regarding those affections to which endocarditis is attributed. In 209 cases of this disease, collected by Dr. Osler,[1] no cause could be assigned in forty-five, and many of these were of a most malignant type. The primary disease was limited entirely to the aortic valves, and, although it was sufficiently extensive to produce most acute symptoms, there was no bruit or other evidence to permit of its localisation during life.

J. M——, a male, aged twenty-seven, was admitted under the care of Dr. Pollock on May 16th, 1887, complaining of excessive dyspnœa without any exertion, slight cough, but no expectoration. These symptoms had lasted about six weeks, but had lately increased in severity, and he sought admission to the hospital. There was no history of rheumatism or syphilis.

On admission, the patient was pale, and his skin had a yellowish tinge; eyes rather sunken; some working of the alæ nasi; cough, with slight expectoration of a darkish-coloured sputum. Lungs: No dulness on percussion; expansion not diminished; no râles; no bronchial breathing. Heart: No hypertrophy; percussion dulness normal; first sound at apex rough and reduplicated; aortic sounds normal. Urine: Sp. gr. 1020; no blood or albumen. Ordered fifteen grains of citrate of potash in an ounce of water every four hours.

May 17th.—Dyspnœa more marked, and expectoration more profuse. Temperature 99·4° at 10 A.M.; 103° at 6 P.M. Pulse 120; respiration 52.

19th.—Dyspnœa very great; sleepless. Temperature 98·4° at 10 A.M.; 101·8° at 10 P.M. Ordered ten minims of tincture of digitalis to each dose of the mixture, and four ounces of brandy.

21st.—Bowels much relaxed. Temperature 99° at 10 A.M.; 102° at 10 P.M. Pulse 124; respiration 52. Ordered ether and ammonia mixture, with ten minims of tincture of digitalis.

22nd.—Diarrhœa profuse. Temperature 97·6° at 10 A.M.; 103° at 6 P.M. Pulse 124; respiration 52. Dyspnœa extreme. Brandy increased to six ounces.

[1] THE LANCET, vol. i. 1885, p. 504.

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23rd.—Weaker. Ordered two grains of sulphate of quinine every four hours. Brandy increased to eight ounces.

On the 24th he died.

Necropsy.—Heart: Excess of fluid in the pericardium; mitral valve normal. Attached to the ventricular surface of the anterior cusp of the aortic valve was a mass of coagulated fibrin, an inch in length and five-eighths of an inch in breadth at its widest part. On the adjoining surface of the next valve to the left was a clean-cut hole, about one-fifth of an inch in diameter, with slightly thickened edges. Before opening the aorta, the valves were tested and found to act efficiently. The remaining cusp of the aortic valve was thickened at its free edge, and had a superficial ulcer at its posterior part. The other organs were healthy, and no infarcts were found.

Remarks by Dr. POLLOCK.—This is a very acute case. Ulcerative endocarditis with pyæmic symptoms appears to have several phases. Sometimes it closely resembles typhoid fever, and is often accompanied by diarrhœa. In the present case the earlier phenomena were rather like those of pneumonia, but in a few days the nature of the disease became apparent. It is interesting to note that throughout there was no cardiac bruit, notwithstanding the diseased state of the aortic valve. The absence of bruit was no doubt due to the fact that the aortic valves were competent. There appears to be a sort of hurried and distressed action of the heart in these cases of acute ulcerative endocarditis, difficult to describe, but very suggestive, and which may be readily recognised.

WEST KENT GENERAL HOSPITAL.

STRICTURE OF ŒSOPHAGUS; GASTROSTOMY; DEATH FOUR MONTHS AFTER THE OPERATION; NECROPSY; REMARKS.

(Under the care of Dr. HOAR and Mr. KNOWLES.)

FOR the following notes we are indebted to Mr. George Wale, house surgeon.

James K——, aged sixty, attended as an out-patient on Sept. 15th, 1886, and complained of difficulty in swallowing. He said he had suffered for years from indigestion, flatulence, anorexia, occasional vomiting of food, and winter cough. He first noticed difficulty in swallowing solid food about two years previously. This gradually increased, and he could only swallow soft food and fluids.

The patient was a spare man, with an anxious expression. On examining his chest nothing abnormal was detected, but on auscultating over the cervical vertebræ during deglutition, the passage of fluid was heard delayed. There was no specific history; no history of traumatic origin; family history good. On passing a medium-sized œsophageal bougie, it was arrested at the cardiac end of the stomach, and felt to be gripped. He attended until Oct. 9th. The diagnosis was malignant disease of the œsophagus. Ordered five grains of iodide of potassium, fifteen minims of liquor morphiæ mur. in half an ounce of water, three times a day.

On Oct. 18th the man went to St. Thomas's Hospital, and was admitted. While there an œsophageal tube (size of No. 7 catheter) was passed, through which he says he was fed with a mixture of milk, beef-tea, and eggs, the tube being removed, cleaned, and reinserted every four days. He left, contrary to their advice, on Nov. 5th.

Nov. 6th.—Admitted into the West Kent Hospital wearing an œsophageal tube. Looks thinner (weight 7st. 13½ lb.). Frequent cough, with frothy expectoration; a good deal of wheezing over both lungs. Swallows fluids fairly well with tube in throat. Is fed through tube four times a day with milk, beef-tea, and eggs, strained through muslin.

16th.—As it was thought that the tube increased the bronchial irritation, and it was found necessary to change it more frequently than every fourth day owing to its becoming plugged with mucus, and as the difficulty of its reinsertion increased each time, and the patient was losing flesh (weight 7 st. 11 lb.), it was decided to perform gastrostomy. The incision was made, about three inches in length, in the usual position, the subperitoneal fascia exposed, and the peritoneum divided upon a director. A portion of the transverse colon which presented, was drawn down, and the stomach then brought into view. This was pinched up with the fingers and thumb of the left hand, and a small portion withdrawn through the wound and transfixed with two hare-lip pins, one supporting the portion transfixed at the upper angle of the wound and the other at the lower angle. One or two wire sutures were used to bring the ends of the incision into apposition, as it was too long, and the wound covered with protective and carbolised wool.

17th.—Pulse 100; temperature 101°. Tongue moist. Passed fairly good night. Is fed by enemata every four hours. Is still wearing œsophageal tube, although plugged. Swallows fluids more freely than before the operation, but the attempt to do so gives rise to dragging pain at the wound.

18th.—Some low delirium at night. Pulse 100; temperature 100°. Tongue moist. Cough troublesome. Fifteen minims of liquor morphiæ hyd. and twenty grains of bromide of potassium in half an ounce of water given three times daily.

19th.—Delirious at night. Plugged tube withdrawn and found to be kinked. Swallows fluids fairly well. Pulse 90; temperature 100°.

21st.—Pulse 88; temperature 99°. Tongue coated, moist. Wound looks well; adhesions formed all round. A tenotomy knife was passed into the stomach wall, and a small piece of drainage tubing inserted, the end being threaded and strapped to the abdominal wall. One hare-lip pin withdrawn.

23rd.—Pulse 94; temperature 99°. The other hare-lip pin withdrawn. Considerable oozing through and around tube. Drainage tube changed for a piece of green elastic catheter and plugged. Swallows with greater difficulty. Looks much thinner. A good deal of cough and bronchitic expectoration.

25th.—Some oozing still from wound. Stomach well united to abdominal wall, but a sulcus left between the two at the lower end of the incision. A small-sized indiarubber tracheotomy tube, plugged, and strapped to abdominal wall, used to replace the catheter after a three-ounce mixture of milk and beef-tea had been injected.

26th.—No oozing. Three ounces of food injected with syringe twice a day.

27th.—No oozing. Six ounces of food injected twice a day. Wound contracting; sulcus filling up with granulations. Some of enemas returned.

29th.—No oozing. Ten ounces of food injected three times a day. Can only swallow a few teaspoonfuls of hot fluid per diem. Was given some meat lozenges to relieve dryness of mouth. Cough less troublesome. Sibilant rhonchi and râles over both bases.

Dec. 4th.—Twelve ounces of food injected three times a day. Enemas stopped. Got up on to a couch.

9th.—Twelve ounces of food injected four times a day. Went out into the garden. Weight 7 st. 3 lb.

26th.—Weight 7 st. 11 lb. Cough troublesome, especially at night. He gets out every day, and can do light work (sweeping, &c.). The patient is taught to feed himself by means of an irrigator and long indiarubber tube. There is no oozing. The plugged tracheotomy tube is kept in position by a firm abdominal belt.

Jan. 12th, 1887.—Weight 7 st. 12½ lb.

Feb. 12th.—Weight 7 st. 10 lb.

March 4th.—Weight 7 st. 4 lb. Patient evidently losing ground; face looks more pinched; cough more constant; pulse weaker; marked emaciation.

15th.—Died, four months after the operation.

Necropsy.—Body very emaciated. The œsophagus and stomach were removed entire, with that portion of integument attached to margin of wound. The stricture was not at the cardiac orifice, its lower margin being an inch and a half above, and it extended upwards for two inches and a half. Its upper orifice was a mere chink, barely admitting a probe; its canal very sinuous, and some ulceration was present in its posterior wall. It was a well-marked scirrhous growth, and it involved the thoracic duct. There was some dilatation of the œsophagus above the stricture. The opening into the stomach was situated midway between the greater and lesser curvature, four inches from the pylorus, and three inches and a half from the cardiac orifices. The integument was firmly and evenly united to the stomach, the adhesions being above a quarter of an inch thick. Between the opening and the pylorus the stomach walls had undergone considerable hypertrophy. Lungs: There were a few pleuritic adhesions, and the base of the left lung was in a condition of red hepatisation. The other organs were normal.

Remarks by Mr. KNOWLES.—The method of fixing the stomach in this case—viz., by hare-lip pins—is that proposed and adopted by Mr. Bryce Barrow in a case operated on by

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him at the West London Hospital. The advantages of this procedure are its easy application and its means of securely fixing the stomach, which in this instance was very desirable on account of the very troublesome cough. The amount of adhesion between the stomach and the abdominal parietes was ample and firm, as shown by the post-mortem examination.

WOLVERHAMPTON AND STAFFORDSHIRE INFIRMARY.

EPITHELIOMA OF PENIS AND SCROTUM, WITH ENLARGED INGUINAL GLANDS; COMPLETE REMOVAL OF EXTERNAL GENITALS, FOLLOWED BY RECOVERY AND AN APPARENT CURE.

(Under the care of Mr. VINCENT JACKSON.)

J. T——, aged fifty-one, single, was admitted in May, 1886. He had never had gonorrhœa or syphilis. There was no family history of cancer. Fourteen days ago he landed in Liverpool from America, and, having tramped to the Cannock Workhouse, was from there sent to the hospital. The man is tall, pale-faced, and a gardener by occupation. Two years since he noticed a small warty growth on the under surface of the penis. This gradually extended in all directions, until the whole of the penis and the greater part of the scrotum were involved. The discharge was free and most offensive in odour. Pain was not complained of. From childhood the prepuce has never been retracted. The chain of glands in each groin running parallel with Poupart's ligament is enlarged, but the glands are not tender, and are freely movable in all directions on pressure. The examination of the urine indicated no abnormality.

On June 3rd, ether having been given, Thiersch's operation was performed, the testes, as well as the penis and scrotum, being removed. Before the necessary dissection was commenced, the corpus spongiosum and urethra were exposed, divided across, and freed from their connexions as far back as was necessary, to permit the urethra to be stitched to the lower angle of the wound without the slightest traction. During the operation the bleeding was free, and required to be arrested by ligatures and forci-pressure forceps. The lateral portions of the scrotum which had been left were united along their edges by points of gut suture. The whole having been dusted over with iodoform, covered with cotton wool, and fixed by a binder, the patient was removed to bed.

In the after progress of the case there was nothing of importance to report; a portion of the flaps as well as of the deeper tissues sloughed, but the wound soon cleaned and the healing process was quickly concluded. As the enlarged inguinal glands were, if anything, a little smaller than when admitted, the patient was discharged in July without their removal. In May, 1887, the patient visited the hospital, and in appearance he seemed to be in perfect health. There was no return of the disease, and the enlarged inguinal glands had disappeared. The perineal urethral orifice was perfectly patent, the mucous membrane being slightly prolapsed.

Remarks by Mr. JACKSON.—This case is published as a contribution to the surgery of this particular operation, and as distinct evidence that it is not only curative but permanently so. No doubt cases are observed which possibly are considered, on account of the depth and extensive area of the malignant ulceration, to be beyond the reach of prudent surgery. The case reported was, I consider, approaching the border line of those cases which may be removed and those which no experienced surgeon would feel justified in jeopardising the life of his patient by attempting, not a forlorn hope, but a foregone conclusion. I have not witnessed a more extensive case of epitheliomatous ulceration of the male external genitals than the present one, and in attempting its entire removal I felt that the operation to be permanently successful must be as radical as it was possible to make it. The encircling incisions were made as wide of the disease as possible, and after the testes had been exposed, enucleated, and removed, the urethra was cut across, and, with the corpus spongiosum, was dissected back until pendent; it occupied the lower angle of the wound. In removing the body of the penis, and in separating by a process of tearing and scraping the crura from their bony attachments I was not prepared for the rather free hæmorrhage which had to be assuaged, as previous writers in reporting cases of Thiersch's operation had stated that the bleeding was slight and easily controlled. The recovery of the patient after this severe operation may be considered satisfactory, and the process of healing rapid. There cannot be the slightest question that the operation removed a most loathsome and destructive disease, and by so doing restored to activity, comfort, and a renewed life a man who would quickly have ended his days worn out by the consequences of so terrible an infliction.

Reviews and Notices of Books.

The Diseases of the Ear and their Treatment. By ARTHUR HARTMANN, M.D. Berlin. Translated from the Third German Edition, by JAMES ERSKINE, M.A., M.B. Glas. Edinburgh: Young J. Pentland. 1887.

Practitioner's Handbook of Diseases of the Ear and Naso-Pharynx. Third Edition of the Aural Surgery. By H. MACNAUGHTON JONES, M.D., M.Ch.

DR. HARTMANN'S work will be found very useful, containing just the kind of information that is requisite for the diagnosis and treatment of diseases of the ear. It does not profess to be a book for specialists. After a few pages which are devoted to a brief historical retrospect, the book may be said to commence with a description of the different methods of examination, and in this chapter the testing of the hearing by the tuning-fork is described in a more thorough and complete manner than we are accustomed to see in any of our English text-books. A short chapter is devoted to some special symptoms, and another to general therapeutics; and then at page 76, in a book of 250 pages, the diseases of the auricle and external meatus are described, the middle and internal ear following in their natural order. Each chapter opens with a brief anatomical description of the part involved in the diseases about to be described, which serves to refresh the memory of those who have not had recent opportunities of working at the subject. The account given of the various diseases and the treatment that should be adopted is, as a general rule, admirable, especially where local treatment is required. A little more stress might, we think, be laid upon the value of scraping out granulations and old caseous products from the middle ear with a sharp spoon under an anæsthetic. The author, on the other hand, advocates the use of a special metallic tube connected by rubber with a syringe. If the former be intelligently and skilfully performed, it is of great assistance to the latter operation, and should be accompanied by no greater risk than the forcible injection of fluids into the tympanic cavity. The old intra-tympanic injections through the Eustachian tube for chronic dry catarrh of the middle ear are still apparently recommended. We wish that the author had had the boldness to say at once how useless it is as a curative measure for this variety of deafness, where no secretion exists. There is very little said about cerebral abscess dependent upon disease of the ear; and absolutely nothing worth reading as to its treatment. At the present day we should expect to find in a book so good as this some expression of opinion as to when and under what circumstances the skull should be trephined; and the exact site of operation in different cases ought to have been discussed. The book, however, taken as a whole, appears to us to be the best in the English language for the class of readers for whom it is intended—namely, those who have not time to read such works as those of Politzer, Gruber, and Tröltsch. The translation, with the exception of a very few German sentences which have not received quite enough alteration in construction, leaves nothing to be desired.

The previous editions of Dr. Macnaughton Jones's book have been favourably noticed in THE LANCET, and the new one has been made more useful to its readers by the addition of a few coloured plates, taken from Dr. Jones's Aural Atlas.

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of the more common diseases affecting the membrana tympani. Out of a book of 160 pages the first eighty are devoted to etiology, methods of examination, and general therapeutics. Much space is here given to the display of surgical instruments, which may be found in any surgical instrument maker's catalogue. At the same time it is only fair to say that the directions are good and to the point. At page 84 the reader finds that at last he may commence to study the diseases of the external ear, but through this and subsequent chapters he has constantly to refer back to much that has been previously said. This is troublesome, and in some instances unnecessary, but it is obviously difficult to avoid. Dr. Jones includes the diseases of the naso-pharynx in his book, and is thus able to describe one of the common causes of deafness in children—namely, adenoid vegetations. The clinical account of this condition which he gives is good, and would enable anyone to recognise a case of this kind if it came under his notice. But the operative means of relief is described in such a manner as to leave some doubt in the reader's mind which method the author recommends; and no inference can be drawn as to whether chloroform should be given for this most painful operation. It cannot be performed effectually in the same rapid manner in which the tonsils are removed, and we know that some difference of opinion exists in practice upon this point. Dr. Jones rightly condemns the use of chloroform for tonsillotomy, but he says nothing ubout anæsthetics in the case of adenoid growths. Granulations and caries of the tympanum do not, in our opinion, receive the attention they deserve, considering the importance of their treatment and prognosis; whilst perforation of the membrane, which might often be left alone, is treated with scarcely any reference to the granulations which so often exist in the tympanic cavity, and which may themselves be dependent on disease of the bone. The reader will find no help in the diagnosis of cerebral abscess in ear disease, nor any opinion as to the position most favourable for the trephine. On the other hand, the chapter on "Some Affections of the Internal Ear" is fully and ably written, and the book, taken as a whole, will be found a safe and useful guide to the busy practitioner in the more common diseases of the ear and naso-pharynx.

Agriculture in some of its Relations with Chemistry. By F. H. STORER, S.B., A.M., Professor of Agricultural Chemistry in Harvard University. Two volumes. London: Sampson Low and Co. 1887.

This seems to us the very book that was wanted by all interested in scientific agriculture. It is full without being diffuse, thoroughly scientific in tone and treatment without needless technicality, and so well written and arranged that it can be understood and used as a text-book by all who have acquired a sound elementary knowledge of chemistry and physics. The transcendent importance of agricultural chemistry was recognised from the time when chemistry became an exact science. Davy was among the first to help it, and from that time in England and abroad many an illustrious name has been associated with it. At the present day the study is more important than ever, for hard times have fallen upon our farmers, and it is only by accurate scientific knowledge joined to prudence and industry that they can hold their own. It would be impossible to enumerate even the most eminent of those who have worked in the field, but such names as Boussingault (so lately lost to us), Liebig, Stöckhardt, and Hellerhegel on the Continent, and Lawes and Gilbert, Way, Voelcker, Church, and Warrington in England, can hardly be omitted. In collecting together, summarising, and applying to the needs of to-day the labours of these and countless other workers Professor Storer has conferred a genuine service upon mankind.

The earlier chapters of the book deal with generalities, the relations of soil to air and water, the movement of water in the soil, the nutrition of plants, the selective power of soils, the influence of heat and light, the formation of soil from rock, the chemical changes produced by certain constituents of soil, and so on. There are, of course, some errors and omissions, but the whole history is well told, and suggestive as well as instructive. Here, and indeed throughout the book, we are reminded of the intimate connexion between agriculture and sanitation. The perfection of each would be reached if we could follow the well-known adage, "The rainfall to the river, the sewage to the soil." Among the physical conditions prominence is given to the capillarity of the soil, a most important agent in vegetable nutrition. Too fine division diminishes capillarity; much kneading and puddling is therefore bad, and earthworms are pronounced pernicious. It is strange that Darwin is not quoted on this last point, but there is no real discrepancy between the statement as it here stands and Darwin's great discoveries, for although the worm is a valuable agent in forming and disintegrating soils, he may, and no doubt often does, overdo his part.

A large portion of the book is, of course, devoted to manures: first, the pure fertilisers, such as phosphates, nitrates, and ammonia, and afterwards the more complex kinds—guano, stable dung, sewage, &c. As an example of the simple and practical character of the book, we may quote a few words on the subject of fish manure. After describing the different kinds of fish manure or "fish guano" made in America and elsewhere, and explaining the great value of all of them, the writer continues:—

"There can be no doubt that in the future, when the increase of population shall enforce a more intelligent agriculture, the drying of fish scrap will become a highly important branch of industry. It bears even now very curiously upon the question of utilising the sewage of cities. The reproach has often been made that the modern system of removing filth from cities by means of waterclosets and sewers flowing to the ocean is wasteful, unphilosophical, and wrong. But it appears from what has just been said, that such censure is hasty and ill-considered. So long as a clean, innocuous, and concentrated manure can be got from the sea in the shape of fish scrap, at less cost of money, comfort, labour, health, and life even than would have been expended in transporting the city filth to the farm, or in converting it into transportable form, it would be mere folly for the farmers to waste their energies upon the sewage."

This is substantially the argument of Sir J. B. Lawes, whose opinion should have been quoted. It has for the future, if not for the present, very great importance. Only one analysis of fish scrap is given, and we wish that others could have been added. Doubtless this and other deficiencies will be rectified in a second edition.

It does not lie in our province to discuss in detail the purely agricultural portion of the book, such as the rotation of crops, the management of farms under different conditions of soil, climate, and water, and the treatment of particular crops—barley, oats, and grass. It is curious, however, that a separate chapter is not given to wheat, and we should have been glad to have heard more of the management of root crops. The chapters devoted to pastures and the making of hay are valuable. It was of course impossible to include everything. The intelligent student of agriculture will be deeply grateful for what he has got, and if he masters the book he will have learnt much, and have attained the rudiments of a really scientific knowledge of his calling.

AT the annual meeting of the subscribers to the Royal Cornwall Infirmary, held at Truro on the 12th inst., an increase in the numbers of both in- and out-patients during the past year, as compared with previous years, was reported by the committee.

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BRITISH MEDICAL ASSOCIATION.

FIFTY-FIFTH ANNUAL MEETING,

HELD IN DUBLIN, 1887.

PATHOLOGY.

(*Concluded from page 333.*)

AT the meeting on Thursday, Aug. 4th, Dr. Samuel Gordon, President, in the chair,

The PRESIDENT stated that he had no desire to inflict an address on the Section, but he wished to remind the few and inform the many that Pathological Societies originated in Dublin. In October, 1838, the Pathological Society of Dublin was founded, mainly through the efforts of Stokes and Robert Smith. The example was followed by Philadelphia and London. The President then traced the history and described the objects of the Society, and concluded by saying that its labours filled twelve large volumes, and the Society then merged in the new Academy of Medicine and Surgery.

Etiology of Chlorosis.

Dr. FOOT introduced this subject. He dissociated it from the comprehensive group of Anæmiæ, and touched upon the fundamental influence of age and sex, alluding to its relationship to precocity of menstruation. He invited a discussion as to whether it was due to a temporary disturbance of hæmatopoiesis or to arterial hypoplasia. After a few remarks by Dr. Anderson, the President called upon Professor Unna of Hamburg, to read his paper.

The Micro-organisms of Lepra.

Professor UNNA reviewed the opinions previously held on the pathology of leprosy. His remarks were then principally confined to the structure of the *bacillus lepræ* and the relation of the bacillus to the tissue elements. He had investigated very carefully the action of various staining reagents and different methods for colouring the bacillus. He described a modification of the method of Gram. By the action of the different dyes he was led to believe that the organism was not a bacillus, but that it consisted of a chain of cocci within a double sheath. When the bacilli were aggregated together, the outer capsules or glœa-masses fused together, and so gave the appearance of micro-organisms within the so-called leprosy cells. The leprosy cells, according to his view, were not animal but vegetable structures, and represented the fused capsules of the micro-organisms of leprosy. From these observations he regarded the term bacillus as untenable, and considered that the leprosy micro-organism should be called a *streptococcothrix*. Professor Unna then demonstrated a series of microscopical preparations.—Professor CROOKSHANK congratulated Professor Unna on his excellent paper, and on the fluency with which he had delivered it in English. His preparations also were very beautiful, but they did not convince him that the interpretation of them was on all points correct. He instanced the case of the bacillus of anthrax as one in which very peculiar appearances could be produced sometimes by the method of Gram. The iodine contracted the protoplasmic contents of the bacillus, and gave it a granular or beaded appearance. The beaded appearance of the tubercle bacillus was well known, and the leprosy bacillus was well known to be beaded also. But this appearance was very varied in the leprosy bacilli. In some cases there were three or four granules in a rod; in other cases there might be one only, which was sometimes situated terminally. In other rods, again, there might be two or three granules irregularly placed. On this account he thought it was misleading to speak of "cocci chains," and he preferred the old term *bacillus lepræ* to *streptococcothrix*.—Dr. THIN considered that the ovoid bodies seen in leprosy bacilli were spores. He had found the bacilli clustered in bodies with a rounded outline, which he considered cells. He had also found the bacilli in leucocytes in sections of the epiglottis, the leucocytes showing distinct nuclei. Dr. Beaven Rake, on examining juice from leprous nodules, found the bacilli within distinct cells. He considered the best results would be obtained from the examination of fresh specimens.—Dr. ACLAND said it was hardly fair to come to any definite conclusions from Professor Unna's specimens, as they had not been able to provide him with a sufficient number of high powers. But having examined the specimens, he was compelled to say that he did not hold the same views as the writer of the paper. He did not consider it a matter of great importance whether the organisms were in the cells or exterior to them. It was probable that they were found in both positions, but he was inclined to think that it was remarkable that the appearance of the organisms had been so variously described. Some looked upon them as an aggregation of cocci within a delicate membrane, others as bacilli, and that the appearance was due to the method of preparation. He agreed with Dr. Hansen of Bergen that the organisms were bacilli, and that in many cases they were within the cells.—Dr. SIMS WOODHEAD said that, after looking at Professor Unna's preparations, he thought that his views were not so untenable as they were regarded by previous speakers. He had found various bodies in fresh juices which closely resembled the appearances described by Professor Unna. He did not agree with a previous speaker that it was unimportant whether the organisms were found in the cells or in the lymph spaces, because if they attacked the cells it is probable that degenerations would occur much more rapidly than they do. He was inclined to support the views of the reader of the paper.—Professor UNNA replied.

A Report of fifty-eight specimens of Chronic Inflammatory Disease of the Uterine Appendages operated on by Mr. Lawson Tait during 1886.

Dr. J. ST. CLAIR BOYD gave a description of the pathological appearances of the organs removed. The great feature was occlusion of the infundibular extremity of the tube, and associated with this in the great bulk of them was closure of the uterine mouth. The nature of the contents of the tube seemed to be a matter of accident governed by the stage of the process at which the removal had taken place. The formation of tubo-ovarian cysts was now attracting considerable attention, and the specimens shown completely confirmed the views which Mr. Lawson Tait had already published.—Mr. TAYLOR spoke of the importance of determining what was meant by the term "tubo-ovarian cyst." He considered that there were at least three kinds which he defined, and there were possibly others.—Dr. JACOB and Mr. LAWSON TAIT joined in the discussion.

Elephantiasis induced by Posture.

Dr. MAPOTHER described the case of a lady aged eighty, who had her knees and hips so flexed owing to rheumatic gout that lying on the back was unendurable. The legs thus constantly dependent developed a condition of elephantiasis. After describing in detail the condition which resulted, Dr. Mapother considered that if posture, as he contended, was a factor in the production of elephantiasis, elevation, friction upwards, and compression in the elastic bandages should be hopeful measures during the stage of inflammatory œdema.—Dr. SIMS WOODHEAD said the paper was most opportune, especially in relation to the blockage of lymphatics by organisms in leprosy. He thought all the changes had been most accurately described.

Cases of Permanently Displaced Head of Humerus and Abnormal Growth of Nail.

Dr. MOORE, in describing the above, said the first case arose in a child of six months by being thrown on the ground. The lad was now fifteen, and the chief points of interest appeared to be the wasting of the shoulder muscles, the low position of the head of the humerus, the facility with which the latter could be partially replaced, and its immediate displacement by gravitation. The second case occurred in a patient aged sixty-nine. There was a peculiar horn-like growth of the thumb-nail, and the phalanx of the thumb appeared to have been lost by suppuration.

On the Fourth and Fifth Dorsal Vertebræ in Health and Disease.

Dr. HARKIN, after a few general remarks on the subject of neurology, said that he was interested in that small area of the spinal cord limited and covered by the fourth and fifth dorsal spines, the very centre of the spinal column, which, whether in health or disease, is gifted with functions and phenomena peculiar to itself. That this limited area constitutes a zone of latent hyperæsthesia, present in every case of acute hysteria, chorea, trifacial neuralgia, and facial

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paralysis, and other neuroses, had been known to him for the greater part of his professional life, and also that treatment applied solely to these apophysial points rapidly cures those diseases; but why a blister applied over the fourth and fifth dorsal vertebræ rapidly cured tic douloureux, or put an end at once to the vomiting of pregnancy, he could not explain to his own satisfaction, nor could eminent neurologists to whom he applied, including Brown-Séquard, throw any light on the subject. The almost universal existence of spinal hyperæsthesia over these points in health as well as disease is still more difficult of explanation. This spinal peculiarity he had found in every class, in the army, in the constabulary, in reformatories, male and female industrial schools, and in his ordinary *clientèle*, and private patients and friends. Some of his medical friends, while acknowledging its frequent presence even in the healthy, fail to evoke symptoms of undue tenderness in every case from want of faith or courage in applying the test—viz., the knuckle of the middle finger over all the dorsal spines. The clinical results after blistering are more freely acknowledged. Dr. Prince gives some remarkable cures effected by a blister over the fourth and fifth dorsal spines—among the rest one in a woman aged thirty-five, suffering from cervico-occipital neuralgia for five weeks, great tenderness over the cervical vertebræ, and rigidity of the muscles, with an expression of prolonged suffering. Dr. Browne, of Belfast, gives a case of facial paralysis in a man, of nine days' continuance, permanently cured by the application of a small blister over those vertebræ, and one of a lady suffering from coryza, with continuous discharge of clear mucus from the nares, and fits of sneezing which had troubled her for twelve months, and for which he had prescribed various remedies without effect. He applied a blister over the spine, and next day the discharge from the nares had permanently ceased.

At the meeting on Friday, Aug. 5th, Dr. Samuel Gordon (President) in the chair,

Dr. SIMS WOODHEAD described and exhibited large sections of Morbid Conditions of the Lungs by means of the magic lantern. The demonstration attracted a large audience.

Micro-organisms associated with Malaria.

Professor CROOKSHANK read a paper on this subject. He mentioned that his attention had been drawn to this subject by his discovery of flagellated monads in the blood of rats. This made him anxious to study the flagellated organisms described by Laveran in the blood of cases of malaria. Professor Crookshank reviewed the work of previous investigators, and described the *bacillus malariæ* of Klebs and Tommasi-Crudeli. He pointed out the fallacies in the views of the last-named, and considered that the researches of Laveran, Richard, and Marchiafava and Celli were more reliable. Through the courtesy of Professors Golgi and Marchiafava he had been able to confirm the observations of these writers, but he had not had an opportunity of studying the flagellated bodies. These occurred very rarely, and from the account given by Professor Marchiafava he should say they were not at all like the organisms in the rat. He was now directing his attention to the cases of malaria in this country, and hoped to have more to say on a future occasion for the present he was glad to have the opportunity of demonstrating the peculiar structures known as the *plasmodium malariæ* and the semilunar bodies of Laveran.

Various questions were asked by Dr. Russell, Professor Macfadyean, and Dr. Acland, to which Professor Crookshank replied.

Sectional Anatomy of Inguinal Hernia.

Dr. CUNNINGHAM contributed a paper on this subject. It was illustrated by a series of frozen sections, and communicated in the absence of the author by Dr. St. John Brooks. The sections were made through the body of a subject suffering from congenital inguinal hernia. After some remarks on abdominal anatomy in general, he showed how the peritoneum was displaced in the sac of the hernia, and explained how the gubernaculum testis played an important part in the formation of the hernia. He drew attention to the great accumulation of fat in the mesentery which was found in the sac of the hernia, and showed some interesting photographs of the sections.

Tubercle in the Dairy.

Dr. SIMS WOODHEAD and Professor MACFADYEAN made a communication on this subject. They gave the results of a series of observations on tubercle in cattle and in milk. They pointed out that tubercular ulceration and tabes mesenterica were comparatively common in children, and especially where there was impaired digestion. They looked for the cause of this in tubercular cattle. In 623 cases from thirty-seven dairies they found thirty-one in which there were diseased udders. In most of these they found micro-organisms, but in six only were tubercle bacilli present, and then very sparsely. In the udders of certain cases they found bacilli present in large numbers. They did not lay very much stress on their observations, but they thought that more attention should be paid to this condition by inspectors, and a careful inspection made of the udders of dairy cows.—Dr. W. RUSSELL thought there was very little doubt as to the possibility of the communication of tuberculosis by milk. The question of nidus necessarily arose. In the case of children perhaps the commonest affection among them was gastro-intestinal catarrh, and in such a condition there was probably a suitable nidus. If the continued observations of these observers should conclusively show that tubercle could be transmitted by milk, there could be no doubt of the duty devolving upon public authorities to have the cows regularly examined.—Dr. PURSER asked whether tuberculosis was common in the human mammary gland.—Dr. ACLAND stated that he had made many examinations of milk from tuberculous women, and had never found any bacilli. He did not remember having seen a single case of tubercular disease of the breast, although he saw many cases of women suffering from advanced disease of the lungs who continued to suckle their children.—Dr. GILBERT KIRKER asked as to the sanitary condition of the sheds, to which Professor MACFADYEAN replied.—Mr. HEDLEY thought that this investigation bore significantly on food supply. Cheese might become an agent in infecting people, unless the process of manufacture destroys the germ. Butter also might convey the disease.

Erythema Nodosum a Specific Infectious Disease, and the Bacteria found in the Disease.

Dr. MANTLE read a paper producing clinical evidence which he thought was suggestive of erythema nodosum being a specific disease. He adduced facts showing its development in the midst of scarlatina and in measles, but particularly pointed out its relationship with the former. He had seen an epidemic of erythema nodosum in which children were chiefly affected, and during this epidemic a disease of a very similar nature took place in swine. He quoted the opinions of Trousseau and Hebra, who regarded the disease as a specific infectious disease. He had examined five cases for bacteria, strict antiseptic precautions having been taken to prevent contamination, and had in each case found bacilli; but he did not argue from so slight evidence that the organisms were by any means the cause of the disease, but merely thought the fact perhaps suggestive.—Dr. BROWN said that in ten years his experience proved that erythema nodosum was not what we understood as an infectious disease. He had seen but very few, if any, cases of erythema nodosum in male adults. Nearly all cases occurred in young women, and associated with menstrual derangement, and by giving iron and aloes the case is soon cured. That there is a close relation between scarlet fever and rheumatism most medical men will admit. Frequently there is rheumatic pain in the joints in scarlet fever which can be relieved by salicylate of soda.—Dr. ARCHER said he was somewhat surprised to hear that erythema nodosum was an infectious disease, but, at the same time, to hear the theory propounded that it depended on a bacillus was not at all surprising to him, as it was the fashion now to ascribe every disease to micro-organisms. He had read a good many papers on the subject, and he did not believe that in any case had proof been brought forward to show that they were anything more than the effect of the disease.—Professor CROOKSHANK said that Dr. Mantle had laid stress on the supposed infective nature of erythema nodosum, and then had described a bacillus in connexion with the disease. This naturally led the last speaker to run away with the idea that this bacillus was characteristic of the disease, and that Dr. Mantle suggested a causal relation. No evidence whatever had been brought forward in support of the latter belief. As no preparations of the bacillus, in the blood, or from cultivations, were shown under the microscope, but only tube-cultivations, Professor Crookshank was only in a position to say that the bacillus presented on cultivation a reticulated pellicle, which was also a character of the *bacillus epidermidis* and other bacteria. No doubt precautions had been

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taken against contamination, but that was not sufficient when the skin was involved, for the only means of avoiding error was to make control experiments by examining the organisms ordinarily present on the skin. He pointed out that Dr. Mantle had last year brought forward a bacillus which he associated with gonorrhœal arthritis, and this presented precisely the same cultivation appearances. In the absence of further proof he could only regard these as saprophytic bacilli. Professor Crookshank was of opinion that it was very praiseworthy for a medical man busy in practice to undertake these researches, and so keep up with the times, and he knew there was difficulty in making inoculation experiments. He urged, in such cases, the necessity for co-operation with a competent observer who had permission to make such experiments. The necessary evidence would then be forthcoming, and such a co-operator would doubtless suggest where observations must be controlled, and thus fallacies would be prevented from getting the upper hand. It was really a grave responsibility to publish such incomplete researches, because it led the sceptical to making such remarks as those which had fallen from the lips of Dr. Archer. Those remarks were a challenge to bacteriology, and he could not leave them unanswered. He desired, therefore, to emphasise the fact that bacteriologists, properly so called, were strongly opposed to any such fashionable or enthusiastic views in connexion with the study of pathogenic micro-organisms. Further, the statement that there was no proof to show that they had any causal relation was only an instance of how unjustifiable it is for anyone to dogmatise without any practical knowledge of the subject whatever.—Dr. ACLAND was surprised to hear such statements as Dr. Archer's in the Pathological Section, and instanced the case of anthrax, or woolsorters' disease, as one in which the causal relation of the micro-organism was universally accepted.—The discussion then became general, the weight of opinion being that no evidence had been adduced to prove the views of the writer of the paper.

Organisation of the Thrombus formed in an Artery after Ligation.

Dr. SHERIDAN DELÉPINE gave a short abstract of his paper on this subject. He pointed out that after ligation of one of the large arteries of the sheep the blood coagulates in the part of the artery where circulation has become impossible—i.e., between the seat of ligature and the first collateral branch above. This clot is not formed all at once. For nearly ten days the clot contracts; spaces are thus formed between the walls of the vessel and the central clot, and into these spaces fresh blood rushes, coagulates, and contracts in its turn; this causes a first stage of spurious or false vascularisation—i.e., vacuolation. The intima proliferates, the proliferation being most marked in the region corresponding to the proximal convex surface of the clot. From this point, especially, the cells of the intima grow into the clot, which is slowly absorbed as they advance. At the same time some of the cells are arranged so as to form a network of impervious embryonic vessels in the midst of the other cells and of the unabsorbed parts of the clot. At the end of the second decade the clot is practically entirely transformed into young connective tissue with embryonic vessels, and the vascularisation up to that time may be said to be rather potential than actual. As the clot is becoming absorbed, the space occupied by it gets smaller, the proximal surface of the plug of connective tissue taking its place becomes depressed, funnel-shaped, and the embryonic vessels begin to show a distinct lumen. By this time the muscular coat of the disused portion of the artery has almost entirely degenerated. Small cells and embryonic vessels are found penetrating into it from the intima and adventitia; these embryonic vessels meet, and when ultimately they become channelled, communication is established between the lumen of the artery, the vasa vasorum, and other vessels surrounding the artery through the vessels newly formed in the plug replacing the thrombus, and true or actual vascularisation at last may be said to exist.—Dr. WOODHEAD and Dr. ACLAND took part in the discussion, the latter drawing attention to Mr. Ballance's researches in connexion with this subject.—Dr. DELÉPINE replied.

The PRESIDENT regretted that time would not allow the Section to continue, and announced that Dr. Knight's paper "On certain Pathological Conditions of the Blood, with especial reference to their Action as Factors in the Manifestations of Empyema, Chlorosis, and Cutaneous Diseases," would be taken as read.

THE COLLEGE OF STATE MEDICINE.

As some of our readers may be aware, though we believe no public announcement of the fact has hitherto been made, an institution has been recently incorporated under the above-named title with the following objects:—1. To found, establish, and maintain, in or near London, an institution, to aid the theoretical and practical investigation and study of Sanitary Science, and of all matters relating thereto. 2. To aid the theoretical and practical investigation and study of other branches of State Medicine. 3. With a view to effecting these objects, to appoint professors to institute lectures and demonstrations, to issue publications of the Transactions of the Association, to found chemical and pathological laboratories, and a library. 4. To do all such other things as may from time to time be incidental or conducive to the attainment of the objects above set forth, or any of them.

It has been felt that in view of the increasing demand which is now being made for Public Health qualifications, some such provision as the above College is intended to afford was necessary; and although at most of the medical schools a course of lectures is given in Hygiene, it was felt that the class of men who wish to avail themselves of the instruction necessary for such diplomas would prefer attending an institution separate from any existing school, the candidates generally being gentlemen in practice or those who have for some time been qualified.

The Council of the College consists of Sir Joseph Fayrer, K.C.S.I (chairman); Sir John Watt Reid, Director-General (Navy); Sir Thomas Crawford, Director-General (Army); Sir Guyer Hunter, K.C.M.I., M.P.; Sir Henry Roscoe, M.P.; Sir Douglas Maclagan; R. Quain, M.D., F.R.S.; E. Klein, M.D., F.R.S.; Surgeon-General W. R. Cornish, Physician to Her Majesty the Queen; R. Brudenell Carter, Esq., F.R.C.S.; Surgeon-Commandant Cantlie; and others. We understand also that provision is made for seats on the Council, as *ex officio* members, of the presidents of existing Public Health Associations—such as the Sanitary Institute, Public Health Medical Society, &c.

There are to be two grades of membership—the Fellowship and Associateship. The former is to be conferred upon gentlemen eminent in any branch of State Medicine; the latter on those students of the College recommended for it, such students having first obtained a registrable qualification in Public Health. It is intended, however, in the first instance, to invite all gentlemen to become Associates who have obtained a Public Health qualification.

The course of instruction is not yet definitely arranged, but we understand it will include occasional lectures from eminent sanitarians, a course of lectures on Bacteriology, a course of lectures on Hygiene, and laboratory instruction.

The offices are at 26, King William-street, Strand, W.C., which, it will be noted, are also the offices of the Volunteer Medical Association and the headquarters of the Volunteer Medical Staff Corps; and we are informed that opportunities will likewise be afforded to Volunteer medical officers to get the instruction necessary to obtain the proficiency certificate.

THE THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—I have the pleasure of announcing that Dr. Sydney Ringer, F.R.C.P.L., F.R.S., has kindly consented to accept the office of first President of the Therapeutical Society, provided that we can arrange the date of the inaugural address to suit his various engagements. I am sure that all the members of the Society will read this statement with great satisfaction. To have secured the leadership of such a world-known man as Dr. Ringer is to make the Society proof against adverse criticism, and to make it certain of success. By an error of mine in a former letter, which you were good enough to publish, I styled Dr. Rayner President of the Medico-Psychological Society, whereas I ought to have written *formerly* President. Again thanking you for allowing me the use of your valuable columns,

I remain, Sirs, faithfully yours,

Longridge-road, S.W. A. GEORGE BATEMAN, M.B.

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THE LANCET.

LONDON: SATURDAY, AUGUST 20, 1887.

THE subject of sea-borne cholera in connexion with British measures of prevention, as opposed to European measures of restriction, was brought before the recent meeting of the British Medical Association in Dublin by Dr. THORNE THORNE, who acted as one of the delegates of this country at the International Sanitary Conference which was held in Rome two years ago with a view to the establishment of a universal code for preventing the importation of this disease; and the present occasion, when cholera is prevalent at several points in the Mediterranean with which the ports of this country are in communication, is an opportune one for considering how far the two methods in force for the prevention of cholera may be trusted to effect their intended purposes. The paper in question states that these two systems are in distinct antagonism to each other. The one which Europe as a whole trusts to, and to which, under the lead of the French, she has repeatedly given her assent at international gatherings, is a strict quarantine, disguised since the Rome Conference under the style of a "period of observation." The other is our system known as that of "medical inspection." The one, according to the author of the paper in question, "says to cholera: 'Hitherto shalt thou come, but no further;' the other, based on experience as to what is practicable in controlling the march of such a disease as cholera amongst civilised communities, has, above all, aimed at the removal from the midst of the people of those conditions which are essential to the spread of the infection."

The European epidemic of 1884-87 has afforded a means for testing the value of those alternative systems. France, foremost amongst quarantining nations, knew of cholera amongst her troops in Tonkin, but cholera entered France by means of infected transports; Italy then put France into quarantine, but cholera invaded her territory by means of coast and frontier provinces; Algeria insisted on rigorous measures of quarantine, but these did not avail to keep cholera from her ports; Spain dealt likewise with the infected countries, but her people suffered a terrible mortality from the disease, which reached her by means of a sea-coast province. In other words, quarantine, with all its modern improvements, turned out to be nothing more than a measure of useless restriction which was utterly disregarded by the advance of cholera. This recent experience is entirely in keeping with the previous history of cholera in Europe, and it fully justifies the irrevocable decision of this country to abandon a system more characterised by its barbaric and inhuman qualities than anything else. France, however, apparently clinging to the system for the sake of form, still advocates it in every capital where conferences assemble; and, knowing that the ten days' quarantine system advocated at Constantinople in 1866 has failed, and that the reduction to a seven days' detention proposed at Vienna in 1874 has shared no better fate, would imply that a still further reduction to five days, such as her delegates proposed at Rome, is, after all, the remedy. In the face of this, it is hardly a matter of wonder that the Rome Conference adjourned *sine die*.

We have so often referred to the real advantages of our alternative system, that we need only briefly summarise what is and has been done under it. All sick of cholera or diarrhœa are dealt with and isolated at our ports; but the healthy are not herded with the sick, as is done under a quarantine system. They are allowed to go where they will, provided they submit to proper supervision, by giving the address of the destination to which they are travelling. These precautions form, however, only the fringe of our system of prevention. Our population, knowing that the Government will no longer pretend to guarantee any measure of safety by drawing a quarantine line around the country, have of their own free will set themselves to remove from their midst those conditions under which imported cholera can alone spread; and, according to Dr. THORNE, they have, apart from all Government dictation, spent during the past ten years, by way of loan or in current expenditure, over eighty millions sterling, for purposes mainly of a sanitary character. When quarantining countries can give evidence of their faith in their alternative system by submitting to any such expenditure, then it will be time enough for them to urge that their system merits further consideration at our hands. Up to the present time, and this even in the Red Sea, which is looked upon as the gateway by which cholera may at any time enter Europe, the quarantine stations are not even provided with the common decencies of life.

Since our system of medical inspection came into operation it has gone hand-in-hand with a steady sanitary progress far exceeding anything to be met with in those European countries where the inhabitants are led to believe that quarantine restrictions will be imposed for their protection in times of danger; it has been accompanied by a great diminution in mortality, and it has spared the inhabitants of this country from an untold amount of misery and destitution, which "is the more burdensome because it follows in the track of preventable disease and death." That our system is complete we do not for a moment pretend, and we would make no boast of the fact that imported cholera has on each occasion, for many years past, been at once checked in this country; but we do hold that the experience of the past few years has once again indicated the uselessness of quarantine and the great advantages of the system we have substituted for it. Quarantine has "a blighting effect on sanitary progress"; it leaves a people unprepared to face a disease which disregards the antiquated barriers which nations have opposed to its extension, and so it prepares the way for panic. On the other hand, the steady progress of true measures of prevention tends to impart that feeling of confidence which is of such value in the face of an impending epidemic, and at the same time it promotes the healthiness and well-being of the population.

FOR a large proportion of what are regarded as people of the "better" classes in this country there are scarcely any regular "meal-times." Those who are able to dine at a fixed hour for the most part take breakfast, luncheon, and

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any other meals they may have, at odd times, more or less uncomfortably. Paterfamilias rushes his morning meal to catch a train or keep an appointment, snatches his mid-day meal how he can, and when he contrives to dine at home or to keep a dinner engagement, is either hurried or late, and therefore generally more or less ill-prepared for the really serious physiological feat of eating at one sitting enough to supply nutriment to the organism for the greater portion of the succeeding twenty-four hours, let what may be taken out of brain and body during that period; for the very large class of busy men to whom we are now alluding take very little to eat, although many consume a proportionally large amount of stimulating beverages when they are not feeding. The unmarried men of this order are even more irregular in their mode of taking food than their elders. Albeit they may be "diners out," they do not for the most part eat. Even admitting that the majority of men have been in times past, if they are not now, in the habit of eating too much, it is astonishing to observe how very little, with all his parade of appetite, and real or pretended *gourmet* airs, the average man of pleasure or fashion actually consumes. Materfamilias and her daughters are equally irregular in the supply of their needs in the matter of nutrition. They rise late, or, if not that, they either ride or walk before breakfast in a way differing greatly from the old-world practice of taking healthful exercise with a view to eating a good breakfast. The prevailing whim is the affectation of a continental *penchant* for breakfast about noon, which means an early luncheon, but for the most part falls short of an adequate mid-day meal. In short, women-folk "peck" at a late breakfast, at luncheon, and again, more demonstratively, at dinner, counting it a feminine grace to have small appetites, and almost vying with each other in their pretty winning way to pass nearly all the dishes. Doubtless in some way women eat enough, but their food is so taken as to digest with great difficulty and not a little distress. Probably most of the forms of dyspepsia increasingly common among women may be traced as their efficient cause to the habit of perpetually worrying the stomach with food, instead of feeding regularly at timely meals.

It has been hinted that, perhaps, we ought to assume that too much in the aggregate, or too bulky food, is habitually taken. In the ideal future of our species' development, man may perhaps take his food in the highly concentrated form of pastils or lozenges, or, dispensing altogether with the gastric organ, he may see fit to be nourished by some irregular mode of absorption. For the present, however, and for some generations to come probably, man will be compelled to take his food *per orem*, and the stomach is, and will continue to be, sufficiently important an organ in his economic apparatus to deserve, as it demands, deferential consideration, and such wise treatment as may minimise its labour and reduce to the least point the wear and tear it undergoes in fulfilling the systemic requirements. The first condition of health in a hard-working organ is regularly remitting strain and work, and punctually recurring periods of rest with opportunities for recuperation. To ensure the satisfaction of this orderly need there must be regular "meal-times," and we are well persuaded that the majority of dyspeptics would find their disabilities in the work of digestion greatly reduced if only they would make it a rule to eat regularly, moderately, and slowly. Irregular meals, at which the stomach is overloaded with materials consumed in haste, are the fruitful sources of distress and inconvenience in the function of food-taking. Indeed, the time and manner of taking food are almost as important as the specia character of the food we take. A dietary table should always particularise the hours for eating and drinking, and those who undertake to minister to the needs of the dyspeptic ought, we think, to lay very great stress on the time and manner of food-taking. The most nutritious diet loses half its value—if, indeed, it be not absolutely wasted—when it is thrown into the stomach, as it were, in shovelfuls, at odd times, without the smallest regard for the condition of that organ or the presence or absence of digestive secretions which are essential to the due performance of the alimentary functions. Economy, health, and in a large measure happiness, depend very seriously on the wise ordering and regularity of our meal-times; and those who are wise will see to it that this primary obligation of a physiological life is duly discharged.

FROM a Memorandum which has been issued by the Local Government Board, it would appear that the central authority have been in communication and in personal conference with the authorities for the city of Oxford on a matter which is becoming of primary importance as regards the future healthiness of many of our towns and cities, and that as yet Oxford does not see its way to initiate a change which is very urgently needed. The matter relates to the provision of a reasonable amount of open space behind new dwelling-houses, and the Local Government Board, having failed to convince the Oxford Board that injury was being done by the want of a proper bye-law to deal with this subject, instructed Dr. THORNE THORNE and their architect, Mr. GORDON SMITH, to inspect the city and its suburbs, and to confer with the local authority on the subject. The result of this visit is set out in the Memorandum in question, and it appears the reverse of creditable to those in whose hands the future interests of Oxford are vested.

The model code of bye-laws issued by the Local Government Board includes a clause requiring that all new buildings shall have a certain amount of open space in front and to the rear. The space to the front is almost always provided by the street itself; that to the rear has to be provided on the land belonging to the house. The principle embodied in this requirement is one which must command the assent of all sanitarians, for without space to the front and to the rear of a house there could be no windows in those positions, and no proper ventilation of the dwelling; besides which, the continuity of the open spaces is essential to that due ventilation around and about houses which is contemplated under the Public Health Act. The actual minimum space to the rear asked for under the model bye-law is a space measuring fifteen feet by ten feet, and even on this a closet and an ashpit may be placed. As the house increases in height, so does the required open space increase in area. Such a minimum space appears to be little enough, and there are a number of sanitary authorities who

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are not content with so little, and insist on a larger amount. But the Oxford authority declines to adopt it, and regards it as excessive for the purposes of the city.

The main difficulty arises with regard to the re-erection of existing houses, for, as the inspectors state, the houses in the principal parts of Oxford are densely crowded together, very many covering the entire area of their premises, and others having to the rear what are in effect mere shafts inadequately serving to admit light and air. Indeed, a bird's-eye view exhibits hardly anything but roofs and buildings. The inspectors appeal to the Ordnance maps in proof of their statement, but they add that since these maps were drawn the evil has materially increased, and instances are given to show that a city with courts and alleys already to excess is getting worse and worse in this respect. Here lies the grave evil to be met, and the question which Oxford has had to decide is, whether the mischief is to go on unchecked, or whether an effort is to be made to remedy it. So far Oxford's health representatives have decided to allow the existing evil to grow into a worse one; and they have done this in the face of offers of compromise, which, if they err, do so on the side of excessive leniency. Thus, the difficulty of dealing with the undue aggregation of houses in certain parts of Oxford was admitted, and to meet it, it was suggested that the bye-laws dealing with this subject might be so framed that they should not affect re-erections, provided the new buildings did not exceed the present ones either in height or in extent of ground covered. Now, considering that some existing houses have no open space at all belonging to them, concession could hardly go further. But the modification was not assented to, one reason being that it would cause irregularities in the heights of adjoining frontages. How this difficulty is to be overcome apart from bye-laws we do not know, for no authority has power to require uniformity as regards height of adjoining houses.

Failing this, the inspectors proposed another compromise, and this was that the area of the city in which the main difficulty arises should be defined, and that this area should be altogether exempt from the operation of the new bye-laws. This was met by proposals following one on another that this and that area should be exempted, until it was evident that the proposals submitted were altogether unreasonable. On this it was clear that Oxford declined any bye-law dealing with this important subject which could reasonably be assented to; and the conference had to be dropped.

The difficulty which has arisen at Oxford is certain to arise elsewhere, and sanitary authorities would do well distinctly to understand what their duties to the public are in this respect. Owing to a want of proper control in the past, houses have in many towns and cities become unduly aggregated together, and such houses have often, owing to the mere accident of position, and in no way owing to any expenditure on the part of their owners, acquired a value which is to a great extent fictitious. If such houses are to be rebuilt on a more expensive scale, and with the same or even a greater disregard to the requirements of public health, the difficulty of securing a remedy is indefinitely postponed; and the legalisation of a bye-law to prevent this evil is no more an interference with private interests than are numberless other provisions of the Public Health Act, which is throughout based on the principle that private interests must not stand in the way of the requirements of the community in the matter of health. Oxford, a centre of learning, disregards this, and that in view of the probability that its densely-crowded areas may become more crowded than ever, that its courts and alleys may be more confined than they ever have been, and that the breathing spaces which still remain behind the houses may be altogether covered over and shut in by loftier obstructions to ventilation than those which now exist. The result is to be deplored in the interests of future generations, and on those to whom the decision is due a heavy responsibility must rest.

THOSE very energetic persons to whose persistency we are indebted for the repeal of the Contagious Diseases Acts seem determined not to let the grass grow under their feet. They have altered the title of their Association. It is no longer the National Association for the Abolition of State Regulation of Vice, but the National Association for the Defence of Personal Rights. With this avowed object in view, they have addressed a memorial to the Secretaries of State for the Admiralty and War Departments, and to members of both Houses of Parliament. It is marked "important," and is a very remarkable document. The memorialists, having learnt that the Government have recently granted subsidies to certain hospitals for the treatment in special wards of women suffering from venereal diseases, desire to protest against any such use of public money. The reason assigned for this protest is original, if illogical. It appears that in 1875, just twelve years ago, representatives from twenty of the most active Associations for the repeal of the Acts met, and for *two* days carefully considered certain proposals then made for subsidising or maintaining lock hospitals or lock wards in hospitals, in lieu of the arrangements authorised by the Contagious Diseases Acts 1866-69. The result of this *two* days' deliberation, we are now informed, was a unanimous declaration in favour of admitting cases of venereal disease into general hospitals and infirmaries, as one among the many forms of suffering which it is the purpose of those institutions to relieve. It is also contended that the present House of Commons is bound by a vote of last year, which rejected an amendment of Sir JOHN KENNAWAY providing for the continuance of voluntary lock hospitals supported by the Government. The whole tenour of the memorial is, like most of the literature proceeding from the same source, inaccurate and misleading; ingenious, but very disingenuous. It would, indeed, be unworthy of notice were it not necessary to refute statements put forward with such persistency. The making of grants of money by the Government to lock hospitals and wards in Portsmouth and Plymouth was allowed without dispute many years before the first Contagious Diseases Act (that of 1864) was passed. The Westmoreland Lock Hospital of Dublin has been supported by a Government grant ever since its opening in 1792; and though it has been proposed to discontinue the annual grant, it is on the grounds of its not being a clinical hospital, and not because the principle of supporting such hospitals is condemned. Moreover, one of the strongest arguments used

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against the Acts by their opponents was that the same, or even greater, results might be achieved by voluntary lock hospitals and wards. They also urged that if the Acts were only repealed, these latter would be liberally provided by the public. So far from this having been the result of their repeal, the Government have been practically compelled to make the grants objected to. The proposal to admit women suffering from venereal diseases into the wards of general hospitals and infirmaries, without distinction, is one the impracticable nature of which scarcely needs comment. To place a married woman infected by her husband with syphilis in the same ward with medical or surgical cases is a proceeding which could never be sanctioned by the managers of any hospital or infirmary; while to admit a prostitute, however penitent she might be, would be simply an outrage. Patients suffering from these diseases must be kept apart from other patients, in separate wards, with separate waterclosets, eating and drinking utensils, washing apparatus, and conveniences of every kind. These requirements are so obvious as to need no argument, and lock hospitals and wards must continue so long as venereal diseases prevail. The truth is, that the tide of public opinion is slowly but surely turning against those who caused these Acts to be repealed. Only a little more experience of the disastrous results which have followed will cause their restoration to be demanded with a force which will sweep away all opposition to the winds.

Annotations.

"Ne quid nimis."

THE INTERNATIONAL MEDICAL CONGRESS.

THOSE Europeans who intend to take part in the International Medical Congress are beginning to wend their way across the waters. The programmes are not yet given in much detail. The Congress will be opened by the President of the United States, at Albaugh's Opera House, on Monday, Sept. 5th, at 11 A.M. This very fact stamps it with an international character. It stands, too, in the series of International Congresses, and will represent to the world the state of medicine as a profession and an art. This fact is enough to invest the meeting with high importance, and to make us wish, as we do devoutly, that it may prove worthy of its predecessors, of the series of which it is a member, and of the great nation of which it is the guest. We are well aware that all has not gone smoothly with it, and that our brethren in the States have been keenly divided as to methods of procedure and questions of membership and precedence. We have no wish to judge between them; but we have never been able to see that the Congress can be treated disrespectfully, or even coldly, without the profession itself suffering. It ought to be the endeavour of all concerned to minimise differences, and even at the eleventh hour to make this Congress great and effective. Meanwhile we may call attention to a circular, issued by the New York Bureau of Information, which contains the following "instructions to visitors":—

"Washington is 200 miles from New York—six hours by cars. Foreign steamers to New York land at New York or at Jersey City and Hoboken, opposite New York. The New York Bureau of Information have engaged a reception parlour in the Hoffmann House, corner of Broadway and 25th Street. The Broadway car line, which is crossed by the car lines from all the steamboat landings, passes in front of the hotel. Rooms at the Hoffmann House, which is conducted on the European plan, can be obtained through the committee at a reduction of 25 per cent. One or more of the Reception Committee will be in attendance between 2 and 4 P.M. each day on and after August 20th. At other hours the clerk of the hotel will act for the committee. Members intending to attend the Congress are requested to send their names in advance to the Reception Committee, Hoffmann House, New York, so that the committee can secure for them reduced hotel and railroad rates."

CHOLERA RUMOURS.

RUMOURS of choleraic diseases in this country tend to arise at this time of the year. One instance occurred some three weeks ago at Newton-Poppleford, where Dr. Pullin, who has had experience of cholera, met with a case which terminated fatally in twenty-four hours, after presenting, according to his report, the symptoms of the Asiatic and malignant disease. The case was that of a farmer, who, after having indulged somewhat freely, was affected by the excessive temperature; and Dr. Pullin is reported to have set the disease down as due solely to the heat to which the patient had been exposed. The sanitary surroundings of the man's residence were excellent, and no other condition indicating any suspicion could be detected. Similar rumours also come from Marylebone, but the cases in question are properly classed amongst those severe diarrhœal affections of which a few always occur in England at this time of the year. The symptoms they not unfrequently present do admittedly most closely resemble many attacks which occur during a prevalence of true cholera, but this circumstance alone is no proof that the infective disease is in our midst, and it is important that those meeting with such cases should not cause unnecessary alarm by resorting to a nomenclature which is only intended to cover cases of the infectious Asiatic disease.

THE CASE OF ISRAEL LIPSKI.

THE extraordinary measures that are being taken to discover further evidence that may shed light on the Batty-street murder shows at least that there is still a considerable amount of mystery enshrouding the case. Many points now being investigated ought, in our opinion, to have been cleared up at the time of the trial, instead of being considered during the respite of the prisoner, who has to linger in suspense, with the gallows ever present to his mental vision. That Miriam Angel was murdered there can be no manner of doubt. It seems equally clear that in the first instance she was rendered insensible by blows on the temple, and afterwards suffocated by strong nitric acid. There is a strong chain of circumstantial evidence, which on the face of it tells strongly in favour of the conviction recorded at the Old Bailey, but it is not enough to warrant the death sentence being carried out that the facts fit the theory of Lipski's guilt; it must be shown beyond reasonable doubt that they are inconsistent with any other hypothesis. As regards motive we are not inclined to lay much stress one way or the other, as the proximate cause of crime is too frequently unknown, and of course still more frequently inadequate to the particular offence. Nevertheless, in this case the motive being entirely conjectural, as negative evidence it should on technical grounds be counted somewhat in favour of the innocence of the convict. If it could be conclusively shown that the door of the room in which the dead body of Miriam Angel and her supposed murderer were found was actually locked on the inside, and that it was impossible that the key could have been turned by some person outside the room, there would be an end of the case; but from the reported testimony it appears by no means clear that the door was locked, and, moreover, there

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is reason to suppose that, either by the use of some instrument or by temporary removal or displacement of a portion of the partition woodwork, the key on the room side of the lock could be reached. It is matter of the highest importance that the authorities should satisfactorily explain the position in which Lipski was found with a box in front of him, and with his acid-stained coat covered with the coat of the deceased woman's husband, which had previously been hanging in the room. Had Lipski committed the murder and afterwards attempted suicide, one would not have expected to find what to our minds is strong presumptive evidence of foul play practised on Lipski himself, evidence consistent with the convict's story of the occurrence. And, again, assuming that the theory of the prosecution was correct, was it not strange that no sounds were heard by Simon, and possibly by Schmuss, who, according to the statement of the convict's solicitor, were one or both in the house at the time the murder is believed to have been committed? We can conceive that the abrasions on Lipski's elbows may have been caused in more ways than one; but obviously they were more likely to have been inflicted in the manner suggested by the defence—viz., whilst Lipski, lying on his back, was offering resistance to an assailant. It is doubtful if the quantity of acid employed can be more than rudely guessed at, for it is so powerfully corrosive, and causes such obvious stains, that, in common parlance, a little goes a long way. And since the purchaser of the acid cannot be positively identified, can it be expected that much light will be thrown on the case from inquiries directed to this end? We trust Mr. Matthews will base his decision on a general consideration of the whole affair, and not in any way limit himself to the determination of the question of "a life against a bottle." After careful and anxious inquiry, and after balancing the evidence, we unhesitatingly avow that Lipski's guilt has not been proved beyond reasonable doubt. In saying this, we do not desire to cast any aspersion on the jury who tried the case. Their duty must have been a painful one, and their task unusually difficult, for, as the learned judge observed, the case was the most extraordinary he had met with in his judicial experience.

A correspondent, whose opinions on medico-legal questions are entitled to the greatest weight, sends us the following remarks on the medical aspect of Lipski's case:—"The medical aspect of the Lipski case has received much less attention than it deserves. The question which is most, and indeed vitally, important is—Whether the man now under sentence of death could become insensible, or could render himself insensible, under the circumstances reported at the trial and at the preliminary inquiries. Had Lipski been found on the bed upon which the murdered woman lay, or had he been found on the floor of the room between the bed and the floor, or near the window, it might be supposed that he had fallen in syncope, from which he had not rallied at the time he was discovered. But he was found unconscious under the bed, with an egg-box in front of him, and we have therefore to assume that he crept there to faint, or else to render himself insensible by some stupefying agent. The hypothesis is incredible, if not impossible, and as far as I know, has for its foundation not one tittle of medico-legal experience. I have sought in vain for anything in the records of forensic medicine that would lend support to such a view, and in my experience it has nothing that could give it the slightest countenance. Another point is the nature of the insensibility. It was not from syncope. It does not tally with the unconsciousness that would be produced by any known anæsthetic or narcotic. It would, however, be accounted for as due to the effects of a stun by a fall or blow, and belongs, without any doubt, to the condition known as cerebral or cerebro-spinal shock. These circumstances all tend to favour the widespread feeling that the guilt of Lipski is not sufficiently certain to allow the nation, with a clear conscience, to commit the irrevocable act of taking the life of a fellow human being, however dark may be the suspicion which appears to cling to him."

RABIES IN DOGS.

THE report from the Select Committee of the House of Lords on rabies in dogs is decidedly satisfactory. Whilst admitting the value of universal muzzling for a period, say of twelve months, with a view to the extirpation of the disease, the committee thinks that this, to prove of real efficacy, should be supplemented by an almost impossible exclusion of foreign dogs. The committee also considers, and doubtless with good reason, that the seizure, detention, and destruction of stray dogs, and the unusual care which dog owners exercise under pressure, are of no little avail in bringing about a diminution of the disorder. The committee rightly think that it is not within their province to discuss or question the conclusions of the committee appointed by the Local Government Board to inquire into Pasteur's treatment. We sincerely hope, as we have hitherto advocated, that the treatment may, in the words of the report, "be applied not only in Paris but in every place where the need may exist and scientific skill be found." The second paragraph of the report asserts that "it is practically proved that subcutaneous inoculation with its virus is the only ascertained means of imparting the disease, and that in order to check it every effort should be made to prevent the dissemination of the infective substance." This is a careful and well-guarded statement, for it asserts nothing more than the facts fully justify as ascertained by Victor Horsley, Nicols, Fleming, and Brown, whose evidence also went to prove that the disease had not originated spontaneously, though it is admitted that it cannot be absolutely demonstrated that rabies does not arise *de novo*. We are glad to observe also that the report states unreservedly that climatic conditions and special treatment of dogs have no influence in the causation of the affection. Without following the report closely, we may say that its statements and conclusions are quite in accordance with those which are accepted by the best authorities, on whose evidence, indeed, the statements and inferences have been drawn up; and the recommendations of the committee, which we printed last week (p. 336), will meet with the reasoning assent of all who have carefully studied the subject.

THE PECULIAR PEOPLE AGAIN.

JAMES RUSH, a labourer of Steeple, has been sent to prison for a month by the magistrates in petty sessions at Latchingdon, Essex, for neglecting to provide medical attendance for his child, who, after measles, was found to be suffering from ophthalmia and eczema of the face in an aggravated form. In all previous cases where parents have been so charged the patient has died. Here the child still lives, but in much suffering, and—according to Mr. Gorton Coombe, medical officer of health—with the sight of the left eye almost entirely gone. The only defence that Rush made was that "he trusted in the Lord." The magistrates told him that he had treated his child most cruelly and unnaturally, which, of course, he denied. The prosecution was at the instance of the Board of Guardians, whose attention was called to it by Mr. Gorton Coombe, who received information of the case in his capacity as medical officer of health of the Southminster district. The case is a pitiable exhibition of stupidity and ignorance. The medical officer of health would have failed greatly in his duty, and would indeed have been guilty of great inhumanity, had he not exposed the facts and thrown the responsibility of dealing

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with the parents on the guardians, who in their turn very properly threw it on the magistrates. The result is not a very brilliant one. The father is sent to prison, and the child is left to the care of its mother. She has been urged to allow the child to go to Maldon Workhouse, but she is taking time to think over the matter. It would seem only reasonable that the guardians should quickly give the mother the choice of placing the child under proper medical care or punishing her as they have the father. On religious grounds alone the behaviour of the Peculiar People is absurd, and unmindful of the great Teacher, who said they that are sick have need of a physician; and on humane and social grounds it is clearly right, as it is legal, to see that children have the prime necessaries of life and health supplied to them when their parents fail in their duty. There is a disease known to medical men in which such neglect as this might involve the speedy loss of both eyes, and in which medicine is capable of effecting a quick and complete cure. Will the most ardent champion of parental liberty argue that a parent is at liberty to throw his child into complete blindness on a fanciful and conceited reading of an isolated passage of Scripture? It is the very business of civilisation to curtail such freedom as this, and to bring the peculiarities of the peculiar into decent conformity with the common sense of mankind.

PROFESSOR POTTER (OF SAN FRANCISCO) AND HOMŒOPATHY.

DR. SAMUEL POTTER, Professor of Theory and Practice of Medicine in the Cooper Medical College, San Francisco, author of the "Index of Comparative Therapeutics," to which so much reference has been made by Dr. Brunton's critics, writes a long and able letter to vindicate himself from the charge of having ever practised homœopathy (though he admits having graduated in a homœopathic college), and from other charges equally inaccurate. We do not think that the censure of Dr. Potter's critics needs such lengthened and careful refutation as Dr. Potter gives it. It is enough to notice his chief reasons for abandoning an exclusive system, all that was good in which, he says, was based on Haller's suggestions in his preface to the Swiss Pharmacopœia about 1775, forty years before Hahnemann's pretentious and absurd doctrine had developed. "I abandoned homœopathy," he says, "before entering into practice, because my observation of the reception by homœopaths of Dr. C. Wesselhoeft's reproving of Carbo Vegetabilis, and Dr. Sherman's work on the Milwaukee Test of 1879, proved to me that no crucial drug experimentation conducted under scientific safeguards could meet with any degree of appreciation from the majority of that sect. I was further impressed by finding that ninety-nine out of every hundred so-called homœopathic physicians were in the habit of resorting to regular therapeutics whenever there was any active therapy to be done."

"SLEEPING FOR THIRTEEN MONTHS."

ANOTHER case apparently of hypnotic unconsciousness has been discovered by the newspapers. The patient is a Russian aged forty-three, who has been for thirteen months in a state of unconsciousness in the workhouse at Walton, under the care of Mr. R. McG. Anderson, from whom we learn that the particulars as published are substantially correct, but for this important detail, that the "very remarkable feature of the case" concerning the patient's readiness to take food is a misinterpretation, for liquid food was simply swallowed by the patient in a reflex and unconscious manner. The loss of mental activity appeared to have resulted from the effects of the hot weather in July, 1886, and it is certainly possible that the "sleep" may have been excited by this cause, but it would be necessary to suppose also that a certain predisposition to loss of consciousness must have formed a part of the man's constitution. As far as we have been able to gather from the record of the case, there seems to be no reason to doubt the diagnosis of this case as being a genuine one of hypnotic sleep, not induced by drugs, or by any tangible morbid state of the blood or nervous centres, but best defined, in the present state of our knowledge, as a peculiar functional disturbance of the grey matter of the cerebral cortex, possibly akin to that which occurs in ordinary sleep, and probably affecting a very large area of the perceptive and sensory centres of the cerebral hemispheres. Comparing the healthy brain for the moment to magnetised iron, we may look on this hypnotic state as iron which has been demagnetised by some slight but efficient cause.

THE PROPOSED NEW UNIVERSITY.

IN the House of Commons on the 12th inst., in answer to a question from Mr. Bryce, Mr. W. H. Smith said that no petition had been presented to the Queen in Council from the Royal College of Physicians of London or the Royal College of Surgeons of England asking for a Charter for a representative body of those Colleges to examine for and confer medical degrees. Caveats had been received in regard to such a Charter from various quarters and from five of the Universities. A petition to Her Majesty in Council had, Mr. Smith stated, been received from University College and King's College, London, conjointly, and also from the Association for promoting a Teaching University for London, in favour of a new University for the London district. The grant of the Charter was opposed by the London Univerasity. The petitions were submitted to the Queen in Council on July 12th, and were referred by Her Majesty to a committee of the Lords of the Council to consider and report thereon. It is competent, said the right hon. gentleman, for any persons or bodies interested to petition Her Majesty in Council at any time before Sept. 1st, and subsequently the whole question will be considered by the committee.

THE EARLY SIGNS OF LOCOMOTOR ATAXY.

Dr. MAX KARGER has published as a graduation dissertation in the University of Berlin an account of a number of observations made on 117 cases of locomotor ataxy in Professor Mendel's clinic, with the view of detecting the early symptoms of this disease; for, as he says, the great hope of a really rational and satisfactory method of treatment lies in the recognition of the existence of the disease in its earliest stages. The history given by the patients established a connexion between syphilis and locomotor ataxy in 53 per cent. of the cases. In the earlier stages he found symptoms affecting sensation, lancinating pains, numbness, especially of the lower extremities, cord-like sensation round the waist, retardation of the rate of conduction of sensations, and, what he looks upon as especially important, being almost always present, the so-called Romberg's symptom—i.e., the inability or great difficulty of balancing the body when the feet are placed parallel and close together, the eyes being shut,—which, however, he does not consider is due to the ataxy, but thinks it is an abnormal condition of sensation. With regard to ophthalmic symptoms, he finds that at the commencement of locomotor ataxy there is a diminution in the acuteness of vision, and a concentric contraction of the field, amblyopia and amaurosis, which were due in 35 per cent. of the cases to atrophy of the optic nerve. Then there were slight and transitory paralyses of the eye muscles. Insensibility of the pupil to light was found in 66 per cent. of the cases, and was due sometimes to a paralysed condition of the sphincter, and sometimes to disturbances of reflex action. With reference to the patellar reflex, the author thinks it has been considered to be absent rather too

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universally. He found it in eight of his 117 cases. The bladder reflex was often diminished, so that chronic vesical disease, the cause of which is not to be made out, ought to lead a medical man to think of tabes. Impotence was much more common than any increased sexual reflex. Very rarely gastric and cephalic "crises" and joint affections were noted. The author suggests that complaints of a vague nature, such as nervous pains, eye or bladder troubles, should lead the physician to make a thorough examination with special reference to the want of patellar reflex, Romberg's symptom, and the want of reaction of the pupil, as these objective signs do not necessarily give rise to any subjective symptoms.

CHOLERA INTELLIGENCE.

NEWS of cholera in Europe is still limited to Italy and to Malta. So far as the mainland of the kingdom of Italy is concerned, the only news as to the cholera comes from Naples and the neighbouring town of Resina in the bay. As regards Naples the intelligence is very conflicting, but there can be little doubt that true cholera prevails there to some extent. At Resina there was, during the close of last week, a daily record of deaths varying from two to five in number, but since then it is stated that material improvement has taken place. In Sicily the disease is still prevalent in the provinces of Palermo, Messina, and Catania, but apart from Palermo there is a diminution in the number of attacks. In Malta over seventy attacks and forty deaths occurred in the week ending the 15th inst., the daily record of deaths varying from thirteen to two. So far, there is no news of any attack amongst the troops garrisoned in the island. Cholera is also prevailing widely in Northern India; the exceptional prevalence of the disease being attributed to a heavy and continuous rainfall ensuing on drought. On the 15th inst. a telegram was received from Simla to the effect that the medical returns from the North-West Provinces showed that 70,000 persons had died there from cholera during June and July, this being at the rate of 1 per cent. of the population.

SPINAL CURVATURE.

IN a clinical lecture by Dr. Mollière, surgeon to the Hotel Dieu in Lyons, upon the etiology and treatment of curvature of the spine, the causes are divided into three main groups: 1. Affections of the head and neck, including astigmatism, enlarged cervical glands, goitre, contraction of the sterno-mastoid, and hysterical or other paralyses of the muscles of the neck. 2. Affections of the lower extremities, including congenital dislocation of the hip, coxalgia or "growing pains" in the hip, knock-knee, rickets affecting the tibia, fractures with shortening, a relaxed state of the foot and other ligaments, and juvenile paralysis. 3. Affections of the vertebræ themselves, or of the thorax, causing true or essential curvature, including pleurisy and excessive exercise of the muscles of one side—such, for example, as existed among the early pressmen, who are represented in old caricatures with a hump near the left shoulder. In addition to these causes, it must be confessed that in a large number of instances there are others which cannot so satisfactorily be made out. Dr. Mollière has given a good deal of attention to this subject, studying the thoracic functions of hunchbacks and examining such muscular theories as appeared to present any hope of a solution of the question. Is, he asks, curvature caused by paralysis of the muscles on the opposite side, as is supposed by some writers? Post-mortem examinations of hunch-backed women negatived this theory, as no muscular or nervous lesion could be found, and no compression of vessels or nerves in the vertebral foramina. Again, is curvature due to muscular contraction on the affected side? Still less is this the case, for the electrical conditions of the muscles and the want of success in the divisions of muscular tissue proposed by M. Guérin both show the incorrectness of this theory. In order to elucidate the subject, M. Mollière some years ago divided three of the intercostal nerves of one side in a young rabbit close to the foramina, reuniting them immediately. The rabbit became hunchbacked, the curvature being on the side operated upon. The animal was allowed to grow up, and was then killed and examined. No trace of the operation could be discovered, the cicatrisation of the nerves being perfect, and no muscular or nervous lesion being discoverable. This experiment proves, according to M. Mollière, that true curvature of the spine is due to temporary paralyses of the intercostal muscles during youth. These paralyses pass away, but the curvature which is produced on the paralysed side remains. In these cases the hope of cure lies in a rational system of gymnastics; but if the curvature is very great, a jacket should be applied while the patient is in a hanging posture.

"STOOPING FORWARDS."

EVERYONE knows that stooping forwards, particularly after rising quickly from bed in the morning, when the stomach is empty and the heart has less than ordinary support from the viscera below the diaphragm, is very apt to occasion a form of faintness with vertigo not unlike that which occurs in sea-sickness. We do not at the moment speak of the faintness and giddiness from cerebral anæmia, which are directly consequent upon suddenly assuming the erect, after long continuing in the recumbent, posture; but of the more alarming sensation of being in the centre of objects which are rapidly passing away, usually from left to right, with loss of power to stand or even sit, and an almost "nightmare" feeling of inability to call for help or do anything to avert a catastrophe, while throughout the experience the sufferer retains painfully acute consciousness. This, we say, is familiar as one at least of the effects not uncommonly produced by stooping forwards under the special conditions indicated. With many other varieties of the vertigo consequent upon heart weakness or cerebral anæmia observation or experience has made us all acquainted. We cannot, however, help thinking that the consequences of even partial compression of the veins of the neck, offering an obstacle to the return of blood from the head, with its important organs, are not so well recognised. The peculiar form—or, more accurately, the several forms—of headache distinctly caused in this way when the head is long bowed forward on the chest, bending the neck on itself, cannot fail to occur to everyone; nor will the high tension of the eyeball, the turgid and heavy eyelids, the snuffling nose, the deafness, with buzzing or throbbing in the ears, the heavy breathing, and the puffed and perhaps flushed or darkened colour of the face, resulting from the obstructed venous circulation through the bended neck, be forgotten. There are other and more perilous, though secondary, effects of leaning forwards when the heart is weak, or the bloodvessels are not so strong as they ought to be, which should not be overlooked. Beyond question the extra strain thrown upon the apparatus of the circulation by anything that impedes the free passage of blood through almost any part of the venous system is more severe and dangerous than a *physically* equal strain thrown on the arteries. At least, this is so in adult life, and, without going further into details in connexion with the *modus operandi* of the mischief to which we point, it may be permissible to urge that the subject is one to which attention may be usefully directed. The weakly, and those who are not unlikely to have hearts readily overburdened, and bloodvessels easily stretched beyond recovery,

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or even ruptured, should be warned quite as earnestly against suddenly assuming, or too long retaining, postures which do—however slightly and partially—impede the return of blood through the veins. We know how prolonged sitting may cause the veins of the legs to become distended, and either give way or permit the extravasation of their contents. When this sort of thing happens, even though in comparatively trifling degree, in the case of vessels directly connected with such delicate organs as the eye, the ear, and the brain, it is easy to see that the results may be very serious in their character; and, probably, few postures commonly taken up by persons who lead somewhat sedentary lives are so prone to do mischief unnoticed as that of "leaning forwards," as at work at a table which is not sufficiently high to ensure the head being so raised that the veins of the neck may not be in any way compressed or the return of blood from the head embarrassed or delayed. We see reason to believe that if this apparently small matter were more generally understood there would be fewer head and heart troubles, and we will go so far as to say that some lives now lost would be saved.

REFLEX AUDITORY NEUROSES.

THE changes at a distance from the site of irritation when this is about the organ of hearing are of great interest, though of doubtful interpretation. Schmiegelow has given renewed attention to them, and rightly points out some fallacies which Urbantschitsch seems to have overlooked, more especially in connexion with the alleged diminution of the acuity of vision on the same side of the body as the aural disease. Even in 1838 Delau recorded two cases of suppurative inflammation of the tympanic cavity, in which the sight of the corresponding eye was lessened whilst the ear was diseased, but improved as the ear got better. The phenomenon is not due to propagation of the inflammation to the retina, for the optic disc presented no pathological change. Schmiegelow doubts the accuracy of Urbantschitsch's observations, in which too much importance was attached to insignificant ameliorations of sight, and enough account was not made of the size of the pupils and of variations in refraction. Another unsettled question is the alleged reciprocity between the two ears, of such a kind that a loss of hearing on one side appears to give rise to a slight diminution of auditory powers on the other side. Besides various forms of neuralgia and the well-known vertigo, many mental symptoms, and even forced movements, have been ascribed to affections of the middle ear, but it is not improbable that damage to the more elaborated structure of the labyrinth may be operative in the production of some of these symptoms.

"SUSPICIOUS" DISEASE IN SPAIN.

THE only fresh explanation that appears to be forthcoming as to the cause of the outbreak to which we referred in our issue of the 6th inst. is a communication to a medical journal from a practitioner, who says that a member of his family who had been drinking goat's milk, having colic, he tested the goat's milk and found traces of corrosive sublimate in it, a circumstance which he believes is due to shepherds using a wash of this substance for their flocks for the purpose of destroying the larvæ of a fly which deposits its eggs in the cracks of goats' teats. The same correspondent remarks that he found corrosive sublimate in some cheese which had been sent to him from Seville a short time before, and which had produced "colic" in four persons who had partaken of it. The shepherds, whom he says he has often seen in his youthful days applying what they call *solfman* to the animals' teats, have no idea of the poisonous nature of the substance. The fly deposits its eggs in the summer only, and that is why these suspicious "colics" occur to those who partake of goat's milk and fresh cheese in the hot weather only. Some "suspicious cases" have been reported at Torrijos and Alhama, those in the latter locality having been diagnosed as sporadic cholera.

INFECTIOUS DISEASE IN LONDON.

SCARLET FEVER still continues to increase in London, as many as 217 cases having been admitted into the hospitals of the Metropolitan Asylums Board during the fortnight ending Friday last, leaving on that day 640 cases under treatment. The patients appear to have been received from all parts of the metropolis, Hampstead excepted. In this district the North-Western Hospital has been opened for the reception of persons suffering from scarlet fever, and ten cases had been admitted during the fortnight, leaving twenty-three under treatment in this institution. Of other fevers, there were but sixty-six cases remaining in the hospitals of the managers, of which fifty-six were of enteric fever and one of typhus. London still remains free from small-pox, but one patient suffering from this disease having been admitted during this period. Application has been made for the admission of a patient suffering from "cholera," but the Asylums Board were compelled to refuse the case, for the reason that no arrangements had been made for the reception of such cases, or could be made without the sanction of the Local Government Board.

THE ART OF BATHING.

THE bathing season of this year has thus far proved not less, perhaps more, fruitful of fatalities than usual, and visitors to the seaside cannot be too earnestly cautioned to avail themselves of all the local knowledge that is to be had before committing themselves to the movements of the tide upon what may be treacherous stretches of coast. Many a good swimmer has already this season found cause to regret the very proficiency which made him heedless of such an obvious peril as the outflowing of the tide. In most watering-places, however, there is no difficulty in getting ample security in this respect. Sea-bathing is an exercise for which more or less complete provision is made, after a fashion, at all the favourite resorts along our coast. That fashion, however, leaves very much to be desired. The familiar bathing machine is commonly a screen, and nothing more. The floor and seats will probably assume in use such an angle to the horizontal as makes it impossible either to sit or stand with comfort. The wooden roof shuts out the sunshine, depriving the bather of both light and heat. The cramped space affords no sufficient room even for the mere use of towels, and puts everything in the nature of athletic or calisthenic exercise wholly out of the question. The confined air, instantly saturated with moisture, throws the whole duty of drying the damp surface of the body upon a pair of clammy towels. The oozy floor keeps the feet wet and cold; while, finally, the isolation of this dismal cell converts what ought to be the most enjoyable part of the bathing operation into a brief term of solitary confinement. Such are some of the defects in our appliances. It cannot be surprising if, associated with these crude contrivances, there are some very faulty methods. Perhaps there is no error more common than that of over-long immersion. The error is, indeed, a most natural one. The bather has probably waited an hour to secure a "machine." He has the assured prospect of spending a most unhappy half-hour in it when the immersion is over, and it seems a very incommensurate advantage to be paddling about in the water for five minutes. Yet for the great majority of bathers five minutes' immersion is quite long enough. Especially is this so with a bather who does not swim. In his case immersion means partial

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immersion only. He stands with shoulders, chest, and back exposed to the air, and offering a large evaporating surface from which heat is abstracted much more rapidly than from the submerged area, and by conduction through the insolated surface water of the sea. If to this be added the important fact that such a position is usually a very unaccustomed one to such a bather, we have a set of conditions in which it is plain that great circumspection should be used and the strictest moderation of indulgence must be prescribed. The swimmer even, whose familiarity with the water indicates, among other things, that he has had many opportunities of judging how long immersion suits his constitution, very commonly errs by exceeding the fifteen or twenty minutes which a wise discretion would prescribe.

FREDERICQ ON THE RESPIRATORY MOVEMENTS.

M. FREDERICQ, Professor of Physiology in the University of Liège, has communicated to the Belgian Academy of Sciences some interesting experiments he has just made on the regulation of the movements of respiration. He took two large rabbits, and, having anæsthetised them, cut the right carotids and connected the cardiac extremity in each with the cephalic extremity of the other rabbit by means of tubes filled with a 0·6 per cent. solution of chloride of sodium. He then tied the left carotids and the two vertebral arteries in both, the head of each rabbit being thus supplied exclusively with blood from the left ventricle of the other. He then attempted to cause dyspnœa in one of the animals by obstructing the trachea, and by administering air highly charged with carbonic acid. Difficulty in breathing, showing itself by deep and rapid respirations tending to pass into convulsions, was produced as under similar conditions in ordinary circumstances, but not on the rabbit subjected to the treatment. In that animal the respirations went on as before, while the symptoms of dyspnœa were confined to the other animal. The respiratory centre in the medulla of the rabbit whose trachea was compressed, being supplied with fully arterialised blood from the other rabbit's heart, entirely ignored the venous condition of the blood in the major part of its own arterial system; while the respiratory centre of the rabbit whose respiration was unobstructed, being supplied with highly carbonised blood, and being stimulated to abnormal activity thereby, immediately communicated exaggerated movements to the respiratory functions under its control.

THE DEGENERATION OF THE TEETH.

AN article recently published in an evening contemporary very properly criticises the theory started in an American dental journal that vegetarian diet would, if universally adopted, produce an edentulous condition of the jaws in the course of a few generations, utterly regardless of the fact that vegetarian races have magnificent teeth. The pathology of this condition is stated to be *disuse* and consequent atrophy of muscles and jaws, then degeneration, and ultimately suppression of the teeth entirely. That comparatively little employment of teeth has something to do with their degeneration in civilised nations admits of no doubt; but how many thousand years must it take to make man edentulous, when there are so few evidences of a tendency in that direction. The wisdom teeth are said to be disappearing because they are so often ill-developed and frequently never erupted, and the same remark may sometimes be applied to the upper lateral incisors; but many Egyptian mummies and Etruscan skulls two thousand years of age exhibit the same conditions, yet there is no race of men edentulous. "Are the teeth of the present century worse than those of the last?" is a question by no means easily answered, for we have only general observations and no statistics to go by. Dental surgery is a modern art, and too much separated from its parents—medicine and surgery—to satisfactorily decide the question. Moreover, dentists only see those people who have defective teeth. Again, much more importance is attached to teeth than in former days, and they consequently receive more attention. It has often been pointed out that the vast improvements in medical and surgical treatment serve to keep alive a large number of weaklings who would otherwise have died, and these often have a progeny of similar frailty, whose teeth we may legitimately conclude partake of the general infirmity. On the other hand, dental disease, if early treated, as is now done, may be to a great extent stamped out. Of course, the teeth of civilised nations are worse than those of savages, although, as has been remarked in our columns, those of the latter are by no means free from disease.

RUPTURE OF THE PERINEUM: GIBSON AND WIFE v. JEFFRIES AND HILLS.

THIS case was tried at the Guildford Assizes, before Mr. Justice Cave, on July 21st, in which damages were sought to be recovered for alleged negligence and unskilfulness on the part of the defendants, in the treatment of the plaintiff's wife in her confinement. In the treatment the use of the forceps was required, and, the patient being a primipara, the employment of the instrument resulted, it appeared, in the rupture of the perineum. The rupture extended into the rectum. The verdict was for the defendants, but the jury were of opinion that there was not sufficient medical supervision over the nurse in the after treatment. The trial was a fair one, and the judge's summing up was very discriminating. But it is a pity that the action was ever commenced. Several medical witnesses testified that they had repeatedly got valuable and patient assistance from Mr. Hills in bad midwifery cases, and Dr. Grafly Hewitt—who was requested to examine the patient and report on her by Mr. Chapman, who took charge of the case a few days after delivery,—after careful examination of the facts and of the case, expressed the opinion that there was no evidence to sustain a charge of malpractice. He said that perineal rupture sometimes happened in the most skilful hands. One point on which Dr. Hewitt's opinion was asked was whether the hand of an assistant would have saved the perineum; he replied that it would not. He said the avoidance of laceration depended for the most part on the skilful manipulation of the forceps. In regard to guarding the perineum, we are of opinion that, whenever practicable, a second surgeon should be retained to make this object his special care. But such actions as the one referred to are unreasonable. Those who are most experienced in midwifery will most mercifully judge accidents of the kind which occurred in the above case.

CARELESS LABELLING OF BOTTLES.

AT the Lewes Assizes last week, before Mr. Justice Grove and a special jury, an action was brought against a well-known firm of pharmaceutical chemists for carelessness in labelling two bottles, one containing blistering fluid for application behind the ears, the other a collyrium. The medicines were rightly made up, but the labels were put on wrongly. This was explained by the statement that the "finisher"—the person who labels the bottles—made the mistake. The defendants, without acknowledging liability, had paid £50 into court. Mr. Critchett gave evidence that the patient was suffering now from gouty inflammation of the eye, and that the accident had done her no substantial harm. The jury awarded the plaintiff £62 damages, being £12 in addition to the £50 paid into court. The judge took occasion to express his regret that directions in pre-

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scriptions were not written in English, and gave a striking instance from his personal experience in which a mistake was made by the dispenser that might have been fatal but for the patient's knowledge of Latin. There is much to be said for this, though it is not very relevant to the case, where the labels were rightly written but placed on the wrong bottles. It seems more to the purpose to insist that the person who makes up the medicines shall affix the labels.

GLASGOW ROYAL INFIRMARY AND THE UNIVERSITY.

A DEPUTATION, representing the directors of the Glasgow Royal Infirmary and the Merchants' House, had an interview with the Secretary for Scotland on the 9th inst., to urge that in the Scotch Universities Bill provision should be made for erecting the medical school in connexion with the Glasgow Royal Infirmary into a college of Glasgow University, in the same way as the College of Dundee was proposed to be affiliated to the University of St. Andrews. The deputation having explained their views, the Marquis of Lothian said that from the fact of a provision of that nature having been in the Bill which was previously brought before Parliament, although not passed, and it having been thought desirable to eliminate it, he should like to have an opportunity of reconsidering the matter in all its bearings. He assured them that the representations of the deputation would have his best consideration. There was, he thought, very little chance of the Bill passing this session, and there would thus be plenty of time to consider the matter.

LIFE-SAVING AT SEA.

THE very short report which has been presented by the Select Committee appointed by the House of Commons "to inquire into the existing laws and regulations" regarding boats, life-buoys, and other life-saving gear, contains many suggestions of such obvious value that one can only feel surprise that they have not been adopted long ago. For instance, "your committee consider that in ships carrying passengers all seats, chairs, stools, lockers, and other movable articles on the deck of such vessels, suitable for flotation, should be sufficiently buoyant to be capable of supporting one or more persons in an emergency." This seems to be the very A B C of prudence, but it probably will never make due impression upon the builders and furnishers of ships until it has been imposed upon them as a regulation by the Board of Trade. It does not appear, however, that the Legislature is itself free altogether from the charge of having overlooked some most obvious considerations when prescribing the kind and quantity of life-saving apparatus which a ship shall carry. Thus the committee remark:—

"With reference to boats, the evidence points out the necessity for having new regulations affecting them. The existing law does not compel any passenger ship over 1500 tons to carry more than seven boats, while in cargo vessels the boats are often considerably over the number which could possibly be useful to the crew on an emergency. Your committee think that boats of all vessels of over 100 tons' register, should be inspected at certain stated intervals, be lowered into the water and examined as to whether they are watertight, and whether the falls, davits, and all gear connected with the boats are in a thoroughly trustworthy and efficient condition. Your committee find that many passenger ships could not, without great inconvenience, carry so many of the ordinary wooden boats as would suffice to carry the whole of the passengers and crew with safety in bad weather. Under such circumstances the crew would not be sufficient to man so many boats; nor could they all be got into the water in sufficient time in the event of very rapid foundering. Having regard, however, to the fact that accidents occur probably as often in moderate weather as in bad, and having regard also to the fact that the very cause of the accident frequently incapacitates many of the boats, and to the further fact that an insufficiency of boats undoubtedly tends to cause panic, we are of opinion that all sea-going passenger ships should be compelled by law to carry such boats, and other life-saving apparatus, as would in the aggregate best provide for the safety of all on board in moderate weather."

Valuable as these suggestions are, we think that the suggestion with which the report concludes is more valuable still. The committee recommend the appointment of a permanent committee on which all the parties interested in navigation would be represented to keep this whole subject under observation, and frame rules from time to time. Only thus will it be possible to take advantage of the latest developments of science which, by its steady advance, is constantly rendering antiquated the unrevised regulations which represent the wisdom and knowledge of an earlier decade.

POOR-LAW MEDICAL ASSOCIATION.

WE regret to have to announce that Mr. John Wickham Barnes, who has been for some years the active and indefatigable secretary of the Poor-law Medical Officers' Association, and who has been somewhat out of health of late, has had a severe attack of choleraic diarrhœa, which almost assumed an Asiatic type. It would appear that he was taken suddenly ill at Wimborne, whither he had gone on business. He is now convalescent and on a fair way to recovery. We are pleased to be able to announce that Dr. Joseph Rogers, who has been staying for some weeks at Herne Bay, has so much benefited by his visit there that there is every probability, in the opinion of his medical advisers, that he will be enabled to resume his work in the interests of the Poor-law Medical Service, which has been in abeyance for some months past.

KAKKE OR BERI-BERI.

THE etiology of this strange affection being confessedly obscure, all attempts to throw light upon it should be well considered. There is no need to refer to the articles on Japanese kakké which have so recently appeared in our columns, further than to remark that the cause of the disease appears to exist in water or food, and can affect human beings and some animals by being swallowed. A Dutch physician from Atchin reports in the *Weekblad van het Nederlandsch Tijdschrift voor Geneeskunde* of June 18th that an epidemic occurred about a month after the ground in a certain locality had been flooded, and that after antiseptic measures had been taken and the neighbourhood well disinfected the disease was arrested. This, he suggests, points to the existence in the ground of the cause of the disease, the incubation stage of beri-beri being, as he says, long—probably about four weeks. No attention seems to have been directed by oriental observers to the very interesting observations of Dr. Lacerda of Rio de Janeiro, who in 1885 published a pamphlet, which is now before us, entitled "Peste de Cadeiras, ou Epizootia de Marajó; suas Analogias com o Beri-beri" (Hip Epidemic, or Marajó Epizootic; its Analogies with Beri-beri), in which he gives an account of a fatal disease affecting horses and swine in the island of Marajó, which appeared to be due to a polymorphous microphyte belonging to the Ascomycetes, which abounded in the water of Lake Arary in the island. This microphyte was found to produce the disease in a number of animals, rabbits, pigs, birds, monkeys, &c., inoculated with it. The symptoms and the lesions found in the spinal cord after death corresponded very closely, in Dr. Lacerda's opinion, with those due to beri-beri, and he came to the

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conclusion that the Marajó epizoötic was identical with that disease. If so, his researches throw considerable light on its etiology, and are certainly well worth the study of those interested in the subject. The pamphlet, which is in Portuguese, has not, so far as we are aware, been translated. It contains, however, several drawings, which are easily understood. A short notice of the work appeared in THE LANCET of Feb. 13th, 1886.

PRECAUTIONS AGAINST DIARRHŒA AND CHOLERA.

IN view of the special dangers from diarhœa and allied diseases at this time of the year, Dr. Tatham, medical officer of health for Salford, has issued a series of instructions for the guidance of the inhabitants of his district. The memorandum embodying them lays down the principle that these diseases are intimately associated with conditions of filth which favour their propagation, and then it proceeds to explain what are the special duties of householders in the removal of all conditions which favour diarrhœal affections, and what steps have been organised by the sanitary authority so as to facilitate cleanliness in and about households. The importance of the early control of symptoms of diarrhœa are referred to, and it is announced that free distribution of diarrhœa mixtures will be given, under proper control, should the occasion arise. Much that is contained in this memorandum deserves the attention of sanitary authorities generally.

PROGRESSIVE SPASTIC ATAXIA.

THE multiplication of names for one and the same disease of the spinal cord or any other organ of the body is not desirable in itself, nor do we think it tends to improve our knowledge of any disease. "Ataxic paraplegia," described last year in THE LANCET by Dr. Gowers, is another name for the affection termed spastic ataxia in a paper in the July number of the *Medical Record* by Dr. Dana. From the latter's point of view the use of some word indicating spasm would seem to be necessary, for he believes that marked weakness of the legs is not common in the disease in question. We do not subscribe to this opinion, for our experience is that constant spasm of legs never exists without considerable impairment of volitional power over them. Dr. Dana's paper is illustrated by coloured diagrams showing the distribution of the combined sclerosis of the lateral and posterior columns.

NEW VOLTAIC COMBINATIONS.

DR. C. R. ALDER WRIGHT, F.R.S., and Mr. C. Thompson, both of St. Mary's Hospital Medical School, have contributed to the Chemical Society some preliminary experiments on batteries, in which the electro-positive metal zinc is replaced by solutions capable of oxidation. The ordinary porous cell arrangement is used, and similar plates of carbon or platinum. The plate of lower potential—that is, the electro-positive plate or the plate replacing zinc—is immersed in the reducing, and the other plate in the oxidising, solution. Steady currents are thereby produced, the energy of which will shortly be determined. Among the couples which have already been tried are the following. In each case we place the electro-positive first. 1. Sulphurous acid against chromic liquor (potassium dichromate and sulphuric acid), sulphuric acid and chromic sulphate being formed. 2. Sodium sulphite against alkaline potassium permanganate. Here sodium sulphate and hydrated manganese dioxide are formed. 3. Chromic hydrate dissolved in caustic soda against chromic liquor. Here sodium chromate is formed in one cell and chromic sulphate in the other. This is a particularly interesting reaction, as the chromium in one cell is oxidised, while that in the other is reduced. By intermediate treatment the action of the cells might be made reversible. 4. Solution of potassium ferrocyanide opposed to chromic liquor. The ferrocyanide becomes ferricyanide according to the following equation: $6K_4FeCy_6+2CrO_3+6H_2SO_4=6K_3FeCy_6+3K_2SO_4+6H_2O+Cr_2(SO_4)_3$. 5. Solution of lead oxide in caustic soda against alkaline permanganate, hypochlorite or hypobromite. Here the lead monoxide becomes peroxide, which deposits in a solid form. It is evident that an almost infinite number of such combinations are possible, and we shall await with great interest the determination of their electromotive force.

TRAUMATIC TETANUS TREATED BY CHLORAL AND BROMIDE.

DR. MAYER relates, in the *Allgemeine Medicinische Central Zeitung*, a very pronounced case of traumatic tetanus, which he treated successfully by fifteen-grain doses of chloral hydrate and bromide of potassium, given alternately every hour for fourteen days. By that time the opisthotonos had ceased, but some rigidity of the muscles of the chin still remained. The chloral was then discontinued, the bromide being given as before for a month longer. The patient was then cured, but was too weak to resume his employment till six months later.

THE INTERNATIONAL CONGRESS ON CREMATION.

FROM Milan a correspondent writes:—The Congress, at which cremation, in its many-sided aspects, was to have been discussed here in September, has been postponed till April, 1888, in compliance with representations addressed to the organising committee by physicians and hygienists, whose presence at next month's Medical and Sanitary Congresses both in Europe and America would have made attendance at its sittings impossible.

THE RESPIRATION IN PARALYTIC RABIES.

AN account of some careful observations on the respiratory rhythm of rabbits suffering from artificially induced rabies is given by Dr. Ferré in the *Journal de Médecine de Bordeaux*, No. 1 (Aug. 6th). The graphic tracings show very clearly the gradual change in type of the respiratory rhythm, which is normally composed of short rapid waves, as seen in the tracing; the respirations become slower and deeper, so that just before death they are six times less frequent than during health. Ferré proves that the first phenomenon of rabic infection is a distinct slowing of the respiration.

TYPHOID FEVER AT MOUNTAIN ASH.

A SEVERE epidemic of typhoid fever is prevailing at Mountain Ash, upwards of 100 cases having already occurred. Unfortunately the actual cause of the outbreak has not yet been clearly determined, although it is believed to be associated with the excessive drought which has prevailed.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Aràmyi von Hunyadvur, Emeritàs Professor of Pathological Anatomy in Pesth, at the age of 78. —Dr. Sheremetevski, of Moscow, librarian of the Russian Medical Society.

IT is gratifying to be able to announce the conspicuous success of the candidature of George Thomson, M.D., C.M. Aber., for the Coronership of the borough of Oldham. There were ten applicants for the post, seven of them belonging to the legal profession.

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THE *London Gazette* of the 12th inst. contains a letter from Captain Woodford, R.N., to the Secretary of the Admiralty in reference to the capture of an Arab dhow and fifty-three slaves by Lieutenant F. F. Fegen at Pemba on May 30th, in which the following passage occurs:—"Surgeon W. H. Norman, of H.M.S. *Reindeer*, deserves great credit for skilful surgery under trying circumstances."

THE Balfour Studentship in the University of Cambridge for original biological inquiry will be vacant in October. The value of the studentship, which is tenable for three years, is £200, and the person elected need not be a member of the University, nor is the award made after a competitive examination.

ON the 12th inst. the Queen conferred the honour of Knighthood upon, amongst others, Mr. George Macleod (Surgeon-in-Ordinary in Scotland) and Dr. William Aitken (Professor of Pathology at Netley Hospital). In the previous week a similar honour was conferred upon Dr. Alfred Baring Garrod.

GREAT excitement was caused in Berlin on Saturday, the 13th inst., by the announcement that Professor Virchow had been rejected as candidate for the post of Rector of Berlin University owing to his Liberal political opinions.

DR. POTAIN was summoned in consultation to M. Katkoff, who resided at Snamenskojè, near Moscow, remaining with the great journalist two days. His fee was 20,000 francs (£800).

M. DASTRE, Docteur ès Sciences, Paris, has been appointed Professor of Physiology in the Faculty of Science.

VON PETTENKOFER'S LATEST VIEWS ON CHOLERA.

(*Concluded from page 340.*)

THE impunity with which the ticket-of-leave men before mentioned were transported to other localities justifies von Pettenkofer in the conclusion that, during war, detachments of troops and prisoners can quite safely be sent from a cholera-stricken region to one yet unvisited by the malady, always with the proviso that, like the above-mentioned ticket-of-leave men, the troops and prisoners have been thoroughly cleansed, with all the articles they take with them. In proof of this he appeals to the history of the Franco-German war (1870-71), when, indeed, cholera did not prevail, but when abdominal typhus and dysentery were rife—maladies which have a strong family likeness to cholera in their mode of diffusion and in their dependence on conditions of place and season. The sixth volume of the medico-military report of that campaign warrants Dr. Port in saying that of "the 74,000 typhus and 39,000 dysenteric cases occurring in the German army from the middle of July, 1870, to the end of June, 1871, great masses were continually sent back to the frontier *en route* to all parts of Germany, but that the result was favourable beyond all precedent. Spread of the maladies among the civil population of the Fatherland there was none—a fact which stands in the sharpest contrast to the experience of small-pox in the same year, and to that of spotted typhus in previous campaigns."

In the eighth section, von Pettenkofer enters into the practical question as to the prohibition or permission of fairs and other periodical assemblies of great masses of people during cholera time; and adduces striking evidence from the experience of Nürnberg in 1854 and Leipsig in 1866 in support of his doctrine that "such assemblies in places where cholera is already epidemic are always to be postponed—not, indeed, in the interest of the residents, but only in the interest of the arrivals from elsewhere who may be infected in cholera localities; so long, however, as a place is not epidemically attacked, or has no reason to apprehend, during the time when the popular gathering takes place, that it may be attacked, the people may unreservedly be allowed to meet."

In the ninth section he treats of restriction of communication during cholera time, in the case of barracks and schools. Much, he thinks, "cannot be done in this direction, the question mainly turning on this: "whether or not the barrack or the schoolhouse is a focus of infection. Schools are, so far, of less importance, as residence in them is of short duration, and the schoolboy age is, besides, least liable to choleraic attack. Barracks may be managed, according to their situation, in very different ways, some being exempt from the infection," others being preserves of it, and accordingly to be regarded and treated essentially, as are other houses in the locality. Recruits have more to suffer, as a rule, than their older comrades, and it should therefore be recommended during an epidemic not to call them in, except to barracks which are proved to be cholera-exempt.

As to the circulation of the cholera-dead in funerals and other modes of removal, von Pettenkofer, under Section 10, maintains that the bodies of the deceased from cholera are just as little infectious as the living cholera patient, and restricts himself to a few precautions of special import in cholera localities. The surveillance of the rag trade in cholera time, which the contagionist school lays particular stress upon, he holds to be of little importance, and gives his reason for the same partially under Section 11, but more fully in the final section. Section 12 deals with the subject of cholera linen and other articles coming from cholera localities. In this case von Pettenkofer admits a certain utility in disinfection, according to the bacteriological principles of Koch and Wolffhügel, though he places much smaller value on it than is usually done. Disinfection of dwelling-houses calls for a very simple procedure in his view; but to this, as to all restrictions of communication, isolation of the sick, and disinfection of their evacuations, he attaches very slight importance. He says: "That it does no harm if we neglect all these measures, but act in quite the contrary manner, is strikingly proved in the epidemic which in 1836 prevailed over all Bavaria. The Government had the boldness officially to assure its four million subjects that cholera is not in the slightest degree a contagious disease, but develops itself only from the *genius epidemicus* inhering in localities, in some to a greater, in others to a lesser degree; in some earlier as to time, in others later; that from cholera patients infection never proceeds, and that they may be nursed without fear; that even the cholera stools are quite innocuous—so much so, in fact, that many physicians have not only smelt them, but have even gone so far as to taste them. That during the prevalence of the epidemic in the capital (Munich) more than 40,000 persons had migrated to neighbouring localities, and the disease had thereafter shown itself only in extremely isolated cases. Notwithstanding this manifesto, the cholera epidemic, treated for the first time on anti-contagionist principles, proved the mildest of all that ever visited Munich. According to the contagionist view, this ought to have been the gravest, attacking as it did a population (epidemiologically speaking) quite unseasoned; while every precaution of isolation and of disinfection was neglected, and communication unrestricted throughout the whole country. In spite of this (on contagionist principles) negation of all prudential measures—a line of conduct authoritatively inculcated by the Government on the then small number of contagionistically-minded physicians—cholera, among the four million inhabitants of the kingdom, diffused itself scarcely at all! That was indeed a high-handed epidemiological experiment on the part of the Bavarian Government; an anti-contagionist experiment to boot. It may be said, with human beings you ought to make no experiments involving danger to life or even to health (however much you may vivisect the lower animals). But, as in the case of epidemics, you cannot help doing something, so that which you actually do is called not an experiment, but a 'regulation' to which human beings must conform, just as much as the lower animals are subjected to the conditons imposed by the experimenter. If this great epidemiological experiment practised by the Bavarian Government in 1836 on its four million subjects on anti-contagionist principles had, with the same beneficial results, been made on the

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principles of the contagionist school, that school would have peremptorily required that its principles should be recognised as the sound ones, just as if the experiment had been practised on four million mice or guinea-pigs. But as this experiment succeeded when applied to men on anti-contagionist principles, it is held to prove nothing at all!"

In his thirteenth section, von Pettenkofer considers the measures to be adopted against individual predisposition to cholera and the specific medical treatment. He takes his stand essentially on the manifesto issued by the Bavarian Minister of the Interior on Aug. 6th, 1883, and insists on the provision that "the organisation of medical establishments for the examination of cholera cases, real or suspected, and the inspection of diarrhœas in single districts (house-to-house scrutiny), for the first time practised in Munich in 1836, should be systematically proceeded with"—measures which worked so beneficially "that of 5157 cases in which they were enforced only 1264 reached the asphyxial stage, and only 553 died." Again, "among the cases of completely developed cholera about two-thirds (66 per cent.) were officially proved to have neglected the premonitory diarrhœa and to have kept out of the way of prophylactic treatment."

In the fourteenth and last section, von Pettenkofer endeavours to show how, on his theory that cholera, epidemiologically considered, depends on conditions of place and of time, the disease may best be combated at its source. You cannot, he grants to the contagionist, alter the essential character of the soil or introduce different climatic conditions in a cholera locality; but, taking the place as you find it, you may effect changes on it which destroy its power of harbouring and developing the cholera germ. He then gives in considerable detail the sanitary operations which have made Fort William, near Calcutta, and Haidhausen in Bavaria, from being foci of cholera, well nigh cholera-proof. The levelling and draining of the soil, the immediate and effective removal from it of all refuse (animal and vegetable), its constant purification internally as well as superficially, were in both cases followed, not only by the practical disappearances of cholera when the malady continued to infect other localities in their neighbourhood not subjected to the same sanitary treatment, but also by the disappearance, in Haidhausen particularly, of contagious diseases of other and hardly less deadly kinds. These measures, carried out coincidently with the proper management of the person on the part of each individual member of the community, are, in von Pettenkofer's view, the one sound and infallible prophylactic against cholera, and supersede the necessity of the elaborate, costly, and vexatious restrictions imposed on society by the contagionist school.

The brief indication of his doctrine which we have given will have fully served its purpose if it sends the reader to the papers themselves from which it has been extracted and condensed—papers which have evoked immense interest in sanitary circles on the Continent, and which in a popularised form are being worked down for the practical instruction of the lay public.

LUNACY IN SCOTLAND.

THE report just issued by the Scotch Lunacy Commissioners, while representing actually a very favourable condition of things, is hardly so promising for the future as that which the English Commissioners were recently able to put forth. The most salient and happiest feature of the English report was that the proportion of lunatics to the general population has fallen slightly within the past two years. The same thing cannot be said of lunacy in Scotland. The proportion (279 per 100,000) which appears in this report is exactly equal to that of last year, and greater than that of any previous year in the Commissioners' review. One consideration does indeed afford satisfaction. Though the percentage of it does not show the same tendency as the English percentage towards diminution, it is at least actually less by a minute fraction; less, that is, in the proportion of 279 to 280. The Commissioners adopt the explanation that the increasing proportion of lunatics under their cognisance "does not necessarily indicate any increasing amount of mental disease, and that it is probably due in a large measure to what is only an increasing readiness to place persons more or less disordered in mind as lunatics in establishments.

As to treatment, the present report may be regarded as upon the whole very satisfactory. The highly important point of finding suitable occupation for the insane receives due attention, and although this aspect of the year's experience is not exhibited statistically with quite as much fulness as we could wish, there are one or two references to it in the report of a highly instructive and eminently satisfactory character. We have already remarked, in reviewing the English report, upon the special difficulty which arises from the unwise susceptibilities of relatives in the case of private patients. The great advantage of giving to the medical man an entirely free hand in this respect is incidentally, and because incidentally the more strikingly, illustrated by the Commissioners' report upon the Lunatic Department of the General Prison at Perth. "This establishment," say the Commissioners, "is reported to be in excellent order. The new kitchen and laundry are in operation, and are found to be of great advantage in affording active and useful occupation for the women. The men are largely employed in gardening and other outdoor work. To the industrial occupation of the patients and other rational modes of treatment may fairly be attributed the fact that the reports record no accident, no escape, and no necessity for the use of mechanical restraint."

Another point of treatment to which this report directs especial attention is that of boarding out. Treatment in the ordinary sense of the word there is none in these cases. The lunatic is placed with some family for custody merely, and only when he is not only harmless, but also incurable, in the judgment of his medical advisers. Were it considered possible for treatment to avail anything, he would, of course, be sent to an asylum where skilled advice and the best appliances would be available. Yet, in spite of this very unfavourable prognosis, there is a record of over forty recoveries among about 2300 such patients. Upon this very striking fact Dr. Fraser makes the noteworthy comment: "Some recoveries, however, do take place, partly because the opinion as to their incurability is occasionally wrong, and partly, as I believe, because the condition of some patients, which would be an incurable one if they were left in asylums, becomes a curable condition under the circumstances which attend life in a private dwelling." We quite agree that, if this opinion is correct, it ought to have an important practical influence on the treatment of the insane, and we shall look with interest for any light which future reports, both of the Scotch and of the English Commissioners, may throw upon this interesting question.

THE VOLUNTEER MEDICAL ASSOCIATION.

WE are glad to be able to record that a serious effort is now being made to thoroughly organise the Volunteer Medical Service of the country under the above title. Some such organisation has long been wanted, and the promoters are to be heartily congratulated upon the success which has attended their efforts. A letter, giving information of the objects of the Association, has been sent to every Volunteer medical officer, the number of whom very nearly approaches 1000. The Association is to be congratulated upon its list of officers and council. We notice the Prince of Wales has given another proof of his interest in the Volunteer movement and ambulance work by accepting the office of president; and amongst the vice-presidents are Sir Andrew Clark, Sir W. Guyer Hunter, Sir James Paget, Sir James Hanbury, Sir William Mac Cormac, Sir William Turner, Sir Douglas Maclagan, Mr. Savory, and Sir Joseph Fayrer. The Council is a thoroughly representative one of the Volunteer Medical Service in every part of the country, and provision is made in the rules for general meetings of the members. The Volunteer Ambulance Department has amalgamated with the Volunteer Medical Association, handing over to its funds a considerable sum of money and valuable material, so that this work will now be carried on under the auspices of the Association. For some time past great dissatisfaction has been felt at the very anomalous position of Volunteer medical officers, the majority of such officers holding the non-commissioned rank of acting-surgeon, and therefore occupying a position inferior to the youngest sub-lieutenant in the service. We are glad to note that in consequence of representations from the Council of the Volunteer Medical

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Association, these anomalies are to be removed, as will be seen by the reply of the War Secretary to the question put by Sir Guyer Hunter, chairman of the Council of the Association, in the House of Commons. Volunteer medical officers generally, and acting-surgeons in particular, are much indebted to the Council for the interest they have evinced, and we cordially recommend every Volunteer medical officer to join the Association, the offices of which are at 26, King-William-street, Strand.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5844 births and 4191 deaths were registered during the week ending August 13th. The annual rate of mortality in these towns, which had been 23·2 and 22·9 per 1000 in the preceding two weeks, rose again last week to 23·7. During the first six weeks of the current quarter the death-rate in these towns averaged 22·1 per 1000, and was 1·0 above the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·2 in Halifax, 15·1 in Huddersfield, 16·3 in Brighton, and 17·2 in Derby. The rates in the other towns ranged upwards to 29·5 in Blackburn, 30·1 in Preston, 30·2 in Newcastle-upon-Tyne, and 31·4 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 1301 and 1292 in the preceding two weeks, further declined last week to 1252; they included 943 from diarrhœa, 104 from whooping-cough, 78 from measles, 57 from scarlet fever, 39 from "fever" (principally enteric), 29 from diphtheria, and 2 from small-pox. These zymotic diseases caused the lowest death-rates last week in Halifax and Huddersfield, and the highest in Birminghom, Salford, Hull, Portsmouth, and Preston. Diarrhœa caused the greatest mortality in Salford, Birmingham, Hull, Leicester, Portsmouth, and Preston; whooping-cough in Sheffield and Birmingham; measles in Newcastle-upon-Tyne, Bolton, Salford, and Manchester; scarlet fever in Birkenhead, Bristol, and Blackburn; and "fever" in Birkenhead. Of the 29 deaths from diphtheria in the twenty-eight towns, 21 occurred in London. Small-pox caused 1 death in Sheffield, 1 in Cardiff, but not one in Greater London, or in any of the twenty-five other large provincial towns. Only 2 cases of small-pox were under treatment on Saturday last in the metropolitan asylum hospitals receiving cases of this disease, of which one was admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding six weeks from 199 to 158, further fell last week to 175, and were 7 below the corrected average. The causes of 6·, or 1·6 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Plymouth, Wolverhampton, Leicester, Nottingham, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sunderland, Brighton, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 20·9 to 17·1 per 1000 in the preceding three weeks, rose again to 19·3 in the week ending August 13th; this rate, however, was 4·4 per 1000 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·0 and 14·5 in Perth and Paisley, to 24·0 in Dundee, and 26·7 in Greenock. The 482 deaths in the eight towns last week showed an increase of 54 upon the number in the preceding week, and included 37 which were referred to diarrhœa, 28 to whooping-cough, 9 to scarlet fever, 5 to diphtheria, 1 to measles, 1 to "fever" and not one to small-pox; in all, 81 deaths resulted from these principal zymotic diseases, against 103 and 73 in the preceding two weeks. These 81 deaths were equal to an annual rate of 3·2 per 1000, which was as much as 3·9 below the mean rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 39 and 28 in the preceding two weeks, rose again last week to 37, of which 8 occurred in Glasgow, 8 in Dundee, 7 in Edinburgh, and 5 in Leith. The deaths referred to whooping-cough, which had been 41 and 22 in the previous two weeks, increased last week to 28, and included 8 in Glasgow, 8 in Greenock, 7 in Edinburgh, and 4 in Dundee. The 9 fatal cases of scarlet fever exceeded by 2 the number returned in the preceding week, and included 7 in Dundee. The 5 deaths from diphtheria were within one of the number recorded in the previous week; 3 occurred in Edinburgh. The fatal cases of measles and the death from 'fever" were recorded in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 65 and 67 in the preceding two weeks, further rose last week to 71, and corresponded with the number returned in the same week of last year. The causes of 63, or more than 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 30·9 and 29·6 per 1000 in the preceding two weeks, rose again to 31·5 in the week ending August 13th. During the first six weeks of the current quarter the death-rate in the city averaged 29·4 per 1000, the mean rate during the same period being but 22·7 in London and 19·1 in Edinburgh. The 213 deaths in Dublin last week showed an increase of 13 upon the number returned in the preceding week; they included 27 which were referred to measles, 23 to diarrhœa, 6 to whooping-cough, 2 to "fever" (typhus, enteric, or simple), and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had increased in the preceding four weeks from 45 to 55, further rose last week to 58, and exceeded the number in any week since August, 1884; they were equal to an annual rate of 8·6 per 1000, the rates from the same diseases being 7·0 in London and 3·4 in Edinburgh. The fatal cases of measles, which had been 22 and 16 in the preceding two weeks, rose again last week to 27, and exceeded the number recorded in any recent week. The deaths referred to diarrhœa, which had been 16 and 29 in the previous weeks, declined to 23 last week. The 6 fatal cases of whooping-cough showed an increase of 3 upon the number in the preceding week, while the 2 deaths from fever corresponded with those recorded in the previous week. The deaths of infants and of elderly persons slightly exceeded those returned in the preceding week. Eight inquest cases and 3 deaths from violence were registered; and 52, or one-fourth, of the deaths occurred in public institutions. The causes of 33, or more than 15 per cent., of the deaths registered during the week were uncertified.

THE SERVICES.

Deputy Surgeon-General R. Webb has been appointed Principal Medical Officer, Dublin District.

A Greenwich Hospital Pension of £50 a year for Fleet Surgeons and Staff Surgeons is vacant by the death of Deputy Inspector-General James Vaughan.

INDIA OFFICE.—The Queen has approved of the retirement from the Service of the undermentioned officers of the Indian Military Forces:—Brigade Surgeon Charles Julian Joseph Jackson, M.D., of the Bengal Medical Establishment (dated March 31st, 1887), and Surgeon-Major Richd. Hamilton Batty, of the Bombay Medical Establishment (dated June 24th, 1887). The undermentioned officers have been granted a step of honorary rank on retirement:—Brigade Surgeon Charles Julian Joseph Jackson, M.D., of the Bengal Medical Establishment (dated March 31st, 1887), and Brigade Surgeon Henry Cayley, of the Bengal Medical Establishment (dated April 29th, 1887), to be Deputy Surgeons-General; an Surgeon-Major Richard Hamilton Batty, of the Bombay Medical Establishment (dated June 24th, 1887), to be Brigade Surgeon.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Daniel O'Connor, M.D., has been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated Aug. 14th, 1887).

The following appointments have been made:—Fleet Surgeon James Bradly, to the *Malabar;* Surgeon John N. Corbett, to the *Alecto;* and Surgeon John Fogerty, to the *Orwell.*

RIFLE VOLUNTEERS.—5th (Isle of Wight, Princess Beatrice's) Volunteer Battalion, the Hampshire Regiment: Acting Surgeon E. R. Woodford, M.D., resigns his appointment (dated Aug. 13th, 1887).

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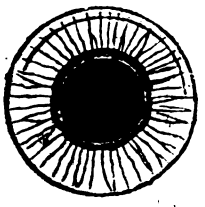
Correspondence.

"Audi alteram partem."

CATARACT OPERATION IN BRUSSELS.

To the Editors of THE LANCET.

SIRS,—Your annotation on cataract operations as practised by Dr. Coppez leads me to suppose that a brief *résumé* of the subject may not be unacceptable to your readers. Formerly the percentage of loss (fifteen actual, with twenty more or less damaged) from the old flap method of cataract extraction was so great that surgeons, as a rule, declined to operate until the patient was quite blind. On the other hand, iridectomies were constantly practised with scarcely any loss of eyes at all—at most not more than one in five hundred. These contrasted figures set Dr. Schafte, Professor von Graefe's assistant, thinking; and the result of his cogitations was a proposition to perform iridectomy in all cases of cataract, and then remove the lens through the small incision by means of a spoon—an operation which was for a time very generally adopted. It was clear, however, that a slight enlargement of Schafte's incision in the corneo-sclerotic junction would permit of the exit of the lens without the use of any traction instrument whatever, and Graefe's modified linear extraction followed as a matter of course—an operation which, varied by most of the surgeons who adopted it, but always accompanied by excision of the iris, was the method of extraction *par excellence* for twenty years. Despite its great popularity, however, there were numerous objections to von Graefe's method. The incision was too far back; the danger of prolapse of the vitreous was great; a large iridectomy was necessary in order to prevent strangulation of the iris at the angles of the wound; bleeding into the anterior chamber was frequent, and the site of the incision was such as to excite well-grounded fears of sympathetic ophthalmia; and yet surgeons were afraid to bring the incision more forward into true corneal tissue on account of the tendency of this non-vascular membrane to suppurate. This risk is now obviated by the use of antiseptics, and prolapse of the iris, formerly the bugbear of extraction, counteracted by eserine. I introduced some patients who had been operated on by the small corneal flap, with central and movable pupils, to the notice of the members of the Clinical Society of London in 1874, and have within the last three years operated upon 500 patients in the same way. Coppez's incision, which is not precisely the one I adopt, is depicted in the accompanying woodcut, which I extract from a review of his paper in the *Annales d'Oculistique* for June of the present year.



I am, Sirs, your obedient servant,

CHARLES BELL TAYLOR, M.D., F.R.C.S.Ed.,
Surgeon to the Nottingham and Midland Eye Infirmary.

August, 1887.

PATHOLOGY AND TREATMENT OF SEPTIC DISEASES.

To the Editors of THE LANCET.

SIRS,—For some time past I have been anxious to lay my views before the profession upon the pathology and treatment of diphtheria and scarlatina.

In November, 1880, I sent a paper to THE LANCET upon reading in that journal a report of five fatal cases of diphtheria occurring in St. George's Hospital, with the peculiar treatment adopted at that time; I say peculiar, for it was strongly stimulating and tonic *ab initio*, under which the patients speedily succumbed. I then sought to show that the alterative and eliminating plan of treatment with which I commenced had been most successful, having only had two fatal cases under my care during three years of active practice. I ought to state that I always commenced by brushing off, as far as practicable, the false deposit on the tonsils and fauces with a strong solution of nitrate of silver, and continued this application daily while any deposit was observed on the surface. During the last few years, however, the science of bacteriology has done much to aid us in arriving at a more correct view of the pathology and treatment of diphtheria and scarlatina, as well as cholera. The scientific researches and experiments of Drs. Tyndall and Koch, M. Pasteur, and others, have lately demonstrated that we have chemical agents which will destroy the microbes and their spores in a very short space of time, which can be administered as remedies internally in these septic diseases: e.g., perchloride of mercury (1 in 20,000) will act as a microbicide in ten minutes; this, therefore, may be termed the prince of antiseptics. Chlorine and iodine, oil of mustard, and oil of peppermint are likewise very decided in their action as antiseptics, and may be utilised in the above-named diseases. As it is known that these micro-organisms multiply with frightful rapidity when once within the body, it is important to adopt energetic measures for their destruction and extermination without loss of time. To this end I would recommend in a case of diphtheria to commence by washing off the fungus-like deposit with a camel's-hair brush dipped in a solution of the perchloride of mercury or the liquor sodæ chloratæ. I should then administer a mustard emetic so as to dislodge and evacuate these micro-organisms from the stomach, œsophagus, and fauces. In half an hour, or as soon as the system had recovered from the effects of the emetic, I should give a dose of the liquor hyd. perchlorid. in a little strong peppermint water; this might be repeated in another hour, and, in about half an hour after this second dose of liquor hyd., a dessertspoonful or a medium dose of castor oil in peppermint water given as an effectual evacuant. Having cleansed the entire gastro-enteric canal of these pernicious atoms, those that have got into the blood must be disposed of in the way that Nature is wont to do—i.e., by the emunctories of the body,—aiding her in various ways: viz., by keeping the patient warm in bed in an airy apartment, administering diaphoretic salines with chlorate of potash, giving easily digested food—e.g., pure milk, beef-tea, barley water, and cocoatina. This treatment is all that is necessary for two or three days, especially while any febrile symptoms are present; tonics and stimulants in the early stage must not be given. Under the above regimen the system will very soon manifest salutary reaction by ridding it of the *materies morbi* under which it has been so distressed. Doubtless there are cases which will demand a course of ferruginous tonics for some little time, as it is well known these animalcules lessen the red particles of the blood.

In the administration of the liquor hyd. perchlorid., we should bear in mind that it is not only a special microbicide, but by its action on the liver it increases the biliary secretion, which is also admitted by many to be an antiseptic; and in order to strengthen our belief in this doctrine, we know that in cholera cases, as soon as the secretion of bile was restored we considered the patient tolerably safe; and, as Dr. Koch stated when writing on the cholera poison, "as soon as the dejections became feculent, the comma-like bacilli gradually disappeared and were not to be seen after recovery." It is tolerably well known, too, that during the visitation of cholera in our fair isle, the calomel treatment was the most successful. The College of Physicians advised the mist. cretæ co. c. opio to start with, and to be kept for use at all dispensaries, not knowing at that epoch the disease depended upon the energetic wriggling bacilli.

Dr. Geo. Johnson, who wrote on the cholera poison fifteen years ago, was not aware of the exact nature of the *materies morbi*, but stated that if it was not expelled from the system by vomiting and purging, or if its exit was hindered by opiates or astringents, collapse soon supervened with fatal results. He commenced with a dose of calomel followed by repeated small doses of castor oil, which was one of the most successful modes of treatment at that time—i.e., the eliminative. Now, I trust, were these bacilli to enter our system, we should screw them up and evacuate them with a mustard emetic followed by the above antiseptic treatment.

From an interesting article which I have just read in THE LANCET of July 23rd, it would go to show that I have been anticipating your views on the subject of bacterio-therapy, when you state that "in these days we find that the pathologist has outstripped the therapeutist." You further remark that we have to find out remedial agents sufficiently potent to destroy the bacterial host without injury to the body. You likewise allude to the all-important art of prophylaxis. One of the most frequent sources of diphtheria and scarlatina has been lately discovered in milk. A few

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months since twelve fatal cases of diphtheria were registered in our neighbouring parish, Ealing, in as many days, which was traced to cow's milk. I wrote to the local paper warning the public against allowing animals to drink from stagnant pools, which at this season of the year especially are teeming with organic life, and is doubtless the *fons et origo mali*. While on this important point I should like the profession to agree with me in urging the advisability of all cow-keepers to give their animals, where practicable, the water of the company whence they draw their supply.

In the treatment of scarlatina with the above antiseptic plan, I would comfort the patient and stimulate the cutaneous surface by sponging the body all over with vinegar and warm water for the first three days, and the subsequent three days by skin inunction, as, I believe, is now usually practised as a prophylactic method, to be followed by two or three washings of the body with carbolic soap and warm water and much dry rubbing, which will complete the effective treatment of a severe and frequently intractable disease.

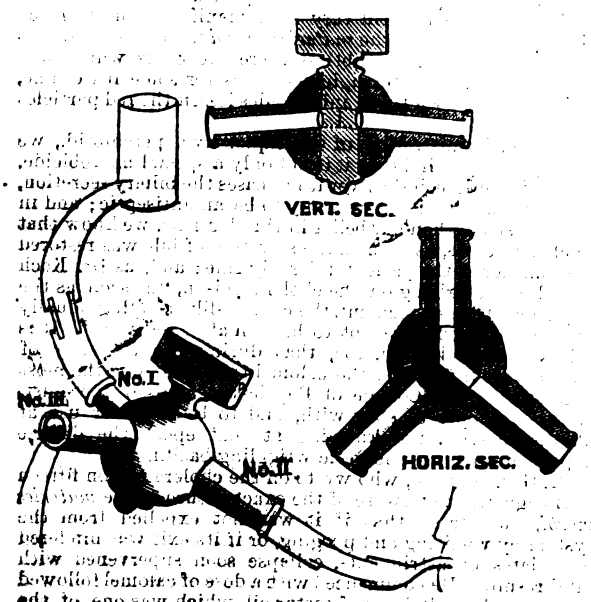
I am, Sirs, yours faithfully,

Fairholme, Hanwell, July 25th, 1887. EMANUEL MAY, M.D.

AN APPARATUS FOR WASHING-OUT THE STOMACH.

To the Editors of THE LANCET.

SIRS,—I can lay claim to no originality in the conception of the apparatus which I wish to bring under the notice of the profession. When in Germany last year I saw it used in the wards by Professor Kohlschutter of Halle, and it struck me at once as being superior to anything I had seen used in England for the purpose, and deserving therefore of a wider publicity. The essential part of the apparatus is a centre piece, consisting of a three-way stopcock, fitted with three outlet tubes. Of these outlets, No. 1 is attached (by india-rubber tubing with a glass interruption) to a vessel of water, or any other liquid to be introduced into the stomach;



No. 2, with its tubing and glass interruption, is continuous with the œsophageal tube; while No. 3, with similar fittings, leads into a receptacle placed on the floor for the waste fluid. To employ the apparatus (the vessel containing the fluid to be used is raised above the level of the patient) the stopcock is turned in such a manner as to connect Nos. 1 and 2, and fluid then passes into the stomach; when sufficient has been thus injected, the cock is turned so as to connect Nos. 2 and 3, and the centre piece lowered slightly; the contents of the stomach are thus by syphon action drawn into the waste receptacle; the performance can now be repeated as often as is deemed necessary, the only requisites being a continuous supply of fresh fluid in the upper vessel, and a slight raising and lowering of the centre piece, with corresponding alternations in the position of the tap. No. 1 and No. 3 can be connected after use to cleanse the tubing if required. Simplicity in management is one great recommendation of the apparatus, but its chief claim is its cleanliness, for nothing that has once passed into the stomach ever returns into the original vessel. The cost of the instrument is not excessive. Messrs. Krohne and Sesemann have made mine for me, the centre piece at a cost of 10*s.* 6*d.*; all the rest of the material need not cost more than a few shillings, as the quality of the tubing is of small moment, and œsophageal tubes are in the possession of most members of the profession.—I am, Sirs, yours obediently,

FRED. J. SMITH, M.R.C.P., M.B.,
Medical Registrar to the London Hospital.

West-street, Finsbury-circus, August, 1887.

THE SEWAGE OF LONDON.

To the Editors of THE LANCET.

SIRS,—"Sanitarian's" letter in THE LANCET of Aug. 6th, while admitting the polluted and foul state of the Thames from London sewage, advocates, as a remedy, the purification of the sewage by precipitation at Barking and Crossness, as well as at various stations within the metropolis, with manganate of soda and sulphuric acid, which never results, he says, "in the production of smelling products." "Neither," he says, "do such ingredients destroy those minute vegetable and animal organisms which are essential for the rapid purification of waters from admixed sewage residues." But suppose we were to admit that the sewage, as it escapes from the outfalls, is precipitated by such a process, the evil he refers to would not be removed. "Sanitarian" speaks of the improved condition of the Thames in 1885-6, when this process was in operation, but unfortunately in the autumn of the latter year I attempted a journey down the river to Barking with the view of ascertaining the state of the Thames at the outfall there, but the condition of the river was so fearfully foul that I found it almost impossible to get there, and when the steamer pulled up at Greenwich, being unable any longer to bear the smell, I was compelled to get off. One thing, I think, is absolutely certain: neither manganate of soda, nor sulphuric acid, nor chloride of lime, nor any other chemical agent will ever succeed in purifying the sewage of any large city, if used only at the stations and at the outfalls; it may be possible, no doubt, during dry weather, when the sewage leaves the outfalls, quietly to precipitate it; but there is this difficulty—and here the difficulty lies, and will ever lie: the *solid* portion of the excreta is not at the outfall to be precipitated. Moreover, in the dry weather it is then snugly lying in the drains under the dwellings of the residents of London, from which it can only be removed by the rainfall, and the rainfall is ever capricious in its operation; sometimes it is delayed for a week, a fortnight, or even a month, but when it does occur the solid excreta is quickly removed from its hiding place in the house drains into the sewers, in which at the upper part there are a great number of large storm outlets, and through these storm outlets the excreta, paper, &c., escape, and gain by that means admission into the rivers. In Birmingham there are about fifty of these storm outlets in the main sewers, and the Drainage Board has found out to its cost how impossible it is to cook the hare before it is caught, and it is this same difficulty the Metropolitan Board has to contend with. The solid portion of the closet soil being viscid and tenacious, it is, as I said before, always more or less retained in the house drains. I pointed that out to Lord Wemyss, who did me the honour of quoting my views in the House of Lords when the Smoke Abatement Bill was under discussion, and when their Lordships, acting in the interests of the residents of the metropolis, wisely threw out the Bill. Your correspondent admits that the state of the Thames at the present time, in consequence of the London sewage, is so bad that it is causing considerable apprehension to those who are responsible for it, and that it is as bad as, if not worse than, it was in 1884. I have shown that the process of purification at the outfalls, as recommended by "Sanitarian," will prove utterly useless and futile; whether we view the question of the utilisation of London sewage as a sanitary, an agricultural, or a financial question, it has hitherto failed in every instance under all these heads, and it will ever continue to fail. Unquestionably, the old midden system was very objectionable, but

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the evils of that system were as nothing when compared with the frightful evils, both urban and suburban, which are produced by the present system of underground cesspools. Formerly the cesspool was at the further end of the yard or the garden; now it is under, and sometimes even in, the house itself. As it is necessary to convey the closet soil by some means to the outfalls at Barking and Crossness, it is obvious it must pass from the higher parts of London under the streets and houses before it can get there. If I recollect rightly, Sir Robert Rawlinson, who, by-the-bye, is responsible to a great degree for the present system, said at one of the Social Science meetings that "the district of Belgravia was as flat as a pancake, and but for the ventilators, he predicted, he said, a fearful epidemic in that locality." But, if I am not mistaken, the three factors of decomposition are air, heat, and moisture, and without these factors decomposition cannot take place, and if we have to deal with a foul smell underground, I should say these factors should be excluded from it. In London there are many instances where offensive smells emanate from these underground cesspools. In the House of Commons, where a large sum of money has been recently expended in perfecting the cesspool system, the foul odours are already returning. Johnson properly describes a drain or a sewer as a passage for liquid, and if drains and sewers are kept for that purpose, surely they would flush themselves; and it is equally obvious, if the sewage problem is to be solved, that the excreta sewage must be kept separate and distinct from the rainfall sewage, and that the solid portion of the closet soil must be intercepted at the fountain head, where it may be retained in hermetically sealed iron receptacles without the smallest danger, and in them it may be sent to the farmer for use on his arable land. If this were done, sewage utilisation would no longer be a failure, but it would become a sanitary, an agricultural, and a financial success. I have been over the sewage works of London, Croydon, Birmingham, &c., and if the watercloset system is to be continued, and if the sewage problem is to be really solved, I am convinced the solution of the question must begin where the solution of every difficulty usually begins: I mean at the beginning!—I am, Sirs, yours obediently,

Birmingham, Aug. 6th, 1887. EDWIN CHESSHIRE, F.R.C.S.

PAIN AND ITS INTERPRETATION.

To the Editors of THE LANCET.

SIRS,—So much debatable matter appears every week in your columns, that it is surprising that letters of criticism thereon are so few and far between. It would be uncharitable to suggest that this may be due to lack of interest in perusal or to want of energy in putting pen to paper in reply. Last week, however, there appeared an article upon the "Interpretation of Disease," which contains a series of statements so strangely at variance with universal experience, no less than with common sense, that I feel it is incumbent upon anyone who has read them to controvert them. Mr. H. Cameron Gillies, M.B., the author of the article in question, ventures the following among other assertions concerning pain and its causation: "*Pain never comes where it can serve no good purpose. Pain comes at the right time. The measure of pain which attends an injury or a disease is a prophecy, in that same measure of recovery.* It is in our knowledge that almost all inevitably fatal diseases are not attended with pain."

Now these statements, as is obvious from the context, refer to the beneficent utility of pain to the individual himself, and not in the wider sense in which it would be more possible to read them with patience and a guarded assent. Surely such fallacies scarcely required to be accentuated by italics to stamp them as such. What diseases are above all others "inevitably fatal"? Why, of course, that great class of malignant maladies which pathology comprises under carcinomata and sarcomata. Is pain absent there? Is pain purposive there?—purposive, that is, towards the utility of the individual. Yet Mr. Gillies does not except this great class, this *opprobrium medicinæ*, from his beneficent "law of pain." Pain, he says, in such cases would "serve no good purpose; there is no pain." Is this the grim comfort he would bring to a suffering woman tortured slowly to death by a sloughing scirrhus of the breast, or to a man, made almost unhuman and killed by inches by the slow yet sure ravages of a rodent ulcer? It is too late in the day to attempt to prop up a theory of the invariable and direct beneficence of pain, shutting the eyes to facts to save a teleological theory which experience and reason have alike discredited.

To a reverent believer in evolution pain is more nearly comprehended in its true light and meaning, and much of its sting removed in proportion to that comprehension. The gradual growth of the nervous system from the early dawn of consciousness—the mere sense of externality—up to the delicate and impressionable susceptibility from which we derive all that is best and noblest, has proceeded under the direction of a natural process of selection, and eventuated in the fittest's survival. It has thus come about that the advantage in the race which the sharp reprimand of pain on danger's approach bestowed has, with the intensified susceptibilities which we prize, also afforded us increased possibilities and opportunities of suffering. To the evolutionist much, if not all, is explained; "the mystery of pain," which Hinton helped to dispel, is lightened. Hinton demonstrated its relative nature, and the absence of any constant external antecedent of it. Here there is to be found the comfort which science affords—comfort in the knowledge that pain is in obedience to law, is bound up with the progress of the race. With this knowledge and with this hope, far more than with blind assertions as to the invariable beneficence of pain, one can "kiss the rod," and be

"Patient of pain, though as quick as a sensitive plant to the touch."

I am, Sirs, yours faithfully,

W. J. COLLINS, M.S., M.D., B.Sc. Lond.

Albert-terrace, Gloucester Gate, N.W., Aug. 15th.

To the Editors of THE LANCET.

SIRS,—My friend, neighbour, and adviser, Dr. J. J. B. Taylor of Ulverston, has obliged me with sight of a paragraph in THE LANCET on pain, the result of an inquiry from him, which again was prompted by a conversation between him and myself. May I venture to regard this as an introduction of myself as well as the subject? If so, I would like to submit the following queries:—1. Pain, in spite of its usefulness in the animal economy, nearly always has the air of an intrusion and a disturbance of that economy, but not absolutely so. The two fixed and normal pains in humanity are, it seems to me, those of parturition, limited to one sex, and those of dentition, limited to two or possibly more stages of development. It seems to me that these have a curious analogy, the dentition involving something of a tension of sensitive parts and extrusion of developed germs, although not, as in parturition, a separation from their matrix. It is an important question, Are there any other pains which can be viewed as fixed and normal, so as to take rank with these? It seems to me also that the higher vertebrates, at any rate in their domestic state, in which we know them best, sympathise with humanity *qua* parturition. Is there any knowledge available as to their wild state? And as regards their dentition—e.g., the changes noticeable in a horse's age-teeth—are any pains observed? 2. It seems to me that pain is not only preservative, but didactic—e.g., savage man finds travelling over rough ground painful, and devises mocassins, &c.; civilised man is prompted to discover anæsthetics and anodynes. Thus civilisation grows through pain, whereas pleasure, tending to absorb and satisfy, would never advance our progress, save as regards the means of procuring enjoyment, which, however, terminate in that enjoyment procured and do little to advance humanity. There is (to return to 1) a notable moral effect in the fixed and normal pain of parturition. It seems to impress the mother or dam in the interests of the offspring, and is allied in humanity to the tenacity of maternal affection, and reciprocally to the respect for maternal feelings, of which even hardened specimens of humanity commonly show a trace. And there seems to me to be, when all preservative and didactic uses have been satisfied, a surplus of pain in humanity, of which, I suppose, cancer may be taken as a typical case. It is my belief that this surplus can only be accounted for on moral grounds, as having a disciplerial tendency, not to the sufferers only, but to humanity at large. It is with this moral aspect of the whole question that I am chiefly concerned. But I should for obvious reasons be glad to have answers, so far as the state of our knowledge allows, to the above questions, and the benefit of any remarks to

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which my own may give rise. I intended this when I began to be a private letter merely; but if you see fit to publish it, I have no objection, and I do not think my friend, Dr. Taylor, would have any.—I am, Sirs, your obedient servant,

HENRY HAYMAN, D.D.,
Rector of Aldingham; Hon. Canon of Carlisle.

Aldingham, Ulverston, Aug. 15th, 1887.

USEFUL EMPLOYMENT IN THE TREATMENT OF THE INSANE.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the article in your issue of Aug. 6th on the Lunacy Commissioners' report, and am grateful for the prominence you give to occupation as a cardinal point in the treatment of the insane. The Commissioners have, I think, done well to call attention specially to this point, and to express a hope that more attention may be paid to it as a potent remedial agency in the treatment of the insane.

It is pointed out in the report that "the employment of patients of the private class in hospitals and licensed houses is attended with greater difficulty than that of patients in county and borough asylums," and the case of St. Andrew's Hospital, Northampton, is quoted as a notable achievement, inasmuch as *one-third* of the gentlemen in that establishment are engaged in gardening and farm work. This is very creditable to the energetic medical superintendent of that asylum, as it is only during the past two or three years that he has had premises extensive enough to allow the development of the employment system.

I believe I may claim what little credit there may be in being the first to ventilate in the columns of the *Journal of Mental Science* the advantages of employment in the treatment of mental diseases in the upper classes, having written a paper on that subject for the *Journal* of July, 1882. For the encouragement of those medical proprietors and superintendents who may be afraid of the "much thought, trouble, and ingenuity" mentioned in the Commissioners' report, I should like to state that I have found no reason to depart from the practice I adopted seven years ago of insisting on regular occupation for every able-bodied patient in my asylum, and that I have now not the slightest trouble in getting at least *two-thirds* of my gentlemen patients (i.e., all those who are physically fit for work) to engage in regular useful occupation, which percentage compares favourably with the average in county and borough asylums of $\frac{6}{10}$, or the "notable achievement" of St. Andrew's Hospital quoted above, where *one-third* of the male patients are employed. I am perhaps rather too enthusiastic on this subject, but I firmly believe that it has only been found possible to abolish restraint and seclusion in English asylums, and the use of locked doors and airing courts in some Scotch asylums, by reason of the increased and intelligent interest betrayed on the part of asylum superintendents in the useful and rational employment of their patients.

I am, Sirs, your obedient servant,

DAVID BOWER, M.D.

Springfield House Asylum, Bedford, Aug. 11th, 1887.

BORACIC ACID AS A FOOD PRESERVATIVE.

To the Editors of THE LANCET.

SIRS,—The question regarding the use of borax and boracic acid as food preservatives, upon which a joint preliminary report, referred to in your issue of the 13th inst., was recently presented to the Kensington vestry by Dr. Dudfield and myself, arose through my having found boracic acid in a sample of *potted cream* submitted to me officially for analysis, and subsequently in several samples of milk.

It is obvious that if the vendors of foods containing boracic acid are to be proceeded against under the Sale of Food and Drugs Act, the proceedings must be taken under the most severe sections of the Act—those, namely, which are intended to provide against the admixture of any substance actually known to be injurious to health, or likely to be injurious to health, with articles of food; and it therefore becomes necessary to obtain definite evidence as to whether boracic acid and borax can or cannot be considered as injurious additions. Very little information upon this head is forthcoming; but, as you very justly remark in your annotation, what little there is is very decidedly against the use of the drug. This, indeed, is the conclusion that one would naturally anticipate on *a priori* grounds, and I may perhaps say that in the early part of 1886, chiefly upon such grounds, I made some remarks in public against the use of boracic acid preservatives, which were subsequently reproduced in the *Chemical News*.[1] In the report above referred to we did not think it necessary to give the full text of Dr. Förster's experiments and conclusions; but I am very glad that this has now been put before the readers of THE LANCET in Mr. Charles Hancock's excellent translation from *Dingler's Journal*, for the matter is unquestionably one of great public interest and importance. The drug was present in smaller amount in the samples of milk than in the sample of potted cream above referred to. The latter, in fact, contained so much of it that its taste was very distinctly perceptible.

Finally, I venture to draw your especial attention to two passages in our joint report. They are as follows:—

"An eminent authority whom we have consulted refers to the tendency of these substances to set up diarrhœa, a disease very prevalent in hot weather, when the preservative is most used to prevent that change which milk and cream are apt to undergo, rapidly, at a high atmospheric temperature."

"We desire to say, in conclusion, that, though in the present state of our knowledge the injurious action of very small doses of borax or boracic acid, even in the case of infants, and even having regard to the doses being continuous, may perhaps be considered as 'not proven,' it will probably become a question whether the use of any known preservative, in lieu of refrigeration, in any amount, however small, should not be prohibited, in view of possible and indeed probable abuse, and while doubt exists as to the action of the drug employed."

These remarks will, I believe, on consideration, be found tolerably suggestive.

I am, Sirs, yours faithfully,

CHARLES E. CASSAL,
Public Analyst for Kensington, St. George's, Hanover-square, and High Wycombe.

Town Hall, Kensington, Aug. 16th, 1887.

"DISEASE AND MEDICAL ATTENDANCE AT WORKHOUSES."

To the Editors of THE LANCET.

SIRS,—As there have lately been several letters in THE LANCET with regard to the question of admitting "a second medical opinion into the workhouse," my experience in this matter may perhaps interest your correspondents.

I am the resident medical officer of the Chorlton Union Hospital and Workhouse, Manchester, and in the male lunatic wards of the hospital there was some three or four years ago a patient suffering from dementia, and incurably insane. This patient's friends wished him to be removed from the workhouse to a private asylum, and they sent their own medical attendant to visit him in the workhouse. This gentleman, a qualified surgeon, saw the patient in the workhouse, examined him, and filled up the papers necessary for his removal to an asylum. He never communicated with me, and I knew absolutely nothing about the matter until after the patient was removed from the workhouse. I reported the matter at the time to the guardians, and the clerk to the guardians ruled that "a pauper, or the friends of any pauper, had a perfect right to send for any medical man, and such medical man had a perfect right to treat such pauper in any way he pleased, without communicating with the medical officer of the workhouse at all." These were the exact words used by the clerk, which of course settled the matter. I am, Sirs, yours obediently,

August, 1887. J. S. ORCHARD, M.D.

[1] March 12th, 1886.

MANCHESTER WATER SUPPLY.—In view of the rapidly-diminishing quantity of water in store at the Manchester Corporation reservoirs, the authorities have had their attention directed to the question of procuring a further supply from some flooded collieries at Moston, a village adjacent to the city. Samples of the water, which is stated to be of splendid quality and practically inexhaustible, have been taken for analysis.

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LIVERPOOL.

(From our own Correspondent.)

THE SUMMER ASSIZES.

MR. JUSTICE DAY concluded the business of the assizes on the 10th inst., having sat for eleven days in the Crown Court. Among other cases were two charges of murder, both by the knife. In one the left lung was wounded, and death occurred shortly after the admission of the deceased man into the Royal Infirmary. The prisoner was found guilty of manslaughter. In the other case the deceased was wounded in the abdomen, and lingered for some time after his admission into the Royal Southern Hospital. His assailant was found guilty of murder, but recommended to mercy.

RIVER POLLUTION.

It is greatly to be hoped that our sanitary authorities will take time by the forelock and steps to purify the river Mersey before it becomes as foul as the Liffey, the Clyde, or the Thames. For years past there have been most unsavoury odours perceptible at low water, especially in hot weather, and were it not for its breadth and the strength of its tides matters would be much worse. Any scheme for diverting the sewage from the river must, of course, be very costly. But it will become more so by keeping; and, taking into account the immense population on both sides of the river, the continuance of this sewage-pollution must be fraught with the greatest danger to them, as well as to all on board vessels stationed in the river.

CONVERSION OF ANOTHER CITY CHURCHYARD INTO A RECREATION-GROUND.

Until within the last few months the churchyard attached to St. Peter's Cathedral Church presented a most ghastly spectacle. It was a wilderness of gravestones, with rank grass here and there, and was a receptacle for all kinds of rubbish. By a mutual arrangement, made between the ecclesiastical and corporation authorities, all this has been changed, and the site has been converted into a recreation-ground of most pleasing appearance. To those who, from absence, have not seen the gradual transition, the change is startling, the wilderness of graves having been converted into walks, grass plots, trees, and shrubs. What is still more pleasing is that it is largely availed of as a place for rest and recreation, seats being provided in different parts, many being induced to leave the adjacent crowded thoroughfare and rest awhile.

THE HOLIDAY SEASON.

There was a small proportion of local representatives at the Dublin meeting, and there will be some at the International Medical Congress at Washington. At present the holiday season is in full vigour, both with medical men and laymen. For those who can go on a distant holiday, Liverpool offers great facilities, it being perfectly easy to go direct to all the more favourite English, Scotch, Welsh, and Irish seaside places, while, for those who prefer a longer distance, trips to America, the Mediterranean, Spain, or Portugal are easily obtained. But there are some persons, professional and lay, to whom holidays are as angels' visits, few and far between. To them Liverpool offers a very fair substitute in the very accessible and popular seaside resorts of New Brighton and Hoylake, where comfortable lodgings can be obtained, and this city can be reached in a very conveniently short time. Southport, though more distant, is soon reached, and on the same line of rail are several very attractive townships and villages, where a complete change of air may be obtained for jaded citizens without taking them out of reach of their duties.

Liverpool, Aug. 16th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

INVITATION TO THE BRITISH ASSOCIATION.

A PUBLIC meeting was held in Newcastle last Wednesday, Sir B. C. Browne (the Mayor) presiding, when it was resolved to invite the British Association to this city in 1889. A very hearty spirit prevailed at the meeting, and Lord Armstrong promised a contribution of £200 towards the expenses, should it be required. On the part of the medical profession, Drs. Embleton and Philipson expressed the feeling that they would not be behind others in endeavouring to make the meeting a success. Dr. Philipson further said, as to the University of Durham and the College of Medicine, he had no doubt they would render all the aid they could. The last time the British Association met in Newcastle was in 1863.

NEWCASTLE ROYAL INFIRMARY.

It will be remembered that in a late note I mentioned that some of the Chinese sailors who were ill aboard the *Foo Nan* in the Tyne were admitted and treated in the Infirmary. The Chinese admiral has now written a grateful letter of thanks for the attention his men received, at the same time enclosing a cheque for £40 as a donation to the institution. At a late meeting held at the infirmary a report was made to the governors of the improved financial state of the house; an alteration was also made in one of the rules requiring, in the case of the admission of a workman to the benefits of the infirmary, if he be employed by an individual or a firm not subscribing to the institution, that a letter shall be written to the employer or firm requesting the adoption of a system of regular workman's contributions or the repayment of the expenses incurred by receiving the patient into the infirmary.

DEATH OF SEPTIMUS W. RAYNE, F.R.C.S.

The death of Mr. S. W. Rayne of this city, I regret to see, is announced as having taken place at Winchester on the 10th inst. Mr. Rayne, who was in his seventy-first year, had retired from the active duties of the profession a couple of years ago, and resided in the south of England. Mr. Rayne was a pupil of the late Mr. Liston. He became M.R.C.S. in 1839, L.S.A. in 1842, and F.R.C.S. Eng. in 1873. He was a very active practitioner, and as surgeon to the police (a post he held for nearly forty years) and North-Eastern Railway Company, his offices brought him a large amount of medico-legal practice, more than usually falls to a general practitioner. He also for many years had a very large private practice. He discharged all his duties with marked fidelity, and his death narrows the circle of the older practitioners of Newcastle, while he will be much regretted for his kindness of heart and many good qualities. I mentioned in a letter about two years ago that on Mr. Rayne's resignation of the police surgeoncy our Town Council accorded him a unanimous vote of thanks for his valuable services, the terms of which were, by direction of the Council, engrossed on vellum.

DUBLIN.

(From our own Correspondent.)

THE DUBLIN HOSPITALS BILL.

IN view of the widespread dislike to the provisions of the proposed Dublin Hospitals Bill, the following resolutions of the Council of the Dublin Hospital Sunday Fund adopted at a recent meeting, may be of interest: "1. The Council of the Dublin Hospital Sunday Fund have had under consideration the Dublin Hospital Bill introduced by the city members. The Council do not at present offer an opinion on the general merits or demerits of the Bill, but wish to observe that the bill provides for the payment to the proposed Hospital Board of the Hospital Sunday Fund and its disposal by that board. The Council are satisfied that the subscribers to the fund would not consent to entrust the management of the fund to the proposed Board, and they desire to impress upon the promoters that they must not reckon upon the Hospital Sunday Fund forming any part of the proposed revenue of the Board." "2. The Dublin Hospital Sunday Fund Council, believing that, in the interests of the Dublin hospitals, it is desirable that a committee should be formed to take into consideration the various clauses in the Bill and their bearing on the hospitals of Dublin, recommend that a committee be appointed with this object, consisting of the Distribution Committee and the honorary secretaries of the Dublin Hospital Sunday Fund, and some members of each of the hospitals benefiting by the fund, having under fifty beds, and two members from each hospital of over fifty beds."

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HEALTH OF IRELAND: QUARTERLY RETURN.

The birth-rate for the June quarter was 0·7 under the average rate for the corresponding quarter of the last five years; while the deaths were slightly above those registered in the second quarter of 1886. Compared with those for the corresponding quarter of last year, the returns of pauperism, furnished by the Local Government Board, show a decrease of 705 in the average number of workhouse inmates on Saturdays during the quarter, and a decrease of 42,833 in the average number of persons on out-door relief. The registrars in their notes report the presence of the following diseases: Measles in 37 districts, rötheln in 6, scarlatina in 36, whooping-cough in 39, and fever in 32.

DISTRICT LUNATIC ASYLUMS, IRELAND.

A Bill has been issued this week to amend the provisions for superannuating the officers of Irish district lunatic asylums. The Bill provides that such officers shall be eligible for superannuation annuities if incapacitated by sickness or age, or if they have served in the asylum for not less than fifteen years, they being fifty years of age or upwards. The retiring allowance is to be paid out of the rates and funds applicable to the maintenance of the asylum, and the amount paid is not to exceed two-thirds of the annual salary, rations, and other allowances. It is required that His Excellency the Lord-Lieutenant approve all such grants.

At Dungannon, last week, Quartermaster Sergeant Armitage committed suicide by taking a quantity of cyanide of potassium. Death, as is usual in poisoning from this substance, was very rapid.

Dublin, August 16th.

Obituary.

GUSTAVUS CHARLES PHILIP MURRAY, M.D.

THE tidings of the sudden death of Dr. Murray, at the comparatively early age of fifty-six, must have come as a great shock to a large and wide-reaching circle of patients and friends. He had been suffering for some time from a degree of general malaise and failure of strength that made the daily calls and cares of practice a burden rather than the pleasure they had been to him; but his sudden death from heart failure, on the 7th of this month, at his residence in Great Cumberland-street, was a quite unexpected and very severe blow.

Dr. Murray, who was born in 1831 at Port of Spain, Trinidad, was the youngest son of the Hon. Edward Murray, marshal of that island. Through boyhood and youth his health was so delicate that his general education was chiefly obtained at private schools, in England, and he was obliged twice to revisit his birthplace for his health's sake. When his choice of a profession had been made, he became a student in the medical school of King's College, in the days of Todd and Bowman, of Fergusson and Partridge, and when Arthur Farre was Professor of Obstetrics. There young Murray worked well and got a good hold of the science and art of medicine; with his ardent spirit he could hardly have done otherwise; and there, as elsewhere throughout his career, he made friends who remained friends for life. In 1856 he became a member of the Royal College of Surgeons of England, and after that he studied at Edinburgh and at Vienna, taking the M.D. degree of the University of Edinburgh in 1860. Having, somewhat early we imagine, decided on seeking obstetric practice as his specialty, Dr. Murray settled down without loss of time in Green-street, which, if not the rose, is, as every medical man knows, very near the rose of medical position, and began to look out eagerly for appointments and patients. The former he obtained quickly, and through them he rapidly gained very largely the practical experience that every true medical man so hungers after. He was for several years physician-accoucheur and physician for the diseases of women and children to the St. George's and St. James's Dispensary; physician, and later on consulting physician-accoucheur, to the St. Pancras Provident Dispensary; and for very many years, and down to the day of his death, he was obstetric physician to the Great Northern Central Hospital. We cannot pretend to enumerate here all the honorary appointments that Dr. Murray at various times held, and to the work in which he gave so much valuable time and thought, but we must note his connexion with the Establishment for Gentlewomen in Harley-street, where he did excellent work, and to which he was still physician for the diseases of women when he died. He was a Fellow of the Edinburgh Obstetrical Society; and was one of the original Fellows of the Obstetrical Society of London, in which he filled in succession almost all the offices of honour and work, except the highest of all—that of president; for when that crowning distinction was offered to him, in 1884, the wear and tear of practice had so far told on him that, with great reluctance, and in deference to medical advice, he felt obliged to decline the coveted honour.

Very early in his career Dr. Murray began to send contributions to the Obstetrical Transactions and Journal, and to the medical papers; but his special fitness for the line of work he had chosen was soon recognised, and the demands of practice gradually more and more absorbed his time and thought, so that he ceased to write, and had to be content, as many other hard-worked medical men have been, to make known the results of his experience and observation orally, instead of putting them on record for the benefit of future as well as of present practitioners.

Dr. Murray was markedly skilful and successful in the treatment of the diseases of women and children, but it will be generally admitted that he especially excelled in the practice of midwifery. His manual dexterity was very great, and served him well in the management of difficult labours. And his judgment was equally good. He knew when to wait, and at what moment to interfere; and the natural result was that as an accoucheur he was highly successful, and his counsel and help were greatly valued by the numerous practitioners who called him in consultation. In untiring devotion to the patients committed to his charge, and in the tenderest regard for their feelings, Dr. Murray could not be surpassed. No trouble was too great for him to take when patients were concerned. He would sacrifice for them his time, convenience, and health in the most unsparing manner. Nor was this devotion, in his case, but a phase of a merely professional instinct. In him it was the outcome of kindness of heart and a sympathetic nature which endeared him to his friends and fellow-workers as much as to the sick and suffering, who relied with a happy confidence upon the physician who never failed them.

In social life Dr. Murray's cheeriness of manner, which was rarely wanting, made his companionship pleasant and very welcome, and his somewhat keen appreciation of the humorous side of life had its share in making him a very popular member of our profession. He will be long and sorely missed, for he possessed qualities which, happily for human nature, even the ever-increasing struggle for existence in professional life has not yet succeeded in rendering less acceptable and endearing.

In 1856 Dr. Murray married Fanny Tryphena, the daughter of John Yearsley, Esq., of The Moors, Cheltenham, who and a daughter and six sons are left to lament their loss. The second son, Mr. Stormont Murray, has followed in his father's steps, and is in practice in London.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen have been duly admitted Licentiates of the College:—

Barrett, William, Ashton-under-Lyne.
Green, Frederic W. Edridge, St. Bartholomew's Hospital.
Lewis, Ernest Edward, Middlesex Hospital.
Phillips, Stanley Clyde, Plymouth.
Trevelyan, Basil Riddell Trevelyan, Clifton.
Waterhouse, Herbert Furnivall, Dunoon, Scotland.
Woodward, William, St. Bartholomew's Hospital.

THE Jubilee of the Queen was commemorated at Southend on the 13th inst. by the laying of a memorial stone of the first local hospital, to be called the Victoria Hospital.

ON the 13th inst. a conference of dentists was held in Dublin for the purpose of establishing an Irish branch of the British Dental Association.

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VACCINATION GRANT. — Dr. W. J. Smyth, Shipley, Yorks, has obtained the grant for efficient vaccination in his district (fourth time).

THE subscriptions in aid of the proposed Victoria Infirmary at Glasgow now amount to nearly £14,000. The committee are unwilling to begin building operations until the funds amount to about £20,000.

ARRANGEMENTS have been made with a view to the transfer of the Bradford Fever Hospital to the Corporation of that town being completed and possession being taken on the 1st prox.

THE 39th annual meeting of the subscribers to the Weymouth Sanatorium was held on the 4th inst., when satisfactory medical, financial, and general reports were presented and adopted.

BEQUESTS.—The late Mr. Thomas Synnott has left £200 to Jervis Street Hospital; £100 to the Mater Misericordiæ; £100 to the Hospital for Incurables; and £300 to Michael's Hospital, Kingstown.

ON the 17th inst. a portion of the burial ground in the rear of St. James's Church, Hampstead, amounting to about two and a half acres, was formally opened and dedicated to the public as an open space.

UNIVERSITY OF EDINBURGH.—We are asked to state that to the name of Daniel Mowat, in the list of gentlemen who were announced in our last issue as having obtained the M.D. of the University, should have been prefixed the sign indicating that his thesis received commendation.

ON the 10th inst. the Mayor of Bradford (Alderman Angus Holden) formally opened a temporary building which is to serve the purpose of the Bradford Hospital for the Sick Children of the Poor until funds are raised for a permanent and larger hospital.

RABIES IN CHESHIRE.—At the Macclesfield County Police Court on the 16th inst. the magistrates issued an order directing dogs to be kept under control throughout the whole of the Macclesfield district until further orders. A similar order expired a month ago, and since then several cases of rabies have occurred in the district.

AFTER much negotiation between the Folkestone Hospital Committee and the Government, the latter have agreed to restore the old battery site to the Earl of Radnor, from whose estate it was severed some years ago. The Earl of Radnor will transfer the site to the town authorities for the erection of a new hospital.

MR. H. C. RAIKES, M.P., visited the Morley House Seaside Convalescent Home, St. Margaret's Bay, on the 11th inst., for the purpose of opening the new wing erected by Lord Wolverton, who had contributed £1000 to the institution, in order that provision might be made for four London postmen convalescent from accident or disease.

THE DARENTH ASYLUM.—On the 6th inst. the managers of the Metropolitan District Asylums paid their annual visitation to the establishment under their control at Darenth, in which 800 imbeciles and harmless insane inmates are accommodated. The result of the inspection was reported as satisfactory, and the officers were congratulated upon the state of efficiency in which they kept the institution.

ROYAL UNIVERSITY OF IRELAND.—The following Exhibitions and Honours have been awarded at the First Examination in Medicine:—Exhibitions: First Class (£30), George Hewitt Frost; Second Class (£15), Katherine M. Maguire. Honours: First Class, G. Hewitt Frost; Second Class, Katherine M. Maguire, James B. Moore, Patrick McGann, Robert Fraser Moore. Upper Pass Division: James F. Carroll, Robert J. Gordon, Isabel W. Harper, James J. Thompson, Michael Toomey.

RETIRING ALLOWANCE.—On the 13th inst., at the weekly meeting of the Board of Guardians of the Caistor Union, attention was drawn to the fact that the visiting justices had recommended to quarter sessions an allowance to Dr. Palmer, on retiring from the post of medical officer of the Baumbridge Lunatic Asylum, Lincoln, of £500. After some discussion, the board decided to reaffirm their original resolution on the subject in favour of a pension of £350 a year only.

MEDICAL NOTES IN PARLIAMENT.

Teaching University for London.

IN the House of Commons on the 12th inst., Mr. W. H. Smith informed Mr. Bryce that the petitions praying for the constitution of a teaching university for London had been referred by Her Majesty to a committee of the Lords in Council, to consider and report upon. The Government did not at present contemplate the appointment of a Royal Commission to inquire into the subject.

Volunteer Medical Officers.

ON the 16th inst., Sir G. Hunter asked the Secretary of State for War whether there was any objection to the adoption of the recommendations of the Volunteer Medical Association with reference to rank &c. of Volunteer medical officers submitted to the War Office. The recommendations were as follows:—(1) That all appointments to the Volunteer Medical service should in the first instance be to the rank of acting-surgeon. (2) That acting surgeons upon obtaining the proficiency certificate should be commissioned and gazetted as surgeons. (3) That the substantive rank of surgeon-major should be given after twelve years' service, as in the Army, after such examination as may be deemed necessary. (4) That the whole of the medical officers be placed in a seniority list under the heading "Volunteer Medical Staff," the regiment or company of the staff corps to which the officers may be attached being placed after his name.—Mr. E. Stanhope, in reply, said that he was able to approve generally the proposals of the Association, but that some questions of detail still remained to be considered. He might, however, say that the grant of the rank of surgeon-major to Volunteer Medical officers after twelve years' service, and the insertion of their names in the Army list as Volunteer Medical Staff, would be approved.

Infant Mortality.

In reply to Mr. Picton, Mr. Ritchie said that inquiries had been instituted in thirty large towns and cities of England and Wales, not only with regard to diarrhœa, but in relation to choleraic outbreaks. The inquiries extended over six weeks of the year during which the disease was most fatal. As they progressed it became necessary to initiate fresh lines of search. To show the magnitude of the matter he might say that there were no less than 15,936 cases of deaths from diarrhœa registered in the third quarter of last year. The work was now actively progressing, and the board hoped that when the result of the present summer was obtained, they would be able to prepare a summary report of the whole inquiry. He was aware that several local authorities had for six years been incurring expense for meteorological observations, and the investigations had been of great service.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BIGGS, CHARLES E. F. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third District of the Malmesbury Union.

EMMERSON, J. B., M.D. Durh., M.R.C.S., has been appointed Certifying Surgeon under the Factory Act to the Biggleswade District, vice C. P. Stevens, resigned.

FISHER, H. HOLDRICK, M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Senior Resident Medical Officer to the Hospital for Sick Children, Pendlebury, Manchester, vice Kurshaw, resigned.

MACLAGAN, CHARLES G., M.B., C.M. Ed., has been appointed Medical Officer for the Berwick District of the Berwick Union, vice Mackay, resigned.

MADDOX, RALPH H., M.B. Ed., M.R.C.S., has been appointed Resident House-Surgeon to the Edinburgh Maternity Hospital.

MARTIN, JOSEPH H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Warboys District of the St. Ives Union.

PRICHARD, RICHARD, M.D., C.M. Glas., has been appointed Medical Officer of Health to the Cardiff Union Rural Sanitary Authority, vice F. W. Granger, M.R.C.S., deceased.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL HOSPITAL.—House Governor. Salary £300 a year, with board and apartments.

BRADFORD INFIRMARY.—Junior House-Surgeon. Salary £50 per annum, with board, residence, and washing.

BRIGHTON AND HOVE LYING-IN INSTITUTION—House-Surgeon. Salary £120 per annum, with furnished apartments, gas, coals, and attendance.

CANCER HOSPITAL, Brompton, S.W.—Resident Assistant House-Surgeon. Honorarium £35 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

DENBIGHSHIRE INFIRMARY, Denbigh. — House-Surgeon. Salary to commence at £35 per annum, with board, residence, and washing in the house.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Surgeon to Out-patients.

GAINSBOROUGH FRIENDLY SOCIETIES MEDICAL ASSOCIATION.—Resident Medical Officer. Salary £166 per annum, together with midwifery fees, house rent, rates, &c.

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JARROW-ON-TYNE MEMORIAL HOSPITAL.—House-Surgeon. Salary to commence at £130 per annum, with board and residence.

LIVERPOOL DISPENSARIES.—Two Assistant Surgeons. Salary £80 per annum each, with apartments, board, and attendance.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary £150 per annum, with board and residence.

NORFOLK AND NORWICH HOSPITAL.—Resident Secretary and House Steward. Salary £100 per annum, with board and furnished apartments.

PAROCHIAL BOARD OF PENNYGOWN AND TOROSAY.—Medical Officer. Salary £100 a year.

ROYAL BERKS HOSPITAL, Reading.—Assistant House-Surgeon. Board and lodging, but no salary.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—Assistant House-Surgeon. Salary, with board and residence, £60 per annum.

ST. PETER'S HOSPITAL FOR STONE, Henrietta-street, Covent-garden.—House-Surgeon. Honorarium (for six months) 25 guineas, board, lodging, and washing.

ST. SAVIOUR'S UNION INFIRMARY, East Dulwich-grove, Champion-hill, S.E.—Assistant Medical Superintendent. Salary £130 per annum, with furnished apartments, board, and washing.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Resident Medical Officer. Salary £60 per annum.

Births, Marriages, and Deaths.

BIRTHS.

CASSIDY.—On the 14th inst., at Harley-street, Cavendish-square, the wife of Joseph Lamont Cassidy, M.D., of a son.

COX.—On the 12th inst., at Claverton-street, S.W., the wife of J. Leslie Cox, L.R.C.P. Ed., of a daughter.

EMMETT.—On the 10th inst., at Woodville, Kingston-road, Portsmouth, the wife of Richard Emmett, M.R.C.S., L.R.C.P.Lond., of a daughter.

HAIG-BROWN.—On the 8th inst., at Charterhouse, Godalming, the wife of Clarence W. Haig-Brown, M.D., of a daughter.

HOOLE.—On the 16th inst., at Parkhurst-road, N., the wife of Henry Hoole, M.D.Lond., of a son.

WILLEY.—On the 16th inst., at Elmhyrst, Bromley, Kent, the wife of Henry Willey, M.B.Lond., F.R.C.S., of a daughter.

WILSON.—On the 11th inst., at the Free Church Manse, Liberton, Midlothian, the wife of Claude Wilson, M.D., of a daughter.

MARRIAGES.

DAVIDSON—BROWN.—On the 9th inst., at St. James's Church, Nottingham, Charles Robert Davidson, M.B., M.R.C.S., to Emily, eldest daughter of John Brown, Esq., of Park Valley.

FAWCETT—LLOYD.—On the 6th inst., at the Parish Church, Conwil Caio, Carmarthenshire, W. J. Fawcett, Surgeon-Major, Army Medical Staff, to K. M. Alice, younger daughter of the late Charles Lloyd, Esq., of Brunant.

HARTLEY—DAVIES.—On the 6th inst., at the Parish Church, Oswestry, Horace Hartley, M.R.C.S., L.R.C.P., to Nora, daughter of the late Henry Davies, Solicitor, Oswestry, Salop.

KENYON—WILTON.—On the 3rd inst., at St. Michael and All Angels', North Kensington, W., George Hebert Kenyon, M.D., to Annie Caroline, younger daughter of the late Rev. Edward Wilton, M.A.Oxon., Vicar of Osberton, Notts, and Domestic Chaplain to the late Earl of Galloway.

LIMONT—JACKSON.—On the 11th inst., at Crosthwaite Church, Keswick, by the Rev. H. D. Rawnsley, M.A., assisted by the Rev. J. S. Ostle, M.A., James Limont, M.B., M.R.C.P., of 3, Eldon-square, Newcastle-on-Tyne, to Margaret Jessie, daughter of the late Richard Jackson, Esq., of Liverpool.

PARTRIDGE—LOADER.—On the 10th inst., at St. Mark's, Coburg-road, Old Kent-road, S.E., William Thomas Partridge, L.R.C.P., M.R.C.S., to Letitia Rose, only daughter of Alfred Loader, Esq., of 60, Trafalgar-road, S.E.

POTTER—KNOCKER.—On the 15th inst., at All Hallow's, Tottenham, by the Rev. Prebendary Wilson, M.A., Vicar. Edward Furniss Potter, M.R.C.S., L.R.C.P.Lond., of Hull, to Ada Florence, second daughter of Charles Knocker, of Tottenham.

ROSS—ANDERSON.—On the 9th inst., at St. Paul's Church, Edinburgh, John Ross Home Ross, M.B., C.M., to Julia Caroline, eldest daughter of C. F. White, Esq., of Whitby, and widow of Charles F. Anderson, Esq.

STATHAM—GILL.—On the 3rd inst., at Kirk Malew, Isle of Man, Reginald Whiteside Statham, M.R.C.S., L.S.A., to Nessy, third daughter of the Rev. Hugh Stowell Gill, M.A., Vicar of Malew, and Rural Dean.

DEATHS.

GIBSON.—On the 8th inst., at Orton, Westmoreland, Thomas Gibson, M.D., M.R.C.S., J.P., aged 53.

GILLESPIE.—On the 12th inst., at Ticehurst, John Williams Gillespie, M.D., late of 25, Porchester-terrace, and formerly of the 5th Fusiliers and of the Isle of Mauritius.

POTTER—On the 12th inst., at North-street, Romford, Essex, Charles Potter, L.S.A., aged 73.

RAYNE.—On the 10th inst., at Winchester, S.W. Rayne, F.R.C.S.Eng., of 6, Hyde-park Mansions, and late of Newcastle-on-Tyne, in his 71st year.

WILLIAMS.—On the 7th inst., at Meadhurst, Eastbourne, W. D. Williams, M.D.Cantab., of Belmont Lodge, Reigate, in the 80th year of his age.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 18th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 12	30·00	W.	60	55	107	71	55	...	Overcast
,, 13	29·78	E.	60	57	101	69	57	...	Overcast
,, 14	29·94	N.W.	58	55	102	68	53	...	Cloudy
,, 15	30·05	N.	56	51	100	73	51	...	Hazy
,, 16	29·78	E.	60	56	79	65	56	...	Overcast
,, 17	29·80	S.E.	57	55	92	66	54	·59	Raining
,, 18	29·88	N.	59	55	...	...	53	·80	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER OF "THE LANCET" will be published on Saturday, September 3rd. Those gentlemen holding official situations connected with medical institutions in the United Kingdom who have not yet forwarded the necessary information to our Office for publication in that number are earnestly requested to send it *without the delay of a single post.*

THE SANITARY CONDITION OF THE PALACE OF WESTMINSTER.

NOTWITHSTANDING the expense which has been incurred in perfecting the drainage beneath the Houses of Parliament, complaint is still made that the atmosphere of the Palace of Westminster is vitiated by disagreeable effluvia. An explanation of this serious annoyance has been offered by Mr. Bailey-Denton, who maintains that the noxious odours are due to the escape of what is called "ground air" from the subsoil of the Palace. The Thames at Westminster is polluted by the main drainage, and the tidal water of the river, as it passes and repasses along the face of the Embankment wall in front of the Houses of Parliament, finds its way in and out under the wall, thereby saturating the subsoil. Having thus percolated into and beneath the foundations of the Palace, the water rises and falls with the action of the tide, and the foul air is forced upwards into the Houses of Parliament.

Wounded.—We must refer our correspondent to the Secretary of the St. John Ambulance Society, St. John's Gate, Clerkenwell.

THE UNQUALIFIED ASSISTANT.

To the Editors of THE LANCET.

SIRS,—The vexed question of the right of the unqualified man to practise is continually cropping up in the medical journals. One has only to refer to the advertisement sheet of THE LANCET to see how overcrowded the profession is. Yet, whilst doing all in our power to stop further ingress among our ranks, would it not be fairer, more in the spirit of "as we ourselves would be done by," to let him, within safe and easily-defined limits, run his life unmolested? Many of this unfortunate class have been following their calling for years, and are too old to gain a livelihood by other means. Take this from them, and the breadwinner of many a family is taken also. None of us, even in these hard times, wish this. At the most it is not a very great slice out of our loaf, and each year it will be smaller, until the unqualified man will be as rare as the once familiar "in practice prior to 1815."

I am, Sirs, faithfully yours,

Aug. 15th, 1887. D. F. J.

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BERLIN MARRIAGE STATISTICS.

Some interesting figures with regard to marriages in Berlin have been issued by the Statistical Office in that city. It appears that, of the 13,866 marriages which took place in 1885, only 100 were between blood relations—viz., 95 between cousins and 5 between uncles and nieces. Among men there were 11,911 first marriages, 11,122 being with spinsters, and 799 with widows or divorced wives. There were 1905 second and later marriages among men, 1441 being with spinsters and 504 with widows and divorced wives. Of the widowers who re-entered the married state, 611 did so within a year of bereavement, 359 within two years, 138 within three years, and 92 married again between three and four years after bereavement, the number of re-marriages falling considerably after this. One widower married after living single over thirty years, and eight divorced couples were re-married, the husband being in one case seventy years old.

Indignant has not enclosed his card.

BODY RESISTANCE TO ELECTRICAL CURRENT.

To the Editors of THE LANCET.

SIRS,—In a letter which appeared in THE LANCET of July 30th, p. 239, Dr. Stevenson touched on the resistance of the body with a needle attached to one pole beneath the skin. This resistance he estimates at 300 ohms; and doubtless in some parts of the body—for example, in the palms of the hands, this is by no means too high. Reference is also made to Dr. Apostoli's electrical treatment of uterine fibroids; and here I believe that the resistance of the body between the external electrode on the abdomen and the sound in the uterus or needle in the substance of a uterine tumour will not often, if ever, reach 500 ohms, although in one of the cases operated on by Dr. Keith it amounted to nearly 350. The practical importance of this will be seen, and the relation it bears to the size and quality of the cells one has to get, by a short reference to the battery we are using at present. It consists of twenty-four large Leclanché cells, whose united electromotive force when joined in series is nearly 36 volts, and whose internal resistance is 12 ohms. When an external resistance of 500 ohms is added to this, and the calculation made, we have, according to Ohm's law, which, when C = current, E = electromotive force, R = external resistance, and R' = internal resistance, is expressible thus: $C : \frac{E}{R+R'} : \frac{36}{500+12} = 70$ milliampères. With an external resistance of 350 ohms a current of 100 milliampères can be got; but to reach to even 100 milliampères with 500 ohms of external resistance eleven cells would have to be added to the battery of twenty-four. The M. F. of each cell has been, for convenience, taken at 1·5, instead of 1·48. I am, Sirs, yours faithfully,

Edinburgh, Aug. 3rd, 1887. SKENE KEITH.

PANSLAVISM IN RUSSIAN UNIVERSITIES.

THE alleged Russianising of the Germano-Russian schools, particularly in the Baltic provinces, is, it happily appears, without foundation. Dr. Schultze, sometime clinical lecturer at Heidelberg, who had been invited to fill a corresponding chair in the University of Dorpat by the Russian Government, has since been unconditionally confirmed in the post, without his being required to prelect in the Russian language. Prof. A. Schmidt, also of Heidelberg—"Blut Schmidt," as his colleagues pleasantly distinguish him, in allusion to his most considerable scientific work—and now Rector of Dorpat University, characterises as "pure fable" the report that restrictions, in a Panslavic sense, are imposed on the German occupants of Russian chairs.

Dr. W. Budd (Exeter).—The paper has been received and will appear shortly.

"THE THROAT AND ITS DISEASES."

To the Editors of THE LANCET.

SIRS,—A very serious error having been brought under my notice by a purchaser of the recently published second edition of my book, "The Throat and its Diseases," I shall be obliged if you will allow me to correct it in your columns, for the sake of those who might otherwise overlook the mistake. In formula 80, page 568, a drachm of sulphate of atropia is ordered to an ounce of vaseline as an application to the nostril. It should, of course, be a drachm of the *solution* of that alkaloid. Thanking you in advance for your courtesy, I am, Sirs, yours truly,

Weymouth-st., Portland-place, Aug. 17th. LENNOX BROWNE.

JOSHUA INGHAM IKIN, F.R.C.S.

Died August 8th, 1887.

IN MEMORIAM.

Shall it be said, alas! he died too soon
Whose life's good work completed is on earth;
Have we not that to which himself gave birth
Long years ago?—the consecrated boon
To sick and poor;—the sunshine of that day
When up the garden path he passed along
With Carlisle at his side, and spirit gay,
And heart all mirthful as the free bird's song
'Mid leafy, sighing woman, that holy house did rear
For you and your fond little ones so dear.

August, 1887. A. T. G. LITTLEJOHN FORTUNE.

THE NATURE AND TREATMENT OF EPISTAXIS.

THE central idea running through the suggestive paper contributed by Dr. Harkin to the Therapeutical Section of the British Medical Association at its recent meeting in Dublin is lucid enough; but, like many clever theories, it requires more proof than we think the author has adduced in the paper. Again, that important hæmapoietic viscus, the liver, is brought into requisition as the chief cause of various, chiefly chronic, blood states in which epistaxis—and, we may add, other hæmorrhages—are prone to occur. Epistaxis may occur under a variety of conditions, and the blood may be hypinotic or hyperinotic, anæmic or plethoric, or even, it is possible, possessing the right number of red blood-discs; but whatever the condition of the blood, Dr. Harkin believes that much good may result from treatment directed to leading the erring liver back to normal modes of action. The quality of the blood may be improved, and the equilibrium between its solid and fluid constituents may be restored, "by the free administration of chlorate of potassium alone, or combined with a soluble salt of iron." The health of the liver may be improved by counter-irritation over the region of the liver, a large blister being in practice the most convenient and suitable application. Dr. Harkin strongly deprecates active surgical interference with the diseased liver or its portal tributaries.

Cymro.—For registration on the ground of having been in practice before the passing of the Dentists' Act it is necessary that information of the claimant's name and address, &c., should have been transmitted to the Registrar before Aug. 1st, 1879.

A. B. C.—We do not give medical advice.

SWEATING OF THE FEET.

To the Editors of THE LANCET.

SIRS,—Many persons during the hot weather are subject to very great discomfort in consequence of an offensive odour proceeding from the feet. For this cause a servant has been discharged from her situation, a gentleman has been debarred from frequenting society, and hitherto no antidote has been found for the evil. In a case, however, which has come under my notice I have found a remedy in the use of soda; so much so that by an effectual daily application of it the nuisance has been entirely removed, whereas by one day's omission the nuisance has recurred. I have not tried ammonia, the stronger alkali, but feel confident that if the soda be applied either in fine powder or concentrated solution, as the skin will bear it, the remedy will be effectual, and be found a great boon to persons so afflicted.

I am, Sirs, yours very truly,

Newhaven, Aug. 5th, 1887. D. RICHARDSON, M.R.C.S., L.S.A.

CAUCASIAN WATERING PLACES.

THE Caucasian watering places or mineral baths seem to be well patronised this season, no less than 4636 persons having taken tickets up to July 2nd, in addition to a certain number of officers and civil servants who are sent there at the public expense, as well as seventy-four persons whose expenses are defrayed by different charitable institutions. There are this year sixty medical men in practice at the different "baths."

D. D. Jones, M.B.—We think any of the leading firms of instrument makers will undertake the work.

HOME FOR IMBECILES OF LIMITED MEANS.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if any of your readers can tell me of any Home that would receive a man of weak intellect, brother of a working farmer, about forty years of age. He is a good and capable worker, and his friends simply seek to place him under restraint in consequence of his constantly straying from home, often being heard of at long distances in a most abject condition. The friends could pay about ten shillings a week towards his support. Any information on the subject would be thankfully received.—Yours truly,

Aug. 14th, 1887. B. FARADAY GILES, M.D.

SANDALWOOD IN BLENNORRHAGIA.

M. C.—The oil of sandalwood in the treatment of gonorrhœa (blennorrhagia), both in its acute stage and in some of its sequelæ, has been found efficacious by Posner, Letzel, and Casper, and more recently by Rosenberg, of the Jewish Hospital in Berlin. In chronic blennorrhagia, this last named investigator has not been equally successful. Cystitis and prostatitis were among the sequelæ in which he found its use beneficial.

A CASE-BOOK.

R. F. W.—There is room for a few good forms of case-book. One such is before us for practitioners and students which would meet the views of our correspondent—Lewis's Pocket Case-book, designed by A. T. Brand, M.D., to be had of H. K. Lewis, Gower-street. It is neatly arranged, portable, and on good paper.

C. D.—The paper will appear in an early number.

A Volunteer Surgeon.—No.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Lauder Brunton, Bedcar; Dr. Bell Taylor, Nottingham; Drs. Meredith and Dunne, Dublin; Dr. S. West; Dr. Thudichum, London; Mr. Lennox Browne, London; Dr. R. Paramore, London; Mr. R. Williams, Manchester; Prof. Whalley, Edinburgh; Mr. A. Warner, London; Mr. W. Allison, London; Mr. Fitzpatrick, Moville; Mr. Dagleish, Trowbridge; Mr. G. Newbolt, Liverpool; Mr. St. George, Antrim; Messrs. Potter and Pearce, London; Dr. J. L. Spender, Rathdrum; Messrs. Eason and Son, Dublin; Mr. R. F. Benham, London; Messrs. Henderson and Clark, Edinburgh; Dr. Bower, Bedford; Dr. S. O. L. Potter, San Francisco; Mr. F. R. Humphreys, London; Messrs. Thompson and Co., London; Dr. B. F. Giles; Mr. Martin, Box; Messrs. Maythorn and Son, Biggleswade; Mr. A. S. Jones, Wrexham; Messrs. Warren and Co., Bristol; Mr. Wale, Maidstone; Mrs. Maitland; Mr. McCook Weir, Nottingham; Mr. M. Laurie, Weymouth; Messrs. Southall and Co., Birmingham; Mr. A. P. Hills, Bexhill; Mr. Pike; Messrs. Dain and Co., Birmingham; Mr. Greenham, Shanklin; Dr. Dale, King's Lynn; Mr. Wright, Sidmouth; Mr. Wilcocks, London; Mr. Tennant, Ben Rhydding; Dr. Spencer, Bath; Mr. A. Carter, London; Mr. Scott, Manchester; Mr. Campbell, Jarrow-on-Tyne; Messrs. Robertson and Scott, Edinburgh; Mr. Boyeau, Paris; Mr. Jacob; Messrs. Blackie and Son, Edinburgh; Dr. Gardiner, Sheffield; Dr. Campbell, London; Mr. Blyth, St. Leonards; Mr. Gordon, Dumfries; Mr. Birchall, Liverpool; Mr. Mercier, London; Mr. Beale, Brighton; Mr. T. H. Brattan; Dr. Thomas, Glasgow; Dr. W. J. Collins, London; Mr. T. Osborne Walker, Crick; Mr. F. H. Pott, Hull; Mr. Allen; Messrs. Blake and Co., Leeds; Mr. Lawrence, Norton; Mr. Rayward, London; Mr. M. Smale, London; Mr. J. J. B. Taylor, Ulverston; Mr. Marshall, Hawkhurst; Mr. Whysall, Grantham; Mr. Maegee, Yorks; Dr. Heelas, Ventnor; Mr. Thompson; Mr. Pearcey, Taunton; Mr. Torrance, Norwich; Mr. F. W. E. Green, London; J. S., Bradford; A Volunteer Surgeon; D. F. J.; Enquirer; The Military Secretary of the India Office; Nuntius.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. May, Hanwell; Dr. Lawrence, Chepstow; Mr. Casey, Oldham; Mr. Cock, Liverpool; Mr. Branthwaite, Twickenham; Messrs. Burgoyne and Co., London; Mr. Hynes, Ennis; Mr. Gibson, Orton; Messrs. Smith and Son, Manchester; Mr. Seymour, Coventry; Messrs. Lumley and Co., London; Mr. Donaldson, Edinburgh; Mr. Palm; Messrs. Grace and Co., Bristol; Mr. Townson, Chester; Dr. Stackpool; Mr. Sabenar, Wigan; Mr. Holsgrave, Waterloo; Mr. Davis, Gateshead; Dr. Taylor, Grantham; Mr. Cuckson, Gainsborough; Mr. Woodcock, Bradford; Mr. Hosker, Bournemouth; Mr. Jeffreys, Chesterfield; Mr. Restall, Stroud; Mr. Angel, Southampton; Dr. Wardle, Bolton; Dr. Smyth, Shipley; Dr. Sharp, Walsall; Mr. Redhead, Hull; Mrs. Cunningham, Surbiton; Dr. Watt; Dr. Meadows, Leicester; Mr. Smith, Tunbridge Wells; Mr. Hartnell, Nottingham; Mr. Immisch; Messrs. Taylor and Co., London; Mr. Abernethey, Brixton; Messrs. Ledger, Smith and Co., London; Dr. Waterhouse, Dunwoon; Messrs. Mawer and Co., Bristol; Mr. Potter, Dartmouth; Medicus, Bedale; Opifer; G. B., Derby; C. B., W. D., Leicester; M.B., Heckmondwyke; Lady Manager, St. Leonards; H., Huddersfield; B. A. L., Oxford; B. A., London; Leon; Csycho; N. M., London; C. M.; P. Y. K.; Matron, Lowestoft; A. B. C., Harwich; M. J.; Medicus, Liverpool; Alpha, Kidderminster; G. H., Llanelly; Locum; H. F., Barnstaple; W. A., Clapham; M.B., C.M.; A. B., London; F. L. N.; M.A., Cambridge.

Windsor and Eton Express, Bolton Chronicle, Southern Times, Devon and Exeter Daily Gazette, Buenos Ayres Weekly Herald, Montreal Daily Star, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 23.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, August 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—4 P.M. Dr. Samuel West: On Pneumothorax (Bradshawe Lecture).

Friday, August 26.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 27.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Books and Publications (seven lines and under)	£0 5 0
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Trade and Miscellaneous Advertisements	0 4 6
Every additional Line	0 0 6
Front Page	per Line 0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An entire Page	5 5 0

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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Lectures
ON
PRACTICAL LEGAL MEDICINE.

Being the Post-Graduate Course delivered at St. Mary's Hospital,

BY AUGUSTUS J. PEPPER, M.S. LOND.,
LATE EXAMINER IN FORENSIC MEDICINE TO THE UNIVERSITY OF LONDON.

LECTURE I.

GENTLEMEN,—In a short course of four lectures it would be impossible for me to go deeply into the wide subject of legal medicine, nor would any good purpose be served by a general survey of the theoretical aspects of the question. I have chosen, therefore, to bring before you such lessons as I have learnt from practical study, and to present them to you with a hope that they may at least serve you in good stead in your own future investigations. It has often surprised me how good common sense has saved a man from making the most grievous blunders whilst instituting inquiry into problems complicated, and therefore difficult. We learn most by our mistakes, and I want you to see the occasion on which those mistakes are likely to be made.

My first lecture will treat chiefly of Inquest Practice—that department of forensic medicine in which all of you are certain at some time or other to be personally engaged. A coroner's inquisition must be held *super visum corporis*—that is, "if there be no view, the inquisition is void." It becomes, then, the paramount duty of medical men to do all in their power to bring cases in which the cause of death is unknown before the notice of the coroner, who will decide upon the information laid whether an inquest be necessary. If the cause of death is unknown, the deceased may have died directly or remotely from some form of violence. In such cases an inquest must be held to determine when, where, and by what means the death happened. The 27th regulation for house-surgeons at this hospital runs as follows: "The house-surgeon shall take care that any death resulting, however remotely, from accidental injury or violence be reported to the coroner immediately." Do not be persuaded, either by the importunity of others or through want of confidence as to the correctness of your own diagnosis and treatment, in a case that has proved fatal, to give a certificate of death, unless, "to the best of your belief," you are certifying that which a coroner's jury would in all probability find to be true. It would be infinitely better to be found wrong in an opinion honestly given than to lay yourself open to the charge of an attempt to evade legal process. A great scandal would arise if exhumation of a body were ordered in consequence of a medical man having carelessly, recklessly, or fraudulently given a death certificate. Whilst speaking of exhumation, I may say that a coroner has power to order the disinterment of a body "privately and secretly buried," and where the deceased person "died not of a natural but a violent death." He can also do it if the burial has inadvertently taken place. Only last month such a mishap occurred. A woman was certified to have died from "chronic lead poisoning," and was buried in the ordinary way. The death having arisen from unnatural causes, exhumation was imperatively demanded in order that an inquest might be held. If the interment has been made in compliance with the terms of the statute, the order for exhumation rests with the Home Secretary.

A few words concerning insurance against accidents and the duties of medical men relative thereto. If a person insured against death from accident dies from an injury within the time specified in the policy of insurance, his representatives can of course claim compensation. Now, inasmuch as the policies of some insurance companies contain a proviso that the claim cannot be sustained if the death be due "wholly or in part" to disease having no causal relation to the accident—even if such disease be but the result of natural decay,—you will see at once that damages could not be recovered in the majority of cases unless on appeal a superior court were to decide that the aforesaid proviso was *ultra vires*, and therefore not binding. I say in the majority of cases; for I believe that most people killed by accident are the subjects of some organic disease, active or degenerative, incipient or pronounced; and obviously certain injuries—e.g., a severe concussion or strain—would most likely tell with maximum severity on the weakest spot. A man with fatty heart would die from syncope; a second, with atheroma of the cerebral arteries, from apoplexy; and a third, with a thin-walled sacculus of the bladder, from peritonitis consequent on rupture; and yet such might, save for the accident, have reached the natural term of life. Do not imagine I am romancing; such cases are matter of history. You will agree with me that it is highly important to make a post-mortem examination as early as possible to determine what is due to accident and what to disease. As medical men, it would be well for you, on the death of a patient, to ask the relatives if the deceased's life was insured, and if so to impress upon them the advisability of at once communicating the facts to the insurance company, and to inform them of the time and place of the necropsy and inquest, so that they may send a representative if they think fit. Were these measures systematically executed many cases of litigation would be avoided.

I need scarcely say that where a claim for compensation is made the person conducting the post-mortem examination should minutely observe all the organs and tissues, and at once reduce to writing the results of such observation. At the inquest he must be extremely careful in describing pathological signs and in correlating them. Especially must he take care not to confound the causes of death with the modes of dying. Let me give an example: In all forms of asphyxial death the organs will be found congested, but it would be incorrect to say that congestion of this or that organ was the cause of death, as such a statement would be too exclusive, and might be seized upon by counsel to prove that an alleged injury was not the *causa causans* of the death. The general practitioner will not think me presumptuous when I advise him to be fortified in these matters by the aid of an experienced pathologist. It is one thing to make a careful observation and collection of facts, and another to make logical inferences from the same. On one occasion I heard a witness depose that the body of a man unknown, who was found drowned, was that of a lunatic, because the brain was congested. He based his conclusion on the fact that he had seen the brains of six persons who had died insane, and they were all congested.

The importance of giving accurate evidence as to fact and opinion at the inquest may reach beyond the present inquiry. A criminal charge may arise out of the finding of the jury, and a coroner can be compelled to produce the depositions at the trial. As regards civil actions he can do as he pleases, for in that case they are his sole property, but a copy can sometimes be obtained for a monetary consideration. Your evidence given at the inquest, then, may be dissected in another court, and, to say the least, it would be inconvenient to have to amend it there. Concerning the advisability of insisting upon making a post-mortem examination in cases where the cause of death is at all doubtful, I believe the medical practitioner can claim it as a right, and is in duty bound to decline to give a certificate of death, or state an opinion equivalent to the same before the coroner, if he has any reasonable doubt that justice will not be satisfied without the information obtainable from a necropsy. But there are cases, for example, where a man is killed by a buffer accident, in which it would be blameworthy if a medical man refused to assist at the inquisition unless he is allowed to make a post-mortem examination. He may not be able to swear to the proximate cause of death, but this does not matter so long as the main question is decided how the death was compassed. It is true that the coroner has the power, if he so wills, to order a post-mortem in every case of death within his jurisdiction; but he is accountable to the magistrates for his expenditure of funds raised by the public rates, and it would be an abuse of his prerogative were he to use it to the full. A coroner is by virtue of his election a magistrate of the peace, and not seldom he has to exercise his double function.

Wherever the reputation of a medical man or the character or freedom of any person is at stake, no inquisition can be complete without a post-mortem examination. The merest suspicion of culpability is sufficient warrant for the coroner to insist on such examination. Let me quote you two cases by way of illustration. In August, 1885, a child suffering

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from shortness of breath was taken to a private surgery. The doctor on duty gave the patient a draught. Soon afterwards fatal asphyxia supervened. The father insisted that his child had been poisoned by the draught; but on examination I found that an abscess of the bronchial glands had burst into the trachea, and a quantity of caseous matter had caused suffocation. The inquest in the second case was held on December 10th, 1886. A man was charged with causing the death of a boy by striking him on the head, but the house surgeon at the London Hospital deposed that the cause of death was pyæmia from suppuration of the middle ear. The boy was said to have enjoyed robust health until he received the alleged injury, although on inquiry it transpired that there had been discharge from the ear for twelve years. I have known many such cases, and believe they are far from rare. I advise you, if you come across a case of pyæmia of doubtful origin or of cerebral abscess, to examine carefully the petro-mastoid bone. I have already spoken of the desirability of conducting post-mortem examinations early. This is especially important where a volatile poison is suspected to have been taken or administered. It is generally understood that in such cases the chances of detection of the poison become remote after the lapse of a few hours. It is true the odour quickly vanishes from the room, or even from the body, and yet sufficient poison may remain in the blood for a complete analysis. Some years ago I proved the truth of this assertion, for on the third day from the death I was able to identify prussic acid in blood taken from the heart, both by its smell and by chemical experiment. If you suspect prussic acid poisoning, take with you a clean glass plate and a solution of nitrate of silver, moisten the plate with the solution and hold the wet surface over (but not in contact with) the natural fluids of the body *in situ*—for example, the blood, urine, and the cerebro-spinal fluid in the lateral ventricles.

I will now discuss certain physical signs the subject of almost daily inquiry in the police courts and before the coroner. Medical men are required to interpret the value of these signs from a medico-legal standpoint. I refer especially to (1) *scalp wounds*, (2) *bruises*, and (3) *general emaciation*.

I have shuddered inwardly when I have read in the newspaper reports that Dr. So-and-so testified that certain linear *scalp wounds* must have been inflicted by sharp instruments. The mistake is a very common one, but none the less grave for that. Now if you consider that a blunt instrument such as a rolling-pin or kerbstone striking the cranial vertex may expand its force in a linear direction on account of the curvature of the bones, you will understand how the wound may on a cursory examination seem to be an incised one. Close inspection will reveal that the divided vessels are torn, and *not* cut. Suppose for a moment that a man is seen to threaten another with a knife, and in the struggle that ensues a linear scalp wound is inflicted, the presumption would be that the knife had made the wound, and yet from what I have just said you will see that it is quite possible such might not be the case; the distinction on surgical grounds might not be of much importance, but to the accused it would probably mean the difference of between a short term of imprisonment and penal servitude.

The subject of *bruises* is a very complex one. You will be asked to say regarding a certain bruise the mode of infliction, the amount of force used, and the approximate age. The first of these questions calls for no special comment, for unless there is something definite in the shape of the bruise you could only give a very guarded opinion. As regards *the force employed*, there is ample scope for careful inquiry. Other things being equal, the extent of the bruise will vary as the violence which caused it; but there are many disturbing influences. A very slight blow over a bony prominence may cause a very large bruise; on the contrary, if the part struck is resilient, fatal injuries may be inflicted on the deeper structures whilst the skin appears untouched. In one instance a man had been run over by a drag; death was almost instantaneous; the aorta and vena cava were severed, and yet the elastic abdominal wall was free from any bruise whatever. I have met with several similar cases. Bruises on the surface of the body are often made the basis of a charge in the police courts, and require interpretation before a coroner. I believe that many accused persons are convicted of serious assaults on the ground that the complainant bears bruises which from their extent are considered to be indicative of considerable violence. Medical evidence is called by the prosecution to throw light on this difficult question, and it *is* a difficult one. Very slight force suffices to produce a bruise of the skin in persons who lead a sedentary life; in those who are subject to privation; in those accustomed to abuse of alcohol; in individuals whose vessels are weak or diseased, from whatever cause—for example, hæmophilia, senile decay of arteries, and varicosity of veins. When required to state an opinion on the question of bruises, if you feel confident, speak dogmatically, but if you are doubtful, do not be afraid to express your doubt simply because the vulgar may read your uncertainty as unpardonable ignorance. The *duration* of a bruise varies within wide limits; an ordinary black eye will pass through its colour changes in from ten days to three weeks; but then you must bear in mind that the tissues of the face are extremely vascular, and the circulation active—conditions favourable to the absorption of extravasated blood. In December, 1886, I examined a bruise which had been made eleven days previously; it was in the leg of a woman who had died from erysipelas, and whose saphenous vein and its tributaries were much varicosed. It appeared as though quite recent, except for a faint greenish-yellow tint at its margin; slowness of the colour change and absorption was explained by the hampered state of the circulation, and perhaps also by the vitiated condition of the blood. The legal bearing of the age of a bruise may be very important, and this is my reason for so pointedly directing your notice to it. I have not seen it mentioned in books that a bruise in the cadaver, which at first is bluish-black in colour, may, if quite superficial, become pink—in fact, almost scarlet; but such is the case. At first sight the appearance would seem to indicate a recent extravasation of arterial blood. I believe it is because the blood, being close to the surface, gets oxidised. A case in point came under my notice at an inquest at South Hornsey in September of last year. My note runs thus: "There was a bruise on the left of the umbilicus as large as the palm of the hand; it was bright-red at the centre, and purple at the margin; clearly quite recent."

The police and coroners' courts have not infrequently to inquire into cases of supposed or even alleged *starvation* of *young children*; and I know of no subject more heavily taxing the judgment of medical men for their proper elucidation. A child may die from inanition from one of three primary causes—(1) for want of sufficient food, (2) on account of improper quality of food, and (3) from defective assimilation owing to natural disease. The second of these factors is without doubt the most frequent. Infant mortality from improper feeding is something appalling. In the majority of instances it is owing to ignorance, and not negligence or culpability. A child may be given more than sufficient for sustenance and growth, and yet die from general wasting, the indigestible food setting up diarrhœa and vomiting; intestinal catarrh is established, and in the wake of this the mesenteric glands become enlarged; the lymph paths are obstructed, and the blood-making function seriously disturbed. On the other hand, tabes mesenterica may arise as an idiopathic affection. After careful investigation of many cases of chronic starvation, I have come to the conclusion that there are no *certain* pathological signs by which a medical man can decide whether a child has succumbed to starvation from natural disease, misadventure, or wilful neglect. All he can say is that a given hypothesis is or is not consistent with the facts, the true interpretation being made chiefly from collateral evidence. The older the child, the more probable becomes the theory of criminal intent on the part of those whose duty it is to supply it with food of proper quantity and quality. A number of bruises or other injuries on the body of a child greatly emaciated would be presumptive evidence of culpable neglect as regards the wasting, but obviously even here the greatest caution must be exercised by the medical man. Let him give his opinion clearly, but guardedly. In March, 1886, a woman was committed for trial at the Old Bailey for criminally neglecting her child. The case was investigated before the coroner and at the police court. The grand jury threw out the bill after hearing from me the evidence I had given at the preliminary inquiries.

There is one thing more I must draw your attention to to-day. Persons are not unfrequently found in a delirious or unconscious condition in the streets. Naturally, but unjustifiably, the police are in the habit of attributing the symptoms to drink. Now, either as divisional surgeons or

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in your general practice, you will be asked to make a diagnosis in these cases. It may be that you will have no difficulty in discerning between alcoholism and other forms of illness, such as apoplexy, uræmic coma, epilepsy, &c.; but experience teaches that it is only too easy to make a mistake, and therefore I advise you, if you have the slightest doubt in the matter, to keep or order the case to be kept under medical supervision. A few hours will suffice to clear up the uncertainty. This advice applies with double force to the medical officers of public institutions like hospitals and workhouse infirmaries. The public look with a jealous eye upon the management of places they are asked to support, and there is a tendency to presuppose abuses of offices of trust. It would be a grievous mischance if a house surgeon were, after dressing a scalp wound of a person partially insensible from apparent drunkenness, to restore him to the care of the police, and afterwards to find at an inquest that the case was one of apoplexy. Several such mistakes have occurred to my knowledge. I would not be hard on my professional brethren, but I cannot help thinking a certain amount of opprobrium for these errors is not altogether unmerited.

ON THE

NATURE AND TREATMENT OF HYPERTROPHIES AND TUMOURS OF THE NASAL AND PHARYNGEAL CAVITIES.[1]

BY J. L. W. THUDICHUM, M.D., F.R.C.P. LOND.,
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DURING the last twenty years the knowledge of diseases of the nasal cavity and the methods of their treatment have been so much improved that they are not behind any other branch of surgery or medicine. The operative, particularly the electro-caustic methods, vie in accuracy with operations on the eye, and the results, as deduced from comparative scientific discussion, have been eminently satisfactory. This has been acknowledged by many members of the profession, notably by those, not a small number, who placed themselves under my care for troubles belonging to the category here to be considered. One of the commonest ailments is hypertrophy of one or other or both of the lower turbinated bodies. This affects most commonly the anterior part, and is not rarely so great as to close the nostril. It then leads to respiratory (nasal) inadequacy, and severe consequences to lungs, nerves, and constitution; it conduces to malformation of the septum from unequal pressure, and from bilateral pressure and ulceration to perforation and loss of the septum.

CASE 1.—A married woman, from Bradford, came under my care on Nov. 9th, 1886. Her nose had gradually become narrow, and entirely obstructed in 1885. On inspection the nose was found to be closed by the two hypertrophied turbinated bodies, which admitted only a probe, no speculum. I effected ablation of the bodies by electro-cautery. When about an inch of the right turbinated body had been removed, it was seen that the septum was perforated and extensively ulcerated all round the perforation. The left concha was now also shortened, and a completely sufficient passage through each nostril was established. The patient was placed under suitable treatment, and when I saw her on Feb. 1st, 1887, she had completely recovered the faculty of respiration through the nose with closed lips, had lost the nasal speech, recovered her sense of smell, and the ulceration was nearly healed.

CASE 2.—A gentleman, residing at Leeds, received a blow on the nose by a door. The nose bled inside and out, and was swollen. He then had inflammation in the ethmoid region with severe pain during five days, after which an abscess discharged into the nose. (This was surmised to be caused by a bad tooth, which was drawn without result.) This discharge and inflammation continuing, polypi formed, and at last the patient came under my care. After preliminary removal of some polypi on Oct. 5th, 1886, both lower and middle right turbinated bodies were found greatly hypertrophied. The only respiratory passage was underneath the lower turbinated body, and this was liable to be blocked by the slightest cold or irritation. I therefore removed on Oct. 15th, 1886, ten days after the operation for polypus, the anterior part of the lower turbinated body. This produced an adequate respiratory canal, and the parts healed well. During the operation a relatively large quantity of pus was discharged from the ethmoid region, and it was necessary to deal with the parts in which the pus originated. On exploration some dead bone was found in the labyrinth and removed. By continued treatment the swelling diminished, and it could be ascertained that the middle turbinated body was enlarged to a bulla, filled with pus. I therefore cut away this bulla entirely by electro-cautery, and cleared the septum from adhesions up to the cribrous plate. Now the abscesses in the ethmoid cells—i.e., the labyrinth—were all laid open and discharged; the anterior and posterior healed quickly; the middle one persisted to discharge in a variable manner. The cavity could be explored with probe, and cleared with sponge. The patient was under treatment about six weeks, and left for his home almost entirely recovered, and well satisfied with his freedom of breathing.

Fracture of the anterior parts of the nose produces sometimes a distortion of the septum, which closes the nostril entirely, and may be mistaken for hypertrophied turbinated bones.

CASE 3.—Master J. K—— came under my observation with the results of this accident. I advised an early operation for this deformity, which, as all experience shows, will no doubt increase.

CASE 4.—A clergyman had suffered for several years from obstructed nose, and been operated upon for polypus by forceps a great many times. He had been asthmatic and was constantly hoarse, and fairly unable to attend to business. I removed a great number of deep-seated polypi from both sides, and obtained a good passage for the right nostril only. The left remained obstructed by a posterior growth which could not be reached owing to hypertrophy of the lower turbinated body and of the septum opposite. I therefore removed, eight days after the first operation, the greater part of the left lower turbinated body, also the ridge from the septum, both with electro-cautery. When the patient blew through the nostril forward it became completely blocked; when he drew backwards it was quite free. The obstruction was an old, hard, strongly-attached, but movable polypus, which was seized, looped, and removed by electro-cautery. The operation was perfectly successful, and after some general treatment the patient resumed his duties, with nose and vocal organs perfectly restored.

CASE 5.—A gentleman, aged twenty-four, was introduced to me by Mr. Tegart. He had been much treated by powders, lotions, and other means, douche, &c., for a discharge from the right nostril, but without effect. The right lower turbinated bone was greatly hypertrophied and pressed the septum in a deep excavation to the left. In the left nostril the septum was hypertrophied below. On July 9th I removed the right anterior lower turbinated body by electro-cautery, also the excrescence from the septum in the left meatus. The results of the operation (at which Mr. Tegart was present) and of the after-treatment were excellent.

CASE 6.—An officer of Cuirassiers in the German army, came to London to be under my care in the course of the summer of 1886. He had for some years suffered from nasal obstruction, which had so altered the sound of his voice as to greatly interfere with his efficiency as a commander. He had been under the care successively of three so-called specialists in Germany, and had in the aggregate been burned with the electro-cautery, superficially, over the lower turbinated body, more than forty times. He had been further tortured with attempts at dilatation of the nostril by the introduction of hard sticks of laminaria. This most painful treatment had the effect of producing a series of asthmatic attacks, of which some were dangerously severe. On examination I found the right meatus very narrow and contracted, the membranous part of the turbinated body scarred and contracted, but the posterior part hypertrophied, osseous, and touching the septum, which was itself hypertrophied and kinked towards the turbinated body. I effected removal of the hypertrophied part of the turbinated body and ablation of the prominence of the septum. The

[1] Abridgment of a paper read before the West London Medico-Chirurgical Society, Feb. 4th, 1887.

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patient declared that the operation gave him complete and absolute relief; he lost the nasal tone of his voice completely, and was at once, and has ever since remained, free from all symptoms of asthma. Having in the autumn of 1886 passed, during two months, through the most active part of the manœuvres of the German army, he observed some respiratory inadequacy in his left nasal meatus. He therefore came to London in the spring of the present year to have the left meatus operated upon in the same manner as the right one had been. The effect was as satisfactory as that of the previous operation, and the patient is now restored to perfect health and efficiency, and is sense of smell is rather more acute than it was before the operation, and is in every sense complete.

CASE 7.—An Irish gentleman and landowner, aged forty-three, who had been suffering for twenty-three years, and had been operated on twice ineffectually, applied to me for treatment. I removed from each nostril a number of grotesque polypi; and from each a large ampulla, with many polypi attached, being the dependent part of the middle turbinated body. In this case both the respiratory and olfactory meati were reestablished in eight days, and the patient made a perfect recovery.

CASE 8.—A young gentleman, aged twenty-three, from the west of England, had suffered for six years, had endured two unsuccessful attempts at operation, and used much iodine in glycerine as a paint to the inside of the nose. The ethmoid region contained many polypi, and both middle conchæ were much hypertrophied and covered with outgrowths; the septum was bent to the left and thickened in left and right meati on prominent parts. I removed both upper turbinated bodies and all polypi, and restored to the patient a more comfortable breathing passage than he had ever had before. This was the more important for him, as his local trouble was no doubt caused by an inherited tuberculous diathesis, which had already invaded the right lung. The patient resided during the winter in Malta.

CASE 9.—This case was that of a girl, aged four years and a half, whom I saw in consultation with Mr. Cripps Lawrence. Both lower turbinated bodies were enormously enlarged and pressed the septum in the opposite direction. There were also enormously enlarged tonsils. In this case a plan of treatment was adopted to reduce the hypertrophy by medicine. Such cases are frequent, and rarely admit of operation in the nose before the patients are of nearly adult age.

CASE 10.—A clergyman from the country had suffered for many years from obstruction in the nose, and had been operated on many times without much advantage. After clearing away some polypi, I found an enormously enlarged right turbinated body. This I removed entire, as it not only obstructed its own meatus, but the left one also by pressure upon the septum. When the bulla was cut through, pus escaped, and it was now seen that the entire swelling was, in fact, an encapsuled abscess. This case is further remarkable on account of a variety of nervous symptoms, which disappeared entirely after the operation: cerebral confusion with hemianopsia, beginning of spasmodic fits without loss of consciousness, and spasm of the pylorus. The etiology pointed to measles as the first cause of the chronic illness. The patient is now practically well.

These cases are a sufficient support of the thesis—which I could sustain by a very large experience—that in cases of chronic hypertrophy of any of the four (lower) turbinated bodies, causing obstruction or accompanying neuroses, ablation is indicated, and is in most cases the only means of effecting a cure. I have experience of cases which have remained well for ten and fifteen years. Not a few patients, having had relief in one nostril, came after a period to obtain the same relief in the other, as did the patient in Case 6. These cases demonstrate that to call such operations either unnecessary or unjustifiable, and their result a mutilation, is not only contrary to common sense but to actual fact; for these persons were mutilated by their disease, and restored to health by the operation.

The reflex neuroses caused by nasal and naso-pharyngeal disease have engaged my attention and been treated in my publications since 1865. They are spasmodic sneezing, lacrymation, asthma of various forms, hemianopsia, convulsive twitchings, mydriasis, spasm of pylorus, vertigo of such intensity that the patient may fall in a semi-conscious state, disordered sense of smell (a condition which causes to the patient olfactory delusions), and others. In such cases German and American specialists have practised superficial cauterisation in the nasal cavity, frequently with such evil effects as were described at the International Medical Congress in London six years ago. In opposition to these surface cauterisations, the result of which is so well illustrated in Case 6, I maintain that if a diseased or hypertrophied part of the nasal cavity can reasonably be supposed to be the exciting cause of any reflex neurosis, it should be removed by abscission. I say exciting cause, for they are but rarely the absolute cause. For most so-called reflex neuroses, said to be, and apparently being, connected with nose disease, are only partially so or in a certain sense—that is to say, both nose disease and neurosis or nerve complaint have a common dyscratic origin, tuberculous, scrofulous, enthetic, scarlatinous, morbillar, variolar; and without such a constitutional (in the last three cases sequelar) basis the reflexes are never produced. That the local disease acts as an exciting cause is proved by the disappearance or mitigation of the neurosis after the removal of the local disease. This local disease must, of course, be clearly and unmistakably developed. To burn a healthy concha because a person is liable to asthma is more likely to provoke and aggravate, or, as in Case 6, to literally produce, than to heal it. Indeed, this surface burning in the nose, which has been so much abused, particularly in Germany, is already being found out, and some of its admirers in this country now admit that "it was calculated to raise expectations which are likely to remain unfulfilled."

I must again point out the superiority of the electro-caustic over any other method of operating in these cases. A battery of seven large Grove cells with platinum plates, an oxyhydrogen lime-light, a complete special armamentarium with best platinum wire, and a good assistant are indispensable. What becomes of cases in which the condition laid down by large experience are left unfulfilled can be seen by the following records.

CASE 11.—A young woman, aged twenty-three, suffering from multiple polypi, was treated in a country hospital for eighteen months as an out-patient. The polypi were attacked with forceps at first once a week, later on once a fortnight. No passage was ever produced, and the patient went to a London special hospital. In this she remained as an in-patient during four periods of three months each, spending the intervals necessitated by the rules in a convalescent home. Thus this patient had been under treatment for two years and a half, and had the forceps in her nose an unknown number of times—on at least 200 occasions. This person was freed from her polypi by my method in two sittings, and has now returned to service quite recovered.

That the instrument ordinarily termed a "snare" may become a delusion the following case will clearly show:—

CASE 12.—A gentleman had been suffering from polypus in the nose for several years, and had much hemicrania; he had partially lost his sense of smell, but he could recognise oil of aniseed and tincture of camphor, though he could not distinguish other tinctures, or Barbadoes aloes, or extract of conia. He had been operated upon, but almost unsuccessfully, only some pieces of tissue being removed. I found the right meatus filled with growth and hypertrophy. I removed all polypi, also a bulla, or enlarged dependent hollow lamina of the middle turbinated bone. Only after this was I able to diagnose and remove a posterior naso-pharyngeal polypus more than an inch long; after that a racemose polypus from a cellule of the labyrinth and an abnormal cavity below was removed; upon this the cellulæ of the labyrinth discharged much thick pus. The removal of the last two polypi met with an unexpected difficulty. I felt something metallic, which I seized with a hook and a parallel forceps, and found it to be a piece of iron wire two inches in length. This had probably been in the nose eight months, or since the last operation with the snare; at least the patient, a considerate, calm, educated man, had no other means of accounting for its presence. The large posterior polypus was cystic, lost its serum when opened, and collapsed, and when refilled with water had the size of an inch of a man's little finger.

Cocaine hydrochlorate in the form of a watery solution of 25 per cent. strength, used as a spray, has been of great service in preventing or diminishing local pain during these operations. General anæsthesia frequently compromises the success of nasal and pharyngeal operations, and should be avoided.

CASE 13.—A patient had been operated upon for polypus by the aid of the forceps frequently, and had been under

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anæsthesia by chloroform for this purpose, as he stated, at least thirty times. Yet he had never been liberated, and his nostrils were filled with polypi. From these he was freed by electro-cautery, preceded by cocaine, in two sittings. Only very short operations in the anterior part of the nasal cavity can be safely or successfully undertaken while the patient is under the influence of general anæsthetics.

NOTES ON STERILITY.

BY JAMES OLIVER, M.D., F.R.S. EDIN., M.R.C.P. LOND.

EVERY occurrence in nature is the result of some pre-existing influence. The former we have agreed to call the effect, whilst the latter is called the cause. Nothing is accomplished by a sudden act of transition; Nature never executes her workings by fits and starts, although this may at times appear to happen. Interdependence is ever avowedly maintained. In the animal kingdom especially are these facts revealed, whether the end attained be one likely to prove beneficial to or exert a prejudicial influence on the species. In the whole organic world change is wont to be gradual. Creation and destruction keep pace with each other, and wherever there is life we witness co-taneously gradual death. The process of generation manifests the same phenomenon. Between that state favourable to the production of a numerous offspring and that culminating in complete sterility there exists no distinct line of demarcation; so gradually, in fact, do the two states glide into each other that we are wholly unable to say where the one ends and the other begins. In the vegetable and animal kingdoms alike we encounter every degree of fertility.

The reproductive function, no matter how fulfilled, is wrapped in obscurity, and full of the greatest complexity, yet from a scientific point of view teems with questions of the deepest interest. Take, for example, the well-known yet mysterious influence of a first coitus on the progeny resulting from several succeeding sexual congresses. A purely-bred Arabian mare was covered by a quagga, the offspring resulting therefrom being a hybrid. Never afterwards did the quagga have an opportunity of covering this mare, yet each succeeding progeny, although begotten by an Arabian black horse, continued for some time thereafter to evince characteristics of the quagga, the hair of the mane especially being like that of the quagga, short and stiff. In this case the first coitus affected in a most marked and wholly inexplicable manner the offspring of the Arabian black horse. So potent may a single fertile coitus prove to be that it may continue to exert its influence for long afterwards, and this in cases beyond all doubt. I merely adduce this evidence in support of the tenet already expressed, that the whole question of reproduction is full of complexity. In order, however, that we may, as far as possible, have a clear conception of the multifarious influences for ever at work tending to induce sterility, we must approach the subject and attempt to elucidate revealed facts with a mind free from all bias, for in this way alone shall we serve the end of science by encouraging truth. Mistakes, be it remembered, more frequently arise from lack of observation than as a result of sheer ignorance.

In man and the majority of animals, perpetuation of the species is maintained by a process of gamogenesis, by a coalition and further segmentation of the germinal elements produced by two sexually distinct individuals. This participation in the act of generation by two parents necessarily hinders us in our investigations regarding those causes which, constantly at work and liable to the greatest variation, act and react directly or indirectly on the reproductive organs. In the case of the male parent all interest actually ceases with the emission of the sperm element; whilst the female, on the other hand, not only produces the other germinal element, but must retain and nourish the impregnated ovule for a more or less definite length of time—until, in the fœtal resultant shall have reached that state of development or maturation enabling it to maintain an independent existence. An inquiry, therefore, into the causes of sterility must have regard merely with the glands concerned in the production of the germinal elements and the relative affinities of these elements for each other, but deal also with those conditions, constitutional it may be, which directly or indirectly interfere with the functions of the whole reproductive tract and the competent fulfilment of its requirements. When we remember that the female plays the all-important part and for a continued length of time in the production of offspring, it is not at all astonishing that we should so frequently find authors disposed to attribute the cause of failure in the sexual congress to become fruitful to some occult influence at work on the part of the mother. This admission does not, however, imply a need for the detection of some structural change in the organs of generation in a female who, because she has legitimately indulged in sexual intercourse for years, has never become pregnant. This, I need hardly add, is too commonly revealed, and simply as a result of defective observation. In the majority of such cases the alleged alteration in structure has no other than a mere fanciful existence in the mind of the observer himself. Let us not, therefore, be carried away too readily by a semblance of brilliant results obtained apparently by a too meddlesome interference, for careful observation teaches us that the good which follows is as a rule the outcome of an enforced sexual rest. In order that any organ of the body shall continue to perform its functions healthily, time must be allowed for the structure to regain its vigour after each period of activity. If sufficient rest be not obtained, the function becomes impaired and the structure itself may eventually undergo change because of a maintained vascular turgescence. An immoderate indulgence in sexual intercourse, or an artificial mode of gratifying the passion, tends to induce a state of sterility, and the possibility of conception is favoured by complete sexual rest followed by a moderate indulgence in the act.

In the human race there are so many factors for ever at work in the social life and habits of the individual which thwart us in our endeavours to elucidate questions bearing on the reproductive functions, that our chief information regarding those causes which tend to induce a sterile state must be obtained from facts afforded us by the whole organic world, whether it be vegetable or animal. Lately I saw a patient who, at the age of thirty-six, had given birth to her first child. Although living a marital life for eight years, she had never before been pregnant. In this case I found on interrogation the delay in conception was the result of the adoption on the part of the husband of a simple but well-known mode of protection, and this because of a mutual desire on the part of the husband and wife to be free from the cares of a family. That certain physical states occurring in the organs of generation hinder conception is apparent to everyone. They are, however, not only manifestly over-rated, but in many cases purely imaginary. Rarely, for example, if ever, do we find the lumen of the cervical canal of the uterus so narrowed in a female, otherwise reproductively healthy, as to be a fertile cause of sterility. In order that this may receive some credence, it may be well to consider the train of events consequent upon impregnation in the bird, as throwing some light upon the location at which in the reproductive tract the sperm and germ cell meet and coalesce. In birds, the egg, after fertilisation becomes coated with a calcareous product—the shell, which serves to protect the contained mass from all extraneous influences to which during the process of incubation it may chance to be exposed. This is the result of no mere acquisition on the part of the female bird, otherwise it must have foreseen the prejudicial influences to which the unprotected mass would have been exposed and have been capable of combating effectually such dangers. The secretion of this calcareous incrustation takes place in the lower and somewhat dilated portion of the oviduct, in a part comparable with that which in the human female becomes uterus. If the oviduct fails to fulfil its function in producing this chalky deposit, the unprotected mass cannot be brought to maturity, and the failure must be viewed as a degree of sterility. Prior to the deposition of the shell, however, the impregnated mass receives also an albuminous covering derived from the upper and tortuous part of the oviduct. In the case of the bird therefore, and all animals with a similar reproductive tract, the germinal elements coalesce somewhere about the free extremity of the Fallopian tube. The sperm cell in the human female travels a tube of very narrow lumen; so long therefore as the lumen of the cervical canal continues equal to that of the oviduct, it will not *per se* offer any very serious obstacle to conception.

In all animals the reproductive organs, it would appear, are highly sensitive, the most trifling changes in the habits

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or surroundings serving in some occult manner to disturb their functions. In many cases dependency seems wholly incredible. Animals, for example, tamed and kept in their own country may become sterile, and this apart from any negligence in the way of food or want of attention to the general comfort of the animal on the part of those who keep them, the physical state of the animal at the same time continuing apparently unimpaired. Elephants domesticated in their native home evince this tendency, and have never been known to couple under such circumstances, although the generative organs remain functionally active. The nature of the food, it will often be noticed, exerts a prejudicial influence on the organs of generation. Mares brought up on dry food continue sterile, and only prove fertile some time after they have been turned out to grass. Under the more favourable conditions of life they gradually recover the power to procreate. Mere change in food, therefore, inappreciable though it may seem to be, may nevertheless determine a complete inertia of the reproductive organs. It has been stated that lions in travelling shows prove more prolific than those confined in zoological gardens. Why this should be so is difficult to understand, for the animals in such menageries are not better fed nor better tended than those in our gardens. It is quite possible, however, that the constant variation in surroundings, and the perpetual state of excitement induced by their movement from place to place, may account for the greater sexual vigour displayed.

In some cases domestication increases fertility, and this apparently because of a more easy access to food which is at the same time more highly nutritious and presented in greater abundance. The domestic fowl, for example, lays more eggs than any bird in the wild state. All animals, however, are not equally affected by like influences and conditions. The lion when confined breeds freely and produces a greater number at a birth than any other member of the same tribe. Under domestication the sexual appetite may remain unimpaired, and yet sterility results. The bears in the Zoological Gardens here have been seen to couple very frequently, yet congress seldom proves fruitful, for they very rarely produce young. Male birds often lose their characteristic plumage under confinement. Under such circumstances the constitutional change, manifest though it undoubtedly is, nevertheless is free from any associated enfeeblement of the reproductive power. The sexual passion may continue in abeyance without apparent reason, and without correlative change in the physical well-being. Absence of sexual passion does not, however, imply sterility, for frequently I have seen women who, experiencing no pleasure whatever during coitus, nevertheless conceive, and prove as fertile sometimes as those in whom the passion is readily excited. Multifarious and slight it would seem are the changes in the life of the animal and its surroundings which may affect in some occult and wholly incredible manner the reproductive power. Some women I have noted continue barren so long as they live in a cold and exposed district, and mere change to a warmer part of the country is all that is requisite to prove their capability of becoming mothers.

Every male and female mated is not fertile, yet each separately may be highly endowed with the power of procreation; for this same male and same female mated with another female and another male respectively may prove eminently fertile and produce a numerous offspring. The germ and sperm cell may meet and coalesce. In order, however, that an uninterrupted segmentation may ensue, they must produce by their union not a state of equilibration, but a state of molecular disturbance. If the molecular waves radiating from the two elements are too closely allied to each other, they induce a state of equilibrium, with which all vital reaction ceases and no further evolutional change becomes possible. Darkness is produced by two rays of light of equal intensity impinging into each other from opposite directions. If the opposing forces be equal, total rest will result; that is, force is spent in overcoming the other, and there is no residual force left to exert its influence. The fault [illegible] sterility may therefore be assignable to neither parent, but to both, the elements produced by both being analogous to each other. Placed under the most favourable circumstances, they fail, when they commingle, to act and react upon each other so as to produce [illegible] capability needful for further segmentation [illegible] dependent being. This form of sterility is the result of sexual incompatibility. In man we find abundant proof of the existence of this anomalous behaviour. Lately I saw a patient who, during fifteen years of marital life with her first husband, never became pregnant, yet coitus was fully accomplished and completed. At the age of forty this female married a second husband, and became a mother within the year. The same fact has been noted frequently in the case of animals, and all that is requisite to prove the reproductive capability is to change the male and female and mate them with another female and another male respectively.

Frequently we see women who apparently exhaust their whole reproductive energy in giving birth to one child, as they never afterwards conceive. The individual may note no change in her general health, the sexual functions may be as thoroughly maintained, and the congress may be as completely effected as before, yet the sterile state prevails. Barrenness, be it remembered, is wholly independent of the general health of the individual, and is frequently remarked as an association of excess of size and great luxuriance. In plants it has been noted that very high nutrition lessens materially, or may even arrest completely, the power of reproduction. Many of our trees which become most luxuriant, and bear nevertheless flowers or fruit seldom, are sometimes made more productive by cutting the roots, and thereby lessening the amount of nutrition. I have frequently remarked that women who tend to lay on fat rapidly are apt to become barren. In the majority of such cases the deposition of adipose tissue in great abundance is the result of some constitutional state of a morbid character, and sterility is surely a concomitant, and dependent upon the same cause as that inducing the obesity.

As I have already stated, the energy expended by the male in perpetuating the species is comparatively slight compared with that amount demanded of the female. Sterility, therefore, we shall find frequently results from a failure on the part of the mother to furnish a favourable nidus for the impregnated mass or to supply that amount of nourishment requisite for those evolutional changes consequent upon impregnation. The young of animals born under confinement often die early; sometimes they are born dead or even badly formed. As a rule sterility is a physiological co-association of the functionally active state of the mammary glands. This depends upon the fact that, at least for a time, these glands withdraw from the body of the mother for the maintenance of the child that amount of nourishment requisite for the activity of the reproductive glands. In the case of the milk cow, we witness an interference with this law of nature, the glands through habitual use being made to secrete milk more or less constantly and quite independently of the reproductive system. Sometimes we find women who continue to menstruate with perfect regularity during lactation, and even become pregnant whilst suckling.

Women who marry early may for a time give birth to children too rapidly, but eventually the reproductive energy begins to wane, and a state of sterility is induced, the general health of the individual, it may be, becoming impaired or evincing no sign of deterioration whatever.

Prostitutes, so long as they persist in cohabiting with a variety of males, prove sterile; yet no special mode of protection is adopted to prevent conception. This, doubtless, depends upon the fact that the various germinal elements tend to counteract each other. We witness a parallelism in the case of plants. If the pollen from one flower be placed on the stigma of another, and within a reasonable time thereafter this same stigma be fertilised with pollen obtained from a stamen belonging to the same flower, the pollen first applied is destroyed by that last applied, and neither is capable of producing the desired effect of fertilisation. Bees and ants teach us that a life of ease and idleness is that most favourable for reproduction, whilst a life of great activity predisposes to barrenness. That race which is physically as well as mentally idle, and which is at the same time well fed, is likely to prove more fertile than another race living under directly opposite conditions. Kaffir women who live chiefly upon flesh and milk are most prolific, and give birth almost as frequently to twins as to single children. Taking all the facts into consideration, there can be no doubt that the higher education of women is detrimental to the race, tending as it inevitably must to engender a state of sterility, or, what is worse, to produce a race with marked evidences of physical and mental enfeeblement.

Montagu street, W.C.

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CASE OF TETANUS FOLLOWING BURN.

EXHIBITION OF MORPHIA; RECOVERY.

BY CLEMENT DUKES, M.D., M.R.C.P. LOND.,
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ON Jan. 1st, 1887, A. H——, while sitting by the kitchen fire sewing, suddenly found her dress on fire, owing to a piece of live coal having popped out of the grate. As is usual under such circumstances, she immediately rushed out of doors, when her ignited dress burst out into a flame, and she became severely burnt on the left leg, arm, and thorax. She was brought into the St. Cross Hospital on Jan. 11th, with sores arising from burn on the left leg, knee, and thigh, and with a very large, partly sloughing, partly granulating wound, at least a foot long and four inches wide, involving the inner surface of the left arm, the axilla, and the thorax. On Jan. 21st she complained of slight stiffness of the jaw, and could not open her mouth properly. I at once prescribed some chloral, bromide of potassium, and cannabis indica; but she steadily got worse every day, slowly and surely, until she showed all the symptoms of a well-marked case of tetanus. As her symptoms became worse,—exhibiting extreme rigidity of the jaws, though they were never absolutely closed, slight opisthotonos, rigid abdominal muscles, and complete rigidity of the arm, forearm and fingers, especially on the left side,—I gave her large doses of cannabis indica, without alleviating her symptoms in the least, and without producing sleep.

While the patient was thus daily going from bad to worse, I saw a paper in THE LANCET of Jan. 22nd, 1887, by Dr. J. F. Murison, on the Value of Morphia in Tetanus, and as she could not have been much worse than she was under the treatment I was then pursuing, I immediately commenced giving her subcutaneous injections of the acetate of morphia, which I pushed as fully as I could short of killing her, and whenever I relaxed the doses, or their frequency, her symptoms became more severe. I append a record of the treatment (see Table) under which her sores healed, the tetanus disappeared, and she convalesced, until she is now (April 12th) hearty and strong. I may add that although the morphia was given so freely, there was scarcely any sleep produced, and she never once had a contracted pupil. Her aspect markedly improved after each dose, and her distress lessened, and every dose was regulated according to

TABLE SHOWING THE COURSE OF MORPHIA TREATMENT.

Date.	Drug.	Quantity per dose.	Quantity per day.	Remarks.
Jan. 21	Pot. bromide Chloral Tinct. cannab. ind.	10 grains 10 grains 7½ minims	40 grains 40 grains 30 minims	—
,, 26	Ext. cannab. ind.	¼ grain	5 grains	—
,, 31	Tinct. cannab. ind.	10 minims	4 drachms	—
Feb. 2	,, ,, ,,	15 minims	6 drachms	—
,, 3	Morph. acet., subcut.	¼ grain	¼ grain	This was given at bedtime for the first time.
,, 4	,, ,, ,,	¼ grain	1½ grains	On this day, at 9 A.M., I gave her half a grain, which made her very livid, and produced very heavy sleep and profuse cold sweats.
,, 5	,, ,, ,,	¼ grain*	2½ grains	—
,, 6	,, ,, ,,	¼ grain	2½ grains	Jerking of limbs during sleep; at times stertorous breathing.
,, 7	,, ,, ,,	¼ grain	2 grains	Scarcely any sleep; rigidity affecting the right side as well as left.
,, 8	,, ,, ,,	¼ grain	3 grains	It was found that she bore a small dose every 2 hours better than half a grain every 4 hours.
,, 9	,, ,, ,,	¼ grain	3½ grains	Necessary to give one-third of a grain every 2 hours.
,, 10	,, ,, ,,	¼ grain	4 grains	—
,, 11	,, ,, ,,	¼ grain + (5 minims, B.P.)	4½ grains	—
,, 12	,, ,, ,,	¼ grain	5¼ grains	—
,, 13	,, ,, ,,	¼ grain + (7 minims, B.P.)	6½ grains	This was the greatest quantity given in a day.
,, 14	,, ,, ,,	¼ grain + (7 minims)	5¼ grains	—
,, 15	,, ,, ,,	¼ grain + (7 minims)	4 grains	Occasionally sick from this date to the end.
,, 16	,, ,, ,,	¼ grain	3½ grains	—
,, 17	,, ,, ,,	¼ grain	3 grains	—
,, 18	,, ,, ,,	¼ grain	3 grains	—
,, 19	,, ,, ,,	¼ grain	2½ grains	—
,, 20	,, ,, ,,	¼ grain	2 grains	—
,, 21	,, ,, ,,	¼ grain	2 grains	—
,, 22	,, ,, ,,	¼ grain	2 grains	—
,, 23	,, ,, ,,	¼ grain	3 grains	Symptoms slightly aggravated.
,, 24	,, ,, ,,	¼ grain +	3½ grains	—
,, 25	,, ,, ,,	1 grain	4 grains	—
,, 26	,, ,, ,,	1 grain	3½ grains	—
,, 27	,, ,, ,,	¼ grain	1 grain	—
,, 28	,, ,, ,,	¼ grain	¼ grain	—
Mar. 1	Pil. morphia	¼ grain	¼ grain	The subcutaneous punctures were now so dreaded by her that I continued the morphia in the form of a pill.
,, 2	,, ,,	¼ grain	1½ grains	—
,, 3	,, ,,	¼ grain	1½ grains	—
,, 4	,, ,,	¼ grain	1½ grains	—
,, 5	,, ,,	¼ grain	1½ grains	—
,, 6	,, ,,	¼ grain	1 grain	—
,, 7	,, ,,	¼ grain	¼ grain	—
,, 8	,, ,,	—	—	—
,, 9	,, ,,	¼ grain	¼ grain	—
,, 10	,, ,,	¼ grain	¼ grain	—

* Increased at every dose until she took over half a grain.

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her symptoms. The constipation occasioned was, however, a great annoyance; her abdomen was immobile, and, owing to the condition of the muscles, felt like a board. From what I saw of the distress before the administration of morphia, and the relief afforded during its administration, I trust, if ever I should be the victim of tetanus, that I may be at once put under its influence.

TWELVE MONTHS' RECORD OF GUNSHOT INJURIES.

By C. W. MANSELL MOULLIN, M.D., F.R.C.S.,
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A. O——, twenty-four years of age, was admitted into the London Hospital on Oct. 3rd, a few hours after receiving a gunshot wound of the left forearm. A charge containing an ounce of No. 9 shot had exploded at a distance of a few feet, and the greater part had passed through his coat-sleeve and entered the flexor surface of his limb. When it was uncovered it was found to be perfectly riddled. Very few shot had entered above the elbow or below the wrist, but the whole of the space between these two joints was evenly dotted with minute openings, out of which venous blood was slowly oozing. The edges were bluish in colour and inverted; a probe was passed down a few, but in no case could the shot be felt, probably owing to the fact that the openings in the layers of fascia and the muscles no longer corresponded with those in the skin. On an average, there were three or four to every square inch; none had gone through the arm, and there were no powder grains in the skin, even of the wrist, which had not been protected by his clothes. The forearm was very much swollen and quite tense, the skin fairly warm to the touch, and though the radial artery could not be felt at the wrist, there was a certain amount of colour under the finger-nails, and it returned readily after being driven away by pressure. The pain was very severe, but it did not correspond to the distribution of any nerves; it seemed to be general, and due rather to the extreme condition of tension than to anything else. Sensation was impaired over the whole hand, though it did not appear to be actually lost anywhere except over the ball of the thumb. It was explained to him that in all probability his arm would have to be amputated, but, as he was exceedingly unwilling and was ready to run any risk, it was determined to make an attempt to save it. The whole of the injured part, which had been well sponged over and wrapped in antiseptic gauze as soon as he came into hospital, was immersed in a carbolic bath, temperature 100° F., one part in forty for the first hour and one in eighty afterwards, and it was kept soaking in this, night and day, for twenty-four hours. At the end of that time, when the part was examined, it was found to be more tense than ever, so that some incisions were made through the skin for the purpose of allowing the accumulated serum to escape; it was still warm, but after it had been out of the bath a few minutes the temperature fell very considerably, the diminution in the sensibility of the skin was more conspicuous, and the pain, in spite of repeated injections of morphia, had become almost intolerable. In twelve hours more it was quite evident that decomposition had set in, and that the part was rapidly becoming gangrenous. Sensation was completely lost; one or two incisions that were made into the subcutaneous tissue about the middle of the forearm showed that in places at least it was already sloughing; emphysematous crackling could be felt in front as high as the elbow, and on the inner side nearly up to the axilla. In spite of the undoubted putrefaction of the limb, there was no evidence as yet of any considerable degree of septic intoxication; the temperature, which the previous evening had been 100° F., had only risen a fifth of a degree; the pulse, it is true, was very rapid (120), and the respirations were hurried and shallow. But this might reasonably be laid to the credit of the extreme pain which the patient had been enduring for a day and a half. The forearm was amputated immediately below the elbow. Skin flaps were made, the longer on the dorsal surface, as that was the least injured; and the muscles and soft parts divided as high as possible. All the tissues were very dark in colour, sodden, and œdematous; but there was no actual slough along the line of the incision. There is no need to give any detailed account of the further progress of the case; the temperature rose to 102° the next morning, and then fell to 100°, about which it fluctuated for a few days before becoming normal. A small part of the dorsal flap sloughed, and about twenty or five-and-twenty shot suppurated out through the wound, but practically convalescence was uninterrupted. The limb itself was in such a condition that it was impossible to ascertain if any of the main arteries had been severed. There can be no doubt the gangrene was due to the bruising caused by the excessive number of small contused and punctured wounds, and to the extreme degree of tension set up. The circulation did not stop immediately, though pulsation could not be felt in the radial at the wrist; it was finally cut off by the effusion and swelling that followed the injury.

W. N——, aged thirty-five, was admitted on June 19th with a bullet wound of the right side of the forehead, about an inch and a half behind and a little above the external angle of the orbit. He was perfectly conscious; there was no paralysis or loss of sensation; the eyes moved normally; the pupils were equal, and, in fact, his nervous system did not seem in the least disordered. The pulse was 72, feeble and very dicrotic; respirations were 20 to the minute, and the temperature 100°F. The wound was small, only one-third of an inch in diameter, the edges inverted, and a thin stream of venous blood continued to ooze from it. A probe could be passed quite three inches into the opening through a hole in the bone, in a direction inclined slightly forwards. No brain substance was oozing from the wound, but there can be no doubt, from the direction it took, that the bullet had gone through, or at least into the substance of, the frontal lobes. No evidence of its presence could be found, so that no attempt at extraction could be made. The wound was covered over with a piece of lint dipped in lead lotion, and the patient placed in bed in a darkened corner of the ward. A few hours later the temperature had risen to 101·5°, the pulse was 42, and the right cheek had begun to swell. He had vomited blood on several occasions, and was very restless, complaining of pain extending over the whole of that side of the head and face, so that it was impossible for him to sleep. The next morning the eyelids of that side began to show staining, and blood was observed making its way gradually forward beneath the conjunctiva. The swelling of the face was somewhat less, but there was a complaint of pain on the opposite side of the head, about the highest point of the temporal ridge. Firm pressure here evidently made him flinch, but there was no sense of yielding or œdema. The further progress of the case does not need any detailed description. The swelling subsided gradually; the staining and ecchymosis slowly cleared up; the tenderness disappeared, and the wound closed in without more than a trace of suppuration. There was no sign of paralysis from first to last, and no impairment of vision. The temperature never rose higher than on the second day; the pulse rose to 70 in the minute, at which it remained fairly stationary, and the patient seemed to recover completely without the slightest loss of memory, even for the events that immediately preceded the injury. He was discharged on July 28th, apparently as well as ever he was. The bullet was fired from an ordinary seven-chambered Colt's revolver by the patient himself while standing in front of a looking-glass. Four cartridges were discharged, but nothing was known about the course taken by the other bullets. This was the only wound that he received. There can be no doubt that there was a fracture of the orbital plate of the frontal bone; and probably from the blood that was vomited the injury involved the roof of the nasal fossæ as well. The probe passed in apparently quite straight, but there is no means of telling whether the bullet was lodged in the anterior lobe of the brain on the opposite side, or whether it might not have been deflected from its course by the bones through which it passed and turned downwards into some part of the ethmoidal cells. It is very difficult to understand what can have been the cause of the exceedingly localised tenderness on the opposite side of the head. It persisted for some days, and was so intense and accurately defined as to give rise to the suspicion that the bullet had in some way passed across the brain and fractured the skull from the inner side; but as there was no œdema or sense of yielding, and as it was not quite in the line of the wound, it did not seem advisable to interfere in any way, and the case was left entirely to itself.

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J. T——, aged thirty-two years, a strong healthy man, who had been a teetotaler for some years, was admitted on Jan. 12th with a gunshot wound of the foot. While out shooting, carrying his gun under his arm, one barrel went off, and the whole charge passed like a ball through an indiarubber shooting-boot he was wearing, and through his foot as well. The aperture of entry, which was about the size of a florin, was immediately over the bases of the first and second metatarsal bones; that of exit was irregular in shape and much larger, the greater part of the sole of the foot that does not touch the ground in standing being carried completely away. The wound itself was full of *débris* of bone mixed with shot, the wad from the cartridge, and portions of his boot. It was thought at first that the injury was beyond repair, and that the wisest course would be to amputate the foot at once; but as the patient was young and healthy, and as the wound was so situated that in all probability the external plantar artery had escaped, so far at least as the first part of its course was concerned, it was determined to make an attempt to save it. The heel, the ball of the great toe, and the skin on the outer side of the foot were intact, and it was thought that if the wound could be induced to heal up the contraction would restore in a certain measure the arch of the foot, and would keep the cicatrix from pressing upon the ground in standing and walking. No attempt was made to clean the wound, or to extract from it any of the shot which it contained. It was simply immersed in a carbolic bath at a temperature of 100° F., 1 part in 40 for the first two hours, and then 1 in 100, and left there. The next morning the patient had had a restless night, in spite of a hypodermic injection of morphia; the bowels had been opened freely; the pulse was only 100, and the temperature 99°. The wound was simply a mass of slough, with the ends of the tendons hanging in it, sodden and greyish-yellow, but perfectly sweet, and with only a thin red line round. This continued through the next day and the next, the wound remaining entirely unchanged, the patient's health continuing very good and there being an entire absence of fever. But then the epidermis over the rest of the foot and the part of the leg that was immersed began to show signs of giving way. It was reddened and beginning to peel off, leaving exposed a younger, softer layer extremely sensitive to the touch. Further, the urine was olive-green in colour from the absorption of carbolic acid, and a certain small amount of albumen had begun to make its appearance. The bath was accordingly changed to corrosive sublimate, 1 part in 20,000; but it was very soon found that this would not answer. The pain was so great that it was impossible to stand it for more than an hour at a time. Boracic acid was then tried, but though the carboluria disappeared and the skin ceased to be so exceedingly sensitive, this too proved unsatisfactory; the wound became offensive. Finally, the continous bath, after it had been kept up for nine days without intermission, was stopped; the foot was wrapped in lead and spirit lotion, covered over with gutta-percha tissue, and immersed for an hour each day in a corrosive sublimate bath. In this way the tendency to putrefaction was completely kept in check. The leg continued swollen and the skin very tender, but it was not more than the patient could bear. There was not the slightest fever; the temperature rarely rose to 99°F., and never but once passed it. It was extraordinary the length of time the sloughs took to separate. At first, the wound was so large that three fingers could easily have been placed in it; then, owing to the swelling of the tissues round it, contracted, so that only a probe could be passed through; but it was not until the beginning of April that the great toe began to feel firm and to sink definitely below the level of the others. The dorsal wound, as might have been expected, healed much the quickest; that on the plantar surface seemed after a time unable to contract any further, and when the patient was discharged from the hospital at the end of April was still open about the size of a shilling. At that time he could rest his weight on the foot without pain, but the amount of movement in it was very limited, and as soon as he began to walk about it swelled up and became tender. Two or three times after that minute spicules of bone worked their way out through the dorsal surface, but the wound continued to close in, and the foot and leg to become stronger, until by the end of the summer he was able to walk four or five miles without fatigue, and to go about on ladders and scaffolding as he had been wont. The wound at the end of the year, when I saw him last, was perfectly sound; the great toe was an inch shorter than its fellow; there was a high arch to the foot, the whole of the under surface of which was occupied by the cicatrix, so that none of this rested on the ground; movement at the ankle was very free, probably in a measure to compensate for the loss of the tarsal joints, and he declared it was as sound and as strong as it had been before the accident.

W. R——, aged nineteen years, was admitted on March 1st suffering from a bullet wound on the outer side of the right arm, just above the middle. A chamber of a revolver, which some friend was handling, had gone off accidentally, and the bullet had gone through his coat and shirt. A probe passed into the opening could be felt in the inner side, close to the brachial artery, immediately under the skin; but though he was perfectly clear about the exact position of his arm at the moment (his elbow was resting on a high desk), and though the accident had only happened an hour or two before, no trace of the bullet could be felt. It had gone apparently beneath the biceps in front of the bone, and most probably had been gradually pushed further and further into the cellular tissue of the arm by the repeated changes in shape and consistence of the muscles as they contracted. The artery itself seemed uninjured, though the bullet must have gone exceedingly close to it. The nerves had escaped in all probability, as there was no pain or abnormal sensation felt in any of his fingers, and accordingly no serious attempt was made to remove it. A counter opening was made through the skin on the inner side in case any portion of his clothes had been carried in, and the arm was placed in a sling. There was a slight amount of suppuration, but the wound was practically healed at the end of a week.

F. S——, twenty-three years of age, was admitted on March 18th with a bullet wound of the gluteal region. Some time before he had been shot with a revolver by accident in this region, and the bullet had never been extracted. Now he came desirous of having something done, as he asserted that after sitting down for some time he could distinctly feel it. There was the scar of the wound about two inches below and to the inner side of the trochanter; and it could be made out that the bullet had gone upwards and forwards with the substance of the glutæi muscles; but as nothing whatever could be felt on deep pressure, either over the bullet track or over the spot of which he complained, and as the latter was some distance from the aperture of entry, nothing could be done. In all probability the bullet had travelled some considerable distance before becoming encysted.

A. C—— and L. C——, mother and daughter, were admitted on June 30th, with gunshot wounds of the head and face. The former was much the more serious case; a revolver had been discharged close to her face, and the bullet had gone through the upper lip a little to the left of the middle line, through the alveolar border of the upper jaw into the substance of the tongue, beyond which it was impossible to trace it, though a certain amount of indistinct swelling could be made out between the angle of the jaw and the hyoid bone on the right side of the neck. There was at first a considerable degree of shock and much apprehension; but this passed off in the course of the afternoon, and beyond the natural difficulty in speaking and swallowing there did not seem any reason for grave alarm. None of the large vessels about the root of the tongue had been injured; there was no bleeding at the time of admission, though it was said to have been rather free at first; respiration was not embarrassed; there was no stridor; the voice itself was quite clear, though the effort was very painful; and there did not seem any reason for immediate interference. The next morning, however, the swelling by the side of the neck had greatly increased in size; all the parts about the floor of the mouth, and even the soft palate, were becoming œdematous; there was severe pain at the back of the neck and considerable difficulty in breathing; the patient was getting anxious and restless, and the temperature had risen to 101° F. It was accordingly determined to examine the part under an anæsthetic, and, if possible, extract the bullet and drain the wound thoroughly. Chloroform was administered on lint, but at the fourth or fifth inhalation the patient was suddenly seized with violent convulsions; the back became arched into the position of opisthotonos; the jaws were clenched, and the wrists and elbows curled inwards as much as possible. Respiration at once became embarrassed; the jaws were forced apart, and the tongue pulled forward, without avail; the trachea was opened immediately through the first and second rings, and as the convulsion was relaxing artificial respiration was commenced;

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the pulse could still be felt beating, but except one or two convulsive gasps there was no sign of returning animation. Post mortem it was found that the bullet had entered the dorsum of the tongue, about its middle, passed through the tissues at its base, and was resting on the transverse process of the fourth cervical vertebra, between the carotid artery and pneumogastric nerve, neither of which, however, appeared to be injured. The tissues along its track were swollen and œdematous, but the œdema did not appear to have involved the larynx to any considerable degree. There can be no doubt, in spite of the unusual character of the symptoms, that the immediate cause of death was the anæsthetic, but it is not unlikely that the previous condition of the patient and the state of the tissues about the upper part of the respiratory passages were material factors.

L. C——, aged twenty-two, daughter of the previous patient, had been shot at the same time. She was holding her hand up to her face at the moment the revolver was discharged, and one of the fingers was almost blown away. The bullet then entered the right side of the face immediately above the zygoma, and passed transversely across almost to the opposite cheek. The aperture of entry was blackened all round by the powder. A probe inserted into it passed for nearly six inches slightly downwards across the nasal fossæ, apparently into the substance of the opposite superior maxilla. It could not be felt underneath the skin, though there was a good deal of tenderness, and an indefinite degree of swelling over its extremity. The exact situation of the bullet could not be made out. Previously to admission she had lost a good deal of blood, both by the mouth and nostrils, but evidently no large vessel was injured. Her speech was rather thick and nasal; there was some difficulty in swallowing, and naturally mastication was exceedingly painful. The temperature on the day after the accident rose to 100° F., but fell to normal the same night, and never rose again. The bullet was never found, and the wound closed completely in the course of a fortnight without more than a trace of suppuration.

These cases were admitted under my care at the London Hospital from Jan. 1st, 1886, to Jan. 1st, 1887. One man died before he could be brought. Some of them are of interest from the peculiar nature of the injuries received; one in particular, as the bullet is in all probability still lodged in his brain; and another from the fact that though the whole charge of shot had gone completely through his foot, leaving an opening into which three fingers could have been passed, he recovered without the least fever, without any inflammation, and so perfectly that at the end of six months he could walk four or five miles without fatigue or inconvenience. A point worth noticing is the extraordinary frequency with which accidents of this kind occur, mainly owing to the pernicious custom of carrying revolvers. Few people probably are aware of the extent to which this prevails, especially among boys and those a few years older. The only consolation is that in a large proportion of the cases, owing to the character of the weapons, they are nearly as likely to shoot themselves as anybody else, and that apparently, if no vital part is struck, the bullets themselves, when lodged in the body, give rise to little or no trouble. The immediate shock, owing probably to the smallness of the size of the projectile and its conical shape, is very slight, and the wound heals rapidly.

ON A CASE OF CHRONIC RHEUMATISM.

BY CHARLES DAY, M.R.C.S., &c.

"CURE of a case of rheumatism of thirty-six years' standing" sounds so like a sensational heading of an account of the marvellous effects of some patent medicine that one almost hesitates to enter on a subject having such a basis. Nevertheless it is a fact, and as facts are—as we too generally find chronic rheumatism to be—"stubborn things," and as the annals of medicine record many remarkable exceptions to the general rule, I will detail a brief history of the case, adding a few remarks suggested by the result.

In July, 1883, I was requested to visit Miss R——. I found the patient, a maiden lady, aged sixty, suffering from much anxiety in consequence of having discovered that the right nipple was deeply retracted, so as to be quite level with the surface. I also heard that she had been a great sufferer from rheumatism for many years; and as it is to this disease rather than to the cancer that my communication relates, I will merely observe how insidiously and painlessly this complaint—cancer—sometimes makes its way, and also the somewhat remarkable circumstance that women, whose attention would naturally be directed to the breasts during the daily ablutions, and quickly notice any change in the appearance of the nipples, do not always observe a gradual process of retrocession. I have met with several cases, as in the present instance, and no doubt the same circumstance has fallen under the notice of other medical men, that there has been complete ignorance of any abnormal change in the condition of parts until their attention has been called to the sudden entire retraction of the nipple, generally described as having occurred in the night. On making further general inquiries, I found, as I have stated, that, as well as the cancer, I had before me a case of very long-standing rheumatism, which all treatment had failed to relieve. The lady is 5 ft. 4 in. in height; body well nourished; fair complexion; cheerful disposition. The family history revealed no gout or rheumatism, but a sister died of cancer.

The following account was given of the commencement of her illness and condition up to the time of coming under treatment. During very hot summer weather, thirty-three years previously to the time of my attendance, she sat between the open door and window while in a state of perspiration, "the draught being so delightful." A very natural result followed—viz., a very severe attack of acute rheumatism, from which she was three months in recovering. I could not hear that there was any cardiac complication at the time, but the heart sounds are healthy now. The pain and swelling of the joints were considerable, which condition of parts never entirely subsided. Another less violent but still sharp attack was experienced eight years afterwards, and again four and two years before I saw her. The last was more confined to the lumbar region, and was very severe. During the whole of the long period named she cannot remember having been entirely free from pain. Going up and down stairs (especially the former) was attended with pain and difficulty, and could not be accomplished without the help of the baluster, the progress being very slow, step by step. Out-door exercise, except for a short distance leaning on an attendant, was impracticable. Any attempt to walk alone immediately produced giddiness and a staggering gait, and if not supported she would fall to the ground. A sharp pain was frequently experienced at the top of the sternum, which increased on any attempt to swallow, causing a choking sensation; consequently all fluids were taken by sips. The night's sleep was very interrupted.

As the treatment continued over some considerable time, it would be inconvenient here to give a minute account of it. For the present purpose it will suffice to give a general statement of the medicines administered and the gradual progress up to recovery. Taking, then, a general view of the case, the invasion and long-continued possession of the system by the rheumatic virus and the mammary glandular disturbance, one was led naturally to select medicines calculated to have a specific action on the parts, and a depurative action on the blood through the excretory functions. I therefore commenced with iodide and bromide of potassium, five-grain doses of each in compound decoction of sarsaparilla and decoction of buchu and broom. And having proved, at least to my satisfaction, that the influence attributed in past time to conium over chronic rheumatism and glandular enlargement is real, I administered three grains of the extract every night and morning. This treatment was continued for twelve months, with only occasional intermission of the potassium and conium, substituting infusion of simarouba with aromatic spirits of ammonia. At the end of this time the swelling of the joints had subsided, and the patient was relieved of the pain which hitherto had made its presence felt so continually. She could also move about the house without the assistance previously necessary, but still not freely; neither could she take out-door exercise without assistance; the giddiness also continuing. At this time the iodide of potassium was discontinued; the bromide and conium were omitted every other week for three months, every third week for the next three months, finishing the year with simarouba. At the end of this time she had regained fair powers of locomotion, could move about the house freely, going up and down stairs without help, and could take a short walk without support, but did

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not feel confident without a companion. Six months after this there was no vestige of rheumatism, joints natural, pain quite gone. Even that in the chest, which had interfered with her swallowing fluids except by small sips, was no longer experienced, the power of swallowing being natural. Sleep was continuous from soon after retiring to rest until the time for rising, a contrast to the pain and restlessness of former times. The general health is now excellent. To use her own expression, she "scarcely knows herself," for whereas during the whole thirty odd years she does not remember having been free from pain, she is now entirely free from it; and whereas she had been unable to move about the house or go out without assistance, she can now go out by herself, and has walked four miles without a rest. Indeed, it has afforded some amusement to hear her expressions of delight, and the description of the tests which she has applied to satisfy herself that the improvement was real. On a recent occasion she was in the park, when, looking round to see that no curious eyes were watching her, she said to a relative who was with her—"Don't laugh, I am going to run," which she did with great satisfaction to herself.

With regard to the treatment and its success. Although there is no claim of novelty to be applied to the remedies used, that they were effectual in promoting the desired end is manifested by the result. There is a wide gulf between disbelief of, and exaggerated confidence in, medicine—the one objecting to any *propter hoc* reasoning, the other accepting without question the empirical dogma. The long period during which the iodide, bromide, and conium were continued without producing any constitutional disturbance is not a little remarkable. Only twice had the iodide to be discontinued in consequence of the characteristic catarrhal symptoms. In like manner the conium was discontinued for a short time on three occasions, not from any evidence of toxic action, but from a feeling that it might be prudent to do so. The system had become so tolerant of the medicines, or, as one might say, the disease had so "consumed" them, that they might have been continued for a much longer period. It may be inquired, How do these medicines act?—which almost necessitates another question, What is rheumatism?—too wide a matter to discuss here. Suffice it that we observe the same divergence of opinion as elsewhere. We have certain forms of words to express the difference between health and what we call disease. We analyse the blood and secretions to discover the *fons et origo mali* without producing uniformity of opinion. Hence in the treatment we find remedies of opposite characters employed for the cure of the same malady. Thus in the acute stage of rheumatism one considers the alkaline treatment to neutralise the excess of acidity in the system the only natural one, while another administers large doses of lemon juice. One will attack cholera with purgatives, another with astringents and opiates; one with cold water, another with hot water; and so on. From time to time the field of argument changes. That which was pretty firmly established in one generation is rejected by the following. Whatever may be the nature of the physiological changes effected in this complaint, rheumatism, it appears from the symptoms in its acute development to be rightly classed both under febris and neurosis. Hence in that stage remedies are sought for amongst those which reduce temperature and allay pain, and the chemical theory of neutralising the acid secretions is rational in theory and useful in practice. But when we come to a chronic condition less susceptible of a satisfactory explanation we are reduced to a more empirical system of treatment, the *rationale* of which we are somewhat at a loss to understand. The iodides and bromides are present to the mind, and have been used with temporary benefit or with no effect. Conium has been employed with marked benefit in chronic rheumatism and in syphilitic periosteal inflammation. With these were joined buchu, broom, and sarsaparilla, with the object of assisting to eliminate from the system the *materies morbi*. Now, I attribute the success of the treatment to its regular and long-continued administration. It is very seldom one meets with a patient so willing and anxious to assist by strict adherence to directions, especially for so long a time, and the unusual tolerance of the medicines gave full opportunity for the trial. One other thought suggests itself to me. In a contribution on fibroid disease, which was published in THE LANCET, I was led to theorise on the relative connexion between those diseases of heredity, cancer and gout, referring to cases where one had been replaced by the other, relating the case of a family which, having for generations suffered from gout, suddenly developed cancer, the former disease disappearing and the latter carrying off the members of two generations. If there be any ground for the idea of substitution, it may be just possible in this instance that, as cancer was developing, the rheumatism so closely allied to the gouty diathesis may have weakened its hold and rendered it more ready to yield to the remedies employed. Be that as it may, I think, taking into consideration the many years during which this poor woman was bound by her infirmity, and despite the medical care she had received at different times, the favourable result now obtained must, without any forced argument, be accepted as the direct result of the action of the remedies used; and, as they are not novel, there is evidence to show that their long and continuous exhibition is necessary to produce such a result.

St. Mark's-square, E.

TWO CASES OF

DISEASE OF SACRO-ILIAC SYNCHONDROSIS.

BY F. J. GANT, F.R.C.S. ENG.

CASE 1.—C. M——, aged thirty-six, married, was admitted into the Royal Free Hospital on March 2nd, 1887. The patient had always been healthy until Christmas, 1886, when he first noticed a swelling over the sacrum to the left of the middle line. He had fallen from a ladder eighteen months previously. When admitted this swelling was found to be soft and fluctuating—evidently an abscess, painful only on deep pressure. On standing, the man complained of a sensation as though the left half of the pelvis were giving way, and of pain running down towards the hip. No wriggle in walking. Viewed posteriorly, the left limb appeared elongated, but there was no real alteration in length when measured between the anterior superior spine and inner malleolus, the apparent lengthening being really due to the patient habitually standing on the right leg, and thus producing drooping of the opposite limb. There was some abduction and eversion of the limb, with slight forward projection of the foot. The anterior superior iliac spine was more prominent than on the other side, and on a somewhat lower level. The above-mentioned swelling had enlarged, so as to occupy the adjoining portion of the gluteal region. On April 19th I made an incision over the swelling, and pus escaped. At one point a small aperture could be felt, through which a probe passed into the sacro-iliac articulation. This was enlarged, and the articulation gouged out until the surface appeared healthy. The abscess cavity was scraped with a Volkmann's spoon, and washed out with 1 in 40 carbolic solution. A drainage tube having been introduced, the wound was dressed with dry carbolic gauze and salicylic wool, and closed with mackintosh cloth and retained with elastic bandage. The wound rapidly healed, and the temperature reached normal in two days. The dressings having been reapplied as occasion required, the patient was discharged on May 22nd. He could then walk and stand without inconvenience.

CASE 2.—E. G——, a young woman, aged nineteen, was admitted on June 29th, 1887. She was by occupation a box-maker, which for the last three years had entailed much standing in her work. Nine months ago she first noticed a small lump nearly over the left sacro-iliac articulation. This slowly increased in size from a hazel-nut to about the size of an orange. She had received no injury. In standing or walking, she experienced a sensation, as she herself expressed, of "falling asunder behind." Pressure on the iliac bone outwards by the finger caused severe pain in the articulation. The movements of the left hip joint were free and unattended by pain. The appearance and position of the limb were precisely similar to those of the former case, there being apparent lengthening with abduction and eversion. The anterior superior iliac spine projected conspicuously forwards. On July 12th the abscess was opened, from two to three ounces of pus evacuated, and the synchondrosis scraped, as in the last case, together with the pyogenic membrane. The cavity was syringed out with carbolic solution (1 in 40), drainage tubes introduced, and antiseptic dressings applied. The after course of the case was uninterrupted by any unfavourable symptom, and now (July 19th) the wound is quite healthy and healing up.

Remarks.—The above cases seem worthy of being recorded, if only on account of the rarity of the disease of which they are

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examples. This is only the fourth case that has come under my notice during thirty-four years at the hospital. The diagnosis would lie between this disease and that of the hip joint. In the early stage at which both of these cases presented themselves, the sacro-iliac disease bore a striking resemblance to the first stage of "morbus coxæ," with regard to the apparent lengthening and attitude of the limb; but the marked prominence of the iliac spine in front is distinctive. Equally characteristic is the sensation of yielding in the articulation in the act of standing or walking, with sometimes a wriggling movement in progression. These characters taken together, with the absence of any signs or symptoms referable to the hip joint, are diagnostic of sacro-iliac disease.

A SERIES OF CASES OF INJURIES FROM EXPLOSIVES.

BY W. LOUDON STRAIN, M.B.

SURGEON TO ST. JOHN DEL REY MINING COMPANY; LATE HOUSE SURGEON, WESTERN INFIRMARY, GLASGOW.

DURING the last three years I have had to deal with a number of surgical injuries produced by various explosives, and I think them of sufficient interest to warrant their publication, with the short remarks I have to make on each case.

CASE 1.—This case I had to deal with while resident in the Western Infirmary. A strong working man on his way to work picked up a piece of copper tubing and put it in his pocket, intending to make some use of it. On reaching home he proceeded with the help of a darning needle to clean it out, when it exploded in his hand. On admission, it was found that the thumb, fore and middle fingers had been so shattered that amputations had to be performed through the proximal phalanx of the thumb, the middle joint of the forefinger, and at the knuckle of the middle finger. The man did well. This case is interesting when compared with Case 3. The explosive—fulminate of mercury—was the same in both cases, and the mode of production and damage sustained were almost identical.

CASE 2.—J——, a very old negro, certainly over eighty years of age, was brought to Morro Velho Hospital on Feb. 16th, 1886, terribly injured by the exploding of a quantity of dynamite and percussion caps, with which he was working. The old man's duties were to attach the cap and fuse to the dynamite cartridge. How the accident occurred will never be known. It is estimated that about 5 lb. of dynamite and about one hundred caps, with fulminate of mercury, exploded at the old man's feet. On admission he was not unconscious, and complained loudly of pain on any attempt to move him. His left foot, with the lower half of the leg bones, was shattered; the right leg bones were fractured in several places, and almost completely stripped of the soft parts. Beyond scorching of the skin and singeing of his wool, no damage was done to the head, trunk, or upper extremities, all the force of the explosion being exerted on his legs. The poor old fellow survived the removal of his shattered limbs about twelve hours.

This case illustrates how curiously dynamite acts. An inspection of the place where he was working showed a hole about a foot deep and two feet in diameter blown in the ground. The house came down about him, and a gable close by was blown in. The wonder is how he was not blown to atoms. The dynamite with which he was working was on the ground, and he sat on a little bench.

CASE 3.—On Saturday, April 4th, 1886, a Chinaman stole a cap, intending to use the tubing as a ferrule for a stick. Finding it obstructed, he proceeded to clear it out, when it exploded, shattering the thumb, fore and middle fingers of the left hand. Being almost identical with the injuries in Case 1, the amputations were also identical. At the end of a week the stumps were dressed, and looked well. Four days afterwards pain was complained of, and on removing the dressings pus was found lodging in small quantity in the sheath of the extensor tendon of the middle finger. This was freely incised, and relief followed, but three days afterwards tetanus appeared, and in exactly three weeks from the date of the injury he died asphyxiated.

What caused the tetanus? Had the faulty drainage—the pus lodging as it did in a tendon sheath—anything to do with it? He suffered from chronic tubular nephritis, with aortic regurgitation and dropsy. Had this anything to do with it? The only other Chinaman in the hospital at the time was a man suffering from anæsthetic leprosy, with ulcers. The two were continually together. I merely mention these three things, as I think it not improbable that one or other had to do with the origin of the tetanus. Calabar bean was given in large doses, and continuously, but without benefit. He smoked opium largely.

CASE 4.—In this case I will briefly narrate the injuries sustained by several persons in an explosion which occurred in a mine on April 9th, 1886. After blasting out masses of rock with dynamite the larger pieces are broken up with sledges to a convenient size for conveyance to the surface. On the above date a man was thus engaged, but on striking a mass of rock an explosion occurred, shattering the mass and sending pieces in all directions. Practical miners are at a loss to account for these explosions, which occur at rare intervals; but it is thought that it is due to nitro-glycerine which has exuded from the dynamite during the blasting and remained at the bottom of the "hole" unexploded, and that the sledge coming down on this causes the explosion.[1] This is a matter of importance for the consideration of dynamite makers. By this explosion five persons sustained serious injuries. J——, an Italian, sustained a compound comminuted fracture of the tibia just above the ankle, total destruction of the right eye, and numerous cuts and scratches. Ten small fragments of bone were removed from the seat of fracture, and three days afterwards extirpation of the eye had to be performed on account of pain. He made an excellent recovery. C——, a Brazilian, was using the sledge. He escaped with a simple fracture of the tibia below the knee. T——, a black man, had a severe laceration of his right arm, and across the left side of his throat there was a deep, clean cut, which bared the side of the larynx and also the carotid, which most wonderfully escaped injury. He suffered from profound shock, from which he did not recover for twelve hours. After this, recovery was uninterrupted. A——, a black man, had a deep punctured wound in front of his left shoulder. A small artery was wounded, and bled so profusely that I had to cut down and tie it. He suffered a good deal from loss of blood. L——, a black man, was cut across the right eyeball, which was completely destroyed. One curious incident occurred. A man was actually standing on the stone when it exploded. He was thrown for a considerable distance up an inclined surface, but escaped uninjured. All these men were employed close to the place of explosion, besides many others who escaped uninjured.

CASE 5.—Senhor J. F. P——, a Brazilian, aged about sixty, was terribly injured by the exploding of a dynamite cartridge in his hand. It occurred in the following manner. On a certain day after Easter the terrible fate of Judas the Betrayer is typified or commemorated by the exploding of bombs, firing off rockets, &c. On this particular occasion dynamite cartridges were used. A short piece of fuse was attached to the cartridge, which was held in the hand until the fuse was seen to have caught fire; then the intention was to throw it away as far as possible for it to explode. The sun shining brightly at the time obscured the sparks flying from the fuse, and thinking it had not caught fire the man held it in his hand until the explosion occurred. I may incidentally remark that the use of dynamite and other dangerous explosives at their religious and other festivals prevails to an alarming extent amongst the Brazilians, and is winked at by the authorities. However, this case has had a very salutary effect in diminishing the nuisance. I was on the spot in about a quarter of an hour, and found the man on the floor in an unconscious state. His right hand was blown off just above the wrist, and his right eyeball burst; a day or so after I also found both tympanic membranes burst. The amputation of the hand was completed, and a great gash in the palm of the left hand was dressed. The shock was very severe, and required free stimulation for twenty-four hours. On the third day the pain in the destroyed eye was so great that I had to extirpate it. The man's recovery was very slow. Sloughing of the palmar flap occurred and much retarded healing; but after two months he was able to be on horseback again—"a sadder but a wiser man."

This case is of interest in showing the very localised action of the dynamite. The bursting of the eye and

[1] Experienced miners here say that in mines where dynamite is largely used, exuded and unexploded nitro-glycerine is frequently met with, and is a recognised danger in using dynamite for blasting.

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tympanic membranes was induced by the concussion, and beyond scorching his chest and face no other damage was sustained.

Whilst writing the above another explosion has occurred similar to Case 4, but happily without doing serious injury.

I am fully aware that no special point of surgery is illustrated in the narration of these cases, and it is not with that intention that I record them. They are interesting and also instructive, in so far as they show a necessity for the greatest care in the manufacturing and using of such dangerous articles. I might say more on this point, but a medical journal is hardly a suitable medium.

Morro Velho, Brazil.

CASE OF VAGINAL HYSTERECTOMY FOR MALIGNANT DISEASE.

BY FERDINAND A. PURCELL, M.D.,
SURGEON TO THE CANCER HOSPITAL.

THE case of extirpation of the uterus and its appendages per vaginam which I have to report makes my fourth successful case. A record of the three previous cases appears in a paper by me, and is published in the *British Gynæcological Journal* (May, 1887, Part ix., p. 60), and was read before the Society on March 9th of this year. I intend to give a full report of this case to show that I have not, with my additional experience, departed from the plan of operation followed in my first three cases.[1]

We may take it for granted that kolpo-hysterectomy is only justifiable when the body of the uterus is cancerous, or when the disease commences near the os internum; and unjustifiable for cancer of the cervix alone, or when the walls of the vagina have been encroached upon, for in the latter condition the surrounding cellular tissue has already been infiltrated, and recurrence after operation will undoubtedly take place in a very short space of time.

Operators are still divided as to the details of the operation: as to whether the peritoneum should be entered in the anterior fornix or the posterior fornix; whether the fundus is to be brought down through the anterior wound or the posterior one; or not to make the uterus perform a somersault at all, so as to avoid all risk of soiling the peritoneum with the discharges from the diseased os and neck; or whether it is not advisable to remove the diseased cervix as a preliminary operation by amputation or with the curette; whether the broad ligaments should be ligated *en masse*, or in segments, or to rely on pressure forceps to be left *in situ*; whether the ovaries ought to be removed; whether the vaginal walls and peritoneal edges should be brought together with suture, or leave the vaginal wound unclosed; and whether a drain is to be used.

Mrs. Eliza K——, aged forty-six, was admitted into the Cancer Hospital on June 17th, 1887, being a patient sent to me from Birmingham by Dr. John W. Taylor, who had curetted and cauterised the os and cervix about three months previously at the Birmingham Hospital for Women, and where she was at the time examined by Mr. Lawson Tait. The patient is a fairly well-nourished woman, the mother of one child aged twenty-four years, and had always enjoyed good health until about twelve months ago, when she had vomiting of blood and violent pains across the pit of the stomach and back. Three months subsequently (Sept. 1886) a vaginal discharge came on, and pain, with difficulty in micturating, necessitated treatment under the care of Dr. John W. Taylor, and in January he performed an operation on the ureters. Some six weeks later malignant disease of the os and cervix was discovered; for this she was examined, in conjunction with Dr. Taylor, by Mr. Lawson Tait, and had the os and cervix curetted and cauterised by Dr. Taylor. Recurrence of the disease showed itself about three weeks ago, for which Dr. Taylor advised kolpo-hysterectomy, and kindly sent her to me. The disease now occupies the stump and neck as far up, if not beyond, the os internum; walls of the vagina are sound. On examining with the two fingers in the rectum and the other hand over the pubes, the body is found larger than normal, more particularly its left half; the organ is freely movable, and the broad ligaments appear healthy; no enlarged glands are to be felt. She has passed the menopause. There is no family history of cancer or of phthisis to be made out. Father died at seventy-nine; mother died at seventy-two, having had thirteen children. After a consultation with my colleagues, and having decided that removal of the uterus was justifiable, fully explaining the nature and risks of the operation to the patient, as also to her husband, and which they had had previously explained to them by Dr. Taylor, consent was given and the best wished for.

On June 23rd I proceeded to operate, assisted by my colleagues, Dr. Snow and Mr. Jessett. Dr. John W. Taylor came up from Birmingham and was present, as also Mr. Henry Reeves, and other visitors. The patient was placed in the lithotomy position, the bladder emptied, and vagina and parts douched with carbolised water; a duck-bill speculum in the posterior fourchette, aided by the fingers of my assistants, brought the parts well into view. Steadying the uterus by fixing a vulsellum in the cervix, the mucous membrane was incised all round, the anterior and posterior flaps reflected upwards, the bladder kept out of the way, and a segment pinched up laterally (first one side then the other), and a ligature passed through it with an aneurysm needle, so as to include the lower uterine vessels, was tied, and divided away. The peritoneum was entered both anteriorly and posteriorly, and the apertures enlarged by tearing; the two fingers of the right hand were passed up through the anterior opening and over the fundus, and then over the right broad ligament, which it was made to encircle. Now a silk thread was passed by means of a long well-curved aneurysm needle on the finger, until it encircled the broad ligament and insinuated down posteriorly; the thread was hooked out of the eye and the needle withdrawn; the broad ligament was gently drawn down and examined for absence of ureter. Feeling satisfied of its not being present, the ligature was tied. Tying the broad ligament *en masse*, close up to the ligature on its uterine side, I applied two pressure forceps as a guard, and, cutting the thread short, divided the parts away from the uterus with scissors. The pedicle receded together with the forceps; the uterus sidled down, presenting its right cornu; the left-hand fingers now were passed in front and above the left broad ligament, followed by a silk thread, which was passed through the substance double. Having examined for absence of ureter and not observed, it was tied double and again encircled, clamped with pressure forceps and divided. The Fallopian tube was not included, and on bringing the uterus down, which was now free, the left ovary came down along with it, and on gently drawing, the Fallopian tube followed, when all was withdrawn; the Fallopian tube on the right side had been included in the pedicle, but now the right ovary was felt for and brought down, its attachment tied and severed, and it was got away. Parts around and within were douched, cleaned, and dried; there was no oozing of blood, and little blood was lost. The pressure forceps were all carefully taken off; no attempt at closing the vaginal or peritoneal wound was made. Bladder and bowel and surrounding parts were finally examined, a glass drain, with its end rounded, but perforated, was inserted; this and the vulva was covered up with a large pad of salicylic wool and fixed by a T bandage; patient was removed to her bed in the general ward. The operation from first to last occupied one hour and twenty minutes.

In the evening, after operation, the pad and draw-sheet were found saturated with coloured water. Four ounces of urine were drawn off, and it was ordered to be drawn off by catheter when necessary. Temperature ranged between 96·8° and 97·4° F. The patient partook of ice only.

June 24th.—Patient passed a comfortable night; had no sickness. Five ounces of urine drawn off. Salicylic wool pad dry; renewed. Iodoform dusted about and up the drainage tube; tube not interfered with. Pulse 74, intermittent; temperature (twenty-four hours) ranged between 98·2° and 100·2°.

25th.—Slept at stretches of an hour; comfortable; no sickness. Was given six ounces of barley water during the night, and one drachm of essence of beef given twice; pad dry. Urine free. Temperature (twenty-four hours) ranged between 100° and 99·4°.

26th.—Very comfortable night; slept two hours at a time. Urine drawn off. Pulse feeble and intermittent. Pad dry. The drain taken out for the first time; only a small piece of shred found clung in a couple of the holes; its inner surface is coated with iodoform; no smell; cleaned and replaced as before. Diet increased—fish, the essence of beef

[1] For Art. see THE LANCET, Jan. 31st, 1885, p. 200.

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more frequently, barley water, and arrowroot. The temperature during the forenoon was 99·6°; afternoon to midnight it ranged from 100° to 101·4°.

27th.—Took nourishment well. At 5 A.M. complained of sickness and pain in left iliac. Urine drawn off. Abdomen is tympanitic. Passed some flatus, but with difficulty. Slight discharge found in the glass drain. Applied a turpentine fomentation, which relieved her. The wool pads were more soiled later on. Temperature for twenty-hours ranged from 99·4° to 101·8°.

28th.—Slight pain in left iliac; urine drawn off; pad not much soiled; tube contains pus; taken out and cleaned; was reinserted, and then iodine water was injected through it, bringing away some purulent discharge enough to colour the water. Temperature 99 6° to 101 8°.

29th.—Complains of a throbbing pain in urethra; pad slightly soiled. Temperature 99·6° to 102·4°. To have a turpentine enema; iodine water douches to be continued twice a day.

30th.—Temperature was high all night; rose to 101·8°, and in the afternoon from 101·8° to 102 4°; enema acted slightly; pad but little soiled. To have a teaspoon of oil.

July 1st.—Slept well and taken nourishment. The tube is half full of pus; the syringing with iodine water has been done night and morning regularly. Temperature 101·8°, 99 2°, and 100 6°. Bowels acted well.

2nd.—Pulse 66, regular; eats well; discharge of pus continues. Temperature 100 4° to 98·4°.

10th.—Discharge lessened every day. The tube is now removed, and she is permitted to pass urine of herself, and allowed up on the couch. From this she became convalescent and began to walk about. Examined the vagina; found that the two fingers passed up to their full length; the vault is broad, and not at all contracted; the broad ligament pedicles distinctly to be felt. Returns home to Birmingham.

Manchester-square, W.

ON A

METHOD OF DETECTING AND REMOVING NEEDLES EMBEDDED IN THE TISSUES.

BY H. LITTLEWOOD, F.R.C.S. ENG.,
RESIDENT SURGICAL OFFICER TO THE LEEDS GENERAL INFIRMARY.

I BELIEVE the general advice given by surgeons when a needle becomes embedded in the tissues, if it cannot be felt, is "to let it alone," with the hope that it will either work its way out or become embedded where it will give rise to no trouble; the reason being that the task of removal under these conditions is always very difficult and often impossible—almost like looking for the proverbial needle in the haystack. Having had several such cases, where I could not be actually sure of the presence of the needle, I have gone on the plan of "letting alone"; in two or three cases the patients have come to me several weeks after, bringing the needle, which had worked its way out, they having in the meantime undergone several weeks of pain and mental anxiety. These cases led me to try if it were not possible first to detect the presence of, and then remove, the needle. Since then I have adopted the following plan with considerable success.

1. The part supposed to contain the needle is thoroughly rubbed over with an electro-magnet, so as to magnetise the metal if present. 2. A delicately balanced magnetic needle is held over the part. If the needle is present, its position can be ascertained by the attraction or repulsion of the poles of the magnetic needle. 3. Having ascertained the presence of a needle (e.g., in the hand), the part is rendered bloodless, and a grain or more of cocaine injected hypodermically. 4. An incision is made over the ascertained position of the needle. 5. The electro-magnet is then inserted into the wound, and with it the needle is felt for. Sometimes it will be found and removed quite easily, at others great difficulty will be experienced, taking as long as one-half or three-quarters of an hour. This may be due to the fact that its position has not been accurately ascertained; it may be lying across the incision, or it may be so firmly embedded in the tissues that the electro-magnet is not able to withdraw it. If this occurs the incision must be enlarged, and the edges held apart with some non-magnetic retractors; using the electro-magnet as a guide, the needle may be seen and removed with forceps. If the needle is firmly fixed, the following plan has been adopted: by placing the positive pole of a galvanic battery on the surface of the body and the negative pole in direct contact with the needle, this becomes loosened by electrolysis and can then be easily removed by the electro-magnet. This latter method has been found useful in two cases for the removal of sewing machine needles that had transfixed the end of the finger, and were so firmly fixed as not to be removable by forceps. The electrolytic action loosened the needles so that they could be removed quite easily.

Mr. Marshall, in his lectures on Surgery at University College, used to tell us that needles &c. could be detected in the tissues by the method described above. I had not seen it practically tested. After having removed two or three needles by the method described above, I referred to Neale's Digest to see what had been written on the subject. I find the following references which I think will be of interest:—In the *Medical Times and Gazette* (vol. i., 1857, p. 298) is a paper by Dr. Bence Jones, entitled "On a ready method of determining the presence, position, depth and length of a Needle broken into the Foot." In the same journal (vol. ii., 1876, page 531) is a paper by Sir Benjamin Brodie, in which the presence of a needle in the leg of his own son was demonstrated at the Royal Institution by means of the electro-magnet. It was not then removed, but allowed to remain in some time, until it worked its way to the skin on the opposite side of the leg, and then removed. Both these papers refer only to the detection of the needle. In THE LANCET (vol. ii. 1876, p. 700) is a communication by an army surgeon named Thompson describing a case in which he made an incision over the site of a piece of metal embedded, and then bandaged an ordinary magnet over the part for twenty-four hours, with the satisfaction of finding the metal attached to the magnet at the end of that time.

I have now removed six needles from the hand and a piece of steel embedded in the foot. In none of the cases could I feel the piece of metal or be sure of its presence without the aid of the method above described. As it requires some expensive apparatus, and sometimes takes a long time, I am afraid this method will not become general; but it is well worth the time and trouble spent if in the end one is successful; as patients really suffer a good deal of pain and anxiety if these foreign bodies are allowed to remain embedded in the tissues.

ON THE PATHOLOGY OF HEMIPLEGIA.

BY FRANCIS W. CLARK, L.R.C.P., M.R.C.S.,
ASSISTANT MEDICAL OFFICER TO THE CROYDON INFIRMARY.

As the pathology of certain cases of hemiplegia is still somewhat obscure, I venture to give a brief *résumé* of some thirteen cases of the disease which have come under my care during the past year, with a view to suggesting that some of these depend, in all probability, upon a chronic pachymeningitis of the vault due either to alcoholism or more rarely to rheumatism.

Of the thirteen cases three were due to massive hæmorrhages into the brain, as verified by post-mortem examination; and hence these cases need not detain us at all.

Of the remaining ten cases, in two only were there any evidences of morbus cordis. The first of these—George K——, aged forty-five—had an attack of right hemiplegia, with *left* facial palsy, from which he recovered to a great extent in the course of a few weeks. Four months later, however, he succumbed to the effects of the morbus cordis, but, unfortunately, no necropsy was granted. The crossed paralysis in this case is suggestive of the lodgment of a small embolus in the pons Varolii.

The other case associated with morbus cordis was that of Jesse Y——, aged sixty-eight, who had an attack of left hemiplegia six years ago, from which he recovered in a short time; a second attack, on the same side, four years ago, with recovery; and he is now convalescent from a third attack, also on the left side, but this time associated with difficulty of articulation. As there is in this case also a history of alcoholism, I shall refer to it again under that head.

In one case only was there a history or any evidences of syphilis—namely, that of a young man (J. P——) aged

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thirty-six, who rapidly recovered from an attack of right hemiplegia under the influence of iodide of potassium.

In two cases the hemiplegia was associated with occasional epileptic attacks: one of these being a man (J. H——) aged forty-eight, who has had right hemiplegia for some years past; and the other, a woman (S. H——) aged fifty-seven, who had an attack of left hemiplegia, from which she recovered in the course of a few weeks, and in whom there was a strong history of alcoholism.

Of the remaining five cases, one had been bedridden for some months with chronic rheumatic arthritis, while in the other four there was a well-marked history of alcoholism.

Mary G——, aged seventy-one, of a marked rheumatic diathesis, was suddenly seized with paralysis and anæsthesia of the left arm; the left leg was cold and anæsthetic, but not paralysed. Four days later the paralysis had much improved, and it continued to improve slowly until her death, which occurred twenty-five days after the seizure. At the necropsy the dura mater of the vault was found thickened and adherent to the brain along the median fissure, but otherwise both brain and spinal cord appeared perfectly healthy. The heart was fatty, but otherwise normal, the lungs œdematous, and the kidneys normal.

The cases with a history of chronic alcoholism were as follows:—

George T——, aged forty, had a sudden attack of right hemiplegia, from which he recovered in the course of a few weeks.

Mary Ann W——, aged fifty-seven, had an attack of right hemiplegia eighteen months ago, from which she has been for some few months convalescent.

Robert C——, aged sixty, had an attack of right hemiplegia, with rapid recovery.

William W——, aged sixty-eight, had an attack of left hemiplegia with amnesia four months ago, from which he recovered in about a month. A second attack occurred a month ago, this time on the right side, and again associated with amnesia, from which he is now convalescent, the amnesia, however, remaining.

Also in the two cases mentioned above—namely, Jesse Y—— with associated heart disease, and Sarah H—— with occasional epileptic attacks—there was a well-marked history of chronic alcoholism.

In none of these cases was there any facial palsy. Hence it would, I think, appear that, in these seven latter cases at least, the transient nature of the paralysis, its alternation from side to side, as illustrated in the case of Wm. W——, its frequent recurrence, as specially illustrated in Jesse Y——, and again the results of the post-mortem examination of Mary G——, are all of them suggestive of some temporary pressure upon the cortex of the brain such as would be occasioned by a slight and transient kindling of the chronic inflammation of the dura mater of the vertex, so common in the later stages of chronic alcoholism, and to a less extent of chronic arthritic rheumatism.

CASE OF
CHRONIC HYPERTROPHIC CIRRHOSIS OF THE LIVER; WITH REMARKS.

BY ALEXANDER YULE, M.D., C.M. ABERD.

JOHN T——, aged sixty-three, a Sussex labourer, came under my observation in 1880 suffering from dyspeptic symptoms and difficulty of breathing. This would last for a few days, and his usually indifferent health followed. I examined his chest, and observed that at one time he had had empyema. There was a cicatrix under the left breast; the lower half of the left side had fallen in, and the lung shrunk. This occurred many years before I first saw him. The want of breathing capacity and feeble action of the heart I attributed to the changes in the chest. I examined the heart frequently, and failed to find a murmur. There was at first a little swelling of the feet and lower part of the legs. The size of the abdomen varied according to the action of the bowels and kidneys, but at all times was much distended with serum. The liver was enlarged in every direction, and the urine albuminous. In 1883 and 1884 increasing anæmia and dropsy supervened, associated with which were symptoms referable to kidney, liver, and lungs—viz, transient and recurrent jaundice, vomiting, &c. The disease proved fatal in July, 1885, from chronic hypertrophic cirrhosis and asthenia. The man had always been of sober habits, and there was nothing personal in his history differing from what is found amongst the labourers in these parts, such as exposure to the vicissitudes of weather.

From a physiological point of view these cases are interesting. In common parlance, it was a case of premature break-down, and beyond the remedial power of medicine. The patient inherited the seeds of the disease, to develop sooner or later, according to circumstances. He was unhealthy to begin with, the error being in the blood and in the organs that deal with nutriment. Be that as it may, the same constitutional dyscrasia that had caused a pleurisy to degenerate into an empyema, with, subsequently, much formation of fibroid tissue, when once the flood-gate of impure blood had been opened, led to degeneration in other parts. Why the liver should not have been the subject of gin-drinkers' cirrhosis I take to be in the difference of the originating causes: in the one case, alcohol being more of an irritant, inflammatory changes with thickening of the tissue resulting, and contraction; while in the other, added development of fibrous tissue, with increase of bulk. In the former case, one would expect the disease to be more rapid and painful on account of the greater activity of the poison. Lung affections and short breathing are common among those who have lived for some time in tropical climates, on their return to temperate parts. The liver is invariably affected. In these cases, not uncommonly, from sudden chill, a fatal congestion or bronchitis results, and there being possibly pre-existing fibroid affection of the lungs, may not that be a predisposing cause of the untoward event? The *rationale* would be evident. Blood dyscrasia, from the liver not performing its appropriate functions of depuration, alteration, or otherwise, and therefore the cellular structure of the lungs being supplied with unsuitable nutriment, perverted growth would ensue. Thus the vena porta brings blood to the liver, and it is altered there, and made fit for nourishment of tissues (altering venous blood in other systems before it is arterialised). However, when what is brought to the liver, or when the liver, from occult causes, in digestive or other parts (or in itself), causes a failure of proper nutrition, the tissues (lungs, kidneys, spleen, and elsewhere), instead of their normal constitution being maintained, will consequently have substituted some other than their healthy formation, in excess or in defect, as the case may be. Where so large and so important a viscus as the liver exists, we cannot suppose but that its functions are of the utmost importance. The many morbid states it displays without immediate fatal interference or death point otherwise; so, likewise, may it be said of every other organ of the human body, from the brain to the smallest cell, which may remain unsound throughout life to a greater or less extent. A great part of the way of diseases is as unknown. The want of access to medical libraries will, in the remarks I have made, be my excuse for the total absence of reference to authorities on this subject. Blood dyscrasia is a wide field, and its connexion with morbid growth, fatty fibroid, and other degenerations requires investigation.

A NOTE ON "TROPICAL ULCER."

BY GEORGE RANKING, M.D. CANTAB.,
SURGEON, 5TH BENGAL CAVALRY.

I HAVE adopted the above name for the form of ulcer which I am about to describe for two reasons: firstly, because it leaves open the question of causation; and, secondly, because, never having met with cases of ulceration exactly conforming to this type elsewhere, it has been my lot to see large numbers in tropical latitudes, under various names taken from the locality—e.g., "Delhi boil," "Meean Meer sore," "Scinde sore," &c. The ulcer commences usually as a small circumscribed patch of inflamed skin. This is attended with pain of varying intensity, but generally only amounting to burning or itching sensations. The skin on palpation is found to be boggy, with a zone of œdema surrounding it. Very soon there appears a dark central spot, which ulcerates, leaving a small perforation, through which issues a larger or smaller amount of thin

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unhealthy purulent fluid. Quickly the edges of this perforation ulcerate away, and it is seen that the skin is undermined over the whole extent of the inflamed area. Eventually, when the whole of this skin has sloughed away, there is left a ragged ulcer with thickened edges and with a base of sloughing cellular tissue. The edges are much raised, so that the ulcer appears deeper than it really is. This ulcer partakes of the nature both of the irritable and indolent ulcer, inasmuch as it is sluggish, with indurated and elevated borders of more or less irregular outline, and surrounded with more or less œdema, according as it occurs in a dependent part or otherwise. It is also painful, often excessively so, the pain being sometimes so great as to be hardly bearable, at other times almost *nil*. In these accessions of pain there is almost always a marked tendency to periodicity. It is, however, in its healing that it presents one of its most peculiar features: a scaly-looking scab, which retards healing greatly if not removed, is apt to form over the ulcer. If, however, this be prevented, the edges of the ulcer gradually heal, with marked exfoliation of epidermis, which, if allowed to become dry, forms a ring of adherent horny scales, removal of which is generally attended with bleeding. The newly-formed skin round the edges of the healing ulcer, and also the skin of the ulcer when healed, show this scaling process for some time subsequently. A certain amount of pigmentation remains after the ulcer has healed; this in Europeans is of a bluish tinge, and in natives of India somewhat the same, making allowance for the difference of colour in the healthy skin. It is in no way comparable with, or liable to be confounded with, specific pigmentation.

In treatment these ulcers are peculiarly obstinate; all recognised modes of treatment by rest, position, strapping, Martin's bandages, aided by iodoform, iodine, carbolic acid, boracic acid, and what not, fail signally to effect the slightest improvement till the peculiar nature of the ulcer is recognised and made the basis for a system of treatment. And here, though I do not wish to discuss the etiology of these ulcers, I wish to remark, *en passant*, that without anti-malarial treatment these ulcers will never heal soundly, and that when once the patient is put upon largish doses either of quinine or arsenic, the simplest local treatment will suffice to effect a comparatively speedy cure. Of the local measures adopted for the cure of these ulcers, frog-skin grafting I have found most successful. The operation of "fringing" or snipping the edges round, with free division of the fibrous base of the ulcer, in long-standing cases, must precede all other local measures. My attention was first called to this method of treatment by a paper which was published towards the end of 1884 by Dr. Allen of Leadgate, co. Durham. The paper may be found at p. 875 of THE LANCET for 1884, dated Nov. 15th. I can fully corroborate all that Dr. Allen says in that paper, except that I have not found the frequent necessity for a series of grafts which he describes.

My cases had, with one exception, been in native soldiers. That exception was the case of an officer, who suffered from severe ulceration of the foot, off and on, for upwards of three years. Two visits to Europe cured the sore for a time, but it recurred each year on return to India. The officer in question suffered from marked malarial cachexia, and was very anæmic. After almost every drug had been tried, the real nature of the sore was appreciated, having been hinted at by the periodicity of the pain and occasional intercurrent attacks of ague. Treatment by quinine speedily brought about healthy action in the ulcer, and when this was sufficiently healthy to admit of grafting, frog-skin grafts were applied, and the ulcer speedily healed soundly and well. The resulting cicatrix was firm, sound, and appeared likely to remain so.

After this case the regiment with which I am serving was in Beluchistan, in a notoriously unhealthy district, where scurvy is endemic and ulcers of the kind now under consideration are extremely common. The men suffered greatly from these sores, and every officer in the regiment, with one exception, had several, either on the arms or legs. I went on leave in August, when these sores were just beginning to appear, and my place was taken by Surgeon Price, I.M.S.; his experience led him to the same conclusion at which I had arrived—viz., that to be successful in the treatment of this form of ulcer one must have recourse to either arsenic or quinine. When the regiment arrived at Meean Meer in February of the present year, after a year's service in Beluchistan, there were upwards of fifty men in hospital, fully one-half of whom had these "tropical ulcers." These were for the most part on the legs, a favourite place being the dorsum of the foot. They were all put upon quinine and iron, and the foot of course placed in the most favourable position. Many of these ulcers healed readily; but the more obstinate required grafting with frog-skin, after which they healed with astonishing rapidity. I have selected four cases from those treated.

Recruit M. S——, 4th Troop, was admitted to hospital on Jan. 30th, on the arrival of the 5th Bengal Cavalry from the line of march. He was anæmic, and evidently in great pain from a large ulcer on the dorsum of the right foot. He had had this ulcer some two months, it having appeared shortly before the regiment marched, but he had managed to march with the regiment, wearing the country shoe in lieu of his jack boot. The ulcer was as large as a crown-piece, deeply cupped, with high, sluggish, ragged edges. His general condition improved slowly, and by the end of February the ulcer, which had for a week previously been treated with a Martin's bandage locally, was in a fit state to graft. Six grafts from the belly of a frog were applied; healing was seen to be going on when the first dressings were removed on the fourth day, and proceeded uninterruptedly, being complete by March 15th. He was discharged to duty on April 12th, with a soundly healed foot, able to wear his jack boots and perform all his duties with efficiency.

The other three cases are as follows:—

Sowar No. 112. S. C——; admitted on Feb. 4th; grafted on March 2nd; discharged to duty on April 17th.

Sowar No. 500. S. S——; admitted on Feb. 5th; grafted on March 2nd; discharged to duty on March 29th.

Sowar No. 275. G. S——; admitted on Feb. 5th; grafted on March 1st; discharged to duty on May 7th, 1886.

These are a few of the cases. The point which has forced itself upon my notice is that, once the essentially malarial nature of these ulcers is recognised, they prove as amenable to treatment as any other ulcer. If, on the other hand, one ignores, whether from prejudice or other cause, this malarial factor, the "tropical ulcer" proves not only a most stubborn foe to the medical officer, but a most fruitful source of loss of service to the State.

Meean Meer.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

A CASE OF INGUINAL ANEURYSM SUCCESSFULLY TREATED BY LIGATURE OF THE EXTERNAL ILIAC ARTERY; WITH POPLITEAL ANEURYSM IN THE OPPOSITE LIMB, TREATED BY COMPRESSION AND GALVANO-PUNCTURE. NECROPSY, EIGHTEEN MONTHS AFTER OPERATION; REMARKS.

(Under the care of Mr. WILLIAM ANDERSON.)

IT is seldom that we are able to publish a case in such complete form as that recorded below, and the unusual condition of the inguinal aneurysm as found post mortem and illustrated by the diagram is very interesting. How far the introduction of the needles into the sac and the passage of the electric current through them may have contributed to the successful treatment of the popliteal aneurysm it is difficult to say, so many cases apparently similar having been cured by simple digital compression. The special precautions taken in the management of the needle punctures are worthy of note, and we shall be glad to see the records of other cases of aneurysm treated in a similar manner. For the notes of the case we are indebted to Mr. R. V. Solly, dresser.

The patient, a carman, aged forty-two, was admitted on July 20th, 1885, with the following history. Health always good, but habits rather intemperate. He was not aware that he had had any venereal disease, but he suffered from an

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abscess in the right groin seven years ago, and three years later was laid up for three weeks with acute epididymitis. There was no history of secondary manifestations of syphilis. Seven or eight weeks before admission he observed a pulsating swelling in the right groin. As this enlarged and at length became painful, he attended at the hospital.

On examination a large aneurysm was found in the right groin. It was pear-shaped, about three inches and a half in length and two inches in its greatest transverse diameter, and the narrow upper extremity extended for a short distance beyond Poupart's ligament into the pelvis. Further exploration of the arterial system led to the discovery of a second aneurysm, about the size of a hen's egg, in the upper half of the left popliteal space. The patient had not previously been aware of the existence of this tumour, but thought it might have been caused by his habit of riding on the cart with the leg hanging over the side, the ham resting against the edge of the vehicle. The general health appeared to be fairly good, and the heart and lungs were normal. The left pupil was larger than the right, both however acting to light, and on convergence.

Under the influence of rest the man improved during the first week of his stay in the hospital, but at the end of this time the inguinal aneurysm began to enlarge rather rapidly, and the limb became swollen and painful.

On July 31st Mr. Anderson tied the right external iliac artery. The vessel was exposed under antiseptic precautions, by means of an incision three inches long, parallel to and an inch above Poupart's ligament. A ligature of stout carbolised catgut was applied about an inch and a half above Poupart's ligament, and after the insertion of a drainage tube the wound was closed and dressed with iodoform gauze and salicylic wool. The pulsation of the aneurysm was completely arrested immediately after the tightening of the ligature. The surface temperatures of the lower extremities after the operation were as follows:—Two hours after: left, 95·2°; right, 90·4°. Five hours after: left, 97·8°; right, 95·2°. Nine hours after: left, 97·4°; right, 98°.

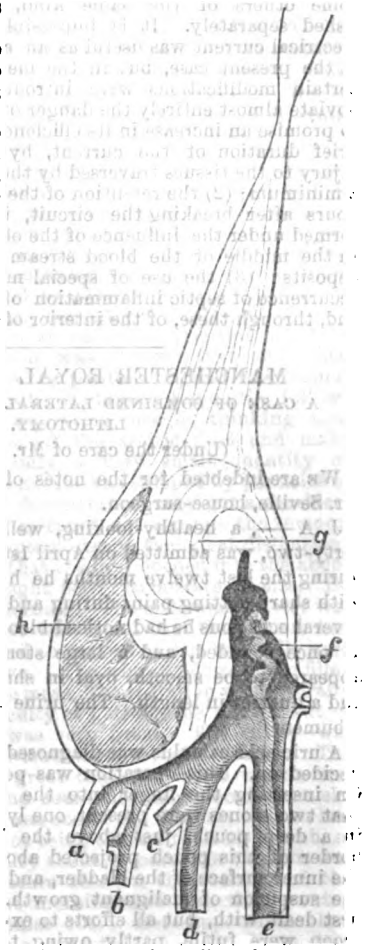
During the next few days the right leg was generally half a degree or a degree cooler than the left, but on one or two occasions its temperature rose somewhat higher than that of its fellow. The equilibrium was permanently established by the end of a week. The wound healed by first intention, and no unfavourable symptoms arose until nearly two months after the operation, when the patient, having undergone treatment for the opposite limb, was allowed to get up. A recurrent pulsation was then observed in the apparently cured aneurysm. The impulse gained in strength during the next fortnight, after which it remained stationary. The tumour, which had shrunk after the ligature of the artery, did not become larger after the reappearance of the pulsation.

The treatment of the popliteal aneurysm was commenced on September 3rd. Digital compression of the common femoral was started at 2 P.M.; an hour later two Duncan's needles were introduced into the sac and connected with the poles of a Stohrer's battery; a current from sixteen cells was passed for five minutes, after which the needles, carefully packed with antiseptic wool, were left *in situ*. On the following day, at 10.15 A.M., the compression was discontinued and the needles were withdrawn. Pulsation was found to be completely arrested. The temperature of the limb during the next twelve hours sank four or five degrees Fahrenheit below that of the opposite leg, but gradually rose again to the normal level on the following day. The needle punctures showed no signs of irritation, and were closed by the end of the second day after the cure. The patient was allowed to leave his bed on the 20th, and was shortly afterwards discharged.

During the next few months the man showed himself from time to time, and appeared to be in very good health. He was following the employment of a tram conductor, and said he was able to do his work without difficulty. The pulsation in the inguinal tumour persisted, but there was no increase in its force, and the sac had not enlarged.

On the 10th of January last the patient, who had been absent for over a year, was brought to the hospital in a state of extreme prostration, suffering from severe cough and dyspnœa, with signs of aneurysm of the arch of the aorta. No change had taken place in the inguinal aneurysm, which still pulsated, but the popliteal tumour was smaller, and remained quite solid. The thoracic symptoms made rapid progress, and death occurred on the evening of the 13th.

At the post-mortem examination a large sacculated aneurysm was found on the right side of the ascending part of the arch of the aorta; the lungs were congested, and showed patches of broncho-pneumonia; and the large arteries were extensively diseased. The heart walls and valves were normal, and no evidence of pre-existent syphilis was anywhere to be seen. The two aneurysms operated upon by Mr. Anderson were removed entire. The condition of the parts was as follows:—The external iliac artery at the seat of ligature was reduced to a solid cord of about one-tenth of an inch in diameter, and the canal above this point was filled with clot as high as the bifurcation of the common iliac, and below as far as the aneurysmal sac. The aneurysm itself was of pyriform shape, about two inches in length, and involved the whole circumference of the artery down to the origin of the profunda; the lower part of the tumour was dilated into a kind of fundus, with which were connected, separately, the superficial femoral, the profunda (joined immediately below by its external circumflex branch), the internal circumflex, and a large muscular branch. On section, the sac was found to be almost filled with coagulum, partly soft, reddish, and friable, and partly pale, firm, and laminated; but at the lower and back part of the aneurysm was an irregular cavity or sinus, into which opened the vessels named (see diagram), and which was occupied in part by a string-like coil of decolourised fibrin that extended below into the common femoral. The popliteal aneurysm offered nothing special for notice. It was of about the size and shape of a small chestnut, and sprang from the inner and back part of the vessel, about an inch above the bifurcation. The artery was impervious as low as the origin of the anterior tibial, and the vein was obliterated to a corresponding extent. The sac was filled with friable clot, without any fibrinous laminæ, and appeared to have originally communicated with the main vessel by a rather small aperture. The popliteal artery of the opposite side was somewhat dilated above its bifurcation, and nearly opposite to this the vein was obstructed by a decolourised thrombus of old date.



Semi-diagrammatic outline of aneurysm and vessels. *a*, Internal circumflex. *b*, Muscular branch of internal circumflex. *c*, External circumflex. *d*, Deep femoral. *e*, Superficial femoral artery. *f*, Cavity with thread-like coil of fibrin. *g*, Laminated fibrin. *h*, Soft clot.

Remarks by Mr. ANDERSON.—Recurrent pulsation in the sac of a femoral or inguinal aneurysm after ligature of the external iliac artery has been recorded in several instances; but this case presents certain peculiar features of its own. An examination of the diagram will show that a complete consolidation of the tumour would almost inevitably have entailed gangrene of the limb, as the principal collateral stream could only reach the superficial and deep femoral vessels by passing through the fundus of the sac. So long as the patient was recumbent and at rest the force of the

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in-coming current was not sufficient to give any noticeable impulse to the tumour, but as soon as exercise was resumed pulsation reappeared, and a secondary cavity of considerable size seems to have been formed at the expense of the soft coagulum. At a later stage the dimensions of the cavity underwent progressive diminution by the deposit of laminated fibrin upon its walls, and had the patient lived longer the obliterative process would probably have advanced much further, although it is unlikely to have ever become complete. At one period in the post-operative history of the tumour the development of a secondary aneurysm, having the same tendencies as the first, was more than a possibility. Had this occurred, the treatment of the condition would have been a very serious problem.

The plan adopted for the cure of the popliteal aneurysm needs only a brief allusion here, as the case, with some others of the same kind, will shortly be published separately. It is impossible to say how far the electrical current was useful as an adjunct to compression in the present case, but in the method of its application certain modifications were introduced which appear to obviate almost entirely the danger of galvano-puncture, and to promise an increase in its efficiency. There were (1) the brief duration of the current, by which precaution the injury to the tissues traversed by the needle was reduced to a minimum; (2) the retention of the needles *in situ* for many hours after breaking the circuit, in order that the clot formed under the influence of the electricity might be held in the middle of the blood stream as a nucleus for fresh deposits; (3) the use of special measures to prevent the occurrence of septic inflammation of the needle punctures, and, through these, of the interior of the sac.

MANCHESTER ROYAL INFIRMARY.

A CASE OF COMBINED LATERAL AND SUPRAPUBIC LITHOTOMY.

(Under the care of Mr. HARDIE.)

WE are indebted for the notes of the following case to Mr. Seville, house-surgeon.

J. A——, a healthy-looking, well-nourished man, aged forty-two, was admitted on April 1st. The history was that during the last twelve months he had been much troubled with sharp cutting pains during and after micturition. On several occasions he had noticed blood in the urine. He was at once sounded, and a large stone was readily felt; it appeared to be smooth, oval in shape, and about an inch and a quarter in length. The urine was acid and free from albumen.

A uric acid calculus was diagnosed, and lateral lithotomy decided on. This operation was performed on April 2nd. On inserting the finger into the bladder, it was found that two stones were present, one lying free, and the other in a deep pouch, just above the left tuber ischii. The border of this pouch projected about half an inch above the inner surface of the bladder, and was so hard as to raise the suspicion of malignant growth. The loose stone was first dealt with, but all efforts to extract it by forceps and scoop were futile, partly owing to the impossibility of laying hold of it in the long axis, and partly owing to the other stone being dragged at the same time towards the opening and blocking the way. Attempts were then made to dislodge the encysted stone, but these were likewise unavailing. The question of breaking the stones with the lithotrite and extracting the fragments by the perineal wound, or of opening the bladder above the pubes, was then considered, and the latter operation decided on. A sound was therefore passed into the bladder by the perineal wound, and made to project above the pubes. An incision about three inches long was made in the middle line just above the symphysis, and careful dissection carried on till the bladder was reached. Two strong threads were then passed in a longitudinal direction and about half an inch apart through the wall of the bladder, which was rendered prominent by means of the sound, and the viscus was opened between them. There was now no difficulty in seizing first the one and then the other stone with lithotomy forceps and extracting them. A lithotomy tube was introduced into the perineal opening, and the suprapubic wound was simply dusted with iodoform and lightly covered with a dry absorbent dressing. The stones were very similar in shape and size, being oval or somewhat triangular in outline, with flattened surfaces. They were found to weigh 2 oz. 80 gr. and 2 oz. 50 gr. respectively.

The patient very rapidly got over the effects of the chloroform and the shock of the operation. In the course of the next few days the urine became very foul, and the bladder was therefore washed out twice daily, through the perineal opening, with a warm saturated solution of boracic acid. Except for slight pains in the lower part of the abdomen and some flatulence the patient expressed himself as feeling quite well. On the 5th urine began to flow from the suprapubic wound, and a few days later the greater part escaped by it, scarcely any coming by the perineal tube, which was therefore removed. On the 23rd a little urine for the first time escaped by the urethra. As the perineal wound had now almost closed, the bladder was washed out by passing a tube into the suprapubic opening and allowing the fluid to escape by the urethra. During the next month, except a little improvement in general health, no appreciable progress was made; but towards the end of May the suprapubic wound began steadily to contract up, and by the end of the month was too small to admit the insertion of the tube to wash the bladder; it did not, however, finally close till three weeks later. The interior of the bladder was examined with a sound, and the part corresponding to the situation of the pouch was felt to be very rough and irregular. It was supposed that much of the discharge was occasioned by its sluggish filling up and healing. During the early part of June a solution of nitrate of silver was applied to the interior of the bladder once daily. The strength used was five grains to the ounce at first, gradually increased to ten. Under this treatment the cystitis rapidly improved, and with it the general health. The patient went home on June 24th.

DEVON AND EXETER HOSPITAL.

THREE CASES OF COMPOUND FRACTURE OF THE SKULL; TREPHINING; RECOVERY.

(Under the care of Mr. BELL.)

CASE 1.—T. T——, aged twenty-six, a miner in a stone quarry, was admitted on Jan. 1st, 1887. Whilst he was at work a large piece of rock fell on his head, and he became insensible, but regained consciousness prior to admission. On examination, a wound extended downwards from the top of the left side of the frontal bone to the upper edge of the malar bone, at the upper part of the wound over the left temple. The skull was fractured and driven in, the cavity being about the size of a florin; the orbital portion of the frontal bone was loose; there were some loose fragments of bone lying in the wound, and a squarish piece of bone, measuring ¾ in. by ½ in., driven down upon and depressing the brain. Under chloroform, Mr. Bell removed the loose pieces of bone, but was unable to raise the piece which was depressing the brain. He therefore enlarged the wound upwards, and, trephining the frontal bone at the upper edge of the fracture, removed the depressed portion, which had become wedged under the edge of the sound bone; the dura mater was uninjured, and the brain immediately regained its normal position. The wound was washed out with warm weak carbolic solution, and brought together with horsehair sutures, a drainage tube being inserted and iodoform and Gamgee dressing applied. The patient was then placed in bed, and an ice-bag applied.—Jan. 2nd: Temperature 99°; pulse 88. No pain in the head. Was sick twice in the night (chloroform?).—3rd: Temperature 98·4°; pulse 80. No sickness. The drainage tube was removed; dressing as before. From this time he made an uninterrupted recovery, the wound healing by first intention. Before finally leaving the hospital he was fitted with a light celluloid guard

CASE 2.—T. C——, aged forty-three, a labourer, was admitted on March 24th, 1887. He had, about three hours previously, fallen into a stone quarry, a distance of thirty feet, pitching on his head. On admission there was a severe lacerated scalp wound over the posterior superior region of the left parietal bone. On passing the finger into this, a depressed fracture was found. There was also a scalp wound at the back of the head. The left arm was much bruised and very painful; the right arm completely para-

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lysed and very cold. Pupils normal; pulse regular at both wrists, but somewhat slow. He was fairly conscious, and had not vomited. Temperature normal. Under chloroform Mr. Bell enlarged the wound, making a T-shaped flap. On turning back the flap a depressed fracture of the left parietal bone was found, and a piece of bone measuring 1 in. by ½ in. was seen driven in upon the brain. A large-sized trephine was applied at a point about five inches above the front of the left ear, five inches above the centre of the left orbital ridge, and rather more than one inch to the left of the central line; the depressed bone was split into plates and driven under the sound bone; these were removed with forceps, and the depressed edges of the sound bone elevated. The dura mater appeared uninjured. The area of bone removed measured about 2 in. by 1 in. Dressing same as in Case 1. After operation, before removal from the room, the right arm became bathed in sweat, and then normally warm.—March 25th: Has had a fairly good night; no sickness, and is quite conscious. Pulse and temperature normal. Can move the right hand slightly.—26th: Dressing re-applied and drainage tube removed; arm recovering.—April 1st: Wound re-dressed; no discharge. Movement of arm almost regained. From this date the patient rapidly recovered, and left the hospital wearing a celluloid shield, the grasp and movement of the right arm being normal.

CASE 3.—A. N——, aged fourteen, was admitted on May 21st, 1887, at 6.30 P.M., having, an hour and a half previously, been knocked down by a railway engine. On admission the patient was unconscious, and lay perfectly still, breathing heavily. When touched or spoken to, he became very noisy and violent. The right cheek and parts around it were very much bruised and swollen, and there was a small oblong wound just above the right eyebrow. On passing a probe into this, a depressed fracture was felt. There was free bleeding from the nose, but none from the ears. His pulse was feeble and slow, and the skin generally cold. Under chloroform, Mr. Bell enlarged the wound longitudinally, and made a vertical incision of about an inch upwards from the centre; the flaps were turned back and bone exposed; a piece of the frontal bone, measuring 1 in. by ½ in., was found fractured and depressed. The trephine was applied to the frontal bone above and to the inner side of the orbit; the depressed and loose bone was removed. The dura mater appeared uninjured. There was some free bleeding. The wound was treated and dressed as in the previous two cases. He made an excellent recovery.

Remarks by Mr. BELL.—These cases were all operated on immediately on their admission to the hospital. This I think of great importance as to successful result, together with the perfect cleansing and drainage of the wound; and I am also convinced that the application of the ice-bag to the head is an essential part of the after treatment.

STANLEY HOSPITAL, LIVERPOOL.

A CASE OF DISLOCATION OF THE HIP IN A CHILD AGED FIVE.

(Under the care of Mr. KELLETT SMITH.)

WE are indebted to Mr. G. P. Newbolt for the following notes.

Charles R——, aged five, was admitted late on May 10th. Ten minutes before admission he had fallen off a waggon whilst playing in a barn, his leg getting twisted under him as he fell.

On admission the child was unable to walk, and complained of pain in the left hip. On examination, the left limb was found to be flexed, adducted, and rotated inwards; there was no crepitus, but the head of the bone could be felt on the dorsum ilii, and the limb was comparatively fixed. On standing the child on the sound limb, the left at once assumed the characteristic position of a dislocation on the dorsum. There was one inch shortening. Having laid him on his back, the limb was flexed, abducted, and rotated outwards. The head slipped in with an audible click, and the deformity at once disappeared, the movements of the joint being perfectly natural. The child seemed much relieved, and at once ceased crying.

The little patient was kept lying on his back for two weeks with a Thomas's hip splint applied. The splint was then taken off, and at the end of three weeks he left the hospital walking perfectly well.

Remarks by Mr. NEWBOLT.—The case is interesting from the rarity of the accident at so early an age, fracture of the shaft being more common. The ease with which it was reduced is also worthy of notice. This, I suppose, may be partially accounted for by the short interval (about fifteen minutes) between the displacement and its reduction. No anæsthetic was used.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

Ovarian Tumour.—Report of Rotunda Hospital.

AT a meeting of the Obstetrical Section held on June 10th, Dr. A. SMITH exhibited a Fœtus of six months. It was surrounded by membrane and had the placenta attached. The most interesting part of the specimen was its posture, indicating how the child had lain in the uterus. The extremities were folded together, the cord was round the neck, and one foot was almost touching the nose. Meconium was coming away from the anus at the time of birth.

The PRESIDENT exhibited an Ovarian Tumour which he had removed from a woman, aged forty years, who had had six children and one abortion. Shortly after her last pregnancy she began to feel a pain at the lower part of the abdomen near the labia; and in a year afterwards a swelling had come on. Twelve months ago she came to the Rotunda Hospital and was advised to submit to an operation, but would not do so and left. Recently she came back to the hospital, being swollen to an enormous size and unable to walk. On examination it was obvious that there had been a large effusion into the peritoneum, and the tumour could hardly be made out. He tapped her on the following morning with an aspirating needle, thinking that he would be able to get off the ascitic fluid and make out the tumour, but only a very small quantity of fluid came away, as the needle was stopped by particles of thick, jelly-like matter. Nevertheless, they got a considerable quantity out, but they could not aspirate the tumour. She had no serious symptom except the great distension; and as it was obvious that the cyst opened into the abdominal cavity, it was thought better to operate at once. He did so on the previous morning. The abdominal cavity was full of viscid stuff, and it was found that the tumour had burst at one side. He tried to remove it, but the walls were so thin that it broke down. The whole abdomen was filled with the viscid, jelly-like mass. The operation was naturally a long one, and the difficulty of getting the matter out of the abdominal cavity was very great. The cavity was thoroughly washed out with a weak carbolic solution. The distension had been so great that the whole vagina was completely prolapsed, and could not be replaced when she lay in bed. The pedicle was one of the thinnest that he had seen for a long time, not being thicker than his thumb, so that there was no difficulty about it once the tumour was removed. The temperature rose on the evening of the operation to 101°; that morning and also that evening it was 98°, and her pulse 104. Her appearance had improved since she was operated on.—Dr. KIDD said he had seen three or four cases in which tumours had burst into the cavity of the peritoneum, and the majority of them did not turn out satisfactorily. The last case of it that he saw he described at a meeting of the old Obstetrical Society. It was complicated with pregnancy, and Sir Spencer Wells was brought over and operated on the lady, but she died on the sixth day. Most of these cases were capable of being diagnosed beforehand; and the inversion of the vagina in them was very remarkable. In cases of ascites Douglas' space was generally protruded; but he did not think that occurred in cases of ovarian dropsy.

Dr. JOHN L. LANE then submitted the report of the Rotunda Hospital for the three years ending Nov. 3rd, 1886.—Dr. KIDD said Dr. Lane was to be congratulated on this report, which was a satisfactory one in every respect. The most important feature in it was the record of patients followed for five or six weeks after they had left the hospital. It was the fair and right way of estimating the mortality of puerperal conditions. During the first 100 years of the existence of the hospital the mortality,

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as stated by Johnston and Sinclair, had been 1·21 per cent.; and during that period antiseptic precautions and treatment were not known. Perhaps if the cases had been followed and counted, as had been done, according to the present report, the mortality would have been greater. It was curious that during the mastership of Dr. Collins the mortality in the hospital from all causes was 0·54 per cent., being less than half the mortality recorded in the present report. They might be sure that all the cases that occurred during Dr. Collins's time were fairly cured; but there was no evidence in his book, as far as he remembered, that the cases were followed as they had been during the last three years. During his time 10,785 patients were delivered, and the total mortality was 0·96 per cent.; and during the last four years of his mastership the mortality was 0·54 per cent. Dr. Macan had succeeded Dr. Atthill in the mastership. During the last few months of Dr. Atthill's mastership there was a remarkable outbreak of puerperal fever in the hospital. The history of puerperal fever in the hospital had been always this: First there came an epidemic with a large resulting mortality; after it subsided they had a freedom from puerperal fever and a gradual decrease in the deaths for three or four years. Dr. Macan's first report did not show a death from puerperal fever. Now they were having an increase in the number of deaths; and he hoped that it would prove the omen of a future corresponding diminution. Dr. Collins entered upon his mastership after an outbreak, and for three years the mortality was low, though considerable. Afterwards, for four years, there was not a case of puerperal fever, and there came the mortality from all causes of 0·54. Dr. Ivory Kennedy then entered upon the mastership, and in his first year there was a furious outbreak, with a mortality larger than had ever been known before. He did not think the immunity from the disease at those intervals had been due to any extra precautions, but rather to the natural history of the disease. He did not say a word against antiseptic treatment; on the contrary, he believed in it, recommended it, and followed it as far as his lights enabled him to do. But it was necessary to look facts in the face; and one of these was the natural history of disease.—Dr. BYRNE observed that the report contained no allusion to the mortality of the children during the three years. Many years ago, in Dr. Clarke's time, the condition of the Rotunda Hospital must have been very bad; puerperal tetanus was then quite common in it. Dr. Clarke's attention was directed to the unsatisfactory condition of the place, and he improved it as far as was in his power. Great and remarkable improvements had been made by succeeding masters; but Dr. Macan might be looked on as the pioneer of antiseptic remedies. Yet he appeared to have abandoned them in this report. He appeared to be a good deal in accord with the tendency of the present day, which was to discard all those remedies. During three years of Dr. M'Clintock's mastership—from 1842 to 1845—there were 6664 deliveries; and during Dr. Shekleton's mastership of seven years there were 13,748 deliveries. That meant that during both these masterships the wards had been more crowded than they were during Dr. Macan's mastership. The present master of the hospital had gone on doing the best he could; but there was something more in the facts than could be explained by antiseptic treatment. Antiseptics had been multiplied, yet still puerperal disease remained. Therefore, it appeared to him that antiseptic treatment had proved a failure to a considerable extent. Of the number of patients who died eighteen were primiparæ and twenty-five were multiparæ of from two to five and six births each. This was a little different from the ordinary reports of maternities, which, as a rule, showed that the mortality was greater in primiparæ.—Dr. HORNE considered the report a most valuable one. As regarded the question of mortality, the results given in the present report could hardly be compared with those of the [illegible] the century; for amongst the old rules of the hospital was one that the master was to "endeavour to keep patients at least five days in hospital after their confinement"; consequently the period of observation was altogether different. The statistics of the present report showed that in 1883 and 1884 there were 175, in which the temperature did not exceed 100·4°; that in 1884 and 1885 the number with such temperature decreased to 94; and that in 1885 and 1886 there was a further fall to 93, which circumstance showed that while the mortality had somewhat risen, the general health of the hospital had improved.—Dr. DOYLE said he looked on this report as the most reliable one that he had ever heard in connexion with the Rotunda Hospital. Hitherto each writer of a report had gone on a different system of making up his statistics; but until one uniform system should be adopted by all, it would be impossible to make reliable comparisons with respect to the mortalities in the various periods.—The PRESIDENT said he had not looked up former mortalities; but in some former reports he had seen as many deaths recorded in a month as had taken place latterly in the Rotunda Hospital in a year. The epidemic theory might be offered as the explanation of that; but he would express his absolute disbelief in any such thing as an epidemic of puerperal fever. There might be a lot of cases in the hospital at a particular time, because even one case was a source of danger; but he repudiated the idea that there could be anything in the air to cause it, or that anything was to come in the third year because it had not come for two years before. He would not attempt to compare present statistics with those of a hundred years ago. They did not call the same thing puerperal fever then that was now known by that name; and it was not now known what former conditions were. If hands and instruments were kept clean he would go so far as to say that puerperal mortality would be almost *nil*. What they had to do was to be on their guard with single cases of puerperal fever, for if there was any want of care in respect of cleanliness or antiseptic precautions, a whole ward might become full of it before they knew where they were. The only difficulty that he felt as regards his belief in antiseptics was how they got rid of puerperal fever without them in old times. In some cases it was more difficult to apply them than in others; but on the whole he thought that antiseptics were the very centre and essence of midwifery nowadays.

The Section then adjourned.

Notices of Books.

The Mineral Waters of Vichy, and the Diseases in which they are indicated, followed by a Sketch of some of the principal Excursions in the Environs. By Dr. C. E. CORMACK. Pp. 375. London: J. and A. Churchill. 1887.—The author of this work states that, while the number of visitors to Vichy has of late years been steadily increasing, the number of English tends to decrease, and is considerably less than it was ten years ago. He has been induced to compile the present volume in the hope of checking this tendency by directing attention to the great efficacy of the waters in the treatment of a number of complaints. The work is divided into two parts: the first giving a description of the various springs (thirty-one in number), and the diseases in which they are generally found beneficial; and the second affording all the necessary information respecting the means of reaching Vichy, the town itself, the thermal establishment, and the different places of interest in its environs or within easy reach of it. The first part might again be subdivided into two: the first section giving a detailed account of the different springs, the mode of using the waters, and the hygiene and diet required during treatment; and the other, a description of the diseases treated at Vichy. In the preface the author has stated that the book "has been composed not so much for the medical profession as for the public; and we have endeavoured to explain in popular language where the thermal treatment is indicated, and how the waters operate." In this point of view we cannot but think that the chapter on the diseases—extending over 124 pages—is a great mistake, and likely to do much more harm than good to the invalids who read it. With that exception the work will be found of value, furnishing, as it does, much useful information respecting Vichy and its waters. If a second edition is called for, we would strongly recommend the author to excise the chapter, or at least to cut it down to a very moderate size by the omission of a great deal of the purely professional matter. There are

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two maps with the book—one of the town, and the other of the environs of Vichy. The latter is merely a road map, and is defective in not showing the mountain ranges. There is also a good index to the book.

The Climate of Llandudno. By JAMES NICHOL, M.D., late Medical Officer of Health. Manchester and London: John Heywood.—In this pamphlet Dr. Nichol discusses the scenic and climatic attractions of Llandudno and their applications to cases of disease. To those who are familiar with this charming Welsh watering place it will not be surprising that the writer should make out a very good case; but his words would carry more weight if they were less of the nature of an unqualified panegyric. The facts adduced prove satisfactorily that Llandudno has a climate of considerable equability and comparative dryness, and that the soil, drainage, and water supply all conduce to constitute it a health resort of decided value. We cannot, however, share Dr. Nichol's surprise that the mean temperature of Llandudno should be as high as that of Eastbourne, Bournemouth, or Torquay, as it is well known to practical meteorologists that in these islands, owing to the influence of the Gulf Stream, the isotherms run north and south, rather than east and west. Thus the little island of Monach in the Hebrides has actually almost as high a mean temperature as Jersey. These facts are, no doubt, commonly ignored, and it is not a work of supererogation to remind the public that the winter at Llandudno is as mild as at some of the most favoured spots upon the south coast. While Dr. Nichol's meteorological facts are marshalled in a workmanlike fashion, we can hardly say the same about his observations regarding the influence of the climate of Llandudno upon disease. He says: "In regard to the class of diseases and conditions of the system to which the climate of Llandudno is adapted, their name is legion. It is beneficial in almost all cases of simple debility, whether general or local, constitutional or inherited, or the result of acute or chronic disease." Vague statements of this kind are of little value. If Dr. Nichol has not met with any cases of debility which are injuriously affected by sea air, we must regard his experience as exceptional. While unable to acquiesce in all Dr. Nichol's enthusiastic eulogies, we are of opinion that the merits of Llandudno, both as a summer and winter resort, are exceptional, and we commend them to the attention of the profession.

A New Basis for Chemistry: a Chemical Philosophy. By THOMAS STERRY HUNT, M.A., LL.D. Cantab., author of "Chemical and Geological Essays," &c. Boston: Cassino. London: Trübner and Co. 1887.—The author of this book, a distinguished American man of science, has been known for many years as an opponent of the atomic hypothesis in chemistry. He now gives us, in a series of essays founded on the latest observations of chemists and physicists, an alternative hypothesis in a coherent form. No true chemist accepts Dalton's great generalisation as an expression of absolute truth, but merely as a convenient and more or less probable mode of accounting for facts. There are many difficulties in the way of the current views of chemical constitution and change, and every inquirer into truth, even if he is not ultimately convinced, will study with interest and profit any new hypothesis which offers a solution of the difficulties. It is not in our province, and would take far too great a space, to discuss Dr. Sterry Hunt's contribution to chemical theory. We can only indicate in a few words his line of argument, and leave those of our readers who are interested in scientific speculation to judge the book for themselves. Matter, according to Dr. Hunt, is homogeneous and destitute of ultimate particles. Each kind of matter is a species distinct in itself, but subject to metamorphoses such as are represented by the solid liquid and gaseous conditions, allotropic and polymeric varieties, and the like. Each species is produced by the integration or disintegration of other species, and he quotes and adopts the definition of Hegel, that "the chemical process is an identification of the different and a differentiation of the identical." Each kind of substance is neither an element nor a compound, but a species. The species from which no other species can arise by mere differentiation is what we call an element. The elements, like all other species, are formed by a genesis such as Mr. Crookes has recently suggested, and, finally, chemism is not to be confounded with dynamic agencies. "It is one of the manifestations of an energy pertaining to matter, which inclines it to integration or disintegration, as conditions favour the one or the other mode of change." This very crude sketch may convey some idea of the new chemical philosophy. It is supported by many ingenious arguments, among which those derived from the law of volumes are perhaps the most important; but it must be admitted that much still remains unexplained, and that the whole scarcely rises above the rank of an able and interesting speculation. As such we welcome it. Time will show whether it will prevail over Epicurus and Dalton, but in any case it is sure to assist in scientific thought.

A Manual of Veterinary Hygiene. By FRED. SMITH, M.R.C.V.S. Pp. 477. London: Baillière, Tindall, and Cox. 1887.—This is a work which cannot fail to prove useful and interesting to all who have to do practically with animals, and especially with horses. The author is Professor of Veterinary Hygiene in the Army Veterinary School at Aldershot, and has had the advantage of being trained in the Laboratory of Hygiene at Netley under the late Dr. Parkes, and has also worked there under Dr. De Chaumont. In this volume he has discussed at some length the principal conditions likely to affect the health of animals, and the measures necessary to maintain them in an efficient state. The chapters on stable construction, ventilation, food, and the eradication of epizootic diseases appear especially to deserve careful study. The chapter on individual hygiene is also very good, but is confined to that of horses alone; it might have been very advantageously extended to other animals. The value of hygienic measures is clearly shown by the greatly reduced death-rate and casting of our army horses in consequence of the attention paid to the sanitary conditions in which they are kept. "It has been publicly recognised that we have practically banished diseases which, before our time, decimated regiments; that we have prolonged the useful life of the horses of the army, and have placed them at the head of all others for freedom from diseases, and general fitness for work." In the French army, which, in this respect, is still behind ours, the adoption of sanitary measures "effected a saving of £90,000 per annum in the purchase of horses alone." There is still much room for improvement in the hygienic conditions of horses employed in civil life, and even more in those of other cattle. We trust that Mr. Smith's book may exercise a beneficial influence, by calling attention to the pecuniary advantages arising from a moderate expenditure in this direction. Another important matter which he discusses, and which seems to require great modification, is animal transport by sea. We strongly recommend the book to all who are interested in horses and other cattle, or who desire to promote their humane treatment. It has the advantage of a copious index.

Lehrbuch der Allgemeinen und Speciellen Pathologischen Anatomie. Von Dr. ERNST ZIEGLER. Zwei Bände. Fünfte Auflage. Erster Band: Allgemeine Pathologische Anatomie und Pathogenese. Zweiter Band: Specielle Pathologische Anatomie. Jena: Gustav Fischer. 1887. (*Text-book of General and Special Pathological Anatomy.* By Dr. ERNST ZIEGLER. Two Vols. Fifth Edition. Vol. I.: General

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Pathological Anatomy and Pathogenesis. Vol. II.: Special Pathological Anatomy.)—The fifth edition of a work so widely known as Professor Ziegler's Text-book of Pathological Anatomy needs no introduction to favourable notice; still it must be remarked that, in spite of the rapidity with which one edition has followed on the steps of another, the author has found time and expended much pains to improve and amplify his book. Those who are familiar with Macalister's excellent translation will find in the present edition many improvements. There is not merely a rearrangement of the subjects, so that the work presents now a very systematic character, but the number of illustrations, the vast majority of which are original, has been greatly increased, and considerable additions have been made to the text. Although the work has thus increased in bulk, there have been certain curtailments—e.g., in the sections on the organs of special sense. The first volume deals solely with general pathological anatomy, and is not one quarter the size of the second, which embraces the subject of special pathological anatomy, the whole work containing upwards of 1500 pages (large octavo) and 703 illustrations. In the first volume we find very material additions. Thus the introductory chapter has been rewritten, and now comprises a succinct account of the febrile process. The second chapter is entirely new. It deals with etiology, the introduction of which into a pathological text-book is a welcome sign of the broadening tendencies of modern inquiry. In this chapter are discussed the operation of external agents in causing disease, the inter-relations of morbid processes in the several tissues, the subjects of metastasis and embolism, disposition and immunity, inheritance and malformation; but the detailed discussion of malformations, which originally opened the work, is now relegated to a later place—viz., after tumours have been dealt with. It will be noticed also that the sections treating of specific new growths have been transferred from the chapter on inflammatory processes to that on bacteria. As may have been expected, this last-named chapter has been subjected to thorough revision and extension, so that it forms a complete account of pathogenic bacteria, illustrated by numerous coloured illustrations. The second volume also shows many evidences of careful revision, and covers the whole ground of special pathological anatomy. The only portions of the work which are not by Prof. Ziegler are the sections on the diseases of the organs of vision and hearing, which are contributed by Drs. Haab and Wagenhäuser.

The Journal of Anatomy and Physiology. Conducted by G. M. HUMPHRY, Sir WM. TURNER, and J. MCKENDRICK. Part 3, Vol. XXI. April, 1887.—This is the third part of the first volume of a new series. May we suggest to the editors the great value that would be possessed by a thoroughly good index to the first twenty volumes. Vast stores of knowledge are concealed and are practically lost in these volumes; and all are aware of the authority that attaches to the numerous memoirs they contain, since many of them have been written by the ablest biologists of this country during the last twenty years, the first volume having appeared in 1866. It would not be a very troublesome task to combine in literal order the indices to the second volumes as they have been already published. The present part contains:—1. J. W. Fraser: Memoir on the Action of Infused Beverages on the Peptic and Pancreatic Digestion of the chief Dietetic Proximate Principles. 2. Thomas Shore: Relations of the Mammalia to the Ichthyopsida and Sauropsida. 3. Henry Bewley: On the Changes produced in the Lungs of Sheep by a Parasitic Worm (Strongylus filaria). 4. James Oliver: Menstruation; its Nerve Origin, not a Shedding of Mucous Membrane. 5. W. Arbuthnot Lane: Evidence of Labour from examination of Skeleton. 6. M. Paterson: Morphology of Sacral Plexus in Man. 7. A. Macfadyen: Behaviour of Bacteria in the Digestive Tract. 8. David Hepburn: Double Superior Vena Cava, &c. 9. G. D. Hamilton: Weigert's Hæmatoxylin Copper Stain for Nerve Fibre, &c. 10. W. Hunter: Intra-peritoneal Blood Transfusion and the Fate of Absorbed Blood. 11. Sir W. Turner: Racial Characters of the Human Skeleton. 12. Prof. Humphry: Remarks on the Conditions, Habits, &c., of Centenarians. 13. R. Cory: Effects of Vaccination and subsequent Amputation of Supernumerary Fingers. 14. W. Menzies: Two Cases of Single Kidney. 15. D. Hepburn: Variations in Human Nerve Arrangements. 16. J. Lamont: Nerve-supply of Musculus Sternalis. 17. Abbé's Apochromatic Micro-objectives, &c. A very good number.

Analytical Records.

LANOLINE (LIEBREICHT.)

(MANUFACTURED BY BENNO, JAFFÉ, AND DARMSTAEDTER, BERLIN, FOR BURROUGHS, WELLCOME, AND CO., LONDON.)

THIS extremely interesting substance is prepared from the *suint*, or grease of wool. Crude suint, as is well known, contains potash salts, whereas the purity of this preparation is shown by the fact that it yields only a very small trace of ash. It contains mainly insoluble fatty acids, the soluble acids determined by the ordinary saponification method only amounting to 0·4 per cent. Its specific gravity at 120° F. is 0·911, and its melting point 113° F. (corrected). But its most remarkable property is that of taking up by mere trituration a very large quantity of water. We found no difficulty in incorporating as much as 150 per cent. of water, and it is said that even larger quantities may be introduced. It is sold in two forms, anhydrous and ordinary, the latter containing, according to our analysis, 20·74 per cent. of water. It is this power of mixing with water that suggested its use as an absorbent, for which it seems admirably adapted, as experience shows that the skin which has exuded it can as readily take it up. We regard it as an article of great promise, and shall look with interest for further records of its use.

DISINFECTANT AND DEODORISING CANDLES.

(THE DEE OIL COMPANY, SALTNEY, CHESHIRE.)

These candles are intended for use in the sick room, and generally in places where the air is of doubtful purity. They contain a real antiseptic, which can be separated by boiling in water or by careful sublimation. They burn with a fragrant odour, and seem well adapted for their purpose.

OLEUM DEELINÆ.

(THE DEE OIL COMPANY, SALTNEY, CHESHIRE.)

This is a mineral oil preparation intended for use in ringworm, eczema, scurvy, and other skin diseases. It is strongly fluorescent, has no taste or smell, does not give off vapour at 212° F., leaves no residue after burning, and is not acted on by sodium. Its purity is therefore evident.

SELLERS' HYPNOTIC TINCTURE.

(JOHN SELLERS & CO., FARRINGDON-STREET.)

The manufacturers state that this tincture, of which the dose is from half to one fluid drachm, is compounded of chloral, bromides, hyoscyamus, lupuline, cannabis indicus, and other drugs. Our analysis confirms this account, and we are the more disposed to praise the preparation because no attempt is made to conceal its composition.

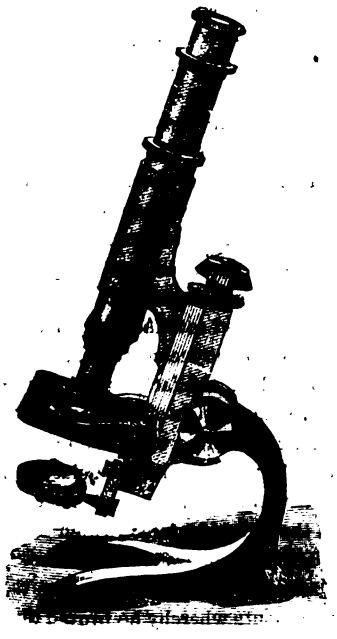
WATER FAMINE IN LANCASHIRE.—Notwithstanding the heavy showers which fell a week ago, the inhabitants of Langho, near Blackburn, are suffering from a water famine. All water used has to be taken from Clitheroe by rail in milk cans. This is served out by the station-master, who allows a bucketful to each family. There is not a drop of water in the district except what can be obtained in this way.

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New Inventions.

PILLISCHER'S NEW "KOSMOS" MICROSCOPE.

THE annexed woodcut illustrates a new student's histological microscope, recently made and brought out by Mr. Pillischer, of New Bond-street. A well-arranged optical body and stage, with a revolving diaphragm, is supported upon a solid bronze base or foot, which is at once original and most convenient, enabling the worker when using the stand to manipulate with the greatest ease. The fine adjustment is perfectly steady and sensitive, and will admit of the highest immersion objectives being used. The optical parts consist of one eye-piece and two objectives, a 1 in. and ⅓ in., of excellent defining and penetrating power, giving amplifications from 30 to 330 diameters. In its simplest and cheapest form—viz., the stand, one eye-piece, 1 in. and ⅓ in. objectives, and a well-made mahogany cabinet with lock, key, and handle—this microscope costs £5; but the stand is so constructed that any additional objectives or apparatus, such as Abbé's or achromatic condenser, polarising and other apparatus may be fitted to it. The maker claims for this instrument both mechanical and optical excellence to a degree which has hitherto not been attempted in cheap microscopes of this class. We can recommend the microscope as a good and cheap one, well suited to students' work.



KANGAROO TENDONS.

To the Editors of THE LANCET.

SIRS,—With your kind permission I would like to draw attention to a few rather important circumstances respecting the selection, treatment, and preparation of kangaroo tendons which are intended to be used surgically. Having read in THE LANCET at different times the opinions of several operators who have used them, I wish now to refer more particularly to the defects pointed out in your reports of the meetings of the Royal Medical and Chirurgical Society and the Clinical Society of London, in THE LANCET, vol. i. 1885, p. 286, and in vol. ii. 1886, p. 819, in which the following statements occur—viz., that tendon ligatures "had broken on more than one occasion"; that they "were sometimes slippery"; and that the knots tied in them "are apt to slip." My own experience is so directly opposite that I cannot help believing that the behaviour referred to was due to an imperfect condition of the tendons employed, and that they were either unsound or had been too much softened before being used. To ensure satisfactory results all tendons must be examined to ascertain that they are quite sound, because they are frequently injured by a hasty and careless removal from the animal's tail, a task requiring some little time and trouble, but not unfrequently performed by the rough hands of a boatman, who will, if not properly instructed, pull them out by main force, and by this heroic method they are seldom obtained of the proper length and strength, for they either break off short or they are frayed at their edges, or split longitudinally, and I have seen many such which had been sold for surgical purposes. A moment's careful scrutiny of the tendon ligature by the surgeon himself is therefore necessary before trusting to it in the deligation of an important vessel. It should be about eighteen inches in length; if less than fourteen it had better be rejected at once; it should also be of the same calibre, and the same width from end to end. Its surface and edges should be even and without flaw, quite free from frayed, broken, or hanging fibres, and without any splitting or longitudinal separation of its substance. The soundness, or otherwise, is at once apparent by holding the tendon out at length between the eye and the light. Who, may I ask, would employ a silk or a gut ligature in which one or more of the strands were notched or broken? In consequence of its natural wavy and irregularly interlaced structure, a tendon is greatly weakened by a very short longitudinal split in its substance. I have always been careful to point out that a split or damaged tendon would easily break. *Apropos* to splitting, there is an article in Heath's "Surgical Dictionary" on Kangaroo Tendons, which seems to me to be rather misleading, for the writer states that "when fresh the tendons may be split up to any thickness required." *Cui bono?* But with seeming inconsistency, the same writer advises, a few lines further on, the rejection of those tendons which show any "longitudinal split." Another surgeon mentions a case, reported in one of the numbers of THE LANCET already referred to, in which he used a "slightly flattened" tendon. If this flattening was made by pressure, as one must presume it was, it is apparent that the process materially weakened the fibre of the ligature. As regards the slippery surface that has sometimes been spoken of in London, it also is probably caused by the preceding treatment to which the tendons have been subjected, and I fear that I may possibly be responsible, though unwittingly so, for some of this treatment. At all events, I desire to point out an error which occurs in a short paper of mine in the Medico-Chirurgical Transactions, in which it is stated (vol. lxv., p. 73) that tendons can be preserved "in 5 per cent. carbolic oil." This should have been 1 to 5 carbolic oil. I regret that this mistake escaped unnoticed by me till a few weeks ago, when some tendons that had been preserved in 5 per cent. carbolic oil were brought to me for examination by a friend, who had followed the directions in the paper just referred to. They were decidedly soft, rather slippery, and altogether different from other tendons which had been preserved in 1 to 5 carbolic oil. This may account for the "slippery nature of the material used," which is complained of in one of the reports. My recommendations, however, when first introducing tendon ligatures—as recorded in the *Australian Medical Journal*, Dec., 1877, and on all other occasions, with the one unfortunate exception—have been that they should be preserved in carbolic oil, precisely in the manner directed by Professor Lister in the preparation of catgut ligatures. And in this way all those I have ever used, or seen used, have been preserved. And there can be no doubt that they improve and become denser by keeping for many months or years in this solution; in fact, they become rather too hard for immediate use, without some previous softening. From recent experiments it appears that the best way of removing the hardness is by immersion for a few minutes (say at the commencement of the operation) in a warm solution of carbolic acid and water, 1 to 40, at a temperature of about 120°, which makes them pliable, yet not slippery. This is better than soaking for a long time in a cold watery solution; such a soaking for twenty-four hours is apt to make them sodden.

A final word about the length, if not trespassing too far on your valuable space. It is hardly possible to tie a tight and efficient knot on a vessel with a short ligature, especially when the operator's hands are wet; therefore it is all the more important to insist that the tendons should be over fourteen inches long, in order to afford a good firm hold, besides the fact that to obtain a tendon at its full length necessitates care in its removal from the tail.

I am, Sirs, yours obediently,

T. M. GIRDLESTONE, F.R.C.S. Eng.,
Surg. and Lect. on Clin. Surg. Melb. Hosp., and
Melbourne, June 27th, 1887. Lect. Surg. Melb. Univ.

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THE LANCET.

LONDON: SATURDAY, AUGUST 27, 1887.

THE Bradshawe Lectures, which are delivered annually at the two Royal Colleges, have been productive of much that is valuable and interesting. The date at which the delivery is fixed at the College of Physicians differs from that of the College of Surgeons; but although strictly in accordance with the foundation, it is rather an unfortunate time for the gathering of a large audience. There is another difference besides the time of delivery which has become marked between the customs of the two Colleges. At the College of Surgeons the office of lecturer has been hitherto bestowed upon one of the senior Fellows or past presidents; at the College of Physicians the president has selected alternately a Fellow from the provinces and the metropolis, and has sought rather to encourage the junior Fellows by inviting them to undertake the office. Hence, we look to the occasion at the one institution for the ripened wisdom of experience and age, and at the other for the ardent investigations of workers in the field of medicine, in their endeavours to open up new paths and proffer new explanations of phenomena. This is strikingly the case with the lecture delivered last week before the College of Physicians. It was the product of a young physician who has brought to bear upon the explanation of a not uncommon pathological condition facts and experiments which illustrate well the bearings of the science of physiology upon practical medicine. Dr. SAMUEL WEST has already identified his name with the subject of pneumothorax, and in his lecture he succeeded in demonstrating how many and varied are the problems involved in this apparently simple condition, besides introducing to notice matter which is wholly new and highly suggestive. It may therefore be well to note some of the more salient features of the lecture, which appeared in full in our columns last week.

Limiting in the main his remarks to the occurrence of pneumothorax in the apparently healthy, Dr. WEST at first alluded to the experiments and observations of Dr. CHAMPNEYS, the correctness of which he has himself verified. From these observations it has been clearly shown that although the lung may be ruptured by violent expiratory efforts, the air rarely finds its way into the pleural cavity, but, burrowing beneath the pleura, enters the mediastinal, and thence the subcutaneous tissues. Subcutaneous emphysema is then more readily produced than pneumothorax; there is less resistance to the passage of air into the lax connective tissue than between the pleural layers, so that, as Dr. WEST subsequently stated, the occurrence of such emphysema is almost a safeguard against the graver issue of pneumothorax; for it was experimentally found that a force equivalent to eight or nine inches of mercury, far and away above the greatest expiratory effort, was needed to produce pneumothorax in the healthy lung. It follows, then, that in every case where this condition arises—as it mostly does in the "apparently healthy"—without any unusual strain or effort, the lung must be markedly weak. This inference is strictly in accord with pathological fact. Pneumothorax may occur in the very earliest as in the latest stages of phthisis, before the appearance of any physical signs, just as at the close of a well-marked case with numerous cavities. All that is needed is a minute sub-pleural softening focus, which may involve the pleura and admit air into its cavity. Nor is recovery from such a form of pneumothorax impossible; indeed, from the cases recorded by Dr. JOHNSON, Dr. WEST, and others of late, it not infrequently ends in this way. But, at any rate, no one can say now that pneumothorax can arise spontaneously in an individual whose lungs are perfectly sound.

A second highly interesting point in the history of pneumothorax was dealt with by Dr. WEST, whose experiments have decidedly thrown a new light upon one of the paradoxes of pathology. That the pleura may be laid open by an external wound, or the lung injured from within, as by rib fracture, without air being admitted into the pleural sac, has long been a puzzle to clinical observers. No explanation hitherto afforded can be deemed satisfactory. Pleural adhesions, although common, are by no means so widespread in area or so universal as to explain the fact, and the alternative hypothesis of a rapid reabsorption of the escaped air is even less tenable. When air gains free entrance into the pleural sac the lung collapses by virtue of its own elasticity, which is reckoned as equivalent to 7 mm. of mercury, Dr. WEST has shown that the cohesive force which keeps two layers of a healthy serous membrane in contact is much greater than this; and we commend to notice the ingenious and accurate experiments whereby he proved that, even when an aperture is made in the outer layer of membrane, no air will find its way between the layers unless a force equivalent to at least 12·5 mm. of mercury be employed to separate the two layers. The "law of cohesion" between two closely applied surfaces of the physical condition of serous membrane is one of considerable importance in animal physics, and is, as Dr. WEST showed, equally applicable to the peritoneum and to joint surfaces as it is to the lungs. The outcome of this doctrine is, then, that pneumothorax cannot be initiated without the intervention of a degree of force sufficient to overcome this cohesion, unless the pleura be already altered from the healthy state, to which, of course, this statement only applies. That force is supplied by expiration, and once it has effected the detachment of the two pleural layers, the elasticity of the lung completes the process, until the whole sac is filled with air.

The third point which received ample illustration at the hands of the Bradshawe lecturer was that of intra-pleural pressure in pneumothorax. It was shown that, whereas the expiratory pressure is always positive, and sometimes raised to a considerable degree, inspiratory pressure cannot exceed that of the atmosphere unless some other condition, as fluid effusion, is present. The value of this observation is obvious; and the interesting question of respiratory oscillation, or the difference between the inspiratory and expiratory pressures as influenced by the condition of the opening into the lung and the presence of fluid, received abundant illustration. The clinical value of the manometer could not be better exemplified; and it would

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add largely to the value of our records were it customary to employ this instrument in connexion with the aspirator in every case of thoracentesis. The results of these variations in pressure are seen in the displacement of the heart, which was shown by Dr. WEST to be a bodily displacement, and not a merely rotatory movement. For these and further facts the lecture itself must be referred to. But there is still another question that was dwelt on by Dr. WEST which merits a few words; that is, the mechanism whereby in cases of recovery from pneumothorax the lung re-expands. Fluid may take the place of the air, and the recovery be effected by the natural forces of absorption alone or aided by paracentesis, the respiratory movements assisting powerfully to this end. It is different in those somewhat rare cases where no fluid effusion occurs, for then the absorption of the air from the pleural sac must take place with a power strong enough to overcome the pulmonary elasticity. There is no doubt of the interchange of gases contained in the pleural cavity; but it is at present an insoluble problem how all the residual gas is got rid of. Dr. WEST proposed an explanation, but admitted that it would hardly be considered final. It shows, however, that he is fully alive to all the difficulties of the question, and it forms not the least interesting topic in a lecture which was throughout lucid and instructive.

THE cry is not unfrequently raised that practice by quacks should be prohibited by law. Those who think that stringent legislative interference would prove successful would do well to listen to what is being said in countries where quackery is, nominally at least, illegal. Dr. AUGAGNEUR has recently contributed some articles on Freedom in the Practice of Medicine to a French provincial medical journal which he edits, in which he first reviews shortly the history of French medical legislation and its consequences, and then proposes a change in the direction of perfect freedom.

Under the old monarchy, medical practice was a monopoly enjoyed by bodies such as the Paris Faculty and the College of Surgeons of St. Côme, which were tolerably jealous of their privileges; but in districts far removed from Paris, sorcerers, bone-setters, &c., had it pretty much their own way. The pride and exclusiveness of the Paris Faculty received a severe but not altogether an undeserved check at the revolution by the suppression of all privileges hitherto enjoyed by medical bodies, and the establishment of entire freedom in the practice of medicine. In consequence of the complaints made by medical men restrictions were after a time again imposed, the chief argument in favour of this, which is attributed to FOURCROY, being that it was necessary to protect people who were too ignorant to discriminate between an educated medical man and a boastful charlatan. "The intention," says Dr. AUGAGNEUR, "was excellent, but look at the result a century after the restrictions were reimposed!—a century too, which has seen the development of railways and compulsory education." This law is a failure, not because the intelligence of the public generally has rendered it unnecessary, but because it is absolutely inefficient. Quackery is to be found everywhere under all kinds of forms—bone-setters, [illegible] and now, as the latest products of a scientific age, electricians, magnetisers, and hypnotisers, who drive a more prosperous trade than even the charlatans of a more primitive character. The press, the glorious instrument of popular education, disseminates daily the most barefaced falsehoods about quack medicines of all kinds, and the pharmacists who do not abuse their position by selling such articles are unfortunately in a small minority. Again, persons who possess diplomas—midwives, *officiers de santé*, and even Doctors of Medicine—act in collusion with quacks by allowing their names to be advertised in connexion with secret remedies. "Not long since one of these diploma'd medicine vendors, whose advertisements were to be seen on the last page of numbers of newspapers, secured the patronage of a Parisian professor, who defended his doings before the Academy of Medicine." "What is to be done? There are only two methods—legislation of Draconian severity, which public opinion would never stand, or complete freedom." Either the police must proceed against every person who practises without a diploma, and advertisements of medicine vendors must be entirely prohibited in general papers, or complete freedom to practise and advertise must be conceded. In this connexion it must be remembered that many valuable remedies have been discovered by lay persons, and that M. PASTEUR himself is not a medical man. There is another matter, too: the State now is obliged to recognise officially many practitioners whose acquirements are far from what they should be. Examiners do not like to go on rejecting a man *ad infinitum*, and so, after various attempts, men who are by no means really competent are passed, otherwise their means of earning a livelihood would be taken away from them. If practice were free, such men could study for as long or as short a time as suited them, and could begin practice whenever they liked. They would not of course be able to call themselves "Doctor," but would have to content themselves with the designation of "Medecin" (medical practitioner), which would mean nothing more than engineer or photographer does. There would, however, Dr. AUGAGNEUR thinks, be this great advantage about the system of free practice: the degree of Doctor might be reserved for those who were thoroughly competent, which, according to him, is by no means the case under the present *régime*. His plan is to do away with the lower diploma of *officier de santé*; to punish usurpation of the title of Doctor of Medicine by a heavy fine and two months' imprisonment, no extenuating circumstances being recognised; and of course to allow none but Doctors of Medicine to hold public medical appointments or to be called as experts in courts of justice. He would make all persons, whether with or without diplomas, responsible for their treatment; the Minister, acting under the advice of a medical committee, to prosecute in cases of malpraxis, without waiting for a complaint to be made by the patient. Under a few years of this system Dr. AUGAGNEUR prophesies that quackery would have nearly disappeared, and with it the *officiers de santé* and the majority of incompetent Doctors of Medicine. This would appear to be a very sanguine view of the result of legislation. As far as the freedom of practice goes, we have it in this country in all its glory, and actions for malpraxis are probably quite as common as they would be if they were entrusted to a Government department. We have, besides, a law against

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assuming medical titles, which, though sometimes evaded, is by no means a dead letter; yet quackery is rife, and is apparently not at all on the decrease. We have also—what the French have not—the unqualified assistant question; and although recent events may possibly have the effect of checking some of the more gross abuses connected with the employment of unqualified men, it is highly improbable that any legislation which the public would tolerate would put an entire stop to unqualified practice. Even the Germans and Russians, who are accustomed to more of the iron-handed style of legislation than we are, are unable to put down quackery. Things are no better in America, where medical legislation is very lax, so that it is to be feared that Dr. AUGAGNEUR'S panacea would prove as ineffectual as other systems.

THE rapid progress of chemistry, particularly of that part of it known as "organic chemistry," outstrips all those who either have no time or no inclination for hard scientific reading. Every few years our text-books are transmogrified; old and familiar names give place to new; and as for the formulæ, many of us are compelled with reluctance to give them up in despair. Omitting the changes due to the revision of atomic weights, which are definite and have become familiar to most, we are confronted with an almost interminable series of variations in the formulæ for well-known bodies, and are tempted to ask, with some vexation, whether acetic acid is $C_2H_4O_2$, or $HC_2H_3O_2$, or $H_2O.C_4H_6O_3$, or C_2H_3OOH, or $CH_3.COOH$. Is there any meaning in such changes? Do they record real discoveries of facts, or merely the latest fads of theorists? Could chemists do without them? Would it be simpler or more complex if they were discarded? Are they of practical use in interpreting present facts and guiding new research? And, above all, have they any appearance of finality about them, or must we look for an endless series of analogous changes? Answers to these and to similar questions cannot be supplied in a few lines or even a few pages, but an interesting and satisfactory attempt is made in a recent number of our contemporary, *Nature*. The author of the article entitled Constitutional Formulæ and the Progress of Organic Chemistry (*Nature*, Aug. 18th, 1887) points out in a very clear manner how the atomic hypothesis led to symbols, formulæ, and equations, and how the later discoveries of isomerism and the physical phenomena incidental to chemical composition and chemical change have led to new hypotheses. Of the value of these hypotheses there can be no doubt, for they have fulfilled in a remarkable manner the great condition of all good working theories, in that they have not only proved equal to the explanation of many, if not all, of the problems which research has presented, but have endowed the experimenter with something of the prophetic skill which is required for new discoveries. The so-called constitutional formulæ of modern chemistry show, at any rate, one possible mode in which the ultimate atoms may be grouped in each individual compound, and suggest not only other groupings of those atoms that would belong to isomeric varieties of the same substance, but also probable modes of synthesis and of decomposition. The defects of the formulæ to which we are at present restricted are self-evident, and are universally admitted. They represent atoms at rest and on a plane, both of which conditions are most improbable. As we know more of molecular and atomic dynamics, we may learn to modify or even to change them, but as far as they go, and in the present state of our knowledge, they are invaluable, and could not be discarded without grave injury to scientific progress. To conclude, in the words of the article which has led to these remarks, "The constitutional formula is not an ultimate expression of the whole truth as regards molecular structure. But it is certainly a very convenient symbolical expression of certain aspects of the truth. We all hope that it may one day be superseded by some higher and more complete generalisation; but it will be absorbed and assimilated, not rejected and contradicted, by that generalisation. *Non omnis moriatur.*"

PERHAPS the diseases of the various parts of the nervous system which may come on during the course of the different "fevers" is one of those subjects on which the present and immediate future are destined to throw considerable light. The discoveries of recent years have been made not only in the clinical, but also in the anatomical sphere, and some observers have happily combined the clinical with the anatomical methods, much to the advancement of true pathological knowledge. The ball may be said to have been re-started by the remarkable discovery of PITRES and VAILLARD that phthisis might be attended with peripheral neuritis, which would explain the presence of certain marked nervous symptoms; and perhaps still more by the circumstance that the same observers detected a similar affection of the peripheral nerves in typhoid fever. These newly recognised facts have widened very considerably the horizon of our clinical and pathological knowledge. The facts, however, that alcohol is a cause of phthisis, and that alcohol is at times freely given in typhoid fever, should be remembered, since alcohol is a proven cause of peripheral neuritis. We now perceive that various fevers may give rise to nervous symptoms and lesions by acting either on the brain, spinal cord, or nerves, and that their deleterious action on these structures may partake of the nature of almost any known anatomical lesion.

Let us examine for a moment the various kinds of symptoms and lesions that have been described as occurring during the course of continued fever. Many observers have noted alterations in the spinal and muscular functions, but readers of THE LANCET will have been made acquainted with their remarkable prevalence by the contributions to our columns last year and this by Dr. ANGEL MONEY, who affords support to the suggestion made by Dr. HUGHLINGS JACKSON that the knee jerk may be found of some utility in the differential diagnosis of typhoid fever and meningitis. For many years past it has been known that various groups of muscles either in the arm or leg may be paralysed during typhoid fever, and even the cranial motor nerves have been known to become diseased—indeed actual signs of neuritis have been observed after death; but still the recent investigations of PITRES and VEILLARD have shown that a neuritis may involve several peripheral nerves without there being such gross changes as have hitherto gone to establish the existence of neuritis. The suggestion has been made that any fever, if sufficiently long continued, may set up peripheral neuritis; and the facts which have

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been ascertained would appear to give some support to the theory. Of other paralyses that have been observed in or after typhoid fever mention may be made of laryngeal paralysis and palsy of the soft palate, which have also been complicated by paralysis of the act of accommodation for near vision, thereby suggesting the well-known paralysis which follows diphtheria. Further careful observation will be necessary before these rare palsies after typhoid fever can be said to be of an altogether satisfactorily proved occurrence. The white matter and the grey matter of the cord have been known to be the seat of lesions during and after typhoid fever, and with all the symptoms corresponding thereto and fully explicable thereby. Many years ago, in 1861, LEUDET described a case of typhoid fever in which the legs became first paralysed towards the end of the third week of the malady, and afterwards the paralysis spread upwards till the arms and chest became involved, and the patient succumbed from asphyxia within a week of the development of the first paralytic symptoms. Spasmodic and atrophic forms of spinal paralysis have also been observed, and lesions of corresponding parts of the gray matter and white columns have been discovered at necropsies, sometimes made at long intervals from the onset of the paralysis. Although the disease was measles, still the fact may be cited as of great interest and of recent discovery, for DR. THOMAS BARLOW found evidence of hæmorrhagic myelitis in the spinal cord, and this developed at the same time that the rash came out in the skin and the bronchial tubes were the seat of acute catarrh; and Dr. BARLOW suggested that the spinal cord might be regarded as being specially involved with a sort of measles-rash in his case. Although the occurrence of such marked lesions in the cord is unusual, still we must admit the possibility of a slighter vascular disturbance of the cord as a more general concomitant of severe measles. If we inquire what effect typhoid fever may have on the brain, we shall perceive that the cerebral lesions hitherto observed have been neither few nor limited. Perturbations of mind, disorders of memory, melancholia, general paralysis, hemiplegia, and aphasia, have been often witnessed, but the difficulty is to know to what precise lesion these effects are to be attributed in the different cases. Many theories suggest themselves, but the facts on which they can be based are few in number, and not of frequent attestation. Mere prolonged pyrexia or mere toxæmia may conceivably spoil the protoplasm of the nervous centres; or these processes may damage the texture of the vessels which supply the nervous tissues. Again, as POPOFF has shown, congregations of leucocytes and colonies of micrococci may collect in scattered foci about the cortex of the brain, and perhaps in other parts of the central nervous system, in acute fevers; or, as Dr. CHARLTON BASTIAN discovered some time ago, minute embolisms or thromboses of capillary vessels may be the cause of some of the nervous symptoms and lesions in typhoid states. Besides minute changes, such gross pathological occurrences as thrombosis and embolism of large vessels, together with actual formation of aneurysms and hæmorrhages, have been considered as the cause of equally marked symptoms occurring actually during or soon after the continued

Annotations.

"Ne quid nimis."

SCARLET FEVER IN LONDON.

THE increase of scarlet fever, upon which we commented in our issue of last week, still continues, and the most recent return shows that there are 724 persons suffering from this disease in the hospitals of the Metropolitan Asylums Board. No one part of the metropolis is specially invaded, but the disease is scattered over the whole area, and is therefore in all probability due to personal contagion. London suffers from scarlet fever in epidemic proportions every few years, and it may be assumed that its prevalence is in great part dependent upon the accumulation of susceptible persons who have grown up since the previous epidemic. Thus, while the annual average number of deaths in London in the years 1876-85 is 2140, during the years 1884-86 the number of deaths has been respectively 1430, 722, and 688, and the numbers have not exceeded 2114 since the year 1880. The deaths undoubtedly bear some proportion to the number of cases, and hence there must be many children in London who have, until the present epidemic, escaped this malady. Of 91 persons admitted into the hospitals of the Metropolitan Asylums Board during the week ending August 19th, as many as 77 were under ten years of age, and 38 under five years of age. When consideration is had for the fact that there is a tendency to keep very young children at home, these figures teach an important lesson, and show that the present epidemic is in great part dependent upon the immunity enjoyed by young children in preceding years. But apart from this circumstance, there are other conditions, not yet understood, which influence the dissemination of scarlet fever. Every health officer knows that there are years when children suffering from the disease can be treated at home with much less risk to other members of their families than during other years, and this difference in the behaviour of scarlet fever deserves further investigation. We have now, fortunately, a department of the State which concerns itself with inquiry into the causes of disease, and we would suggest that it might usefully employ in the examination of the conditions to which we have referred those health officers who have special aptitude for detailed work of this nature.

A SWEDISH SURGEON ON EXTIRPATION OF THE FALLOPIAN TUBES.

DR. F. WESTERMARK of Stockholm, who has now performed extirpation of the Fallopian tube ten times, contributes a paper on the subject in the report of the Sabbatsberg Hospital. After dealing with the history he goes on to discuss the indications for the operation. First of all, as to tubal pregnancy, the best period for operating is before rupture has occurred; Veit having operated eight times, and Gottschalk twice, with entire success, in this stage. As a rule, however, women seldom come under observation till after rupture has taken place. When this has occurred, he considers the operation indicated if the internal hæmorrhage and the collapse produced are not sufficiently severe to place the patient from the first *in extremis*. Other methods which have been suggested are, he believes, uncertain, and even more dangerous than extirpation. Of thirty of these cases with which he is acquainted, a fatal result only occurred in two. Respecting hydro- and pyo-salpingitis, he points out that a very characteristic pain occurs in the pelvis, which is always more marked a little before each menstrual period, and which sometimes becomes spasmodic in character and almost unbearable in amount. These pains, he thinks, are due to spasmodic contractions

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of the tubes caused by increased turgescence of the tubal tumour. Continuous pain, on the other hand, is, he believes, a sign of perimetritis, which is nearly always present, and which he by no means considers an indication for the operation; he even seeks to subdue the perimetritis before operating. In uncomplicated cases of salpingitis the diagnosis is simple, but where ovarian abscess or cysts coexist with it the diagnosis is sometimes impossible without a preliminary laparotomy. In cases where the diagnosis is rendered difficult by perimetritic effusion of large amount, he recommends a long course of absorbent treatment before operating. The chronic forms of salpingitis ought invariably to be operated on, and likewise some of the acute forms—e.g., gonorrhœal. He had a case of this kind which he operated on about a month after its commencement, and was able to trace in the preparation distinct groups of gonococcus. In the catarrhal form he seems less disposed to recommend early operation. Of nine operations for salpingitis only one proved fatal; and here the disease was tubercular, and was followed by tubercular peritonitis. From statistics of other operators he deduces that the mortality from 498 extirpations has been forty-one, or 8·2 per cent. Regarding the question of operating for new growths, Dr. Westermark agrees with the views of other surgeons who have written on the subject.

FARTHING DINNERS FOR SCHOOL CHILDREN.

SOME months ago we noticed with cordial approval the efforts which had been made in Birmingham to supply cheap and nutritious dinners to poor children attending elementary schools. Some further papers descriptive of the movement are now in our hands, and we commend them to all who are interested in philanthropic work, and, indeed, to all who have the good of their country at heart. The new papers are a second edition, revised and enlarged, of a pamphlet by Mr. George Herbert Sargant of Birmingham, entitled "Farthing Dinners," a report for the season 1886-87 on Birmingham halfpenny and farthing dinners, and a report on two conferences held in Manchester under the auspices of the Vegetarian Society in the spring of this year, on the economy of our food supply, and upon cheap dinners for school children. Mr. Sargant, to whom the success of the Birmingham experiment is in a great measure due, has done a further and more general service in publishing his experience in a somewhat extended form. His pamphlet can now be obtained from Messrs. Simpkin, Marshall, and Co., for twopence. In it he has given minute directions for the selection of suitable food material, cooking apparatus, and kitchen and table appliances, and tables of the price of each. For the daily supply of 400 or 500 children the initial expenses for cooking and serving, including tables, linen, &c., is stated to be £25 13*s*. This is the maximum, and in many cases it may be greatly reduced. In the earlier days of cheap dinners it was thought a triumph to supply a meal sufficient for an average child for a penny. It was then successfully reduced to a halfpenny; but, alas! even this was too expensive a luxury for many of the poor little things. So Mr. Sargant set to work again, and by dint of close study and careful purchase succeeded in preparing wholesome and nutritious dinners, the absolute cost of which was only one farthing each. It seems incredible, but we are assured that this is the actual cost of the rations daily issued to the poorest children in Birmingham. No less than 12,000 dinners a week are now sold or given away in the town, and although the dinners are scanty for strong and well-fed children, they are said to be ample for the ill-fed and sickly, and it is for the latter that the boon is chiefly needed. The dinner consists of half a pint of soup and a slice of bread and jam, and the main reason of its amazing cheapness is that lentils, split peas, Indian meal and barley, with carrots and onions, are used, to the exclusion of meat. Of the nutritive value of such food there can be no doubt, and as to the quantity, we presume that two meals may be had for a halfpenny. Mr. Sargant gives a most encouraging account of the effect of the simple meal upon the intellectual progress as well as on the health of the children; but for that, as well as for an able statement of the arguments for and against free dinners for Board School children, we must refer our readers to the interesting pages of his pamphlet.

A RESERVOIR OF THAMES WATER NEAR A HOSPITAL.

THAMES WATER in an unfiltered state may, perhaps, be good enough for forge work and for extinguishing fires, but when a large volume of it is pumped into a reservoir situated directly under the windows of a large hospital and allowed to lie stagnant for some time there at this season of the year, the danger to the inmates is considerable. These remarks are prompted by the horrible stench which has been emanating for some time past from the circular reservoir at the top of Woolwich Common, close to the Herbert Hospital. This reservoir (which, it may be remarked, though pretty carefully railed round, is a somewhat favourite spot for suicides) is connected with the Woolwich Dockyard, now no longer used for its original purpose, but employed as a store of warlike material. The reservoir is filled with Thames water, which at Woolwich is never particularly savoury, and at this season of the year is frequently very offensive. The dockyard and the residential quarters in it are supplied with wholesome water by the Kent Waterworks Company from deep wells at Deptford, Orpington, and St. Mary Cray; but for certain purposes of a manufacturing nature, and as a reserve in case of fire, Thames water is laid on from the old reservoir, which is on high ground.

TRAUMATIC HEMI-EPILEPSY CURED BY OPERATION.

DR. HOUZÉ, physician to the St. Jean Hospital in Brussels, gives in *La Clinique* an account of a case of hemi-epilepsy due to a blow from a quoit on the left parietal bone, where trephining was performed with ultimate success. The patient was admitted into the medical wards in February, 1886, having then suffered for three years from frequent and violent fits, which always commenced on the right side of the body, and then passed over to affect the left side. There was, besides, motor aphasia of articulation and ataxic dysphagia, due to spasm of the tongue and hemiparesis; also fibrillar contractions, movements of extension and flexion, and ascending and descending auras. These phenomena had first shown themselves in the leg then in the arm, and finally in the neighbourhood of the facial and hypoglossal nerves. By means of a seton applied to the nape of the neck and very large doses of iodide of potassium, the aphasia, agraphia, and the hemispasm of the tongue, together with the brachio-facial twitchings, completely disappeared. From September, 1886, to January 25th, 1887, there were only four fits, the twitchings in the intervals being confined to the right leg. It was then determined to give the patient the benefit of an operation, and he was transferred into the surgical wards, where M. Thiriar trephined above the situation of the fissure of Rolando. After the second attempt a splinter of bone was discovered adhering to the surface of the endocranium, and the dura mater was observed to be peculiarly white at that spot owing probably to a proliferation of connective tissue due to irritation of the splinter. The wound healed perfectly. From Jan. 25th, the day of the operation, to Feb. 11th th symptoms had diminished considerably, the vaso-motor

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troubles having ceased on the fourth day. From Feb. 15th, however, the symptoms reappeared one after another, and on the 23rd there was an epileptic fit, which commenced, as the former attacks had done, on the right side, and rapidly affected the left. The next few days there were from three to eight attacks per diem. The seton was reapplied and large doses of iodide given. This treatment again produced a great effect, there being no fit from Feb. 28th to May 4th, the other symptoms having also almost disappeared by that date. On June 7th the patient complained of severe pain in the right thigh, and of frontal headache and want of appetite. There was, however, no tenderness over the scalp or the courses of the nerves, but the temperature was raised. The next day there were twitchings of the muscles, and the day following that a herpetiform eruption on the right leg. After that there were no manifestations of the former condition beyond some slight twitchings of the right leg up to July 10th. When the patient left the hospital he still continued to take iodide in the form of the sodium salt. M. Houzé has good cause to congratulate himself on the accuracy of his diagnosis and his correct localisation of the source of irritation.

"OVERWORK" IN THE COMMONS.

THE conditions of service in the House of Commons are rapidly becoming too hard for any but the most robust of men. Unless a change be quickly inaugurated, there will be no hope of retaining in the public service of the country those busy men who are, by habit and experience, best qualified to make the laws in the administration of which, as magistrates, lawyers, or men of commerce, they have so large an interest. Country gentlemen, barristers, manufacturers, and merchants cannot possibly labour both day and night without respite, even for the good of the commonwealth. What makes the exhausting character of work in the lower House of Parliament especially provoking is its utter needlessness. It is purely wasteful, not merely of strength but of time, to protract the sittings of the Commons beyond reasonable hours. As a matter of fact, if the wretched system of "talkee talkee" were not supported by both parties there would be no occasion to sit an hour after midnight. Eight hours four days each week for six months in the year would amply suffice. Making the most liberal allowance for the advance of intelligence and the destructive effects of progress, it cannot be that our statutes and laws generally are so quickly rendered obsolete that the large amount of time legitimately available for legislative purposes, without turning the whole of the night into day, is inadequate. We cannot help thinking that a great awakening and reconstructive change in our method must be in the near future, and will be hastened by the discovery that many valued lives are being ruthlessly worn out by the worry and work which the present manner of legislating involves.

THE PETRIFACTION OF ANIMAL BODIES.

A WELL-KNOWN Padua chemist and physician, Dr. G. B. Mastedaglia, who died more than forty years ago, discovered a method of petrifying animal bodies, and gave the University museum several specimens of his work. This method he kept secret, but he wrote it all out and left the directions in a sealed packet to his legitimate heirs by will. These legitimate heirs, however, were not to be found; and, in spite of every effort to discover them, they remained until recently unknown, and the sealed packet remained therefore unopened. Lately, however, they have been found, and have been besieged by applications for the secret, large sums being offered to them for it. They have, however, it seems, decided not to part with it—at present at least.

THE CARE OF PAUPER CHILDREN.

PUBLIC attention has recently been directed to the care of poor children who are removed from the charge of their parents by the Boards of Guardians, and much evidence has been forthcoming that constant attention must be given by the Local Government Board to ensure that careless administration shall not inflict injury upon them. Within a few weeks the Central Board has had to make inquiry into allegations of neglect of children boarded out by the St. Pancras guardians, of cruelty to the children of the Holborn Union in the schools at Mitcham, and of accusations of inhuman treatment of children suffering from ophthalmia in the schools at Norwood belonging to the Lambeth Union. The first was shown to be but too well founded, and some effort was made to reflect on a system which undoubtedly confers benefits on many young children. The chief fault of our Poor-law system is that the young brought up in large institutions fail to develop any individuality or to become fitted for future occupation in the life that is before them, or in the large world in which they must subsequently earn their livelihood. To some extent this difficulty has been met by placing these children in the families of poor persons, where they are subject to, at any rate, some of the conditions with which they will be surrounded in their after life. The gain by this method of treatment has been sufficiently distinct, but it is obvious much local supervision is required to ensure that they are maintained under circumstances which are advantageous to them personally; a break-down in one locality must not be regarded as a reason for condemning the whole system, but it points to the need for a better supervision than has heretofore existed. Concerning the cruelty to children at Mitcham, this has been shown to exist through the misconduct of officers of the local authority, and the Local Government Board have acted wisely in insisting upon the removal from office of those who were chiefly to blame. The accusations of improper treatment of children at Norwood appear to have arisen from a want of understanding on the part of some members of the Board of Guardians that the methods usually adopted for the cure of granular lids were not more severe than the nature of the cases warranted. Dr. Bridges, who, on behalf of the Local Government Board, investigated the matter, was able to assure the guardians that this malady would yield only to the treatment which had been carried out, and his opinion will be supported by all who have experience of this disease. There appears to have been some exaggeration as to the sufferings of the children, but it may be assumed that much discomfort would be experienced, and that those who had no knowledge of the benefits of the treatment might take exception to its adoption; but the guardians will doubtless be satisfied now that a full explanation has been received from so trustworthy a source as Dr. Bridges.

"MASSAGE AND ELECTRICAL TREATMENT."

WE have received from medical men numerous circulars forwarded to them by a Limited Company, with many indications that in their opinion electricity is not to be used in this wholesale fashion in medicine. Accompanying the circular is a lithographed letter from Mr. J. F. Leeson, L.R.C.P. Lond. and L.R.C.S. Ed., who is described in the Company's circular as having had "a long and varied experience in hydro-therapeutics, electricity, massage, and medical rubbing." One would think this specialty enough to credit to any single medical man in a very business-like circular. But it no sooner ends the description of the staff for electrical operations, under Mr. Leeson, than it goes on to say: "Dr. Leeson will also undertake all difficult cases of hernia requiring special attention," and on the

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opposite page is a warm eulogium of a certain truss. We have only to mention such advertisements to indicate our disapproval of them and that of the profession. We cannot but regret that a member of the profession should lend his name for use in such business-like circulars. We feel sure that a little reflection will satisfy him that this is neither the way to commend electricity to the profession nor to lead to the acquisition of a knowledge of its refined use in fit cases, which Mr. Leeson will admit to be essential.

THE CAUSE OF INFANTILE DIARRHŒA.

THERE is no problem in public sanitation or in pathology more interesting than the radical and essential cause of infantile diarrhœa. The mortality from this disease is very great, and the illness occasioned by it, even where not fatal, is still greater. We are glad to have been able to lay before our readers in THE LANCET of last week a suggestive paper by Dr. Tomkins of Leicester, a town scarcely more notorious for its absurd opposition to vaccination than for the prevalence and fatality of infantile diarrhœa. We commend the paper to all medical officers of health and to all physicians who have special opportunities of studying this disease. The drift of Dr. Tomkins's careful investigations is to show, as we are all prepared to learn, that the disease depends on micro-organisms. He does not pretend to have defined or identified them; he is, indeed, excessively careful to show that his observations are still very incomplete. But of course they go far to show that in the organs of those children dying of the disease, especially in the ileum and the kidneys, micro-organisms were obtainable from which abundant and rapid cultivations could be obtained, the nutrient material used being gelatine. The bacilli so obtained, or rather the gelatine in which they were cultivated, developed a markedly alkaline reaction, and even in highly diluted quantities a powerfully offensive odour. It is equally important to note that Dr. Tomkins has been able to obtain the same organisms developing the same odour in the air of Leicester, but not with the same success in all parts of the town. In those parts of the town where the disease most prevails the organisms numbered from 2000 to upwards of 5000 or 6000 per cubic metre, whereas in the healthier and more open districts they varied from 60 or 80 to 800 or 900 per cubic metre. He uses every opportunity to ascertain the pathological lesions in such cases, but has not found them coarse or striking to the naked eye, consisting mainly of inflammatory changes extending through the intestinal canal, and most severe in the ileum. Small ulcers, too, were present in most cases, but they were not localised as in typhoid fever. It is satisfactory to think that Leicester has a health officer so bent on elucidating a problem which he has special opportunities of studying.

THE SABBATSBERG HOSPITAL, STOCKHOLM.

FROM the recently issued report of the work of the Sabbatsberg Hospital, Stockholm, for the year 1886, we learn that 3169 patients were treated there during that period, with a mortality of 257, or 8·11 per cent. On Jan. 1st, 1887, 263 patients remained in hospital. The total cost of each patient per diem was 1*s.* 7*d.*, the food being about 4¾*d.*, and the medicine about 1½*d.* Since 1884 the hospital has been illuminated by the electric light, there being 228 incandescent lamps. The cost per lamp per hour was 0·15*d.*, including interest and sinking-fund charges. In order to enable the hospital to be cleaned and thoroughly aired during the summer, a pair of temporary wards have been obtained, made of thin wooden boards, each to accommodate thirteen beds. The cost of these was about £150. The number of major operations was 785 in the surgical, and 125 in the gynæcological department.

THE DIGESTION OF CARBO-HYDRATES.

THE paper of Ellenberger and Hofmeister, recently published in *Biedermann's Centralblatt*, contains a summary of their long-continued researches on this subject. They have experimented upon the horse, and their conclusions are by no means identical with those that have hitherto been received. An abstract, by Mr. J. Fletcher, of this important paper appears in the current number of the Journal of the Chemical Society; and it is so lucid and concise that we reproduce it almost *in extenso*.

"The action of saliva in the process of mastication is shown to be more mechanical than chemical. The quantity of saliva used depends on the dryness and roughness of the food rather than its contents in starch; and the authors think that the chemical activity of saliva owes much to spores, which, floating in the atmosphere, mix with the food and assist in the fermentation process. A digestive action of the mixed food takes place in the stomach when the acidity due to hydrochloric or lactic acid does not exceed 0·03 to 0·04 per cent. The left section of the stomach of the horse does not secrete a gastric juice; this is the function of the right portion. The pure gastic juice of the horse contains lactic, fatty, and amylaceous ferments—the latter in small quantities. Cellulose is not digested in the stomach of the horse, but muscle, fat, gelatine, and flesh generally are easily digested, bone and elastic tissues more slowly. Pepsin operates actively only when acids are present, about 2 per cent. of lactic acid or 0·2 per cent. of hydrochloric acid being necessary. The activity of pepsin does not increase in proportion to its quantity after reaching a certain point, but it rather becomes injurious. The acid which appears first in the digestive process is lactic acid, and later hydrochloric; at the time of greatest activity lactic acid is present in the upper and lower extremities of the digestive tract, hydrochloric acid being found in the intervening part. The digestion of starch in the stomach of the horse lasts for about two hours; that of albuminous matter takes place later, and occupies three or four hours after the eating of the food. The drinking of water immediately after food does not appear to hinder digestion. The secretions of the intestinal canal unite in themselves all the properties of the gastric juice, and can act as a substitute for it, and are particularly energetic in the decomposition of fats. The duration of the digestive process in the horse is long, lasting almost three days. A very active lactic fermentation of sugar takes place in the stomach and intestines, but the authors do not say that all the sugar which is lost in the course of passage is lost in that way; it is more probably reabsorbed."

THE CASE OF LIPSKI.

IN our editorial remarks on the case of Lipski, in our last issue, we drew attention to the difficulties that surrounded the investigation as gleaned from our contemporaries, and from the meagre reports that appeared at the time of the trial. The reader will find, on referring to our annotation, that we were anxious that the evidence in all its bearings should be thoroughly weighed. It was not our purpose to hamper the executive, but to assist, although in an indirect manner, to unravel the tangled skein of facts proved, reported, and reputed. There can be no doubt that Mr. Matthews was in possession of the knowledge of circumstances of the tragedy much more fully and perfectly than most suspected; and now that all is over, we offer to him our tribute of respect and admiration for the exceeding forbearance and energy he displayed in what must have been to him a very trying ordeal. He has tempered justice with mercy, and held the scales until one side kicked the beam. Mr. Matthews is to be congratulated on not having made an ignoble surrender to the mob advocacy of Lipski with which he was beset. The case will long remain a memorable one,

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as having been the occasion of a vigorous, long-sustained, and very general plea for clemency to the convict. This we cannot say we altogether regret, for it has shown that several points of medico-legal interest were, on cursory examination, open to other interpretations than the one arrived at by the jury at the Old Bailey. But, quite apart from Lipski's confession, we were content that the Home Secretary, with the concurrence of Mr. Justice Stephen, would arrive at a righteous conclusion. The days of Scroggs and Jeffreys are past; nor is there reason to dread that Home Secretaries will fly in the face of reason and justice, and recklessly give the *fiat* for a fellow creature's death. The most that their responsible duties demand at the hands of the public and our own profession is kindly assistance. Attempts at coercion must end—as they deserve to do—in shame and confusion.

ICHTHYOSIS HYSTRIX NIGRICANS.

IT is not necessary to suppose that the trophic influences of nerves are alone active in the causation of any disease which happens to follow the course of well-known nerves. On the posterior part of each thigh of a child six years old Dr. Butruille observed a long band bounded by parallel lines, and composed of horny growths of a pronounced grey or nearly black colour, and of irregular aspect and hard consistence. There were a few scattered nodules of the same kind; but it was clear that the tract of the disease corresponded with the general direction of the great sciatic nerve. On the right leg the direction of the ichthyotic disease was along the path of the internal popliteal nerve, whilst on the left it followed the course of the external popliteal and anterior tibial nerves as far as its splitting on the dorsal aspect of the foot. A similar distribution was found in the front of the elbow and forearm, as though the fish-like skin was taking its direction from the median nerve. In addition to the overgrowth of the horny layers of the epidermis, there were redness and chronic inflammation of the underlying skin; but with this exception there were no other lesions, and careful examination failed to detect any patches of anæsthesia, analgesia, or hyperæsthesia. The disease was first noticed a few months after birth, in the form of two reddened tracts on the posterior aspect of the thighs, which appeared to have been formed of lines composed of projecting red papules. Such a case, like others that have been recorded hitherto, may be explained by supposing that the disease ran in a general direction with well-known nerves as the result of a mere coincidence, though the association is a curious one; or it is possible that a slight influence coming from the nerves may have decided the direction which the disease took, without in any way supposing that the nervous trophic influence was the chief cause of the ichthyosis.

THE EDUCATION OF VAN CHILDREN.

THE strength of a chain is the strength of its weakest link. If the general truth of this axiom be admitted, then the effective value of that chain which represents our national system of education can hardly be tested at any point so well as in its application to the state of our nomadic population. Mr. George Smith of Coalville has repeatedly roused public opinion to action on behalf of the neglected children of van-dwellers. This perseverance, in spite of the great passive resistance of inertia which belongs to a task at first sight so thankless as the effort to supervise and to train this wandering race by any regular process, is worthy of all praise. He, and many more who favour his disinterested purpose, will certainly view with satisfaction the probable realisation of their hopes as far as that can be assured by the passing of the Bill relating to this subject. This measure, which is framed on the same lines as its predecessor, the Canal Boats Act, besides dealing with the question of education, will also necessarily provide for the registration and inspection of vans and the carrying out of sanitary requirements. Van-dwellers are on the whole a healthy people, thanks to the fact that their lives are passed so much in the open air. Their moving cabins, however, cannot, under the ordinary conditions of domestic life, be regarded as either wholesome or convenient. Only the out-of-door daily life of their occupants counteracts their essential tendency to become at any time nests of contagia acquired in the towns through which they have to pass. In view of this risk and of the prevailing neglect of childhood to which we have alluded, the Bill now under the consideration of Parliament is one which can but appeal to the judgment of everyone who understands that healthy growth of mind and body among the members of every class is the foundation of national prosperity.

SANITARY NEGLIGENCE IN AUSTRIA.

AUSTRIA is credited by *The Times* correspondent at Vienna with taking little interest in sanitary matters, and an amusing story is told in an evening contemporary of a high official who expressed disapproval of a reduced death-rate because it interfered with the public revenue from succession duty. Indeed, it is broadly stated that the upper classes are satisfied with the erection of luxurious buildings, irrespective of their influence upon health. Some difficulty arises through the unwillingness of provincial authorities to carry out the laws enacted by the Imperial Diet, and in so simple a matter as the examination of cattle and meat the local authorities in the Tyrol have attempted to evade their duties, and have appealed against the decision of the Diet on this subject to the Court, which has to decide disputes between the central government and provincial authorities. It is hoped the International Hygienic Congress, which will be held in Vienna next month, will create a warmer interest in public health questions.

THE PREVENTION OF LEPROSY BY SEGREGATION.

IN anticipation of the forthcoming quinquennial report on Leprosy in Norway for 1881-5, the Director of the Norse Leper Department, Dr. Hansen, has forwarded Brigade Surgeon H. V. Carter, M.D., a short preliminary summary of the latest results of the segregation of lepers as carried out by the Norwegian Government, which Dr. Carter, ever keenly alive to the bearing of these facts on India, has communicated to the Bombay Government Gazette (June 30th, 1887). The total number of lepers officially registered, had between the years 1856 and 1880 inclusive, diminished from 2863 to 1582, and of the latter 617 were lodged in the Government Asylum and 965 were living in their own homes. The diminution in the home-dwelling lepers is still going on, so that in 1885 there were only 354 men and 291 women, making 645 in all, or a decrease of 31·24 per cent. in the last five years, or in the course of twenty-nine years a tolerably regular progressive diminution from 2628 to 645, or 75 per cent. Were it not for the circumstance that the asylum population has of late years been reduced, from economic reasons, to about 500, the hope would have been realised that by the year 1885 50 per cent. or one-half of the entire leper community would be isolated. Further good results should follow from the enactment by the Norse Parliament in June, 1885, that the sanitary officials in the country districts be authorised to inform the leper subject that, as a condition of being allowed to dwell at home, he must take satisfactory measures against risking the infection of other people. Amongst other interesting points we notice that Dr. Hansen has probably succeeded in inoculating rabbits with *perfectly fresh* leprous

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material, but these experiments require confirmation, He finds the bacilli in the anæsthetic form of disease, and always in wandering cells amidst the epidermic scales surrounding the true leprous ulcer of the nodular form. As bearing on the hereditary nature of leprosy, Dr. Beaven Rake relates an interesting, though, as he admits, in no way conclusive, case in his Report on the Trinidad Leper Asylum for the year 1886. A leper woman was admitted with an apparently healthy child eighteen months old. The child was sent to an orphanage, and about one year later developed leprosy.

THE INFLUENCE OF SANITARY MEASURES.

IN a report on the sanitary state of Hull, Dr. John W. Mason, medical officer of health, points to the influence of the provision of a proper system of sewers in lowering the mortality from certain diseases. During the years 1881–85, the western district of the borough was provided with a continuous instead of an intermittent outfall for sewerage. Phthisis and rheumatism will, it is believed, be materially alleviated by this measure, which permanently lowers the level of the subsoil water, and, by preventing the backing of sewage up subsidiary drains, deals even with the temporary choking of the subsoil with wetness. But as regards the zymotic diseases a change is already in progress which is worth recording, without necessarily attributing the whole of it to this one measure of sanitary progress. In 1881 the zymotic death-rate for the western district of Kingston-upon-Hull was 5·6 per 1000 living; and since that date it has almost steadily diminished, until in 1885 it was only 0·8 per 1000; the general death-rate from all causes meanwhile falling from 2·41 to 18·4. During that period 58,546 feet of drains were laid and 2394 houses connected with the sewers in the district in question.

A FUTURE FOR INDIAN WOMEN.

FOR many years there have not been wanting signs that the mind of the people of India is gradually freeing itself from the restraints which custom, inspired by superstition and social prejudice, has cast about it. The advantages acquired through a co-partnership with ourselves in modern methods of education, in facilities for European travel, and in such practical conveniences as the railway and the telegraph, have not lacked appreciation by many of our Oriental fellow-subjects. Chief amongst these advantages we would place the fundamental benefit conferred by a liberal and carefully directed education. Whatever the progress it has made hitherto, whatever temporary drawbacks or failures may have marked the periods of oscillation natural to advance in that as in any other direction, there can be no reasonable doubt as to the true position of this primary gain in the estimation of all who concern themselves to gauge its possible influence if allowed to act without restraint. It must of necessity in India, as elsewhere, be largely instrumental in reforming many objectionable practices which continue to disfigure personal conduct and social usage. It will undoubtedly do much, for example, to disabuse the native mind of its ingrained attachment to the practice of compulsory betrothal and marriage, with its too frequent sequel of child widowhood. A more cruel or disgraceful folly than this latter could hardly be credited to human nature. The pitiless lot assigned by Indian custom to the child widow was known in this country long before the case of Rukmabai attracted attention. Her case, hard though it is, is not to be compared with the misery of many of these children, who, bereft of friendship, scant of food, deprived of the very decencies of life, drag out an outcast existence, begun almost in infancy, simply because a husband, whom, perhaps, they have never seen, has died before them. Well may we feel a sense of shame that British law has been successfully invoked in justification of a forced marriage arranged in childhood, and of reproach that it is as yet powerless to lighten the sorrows of those poor children. Some effort in this direction, we trust, is not beyond the scope of early legislative reform. In the meantime we cannot but offer our cordial adhesion to a scheme in which it is suggested that an asylum be established for the reception of any of these outcast children who may be permitted to enter it. It has been proposed that there they should be instructed in the duties of attendance on the sick, with a view to their formation into a native nursing staff. A body of young native women thus trained is one of the crying needs of India at this time. Their youth, acquaintance with eastern character and custom, their familiarity with the language of their country, as well as with its diet and the changes of its climate, combine to fit them in a peculiar degree for waiting upon the native population, without reference to our fellow-countrymen, during illness. It is much to be desired by all classes of the people of India that a staff of this kind should be created, and we therefore commend the scheme to their most earnest consideration, as well as to that of the Government.

CHOLERA INTELLIGENCE.

THE returns as to cholera in Italy are not sufficiently definite to enable us to record the total number of cases and deaths. The main incidence of the disease is still upon the island of Sicily. But there is sufficiently accurate information to make it pretty clear that there has been some spread in the mainland. From Resina the news is more encouraging. Suspicious cases are said to have occurred in the provinces of Benevento and Avellino, and in Rome itself; and as regards Naples, it is distinctly asserted that the cases there have been somewhat numerous, and that a considerable number of cases had been admitted into the cholera hospital. A few cases are also reported from the province of Capua. From Sicily itself the news is mainly concerned with two provinces, and during the week ending the 22nd inst. there were in the province of Catania 152 deaths, and in that of Palermo 98 deaths, the outbreak clinging with considerable tenacity to both provinces. In Malta cholera is also maintained, fresh attacks and deaths being recorded every day. During the seven days August 16th to 22nd those newly attacked were 66 in number and the deaths amounted to 39. Owing to the maintained prevalence of cholera in Italy, it is generally apprehended that the Local Government Board are about to renew the order which expired some time back, and which prohibited the importation into this country of rags from that kingdom.

RECENT PHYSICAL DETERMINATIONS.

MANY determinations of the densities of the liquids which so short a time back were only known as permanent gases have been made, but until very lately it has been impossible to compare them on account of the various conditions under which the experiments were made. But very recently Dr. Olszewski, to whose elaborate researches on this subject we are already greatly indebted, has succeeded in overcoming the difficulties of comparison. Taking advantage of the very low temperature produced by the evaporation of liquid ethylene, he succeeded in finding not only the boiling point of the liquefied gases at the normal atmospheric pressure, or very near to it, but also its specific gravity at this pressure. It is of course of particular importance to know the specific gravity at the boiling point, because this fixes the specific volume. Working in this way, Olszewski found for the three important liquids, methane, oxygen, and nitrogen, the following numbers:—Methane: pressure, 736 mm.; boiling point, −164° C.; density, 0·415.

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Oxygen: pressure, 742·1 mm.; boiling point, −181·4°; density, 1·124. Nitrogen: pressure, 742·1 mm.; boiling point, −194·4°; density, 0·885. Scarcely inferior to the above research in interest is that of M. Amagat on the influence of pressure on the point of maximum density of water. It is well known that this liquid, remarkable in so many respects, occupies a less volume at 4° C. than at higher or lower temperatures. Hence the expansion of water is irregular, and is unlike that of any other liquid. But we now learn that this peculiarity only exists under ordinary pressures. When the pressure is increased the point of maximum density falls, and at 200 atmospheres it is almost identical with zero; with greater pressure the irregularity of expansion lessens, and at 3000 atmospheres it disappears and water behaves like any other liquid.

THE BRITISH DENTAL ASSOCIATION.

THE annual meeting of the British Dental Association was held last week in the hall of the Faculty of Physicians and Surgeons, Glasgow. The popularity of this institution is growing, as was shown by the statement of the secretary that there was an increased number of members, and there was a goodly number present, although the meeting lacked some well-known names, perhaps owing to the approaching International Congress at Washington. Sir Edwin Saunders, Mr. Smith Turner (the newly-elected President of the Association), Mr. Felix Weiss, Mr. Morton Smale, and many others took part in the proceedings, Mr. Brownlie (Glasgow) being in the chair. Amongst the papers of most general interest was one by Dr. George Cunningham on "The Dental Aspect of Public Health," which followed much the same lines as his and Mr. Fisher's papers last year, to which we referred at length at the time. At the conclusion of his paper the following resolution was agreed to:—

"That this meeting is of opinion (1) that wherever the State provides medical services, dental services should be provided for as an essential part of such medical provision; (2) that, having regard to the great importance of securing competent attention to the teeth of the army and navy, the representative board should consider the advisability of urging the Government to make suitable provisions to that end; and (3) that, considering the compulsory attention to the teeth of school children would be a national gain, the representative board should be empowered to further the matter in any way they deem most fit."

Mr. Lloyd Williams contributed a paper on "Antiseptics in Dental Surgery," which showed that the success in the treatment of dental diseases was largely due to their use, and that they were of great importance in preventing infection, septic or specific, by instruments. Messrs. Walter Campbell and Jas. Cumming also read papers.

EXCESSIVE SECRETION OF GASTRIC JUICE.

DR. WILKENS, of Stockholm, reports a curious case of periodic hyper-secretion of gastric juice, for which no cause or explanation is forthcoming. The patient was a musician of the age of thirty-six, who had lived in different countries, but had never suffered from digestive troubles till three years and a half previously, when he was seized with vomiting and pain in the abdomen, rendering him incapable of eating or drinking while the attack lasted. Similar attacks recurred at intervals of ten or twelve days, lasting from twenty-seven to thirty-five hours, and during them the patient was forced to keep his bed. It was found that he lost from two to three and a half kilogrammes in each attack; in the intervals he suffered from excessive hunger. The vomit presented all the characters of gastric juice. The quantity passed during each attack was about two pounds and a half; the acidity was 0·12 per cent. The only explanation that Dr. Wilkens can suggest is that this excessive flow depends on some affection of the secretory nerves of the stomach.

THE SURPLUS OF THE WOMEN'S JUBILEE OFFERING.

THERE was wisdom in the selection of the purpose to which the surplus of the Women's Jubilee Offering is to be appropriated. Women's work among the sick is an enterprise of great interest and value, and there is obviously a special fitness in the determination to utilise the money collected from women by women in honour of the Jubilee for the promotion of their benevolent mission. Only one better proposal could have been entertained, and that was the distribution of the fund in aid of the hospitals. This being set aside, possibly under the impression that it would be difficult to allocate the money in that direction effectively without merging it in a fund which it would not so much strengthen as complicate, the decision at which Her Majesty has arrived is one which must at once command the respect and sympathy of her subjects, and especially of those by whom the fund was contributed. That being so, we have only to express the hope that the committee commanded to advise the Queen will do so in a spirit of large-minded sagacity and benevolence worthy of the undertaking in which they are engaged. The nursing of women and girls by women, which we understand to be the particular branch of nursing specially eliciting Her Majesty's interest, is an enterprise that urgently needs help, and the timely assistance afforded by this Royal direction of an almost national fund towards its resources cannot fail to prove of invaluable service, if only it be judiciously applied.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Hartmann of Naumburg.—Dr. F. J. Hairon, Emeritus Professor in the University of Louvain, formerly President of the Belgian Royal Academy of Medicine, and ex-Director of the Ophthalmic Institute of the Belgian Army.

CUTANEOUS CALCULUS.

CALCULI in the skin are not of common occurrence; at the same time they can hardly be said to possess much importance except as articles of curiosity. One of fair size was recently removed from the skin of the left cheek of a woman, aged sixty-five, by M. Dubois Havenith. It does not seem possible for the stone to have been extracted from the parotid duct, for the disease was mistaken at first for a cancroid, on account of its hardness, and from its being covered with a crust; but there was no enlargement of the corresponding lymphatic glands; and a dental fistula, though a possible explanation, was negatived by careful examination. The stone was irregular, mammillated, weighed about five grains English, had the volume of about a quarter of a cubic centimetre, and was composed of phosphate and oxalate of lime and cholesterin.

SANITATION IN CALCUTTA.

IN the second quarterly report on the health of the town of Calcutta Dr. Simpson discloses a most discreditable state of affairs on the part of those who are responsible for the health interests of the community. Dr. Simpson points out that cholera and typhoid fever are always sufficiently present to call for systematic inspection of premises and their surroundings, but that this work cannot be carried out without

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an agency. He then states that the sanitary inspectors who, he had hoped, were the officials by whom the work was to be performed, and who were the nucleus of the sanitary department which he desired to see established in the city, have been dismissed. A real sanitary department in Calcutta has heretofore only existed in name, and now it appears that the sanitary organisation for carrying out inspections, which the most insignificant village in England possesses, is lacking for this great eastern capital, with its terrible death-rate from preventable causes. Had there been no inspection of the special surroundings of the dairy and other premises which led to the discovery that in the case of the *Ardenclutha* those who were attacked with cholera had used the implicated milk, that outbreak, like others in Calcutta, would probably have gone to swell the list of cholera cases due to so-called climatic causes.

THE EPIDEMIC OF ENTERIC FEVER AT MOUNTAIN ASH.

THE severe outbreak of enteric fever at Mountain Ash is said to be extending and to call for unceasing labour on the part of the medical practitioners of the district. Up to the end of last week 140 attacks had occurred, and a period has now arrived when the deaths have commenced, five fatal attacks being recorded. Happily, there is reason to believe that the cause of the extension of the epidemic has been discovered. The outbreak has been almost exclusively confined to a suburb of Mountain Ash known as Miskin, and there it has been found that the choking of a branch sewer had led to a large block in the sewerage system, with the result of forcing back upon the houses the fetid emanations arising from the decomposing sewage. This block has been dealt with; and we may hope that the sanitary circumstances of the place are such that, the initial cause once removed, the further spread of the disease will be checked.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Professor Hertwig will commence his lectures as Second Professor of Anatomy in October. Dr. Schmaltz has been appointed to the second Professorship of Anatomy in the Veterinary School.

Jena.—Dr. F. Semon has qualified as *docent* in Anatomy.

Kiel.—It is reported that a Hygienic Institute and a Professorship of Hygiene are to be established.

THE Vienna Academy of Sciences have elected Dr. Leopold Pfaundler, Professor of Physics at Innsbruck, and Dr. Hubert Seitgeb, Professor of Botany at Gratz, Members; Dr. Karl Toldt, Professor of Anatomy at Vienna, Dr. Sigmund von Wroblewsky, Professor of Physics at Cracow, Dr. Ernest Fleischl von Marxon, Professor of Physiology in Vienna, Home Corresponding Members; and Professor H. E. Beyrich of Berlin, Foreign Corresponding Member.

DR. BILLROTH, our readers will be glad to learn, is steadily regaining health and energy at St. Gilgen, by the pleasant waters of the Wolfgang-See. He hopes to resume his prælections with the reopening of the winter session.

THE Crown Prince of Germany has written to Professor Virchow, announcing a continued improvement, and thanking the renowned pathologist for his investigations into the character of his Imperial Highness's malady.

DR. EDMUND NEUSSER, assistant in Professor Bamberger's Medical Clinic in Vienna, has been appointed Body Physician to Prince Ferdinand of Bulgaria.

THE INTERNATIONAL CONGRESS OF HYGIENE.

VIENNA, famous historically as a seat of Congress, will four weeks hence give hospitality to the greatest numerically as well as philanthropically that has yet assembled within her walls. To the invitations issued by the Organising Committee of the International Congress of Hygiene 1320 affirmative replies have been received. The ordinary members will be numerous enough to suggest the thought that the gathering is as much an ethnographic as a hygienic one. Austria contributes 788, Hungary 182, Germany 85, France 63, Belgium and Italy 24 each, Russia 19, Switzerland 13, England 12, Holland 9, Denmark 8, Roumania 5, North America 5, Spain and Egypt 3 each, South America 2, and Portugal, Bulgaria, and Turkey 1 each. The official representation is also considerable. The common Ministries of Vienna and Buda-Pest depute 15 delegates; the Austrian Government 12, the Hungarian 18, the French 10, the Belgian and Swiss 4 each; the German kingdom, the Bavarian, the Saxon, the Spanish, the Netherlands, and the Egyptian, 2 each; the Italian, the Danish, the Portuguese, and the Norwegian kingdoms, 1 each; Brunswick, Hamburg, Lübeck, Bremen, Roumania, Servia, Persia, and the Argentine Republic also 1 each. The proceedings will relegate to the second line all purely controversial themes of hygienic science, and deal mainly with the thoroughly practical questions of human well-being. Of the twenty books and *brochures* distributed by the Hygienic Section among the members of the Congress, some of them ranging from 100 to 150 pages (the Demographic Section has limited itself to two *brochures* of a few pages each), the subjects dealt with are—Water in all its aspects as a Necessary of Life, including Drainage, and the preservation of Rivers from Pollution; the Utilisation of Human Refuse; the Adulteration of Food; Alcoholism; the Hygiene of Schools, of Seafaring Vessels, and Factories; the erection of Isolation Hospitals; the Protection of Animals from Epidemic Disease by Inoculation; the Etiology and Prophylaxis of Cholera, considered with reference to the recent European visitations—the whole field, in short, of sanitary science in its rigidly practical bearings. The special sections, as well as the general meetings, will assemble in the new university buildings. Within the same walls has been brought together, chiefly through donations, a splendid hygienic and demographic library, which, after the close of the Congress, will become the property partly of the University Institute for Hygiene, partly of the Central Statistical Commission. In connexion with the library there is also a magnificent assortment of plans and graphic representations of what may be called the *matériel* of sanitary and demographic science. The residue of the money subscribed for the Congress will be devoted to a foundation for the promotion of "fabriks-hygiene"—to remain as a monument of the Congress long after its immediate programme has been fulfilled. Demography, we may mention, will be represented at the Congress for the last time on this occasion, its votaries having made special arrangements with the newly organised Statistical Institute for enrolment among its members.

The organising committee, as already remarked, has now issued in printed form the opening address, dealing with the twenty-two subjects set down for discussion. These in themselves constitute a formidable volume, and will enable all the members of the Congress to obtain a complete insight of each subject that is to be debated. The greater number of papers are in German, but these, for the most part, are accompanied with summaries of the main argument written in French. After German, second in number are the discourses in French, and finally there are four papers in English. The first is a report on the Purification and Utilisation of Sewage, by Dr. E. Frankland of New Reigate; the second is a short Report on the Importation of Rags, by Professor Corfield; the third is an account of the Laws relating to Factories and Workshops, by Mr. F. Hayes-Whymper; and the fourth is a paper on International Regulations for preventing Epidemics, by Mr. Shirley F. Murphy. This latter may probably lead to a somewhat stormy debate, as it will be remembered that English ideas on quarantines were left in a minority of two at the last Congress, held three years ago at the Hague. Among the French papers, M. Durand-Claye's summing up of the Shone and Waring

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systems of drainage is certain to elicit very warm contradictions. Indeed, we already hear of various speakers who are preparing for the fray; and it must be borne in mind that the debates open on September 26th, so there is not much time to be lost. The excursions and various entertainments all seem to have been organised on a very grand scale and with much method, and the number of adherents to the Congress being unprecedentedly large, everything indicates that this gathering will be more successful than any of its predecessors.

THE FROZEN MEAT SUPPLY.

THE enormous importance of everything which has a bearing upon the food supply of Great Britain gives a very special interest to much of the evidence which was tendered to Mr. Justice Stephen in the course of the long patent trial with which he brought his judicial labours to a close for the legal year now just ended. The subject matter of the patent in question is a refrigerating machine, and interesting as its theory may be as a branch of thermo-dynamics, it would have been little but a piece of laboratory apparatus but for one thing. It has been found applicable to the important purpose of bringing dead meat from America, Australia, and New Zealand in a perfectly sound condition. The trade is at present in its infancy. Ten years ago, although experiments had been made with a view to the importation of cargoes of dead meat, they had all met with very indifferent success. The trouble arose out of a very trifling circumstance. Air contains, as everybody knows, a certain proportion of water vapour. This is, indeed, rather a popular way of putting the fact. If atmospheric air be considered to be strictly a mechanical mixture of oxygen and nitrogen, then of course it does not always and necessarily contain water. But although oxygen and nitrogen are often spoken of as being the principal (and sometimes roughly as the only) ingredients of common air, this is hardly accurate. So long as oxygen and nitrogen were regarded by physicists as "permanent gases," radically different from condensable vapour, like steam or carbonic acid, it was natural to draw a line between the gaseous and vaporous constituents of the atmosphere. But that distinction holds no longer. The brilliant experiments of Andrews, of Cailletet, of Pictet and others have recently shown that the most volatile gases are only vapours at a temperature much above, or a pressure greatly below, saturation point, and in this view it is impossible any longer to deny to the omnipresent and beneficent water vapour which paints our sunsets and fertilises our fields its right to the position of a constituent of prime importance in the terrestrial atmosphere.

But prior to 1877 it almost seemed as if this subtle vapour would for ever shut Great Britain off from the greatest dead-meat markets of the world. The problem was to preserve the meat during a voyage lasting from two to five weeks, and involving, in the case of the southern hemisphere, the crossing of the equator. The solution was obvious—viz., to reduce the temperature of the chamber in which the meat was carried to a point that would arrest putrefaction. Other methods of antiseptic treatment had indeed been tried, but not only without success, they had never even offered a reasonable prospect of success. An antiseptic dressing may do no harm to living flesh, because the vital processes speedily eliminate foreign elements; but once lodged in the substance of dead animal tissue, the antiseptic dressing became itself a ground of offence, and one which no subsequent treatment could wholly or satisfactorily remove. Not so, however, the treatment by what may, perhaps, be termed antiseptic temperature. This demands no counteraction but the subsequent thaw, and leaves no ineradicable mischief behind it. This, then, was, as we say, the obvious solution, and for years was only obstructed by the difficulty of dealing in the refrigerator with the inevitable water vapour. Unlike the so-called "permanent gases," water vapour is always present in the atmosphere, under ordinary conditions, in such quantity as to be actually at its point of saturation. A slight increase of pressure or a slight fall of temperature suffices to precipitate some portion of this vapour. Hence the difficulty. The engine is required suddenly to accommodate in the liquid or the solid form what up to that moment has been present only as a gas; and it is not surprising, therefore, that many—most, indeed—of the engines that have been constructed for this purpose have been liable to clog through accumulations of ice and snow.

The deposition of water as a result of increased tension in water vapour, though theoretically correlative to the deposition through reduction of temperature, does not, indeed, give rise to any practical difficulty. Indeed, in practice it is somewhat in favour of the operation, for as a matter of experience great reduction of temperature is almost always accompanied by simultaneous reduction of pressure. Thus the one condition tends to promote evaporation, while the other is producing condensation. But it falls far short of effecting a complete compensation. Our readers will remember the beautiful experiment of Cailletet, alluded to above, in which hydrogen gas, after being subjected to an enormous pressure and to the refrigerating influence of freely evaporating carbonic acid, was allowed to stream through a cock into the open air. It might have been supposed *a priori* that the relaxation of pressure, which itself produced the cold, would have countervailed the condensing effect of the cold so produced. But it was not so. In the centre of his emergent jet of liberated gas little lumps of solid hydrogen formed and fell upon the floor. In the same way grains of ice form in the expanding water vapour when the reduction of pressure is considerable, and these grains of ice, accumulating in the working parts of the machine, have of course a strong tendency to block it up. How strong this tendency is may be collected from the evidence of one of the engineers, who told Mr. Justice Stephen that "cold air machines are frequently made to deliver 1,680,000 feet per day, and this would produce about 5 cwt. of snow equal to three cubic yards in twenty-four hours without taking into account evaporation from the meat, and this on the assumption that the air taken into the machine is already below freezing." It may well be supposed that the disposal of such a quantity of solid matter generated within the machine would in any case be a serious problem, but it is complicated by the circumstance that this mass of snow comes into existence precisely where it is most mischievous. In order to get the full refrigerating effect, it is necessary to make the air do work during its expansion, and consequently it must be expanded in a closed chamber, in a cylinder in fact. This accordingly is where the snow is formed, and the problem of its removal in the solid form must be faced if once the water vapour gains admission.

Stated thus, the difficulty conveys a hint as to how it may be evaded. All that is wanted in the expansion cylinder is the permanent gas. If the water vapour can be removed the whole difficulty is at an end. Completely to remove it is not practicable, is not desirable perhaps, for it is probable that the desiccating action of a truly anhydrous atmosphere would have a deteriorating effect upon the meat cargo. But by the simple expedient of cooling down the entering air, before admitting it to the expansion cylinder, to a temperature just above 32° F., and giving it time to deposit its condensed moisture in a liquid form, the practical difficulty has been overcome. The liquid water runs away under the mere action of gravity. The residual vapour, though still producing snow, produces so much less than if it had gone into the cylinder at an ordinary atmospheric temperature as to make all the difference between commercial failure and commercial success. Equipped with this contrivance, the merchant finds it as easy to make his way through the circumambient ocean of water vapour as to traverse the subjacent ocean of liquid water, and without risk or trouble to bring his inert cargo of perishable meat for a six weeks' voyage through the tropics. Already the boon of this great enlargement of his meat supply is being felt by the British consumer. Last year it seems that a million frozen carcases arrived in London from New Zealand and the River Plate. In April of the present year 131,000 carcases of frozen mutton were received. Thus a beginning has been made of what will probably in the end prove to be a most important departure in the department of our food supply.

ACCORDING to advices from Jamaica, brought by the Royal Mail Company's steamer *Orinoco*, small-pox has entirely disappeared from the island, but several ports of Cuba are declared to be infected.

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THE MANCHESTER EXHIBITION.

THE Manchester Exhibition has proved a great success. The number of visitors has exceeded all anticipations, and at first their advent caused no slight confusion. Thus, the catering came altogether to grief, and there was not food enough to feed all the hungry sightseers. This, of course, was very soon rectified. It cannot, however, be said that all the people who thronged the door of the Exhibition came for the sole purpose of studying the exhibits. At Manchester, as at the South Kensington Exhibitions, there are many other attractions. The gardens are expansive and effectively illuminated, and there is the extra and exhilarating prospect of a ride on the switch-back railway, or a wild career down the toboggan slide. The play of the fountains at night, illuminated by coloured rays of electric light, the excellent bands without, the organ recitals within, the numerous cafés and refreshment bars, the quaint reproduction of an Old Manchester street, achieved in as elaborate a manner as the Old London street at South Kensington, and, above all, the most glorious, sunny, dry weather, have all contributed to render the Manchester Exhibition a success.

Technically viewing the exhibits, there is more to interest the chemist than the doctor, and the chemistry relates rather to industrial enterprise than to sanitary reform. Nevertheless, there are some points of special interest which deserve a few words of notice. For instance, Messrs, Leveson and Son, of London, Manchester, Leeds, and Liverpool, exhibit six invalids' carriages, carefully swung on bicycle wheels; and there are the patent royal Hansoms of Messrs. Forder and Co., of London and Wolverhampton; and the landau and broughams of Mr. J. C. Windover. Then, to go from large things to small, writing nibs and pens generally are of practical interest to a profession so often called upon to prescribe; under these circumstances, the firm of Joseph Gillott and Sons will be welcomed among the exhibitors, particularly as they show us every stage of the manufacturing process necessary to produce the pen, which Bulwer-Lytton has aptly described as "mightier than the sword." There are also our old acquaintances and useful servants, the Owl, the Waverley, and the Pickwick pens of Messrs. Macniven and Cameron; and by the side of these, the medical publications, the anatomical models, and preparations of J. Pentland Young (Edinburgh), the educational publications of Messrs. Cassell and Co., including popular and most useful science works, and the elaborate exhibits of the well-known Manchester publisher, John Heywood. It is, of course, to this latter firm that we are indebted for the very complete and well-organised catalogue of the Exhibition. In the Old Manchester street Mr. Heywood shows us how printing and bookbinding was done in the Caxton period. This quaint and living record of the past is not without its sanitary lesson. Both the men and women engaged in the printing and bookbinding trades were evidently dressed some 300 years ago in a manner far better suited to our climate. The dress was practical, simple, artistic, and of such stout woollen materials as could defy the damp and cold, or the sudden, unseasonable heat, of an English winter.

In the matter of furniture, also, there are many things of interest. Messrs. Neville Glegg, of Altrincham, have gone to the trouble of showing how an artisan's living room might be furnished to secure the greatest amount of health, comfort, and economy in a limited space. Messrs. J. Davenport and Co., on their side, have artistic and sanitary wall papers free from poisonous colouring matter.

Section 8, devoted to chemical and collateral industries, possesses, of course, the greatest number of objects that more particularly concern the profession. The chemical apparatus and scientific instruments of Messrs. James Woolley and Sons, and the laboratory tables of John Haywood, both of Manchester, are effectively and neatly arranged. The former firm has also elegant antiseptic preparations for nursery and toilet use. There is, indeed, a large assortment of disinfectants. MacDougall's carbolic and sulphurous disinfectants, Jeyes' sanitary compounds, the Hydrofluate sanitary soap powder, and a new antiseptic named "Saltifer."

In the same section there is a very large assortment of soaps. Price's Patent Candle Company have an excellent opaque coal-tar soap. When this soap is transparent it contains a certain portion of glycerine and alcohol; there is consequently so much less washing material. The coal-tar soap in question, however, has neither the one nor the other of these ingredients. It is made of tallow, like pure primrose soap, with an addition of 5 per cent. of coal-tar; it is not black, and need not be black. For those who desire glycerine this firm manufactures a pure solidified soap, which contains no less than 50 per cent. of glycerine, and it is this large quantity of glycerine that produces the transparency without any addition of alcohol. In many soaps the transparency is secured by the presence of sugar and alcohol alone. Price's Candle Company, for example, showed us some of their hard transparent soaps that contain no glycerine whatever. They have recently introduced a new method of removing glycerine from neutral fats by means of magnesium instead of lime, and this enables them to obtain a glycerine of a much purer character. Their soap, containing 50 per cent. of glycerine, must be regarded as a purely medical article, and is not meant for ordinary daily use. Where, however, glycerine is required, it would be difficult to find a combination giving so large a quantity in the form of soap.

Among the goods of other manufacturers, we noticed the hazel soap of Messrs. James Alexander and Co. of London; the health soap of the Health Soap Company, Liverpool, who also show their process of manufacture; the soaps and oils of Messrs. Senior and Brooks; the well-known sunlight soap of Messrs. Lever Brothers, with a complete model of their very large works; and the samphire soap of Messrs. J. C. and J. Field. Some white Windsor soap of Messrs. Joshua Margerison and Co. seemed very inexpensive, and being made with potash instead of soda is suitable for hard water. The Pedeline powder and soap, made by Mr. F. Round, chemist of Southport, was attracting considerable attention. Used for washing the feet and for powdering the inside of boots or socks, it is presented for the prevention of sore, tender, or unpleasant feet.

In the same section, we also noted that Mr. J. W. Lovibond of Salisbury exhibits a tintometer which, though meant for testing the density of dies and colouring material used in manufactories, would serve as a quick, ready means of applying the Nessler's test in the analysis of potable waters. Near at hand, Herr Franz Müller has some German chemical and physical apparatus; and there are several exhibits of non-poisonous paints, notably Freeman and Co.'s white-lead paint, which, however, only professes to be free from injurious smell. There were many exhibits of chemicals for bleaching, finishing, dyeing, and calico printing, which, according to their freedom from mineral and vegetable poisons, have a great effect on the health of workers in the factory and in the mills.

There is an entire group devoted to indiarubber and gutta percha, and here Messrs. David Moseley and Sons have waterproof garments that are necessarily most useful to those who are compelled to face all weathers when calling on their patients; and the Ancoats Vale Rubber Company show domestic and surgical indiarubber articles worthy of note. The exhibits of Owens College, Manchester, constitute a small historical, chemical museum of great retrospective interest; and it was a happy idea to include this collection in the Third Section. Close by, Messrs. Thomas Christy and Co., of London, have many raw and manufactured drugs and some specimens of the less known medical plants. They give great prominence to methods for inhaling.

With regard to sanitary matters, such as ventilation and drainage, we could not find anything remarkable. Even Messrs. Doulton and Co. were not up to their usual high level of excellence. The newest object they exhibited was a graphic drawing which facilitates the appreciation of their improvement in the Stamford drain-pipe joint. Nor is the Exhibition building itself satisfactorily drained, for we could discover no trace of the intercepting man-holes, and the inlet and outlet ventilation of the soil pipes so well shown by this firm at the London Health Exhibition. The closets of the Manchester Exhibition, we believe, drain straight into the sewers without any interception and without any ventilation of the soil pipes. At all events, though we made several inquiries as to this point, we could find no evidence of these most indispensable precautions. We ought also to enter a protest against the condition of the ornamental waters in the gardens. These were extremely dirty, and consequently lost much of their attractiveness to the eye.

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In spite, however, of these drawbacks, the Exhibition as a whole, is well organised, and has, we repeat, proved a great success. The machinery in motion is naturally, for a town in Lancashire, the principal part of the Exhibition, unless we include the art gallery, where many of the *chef d'œuvres* of English art, painted during the last fifty years, will be found. There is also an Irish section that has elicited considerable praise. Finally, though the Exhibition is some distance from the centre of Manchester, it is easily reached both by tram and rail. We trust it may still remain open for some time, as it will amply repay a visit on the part of those who have not yet been able to avail themselves of the many excursions and opportunities afforded of inspecting this collective display of northern industry and progress.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hull Urban District.—Dr. Mason reports the general death-rate for Hull during 1886 to have been 18·6 per 1000, and the zymotic rate 2 per 1000. Both these rates exhibit a substantial diminution on the average rate for previous years, and the items which go to make up the latter are indicated in a useful but simple form by a diagram which discriminates between deaths from general and zymotic causes. Diarrhœa was by far the most fatal of the zymotic diseases, the rate from that disease alone reaching 1·37 per 1000—a higher rate than any since 1882. The deaths under one year of age are also high, amounting to 164 per 1000 registered births. Dealing with diarrhœa, Dr. Mason points out how favourable summer heat is to fermentative changes, which lower the vitality of the young and the aged, thus rendering them more liable to succumb to this disease, which he regards as being doubtless dependent upon the reception and propagation of some micro-organisms in the system. The hospitals for infectious disease continue to do service, the new sanatorium being highly spoken of for design and equipment. Hospital isolation is becoming more and more popular, and of 265 admissions during 1886, 251 were from scarlatina; that is to say, from a disease mainly affecting young children, as to whose removal from their homes difficulties are so frequently alleged by those authorities who have made no proper provision for their reception. The report in question contains a large number of valuable tables and diagrams, and it explains in detail the general measures of sanitation which have, with success, been carried out during the year.

Winchester Urban District.—Mr. Langdon gives a graphic account of the danger from small-pox which communities incur through the unvaccinated state of gipsies. Small-pox encampments were last year established near the city, and the announcements made by the sanitary authorities as to the existence of small-pox amongst the gipsies practically broke up the Lent Fair, which would otherwise have been the cause of much danger. But it is stated that, owing to an announcement in a local paper, some 400 people from Winchester visited the small-pox camp, and Mr. Langdon points out that the well-vaccinated state of the community alone protected them from infection. As regards the gipsies themselves, their failure to procure vaccination has been solely a matter of carelessness, and they gladly availed themselves of the offer of protection. At the gipsy camp no unvaccinated person escaped infection, and none who had recently been successfully vaccinated took the disease. The death-rate in the whole district from all causes was 18·0 per 1000 during 1886; the zymotic rate was 2·8.

Barnstaple Urban District.—Dr. Mark Jackson reports a birth-rate of 29·7 and a death-rate of 17·7 per 1000 for 1886. Neither small-pox, measles, nor scarlet fever caused a single death, the largest item amongst the so-called zymotic diseases being eight deaths from diarrhœa. In relation to five deaths from diphtheria, Dr. Jackson speaks of a prevalence of throat affections generally, the milder disease probably rendering the individual more liable than he otherwise would be to an attack of true diphtheria. The general record of sanitary work in progress is satisfactory; but there is no infectious hospital. Such a building should be provided, and the caution not to let the matter stand over until an emergency arises should be borne in mind. A disinfecting apparatus is in contemplation. Properly speaking, it should stand on the future hospital site, where it would be available for town and hospital purposes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5605 births and 4128 deaths were registered during the week ending August 20th. The annual rate of mortality in these towns, which had been 22·9 and 23·7 per 1000 in the preceding two weeks, declined last week to 23·3. During the first seven weeks of the current quarter the death-rate in these towns averaged 22·2 per 1000, and was 1·0 above the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 15·0 in Derby, 16·9 in Norwich, 17·1 in Halifax, and 18·2 in Leicester. The rates in the other towns ranged upwards to 29·9 in Birkenhead, 30·1 in Preston, 30·8 in Blackburn, and 33·5 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined from 1301 to 1252 in the preceding three weeks, further fell last week to 1195; they included 878 from diarrhœa, 100 from whooping-cough, 87 from measles, 61 from scarlet fever, 35 from "fever" (principally enteric), 30 from diphtheria, and 4 from small-pox. These zymotic diseases caused the lowest death-rates in Halifax and Norwich, and the highest in Hull, Brighton, and Portsmouth. Diarrhœa caused the greatest mortality in Salford, Brighton, Hull, Birmingham, and Portsmouth; measles in Manchester, Bradford, and Oldham; scarlet fever in Bristol and Blackburn; whooping-cough in Cardiff, Sunderland, and Blackburn; and "fever" in Cardiff and Huddersfield. Of the 30 deaths from diphtheria in the twenty-eight towns, 22 occurred in London and 2 in Liverpool. Small-pox caused 4 deaths in Sheffield, but not one in London or in any of the twenty-six other large provincial towns. Only 3 cases of small-pox were under treatment on Saturday last in the Metropolitan Asylum Board's hospitals receiving cases of this disease, of which one was admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 158 and 175 in the preceding two weeks, further rose last week to 178, but were 3 below the corrected average. The causes of 79, or 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Norwich, Leicester, Salford, Sunderland, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Newcastle-upon-Tyne, Sheffield, Oldham, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·1 and 19·3 per 1000 in the preceding two weeks, delined again to 18·6 in the week ending August 20th; this rate was 4·7 per 1000 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·3 and 15·1 in Aberdeen and Greenock, to 21·1 and 34·2 in Perth and Paisley. The 464 deaths in the eight towns last week showed a decline of 18 from the number in the preceding week, and included 44 which were referred to diarrhœa, 24 to whooping-cough, 12 to scarlet fever, 6 to "fever," 1 to diphtheria, and not one to small-pox; in all, 87 deaths resulted from these principal zymotic diseases, against 73 and 81 in the preceding two weeks. These 87 deaths were equal to an annual rate of 3·5 per 1000, which was 3·2 below the mean rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 28 and 37 the preceding two weeks, further rose last week to 44, of which 11 occurred in Glasgow, 10 in Paisley, 9 in Edinburgh, and 6 in Dundee. The 24 deaths referred to whooping-cough showed a decline of 4 from the number in the previous week, and included 6 in Glasgow, 5 in Edinburgh, 4 in Dundee, and 4 in Greenock. The 12 fatal cases of scarlet fever showed a further increase upon recent weekly numbers, and included 6 in Glasgow and 5 in Dundee. The

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deaths referred to "fever," which had been 9 and 1 in the preceding two weeks, rose again to 6 last week, of which 4 occurred in Glasgow. The fatal case of diphtheria was recorded in Dundee. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 67 and 71 in the previous two weeks, were 69 last week, and exceeded by 7 the number returned in the same week of last year. The causes of 53, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 29·6 and 31·5 per 1000 in the preceding two weeks, further rose to 35·5 in the week ending August 20th. During the first seven weeks of the current quarter the death-rate in the city averaged 30·3 per 1000, the mean rate during the same period being but 22·5 in London and 18·8 in Edinburgh. The 240 deaths in Dublin last week showed an increase of 27 upon the number returned in the preceding week; they included 39 which were referred to diarrhœa, 27 to measles, 5 to whooping-cough, 4 to "fever" (typhus, enteric, or simple), 3 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had steadily risen in the preceding five weeks from 45 to 58, further rose last week to 78; they were equal to an annual rate of 11·5 per 1000, the rate from the same diseases being 5·7 in London and 3·2 in Edinburgh. The fatal cases of diarrhœa, which had been 29 and 23 in the previous two weeks, rose again to 39 last week. The deaths referred to measles, which had been 16 and 27 in the preceding two weeks, were again 27 last week. The 5 fatal cases of whooping-cough were within one of the number in the previous week, and the 4 deaths referred to "fever" exceeded those recorded in any recent week. The deaths of infants showed a marked excess, while those of elderly persons declined. Eight inquest cases and 8 deaths from violence were registered; and 51, or nearly one-fourth, of the deaths occurred in public institutions. The causes of 49, or more than 20 per cent., of the deaths registered during the week were uncertified.

THE SERVICES.

WE learn from the Indian papers that Surgeon J. C. Addison, of the Army Medical Staff, has, with the sanction of the military authorities, established an Ambulance Association at Quetta, and has been delivering a course of lectures on "First Aid to the Wounded." His class consisted of twenty-four ladies and a large number of the officers at the station.

WAR OFFICE.—Army Medical Staff: Brigade Surgeon Albert Stanley Knight Prescott has been granted retired pay, with the honorary rank of Deputy Surgeon-General (dated July 26th, 1887); Surgeon-Major Samuel Flood is granted retired pay, with the honorary rank of Brigade Surgeon (dated Aug. 24th, 1887).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet-Surgeon John Shields has this day (16th inst.) been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. Fleet-Surgeon Fleetwood Buckle, M.D., has been placed on the retired list of his rank (dated Aug. 12th, 1887).

The following appointments have been made:—Fleet Surgeon H. S. Lander, to Devonport Dockyard; Fleet Surgeon S. H. Stewart, to the *Impregnable;* Fleet Surgeon J. B. Courtenay, to the *Clyde;* Staff Surgeon E. R. H. Pollard, to the *Ganges;* Staff Surgeon S. F. Hamilton, to the *Devastation;* Staff Surgeon C. Hicks, to the *Neptune;* Surgeons G. B. Townsend and H. J. Hadden, to the *Nelson*, additional; Surgeon P. J. Barcroft, to the *Revenge;* Surgeon F. R. Jeans, to the *Monarch;* Surgeon R. W. Rickards, to the *Hotspur;* Surgeons G. H. Milnes and C. H. Upham, to the *Alexandra*, additional; Staff Surgeon J. C. B. Maclean, to the *Agincourt;* Staff Surgeon D. D. Birkey, to the *Espiegle;* Staff Surgeon E. H. Saunders, to the *Garnet;* Staff Surgeon William R. White, to the *President*, additional, for temporary service; and Mr. R. A. Nesbitt to be Surgeon and Agent at Donaghadee, Orlick Hill, Millisle, and Ballywater.

RIFLE VOLUNTEERS.—4th Volunteer Battalion, the Gordon Highlanders: James William Mackenzie Gunn, M.A., M.B., to be Acting Surgeon (dated August 20th, 1887).—2nd Volunteer Battalion (the Prince of Wales's), North Staffordshire Regiment: Surgeon H. M. Morgan, M.D., is granted the honorary rank of Surgeon-Major (dated August 20th, 1887).

Correspondence.

"Audi alteram partem."

"USEFUL EMPLOYMENT IN THE TREATMENT OF THE INSANE."

To the Editors of THE LANCET.

SIRS,—Writing under the above heading in your issue of August 20th, Dr. Bower is good enough to refer in complimentary terms to the management of this hospital. His letter, however, contains at least one, doubtless inadvertent, inaccuracy, which, I feel sure, he will be pleased to see corrected. He conveys the impression that the system of employment of patients is here of quite recent development, and adduces want of premises as an explanation of our apparent tardiness and want of energy. In both these particulars he is entirely in error. This institution has for many years had immediately attached to it an estate of nearly seventy acres (ornamental grounds, flower and kitchen gardens, &c.), and been equipped with the usual complement of workshops and the like. It is obvious, therefore, that it has not lacked the necessary resources. As to the utilisation of this material, it is certain that, during the tenure of office of the present medical superintendent (a period of over twenty years), employment of patients, particularly in out-door work, has been regarded as a remedial agent of the most radical importance, and been carried out to the fullest possible extent. The case-books and other hospital records at any time during the past ten years indicate a proportion of working patients nearly, if not quite, as high as at present. It is true that the purchase, seven years ago, of an annexe, with a farm of 500 acres, has in a measure favoured the development of the employment system, but in no sense originated it. It has rendered practicable the devising of greater variety in occupation, but has not materially increased the number of the workers.

In a paragraph of their Forty-first Annual Report, the Commissioners in Lunacy note with approval the fact that one-third of our male patients were employed in out-door work in April, 1886. This estimate is, of course, perfectly correct so far as it goes, but it does not entirely cover the ground. In illustration of my meaning, I beg leave to append statistics, as to occupation, of a day taken at random in the past week:—

Total number of male patients	164
Employed on farm, grounds, and gardens ...	60
" in in-door work (carpentry, printing, tailoring, &c.)	19
Cricket, tennis, bowls, driving, fishing, &c. ...	15

The addition of the inside workers to those employed out of doors raises the number of those usefully occupied to 79, or nearly 50 per cent. In-door work, though for obvious reasons less beneficial than labour in the open air, is nevertheless resorted to in a small minority of instances—patients who are either strongly averse to, or physically unfit for, out-door employment.

Considering next the 15 who are entered as devoting their time to various forms of recreation, I may remark that the majority, if not all, of these individuals are both mentally and physically capable of engaging in manual labour, if it were insisted on. Their preference, however, for healthy amusement in place of actual work cannot under the circumstances be reasonably interfered with. In a pauper asylum, however, where such counter-attractions are practically non-existent, this class of patients would undoubtedly go to swell the ranks of the usefully employed.

When to the numbers already quoted, I make two further additions—to include, first, those who are incapacitated by bodily illness or physical infirmity, and, secondly, those who, without pretending to any regular employment, yet occupy themselves in a rational manner in the wards (reading,

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writing, drawing, music, &c.),—I find, out of a total of 164 male patients, a residuum of not more than 20 who can be truthfully denominated as hopelessly idle. These are either incurably indolent, or else so demented or intractable as to baffle all efforts to improve them.

Taking into account the comparatively large number of patients, the classes of society from which they are drawn, the various difficulties in the way of enforcing such a plan of treatment, amongst which the ill-advised opposition of relatives and friends is one of the most practical and embarrassing, the result which I have endeavoured to indicate above is not, I venture to think, wholly unsatisfactory.

I am, Sirs, faithfully yours,

LLOYD FRANCIS, M.A., M.D. Oxon.,
Senior Assistant Medical Officer.

St. Andrew's Hospital, Northampton, Aug. 23rd, 1887.

"DIPHTHERIA IN MAN AND THE LOWER ANIMALS."

To the Editors of THE LANCET.

SIRS,—In a leading article on the above subject in your issue of the 13th inst., you draw attention to a report lately issued by Dr. Turner, in which he deals with the relationship that, according to him, exists between diphtheria of man, the horse, the cow, the pig, and poultry, I have not at present seen Dr. Turner's report, but I am, nevertheless, bound to accept the statement in your article as in some sense reflecting the general conclusions with which it deals.

Dr. Turner seems to have arrived at the conclusion that the disease so well known to veterinary surgeons as affecting poultry, and in which a false membrane is formed in the mouth, throat, nostrils, and conjunctivæ, is identical with diphtheria, and he speaks of the membranous product as being *found in the trachea*. At first sight does this statement bear out the relationship? I have always understood that diphtheria is, in the human subject, mainly localised in the pharynx and fauces, and if I am wrong in this ingrained supposition, I may still fall back upon my experience, and say that I have never yet seen anything approaching a diphtheritic product in the trachea of any feathered creature; but I will not beg the question thus, as I am perfectly well aware that circumstances alter cases, and that slight histological differences exercise a material influence in the characters of pathological or, more strictly speaking, histological processes. I cannot at the moment remember the name of the pathologist who some time ago stated that the difference between catarrhal, croupous, and diphtheritic products was merely histological, and was dependent upon the difference in the arrangement of the epithelium in the mucous membrane of the pharanx, larynx, and trachea respectively, and that the same disturbing influence (only in a different degree) that would produce catarrh or croup in one would produce diphtheria in another; and until this statement was published I was at a loss somewhat to account to my pupils for a fact which I had on more than one occasion observed—viz., the occurrence of true diphtheritic products in the larynx and trachea of the cow. Diphtheria I have only seen once in the horse; it is more common in the pig; and a few years ago cases occurred in swine and cattle in the practice of Mr. Campbell, F.R.C.V.S., Kirkcudbright, on farms where diphtheria *had prior existence* in the attendants. Such statements as that made by Dr. Turner to the effect that "strangles in the horse appears to have some real kinship with human diphtheria" are gratuitous assumptions, and not borne out by the experience of every-day practice. That strangles in some seasons takes on protean characters is a fact well known to all observant veterinary practitioners; that it bears in its essential characters any resemblance to, or has any clinical kinship with, diphtheria are, again, gratuitous assumptions, and all the more so seeing that Dr. Turner attempted to impart to them an air of plausibility by the following statement that "a large proportion of fatal attacks of diphtheria has also been observed to occur in other families of persons—such as shepherds [this ringing the innocent sheep], grooms, and blacksmiths—who have to do with the lower animals." Really this is drawing conclusions (if I may be permitted to say so) from false data with a vengeance. Why does he not put dairymaids and swineherds in the list? Dr. Turner, it seems to me, has lost sight of a well-known law bearing upon diseases and endemics and epizootics and epidemics, to the effect that in certain seasons this class of affections rage simultaneously, and that the same forces which favour the production or prevalence of epidemics and endemics are equally operative in the propagation and spread of epizootic and enzootic diseases. Returning to Dr. Turner's primary argument as to the prevalence of diphtheria in poultry and pigeons, I may be forgiven when I express the doubt that he has not made himself acquainted with the current medical and veterinary literature on the subject during the past few years, both in this country and on the Continent.

About the year 1865, I saw, in the neighbourhood of Liverpool, cases in poultry which I looked upon as of the nature of *diphtheritic aphtha*. On my removal to Edinburgh (in the years 1871-2), I came across similar cases in pigeons, poultry, and canaries, and in the first lectures it was my privilege to give in the Royal Veterinary College on the subject of infectious and contagious diseases I described an affection that I considered partook partly of the nature of aphtha and partly of that of diphtheria by the dual term *diphtheritic aphtha*, and which was most certainly contagious and infectious between poultry and pigeons. I further attributed it to the action of a fungus (a leptothrix), and thought that its production was favoured by insanitary conditions and all influences that tended to lower the vital forces, such as damp, cold, and in-breeding. Some time after this a disease was described by Dr. Fleming, in his "Sanitary Science and Police," under the head of "Gregarinosis" or "Psorospermiosis," the clinical characters of which resembled those of diphtheritic aphtha. The terms mentioned were, if I mistake not, of continental origin, and were applied to the disease because it was believed to be due to a form of psorosperm or gregarina.

In 1879 M. Megnin described diphtheria of poultry, and distinguished two forms — (1) a false membranous form, and (2) a tuberculous form, the former being localised in the pharynx, nose, &c., the latter in the internal organs and muscles; and Megnin identified the disease (histologically) with the hepatic tuberculosis of rabbits. Megnin also asserted that M. Nicati sought to identify the affection with the diphtheria of man; but he himself combated Nicati's identification by drawing attention to the fact that he had frequently seen women and children eat infected poultry with impunity, and by the experiments of Trasbot of Alfort, who inoculated pigs and dogs ineffectually, fowls successfully, and who stated that a pupil of his—M. Faiés—placed diphtheritic membrane (from fowls) in his own throat with impunity.

In May, 1882, I read a paper on "Specificity in Disease" at a meeting of the North of England V. M. Association held at Newcastle, and amongst other subjects touched upon the disease designated "gregarinosis." For some time I had had doubts as to the nature of the disease, and strongly suspected that causally—as most certainly pathologically—it was intimately related to tuberculosis; but there were certain differences in the characters of its local manifestation which I could not reconcile with those of the last-mentioned disease. These were principally the presence of flattened yellow bodies in the intermuscular connective tissue, the peculiar croupous transformations so frequently seen in the lungs, and the cylindrical croupous and hæmorrhagic masses sometimes forming in and occluding the intestines, with the absence of that marked tendency to calcification so characteristic of tubercular granulomata. In the paper alluded to I concluded my remarks as follows:—"The dissemination of the nodules internally is certainly similar to that of ordinary tubercle, and, as in that disease, death is largely produced by anæmia and exhaustion. But, in other respects, the two diseases differ widely, though one is undoubtedly quite as specific in its nature as the other."

Since the above-mentioned date I have arrived at the conclusion that the disease might be due to a cladothrix form of fungus, the visible products of whose action were, as in the case of actinomycosis, granulomata. In August, 1883, attention was directed to the subject of Tuberculosis in Fowls, in a leading article in THE LANCET. And again in October, 1884, the statement of Emmerich to the effect that he had discovered a bacterium in the false diphtheritic membrane from pigeons is noticed in THE LANCET. The spread of disease amongst domestic poultry has been going rapidly on for some years, and in several—in fact, I may say in all—specimens examined by the newer methods of staining, my colleague, Professor McFadyean, has succeeded in detecting bacilli identical with those of tubercle. Whether, however, there are two distinct forms of disease in poultry,

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a diphtheritic and a tuberculous, or one disease manifested in different ways clinically, must be left an open question; but of the widespread prevalence of tuberculosis in the feathered tribe there can be now little doubt. An admirable article on this subject appeared in the *American Journal of Comparative Medicine and Surgery* for October, 1886, by Dr. Bland Sutton; it was entitled "Avian Tuberculosis."

I am, Sirs, your obedient servant,

Edinburgh, August, 1887. THOMAS WALLEY.

THE ALLEGED CASE OF ASIATIC CHOLERA AT NEWTON-POPPLEFORD.

To the Editors of THE LANCET.

SIRS,—You will probably think the following case of sufficient importance for insertion in an early issue of your valuable journal.

At 7 A.M. on Saturday the 23rd ult., I was called on to visit John F——, aged sixty-seven, a small farmer residing at Newton-Poppleford in the parish of Aylesbeare, distant about nine miles from Exeter. I was well acquainted with the man, who was strong, and enjoyed uninterrupted good health. Formerly he had been rather intemperate, but of late years had been what would be called a "moderate drinker." On my arrival at 9.30 A.M., I was informed that, after a light supper of bread and cheese and a single glass of ale, he retired to rest at 9.30 (his usual hour) on the previous evening, apparently perfectly well. At 1.30 A.M. on Sunday (eight hours before my arrival) he was seized with sickness, which was speedily followed by copious relaxation of the bowels, and in about an hour cramp in the upper and lower extremities set in, and increased with the purging and vomiting until my arrival. No stools or vomicæ had been preserved. The former were described as "at first like dirty water and then light yellow," and the vomited matter as "thick and brown," except when he took tea or milk, which was ejected as soon as swallowed. I found him prostrate and restless; features pinched; eyes sunk; the whole surface of his body bore a marked leaden hue, covered with a cold, clammy sweat. His voice (which I heard, and which forcibly struck me as I ascended the stairs to his room) was completely changed into a whine or loud whisper. His respiration was difficult, and the breath and tongue quite cold. The toes and fingers—the skin of which was much pinched—were severely contracted during the cramps, and the muscles of the calf "quivered" during the absence of cramp. He complained of no griping in the bowels, but of great uneasiness at the epigastrium, severe thirst, and craving for cold water, which was allowed *ad libitum*, but instantly thrown up. Pulse small, thready, and rapid. Temperature in the mouth (taken with great difficulty, and not to be relied on) 98°. At 10.30 P.M. I again visited him, in company with my son (Mr. Bingley G. Pullin). The colour of the body was very livid, the eyes more sunk, the face more pinched, and the hands sodden, as if long immersed in water. Pulse not perceptible. Body covered with sweat of icy coldness. There was at this time a slight return of heat in the breath and tongue, and the purging and sickness had been less severe with the medicine, and he had dozed for a few minutes at a time, but he was now very prostrate and restless, rolling from side to side with severe cramps. Three stools had been reserved, which closely resembled thin gruel or rice-water. The patient stated that no urine had passed during the attack, but about one ounce was taken, which in his struggles was spilt and the opportunity to analyse lost. My son remained to ensure the necessary remedies being carried out. All, however, was of no use, and the patient succumbed at 2.30 A.M. on Sunday (twenty-five hours from commencement of attack). It was not until an hour before he died that stupor set in and his mind gave way. The contraction of the muscles of the calf continued for two hours after death, and during this period the temperature of the body had risen, but in three hours rigor mortis had powerfully set in. The treatment consisted in the first instance of three grains of calomel placed on the tongue, with ten minims of dilute sulphuric acid and ten minims of tincture of opium, every hour, and subsequently diffusible stimulants of ammonia and ether, with friction and chloroform liniment.

The dwelling was isolated and elevated, and both it and its surroundings were sanitarily satisfactory and the water pure. No diarrhœa prevailed in the family or village, and none has appeared since. It will be asked, What was the cause of the attack? Was it the result of a "specific poison"? I leave wiser heads to determine this point. There was no premonitory stage. It manifested itself suddenly in a most virulent manner, and, as is usual, as far as my experience goes, such cases invariably prove fatal. That the intensity of the attack was determined by the heat of the day, I feel no doubt. During his work on the previous day he came into his house three times to shelter himself from the effects of the sun—quite an exceptional circumstance; and the temperature taken in the neighbourhood that day by one of the most reliable meteorologists (Dr. Radford) was 139° in the sun—a heat never registered higher in the neighbourhood before, and only once so high. I consider it to have been a case of Asiatic or malignant cholera, and to guide me in this opinion I have the advantage of the experience of the severe cholera epidemic of 1849, when I acted professionally under the then Government General Board of Health at Portsmouth, Plymouth, and Cornwall. No symptom that I witnessed during that epidemic was wanting in this case. A post-mortem examination was refused. I may mention that the coffin was saturated with Burnett's fluid, and the corpse wrapped in cloths saturated with Calvert's strong carbolic acid, and interred in forty-eight hours. The bed, bedding, and everything used during the illness I insisted on being burnt at once, the house powerfully fumigated, and the entire premises thoroughly cleansed.

I am, Sirs, yours faithfully,

THOS. H. S. PULLIN, M.D.,

Sidmouth, Aug. 23rd, 1887. Medical Officer of Health for Sidmouth.

"PAIN AND ITS INTERPRETATION."

To the Editors of THE LANCET.

SIRS,—With your indulgence I would offer a few words in reply to Dr. Collins' letter in your last issue. I am not quite sure how that letter should best be answered, but certainly the worst way would be to imitate its method. No good purpose can be promoted in that way. The burden of this letter is in two remarks. The first is that my statements concerning pain "are so strangely at variance with universal experience and common sense that it is incumbent upon anyone who has read them to controvert them." Now, my answer is that I have the best proof possible that Dr. Collins' knowledge is at fault concerning universal experience, and I fear uncharitable as regards common sense; for I have from utter strangers and from all parts of the country the most unqualifying encouragement to continue my papers on the Interpretation of Disease, and this last paper on Pain has been received most favourably. I have had many private letters concerning it; it has been quoted *verbatim* by several provincial papers, with very pertinent and encouraging comments; and what I esteemed perhaps more than all this was your own annotation in the same issue, which very distinctly asserted the beneficence of pain.

I trust Dr. Collins will credit me that I am not anxious to entertain any theory of pain that is wrong or unreasonable, but I must say that there is nothing in his letter to convince me that this beneficent view of pain is wrong. The assumption of universal experience and a private property in common sense is scarcely safe, and any *ipse dixit* based on such disposition is sure to be largely discounted. I must be held excusable, then, if I say I still adhere to every word of my paper. When Dr. Collins charges me with not excepting malignant diseases he does me an injustice. I did make distinct reference to these "apparent exceptions"; no person at all thinking of the matter could escape so doing. But he takes no notice of my attempt to reconcile these with the beneficence of pain. This is unfair and unfortunate; for as long as the philosophy of disease is treated in that manner, so long will our profession remain under an *opprobrium medicinæ* worse even than cancer. I have nothing to do at present with the "wider sense" in which pain may be viewed. I am only concerned with the individual, and I am not afraid that anything determined right for the individual shall be found at variance with the wider signification of pain when that is adequately declared and understood. As to Dr. Collins' own rendering of the matter, which I honestly confess I did not understand,

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Daily News seems to me to have touched it off quite neatly and gently.

Surely this most important question can be rationally discussed so that some clear understanding may be come to. There are to my own knowledge not a few able men quite clear on the purpose of pain. They may have something to say.

I am, Sirs, your obedient servant,

Brockley, S.E., Aug. 22nd, 1887. H. CAMERON GILLIES.

CASE OF HYSTERICAL SPASM SIMULATING TETANY.

To the Editors of THE LANCET.

SIRS,—In connexion with the above subject, reported by Dr. F. F. Caiger in your issue of Aug. 20th, I think the following will be read with interest by many neurologists.

M. P——, female, aged twelve years, a provisional pauper, came under my notice about the end of last June with symptoms of gastro-intestinal disturbance, produced—as is so commonly the case, especially at this season of the year—by taking food of bad quality and in insufficient quantity. She lives in one of the lowest parts of a provincial town, amidst bad sanitary surroundings. The house she lives in is an ordinary cottage, and, besides the family, accommodates one or more Irish lodgers, and is in a very dirty state. My patient is a bright, intelligent little girl, with fair hair and blue eyes, small and slightly made, and with a pinched face and subdued manner. There is no evidence of syphilis or worms, nor has she ever had any catamenial discharge. During the winter months she nursed a younger brother through an attack of scarlatina, and when in her usual health she does most of the housework. She attended the surgery from time to time, complaining of occasional vomiting, pain behind the sternum and in the abdomen, and constipation, and was treated with a mild saline purgative and a few drops of opium. She came to the surgery for the last time on August 8th, and on the 9th, about 7 P.M., I received a message to go at once, as she was "in fits." I attended almost immediately, and when I opened the door the following scene met my gaze. On a bed under the window of the living room into which I entered, and close to a great fire where culinary operations were going on, lay my patient, surrounded by six or seven dirty women and two or three dirty men, each of whom was holding some different part of her body. She was quite still when I entered, and watched me approach her; but as soon as I touched her the following convulsion occurred. The depressors of the lower jaw contracted, opening the mouth to its fullest extent, the facial muscles attached round the mouth contracted, fully exposing the teeth in both jaws. As soon as this action was completed the post-cervical muscles commenced to contract, and drew back the head until the tip of the nose rested on the pillow. The wave of contraction then passed slowly down the spinal muscles; the thorax bulged forward, then the abdomen, and then the legs became rigid. Although the child is not more than four feet six inches in height, I think I shall be well within the mark in saying that the lumbar region rose twelve inches from the bed, and she rested solely on her forehead and heels. The legs were now drawn up, and then violently extended. This had the effect of forcing the face upwards against the iron bed-head, and had not her shoulders been raised into a semi-erect position, the face would have been seriously injured against the iron rail (as happened once or twice to a slight extent). The spasm seemed now to attack the remaining muscles, and the consequence was that the whole body became rigid and straightened out, with the head thrown back. The spasm began now to pass off, leaving one side sooner than the other, thus producing pleurothotonos, with the concavity towards the left. The whole attack lasted two or three minutes, and was repeated several times during the night, all being very much alike by varying in slight details. It was impossible to take the temperature. I came to the conclusion that the case was hysterical, and—my suggestion that the case would be better treated in the workhouse hospital not meeting with any opposition—I enjoined strict quiet in a cool room, from which all visitors were to be rigorously excluded, and left without ordering any other treatment. The next day, Wednesday, I found that the convulsions had continued through the night, and were, if anything, more severe than when I last saw her. I injected a quarter of a grain of morphia hypodermically, but found later in the day that it had had no effect in checking the convulsions. On Thursday, the 11th, I found her still in convulsions, and much exhausted; the convulsions, I was informed, had continued at intervals since my last visit. I ordered her a mixture containing five minims of tincture of Calabar bean and ten grains of bromide of potassium every two hours. On the 12th I was told that my patient took the mixture with great difficulty, and complained of its being very salt. From her general expression and semi-somnolent manner, I began to fear that, after, all I had to do with commencing meningitis, and, there being some constipation, I gave her two powders at intervals of three hours, each containing a little calomel and half a minim of croton oil, which operated promptly and without causing any disturbance. When I saw her in the evening, she was not convulsed, but pressure on the ovarian region induced a pretty severe convulsion. On Saturday, the 13th, I heard her screaming as I came up the street—"Oh, mother! Cut my legs off. Oh, my legs and my back! Mother, be quick!" As soon as she ceased to cry out she went into a convulsion similar to the one I have described. She appeared quite unconscious of what went on around her, and after giving orders for the mixture to be pushed I left. On Sunday, the 14th, I found her singing, shouting, and beating time with her arms and legs, heedless of all that went on around. I was told that she had slept well during the night, and awakened seemingly all right, but that on an attempt being made to give her the mixture the present state of things commenced. The attack passed off during my visit, giving me an opportunity for the first time of taking her pulse (80) and temperature (98·8°). I now became satisfied that I had to do with hysteria, and thereon determined to stop the mixture and watch the progress of the case. Later on in the day, at the urgent request of her friends that I should give her something, I sent a mixture of burnt sugar and water, and was informed on my next visit, when I found her perfectly quiet and sensible, that it had done her a deal of good, and that she had not had a single attack since taking the first dose. I took this opportunity of informing her friends in her hearing that I declined having anything more to do with the case, and that if she had any more convulsions I should insist on her going to the workhouse. Since that time I have heard nothing of her.

I am, Sirs, yours faithfully,

Barnsley, Aug. 24th, 1887. EDWARD KERSHAW.

EIGHTEEN MONTHS' TRIAL OF CANTANI'S TREATMENT OF CONSUMPTION.

To the Editors of THE LANCET.

SIRS,—Your admirable leader on Bacterio-therapy in your number for July 23rd last deserves not only the attention but the careful study of medical men. It is a garden of valuable suggestion, and contains the rich fruits of extended experience.

When discussing the erysipelas streptococcus injections of Fehleisen and the bacterium termo inhalations of Cantani, you write "Cantani's method has proved a failure," and then you give Dr. Pawlowsky's explanation of the cause of that failure—viz., "the confusion of many species of bacteria under the head of bacterium termo," and you add, "also the reliance solely upon the antagonism of these two organisms, the bacterium termo and the tubercular bacillus, as sufficient to cause the destruction of the latter." Pawlowsky's explanation and your additions are instructive and reasonable, but, these exceptions being removed, experience leads me to disagree with the conclusion that "Cantani's method has proved a failure." In the previous part of your article I read: "On all sides we hear of bacillicidal methods, but the results are not commensurate with the faith that inspires them or the plausibility of the grounds on which their employment is based.... and yet we by no means despair of a way being found out of the morass." And you continue: "That way lies, we think, in affording to the organism support sufficient to cope with the bacterial hordes—in other words, to strengthen the powers of vital resistance." Did I try to describe to you the system which I have pursued in the treatment of consumption for the last eighteen months, I could not adopt more suitable language

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than that which your suggestion employs. I have made Cantani's bacterium termo the basis. In a letter which I received from him occur these words: "Le B. termo, qui m'a servi si bien contre la phthisie, est une espèce particulière du genus Termo, qui végéte bien à 39-40 C°. On doit si le procurer dans un laboratoire bactériologique et le cultiver toujours pur." Here are four particulars: (1) a particular species; (2) a particular laboratory; (3) a particular temperature; (4) a particular cultivation. To avoid the confusion of species which Pawlowsky condemns, minute attention to these particulars is requisite; and no one who has not diligently tried can estimate the trouble of sterilising the suitable fluid and thus sowing that bacterium, and the number of times it is necessary after every precaution to go over and over the same ground to secure the culture of one species, and one species alone; and yet this point secured is only the beginning. To find the way out of the morass, too much attention cannot be paid to your direction—viz., "to afford to the organism support sufficient to cope with the bacterial hordes—to strengthen the powers of vital resistance." To secure this end, every means within my reach has been resorted to—nutritious food, tonic and strengthening medicines, daily inunctions of cod-liver oil, thorough ventilation of apartments, disinfectants, change of air, long continuance in the open air, and, latterly, the addition of the sulphuretted hydrogen rectal injections of Bergeon.

Now for results. Were I to send you a table or chart describing cases from the commencement to the conclusion, it would claim too much of your space. Suffice it to say, I can point to patients, not only in Liverpool, but in London and various other places—patients, the first account of whose symptoms would have left no ray of hope under the old methods of treatment; patients, now convalescent, who were pronounced to be in advanced phthisis by other physicians before bacterium termo and vital restoratives combined yielded the wished-for consummation. The desire that similar success may attend the efforts of others induces me to write thus. Truly the morass is a deep one. It is daily engulphing victims; but there is a way out, and some have securely walked it. To induce others to try the path you advocate is my apology for thus intruding on your valuable space. I am, Sirs, yours faithfully,

Liverpool, Aug. 23rd, 1887. W. H. LAMBART, M.D., F.R.C.S.

P.S.—It will give me pleasure to supply, free of charge, a pure cultivation to any medical brother who is anxious to give this treatment a fair trial.

THE PASTEUR COMMITTEE.

To the Editors of THE LANCET.

SIRS,—It may appear to be presumptuous on the part of so humble a member of the profession as I am to record my objection to the report of the committee appointed to inquire into the value of Pasteur's method. Nevertheless, I feel sure many will agree with me that the report is not satisfactory so far as the main question at issue is concerned. The committee appear to have experienced no difficulty in obtaining facilities for experimentally testing the *prophylactic value* of Pasteur's method, but what I think required to be shown in the same manner was whether it possessed *antidotal powers*. No attempt whatever seems to have been made to submit this matter to experimental test. It is true that the committee offer an opinion, but it is founded upon a critical analysis of Pasteur's cases. Even supposing the committee had met most of the principal objections to these cases, which, with all due deference to those eminent gentlemen, I may venture to say appears not to have been the case, their decision, however much entitled to respect, would, after all, only be a matter of opinion. I humbly submit that what is required to be tested by *experiment* is this: (*a*) Does inoculation with Pasteur's material prevent the occurrence of rabies after infection has taken place? (*b*) If so, what is the shortest period after infection that it does so?

Surely, in the absence of any experimental researches, the success of the method as a *remedial measure* is as far from *demonstration* as ever. I am, of course, assuming that the abstract contained in your issue of July 2nd, 1887, from which my information is obtained, accurately describes the report of the committee. More than twenty years' practical experience in investigations of a somewhat similar nature must be my respectful apology for this communication.

I am, Sirs, yours truly,

July 24th, 1887. VINCENT RICHARDS.

THE ORGANISMS OF MALARIA IN THE EAST.

To the Editors of THE LANCET.

SIRS,—It may interest some of your readers to hear that the micro-organisms of the blood supposed to be characteristic of the malarial infection have been found almost daily, for some time past, in two patients at present lodged in the clinical medical wards at the Jamsetjee Jejeebhoy Hospital, Bombay. They have been seen not only by myself in charge, but also by Professors Manser, Macdonald, and Burke. Stained preparations are preserved, and on careful comparison with the original descriptions of Professors Laveran, now of Paris, and Osler of Philadelphia, there seems to be no doubt of the identity of the "hæmatozoa of ague," sometimes at least, found in this part of India, with the organisms now known to prevail in parts of Europe, Africa, and America. Several interesting questions are raised by these recent observations, which can be fully answered only after a prolonged research. Hitherto, after a brief inquiry, it has not appeared to me that the pigmented monads, of either spheroidal or crescentic shape, are usually or distinctly present in the blood of patients affected with the common so-called "malarious remittent" fever of Bombay. Nor have they been detected in four pronounced examples of "malarial cachexia." According to my experience, genuine "ague" here is almost invariably an importation; and as regards the two positive instances above named, it happens that the quotidian and quartan types they represent were acquired outside the limits of the western Presidency. About two years since a fatal case of "pernicious" malarial fever came under my care from the N.W. frontier, and in it the blood was loaded with pigment in a striking degree. (*Vide* Trans. Med. and Phys. Soc., Bombay, No. 8, new series, 1886.)

I am, Sirs, your obedient servant,

Grant Med. Coll., Bombay, July 28th, 1887. H. V. CARTER.

THE STATE OF THE THAMES.

To the Editors of THE LANCET.

SIRS,—Perhaps you may not disdain to receive the congratulations of a simple engineer upon the correct views expressed on several occasions on the above subject by the leading medical journal, and your clear short article in your issue of to-day, the 13th inst., presents a striking contrast to a long and lame apology for chemical failure published by the *Engineer* newspaper on the 5th instant. This paper has devoted many leading articles during the last two years to the advocacy of an ingenious theory set up by Mr. Dibdin, chemist to the Metropolitan Board of Works, and has striven by faint praise of the permanent remedy recommended by Lord Bramwell's Royal Commission to exalt the supposed economy of experimenting with permanganate of soda. These articles contained internal evidence of acquaintance with unreported proceedings of the Board in pursuance of their chemist's advice, which led me to refer to them as "semi-official" in one or two letters published without disclaimer by the *Engineer;* but the article of the 5th inst. has "let the cat out of the bag," and shown that its editor sympathised with the Board so long only as its majority was content to follow the lead of their chemist, and proceeds to taunt the Board with "drifting" towards Canvey Island.

Now, I would ask your readers if it is right that a problem of such public importance as that now before the Metropolitan Board should be treated by anyone in such a spirit as seems to be indicated by the word "drifting," and still more by the following further quotation from the *Engineer* of the 5th inst.:—"Without really intending it, the Board is now playing into the hands of Mr. Bailey-Denton and his colleague."

I am, Sirs, your obedient servant,

ALFRED S. JONES, Assoc. M.Inst. C.E.

Wrexham, Aug. 13th, 1887.

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THE UNCONSCIOUSNESS OF LIPSKI.

To the Editors of THE LANCET.

SIRS,—As I gave evidence on the trial that the unconsciousness of Lipski might be caused by mental perturbation, and you have admitted to your columns some very strong remarks thereon, I trust, in fairness to me, you will admit this letter. The positive assertions of your correspondent in your issue of the 20th inst. (page 378) are mistakes, because Lipski in his confession says he *fainted* when he heard the people coming up the stairs. As to the abrasions on the elbows, about which so much has been said, they were caused by the mob seizing him by his bare arms, and trying to drag him from the custody of the two policemen as they were taking him up Batty-street. The abrasions were not there when I found him under the bed. The police just managed to get him as far as my surgery, and took him in for safety. I pointed out to the police the abrasions that the crowd had made. In the interests of persons who, like Simon and Schmuss, in the future may be falsely accused of murder, I hope your correspondent will secure Lipski's case a place "in the records of forensic medicine," so that others may not, like him, seek "in vain for anything that would lend support to such a view" as I took.

Commercial-road, E., Aug. 24th, 1887. J. WILLIAM KAY.

SICILY.

(From our Correspondent.)

THE *Gazzetta Ufficiale* puts it beyond question that in the general stampede from the cholera-stricken communes in this island not only the civil functionaries joined, but also, I regret to say, not a few medical practitioners and pharmacists. These deserters from their posts have each and all been subjected to severe marks of Government displeasure, professors having been deprived of their chairs and divisional surgeons of their appointments. As a foil, however, to this deplorable exhibition of moral cowardice, it is fair to mention that physicians and surgeons from all parts of the island and the peninsula have been besieging the Ministry of the Interior to obtain permission to serve in the cholera-visited localities, the majority of the applicants being young men eager to atone, even by their lives, for the defection of their demoralised brethren. Examples of the stuff of which these medical youths are made might easily be cited, and one of them, whose tragic end absolves me from the duty of withholding his name, I cannot refrain from mentioning. Vincenzo Rapisardo, Sicilian by birth and a medical student of five years' standing, lost no time in enrolling himself among the volunteers in the cholera campaign. Catania was the place to which he was told off, and he worked night and day in relieving patients and in helping forward the sanitary works. Meanwhile the enemy had appeared in force at Paterno, his native village, where his family were still residing. Most of the functionaries of the place, civil as well as medical, had taken flight, when Rapisardo appeared on the scene. He at once took upon himself the work of half-a-dozen hands, visiting the sick, compounding medicines, performing every kind of hygienic duty, and keeping, by constant corrrespondence, the officials at headquarters cognisant of the movements of the disease. Day and night he laboured at his wellnigh solitary task, till he, too, was struck down by the malady, which his strength was too far gone to resist. He died on the 5th inst., and a few days afterwards was followed to the grave by his mother and sister.

An assistant of Professor Bizzozero of Turin is another of these young medical heroes, and him, too, I may mention, as the Government have made public recognition of his work. Dr. Canalis, whose name has before now appeared in your columns in connexion with certain departments of physiological research, received from Signor Crispi, then Minister of the Interior, now Premier of Italy, the mandate to go to Catania directly the cholera had declared itself. To Catania accordingly he went, and in concert with Signor Noghera, official inspector of sanitary works, he organised a thorough system of medical relief and hygienic precautions, exposing himself in a hundred different ways to the malady wherever it was most pronounced, and not leaving the spot until he had made return to it unnecessary. A friend who has lately seen him informs me that what Canalis found more disheartening than the stubbornness of the epidemic was the cowardice of the local authorities and the ignorance of the multitude. He has prepared, and is, I am told, about to publish, an official report of his experiences, and he certainly will not spare those who have failed in their duty, or have been found wanting in common humanity. Moral paralysis is hardly the word for the inaction of the communal functionaries, who, according to Dr. Canalis, allowed from twenty to thirty cases a day to occur almost at their doors, and who were too frightened to inform themselves of the symptoms and to report the same to headquarters. And what is to be done with communes like many of which Dr. Canalis has just had experience?—communes of 20,000 inhabitants, where the pigs patrol the streets and where the population threaten to rise *en masse* and stone the sanitary inspectors who dare to close notoriously infected wells!

Servius, whose commentary on Virgil contains so much information on the life of classical antiquity, tells us that at Massilia (the modern Marseilles), whenever a pestilence appeared, one of the poor offered himself to his fellow-citizens on these conditions; he was to be kept and daintily fed at the public expense for a whole year, and after that he was to be arrayed in verbena and sacrificial vestments and carried through the streets amid the execrations of the people—to make himself, as it were, the embodiment of all the maledictions of the townsfolk—by whom he was finally to be precipitated into the sea. This heathen custom, however, is intelligible and even rational, compared with the madness without method that assails Southern Italy in cholera times. At Risposta, in this island, the other day the countryfolk rose and murdered a man whom they suspected of secretly "propagating the malady." In other Sicilian localities the people openly accuse their priests of distributing "the poison," and post their names as worthy of assassination; and why? Because, amid the general sickness and mortality few or none of these spiritual men have been taken ill or died! On the 14th inst., shortly after midnight, the postal diligence plying between Caltagirone and Valsavoia, had reached a lonely township in the Commune of Granmichele, when it was suddenly stopped by twelve individuals armed with rifles. They presented their firearms at the windows, and commanded the coachman and the guard to deliver the post-bags at once. These they opened, removing the letters and newspapers and certain articles which find hospitality in the post-bags for the use of the military. They touched no other object of value, and even returned the guard his watch, which he had voluntarily given up to them. Mysterious brigands these! But it now appears that they were not gentlemen of the highway at all, but honest countryfolk who thought they were doing a sanitary service by stopping the conveyance of cholera-infected correspondence between their own and the surrounding communes.

Oh for the day when, in the memorable words of Sir James Coxe, the late Scottish Commissioner in Lunacy, every citizen, not in Sicily only, but much nearer home, will be taught at school to be "the intelligent custodian of his own health." Southern Italy has more than her proper share of this educational leeway to make up, but now she is more likely to start fair in that wholesome direction than she has hitherto been—her leading statesman, Signor Crispi, himself the representative in the Italian Chamber of one of the divisions of this city, and now Prime Minister of the kingdom, being an enthusiastic sanitarian, one on whom the mantle of Bertani has worthily fallen, and who will make his term of office memorable by a vigorous carrying into effect of the new "Codice igienico." Under his auspices, reinforced, too, by his reassuring presence, Palermo has suffered but lightly from this return of her old enemy. The municipality, I may add, have shown praiseworthy energy in seconding their distinguished townsman's initiative, and are at this moment organising depôts where good bread and sound meat can be sold to the very poor at prices within the reach of all.

Palermo, Aug. 20th.

AT an inquest recently held at Widnes on the body of a young man who died in consequence of injuries received in a game of football, the jury returned a verdict of accidental death.

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MANCHESTER.

(From our own Correspondent.)

VICTORIA UNIVERSITY.

At the late examinations in medicine there were thirty-two successful candidates, twenty-six of whom were students from Owens College, and six from University College, Liverpool. At the Preliminary Scientific five Owens College students and one from University College passed in the first division, and five University and seven Owens men in the second division. At the Intermediate, four Owens men passed in the first division and five in the second. At the Final Examination, Part 1, there were three successful candidates (all Owens College men), and in Part 2 of the Final two from the same College. Arrangements have been made for a continuation of the lectures during the coming winter on the model of the "Cambridge University Extension" lectures. Professor Munro will deliver one course at Withington on the English Constitution, and Professor Boyd Dawkins another on Evolution and Geology.

THE IRWELL AND SEWAGE.

Mr. Walmsley continues to draw attention in the public press by a series of letters to the disgraceful condition of the river Irwell from sewage contamination, urging that all offenders should promptly and thoroughly be brought to book. It is to be feared that one of the greatest sinners is the city of Manchester, and until we get our new sewage scheme in operation little improvement can be looked for. In a letter to-day Mr. Walmsley states that the death-rates of those districts of the borough which abut on the river varies from 25 to upwards of 42 per 1000 per annum, a statement of serious import.

WATER SUPPLY.

Notwithstanding the late acceptable rain, we are still on a limited water supply, and so urgent had the matter become that the corporation were seriously directing their attention to an additional supply from subterranean sources. At some coalpits near Moston, which were flooded a few years ago and rendered unworkable, a quantity of about 4,000,000 gallons is available, and, after examination, has been declared of good quality, though rather hard for manufacturing purposes.

SALFORD FEVER HOSPITAL AND INFECTIOUS DISEASES.

The acquirement of a site for the new Fever Hospital required by the borough of Salford appears to be a matter of some difficulty. The land last proposed to be used for this purpose has now been objected to on account of its proximity to the workhouse hospital, in addition to the objections made by the residents in the neighbourhood of Hope. The epidemic of measles appears now to be subsiding, but scarlet fever still continues very prevalent, notwithstanding the large number of cases sent to hospital, the wards of both fever hospitals being very full of scarlet fever patients. The effect on the death-rate by the large number of fatal cases of measles was apparently very marked last quarter. Manchester occupies the unenviable position of having the highest death-rate in the country for the three months ending July 2nd, being no less than 30 per 1000 per year.

OPEN SPACES.

A wise and philanthropic course has been taken by the dean and canons, who have promised a large piece of land in the populous and increasing district of Newton Heath. The cathedral authorities are possessed of much land in this manufacturing suburb, and while they will be doing a good thing for the dwellers, they will probably lose but little pecuniarily, as it is usually found that the land adjoining parks and open spaces acquires an enhanced value. The Manchester and Salford Sanitary Association have issued their tenth volume of Health Lectures for the People, comprising the last course delivered during the winter 1886-87.

Mr. de Jong, the resident surgeon at the Jubilee Exhibition, has had a considerable number of cases pass through his hands during the past month. On Saturday last a serious case of injury from burns occurred by the careless habit of throwing down lighted matches in the grounds. A lady's dress was thus set on fire, and she was much burnt before the flames were extinguished.

Aug. 23rd.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

SOUTH SHIELDS.

DR. A. CAMPBELL MONRO, medical officer of health for South Shields, has issued his annual report, which is of a satisfactory nature, and shows that during the past year the death-rate was 20·5 per 1000, which is the lowest death-rate in the borough, with two exceptions, since 1872. After pointing out the difficulty of dealing with zymotic cases on account of the small proportion of cases notified to him, Dr. Monro shows that, of 137 persons admitted to the Infectious Hospital, 129 recovered. He points out how the corporation, in converting a large area of waste ground, had made it into a Marine Park second to none in the kingdom. This, with the provision of salt water baths on the most modern principles, had made South Shields proverbially a healthy town and a desirable seaside resort; but he, at the same time, urges on the authorities the view that while the sea side of the town is well provided with breathing and recreation space, the west and crowded end requires their attention before it is built up; for to aged persons and younger children the Marine Park is practically inaccessible. There can be no doubt that "the folk of Shields" possess sufficient public spirit to carry out Dr. Monro's valuable suggestion. At the late annual meeting of the Ingham Infirmary, South Shields, the deepest regret was expressed at the somewhat sudden death of Alderman Williamson, who had laid the foundation stone of the present buildings in May, 1871, and who from that time until his death was president of the hospital, having contributed the munificent sum of over £3000 towards the building, and furnishing funds. It was resolved to call No. 1 ward the John Williamson Ward in future. The Hospital Sunday and Saturday fund showed a small increase over the previous year. It has been decided to erect a monument in South Shields to the lifeboat inventors, Wouldhave and Greathead.

NEWCASTLE-ON-TYNE DISPENSARY.

The vacancy for the honorary physicianship of the Newcastle Dispensary has been filled up, Dr. G. Armstrong Atkinson, after a spirited contest, having been elected. Dr. Atkinson is a brother-in-law of the late Dr. Holland, whose death caused the vacancy. Dr. Atkinson was late assistant to the Professor of Materia Medica and Demonstrator at Edinburgh, and is a distinguished graduate of that University.

A CAUTION.

A successful female swindler has been operating in Newcastle, and the following is her *modus operandi*. Having somehow become aware that a medical man and his family were travelling, she represented to the servant that she was a great friend of her master, and a surgeon's daughter herself; being from her own home in Barnsley, owing to the illness of her mother, she was hastily summoned home, but, being confused and in great anxiety, she had, in changing trains, lost her bag and purse, and was without the means of going home. The servant believed her story, and recommended her to a kind lady patient of her master, who also believed her story, entertained her, and gave her a £5 note and a warm shawl to proceed home. As she will no doubt try to repeat the trick elsewhere, it is as well to say she is about twenty years of age, with good manners and address.

Newcastle-on-Tyne, August 30th.

DUBLIN.

(From our own Correspondent.)

LUNACY IN IRELAND.

FROM the thirty-sixth Annual Report of Lunatic Asylums in Ireland, it appears that insanity throughout Ireland is not only not on the decline, but relatively to a decreasing population quite the reverse, there being a registered excess of 283 at the close of 1886 as compared with the preceding year. With regard to the condition of the 16,077 patients in district asylums on Jan. 1st of the present year, the probably curable, or rather those who admit of hope of

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recovery, were estimated at 2223, and the incurable at 7779, each class needing an equal professional care and domestic supervision. Owing to a better and more generous treatment of the insane, their longevity is notably increased, so that additional provision has to be made, as shown by the progressive enlargement of public asylums. Twelve years ago the accommodation in them was limited to 7000 beds, which has been increased by over 2600, and even now there is a marked deficiency. During the past year 1831 admissions of patients were effected through magisterial warrants, a method which the inspectors consider as unsatisfactory, and to obviate it they suggest that the Act should be so amended as to impose on the relieving officers in Poor-law divisions an obligation to report on all cases of insanity, so as to have the patients visited professionally and taken charge of in poor-houses until remitted in due form to the asylum of the district. In a total aggregate of 12,618 patients under treatment during the year, 894 deaths took place. The general mortality was owing to pulmonary diseases in nearly a third, or 294 cases; to cerebral affections in 244; debility and old age, 160; diseases of the heart and circulatory system, 37; abdominal derangements, 83; and the remainder to febrile, scrofulous, and cutaneous maladies of no marked description. The cost per head of district asylum patients last year was £20 19*s.* 3*d.*, as contrasted with £21 19*s.* 5*d.* the previous year.

THE PREVALENCE OF OPHTHALMIA IN THE CORK WORKHOUSE.

Dr. O'Farrell, Local Government Board inspector, at a meeting of the Cork guardians last week, reported as to the prevalence of ophthalmia among the workhouse children. He remarks that owing to a great extent to the excellent measures recommended by Dr. Sandford, the outbreak is subsiding; but at no time was the epidemic so severe in its intensity, or in the number of those attacked, as stated in the daily press. He points out that owing to the unhygienic surroundings of the poorer classes, to their overcrowded and smoky cabins, and their impoverished dietary in the past, ophthalmia has at all times been extensively common in this country; and no doubt this tendency to the chronic and milder forms of eye disease has been transmitted from generation to generation. As regards the measures to be adopted to get rid of the present outbreak of ophthalmia, Dr. O'Farrell suggests the appointment of a small committee to consider, in conjuction with the medical officers, how Dr. Sandford's suggestions can be carried into effect, as well as any recommendations which he might make in his report to the Local Government Board. One of the guardians had kindly offered to place a house at Passage West at the disposal of the board for the purposes of isolation, and if the house and situation were suitable, the matter might be referred to the committee for their consideration.

THE DUBLIN HOSPITALS BILL.

It cannot be a matter of regret to all unprejudiced parties to learn that this Bill has been blocked by Mr. Macartney, M.P. The provisions of the proposed Bill, and the constitution of the Board of Management, &c., were so one-sided and unjust, that if carried out, they would have proved so injurious to several well-conducted charitable institutions in this city, that the result above mentioned must be regarded as a subject of congratulation.

Several cases of small-pox have occurred in the town of Drogheda and neighbouring district, and up to the present time one death has taken place.

THE SALE OF DRINK IN FRANCE.—The annual return upon this subject, published in the *Bulletin* of the Ministry of Finance, states that there is a tavern to every 46 inhabitants in the department of the Nord, one to every 55 inhabitants in the Pas de Calais, one to 58 in the Ardennes, one to 60 in the Somme, one to 67 in the Aisne, and one to 75 in the Eure. These are all in the north of France, whereas the five departments in which the taverns and wine-shops are the least numerous, proportionately to the population, are all in the south—viz., the Gers with one in 137, the Vaucluse with one in 159, the Savoie with one in 142, the Hautes-Alpes with one in 143, and the Charente-Inférieure with one in 143. Altogether, there is a tavern to every 95 of the inhabitants throughout France, this representing an increase of more than 11 per cent. within the last six years.

Obituary.

PROFESSOR ADOLF PANSCH.

A DEPLORABLY sudden death by drowning in Kiel Bay on the 14th inst. has deprived German science of one of its ablest representatives. On the morning of that day Dr. Pansch started with his son (a boy of eleven years of age) by steamer to Laboe, to bring back to Keil his sailing boat, with which a few days before he had taken part in the Laboe regatta. Shortly before embarking on the return voyage he complained of feeling unwell, but, nevertheless, set sail with his son about 11.30 A.M. The course of the little craft was sufficiently smooth till between Möltenort and Heikendorf she was struck by a heavy squall and capsized. Dr. Pansch had time to fling the rudder to his son and utter the words "*Rette dich!*" ("Save yourself!") and then sank. Known to be an expert swimmer, and quite equal to finding his way to the shore, he is thought to have died at once from the shock, having for years been a sufferer from organic lesion of the heart. His body was afterwards recovered by one of the eight boats that set out in quest of him. His son had shortly before been saved, though in an extremely exhausted state, by a passing steamer.

Adolf Pansch was born on March 2nd, 1841. From 1860 to 1864 he was a student of natural history and medicine at the Universities of Berlin, Heidelberg, and Halle, at which last-named school he graduated as Ph.D. Having gone to Kiel in 1865, he was there appointed prosector in room of Dr. Hensen, who had just been elected Professor Extraordinary of Physiology. In the following year he passed successfully the examination for Doctor in Medicine, and thereafter qualified as *privat-docent*. In 1876 he was elected Professor Extraordinary of Anatomy, but still kept his favourite post of prosector, and laid the University of Keil under signal obligations by the skill and zeal with which he continued to attract *alumni* to the school. For twenty-one years his popularity never flagged, while the number of his pupils steadily rose.

Among his contributions to the literature of his special department may be mentioned his "Grundriss der Anatomie des Menschen" (Berlin 1879-81); and his "Anatomische Vorlesungen für Aerzte und ältere Studierende, Theil I.' (Berlin, 1884). Besides these works, he was a steady and esteemed contributor to the professional journals; while to a still more extended circle he was favourably known for the part he took in the Second German Expedition to the North Pole (1869-70), to the scientific report of which (1873) he contributed many valuable observations.

Medical News.

NAVAL MEDICAL SERVICE.—The following gentlemen who competed at the examination recently held at Burlington House for appointments as Surgeons in the Royal Navy have been granted commissions:—

	Marks.		Marks.
Bradley, James	3180	Woodwright, C. S.	2880
Hewlett, George	2975	O'Brien, Michael	2820
Waters, Geo. Alex.	2975	Shand, Jonathan	2790
Stott, Wm. G.	2900	Whitelegge, Wm. A. ...	2710

INDIAN MEDICAL SERVICE.—The following is a list of candidates for appointments in this Service who were successful at the competitive examination held at Burlington House on the 8th inst. and following days. Of the 59 candidates who competed for twenty-three appointments, 55 were reported qualified:—

	Marks.		Marks.
Roberts, A. E.	3360	Buchanan, W. J.	2960
Macwatt, R. C.	3165	Close, J. K., M.D.	2950
Nott, A. H.	3160	Dewes, F. J.	2930
Lamont, J. C.	3145	Brabazon, H. M.	2910
Woodwright, W. H. E. ...	3120	Griffith, J. H.	2895
Coleman, A.	3060	Ingham, W. H. M.	2890
White, W. W.	3050	Pinta, J. O.	2890
Maynard, F. P.	3045	Holt, J.	2880
Lane, D. T.	3020	Jones, J. L. T.	2875
Davidson, D. M.	2990	Jennings, W. E.	2820
Macnamara, J. M., M.D.	2990	Stewart, T. W.	2780
Strickland, P. C. H. ...	2980		

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COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The undernamed have passed the Final Examination under the Conjoint Examining Board:—

J. Abbott, A. Austin, B. Beamish, A. Bewley, T. Cohen, S. Cox, W. Cremin, H. Cummings, R. Flynn, E. Frazer, E. Glynn, W. Graves, J. Harty, R. Hewitt, R. Jones, P. Keane, C. Lyons, J. Mc Naboe, J. Mannix, J. Moore, R. Pennyfeather, M. Shanley, W. T. Steele, and J. Stewart.

THE annual Hospital Sunday collections on behalf of the Worthing Infirmary were made on the 14th inst.

Two deaths from heat occurred in the City of London on the 22nd inst.

A SUM of about £600 has been received for the Walter Moxon Memorial. The subscription list closes on the 31st inst.

THE Edinburgh Medical Missionary Society received as a year its largest income, and started this year with its largest number of students—twenty-three,—of whom six are missionaries' sons, one of them the grandson of Dr. Moffat.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The name of Mr. A. Carter was omitted from the list of candidates, recently published by us, who have passed the final examination for the licence of this College.

THE annual meeting of the subscribers to the North Devon Infirmary was held at Barnstaple on the 16th inst., when satisfactory financial and general reports were presented by the committee and adopted.

SUPERANNUATION ALLOWANCE.—Dr. Charles P. Stevens, late medical officer for the Biggleswade Union, has, after forty-five years' service, been granted a retiring allowance of £25 per annum.

SPECIAL efforts are at present being made by the Health Department of the city of New York, to prevent, as far as possible, the excessive overcrowding of tenement houses, which is the source of so much disease and mortality.

THE 21st inst. was the day set apart by the Barnsley Hospital Sunday Committee, which of late years has provided by collections and otherwise half the funds for the Beckett Hospital, for the annual festival. The proceedings were largely attended.

AT a special general meeting of the governors of the Sheffield Infirmary, held on the 19th inst., it was unanimously decided to appoint two additional surgeons and two assistant physicians, the senior staff of physicians being reduced from three to two.

NEARLY all the guests, twenty in number, at a wedding party recently held at Winsford, Cheshire, have been attacked with illness, one of the cases proving fatal. An analysis is being made of the contents of a dish of mutton suspected to contain poison.

NEW DRAINAGE WORKS AT ACTON.—The main drainage works at Acton, constructed at a cost of £75,000, were formally opened on the 25th inst. The process of clarification adopted is that which dispenses with the use of lime as a precipitant and employs in its place magnetic ferrous carbon.

THE FRENCH COMMISSION ON FIRES IN THEATRES.—M. Emile Trélat has reported on behalf of the French subcommission on fires in theatres strongly in favour of the use of chemicals rendering the stage and all its contents uninflammable, stating that the expense will not be so great as is imagined, and should fall on theatre-goers, who cannot grudge an extra charge for safety.

UNIVERSITY OF CAMBRIDGE.—From the Calendar of this University, which has just been issued, it appears that the total number of members of the University whose names are retained on the College books, is 12,546. Of these 6527 are members of the Senate—that is, have taken the degree of M.A.; 3040 are graduates under the status of M.A., and 2979 are undergraduates. The total number of matriculations during the past academical year was 1012, while in the preceding year the number was 950, showing an increase of 62.

THE Government of Peru has invited the Republics of Central and South America to co-operate in a Sanitary Congress to be held in Lima on Nov. 1st.

THE MIDDLESEX HOSPITAL.—A great demonstration of temperance and friendly societies was held on the 21st inst., in aid of the funds of the Middlesex Hospital. The institution has been closed since the beginning of July for cleansing and repairs, and is announced to be reopened in the course of a few weeks.

BEQUESTS.—The late Lady Caroline Emily Nevill has bequeathed £100 each to the Brompton Hospital for Consumption, the Royal Hospital for Incurables, and the Maidstone Infirmary.—The late Mr. John Floyer of West Stafford, near Dorchester, has bequeathed £100 to the County Hospital, Dorchester.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—The following have been elected officers of this Society for the current year:—President: Mr. F. W. Salmann. Vice-presidents: Dr. W. Withers Moore, and Mr. E. Noble Edwards. Treasurer: Mr. Hodgson. Hon. Secretaries: Mr. Cresswell Baber and Dr. Whittle. Honorary Librarian: Dr. Gasquet.

THE BRITISH ASSOCIATION.—At the meeting of the members of this Association, to be held at Manchester next week, amongst other papers to be read are one by Professor Schäfer, on the Present Aspect of the Cell Theory; and one by Professor Ray Lankester, on the question, Are acquired Characters Hereditary? The guarantee fund for the meeting exceeds £10,000.

RABIES IN RICHMOND PARK.—It has been reported to the Richmond bench of magistrates by the official veterinary inspector of the district that during the past week no fewer than nine deer suffering from rabies in Richmond Park have been slaughtered. This is the largest number yet reported in one single week. Nearly the whole of the herd of deer, among which the outbreak occurred some months ago, have now been exterminated.

PROPOSED SMALL-POX HOSPITAL FOR SHEFFIELD.—At a specially convened meeting of the committee of the Sheffield Borough Hospital on the 19th inst., it was decided that the accommodation for small-pox patients at that institution is not sufficient during the prevalence which now prevails, and that it is desirable that more should be provided. This may almost be regarded as the first step towards the establishing of a small-pox hospital outside the town.

POISONOUS FISH.—In the exhibition recently opened at Havre there is an interesting collection of specimens of poisonous fishes. Some are poisonous when eaten; others are merely venomous. Among the first are many Sparoids, a Tetrodon, and many *Clupea*, which are abundant near the Cape of Good Hope. In the Japan Sea is found a very peculiar Tetrodon, which is sometimes used as a means of suicide. It brings on sensations like those produced by morphia, and then death.

LONGEVITY IN ALGERIA.—A list of aged people living in Algeria has just been published, according to which there are now in Blidah an Arab 108 years old and a Moorish woman aged 110. At Chercell, also, there is a Moorish woman who is 102 years old, and whose brother died a short time ago at the age of 110. Then, at Alger, there are two Frenchmen, each 100; a Spaniard, 99; two Poles, each 98; and two Arab-Jews, both of whom count their hundred winters.

THE REPORTED DEATH OF MR. H. M. STANLEY.—A letter has been received from Surgeon Thomas H. Parke, A.M.S., who is the only medical man accompanying Mr. Stanley's expedition for the relief of Emin Pacha, dated Aruwimi River, June 20th, 1887, stating that Mr. Stanley and the European officers accompanying him are all quite well. Mr. Stanley was then forming an entrenched camp, two days' journey up the river, whence, after eight days for arrangements, they were to make a forced march of 400 miles of difficult, unexplored country to Wadelai, to meet Emin Pacha. This, of course, allays anxiety about the reported death of Mr. Stanley, announced by a telegram dated June 17th last.

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MEDICAL NOTES IN PARLIAMENT.

Rabies in Windsor Park.

In the House of Commons on the 22nd inst., Mr. Labouchere asked whether the newly-issued regulation that all dogs taken into Windsor Park were to be "muzzled or led" was issued with a view to protect the game, or in consequence of an epidemic among the deer, and, if the latter, how many deer had died or been attacked with rabies; and under whose authority and under what Act of Parliament the Ranger or Deputy Ranger was empowered to prevent the free use of the park and forest roads to the public and their dogs.—Mr. Jackson, in reply, stated that owing to the outbreak of rabies among the deer in Richmond Park, resulting in the loss of a large number, it was considered advisable to take steps to guard against any similar outbreak in Windsor Park, and with that view the notice referred to was issued by his Royal Highness the Ranger. No deer had died in Windsor Park of rabies, but it was known that at least twelve deer were worried and killed by dogs there before the notice referred to was issued. The Ranger was appointed by Her Majesty and the Deputy Ranger by the Ranger. They derive their powers by virtue of their appointments, and not under any Act of Parliament or from the Commissioners of Woods.

Vaccination.

On the 23rd inst., in reply to Mr. Picton, Mr. Ritchie stated that no report was made to the Local Government Board by Mr. Hutchinson about the year 1877 with reference to patients stated to be suffering from syphilis through vaccination, and so far as the Board are aware no report was made by him at the request of Dr. Seaton. The Board believe, however, that a report was made in 1871 to the Royal Medical and Chirurgical Society by Mr. Hutchinson, but that report, as stated by him before the Vaccination Committee in 1871, was made on the application of the medical man in attendance on the cases, and not of Dr. Seaton. The Board are aware of the cases of vaccino-syphilis which are referred to in Mr. Hutchinson's publication. Three out of the six cases referred to in the question as a "long series" related to single cases, and the most recent of any of the occurrences related took place between ten and eleven years ago. The Board have the authority of Mr. Hutchinson for saying that though he has been diligently on the look out for similar cases during the ten years' interval he has failed to meet with any. In his recent work, published this year, on the subject, Mr. Hutchinson says:—"There certainly cannot be any difficulty under ordinary circumstances in procuring vaccinifere which are absolutely free from risk." Mr. Hutchinson's experience was in these respects entirely confirmatory of that of the Board, which is to the effect that although three-quarters of a million of children have been vaccinated annually for many years past not a case of the communication of the disease in question by vaccination has come under their observation.

The Coroners Bill.

Mr. W. H. Smith, replying to Mr. Bryce, said the Coroners Bill was a measure to consolidate the existing law, and bring it into harmony with the practice. It would undoubtedly be a misfortune if the labour which had been expended on this Bill should be thrown away, and the Government would adopt the suggestion of the hon. Member not to drop the Bill, in the hope that as it was beneficial to the public, and involved no political question of any kind, it might be passed this session.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADKINS, GEORGE, L.R.C.P. Lond., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health to the Plympton St. Mary Union Rural Sanitary Authority, till July 25th, 1890.

ANDERSON, JAMES KEITH, M.D.Ed., L.R.C.S.Ed., has been appointed Medical Attendant to the Arbroath Infirmary.

ATKINSON, G. ARMSTRONG, M.D.Ed., has been appointed Honorary Physician to the Newcastle-upon-Tyne Dispensary, vice Lucius Holland, M.D.Aber., deceased.

BARRON, HUNTER, M.D., M.R.C.S., has been appointed Surgeon to the S Division, Metropolitan Police (Finchley Station), vice J. Hochee, M.R.C.S., resigned.

BREDIN, HOWARD A., M.R.C.S., L.S.A., has been appointed Medical Officer for the Eastham District of the Wirral Union.

BROWNE, J. W., M.D.Q.U.I., M.R.C.S., has been reappointed Attending Surgeon to the Belfast Royal Hospital.

BYERS, JOHN W., M.D., M.Ch. Q.U.I., has been reappointed Attending Physician for Diseases of Women to the Belfast Royal Hospital.

COLLIER, JOSEPH, M.B., B.S., F.R.C.S.Eng., has been appointed Assistant Surgeon to the General Hospital for Sick Children, Pendlebury, Manchester.

FITZGERALD, JOHN R., L.R.C.S.I., has been appointed Medical Officer for the Stotfold District of the Biggleswade Union.

GWYNNE-HUGHES D., L.R.C.P., L.R.C.S.Ed., has been appointed Resident Medical Officer to the Sydney Hospital, vice R. Westrum, M.D., resigned.

KINNEIR, FRANCIS W. H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Fourth District of the Horsham Union.

LAING, DAVID, M.D., C.M.Edin., has been appointed Attending Surgeon to the Arbroath Infirmary.

LINDSAY, JAMES ALEX., M.D., M.Ch. Roy. Univ. Irel., has been reappointed Assistant Physician (extern department) to the Belfast Royal Hospital.

MONRO, WILLIAM, M.D.St.And., L.R.C.S.Ed., has been reappointed Surgeon to the Arbroath Infirmary.

MORRIS, COLIN DWIGHT, L.R.C.P.Lond., M.R.C.S., L.S.A., has been appointed Surgeon to the Bedfont Division of the Metropolitan Police, Medical Officer to the Fulham Provident Dispensary, and Surgeon to the Bedfont and Hatton Mutual Benefit Societies.

NELSON, JOSEPH, M.D.Q.U.I., L.R.C.S.I., has been reappointed Attending Surgeon to the Belfast Royal Hospital.

O'CONOR, JOHN, M.B., B.Ch. T.C.D., has been elected House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital, vice J. P. Williams Freeman, M.B., resigned.

POGSON, W., F.R.C.S., L.R.C.P.Ed., has been reappointed Medical Officer of Health for the Leeds Rural Sanitary Authority.

ROSS, RICHARD, M.D.St.And., L.R.C.S.I., has been reappointed Attending Physician to the Belfast Royal Hospital.

RUSSELL, JOHN, M.B., C.M.Aber., has been appointed Medical Attendant to the Arbroath Infirmary.

SUMPTER, B. G., M.B.Dunelm, M.R.C.S., has been appointed House-Surgeon to the West Norfolk and Lynn Hospital, King's Lynn.

VALPY, CHAS. EDWARD, B.A., Merton College, Oxford, M.R.C.S., has been appointed Senior House-Surgeon to the Cancer Hospital, Fulham, vice H. G. Shaw, resigned.

WILLIAMS, JOHN HENRY, M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Llanybyther Division of the Lampeter Rural Sanitary District, vice Davies, resigned.

WINN, JOHN, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer of Health for the Fylde Rural Sanitary District, Lancashire.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

ASHFORD FRIENDLY SOCIETIES AND PUBLIC MEDICAL ASSOCIATION.—Out-door Assistant. Salary £100 per annum.

BIRMINGHAM GENERAL HOSPITAL.—House Governor. Salary £300 a year, with board and apartments.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house.

HOSPITAL FOR WOMEN, Soho-square, W.—Two Out-patient Clinical Assistants. Fee for course of three months 5 guineas.

JARROW-ON-TYNE MEMORIAL HOSPITAL.—House-Surgeon. Salary to commence at £130 per annum, with board and residence.

MAIDSTONE UNION.—District Medical Officer and Public Vaccinator. Salary as Medical Officer, exclusive of fees, £60 per annum.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary £150 per annum, with board and residence.

ROYAL BERKS HOSPITAL, Reading.—Assistant House-Surgeon. Board and lodging, but no salary.

ST. PETER'S HOSPITAL FOR STONE, Henrietta-street, Covent-garden.—House-Surgeon. Honorarium (for six months) 25 guineas, board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

EVANS.—On the 23rd inst., at Denmark Lodge, Clapham-common, the wife of Lewis Evans, L.F.P.S.Glas., L.R.C.P.Ed., of a daughter.

HENDERSON.—On the 18th inst., at 6, Hampstead-lane, Highgate, the wife of A. Milne Henderson, M.D., of a son.

OWEN.—On the 24th inst., at Seymour-street, Portman-square, the wife of Edmund Owen, F.R.C.S., of a daughter.

STEER.—On the 12th inst., at Sportsman's Hall, Stewart Town, Jamaica, the wife of A. W. Thorburn Steer, M.R.C.S., L.R.C.P.Lond., of a daughter.

VERRALL.—On the 17th inst., at Montpellier-road, Brighton, the wife of T. Jenner Verrall, M.R.C.S., L.R.C.P., of a daughter.

WILKIE.—On the 19th inst., at Simla, the wife of David Wilkie, M.B., C.M.Glas., I.M.S., of a daughter.

MARRIAGES.

FAYLE—LEECH.—On the 20th inst., at Long Ashton Church, Robert J. L. Fayle, L.K.Q.C.P.I., L.R.C.S.I., Surgeon, Army Medical Staff, Secunderabad, India, to Mary, second daughter of Joseph Leech, of Leigh Woods, Clifton.

GILBERT—WOODS.—On the 18th inst., at St. Stephen's, Twickenham, Clarence Edwin Lloyd Gilbert, L.K.Q.C.P.I., M.R.C.S., Indian Medical Service, to Isabella Lilian, second daughter of Lieut.-Col. J. A. Woods, late Royal Dublin Fusiliers.

KERSHAW.—On the 16th inst., at the West Derby Parish Church, Liverpool, by the Rev. R. J. Rolfe, John Cawthron Kershaw, M.R.C.S.B., L.R.C.P.Ed., of New Wortley, Leeds, to Jane, only daughter of W. A. Punshon, Esq., of Liverpool. (No cards.)

DEATH.

TREND.—On the 13th inst., at Potton, Beds (very suddenly), Henry Gristock Trend, L.R.C.P., late of Highbury, aged 55.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 25th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 19	29·95	N.	55	52	109	68	49	...	Bright
,, 20	29·88	N.E.	55	53	95	65	53	·05	Overcast
,, 21	30·06	N.W.	59	55	104	71	51	·08	Cloudy
,, 22	30·10	W.	60	55	117	77	52	...	Hazy
,, 23	30·12	W.	63	56	111	77	53	...	Hazy
,, 24	30·03	S.E.	66	60	103	79	59	...	Hazy
,, 25	29·98	S.E.	63	60	110	82	58	...	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER OF "THE LANCET" will be published on Saturday next, Sept. 3rd. Those gentlemen holding official situations connected with medical institutions in the United Kingdom who have not yet forwarded the necessary information to our Office for publication in that number are earnestly requested to send it *without the delay of a single post.*

BACTERIA IN HAIL.

W. J. C. (Birmingham).—Prof. L. Maggi of Pavia. Following up the researches of Bischoff and Fränkel, who have investigated bacterial life as occurring in natural water and ice, the Italian physiologist has found the same organisms in hail. He has classified these as belonging to the three orders of sphero-bacteria, micro-bacteria, and desmo-bacteria, the first being the more numerous.

C. M.—The idea is not new.

A SINGULAR CASE OF ECTOPIA OF THE THORACIC AND ABDOMINAL VISCERA.

To the Editors of THE LANCET.

SIRS,—The following case is, I think, worth recording:—

Mrs. A——, aged thirty-six, fourth confinement, labour commenced at 10 A.M. on July 23rd. I was sent for at 3 P.M. On arrival I found a head presenting in the first position; labour progressed rapidly, and the child was born alive at 4.15 P.M. I then found that there was a second child in utero, having also head presenting; the pains came on rapidly, and the child was born alive two minutes after the first, followed almost immediately by the placentæ. The second child presented a very peculiar malformation. The thorax and abdomen were open from the neck to the pelvis, and on each side as far as midway between the sternum and spinal column; the sternum was absent, the lungs and heart were outside the chest, the apex of the heart being directed laterally to the right; the aortic arch gave off four branches, two carotid and two subclavian; the abdominal organs were all lying outside the body. The child lived three hours and a half, during which time the pulsations of the heart could be counted; it never cried, and was somewhat smaller than the first. Both were female children.

I am, Sirs, yours truly,

Aug. 20th, 1887. J. MCAVOY, M.D.

CINCHONA CULTURE IN RÉUNION.

AT the present time, owing mainly to losses on coffee and sugar, planters in most British tropical and sub-tropical colonies—especially in Ceylon and the West Indies—are turning their attention to cinchona cultivation. It may, therefore, be well to call attention to the process followed in Réunion, as described by Mr. St. John in his last consular report from that island. The difficulty of removing the bark from the tree appears to have received a more practical solution there than either in Java or the British colonies. In Réunion the plantations are made in forests at a height of about 4000 ft. At this altitude there exist no high trees, but merely brushwood. Parallel alleys from five to six feet wide are made, and, as far as practicable, in spots sheltered from the winds. These alleys are separated by a range of brushwood 10 ft. thick on each side, which serves to protect the young cinchona plants against the violent winds so common in Réunion. The alleys being made, holes are dug at a distance of 15 ft. apart, 20 in. in diameter, and of the same depth. These holes are then filled with the earth which has been dug up, to which some mould is added. This mixture forms at the surface of the soil a convexity, in the middle of which the young cinchona plant is placed and experiences no difficulty in its growth. When it has reached a height of 18 in. care must be taken to cut the roots of the adjoining brushwood which may have found their way into the space reserved for the cinchona. At the end of seven or eight years plants will have reached a diameter of 3½ in., and are ready to be worked. The process then pursued is this:—Towards the month of October, when the sap resumes its upward movement and the bark is more easily detached, the plants are cut at about two inches from the ground. The bark is then taken off and put in the sun to dry. From the stump that remains there soon spring a great number of young shoots, which, when they have in their turn attained a certain size, it is necessary to lop off, only leaving a number of sprigs, which the stump is able to feed conveniently. These have a rapid growth, and at the end of another period of six or eight years a new crop is ready. In this way the cultivation of cinchona once planted can be continued almost indefinitely and at little expense. This is a far more economical method than that employed in Java, and the experiments in Réunion have hitherto proved very successful.

Nuntius.—A physician "of right," strictly speaking, is a member or associate of a college of physicians; but a medical graduate of a respected university in actual practice is certainly, in the best sense of the word, a physician, and entitled to be called such, or to call himself such.

Dr. Walters is referred to our annotation on page 1297 in the issue for June 25th of the present year.

Sufferer should consult his medical attendant.

HOW EXAMINATIONS ARE CONDUCTED.

To the Editors of THE LANCET.

SIRS,—At the last examination of the Royal College of Physicians I presented myself and was allotted a certain day for the *viva voce* in medicine, but two or three days later I received another card altering the date to one four days earlier. The examination being over, I am kept waiting till the very last, and then told "that the clerk had forgotten to acquaint the examiners with the fact that the date of my *viva voce* had been changed; but that they would write to me as soon as the examiners brought my medicine papers and reported on them. I go away to the country the next day to wait a week without hearing anything. I then telegraph to the Examination Hall, and have a reply sent to me, saying, "that I have 'passed,' but that if I wish to receive my diploma this time, I must come up to London at once and sign the book." This, of course, I refused to do, and then an affidavit form is sent me, which I fill up and get the diploma. But on returning to London I am met with condolences from my friends, both professional and non-professional, as my name has not appeared in the lists of passed candidates in the medical journals. I think it is most disgraceful that such laxity should exist, and it appears to be common, for a similar occurrence happened to me at the B.S. examination of Durham, when my name was crossed off as having failed when I had passed.

Hoping that the insertion of this letter will aid in preventing such occurrences, I am, Sirs, yours faithfully,

Belsize-square, N.W., Aug. 17th, 1887. F. W. EDRIDGE GREEN, M.B.

THE DUODENUM: A SYPHON TRAP.

To the Editors of THE LANCET.

SIRS,—Kindly permit me to ask the following questions through the medium of your valuable columns regarding Mr. Collier's original article on the above subject:—Is it possible, by taking into consideration the peristaltic action of the duodenum, that it will practically allow a volume of stagnant liquid within its calibre, as it is generally found empty in post-mortem examinations? How are we to account for the fetid gases which are driven upwards in the clinical phenomena called stercoraceous vomiting? I am, Sirs, yours faithfully,

Hucknall Huthwaite, Aug. 25th, 1887. D. G. EVANS.

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LANGMORE DEFENCE FUND.

SINCE the publication of the fifth list of subscriptions in THE LANCET of June 11th, a donation of one guinea has been received from Dr. T. L. Rogers, Rainhill, Lancashire. The fund amounts to £168 5s. 6d., and cheques for £158 12s. 6d. have been forwarded by Mr. Eastes to Dr. J. Wreford Langmore. The balance (£9 13s.) is composed of four subscriptions (amounting to £8 8s.) promised but not yet paid to the honorary secretary of the fund, and of the expenditure (£1 5s.) incurred for postage, &c. As Dr. Langmore's expenses at the trial (which were allowed him by the judge, but which the plaintiff, being a person of small means, could not settle) amounted to more than £240, he still has to pay about £80 beyond the amount raised by the subscription. If any gentlemen desire to assist further in defraying this expense, the secretary of the fund, Mr. George Eastes, M.B., 69, Connaught-street, Hyde-park-square, London, W., is willing to receive their subscriptions, and forward them to Dr. Wreford Langmore.

Nemo.—It is obvious that we cannot be responsible for the good faith of all our advertisers.

Studeo has not enclosed his card.

"GAELIC MEDICINE."

To the Editors of THE LANCET.

SIRS,—With reference to the notice under this heading in your issue of the 6th inst., and dissenting entirely from your dictum that "impaired eyesight is a very common failing in the Irish recruit," I have pleasure in offering for your kind acceptance the following description of the "Leech in Ancient Ireland," as that is set forth in Dr. Sullivan's learned edition of Eugene O'Curry's "Manners and Customs of the Ancient Irish," vol. i., page 309. Describing the office and emoluments of this functionary, Dr. Sullivan says, that "he appears to have been respectable and eminently practical. The value of cleanliness, of water and fresh air as curative agents, appears to have been thoroughly appreciated [by him], for we are told that the Leech's house, in addition to having a stream of water flowing through it, should have four doors, in order, as the law says, that it may be perceived from all sides. Another object of the four doors was that it might have at least one of them always open, no matter from what point the wind blew, and thus ensure the proper ventilation of the sick chamber. The hot-air bath was used for the cure of rheumatism, which must have been very common, and it is probable that the remains of such baths, which are found here and there throughout the country, indicate the localities where Leechs' houses formerly existed. A physician had (our author says) certain rights over water, he had not only the right, but was in fact obliged to build his house over a running stream, not over a spring. Among the early Irish the Liag or Leech sometimes treated his patient in his own house; he supplied not only medical advice, but medicines and hospital accommodation also. When a man was accidentally or maliciously wounded, he was taken to the house of the Leech, who examined his wounds and gave a certificate to their character, upon which depended the legal liabilities of the person who defended them. If the Leech considered the cure probable, he gave security for the proper treatment of the patient and received in turn security for his fees. These were, of course, paid in kind, as in cows, presents, &c. Thus, four cows and a heifer were paid for the cure of the maim from a king or from those who are of equal value with him; three cows for a maim, for which the fine of infliction would be three cows; a cow and a heifer for a wound, for which six calves are the fine of infliction; a cow and eighteen screpalls (alms or presents) for a wound for which seven calves were the fine of infliction." As an instance of the universality of the practice of cremation, I may be allowed to quote as follows from this same source:—"The numerous urns containing burnt bones, found in the Irish tumuli, prove that at some period cremation of the dead was practised in Ireland." So were "marrow baths" used, at times, by these same Leeches as tonics, and to show the spirit—the ever kindly and merciful spirit—that animated my much maligned and even now much misunderstood countrymen, I may be permitted to add here, in this connexion, that though the Druids—in other words, the medicine-men of Gaul and Britain—sacrificed a man for the recovery of those who were afflicted with a dangerous disease, there is no evidence that the Irish Druids ever did offer or recommend the offering of human sacrifices. I am, Sirs, your obedient servant,

Auriol-road, W., Aug. 21st, 1887. W. CURRAN.

PARALYSIS AFTER DELIVERY.

To the Editors of THE LANCET.

SIRS,—On May 11th I attended Mrs. H—— in confinement. It was a very difficult instrumental delivery, partly due to a pendulous abdomen. She informs me that each time she has required instruments. The recovery was good with the exception of a temporary paralysis of the muscles of the left leg, the patient being unable to walk without support for six weeks after the confinement, when she began rapidly to improve. I treated her with bromide of potassium and friction with counter-irritants. I must add there was slight puffiness of the ankle, and severe pain in the leg, with a sensation of pricking by pins and needles. Might I ask some of your readers to kindly inform me whether this is a common occurrence, and, if so, what is the etiology? I am, Sirs, yours truly,

August 22nd, 1887. VOLEL.

PILL PRESCRIPTIONS FOR MEDICINE CHESTS.

C. T. S. asks an opinion on a little pamphlet which he encloses, to be taken by any passer-by at the American Exhibition. Our opinion is that the name of any practising physician is better withheld from such commercial advertisements, which will not tend to increase public intelligence or the safety of invalids. Not that the prescriptions individually are bad prescriptions; but one man's medicine is another man's poison, and in disease so much depends on individual constitution and circumstances and so little guide is to be found in a particular symptom, that such prescriptions are an evil rather than a good. We decidedly disapprove of advertising sulphate of copper and opium as "anti-diarrhœtic or corrective pills," or opium and antimony, &c., as catarrhal or sudorific pills.

Mr. Fenton.—We have no such information. We doubt there being any, except from quacks.

Inquirer.—The agents are Messrs. Barron and Wilson, 7, King William-street, West Strand, London, W.C.

SWEATING OF THE FEET.

To the Editors of THE LANCET.

SIRS,—In your last issue there is a letter from Dr. Richardson of Newhaven, in which he recommends soda for sweating of the feet, which has nearly always a very offensive smell. He also states that there is no specific for this complaint. Now it is well known that borax is a specific for it. I think I must have used it for ten years, and cured numbers of cases by it. I use three drachms of borate of soda to eight ounces of water, and tell the patient to bathe the feet in warm water, and apply the lotion with a sponge every night on going to bed.

I am, Sirs, yours truly,

Clifford-street, W., Aug. 25th, 1887. G. TAYLOR, M.D.

To the Editors of THE LANCET.

SIRS,—Inasmuch as the treatment of sweating feet seems to remain a vexed question, perhaps the result of a little personal experience may not come amiss. For several years I was a martyr to the complaint, trying fairly all the remedies I could hear of, nothing doing any good, but, if anything, becoming worse, until at last I was told that it had grown an established function of the body, and could not be stopped with impunity. However, I was one day recommended salicylic acid, two parts, and burnt alum, three parts, mixed together and well dusted between the toes and upon the feet, after washing them in warm water, to be repeated as often as necessary. At first I did it nightly, but soon learned that it was not necessary to do it so often; then once a week was sufficient, and then not at all. Since, I have tried it many times, and always with success, upon others, and would advise anyone else to do likewise. Needless to add that it improves the comfort of the operation to tie a folded kerchief over the nose and mouth during its performance.

I am, Sirs, yours faithfully,

Aug. 23rd, 1887. GOOD.

Young Student.—The question cannot be answered in the form it is put, for it is a series of questions. We doubt whether the method mentioned is particularly efficacious.

Mr. Masters (Weston-super-Mare).—We can only suggest advertising.

LONDON FIRES.

To the Editors of THE LANCET.

SIRS,—With reference to your annotation at page 336, if you think fit to place before your readers for criticism a scheme to prevent and to extinguish fires that has occupied my thoughts for many years, I shall feel obliged. In rebuilding premises, now destroyed or erecting new buildings, let the walls of each room be hollow with a layer of perforated bricks placed every three or four feet and in connexion with a properly constructed chamber, the size of which must be regulated according to the extent of the building or buildings, the pipe or pipes leading from the chamber to the building being each capable of ready closure or opening. The chamber itself must always be full of chalk and water, a separate reservoir of hydrochloric acid being so arranged that it may be poured into the chalk and water at a moment's notice. By the aid of a steam engine the gas, mixed with air, robbed of its oxygen by passage over incandescent coke, is then pumped into the burning building, through the hollow walls, or by proper pipes if the walls be not hollow; separate hoses leading from the reservoir of carbonic acid gas being provided for the firemen's use, who, protected by Fleuss's helmet or similar apparatus, can work unharmed in the vitiated atmosphere. Were the men encased in perforated leather dresses so arranged that carbonic acid gas could be forcibly ejected through the perforations, they could walk into the fire unharmed. Had some modification of this scheme been at hand on board the steamship *City of Montreal* the terrible fire would have been extinguished in a few minutes. Fires could thus be extinguished without damage to goods around; and even if water be needed, that charged with carbonic acid gas would be infinitely more effectual.

I may say that on the occasion of each great fire a trial of the above scheme has been in vain solicited.

I am, Sirs, yours truly,

Boundary-road, N.W., Aug. 1887. RICHARD NEALE, M.D. Lond.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Harkin Belfast; Sir E. H. Currie, London; Dr. Neale, London; Mr. Curran, London; Dr. Lewers, London; Dr. Slight, London; Dr. Kay, London; Mr. J. W. Smith, Buffalo; Mr. C. H. Milburn, Hull; Messrs. McGee and Co., Belfast; Mr. Goodridge, London; Mr. Labban, West Bromwich; Mr. Sturmfels, London; Dr. Lethers; Messrs. Bath and Co., London; Mr. Waddington, Bradford; Mr. Ash; Dr. Adam, West Malling; Mr. Bunyon, London; Mr. Hoar, Maidstone; Mr. Bull, New Cross; Mr. Hurst, Hammersmith; Mr. Stump, London; Messrs. Boyd and Co., Belfast; Mr. Reid, Wellington; Dr. Waterhouse; Dr. Beaven Rake, Trinidad; Messrs. Thompson, London; Mr. Mackenzie, Farnmouth; Mr. Brittain, Bangor; Mr. Borene, London; Dr. Millman, Ontario; Mr. Stamp, Hereford; Mr. Bandett, London; Mr. Hancock, London; Mr. Maythorn, Biggleswade; Dr. Spencer, Clifton; Dr. Cole, Woodview; Dr. Hutchinson, Scarborough; Messrs. Ismie, Imray, and Co., Liverpool; Mr. Masters, Weston-super-Mare; Messrs. Ingram and Co., Hackney; Dr. Cran, Lakhimpur, North; Rev. H. Hawkins, Colney Hatch; Mr. Patterson, Leeds; Mr. Brown, London; Dr. H. L. Jones, London; Dr. Richardson, London; Dr. Steeves, Liverpool; Mr. A. Campion, London; Mr. Arnold, Providence, U.S.A.; Dr. Carter, Bombay; Mr. Fenton, Colchester; Dr. Laguer, Wiesbaden; Dr. Richards, Bengal; Mr. Casey, Oldham; Mr. Carter, Stockport; Mr. Hardwicke, London; Dr. Philip, Boulogne; Mr. Church, Streatham; Mr. Jones, Wrexham; Dr. Brown, Penang; Dr. Walker, Worksop; Mr. Douglas, Sunderland; Mr. Bischof, London; Mr. Hadi, London; Mr. Colville, Melbourne; Dr. Francis, Northampton; Messrs. Maclachlan and Co., Edinburgh; Dr. McAvoy, Rathfriland; Messrs. Robertson and Scott, Edinburgh; Rev. A. Robbins, Windsor; Dr. Morgan, Ebbw Vale; Dr. Meany, London; Dr. Walters, London; Messrs. Blake and Co., Leeds; Mr. Fenwick, London; Mr. Hughes, Deal; Messrs. Irvine and Co., London; Dr. Pallin, Sidmouth; Mr. Flynn; Messrs. Reynolds and Co., Leeds; Mr. Scott, Twickenham; Dr. Lambart, Liverpool; Mr. Menzies, Johnstone; Mr. Evans, Hucknall Huthwaite; Studeo; H. B., Southport; P. P.; Matron, Canterbury; C. M.; Nemo; A. B., Southport; Volzi; C. T. S.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Beale, Brighton; Dr. Martin, Aderbury; Mr. Dewar; Messrs. Turner and Marshall, Leith; Mrs. Topham, Stoke-on-Trent; Messrs. Hewlett and Son, London; Mr. Campbell, Jarrow-on-Tyne; Messrs. Warren and Co., Bristol; Mr. Gray, Walsall; Mr. Kershaw, Leeds; Mr. Chadwick, Lancaster; Mr. Bowser, London; Mr. Waters, Tenberth; Mr. Pearcey, Taunton; Mr. Macfadyen, Inverness; Mr. Allwright, Maidenhead; Mr. Oldham, Liverpool; Capt. Pead, Dulwich; Dr. Milligan, Tottenham; Mr. Townsend, Exeter; Dr. Fogerty, Limerick; Mr. Macleod, Edinburgh; Mr. Williams, Huddersfield; Messrs. Thompson and Co., Liverpool; Mr. Parker; Mr. Bond, Leicester; Mr. Frankel, Cape Town; Mr. Bagshore, Salford; Mr. Hefferman, Liverpool; Mr. Smith, Hastings; Mr. Gwyther, Bristol; Mr. Kennett, Hythe; Mrs. Smith, St. Helens; Mr. Griffith, Canterbury; H. A., Delpeth; Carnabyn; Matron, Plymouth; Medicus, Pontypool; L., Aberdeen; G. T. O., Newcastle; Colonel, Dursley; M.B., Blackburn; B. H. A.; Medicus, Brighton; M. R. J.; Verax; A. B., Chiswick; C. B., London; F. H., Eastwood; A. B., Stamford-hill; H.

Liverpool Mercury, Manchester Guardian, Globe, Bucks Herald, Standard, Aberdeen Weekly Free Press, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
GENERAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 30.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 31.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, September 2.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 3.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 3, 1887.

ADDRESS TO MEDICAL STUDENTS.

IT becomes our duty to-day to give our annual address to those engaged in the studies necessary for obtaining admission to the profession of medicine. On former occasions we have dwelt upon the choice of a medical school, the selection of class-books, and the general *technique* of the professional curriculum. To-day we propose to make a few observations on the spirit in which medical study should be conducted, and then to pass on to the consideration of the life-work for which that study is designed to be the fitting preparation. We speak not alone to those who are students in the strict sense of the term. In a very real sense we are all, young and old, medical students; all engaged in the study of morbid processes, and the means employed for their relief; all ready to learn from anyone wiser or more experienced than ourselves; all conscious of the limitations of our knowledge, and the vast field of research still ungarnered, and already white unto the harvest. The physician or surgeon ceases to be a medical student only when his pulse ceases to play, and he rests for ever from his labours.

Education, in the genuine and higher signification of the term, consists not so much in the acquisition of knowledge as in the development of faculty; not in the accumulation of facts, but rather in the recognition of principles. The medical student cannot too early recognise that the main end of his professional training is not to fill his memory with descriptions of disease and routine rules of treatment, but to fit him to observe for himself and to reason accurately upon the facts of observation. The descriptions and classifications adopted in class-books, often excellent in their way, are apt to mislead the beginner regarding the fixity of nature and the homogeneity of disease. Probably there never yet were two cases of disease precisely similar in all details, and the student will strive in vain to find in the widest fields of observation the stereotyped cases which a careless reading of his text-books might lead him to expect. Nature, though ever true to herself, varies within limits that are practically infinite. "All things are in flux," said the ancient poet, and nowhere is the dictum truer than in the realm of disease. Hence the fatuity of "cram" in medical education; hence the supreme necessity that the medical student should early accustom himself to allow for the uncertainty introduced by the variability of pathogenic influence and of individual idiosyncrasy. Many practitioners undoubtedly reason hastily from one case to another. A drug has benefited one patient, therefore it will benefit another; a remedy has been useful in one case of a certain malady, therefore it will be useful in another case of the same malady. Such reasoning is by no means rare, but it is the reasoning of a quack and an empiric, and not of a man of science.

Towards the formation of the habit of exact observation nothing can more certainly conduce than the resolute study of anatomy. This subject is undoubtedly distasteful to many minds, some of them of the higher order, but the student who neglects it is dogged by a remorseless Nemesis throughout his entire professional career. An exact knowledge of the structure of the body is not only indispensable for the physician, and *à fortiori* for the surgeon; but, as we have implied, the process by which alone that knowledge can be acquired is a wholesome and indispensable discipline. Let the student accustom himself to regard the human body as a wonderful and complicated piece of mechanism, of which he has to discover and remember all the props and stays, all the wires and tubes and springs. Regarded thus, anatomy can no longer repel as a mere collection of dry and disconnected facts. Rather will it become a study of absorbing interest, in which every step securely taken opens up the road of further advance.

Just as anatomy deserves to hold the first place in the earlier stages of the medical curriculum because of its educating influence, so in the concluding stages must priority of importance be accorded to clinical study. The student who is a zealous anatomist in the first two years of his course, and a zealous observer in the hospital wards during the remaining two, is on the high road to professional usefulness and possibly eminence. Hospital work is the real preparation for practice, and to it all other studies are subsidiary and preparatory. In the wards of a hospital the student not only learns to recognise the characteristic features of disease and the general outlines of treatment, but there also his mind, with regard to professional knowledge, receives its first and most indelible impressions. A vivid clinical lecture leaves its mark for aye; a chance word of a trusted teacher becomes an axiom for life; a case presenting striking features and conveying serious lessons remains a landmark and sign-post during all succeeding years. Hence hospital experience more than all else makes the student what he will be for life; hence the well-known fact that certain hospitals impress upon all their *alumni* a certain mental tone and colour which constitute their tradition; hence the paramount duty that hospital instruction should be genuine, thorough, honest, free from bigotry, prejudice, or partiality. If statesmen and soldiers make history, the hospital physician or surgeon does much to make human life, and it is fitting that he should recognise the full measure of his responsibility.

We would advise the young student to begin his hospital work with a determination to use his own senses and intellect for the discovery of knowledge. It is impossible to acquire any genuine acquaintance with disease through the medium of books alone. The student must handle diseased structures, watch morbid processes, call in the aid of sight, touch, hearing, and smell for the discovery of deranged function. Each sense must be on the alert to receive impressions, while the brain is constantly at work in their interpretation. Of course, undirected and undisciplined observation will accomplish little. The student, in proportion to his inexperience, will need the constant help and supervision of his teachers and a frequent reference to his text-books; but, we repeat, personal observation is the only secure foundation of a really permanent and fruitful knowledge of disease.

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The student need not be surprised or disheartened if his first feeling on entering the wards of a large hospital is one of simple bewilderment. Many distinguished men have described the sensation of despair which palsied their minds on first attempting to find order in the apparently inextricable chaos of disease. But this is an evanescent sentiment. Each day's experience, if honestly acquired and diligently tabulated, tends to clearness of vision and fixity of idea, and becomes the starting-point for further progress. By degrees the chaotic mass of morbid material takes shape and colour, and the apparent "wilderness of single instances," begins to acknowledge the principle of order and the rule of law. At this point another and more subtle danger needs to be shunned—namely, the danger of rash and hasty generalisation. The student, in his early delight at discovering order in apparent disorder, is apt to reason too precipitately from individual phenomena to general laws. Because a certain consequent follows a certain antecedent in one, two, three, or a dozen instances, he is liable to conclude that the causal relation is invariable, and thus to fall into the error known to logicians as the "fallacy of simple enumeration." Thus, to take a familiar instance—Does arsenic cure chorea? The student sees the drug given in this disease perhaps a dozen times; and let us suppose that recovery in each case results. He is most apt to conclude that cause and effect are here self-evident, especially if so informed authoritatively by his teacher. He does not readily reflect that the patients might conceivably have recovered under a quite different line of treatment, or that while his twelve cases recovered a thirteenth case might die. Every case of apparent cause and effect is entitled to be kept in memory and accorded its due weight, but it requires a multitude of such cases even to raise a presumption of a general law.

We would counsel the young student to attend diligently to the physiognomy of disease. It is by so doing that the trained hospital nurse acquires most of her knowledge, which is often surprisingly accurate, while at other times it is hardly less remarkably faulty. The eye alone can often go far towards establishing an exact diagnosis. Apart from such obvious cases as skin diseases, jaundice, anæmia, &c., in which simple inspection enables us to form a fairly accurate opinion, there are multitudes of other cases in which the aspect of the patient conveys information of great value. The flushed face, anxious expression, and suppressed breathing of a patient in the first agony of acute pleurisy; the orthopnœa, dusky hue, and throbbing arteries of a patient with advanced heart disease; the malar flush, sunken cheeks, and glittering eye of the dying consumptive,—all these and innumerable other cases carry to the trained eye their own interpretation, written only too plainly upon them. The aspect of a patient is valuable not only for diagnosis, but also for prognosis. The subtle changes from day to day, making either for life or death, may be too fine for detection by stethoscope or thermometer, but be visible to the experienced eye. The approach of the end is not seldom heralded by changes which the physician could hardly describe, but which he sees and reads with ease and confidence.

We will not stay to dwell upon the other features of clinical study to which attention might be directed, such as the importance for the student of persevering through the necessary drudgery of case-taking, the necessity of acquiring readiness and facility with such instruments of precision as the ophthalmoscope and laryngoscope, the duty of studying human nature as well as disease, and of remembering that the physician and surgeon deal not with inanimate things, but with beings responsive to sympathy and often oppressed by many sorrows. One word only we will add on this subject. Let the student be on his guard against too readily adopting the prevalent scepticism regarding the effect of remedies and the value of medical treatment. No doubt, the efficacy of drugs is receiving a severe sifting. We no longer regard medicines as potent spells to conjure with, and the present danger is rather lest the really immense influence of drugs over healthy and morbid function should be ignored. The student should early realise that, when all is said, success in treatment is the only justification for the existence of an art of medicine. All our minute pathology and refined diagnosis are of small value, except in so far as they enable us to prolong life or palliate suffering. The young student who begins with undue scepticism in therapeutics (a scepticism which is the less justifiable because it consists at bottom in disbelief in the value of remedies which have not yet received a thorough and patient trial) will be apt to drift into carelessness in diagnosis, and when this point is reached the practitioner is in the melancholy plight of living by the promulgation of a creed in which he himself is a secret disbeliever. There is nothing to be more desired for the student of medicine than that he should carry away from his hospital training a just and well-balanced judgment regarding both the resources and the limitations of his art, neither on the one hand scoffing at the value of doctrines established by the patient labour of long generations of great men, nor, on the other hand, clinging to antiquated superstitions, and practising with the blind and unintelligent faith of the empiric and the quack.

We pass on to make a few observations on the medical career on which many of our readers have entered, and to which others are looking forward with hope and expectation. If we could credit the vaticinations of professional Cassandras, the medical profession has fallen upon evil days. Our correspondence columns are often occupied with complaints regarding overcrowding, excessive competition, low remuneration, abuse of charities, &c.; and we do not doubt that such complaints have a certain justification. The stress and strain of the nineteenth century cannot be expected to leave any professional sanctuary free from invasion; we are sharing in the altered conditions of modern life, and it is for us to consider whether changed circumstances do not call for changed methods. The remedy is beyond question in our own hands. The public take from us their cue in their estimation of professional services, and are amenable to influences which it is in our power to exert. Without professing to consider remedies in detail, we think it is clear wherein much of the mischief consists. We need among ourselves a higher estimate of the dignity of our profession, and of the value of the services which it is in our power to render; a more scrupulous honour in shunning every suspicion of sacrificing the interest of a brother practitioner to our own advantage; a self-respect that can endure

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poverty if necessary, but which will not tolerate either puffery or chicanery; and, lastly, a just estimate of our own rights, and a firm insistence upon them at the hands of the public. There can be no doubt that we suffer much and undeservedly from the abuse of medical charity. No one can value more highly than we that priceless heirloom of our profession—the principle that the suffering poor can command our services even if they come empty-handed; but the public need to be reminded again and again that if a man or woman who can afford to pay accepts gratuitous medical advice, or abuses the beneficence of our charitable institutions, he or she is guilty both of a meanness and a dishonesty. We should be sorry to see the commercial spirit prevail extensively among the profession, and we prefer the old notion that a medical fee is an honorarium, and not a quittance; but we must take human nature as we find it, and recognise that men, as a rule, value a thing just in proportion to the cost or effort of obtaining it, and that if they can get medical advice for nothing they are most apt to rate its value accordingly. We think "club practice" is being grievously abused, and might well call for attention at the hands of the licensing bodies. Again and again cases have been recorded in our columns of medical men giving their services in this line of practice at an average rate of less than a shilling per visit, medicine included. Now, *pace* CARLYLE, the people of this country are not "mostly fools," and egregious fools they would be to expect really efficient and honest medical service at this miserable rate. Let the public understand that if they want skilled attendance, and the bringing to bear for their relief the results of elaborate training and long experience, they must pay for them. They are wise enough to realise, if the matter be properly explained, that they cannot expect the benefits of a learned profession at a rate less than that paid to the carpenter for putting a broken chair to rights or to the plumber for inspecting the drains.

It is well, however, to remember that, on the whole, few careers hold out a more assured prospect of competence to character, industry, and perseverance than does that of a medical man. If the great prizes of the profession are few, the blanks are also few. The medical man who combines fair professional accomplishments with moderate talent and sound moral instincts rarely fails of attaining a reasonable competence, and a social position which, with certain inevitable drawbacks, has some very real compensations. It is no trifling inconvenience to have no certain leisure, to be able to take a holiday only at the cost of possible annoyance and certain financial loss, to have over-pressure of work at one season and under-pressure at another, to be always "on duty," and never able wholly to forget the physician in the man. On the other hand, it is no small compensation to feel that the daily work is not a mere bread-winning, but a labour of charity and usefulness—an image, however faint, of the deeds of the Divine Healer during

> "those sinless years
> That breathed beneath the Syrian blue."

It is quite true that any man, whatever his avocation, who discharges his daily duty with industry and uprightness is in some sense a benefactor of his race; but of few men is this so undeniable as of the medical practitioner. It is, indeed, happily impossible for him ever to become wholly selfish, inasmuch as the vigorous exercise of his talents, which builds up his own fortune, also subserves the interests of his patients. He has the double incitement to strive after professional excellence—viz., his own advantage and the well-being of those who commit their lives into his keeping. It is the happy characteristic of the medical profession that these two objects—one selfish, the other unselfish—are not only not opposed, but are indissolubly linked together.

Medical life is, or is capable of being, an admirable school for the formation of character. Few, if any, careers so appeal to the entire man, to head and heart, to sense, intellect, and feeling. Men of action can find room for the play of faculty in the operations of surgery or the experiments of therapeutics and pharmacology; men of reflection can find illimitable material for thought in the ever-varying phenomena of disease and the wonderful aberrations of the disordered machinery of the human organism.

We think few men who have deliberately chosen the medical career and successfully surmounted the initial difficulties which beset all professions ever regret their choice. Here and there we meet a man soured by disappointment, broken down by the pressure of "club" or "Poor-law" practice, or dissatisfied with the limitations of a career which fortune has placed in some remote and solitary spot. But such cases are relatively rare, and the great body of the profession undoubtedly consists of fairly prosperous men, who have a cheery and sympathetic word for every patient, and whose hard work has not taken the flavour and charm out of their lives. On the other hand, the hard logic of statistics shows that medical life has more than an average share of hardship, and some dangers peculiar to itself. The mortality rates of the three learned professions—Divinity, Law, and Medicine—are respectively 15, 20, and 25 per 1000; and if we take the period of active professional life, between the ages of twenty-five and sixty-five, we find that the death-rate among doctors is half as much again as among lawyers, and actually twice as great as among clergymen. These facts can bear only one interpretation. Medical men have many peculiar privileges; they are the recipients of great honour and of still greater confidence, and they hold in their hands many of the cords by which our social life is bound; but their life-work is often arduous, their life-course often short, and many fall from the ranks when the trumpet is only sounding for the battle and ere the conflict is well begun. It is comforting to reflect that many fall not the less truly martyrs in the cause of humanity, although their deeds are unsung and their heroism enshrined in the breast of perhaps one individual or in the affections of only a single household. The physician who sucks a tracheal tube to give an easy breath to the miserable victim of diphtheria, with the knowledge that the act too probably seals his own doom, is but the most distinguished illustration of a heroism which is part of the inheritance of the medical profession, and which is in daily, and often silent and unobtrusive, exercise in every part of the civilised world. Medical men "count not their life dear unto them," so that human suffering be mitigated and the dictates of honour and duty obeyed. This is their solemn obligation; it is also their privilege, for self-sacrifice is the law of the

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moral universe, and its exercise is the surest path to personal happiness.

Let the student, then, on the threshold of his career realise that he is becoming the heir of noble traditions and the guardian of some of the most sacred rights of humanity Let him reflect that he is taking the first steps on a path which may become as the shining light. Let him clearly understand that on his zeal and diligence in the pursuit of knowledge turn not only his own honour and interest, but in all probability the lives and happiness of many of his fellow-men. The profession of medicine, embraced in this spirit and pursued with such sentiments, will be fruitful in usefulness and honour, and its professors at the conclusion of their labours will most assuredly be ranked among the number of the "righteous" who "shall be held in everlasting remembrance."

THE PRACTICAL ELEMENT IN MEDICAL EDUCATION.

ONE noticeable fact in the history of the year that may prove of interest to students of medicine is the appointment of a committee of the Medical Council, on the motion of Dr. GLOVER, to consider the best means of increasing the practical element in medical education. This element is, undoubtedly, a most important one in medical education. It is admitted on all hands that medical education is better now than it has ever been. The public demand is higher, the efficiency of schools is greater, and their rivalry is keener. The basis of education has been raised, and the whole superstructure with it, including all its special and professional branches. All the strictly scientific parts of medical education are now taught in many schools as they have never been taught before. In some schools a large proportion of the teachers practically devote their lifetime to their work. But in spite of all this—or, perhaps, partly because of it—it has been complained that there has been a falling off in the practical parts of medical education, and that the newly-fledged diplomate, or even graduate—though more transcendentally learned in minute anatomy, chemistry, physiology, and pathology than his predecessors, —is less apt at recognising and treating common diseases, upon which so much of his comfort and reputation in after life depend. Some physicians and teachers of great authority admit and approve this. They say that it is inevitable, and that a student cannot become a practitioner till he has practised. This is of course a truism, but it is not a sufficient answer to the complaint. As medical science has improved, so has medical art. It is more neat, more direct, more precise, altogether more apt than it used to be; and medical students should be better trained in this latter, as they are in the former respect. The power of early recognising scabies or scarlet fever, or a wrong presentation in midwifery, or a fracture in surgery, or a dangerous infantile diarrhœa, can be taught as well before the charmed diploma is given as after. So can the professional conduct proper to such discoveries. It is certainly possible to go through all the long and exacting existing curriculum of the Schools and learn nothing of these things. Some of the Schools have not the means of teaching them. With large museums and learned professors, they have not cases of disease and of midwifery such as constitute the bulk of medical practice.

It remains to be seen whether the Medical Council of Education can suggest or apply a remedy for this defect. The committee appointed has already presented a temporary report recommending a limited pupilage, the alliance with every hospital of dispensaries and midwifery departments, the requirement of a larger midwifery experience in students, and more attention on the part of the examining authorities in the final examinations to common diseases. But this report, by a somewhat circumlocutory process, has been referred to another committee, and the result is still uncertain.

Meantime we advise students, for their own sake, to cultivate the practical element in their own education; to learn for themselves early the interest of common cases, common remedies, and common causes of disease; to aim at readiness in detecting what is wrong, and in seeing the nature of the correctives that can be applied. Our recommendation is not in favour of dogmatism and quackery and a specific for every symptom, but in favour of the cultivation of a medical aptitude for detecting and removing the run of diseases for which people consult medical practitioners. No worthy student should wait for the action of medical authorities in demanding proof that he knows the profession on which his living and the life of his patients are to depend.

STUDENTS PAST AND PRESENT.

THE student of medicine has been, and still is perhaps, regarded by some as a person in whom the faults of humanity meet and multiply with peculiar facility. In addition to our common inheritance of moral frailty, his age and associations appear in the eyes of such to have impressed him with a large additional proneness to error which is all his own. They would dread his presence under the same roof, would treat him with particular caution as an acquaintance, and would be prepared to find him the active source of almost any mischief or misdeed. For them perhaps it is not unnatural to view him in this light. Some natures readily exaggerate every circumstance, good and evil alike. A greater number are too ready to magnify evil while they persistently minimise good, and this not so much by intention as by a physical law which has allotted too grave a shade for their mental atmosphere. The alarmists, to whom the fair fame of our profession while yet in its budding spring presents a picture so unpromising, belong to this latter class. They are too apt to view with disfavour even the natural and blameless exuberance of youthful energy. They forget that idleness and folly are not the only companions of young manhood, and that though these qualities may distinguish a minority of youths engaged in every calling, there is, happily for mankind, in medicine as in other spheres of labour, a majority which is endowed with some sense of responsibility and a resolution to do well. They forget, moreover, that a large part of the praise or blame for what a young man is must be borne by the age he lives in, and that as times and customs alter so does he. Whether the change be for the better or for the worse, this will appear no less in his character and conduct than in the lives of other men. Be his individuality what it may, he must in some degree be moulded by his time.

The fifty years of our QUEEN'S reign have been fruitful in

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advantage to all callings and all conditions of men. They have witnessed the action of forces whose operation upon the mind and work of the medical profession have been of most happy kind—forces which have not failed to affect favourably the quality of our professional recruits. More has doubtless to be done, and it would be idle to argue that further advances do not lie before them and us. We are well aware that the medical student is no more perfect than other young men. This much, however, we may truly say of him, that he represents in some respects a marked improvement on the type of his predecessor of half a century ago. Now, we are not about to drag up old memories for the purpose of abusing them. The widely admitted skill and character of many older practitioners who still survive amongst us are not the outcome of a wild and idle youth. Good work and an honest conscience have been held in honour by many in schools of medicine since time was young. Nevertheless, there is, we assert, a difference between the student past and present, and this difference is on the whole in favour of the latter. The object of study is now more clearly kept in view than it was then; study itself is more in vogue; recreation, still in justly high esteem—nay, in freer exercise,—bears rather more the impress of manhood, less of boyhood than before; and life throughout has more the stamp of reality. Racket and dissipation certainly are not, and have not been, in recent times at least, the rule in medical student life; but it is equally true that they were once less exceptional than they are now. What cause has wrought this favourable change? It is not that sombre gravity has overweighted the buoyancy of youth, but that young men and all men find it profitable alike in personal satisfaction and in material advantage to be sincere in all things, active in timely amusement, and vigorous in timely work. Naturally and truly we may assign much of this improvement to the tendencies of the period in which we live. Overwork there is in plenty, and we do not praise it for that, but regulated effort there is also within even this excess, sense of duty, belief and hope in it, and in life as duty as much as in any former era—nay more. In this era, for which, amid all falsity, real or apparent, we claim the merit of comparative sincerity, we can see in actual life a frequent answer other than the cynic's to the cynic's question—Is life worth living? In the history of recent invention and discovery, in the great advances made by public opinion in matters of moral, intellectual, social, and physical well-being, there is not wanting something which replies for men in common: that life, if it be purposely lived—not dreamt or idled through,—is in their view worth living. This character of the age, this hopeful earnestness, has impressed itself in no undecided manner upon the mind and conduct of medical students.

Another factor which has assisted and still powerfully assists this class is the actual development which has taken place in our knowledge of medicine itself, with the practical results involved in that extension. In order to gauge the real meaning of this advance, it is not necessary to enumerate here the many successful researches which have added skill once believed impossible to the healing art. To every person possessed of ordinary intelligence and information it will be an easy matter to form a fair idea of that volume of scientific truth which, within a generation or two, has been collected into a common fund of intellectual capital for the use of all practitioners. Then, again, out of that increase of knowledge, how many mechanical facilities have arisen like a second growth to confer upon us advantages of the greatest value in diagnosis and treatment. More is almost daily known and done in medicine and surgery, and, as a natural consequence, the interest which belongs to the work increases in proportion. Not only does it command a wider and a deeper appreciation than at any former period at the hands of the general public, but it has proved repeatedly and fully its power of drawing out the enthusiasm and the energy of those who enter its ranks. Nor does this devotion imply merely a passing and ineffective exuberance of feeling. The sense of personal responsibility supplies an ever-present check upon any such excess; and while we naturally expect to find this the ruling principle in the mind of the practioner, we cannot but notice that it guides in an important degree the course of student life also. It is therefore not remarkable that, after passing in review these various considerations, we find in them so many reasons for the greater steadiness of endeavour which distinguishes the medical student of to-day from some of those who went before him. We cannot but think, too, that in fixing the limit of age at which a diploma can be obtained at a later period than formerly, the heads of the faculty have rendered useful service to students as well as to the non-medical part of the population. They have provided, as far as they can, that manhood, if not already reached, shall be near enough to guarantee a due regard for the exercise of energies which are not conducive merely to amusement. They have thus allowed the student time to form a fair estimate of what is implied in professional duty, and have enabled him to bring to bear on extended studies a more mature mind than was at one time thought to be necessary. It cannot be said, however, that this or any other existing arrangement has even come near to settling the question between work and play. That question is one affecting not youth alone, but every age, class, and occupation. However well we may try to advise with regard to it, its decision remains a matter of individual judgment, and compromise is the basis of such decision in every case. Recreation is as indispensable to a healthy life as work is to success in any undertaking. Even in its physical form it refreshes mind as well as body, and if rightly used will aid the student in his more laborious mental efforts without inflicting upon him any real disadvantage, for time thus occupied is repaid in working power. So it is with occupations of a recreative kind that are not physical. Change of mental as well as of muscular action is rest-giving and helpful. Who does not know the power of a fresh interest introduced amid fatigue and worry? How it changes nature in a man and sets the world about him and his part in its affairs in a totally different and more hopeful light from that of his former blurred and dim perceptions. It is no new saying that change is recreation, and it is true wisdom in students and in all men to see that in their most strenuous undertakings mind and body are not deprived of those refreshing interruptions of effort which are due to them. At the same time, we may be allowed to remind our readers that the real business of student life, the course of study, must always occupy the chief share of their attention. If they would assure a successful future, they must assign to

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amusement, however salutary, a distinctly secondary position. This, it seems to us, is for medical students no hardship. Their mental occupation for the time being abounds in interest, and, inasmuch as it is largely practical, implies a fair degree of wholesome exercise. Their lot, therefore, even in its more laborious phase, is by no means unattractive, and may well absorb their best energies. Another subject directly connected with the employment of leisure is the choice of friends. The importance of making a right selection it is hardly possible to over-estimate. Temptations cluster around the path of all young men; and certainly the journey which the student of medicine has to travel is not beyond their influence. In view of this fact, it is not difficult to understand how the quality of a friendship has often a determining force towards good or evil, and we would strongly advise every student who does not intend his college life to be a failure not only to work regularly himself, but to choose his associates from the number of those who are good workers. In the sowing time of manhood some have thought it well to sow wild oats among their wheat. They have thought that the bitterness of the after-taste was compensated by the novelty of that light diversion while it lasted. But time is the truest teacher in all such matters, and the verdict of time is against that folly which winks at evil till it seems to be good, and kicks at restraints which impose no stricter bondage than that which the teaching of experience must otherwise establish. Strong fibre of mind or body is not bred of disease, and we repeat that what is most honourable and most useful in our professional character and practice is not, and never can be, the outcome of a profligate or idle studentship.

THE CHOICE OF A TEXT-BOOK.

THE question which the student is always asking, and naturally, is what book will best serve his purpose in preparing for certain examinations. The answer to this question is one which becomes every year more difficult The number of medical text-books of a high class is now very great; therefore to select a few from amongst them may seem invidious. At the same time a list, which by no means pretends to be exhaustive, can be drawn up that may prove of value as a guide to the student in his choice As representing all the various examining bodies, we may take for this purpose the Examining Board for England (Royal College of Physicians and Royal College of Surgeons) and the University of London.

THE EXAMINING BOARD FOR ENGLAND.

For the *First* Examination of this Board the student will be required to have gained a fair knowledge of Elementary Anatomy and Physiology, of Chemistry, Materia Medica, and Pharmacy; and if he be diligent he should be able to pass both parts of the examination by the close of his first year. In *Anatomy*, he may have recourse to GRAY'S Text-book, and to the works on *Osteology* by WARD, HOLDEN, and NORTON. In *Physiology*, the Elementary Text-book of HUXLEY might well be mastered first. In *Chemistry*, HOSCOE'S Elementary book and ATTFIELD'S work. In *Chemical Physics*, FOWNES' Inorganic Chemistry edited by WATTS, or BALFOUR STEWART'S Elementary Physics. In *Materia Medica*, the works of MITCHELL BRUCE, WHITLA, ROBERTS, GARROD, and BRUNTON'S or OWEN'S Elements.

For the *Second* Examination (corresponding to the Primary Membership at the College of Surgeons), the subject of *Anatomy* may be well studied in GRAY'S Anatomy, ELLIS'S Demonstrations, or HEATH'S Practical Anatomy. The anatomical plates of ELLIS and those of GODLEE are very useful in supplementing practical work, or the handier volume of MASSE. In *Physiology*, the books most to be recommended are KIRKE'S Handbook, G. YEO'S Text-book, and H. POWER'S Elements; and *Histology*, apart from the sections devoted to it in the works of GRAY and KIRKES, may be read in KLEIN'S Elements.

For the *Third* or Final Examination, in the subjects of *Surgery* and *Surgical Anatomy*, there are the Text-books of BRYANT, HOLMES, GANT, and ERICHSEN'S work, ably edited by MARCUS BECK, the System of Surgery edited by TREVES, the Practical Handbooks of BERKELEY HILL, CHRISTOPHER HEATH, PEARCE GOULD, and TREVES'S Applied Surgical Anatomy. For *Surgical Pathology* PEPPER or BILLROTH may be recommended. In *Diseases of the Eye*, LAWSON or NETTLESHIP. In *Medicine*, the Text-books of ROBERTS and BRISTOWE, preceded by the smaller works of CARTER or CHARTERIS. *Clinical Medicine*: FENWICK, FINLAYSON, or GRAHAM BROWN. *Pathology*: GREEN, COATS, and ZIEGLER (MACALISTER'S translation), and WOODHEAD'S or STEVEN'S practical work. *Therapeutics*: BARTHOLOW, RINGER, NAPHEYS, and FARQUHARSON. *Medical Jurisprudence*: the Text-books of GUY and TAYLOR. *Public Health*: WILSON. *Midwifery*: PLAYFAIR or GALABIN.

COLLEGE OF SURGEONS (FELLOWSHIP).

In addition to the anatomical and physiological works above mentioned, there may be read for the Primary F.R.C.S. (especially its histological and embryological sections)—QUAIN'S Anatomy, FORSTER'S Text-book of Physiology, LANDOIS' work edited by STIRLING, and GEGENBAUR'S Comparative Anatomy. Professor FLOWER'S Osteology of the Mammalia might also be read. For the Pass Examination, ERICHSEN'S work may be supplemented by chapters in the System of Surgery edited by HOLMES and HULKE. In *Operative and Practical Surgery*, there are works by STIMSON, FERGUSSON, and S. SMITH and HEATH'S ATLAS. PAGET'S or BILLROTH'S Surgical Pathology and ZIEGLER'S Pathology may be profitably read in connexion with works mentioned under the Conjoint Examination.

UNIVERSITY OF LONDON EXAMINATIONS.

For the Intermediate M.B. Examination of the University of London, the subject of *Organic Chemistry* may be studied in the Text-books of WILLIAMSON and of FOWNES. *Materia Medica*, besides the books above mentioned, is more fully treated in the works of BRUNTON, PHILLIPS, BARTHOLOW, and H. G. WOOD. *Physiology* as for the Primary F.R.C.S., with perhaps the addition of such books as that of POWER and HARRIS for practical work and of SCHAFER for practical histology. The anatomical text-books are those recommended above. For the M.B. Examination, the subject of *Medicine* may profitably be further studied in NIEMEYER'S Text-book, in the exhaustive and scientific treatise of the late Dr. HILTON FAGGE, in that of AUSTIN FLINT, in the admirable work of STRUMPELL, lately translated, in REYNOLDS'S System of Medicine, and in TROUSSEAU'S Lectures. The large System of Medicine by American authors contains articles which

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may often be usefully consulted by those who are desirous of obtaining full and accurate information. Special monographs (see M.D. Exam.) may also be consulted. *Pathology*, which should be worked at practically, may be studied in GREEN'S, COATS', or ZIEGLER'S Text-books, and also in the works of WILKS and MOXON, and in those of CORNIL and RANVIER; *Midwifery*, in the writings of PLAYFAIR, GALABIN, LEISHMAN, LUSK, and BARNES; *Gynæcology*, in those of GALABIN, LOMBE ATTHILL, EDIS, M. JONES, and BARNES; *Dermatology*, in the Text-books of TILBURY FOX, LIVEING, DUHRING, and M. MORRIS; *Medical Electricity*, in DE WATTEVILLE or POORE; *Medical Ophthalmoscopy*, in GOWERS' Handbook. For the M.D. Examination the candidate will do well to extend his reading to the better-known monographs, such as MURCHISON on Continued Fevers and on Diseases of the Liver; GOWERS, ROSS, CHARCOT, and WILKS on Diseases of the Nervous System; BALFOUR, BYROM BRAMWELL, and WALSHE on Diseases of the Heart; POWELL and WALSHE on Diseases of the Lungs; RALFE, W. ROBERTS, and DICKINSON on Diseases of the Kidney; E. SMITH, GOODHART, and A. MONEY on Diseases of Children.

In the foregoing lists we have mostly indicated more than one work upon a subject; for it is, of course, impossible to make a single selection from among so large a number of excellent works. A certain amount of choice must be left to the student himself, who will do well to be guided in this respect by the opinion of his teacher in the particular subject. Since it is impossible as well as undesirable for him to be too discursive in his reading during his student days, he may well resolve to devote such leisure as may happen to him in the future to making the acquaintance of works which will afford not only instruction but pleasure in the perusal.

CONDITIONS UNDER WHICH MEDICAL MEN WITH BRITISH QUALIFICATIONS ARE PERMITTED TO PRACTISE IN FOREIGN COUNTRIES.

MEDICAL men are so frequently anxious to settle abroad that a little general information concerning the conditions under which those who possess British qualifications can obtain permission to establish themselves in practice in various countries will probably be useful. As new laws are made these conditions are liable to change, and at the present time the regulations for the permission of foreigners to practise are in a transition state in several of the more important countries. There is probably no country in Europe where more liberty is enjoyed by foreign practitioners than in England; while other countries are continually hedging themselves round, so that it is yearly becoming more and more difficult for a British practitioner to establish himself abroad unless he is prepared to undergo a tolerably complete examination in all the subjects of medical study in the language of the country in which he elects to live. A British diploma ought to hold good for all British possessions. In some colonies, however, local fees have to be paid, and in Malta we believe an examination is required, though by what right it is difficult to conjecture.

In France there are two grades of practitioners—Officers de Santé and Doctors of Medicine, the examinations for the former diploma being fewer and more simple than for the latter. It has been usual for British medical men to content themselves with the lower diploma, which, it should be remarked, gives only a right to practise in some one department of France. Now, however, a cry has been raised that foreigners ought to be obliged to undergo the whole of the five examinations for the Doctorate—if not, indeed, to pursue their studies over again in a French medical school. Discretion is given to the Minister of Public Instruction to decide whether a foreign medical man may be admitted to the examinations for the Officership or the Doctorate, as well as the amount of exemption that shall be accorded to him. This decision is based upon the value of his own diplomas.

In Germany the ordinary State examination must be passed, and as a condition of admission to it the maturity or matriculation examination must either be passed or exemption obtained from it on the strength of some degree or other Arts examination previously passed at home. Some account of the German and other continental examinations was given in the Students' Number of THE LANCET for 1886.

In Austria, save, we believe, under very exceptional circumstances, when leave to practise may be obtained from the Government, the M.D. of an Austrian University is essential. We are not able to say whether the usual conditions as to residence may, as a rule, be dispensed with.

In Russia the State examination must, as a rule, be passed—in Russian at most of the Universities, in German at Dorpat, or in Swedish at Helsingfors. The Helsingfors diploma, however, only holds good for Finland. Where a foreign M.D. of high value is held, the Minister may permit the examination to be confined to what is called in Cambridge "keeping an act"—i.e., reading and defending a thesis. Even this is a much more serious affair than it is generally looked upon with us.

In Switzerland, the State examination is compulsory, and it is said to be by no means a matter of form by Englishmen who have passed or attempted it. It may be passed in French or German.

In Holland the State examination, which, we believe, corresponds somewhat with the German one, must be passed.

In Denmark the degree of Candidate in Medicine must be taken at Copenhagen. Foreign practitioners are admitted without residence.

In Sweden and Norway a State examination must be passed. These Scandinavian examinations have the reputation of being very severe.

In Portugal, including of course Madeira, the regular State examination must be passed in the Portuguese language.

In Italy permission may be obtained to practise amongst foreigners, but in order to practise amongst Italians the M.D. degree must be taken at one of the numerous Italian Universities.

With regard to Spain, application must be made through the diplomatic agent to the Government, the diplomas, duly certified, being forwarded. The application is usually granted, but applicants must be prepared for protracted delay; thus we have information that one gentleman who applied more than a year ago is still in a state of suspense.

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In Belgium either a degree must be obtained from Ghent or Liège (those of Brussels and Louvain not being recognised), or an examination of a more or less formal character must be passed, after which a "permit" is given by the Minister. Changes in the direction of increased stringency may here be expected shortly.

In Servia an examination must be passed in Belgrade, except by graduates of Paris or Vienna.

In Roumania a *vivâ voce* examination is necessary.

In Turkey a short examination is obligatory, which is held at the Military Medical School; but although the regulations appear simple enough, we are informed that there are various difficulties to be overcome before obtaining the necessary licence.

In Greece an examination is necessary, which is held at Athens. It may be conducted in almost any language.

In Egypt and Morocco permission to practise may be obtained by the presentation of British diplomas.

In the United States the laws vary with the different States. In most of them British diplomas are recognised. In New York, however, a degree must be obtained from some local college.

Nearly all the South American States require examinations to be passed. Some of them are really difficult, and others are said to vary in stringency according to circumstances, the examiners, who are frequently Englishmen or Germans, not being particularly anxious to increase the already existing competition for practice amongst the more wealthy inhabitants.

THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

DURING the past year no change has been made in the qualifications required of candidates for commissions in the Medical Services, nor in the regulations affecting the pay and retirement of the officers. The Navy, the Army, and the Indian Service, differing from each other in some respects, but all possessing considerable advantages, seem to us to offer eligible openings for young medical men. Candidates for the Navy do not enjoy the benefit of the valuable course of instruction given to the other two branches at Netley, but they come upon full pay from the date of passing the competitive examination. Naval medical officers have great opportunities of seeing foreign countries and of studying natural history in its various branches, if so disposed, and have abundance of time for study. But, on the other hand, their opportunities of following out the practical work of their profession are limited, and they are liable to be placed on half-pay for indefinite periods when their ship is paid off. The latter drawback has been much reduced in recent years by the judicious action of the Director-General in employing them as much as possible in the hospitals on shore, but the possibility of this compulsory half-pay must not be overlooked. Candidates for the Army have the benefit of a most valuable course of instruction at Netley on special subjects, which cannot fail to prove useful to them in their future career and enable them, from the very commencement of their service, to carry out their duties with satisfaction to themselves and benefit to the soldier. Like the naval officers, though in a different manner, they have the opportunity of seeing foreign lands, but are not liable to be placed on half-pay on their return to England. They have also the right to retire from the service after completing a period of ten years, with a gratuity of £1250; after fifteen years, of £1800; and after eighteen years, of £2500. They labour under the disadvantage, however, of not being allowed to count the period of service at Netley towards retirement, their commissions being dated from the termination instead of the commencement of the course. They are by this also placed in the position of being always junior to the medical officers of the Navy and the Indian Service who have passed at the same competitive examination. Admission to the Indian Medical Service is governed by the same conditions as those which obtain with regard to the Army, and, as surgeons on probation, entrants have the advantage of the course of instruction at Netley. Their commissions as surgeons are antedated to the period of their joining at Netley, and the four months passed there are reckoned as service for pension; but their pay between the date of passing the final examination at Netley and arrival in India is only ten shillings per diem. The Indian medical officers labour under the disadvantage that all their service must be tropical, and they do not seem to have a right, as in the Army, to retire upon a gratuity after stated periods; but they become entitled to retired pay after seventeen instead of twenty years. The officers of the administrative grades are granted also a higher rate of retirement than those in the Army. We have endeavoured to point out the leading differences in the three branches with a view to enable students to weigh well their relative advantages and disadvantages; but we think all three offer considerable inducements in the way of pay and retirement to young men who may desire to enter at once upon a career in which, from its commencement, they can live on their pay, and have also the right either to retire when they think fit, or to continue to serve with the certainty of a fair pension for life.

METHODS OF OBTAINING A PRACTICE.

DURING his hospital days a student's whole energies are very properly thrown into the labour of preparing for his examinations and fulfilling the duties attached to the appointments he has been fortunate enough to obtain. It is, however, after his diplomas have been gained that the real battle of life begins. As long as he was at the hospital all was tolerably straightforward, and any lecturer or senior student could give him advice as to the course that should be pursued; but when the student has become a practitioner, or rather a medical man, no one can advise him how to obtain patients, and guarantee that the advice, however faithfully followed, will lead to success. A good student who has taken honours in his examinations and held important hospital appointments does not by any means always command the success in after life which he feels is his due. Indeed, he not unfrequently finds that some fellow-student who has taken no honours, and whose ability he perhaps looks upon with contempt, succeeds in obtaining a much better practice than himself. Not all the public care whether their medical man is an M.D. Lond. or an L.S.A., but they care very much for agreeable manners and tact. Leaving aside for the present the comparatively small number of young practitioners who wish to become consultants, as well as those who enter the public services, and addressing ourselves to those who look

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forward to general practice as the means of earning their daily bread, a few hints as to the methods that exist of obtaining or attempting to obtain a practice may be of some utility.

It is often thought that an active young man has only to offer to do the bulk of the more arduous work of a practice for an elderly practitioner in order to be taken with open arms as a partner. There could not be a greater mistake. An elderly practitioner who wishes to part with a share of his practice—i.e., of course of his income—can always find a junior partner who will gladly pay him a substantial sum for it, and few men will give away that which has a marketable value. The purchase of a partnership, therefore, is one method of obtaining a practice, and a very suitable method for a young man who has had no experience as pupil or assistant in a general practice. The price that has to be paid varies generally from one and a half to two years' purchase of the share purchased. Thus, suppose the average income for the three preceding years is shown by the books to be £1200, a third share will have a value of from £600 to £800. If the practice does not decrease, he will immediately commence to *earn* £400 a year, but he will be some time before he *receives* anything to speak of, as accounts are not generally sent out more often than half-yearly, and may then remain unpaid for a considerable period. The junior partner will do well to reckon that during his first year he will not receive more than the half of what he has earned, or £200. During this time, however, he will have, in addition to the necessary outlay on furnishing, to pay rent, to keep himself and his family, if he be married, in suitable style, and to bear his share of the outgoings of the practice for drugs, bottles, and stationery, and if the vehicular expenses are borne by the firm, for the horse and man in addition. All this shows that even such a small partnership as this cannot be entered into without some capital over and above the amount paid as premium. Speaking generally, it may be said that a man should not expend more than 60 or 70 per cent. of his available capital in the purchase of his share. Such a share as we have supposed should not therefore be thought of by a man with less capital than £900 or £1000. Partnerships are becoming more and more rare, and there are, of course, objections to them. For instance, a partnership may be a great tie, for it may not be easy to liberate oneself from it, however much the locality may disagree with oneself or with one's family. Many ways of improving the practice or the manner in which it is conducted may occur to the junior partner, but he cannot well carry them out against the wishes of his senior. For these and other reasons it is more usual to buy an entire practice than a mere share in one. Would-be purchasers of practices should, however, be warned that all that can be bought is an introduction to patients and the goodwill of the retiring practitioner. A man may be ever so well qualified, and even experienced, and yet he may find that after his predecessor has left, a large proportion of the patients may fall away; that is to say, they may prefer the attendance of some other practitioner whom perhaps they may have known, socially or by repute, for many years. Small practices are much more easily transferred than others. Generally speaking, where the patients are of a high class and there is much opposition, transfer is difficult; whereas in a country village where there is no opponent for several miles, the transfer of a large proportion of the patients may be confidently looked for—i.e., if the parochial appointments can be secured; if not, the practice is probably not worth buying at any price. The premium paid for an entire practice is under ordinary circumstances about a year's purchase of the gross receipts, with a preliminary partnership of three, six, or twelve months on equal terms. What is called a death vacancy can frequently be obtained for half a year's purchase. It is well for the incomer to remember that he will have to keep up much the same establishment as his predecessor upon what is likely to prove only a half or two-thirds of his income, and that some time—in country places a year or eighteen months—will probably elapse before much begins to come in.

It is impossible within the limits of an article to go into a detailed account of the matters on which an intending purchaser should inform himself—such as the appointments, the number of midwifery cases (and whether these are increasing or diminishing), the conditions of opposition, increase or decrease of population, conditions of tenure of the house, the general character of the vendor and the length of time he has held the practice, the possibility of obtaining accommodation during the introduction, whether the connexion is sectarian, &c. He must beware of accepting too literally the statements and views of a would-be vendor, who sometimes romances cheerily and in much too sanguine a strain on what may be accomplished by a more active or a more highly qualified successor. Vacant practices are to be heard of through private friends or the members of the hospital staff, by taking locum tenencies, and through advertisements, wholesale druggists, or medical agents, but in all cases *caveat emptor*. A respectable independent medical agent will for a very few guineas make inquiries, examine the books, and give advice about the value of a practice both generally and to the individual client, and about the terms of the agreement. It is part of his profession to do this, and many a medical man would have saved himself from severe disappointment by taking timely professional advice. Of course the family solicitor should also be consulted, but he has not usually the special knowledge of an experienced medical agent regarding the details of medical practice.

The question is often asked by recently qualified men on the look out for practices, What income may I fairly hope to obtain by the investment of my capital? Of course, a great deal depends on the individual and much on the locality of the practice. Speaking in very general terms, it may be said that if 60 per cent. is sunk as premium, the remaining 40 per cent. being employed in furnishing and in maintaining oneself until the practice yields its full fruit, a gross yearly income of 40 or 50 per cent., or a net income of 30 or 40 per cent of the total original capital may fairly be looked for, whether the premium is invested in a partnership or in an entire practice; that is to say, a man with £1000 ought to make a net income of £300 or £400. Of course, many men succeed in doing much better than this, either by buying a practice on peculiarly favourable terms, or by equalling or exceeding the outgoer's income from the very first. Thus, we know of a case where a man "picked up" a practice just as it was about to be abandoned for £60, with a fortnight's

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introduction, and succeeded in making £300 a year at once; he had, however, some private means. It should be remarked that a very small practice is frequently not worth buying at any price, the necessary expenses reducing its net value far below that of an assistancy. Indeed, where the available capital is, say, under £500, it is worth consideration whether it is not better to invest it at compound interest in some public security, and to take an assistancy till a favourable opportunity (which is nearly sure to come sooner or later) can be seized.

Medical men who have no capital or connexion are frequently attracted by assistantships, with a view to partnership. In nine cases out of ten the "view" turns out to be of a most telescopic character, unless there is a written and stamped agreement, and a readiness of capital when the share is actually transferred. Practices may sometimes be created by "setting up" in a new neighbourhood which is rapidly growing; or in a place where one already has some connexion either through relatives or friends, or through having been house-surgeon at the local hospital. Again, a practice may sometimes be made by obtaining some parochial or other appointment which is publicly advertised, and which of itself affords an introduction. Such appointments, however, are not very easy to obtain, and much time and money are sometimes wasted in applying for posts and interviewing guardians when the appointment is already as good as made, and the advertisement is a mere matter of form. It is rare that a practice can be made without the expenditure of some capital, for even if success ultimately attends the venture, the practitioner has to "sit behind his brass plate" to pay his rent and to maintain himself for some months, or even years, before sufficient practice is obtained to support him, so that, as Dr. THURSTAN recently remarked in our correspondence columns, it is financially much the same thing whether a practice is made or purchased. Complete failure, too, is probably more common in cases where men have established themselves in a fashionable locality in an expensive house, without adequate means, than in those where a practice of some kind has been bought. Here the purchaser seldom fails to secure some remnants of his predecessor's practice, which, though perhaps very much less than he had hoped for, are yet sufficient to enable him to exist; whereas, when there has been no introduction, some years may elapse before £100 is received.

A WORD TO STUDENTS OF PSYCHOLOGY.

IT is not to be expected that a knowledge of insanity, any more than of other branches of medicine, can be obtained by the light of nature. The public are occasionally under the delusion that anyone is able to recognise a lunatic at first sight. In many instances, no doubt, this supposition is correct, but in a very considerable number of cases the diagnosis is one of extreme difficulty. Practitioners, therefore, who have any dealings with lunatics should be able to prove that they are competent to undertake their management. During the last twelve months a step in the right direction has been taken by the Medico-Psychological Association, and we are glad to find that the recommendation contained in our Students' Number of last year, that those who intend to treat the insane should obtain the diploma offered by this body, has not been neglected. The fact that not less than twenty-four registered practitioners have availed themselves of the opportunities of being examined by distinguished psychologists, and of displaying their competency to treat mental disorders, is sufficient proof that the Association has supplied a want, felt not only by the profession, but also, we venture to think, by the public. We shall watch the progress of this movement with much interest, and we trust that all our recognised examining bodies may be induced to follow this good example, and to insist upon a knowledge not only of the book work, but also of the practical knowledge of mental disease, being exhibited by those who receive their qualifications. Latterly several cases have come under our notice in which great difficulty has been experienced in getting medical men to sign certificates for admissions to asylums. This under present circumstances is hardly to be wondered at. Should the proposed new Lunacy Bill ever be passed, we sincerely hope that the most stringent measures will be taken to protect those who are really acting conscientiously from the mental anxiety, loss of time, and loss of money to which some of our profession have recently been subjected.

SESSION 1887-88.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION OF THE UNITED KINGDOM.

Registration of Medical Students.—The following are the General Medical Council's Regulations in reference to the registration of students in Medicine:—

Every medical student shall be registered in the manner prescribed by the General Medical Council. No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council,[1] and has produced evidence that he has commenced medical study. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration. The registration of medical students shall be placed under the charge of the branch registrars. Each of the branch registrars shall keep a register of medical students according to a prescribed form, and shall enter therein the name, the preliminary examination and date thereof, the date of registration, and the place and date of commencement of medical study, as certified by a master or a teacher, or an official in a medical school or hospital. Every person desirous of being registered as a medical student shall apply to the branch registrar of the division of the United Kingdom in which he is residing; and shall produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and *evidence that he has commenced medical study*. The branch registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration. Each of the branch registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students. The several Branch Councils—and in England the Executive Committee, if its meeting be more convenient, and the case be urgent—have power to admit special exceptions to the foregoing regulations as to registration.

[1] Exception may be made in the case of a student from any Indian, Colonial, or Foreign University or College, who shall have passed the matriculation or other equivalent examination of his University or College, provided such examination fairly represents a standard of general education equivalent to that required in this country.

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for reasons which shall appear to them satisfactory. A copy of the Register of Medical Students, prepared by each of the branch registrars, shall be transmitted on or before December 31st, in each year, to the registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule A to the Medical Act (1858), and through the branch registrars to the several medical schools and hospitals. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent—have power to admit exceptions to this recommendation. The regulations for preliminary general education are as follows:—

No person shall be allowed to be registered as a medical student unless he shall have previously passed (at one or more examinations) a preliminary examination in the subjects of general education as specified in the following list:—1. English Language, including Grammar and composition. 2. Latin, including Grammar, Translation from specified authors, and Translation of easy passages not taken from such authors. 3. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first book of Euclid, with easy questions on the subject matter of the same. 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics. 5. One of the following optional subjects:—(*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other Modern Language, (*f*) Logic, (*g*) Botany, (*h*) Zoology, (*i*) Elementary Chemistry.[2]

W. J. C. Miller, B.A., Registrar of the General Council and of the Branch Council for England, 299, Oxford-street, London, W.—James Robertson, Registrar of the Branch Council for Scotland, 4, Lindsay-place, George IV. Bridge, Edinburgh.—R. L. Heard, M.D., Registrar of the Branch Council for Ireland, 35, Dawson-street, Dublin.

REGULATIONS
OF THE
MEDICAL EXAMINING BOARDS IN THE UNITED KINGDOM.

UNIVERSITY OF OXFORD.

There are two degrees in Medicine, B.M. and D.M., and two degrees in Surgery, B.Ch., and M.Ch., and a diploma in Public Health. The B.M. and B.Ch. degrees are granted to those members of the University who have passed the Second Examination. Graduates in Arts (B.A. or M.A.) are alone eligible for these two degrees. After the degree of B.A. is obtained, the degrees of B.M. and B.Ch. may be obtained by passing the following examinations:—1. Preliminary. 2. Professional. (*a*) First Examination: Subjects—Organic Chemistry, unless the candidate has obtained a first or second class in Chemistry in the Natural Science School; Human Physiology, unless he has obtained a first or second class in Animal Physiology in the Natural Science School; Human Anatomy. (*b*) Second Examination: Subjects—Medicine, Surgery, Midwifery, Pathology, Forensic Medicine with Hygiene, and Materia Medica with Pharmacy.

The degree of D.M. is granted to Bachelors of Medicine of the University—(1) who took the degree of B.M. previously to the end of Trinity Term, 1886, provided they have spent three years in the practice of Medicine after taking that degree, and have composed a dissertation on some medical subject approved by the Regius Professor of Medicine, before whom it must be read in public; (2) who took the degree of B.M. subsequently to the end of Trinity Term, 1886, provided they have entered their thirty-ninth term and have composed on some medical subject a dissertation which is approved by the professors in the Faculty of Medicine and examiners for the degree of B.M. whose subject is dealt with. A book published within two years of the candidate's application for the degree may be substituted for a dissertation. The degree of M.Ch. is granted to Bachelors of Surgery of the University who have entered their twenty-seventh term, who are members of the surgical staff of a recognised hospital, or have acted as Dresser or House-Surgeon in such a hospital for six months, and who have passed an examination in Surgery, Surgical Anatomy, and Surgical Operations.

The diploma in Public Health is granted only to Bachelors of Medicine of the University who have passed an examination in Hygiene, Sanitary Law, Sanitary Engineering, and Vital Statistics.

The First Examination for the degrees of B.M. and B.Ch. and the Examination in Materia Medica and Pharmacy may be passed as soon as the Preliminary Examination in Medicine has been completed. Organic Chemistry may be taken on a separate occasion, but before Human Physiology and Anatomy. The two last-named subjects must be taken together. For exemptions, see *ante*.

The Second Examination may be taken after the completion of the first. Materia Medica and Pharmacy, if not already passed, may be offered on a separate occasion, but before the remaining subjects, which must be taken together.

The Professional Examinations in Medicine are held once a year in Trinity Term, the second before the first.

Instruction in the subject-matter of Responsions, Moderations, and the various literary schools is given by the tutors and lecturers of the Colleges and Halls. In Natural Science, the professors of the University and their assistants deliver regular courses of lectures and conduct classes for practical instruction in the laboratories of the Museum and Botanic Garden in each term. In addition, several Colleges possess tutors in Science, and in two or three instances laboratories as well. In Medicine, instruction in Organic Chemistry is given once a year. Physiology, Physiological Chemistry, and Histology are taught by the Waynflete Professor of Physiology and his assistants; Human Anatomy by the University lecturer in that subject, under whose control is placed the department for dissection. Provision for the teaching of Materia Medica is being made. Instruction and demonstrations in Physical Diagnosis and Regional Anatomy are given in each term at the Radcliffe Infirmary. Clinical lectures in Medicine and Surgery are also delivered by the two Lichfield lecturers of the University, a physician and a surgeon of the infirmary respectively; but as full provision does not exist for the teaching of the subjects for the Second Professional Examination (except Materia Medica), it is necessary for a student to obtain his knowledge elsewhere. The Radcliffe Library at the Museum contains a vast collection of scientific and medical literature, available for study and consultation by students.

Scholarships, &c.—Scholarships in some branch of Natural Science (Chemistry, Physics, Biology) of the average annual value of £80 per annum, tenable for four years and renewable under certain conditions for a fifth year, as well as Exhibitions of a less annual value, are awarded after competitive examination, every year by some, from time to time by other, Colleges. Notices of vacancy &c. are published in the *University Gazette*. In February there is competed for annually, by those who have obtained a first class in any school (Moderations or Final), or a Scholarship or Prize open to general competition in the University, one Radcliffe Travelling Fellowship. It is tenable for three years, and is of the annual value of £200. The examination is partly scientific, partly medical. The holder must travel abroad for the purpose of medical study, and take the degree of B.M. Oxon. A Rolleston Memorial Prize is awarded once in two years to members of the Universities of Oxford or Cambridge of not more than ten years' standing for an original research in some Biological subject, including Physiology or Pathology.

More detailed information may be obtained from the University Calendar; the Examination Statutes, 1887, which contains the official schedules of the several subjects of examination in both Arts and Medicine; from the Student's Handbook to the University; from the Regius Professor of Medicine; from the Professors in the several departments; and from the Sub-Librarian in the Radcliffe Library at the Museum.

[2] The list of students in Universities with a prolonged curriculum, where matriculation in Mechanics required for their degree is taken at a [illegible] period of study than before commencing medical [illegible] can be effected only on having passed the [illegible] Mechanics, but their registration may be then antedated [illegible] when the Preliminary was passed.

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UNIVERSITY OF CAMBRIDGE.

The student must enter at one of the Colleges, or as a non-collegiate student, and keep terms for three years by residence in the University. He must pass the Previous Examination in Classics and Mathematics, which may, and should if possible, be done immediately on coming into residence in October, or, which is best, obtain exemption through the Oxford and Cambridge Schools Examination Board or the Local Examinations, before commencing residence. He may then devote himself to medical study in the University, attending the hospital and the medical lectures, dissecting, &c. Or he may proceed to take a degree in Arts, either continuing mathematical and classical study and passing the ordinary examinations for B.A., or going out in one of the Honour Triposes. The Natural Sciences Tripos is the most appropriate, as the subjects are the same as those for the First and Second M.B. Examinations.

For the degree of *Bachelor of Medicine* five years of medical study are required, except in the case of medical students who have graduated with honours as Bachelors of Arts, four years only being then required, though it is rarely sufficient. This time may be spent in Cambridge or elsewhere. The first three or four years are usually spent in Cambridge, the student remaining in the University till he has passed (say) the examination for the Natural Sciences Tripos and the first and second examinations for M.B. Cambridge being now a complete School of Medicine, all the requisite lectures and hospital practice may be attended here, and many students remain to attend lectures and hospital practice until they have passed the first part of the third examination for M.B. The supply of subjects for Dissection and Practical Surgery is unusually abundant.

There are three examinations for M.B. The *first* in Chemistry and other branches of Physics, and in Elementary Biology. These may be taken together or separately. The *second* in Human Anatomy and Physiology, and in Pharmaceutical Chemistry. These may be taken together or separately. The *third* may be also taken in two parts—viz., (1) Principles of Surgery (with Operative and Clinical Surgery) and Midwifery and Diseases of Women, and (2) Pathology, Principles and Practice of Medicine, Elements of Hygiene, and Medical Jurisprudence. The examinations are partly in writing, partly oral, and partly practical, in the hospital, in the dissecting-room, and in the laboratories.

Previously to the first examination, Lectures must have been attended on Chemistry (with manipulations). Previously to the second examination, the student must have attended Lectures on Human Anatomy, Pharmacy and Pharmaceutical Chemistry, and Physiology, have dissected for six months, and attended Hospital Practice six months. Previously to the first part of the third examination, he must have attended Lectures on Pathology, the Principles of Surgery and Midwifery, the Surgical Practice of a Hospital with Clinical Lectures for a year, ten cases of Midwifery, and produce a certificate of proficiency in Vaccination. Previously to the second part of the third examination, he must have attended Lectures on the Principles and Practice of Physic, the Physiological Action and Therapeutic Uses of Drugs, and Medical Jurisprudence; also the Medical and Surgical Practice of a Hospital with Clinical Lectures for three years, and have been Clinical Clerk for six months; and have acted as House-Surgeon or Dresser for six months, and have gone through a course of instruction in Practical Surgery.

The degree of *Doctor in Medicine* may be taken three years after that of M.B. An Act has to be kept, with *viva-voce* examination; and an extempore essay has to be written on some subject relating to Physiology, Pathology, the Practice of Medicine, or State Medicine.

As Operative and Clinical Surgery now form parts of the third M.B. examination candidates who have passed that examination are admitted to the degree of Bachelor of Surgery (B.C.), without separate examination.

For the degree of *Master in Surgery* (*M.C.*) the candidate must have passed all the examinations for B.C. two years. He is required to pass an examination in Surgical Anatomy and Surgical Operations, Pathology, and the Principles and Practice of Surgery.

An abstract of the Regulations and Schedules of the range of the examinations in Chemistry, Physics, Biology, and Pharmacy may be obtained by sending a stamped directed envelope to the Assistant-Registrar, Cambridge. Full information is contained in the *Cambridge University Calendar*.

UNIVERSITY OF LONDON.

The *Matriculation Examinations* take place on the second Monday in January and the third Monday in June. Candidates must be above sixteen years of age. The fee for the examination is £2. Provincial examinations are appointed by the Senate from time to time at specified centres. Several scholarships, exhibitions, and prizes are associated with these examinations.

The *Preliminary Scientific (M.B.) Examination* takes place twice in each year, once for Pass and Honours, commencing on the third Monday in July, and once for Pass candidates only on the third Monday in January.[3] No candidate will be admitted to this examination until he shall have passed the Matriculation Examination, nor unless he have given notice of his intention to the registrar at least one calendar month before the commencement of the examination. Fee for this examination, £5.

Candidates are examined for a Pass or for Honours on Inorganic Chemistry and Experimental Physics; and for a Pass, on General Biology. Candidates for Honours, who have entered for the whole examination, may also be examined in Botany and Vegetable Physiology, and Zoology, unless they have previously obtained an exhibition in any one of the subjects of this examination at the Intermediate Examination in Science, in which case they shall not be admissible to the examination for Honours in that subject.

Bachelor of Medicine.—Every candidate for the degree of Bachelor of Medicine will be required—1. To have passed the Matriculation Examination in this University. 2. To have passed the Preliminary Scientific Examination. 3. To have been engaged in his professional studies during four years subsequently to passing the Preliminary Scientific Examination[4] at one or more of the medical institutions or schools recognised by this University, one year at least of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in Medicine.

Intermediate Examination.—The Intermediate Examination in Medicine takes place twice in each year, once for Pass and Honours, commencing on the second Monday in July, and once for Pass candidates only, commencing on the third Monday in January, the January examination being held for the first time in 1888. No candidate shall be admitted to this examination unless he have passed the Preliminary Scientific Examination at least two years previously, and have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having, subsequently to having passed the Matriculation Examination, been a student during two years at one or more of the medical institutions or schools recognised by this University, and of having attended a course of lectures on each of three of the subjects in the following list: Descriptive and Surgical Anatomy, Histology and Physiology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine. 3. Of having, subsequently to having passed the Preliminary Scientific Examination, dissected during two winter sessions. 4. Of having, subsequently to having passed the Preliminary Scientific Examination, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical chemistry, in applying tests for discovering the adulteration of articles of the materia medica and the presence and nature of poisons, and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c. 5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines. These certificates (as is the case also with all the certificates hereinafter mentioned) must be transmitted to the registrar at least fourteen days before the commencement of the examination. Fee for this examination, £5.

Candidates will be examined in the following subjects: Anatomy, Physiology, Histology, Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry.

[3] Candidates for the degree of M.B. are required by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies, and are recommended to devote a preliminary year to preparation for it, according to the following programme:—Winter Session: Experimental Physics, Chemistry (especially Inorganic), Zoology. Summer Session: Practical Chemistry (Inorganic), Botany.

[4] Candidates who passed the Matriculation Examination in January, 1885, or previously, will be allowed to date the commencement of their professional studies, as heretofore, from that examination.

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Every candidate for the July examination, on sending in his name for the examination, must state whether he intends to compete for honours in any subject or subjects; and, if he does so intend, must specify the subject or subjects. No candidate will be allowed to take both the Pass and the Honours Papers in the same subject; but every candidate must take the Pass Papers in those subjects in which he does not offer himself for Honours. A candidate who enters for, but fails to obtain, Honours in any subject, may be recommended by the examiners for a Pass in that subject if they are satisfied that he has shown such a competent knowledge thereof as is required by the regulations for the Pass Examination.

M.B. Examination.[5]—The M.B. Examination takes place once in each year, and commences on the last Monday in October. Each candidate, two academical years after passing the First Examination, must produce certificates to the following effect:—1. Of having passed the Intermediate Examination. 2. Of having, subsequently to having passed the Intermediate Examination, attended a course of lectures on each of two of the subjects enumerated in Section 2 of the regulations for that examination, and for which the candidate had not on that occasion presented certificates. 3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified practitioner in medicine. 4. Of having attended the Surgical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery. 5. Of having attended the Medical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Medicine. 6. Of having, after having attended Surgical and Medical Hospital Practice for at least twelve months subsequently to passing the Intermediate Examination, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, or parochial union, during six months, such attendance not to be counted as part of either the Surgical or the Medical Hospital Practice prescribed in Clauses 4 and 5. 7. Of having acquired proficiency in Vaccination. Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council. The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. The fee for this examination is £5.

Candidates will be examined in the following subjects: General Pathology, General Therapeutics and Hygiene, Surgery, Medicine, Obstetric Medicine, Forensic Medicine. The examinations will include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry.

Any candidate who has passed the M.B. Examination may be examined at the Honours Examination next following the M.B. Examination at which he has passed for Honours in (1) Medicine, (2) Obstetric Medicine, and (3) Forensic Medicine. The examinations commence in the week following that in which the Pass Examination terminated. Except in the case of Forensic Medicine, they are conducted by means of printed papers, but the examiners will not be precluded from putting *viva-voce* questions upon the written answers of the candidates.

Bachelor of Surgery.—The examination for the degree of Bachelor of Surgery takes place once in each year, and commences on the Tuesday following the first Monday in December. Candidates must produce certificates to the following effect:—1. Of having passed the examination for the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. Fee for this examination, £5.

Any candidate who has passed the B.S. Examination may be examined at the Honours Examination next following the B.S. Examination at which he has passed for Honours in Surgery. The examination takes place on Tuesday in the week following the Pass Examination, and is conducted by means of printed papers.

Master in Surgery.—The examination for the degree of Master in Surgery takes place once in each year, and commences on the first Monday in December.

[5] Any candidate for the M.B. Examination who has passed the Intermediate Examination under the former regulations will be required to have passed the examination in Physiology at some previous Intermediate Examination carried on under the present regulations, at which examination he shall not be allowed to compete for Honours.

Candidates must produce certificates to the following effect:—1. Of having taken the degree of Bachelor of Surgery in this University.[6] 2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University, (*a*) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; or (*b*) to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession; or (*c*) of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division. 3 Of moral character, signed by two persons of respectability.

Fee for this degree, £5. The examination is conducted by means of printed papers and *viva-voce* interrogation.

Candidates will be examined in Mental Physiology, and in Surgery.

Doctor of Medicine.—The examination for this degree takes place once in each year, and commences on the first Monday in December.

Candidates must produce certificates to the following effect:—1. Of having passed the examination for the degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University, (*a*) to Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University; or (*b*) to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession; or (*c*) of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Medicine in this University. One year of attendance on Clinical or Practical Medicine or two years of practice will be dispensed with in the case of those candidates who at the M.B. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability.

Fee for this degree, £5.[7] The examination is conducted by means of printed papers and *viva-voce* interrogation.

Candidates will be examined in Mental Physiology and in Medicine.

UNIVERSITY OF DURHAM.

Three Licences and four Degrees in Medicine are conferred—viz., Licences in Medicine, in Surgery, and in Sanitary Science; and the Degrees of Bachelor in Medicine, Bachelor in Surgery, Master in Surgery, and Doctor in Medicine.

For the degree of *Bachelor in Medicine* (*M.B.*) there are three professional examinations: the first being held in September (in 1887, commencing on the 19th) and April (in 1888, commencing on the 16th); the second in September (in 1887, commencing on the 26th) and April (in 1888, commencing on the 23rd; and the third in December (in 1887, commencing on the 5th) and in June (in 1888, commencing on the 11th).

The subjects for the first examination are—Elementary Anatomy and Elementary Physiology, Chemistry, with Physics, and Botany. Candidates must produce the following certificates:—(1) Of registration as a medical student. (2) Of attendance on the following courses of lectures: Anatomy, Physiology, Chemistry, with Physics, and Practical Anatomy (Dissections), each six months; Botany and Practical Chemistry, each three months.

The subjects for the second examination are Anatomy, Physiology, Materia Medica, with Pharmacy. For it the following certificates are necessary: Lectures, &c.—Anatomy, Physiology, Practical Anatomy (Dissections), second courses of six months each; Materia Medica, Practical Phy-

[6] Candidates who have obtained the degree of Bachelor of Medicine previously to 1886 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates the attendance on surgical practice required by Regulation 2 may commence from the date of the M.B. degree.

[7] This fee will continue to be £10 to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of £5 at the Preliminary Scientific Examination.

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siology, and Practical Pharmacy, courses of three months each. The candidate must also produce a certificate of his having passed the first examination for the M.B, or the first examination of the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England, together with the extra examinations in Chemistry and Botany of the University of Durham.

The subjects for the third examination are Medicine, Surgery, Pathology, Therapeutics, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Public Health. For it candidates must produce the following certificates—viz.: 1. Of being not less than twenty-one years of age. 2. Of good moral character. 3. Of having passed one of the following examinations in Arts: (*a*) the Examination for Graduation in Arts at one of the following universities—Oxford, Cambridge, Durham, Dublin, London, Queen's (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), Queen's College (Kingston), Victoria (Manchester), and Royal (Ireland); or (*b*) the Preliminary or Extra-professional Examination for Graduation in Medicine at one of the following Universities—Cambridge, London, Edinburgh, Glasgow, St. Andrews, Aberdeen, Queen's (Ireland), Victoria (Manchester), and Royal (Ireland), provided that the candidate in obtaining the certificate shall have satisfied the examiners in Greek. Candidates holding a certificate which does not include Greek may offer themselves for examination in that subject alone at the examination for the certificate for Proficiency in General Education at Durham, or at the Preliminary Examination in Arts for the degrees in Medicine above mentioned. This regulation will apply to all candidates entering for the degrees in Medicine on or after October 1st, 1888; or (*c*) the Preliminary Examination in Arts qualifying for the Membership of the Royal College of Physicians of London or for the Fellowship of the Royal College of Surgeons of England; or (*d*) the Preliminary Examination in Arts for the degrees in Medicine of the University of Durham (in 1888, commencing on March 20th and Sept. 18th). 4. Of attendance on the following course of lectures—viz.: Medicine and Surgery, each two courses of six months; Public Health, one course; Forensic Medicine, Midwifery, and Diseases of Women and Children, and Pathology, each one course of three months; Clinical Medical and Clinical Surgical Lectures, each two winters and two summers; Medical Hospital Practice and Surgical Hospital Practice and Post-mortem Demonstrations, each three winters and two summers; Medical Clinical Clerking and Surgical Dressing, each six months; Clinical Obstetrics, three months; attendance on not less than twenty-one cases of Midwifery, and instruction in Vaccination.

N.B.—It is required that one of the four years of professional education shall be spent in attendance at the College of Medicine, Newcastle-on-Tyne. Candidates for the First Examination who have passed the First Examination of the Conjoint Board in England, and candidates who hold a qualification from a recognised Licensing Body in the United Kingdom, will be exempt from the First Examination of the University, except in the subjects of Chemistry, with Physics and Botany. Candidates who have passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board.

For the degree of *Bachelor in Surgery* (*B.S.*) every candidate must have passed the examination for the degree of Bachelor in Medicine of the University of Durham, and must have attended one course of lectures on Operative Surgery, and one course on Regional Anatomy. Candidates will be required to perform operations on the dead body, and to give proof of practical knowledge of the use of surgical instruments and appliances.

For the degree of *Master in Surgery* (*M.S.*) candidates must not be less than twenty-four years of age, must have obtained the degree of Bachelor in Surgery of the University of Durham, and must have been engaged for at least two years subsequently to the date of acquirement of the degree of Bachelor in Surgery in attendance on the practice of a recognised hospital, or in the naval or military services, or in medical or surgical practice. The subjects of examination shall be: Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, Surgical Operations, and Clinical Surgery.

For the degree of *Doctor of Medicine* (*M.D.*) candidates must not be less than twenty-four years of age, must have obtained the degree of M.B. at least two years previously, and in the interim have been engaged in medical and surgical practice. Each candidate will be required to write an essay on some medical subject selected by himself and approved by the Professor of Medicine, and to pass an examination thereon.

Candidates for any of the above degrees must give at least twenty-eight days' notice to the registrar of the College.

VICTORIA UNIVERSITY, MANCHESTER.

Colleges of the University: Owens College, Manchester, and University College, Liverpool.

Three degrees in Medicine and Surgery are conferred by the Victoria University—viz., Bachelor of Medicine (M.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.).

All candidates for degrees in Medicine and Surgery are required—(1) To have matriculated in the University; and (2) to pass (either *before* or *after* matriculation) an examination called the Entrance Examination in Arts, or to have passed such other examination as may be recognised by the University for this purpose.[8]

Degree of Bachelor of Medicine.—Before admission to the degree of M.B candidates are required to present certificates that they will have attained the age of twenty-one years on the day of graduation, and that they have pursued the courses of study required by the University Regulations during a period of not less than four years subsequently to the date of their registration by the General Medical Council, two of such years having been passed in a College of the University, and one year at least having been passed in a College of the University subsequently to the date of passing the Preliminary Examination in Science. All candidates for the degree of Bachelor of Medicine are required, after matriculating, to satisfy the examiners in the several subjects of the following examinations: the Preliminary Examination in Science, the Intermediate Examination for the degree of M.B., and the Final Examination for the degree of M.B.

The Preliminary Examination in Science.—The subjects of examination are as follows:—1. Chemistry. 2. Elementary Biology. 3. Physics. Candidates for the Preliminary Examination in Science must have attended during at least one year courses, both of lectures and of laboratory work, in each of the above-named subjects.

The Intermediate M.B. Examination.—The subjects of examination are as follows:—1. Anatomy. 2. Physiology (including Physiological Chemistry and Histology). 3. Materia Medica and Pharmacy. Candidates for the Intermediate M.B. Examination are required to have passed the Preliminary Examination in Science, and to have attended courses of instruction in Anatomy for one winter session, in Physiology for two winter sessions (but one session will be accepted provided that a full course has been attended by the candidate), and in Materia Medica and Pharmacy for one summer session. The certificates must show (1) that the human body has been dissected twice at least; (2) that laboratory instruction has been received in Physiology; (3) that practical instruction has been received in Materia Medica and Pharmacy.

The Final M.B. Examination.—The examination is divided into two parts, called the First Part and the Second Part respectively, which may be passed separately or on the same occasion, but the First Part cannot be taken before the end of the third year, and the Second Part cannot be taken before the end of the fourth year, of medical study in accordance with the University Regulations. The subjects of examination are as follows:—Part I.: 1. Systematic Surgery. 2. Pharmacology and Therapeutics. 3. General Pathology. Part II.: 1. Systematic and Clinical Medicine, including Mental Diseases. 2. Practical and Clinical Surgery. 3. Obstetrics and Diseases of Women and Children. 4. Morbid Anatomy. 5. Forensic Medicine. 6. Hygiene.

Candidates, before presenting themselves for the Final Examination, are required to have passed the Intermediate Examination, and to furnish certificates—1. Of having

[8] The Examinations at present recognised are:—1. The Preliminary Examination of the Victoria University, provided Latin and Mechanics have been taken up. 2. The Matriculation Examination of the University of London. 3. The Previous Examination of the University of Cambridge. 4. Responsions and Moderations of the University of Oxford. 5. The Leaving Certificate Examination of the Oxford and Cambridge Boards, provided that it include Latin, English, Mathematics, and Elementary Mechanics. 6. The Final Examination for Graduation in Arts of any University in Great Britain and Ireland.

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attended the Medical and Surgical Practice of a hospital or hospitals, approved by the University, during at least three years, of which years two at least must be subsequently to the date of passing the Intermediate Examination, except when exemption has been granted by the General Board of Studies, after report from the Departmental Board of Medical Studies. 2. Of having attended during at least twelve months demonstrations in the post-mortem theatre of a hospital. 3. Of having attended, under proper supervision, at least twenty cases of labour. 4. Of having during at least three months received in either a general or a special hospital, approved by the University, such Clinical Instruction in the Diseases peculiar to Women as shall be approved by the University. 5. Of having acquired proficiency in Vaccination. 6. Of having attended courses of instruction, approved by the University, in a College of the University or in a College or Medical School recognised for this purpose by statute of the University, in the following subjects:—(*a*) Systematic Medicine, (*b*) Clinical Medicine, (*c*) Systematic Surgery, (*d*) Practical Surgery, (*e*) Clinical Surgery, (*f*) Obstetrics and Diseases of Women and Children, (*g*) Pharmacology and Therapeutics, (*h*) General Pathology and Morbid Anatomy, (*i*) Forensic Medicine, (*j*) Hygiene.

Degree of Doctor of Medicine.—Candidates are not eligible for the degree of Doctor of Medicine unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. Candidates for the degree of Doctor of Medicine are required to present a printed dissertation embodying the results of personal observations or original research, either in some department of medicine or of some science directly relative to medicine. No candidate will be admitted to the degree unless his dissertation, after report from the Departmental Board of Medical Studies, shall have been recommended by the General Board of Studies to the Council for acceptance in that behalf. Candidates may be examined on any subject connected with their dissertations.

Degree of Master of Surgery.—Candidates are not eligible for the degree of Master of Surgery unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree.

The subjects of examination are as follows: (1) Surgical Anatomy; (2) Surgical Pathology; (3) Practical Surgery, including the performance of operations on the dead body; (4) Clinical Surgery; (5) Ophthalmology.

UNIVERSITY OF EDINBURGH.

Three medical degrees are conferred by the University of Edinburgh—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the degree of Bachelor of Medicine.

No one is admitted to the degrees of Bachelor of Medicine and Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course and two courses of not less than fifty lectures each; with the exception of the clinical courses, in which lectures are to be given at least twice a week during the prescribed periods.[9]

Every candidate for the degree of M.B. and C.M. must give sufficient evidence by certificates—(*a*) That he has studied each of the following departments of medical science, namely, Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children, and General Pathology, each during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures;[10] Practical Chemistry, three months; Practical Midwifery, three months at a midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery,[11] courses of the same duration as those of not less than one hundred lectures, or two courses of three months' lectures, being given at least twice a week; Medical Jurisprudence, Botany, Natural History (including Zoology), during courses including not less than fifty lectures. (*b*) That he has attended, for at least two years, the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons. (*c*) That he has attended, during a course of not less than fifty hours' instruction, the class of Practical Materia Medica in the University of Edinburgh, or a similar class conducted in a university or recognised school of medicine, or a similar class conducted at the laboratory of a hospital or dispensary, or elsewhere, by a teacher recognised by the University Court under Section VI. Sub-section 4; or that he has been engaged by apprenticeship for not less than two years with a registered medical practitioner, or a member of the Pharmaceutical Society of Great Britain, or a member of the Pharmaceutical Society of Ireland, or a pharmaceutical chemist, or chemist and druggist, registered under the provisions of the "Act for regulating the qualifications of pharmaceutical chemists, 1852," "The Pharmacy Act, 1868," or "The Pharmacy Act (Ireland), 1875," in the *bonâ fide* compounding and dispensing of drugs, and the preparation of their officinal and other preparations under his superintendence. (*d*) That he has attended, for at least six months, by apprenticeship or otherwise, the out-door practice of a hospital, or the practice of a dispensary physician, a surgeon, or a member of the London or Dublin Society of Apothecaries. (*e*) That he has attended, during courses of not less than fifty hours' instruction, classes of Practical Physiology and Practical Pathology in the University of Edinburgh, or in a university or school of medicine recognised by Sub-sections 2 and 4 of Section VI. of Ordinance No. 8, Edinburgh No. 3, or upon classes thereof, conducted by a teacher recognised by the University Court under the said Sub-section 4.

Students of Medicine in the London schools, and in the school of the College of Surgeons in Dublin, can obtain there two *anni medici* out of the four required for the Edinburgh degrees in Medicine. Courses of lectures in these schools, and the courses of the medical teachers and of the science teachers in King's College and in University College, London, in the subjects of graduation, are regarded as equivalent to lectures on the corresponding subjects in this University, except Materia Medica and Midwifery, which when only three months' courses are not received as equivalent. One *annus medicus* may be constituted by attendance on Practical Anatomy and Hospital Practice during the winter session. Another *annus medicus* by attending either (*a*) full winter courses on any two of the following subjects—Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (*b*) on one such course and two three months' courses on any of the following subjects—Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the student selects the arrangement prescribed in (*a*), attendance on a third course, although unnecessary to constitute an *annus*, will also be accepted. The other subjects and the additional courses, not given in London or Dublin, necessary for the degrees of the University, require to be attended at this University. In provincial schools, where there are no lecturers recognised by the University Court, a candidate can only have one *annus medicus*, and this is constituted by attendance at a qualified hospital along with a course of Practical Anatomy. But in a provincial school where there are two or more lecturers recognised by this University, a second *annus medicus* may be made by attendance on at least two six months', or one six months' and two three months', recognised courses.

Every candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine a declaration in his own handwriting that he has completed his twenty-first year, or that he will have done so on or before the day of graduation, and that he will not be on the day of graduation under articles of apprenticeship to any surgeon or other master. This declaration, along with a statement of studies, accompanied with proper certificates, is appended to the schedule for the Final Examination, and must be signed before the schedule is given in.

[9] [redacted] of lectures will be allowed to qualify unless the lecturer certifies that it has embraced at least one hundred lectures, or fifty lectures in conformity with the requirements of this section. Three months' courses on Materia Medica, Pathology, and Midwifery do not qualify.

[10] The certificate of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the [redacted] and the degree of care with which the dissections have been conducted. Candidates are recommended not to appear for an examination [redacted] with a view to a degree until they have dissected the [redacted] body at least once.

[11] The Medical Faculty recommend that medical students should not attend Clinical Surgery during their first six months' attendance on Clinical Medicine.

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Each candidate is examined, both in writing and orally, on Chemistry, Botany, and Natural History; on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; clinically, on Medicine and on Surgery in a hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects placed before the candidates. Students who have passed their examination on the first division of these subjects may be admitted to examination on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *annus medicus*. Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of their fourth year.

The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degrees of Bachelor of Medicine and Master in Surgery, and who is of the age of twenty-four years, and produces a certificate of having been engaged, subsequently to his having received the degrees of M.B. and C.M., for at least two years in attendance on a hospital, or in the military or naval medical service, or in medical and surgical practice; provided always that the degree of M.D. shall not be conferred on any person unless he be a graduate in Arts of one of the universities of England, Scotland, or Ireland, or of such other universities as are above specified, or unless he shall, before or at the time of his obtaining the degrees of M.B. and C.M., or thereafter, have passed a satisfactory examination on *three* of the subjects mentioned in Section II. of the statutes relative to preliminary examination. Two of these must be Greek and Logic or Moral Philosophy, and the third is to be one of the following subjects, at the option of the candidate—namely, French, German, Higher Mathematics, and Natural Philosophy; and provided also that the candidate for the degree of M.D. shall submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, or any branch of knowledge comprised in the professional examinations for the degrees of M.B. and C.M., which he may have made a subject of study after having received that degree.

The fees for M.B. and C.M. are £22. Total fees and stamp for graduating as M.D. only, by regulations for students commencing before February, 1861, £25. The fees for examination must be paid at the secretary's office ten days before the dates thereof, and the fees for the degree of M.D. and the stamp duty for the latter must be paid on or before the 15th day of July in the year of graduation. In the event of the candidate not passing any one of the professional examinations, the fee is not returned; but he may appear at one subsequent examination without paying an extra fee, and at any future examination on paying one-half the fee.

UNIVERSITY OF GLASGOW.

Three degrees in Medicine are granted—viz., Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. The curricula of study and the examinations for the several degrees conferred are nearly the same as in the University of Edinburgh. The annual term for conferring medical and surgical degrees is the 1st of August. The Preliminary Examinations of medical students in branches of general education begin on the 5th of October, 1887, and on the 28th of March, 1888.

The fees for the degrees are £21 for M.B. and C.M., which are obtained together, and £15 for M.D.

The regulations under which the above degrees are granted and the notices of the subjects of examination may be obtained by application to the assistant-clerk, Matriculation Office, the University.

The first, second, and third Professional Examinations are held in April and in October each year, and the fourth or final examination is held annually in June and July.

UNIVERSITY OF ABERDEEN.

The curricula for the several degrees conferred are nearly the same as in the University of Edinburgh.

Professional Examinations will be held twice in each year—namely, in April and July, directly after the close of the winter and summer sessions.

The fees for graduation are the same as in the University of Edinburgh. Matriculation fee, including all dues, for the winter and summer sessions, £1; summer session alone, 10*s*.

Candidates who commenced their medical studies before November, 1861, are entitled to appear for examination for the degree of M.D. after four years' study, one of which must have been in the University of Aberdeen.

Besides the Royal Infirmary, students have the opportunity of attending the following institutions: Sick Children's Hospital; General Dispensary, and Lying-in and Vaccine Institutions, daily; Royal Lunatic Asylum; Eye Institution, in which is given clinical instruction on the Diseases of the Eye, and on the application of the Ophthalmoscope for their diagnosis.

Regulations for the Diploma in Public Health (D.P.H.).—Candidates for the diploma must have graduated in Medicine in the University before they receive the diploma; and they must give evidence of having attended a course of instruction in Analytical Chemistry or in Practical Hygiene. The diploma is conferred after an examination in Public Health, held in March and July of each year. Candidates desiring to appear for examination at either of these periods must send their names, with the necessary fee, to the Secretary of the Medical Faculty before the first day of the month in which the examination takes place. The fee for the examination is 3 guineas. In the event of a candidate failing to pass the examination, a fee of 1 guinea will be charged for each subsequent examination for which he may enter. The examination is conducted by the examiners for the medical degrees. The examination is written, oral, and practical. The subjects and scope of the examination are as follows:—1. Physics and Meteorology: The general principles of Physics in so far as they relate to Heat and Ventilation, Water Supply and Drainage. The elements of Meteorology and Climatology. Practical exercises in the use of Meteorological Instruments. 2. Chemistry and Microscopy: The Composition and Analysis of Air, Water, and Sewage; the Composition and Adulterations of the more common Foods and Beverages; Diseased and Putrid Food. Practical exercises in the Chemical and Microscopical examination of Air, Water, and Foods. 3. General Hygiene: Duties of Medical Officers of Health; Nature and Construction of Dietaries; Construction and Sanitary Arrangements of Houses, Hospitals, Workshops, Factories, Towns, &c., including interpretation of plans; Ventilation, Water Supply, Sewerage, Disposal of Dead; Etiology, Prophylaxis (including Vaccination), and Control of Infectious Diseases; Unhealthy Occupations. Practical exercises in examining and reporting on the Construction and Sanitary Arrangements of Houses, &c. 4. Sanitary Law and Vital Statistics: Laws relating to the Public Health of Scotland, England, or Ireland, at the option of the candidate. Laws relating to Vaccination, and Registration of Births, Marriages, and Deaths. Methods and Data of Vital Statistics, mainly in so far as they relate to the birth, marriage, and death rate of communities.

Application for further information should be addressed to the Dean of the Medical Faculty.

A diploma in Public Health is granted by the University to its Graduates in Medicine, after a special examination. The diploma can be entered on the Register of the General Medical Council. The Regulations can be obtained on application to the Dean.

UNIVERSITY OF ST. ANDREWS.

Two degrees in Medicine are granted—namely, Bachelor of Medicine and Master in Surgery (M.B., C.M.), and Doctor of Medicine (M.D.). The curricula for these degrees, and the regulations under which they are conferred, differ from those of the University of Edinburgh only in the particulars noticed below.

The degree of *Doctor of Medicine* may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always that degrees will not be conferred under this section on a greater number than ten in any one year. The examinations are held yearly towards the end of April. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination:—1. A cer-

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tificate of age. being a baptismal certificate or an affidavit of age. 2. Holograph certificates from at least three medical men of acknowledged reputation in the medical profession or in the medical schools, recommending the candidate to the Senatus for the degree, and testifying to his professional skill and position. As only ten can graduate yearly, candidates will be selected whose service and certificates seem to the Medical Faculty to present the highest professional claims; and where these seem equal, preference will be given to age and priority of application. 3. A portion of the graduation fee (viz., £10 10*s.*) shall be forfeited should the candidate fail to appear or to graduate at the time appointed. A satisfactory examination, written and *viva voce*, must be passed in the following departments—viz, Materia Medica and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery, and Diseases of Women and Children.

No one will be received as a candidate for the degree of *Bachelor of Medicine and Master in Surgery* unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities or colleges—viz.. the Universities of St. Andrews, Glasgow, Aberdeen, Edinburgh, Oxford, and Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

Subject always to the condition here specified, the studies for candidates for the degree of Bachelor of Medicine and Master in Surgery will be under the following regulations. The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specifird, or in the hospital schools of London, or in the school of the College of Surgeons of Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court. Attendance during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and during the same period on a course of Practical Anatomy, may be reckoned as one of such remaining years.

Every candidate for examination for the degree of M.B. and C.M. is required to lodge a declaration of age, a statement of his course of study, his inaugural dissertation, and all his certificates with the Dean of the Medical Faculty, on or before the 25th of March in each year.

UNIVERSITY OF DUBLIN (TRINITY COLLEGE).

Matriculation.—All students in the School of Physic intending to practise Physic must be matriculated, for which a fee of 5*s.* is payable. No student can be admitted for the winter course after Nov. 25th.

Previous Medical Examination.—Candidates for degrees and licences in Medicine and Surgery are required to pass an examination in Physics, Chemistry, Botany, Comparative Anatomy, Descriptive Anatomy, and Institutes of Medicine (Practical Histology and Physiology) previously to their degree examination.

Bachelor in Medicine.—A candidate for this degree must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same Commencements as that at which he receives his degree of B.A., or at any subsequent Commencements. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on a single course of each of the following lectures—Anatomy, Practical Anatomy, Theory of Surgery, Chemistry, Materia Medica and Pharmacy, Physiology, Practice of Medicine, Midwifery, Botany, Medical Jurisprudence, Heat, Electricity, Magnetism, Comparative Anatomy; three courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College; six months' instruction in Practical Midwifery, including Clinical Lectures; a certificate of personal attendance on Fever cases, with names and dates of cases. Six months' dissections, three months' laboratory instruction in Chemistry, three months' Practical Histology, and one month's instruction in Vaccination are required. Any of the above-named courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows. Fee for the *Liceat ad Examinandum*, £5; for the M.B. degree, £11.

Doctor in Medicine.—A Doctor in Medicine must be M.B. of not less than three years' standing, or have been qualified to take the degree of M.B. for three years, and must read a thesis or undergo an examination before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

Bachelor in Surgery.—A Bachelor in Surgery must be a Bachelor in Arts and in Medicine, and have spent four years in the study of Surgery and Anatomy. He must also pass a public examination in the Hall before the Professors of the School of Physic, having previously completed the prescribed curriculum of study, which includes the following additions to the courses named above for the M.B.: Operative Surgery, Two Courses of Dissections, Ophthalmic Surgery.[12] Candidates are required to perform surgical operations on the dead subject. Fee for the *Liceat ad Examinandum*, £5; for the degree of Bachelor in Surgery, £5.

Master in Surgery.[13]—A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the degree of Bachelor in Surgery for three years; and must read a thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor, according to regulations to be approved by the Provost and Senior Fellows. Fee for the degree of Master in Surgery, £11.

University Licences.—Candidates for the Licences in Medicine or Surgery must be matriculated in Medicine, and must have completed two years in Arts and four years in medical studies.

Licentiate in Medicine.—The medical course and examination necessary for the licence in Medicine are the same as for the degree of M.B. Fee for the *Liceat ad Examinandum*, £5; for the licence in Medicine, £5.

Licentiate in Surgery.—The surgical course and examination necessary for the licence in Surgery are the same as for the degree of Bachelor in Surgery. Fee for the *Liceat ad Examinandum*, £5; for the licence in Surgery, £5.

The total cost of the education and first degrees in Medicine and Surgery is as follows, in addition to the fees for education in Arts and B.A. degree (£83 4*s.*): Medical and Surgical Lectures, £60 12*s.* 6*d.*; Hospitals, £44 2*s.*: Medical and Surgical Examinations and Degrees, £26.

ROYAL UNIVERSITY OF IRELAND.

The following degrees are conferred by the University in this Faculty: Bachelor of Medicine. Doctor of Medicine, Master of Surgery, Master of Obstetrics; in Sanitary Science, a special diploma. All the medical examinations are held twice yearly—viz., towards the end of April and in October.

The course for degrees in Medicine &c. is one of at least four years' duration. Students who have commenced their medical studies since January 1st, 1884, must also produce a certificate of having been registered as students in Medicine by the Medical Council for a period of at least forty-five months. No one can be admitted to any degree in Medicine who is not fully twenty-one years of age. All candidates for these degrees are, in addition to attending the lectures and complying with the other conditions to be from time to time prescribed, required to pass the following examinations: the Matriculation Examination, the First University Examination, the First Examination in Medicine, the Second Examination in Medicine, and the Degree Examination.

The First Examination in Medicine.—Students are admitted to this examination after the lapse of one academical year from the time of their matriculation. The subjects of this examination are—Zoology, Botany, and a modern language (either French or German). Candidates who have passed in a modern language at the First University Examination in Arts are exempt from again presenting this subject at the First Examination in Medicine, except as a qualification for admission to compete for Honours, the answering of the candidates in the three subjects above mentioned being taken into account in awarding Honours.

The Second Examination in Medicine.—Students are admitted to this examination after the lapse of one academical year from the time of passing the First Examination in Medicine, provided they have completed the First Period of the Course of Medical Studies. The subjects of this exami-

[12] Students in the School of Physic who matriculated before June 22nd, 1872, may obtain the degree of Master in Surgery according to the regulations in force previously to the creation of the degree of Bachelor in Surgery.

[13] Masters in Surgery must be of the standing of Master of Arts.

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nation are—Anatomy, Physiology, Materia Medica (Pharmacology), and Chemistry.

The Examination for the Degree of M.B.—Students are admitted to this examination after the lapse of one academical year from the time of passing the Second Examination in Medicine, provided they have completed the Second Period of the Course of Medical Studies. The subjects of this examination are—Anatomy, including Practical Anatomy; Physiology, including Practical Physiology and Histology; Surgery, Midwifery, and Diseases of Women and Children; Pathology; Vaccination; Theory and Practice of Medicine, Medical Jurisprudence; Mental Diseases; Hygiene.

M.D. Degree.—Candidates may be admitted to this degree after the lapse of two academical years from the time of obtaining the degree of M.B.; provided, however, that all persons who were students in Medicine in the Queen's University at the date of its dissolution shall be entitled, if they so desire, to obtain the degree of M.D., instead of the degree of M.B., upon passing the examination herein prescribed for the M.B. degree. Every candidate will be examined at the bedside, and required to diagnose at least six cases, medical and surgical, and prescribe treatment, and to write detailed reports on at least two cases to be selected by the examiners, and to discuss all the questions arising thereon. Every candidate must submit to the medical examiners, for their approval, a thesis certified by him (or her) to have been composed by himself (or herself). No thesis will be approved which does not contain some original or personal observations in Practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum, or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

The *M.Ch. Degree* will be conferred only on graduates in Medicine of the University. The examination will comprise the Theory and Practice of Surgery, including Operative and Clinical Surgery.

The *M.A.O. Degree* will also be conferred only on graduates in Medicine of the University. The examination will comprise the Theory and Practice of Midwifery, and the use of Obstetrical Instruments and Appliances. Candidates will be required to undergo a special written examination in Midwifery, Gynæcology, and Diseases of Children, in addition to the other tests.

Diploma in Sanitary Science.—This diploma will be conferred only on graduates in Medicine of the University. Candidates must give notice in writing to the secretaries of their intention to present themselves, and must pay the prescribed fee of £2 at least one month previously to the examination. The examination will include the following subjects:—Physics, Climatology, Chemistry, Geology, Sanitary Engineering, Hygiene, Sanitary Law, and Vital Statistics. Proficiency in practical work and an adequate acquaintance with the instruments and methods of research which may be employed for hygienic investigations are indispensable conditions of passing the examination.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The licence of this College is a qualification to practise Medicine, Surgery, and Midwifery, and is recognised by the Local Government Board as a qualification in Surgery as well as in Medicine.

Licentiates.—Every candidate for the College licence (except when otherwise provided by the bye-laws) is required to produce satisfactory evidence to the following effect:—Of having attained the age of twenty-one years. Of moral character. Of having passed before the commencement of professional study an examination in the subjects of general education recognised by the General Medical Council. Of having been registered as a medical student in a manner prescribed by the General Medical Council. Of having been engaged in professional studies during at least forty-five months, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—1. Attending the practice of a hospital or other institution recognised by the College for that purpose; 2. Receiving instruction as the pupil of a legally qualified practitioner having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals.[14] Of having discharged the duties of a medical clinical clerk during six months, and of a surgical dresser during other six months; and of having been engaged during six months in the clinical study of Diseases peculiar to Women. Of having received instruction in Chemistry, Practical Chemistry, Materia Medica, and Practical Pharmacy. Of having attended a course of lectures on the following subjects:—Anatomy (with dissections), during twelve months; Physiology; a practical course of General Anatomy during a winter or a summer session, consisting of not less than thirty meetings of the class; Pathological Anatomy; Principles and Practice of Medicine; Principles and Practice of Surgery; Midwifery and the Diseases peculiar to Women; Forensic Medicine. Of having attended Clinical Lectures on Medicine during nine months, and also Clinical Lectures on Surgery during nine months, and of having been engaged during a period of three months in the Clinical Study of Diseases peculiar to Women. Of having passed the professional examinations, of which there are three, each partly written, partly oral, and partly practical. The subjects of the first examination are: Chemistry, including Chemical Physics—viz., Heat, Light, and Electricity; Materia Medica and Pharmacy; and Osteology. The subjects of the second examination are Anatomy and Physiology. The subjects of the final examination are: Medical Anatomy and Pathology, including Morbid Anatomy; the Principles and Practice of Medicine; Surgical Anatomy and Pathology, including Morbid Anatomy; the Principles and Practice of Surgery; Midwifery and Diseases peculiar to Women; Forensic Medicine; Public Health and Therapeutics.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by a university in the United Kingdom, in India, or in a British colony, or by the College of Surgeons in England, Scotland, or Ireland, or the Faculty of Physicians and Surgeons of Glasgow, shall be exempt from re-examination on those subjects. Any candidate who shall produce satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a degree in Medicine at a university in the United Kingdom, in India, or in a British colony, will be exempted from re-examination on those subjects. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATIONS APPLICABLE TO CANDIDATES FOR THE DIPLOMA OF MEMBER OF THE COLLEGE.

Professional Examination.—The following are recognised modes of commencing professional education:—(1) Attendance on the practice of a hospital, or other public institution recognised by this College for that purpose. (2) Instruction as the pupil of a legally qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. (3) Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

Candidates, prior to their admission to the First or Primary Examination on Anatomy and Physiology, will be required to produce the following certificates—viz.: Of having, prior to the commencement of professional study, been registered by the General Medical Council. Of having attended lectures

[14] A three months' course of clinical instruction in the wards of a recognised lunatic hospital or asylum may be substituted for the same period of attendance in the medical wards of a general hospital.

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on Anatomy during two winter sessions. Of having performed dissections during not less than two winter sessions. Of having attended lectures on General Anatomy and Physiology[15] during one winter session. Of having attended a practical course of General Anatomy and Physiology[16] during another winter or a summer session, consisting of not less than thirty meetings of the class.

Candidates who commenced their professional studies on or after October 1st, 1882, and shall have pursued those studies in recognised medical schools in England, will be required, before presenting themselves for the Primary or Anatomical and Physiological Examination for the diploma of Member of the College, to produce certificates of having passed an examination in Elementary Anatomy and Physiology, such examination to be conducted by their teachers at the several medical schools. (1) The periods at which the examinations shall be held will be determined by the teachers at the several medical schools, provided that an interval of not less than six months shall elapse between the date at which the candidates shall have passed the examination and the date of their presenting themselves for the Primary Examination at the College. (2) It shall be left to the teachers at the several medical schools to determine the nature and extent of the examination in Elementary Anatomy and Physiology.

Candidates, prior to their admission to the Second or Pass Examination on Surgical Anatomy and the Principles and Practice of Surgery, Medicine, and Midwifery, will be required to produce the following certificates—viz.: Of being twenty-one years of age. Of having been engaged, subsequently to the date of registration by the General Medical Council, during four years, or during a period extending over not less than four winter and four summer sessions, in the acquirement of professional knowledge. Of having attended lectures on Surgery during one winter session. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by the preceding Clause 3.[17] Of having attended one course of lectures on each of the following subjects—viz.: Chemistry,[18] Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction), and a certificate of having personally conducted not less than ten labours, and Pathological Anatomy during not less than three months. Of having studied Practical Pharmacy during three months. Of having attended a three months' course of Practical Chemistry (with manipulations), in its application to medical study.[19] Of instruction and proficiency in the practice of Vaccination.[20] Of having attended, at a recognised hospital or hospitals, the Practice of Surgery, during three winter[21] and two summer[22] sessions. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months.[23] Of having, subsequently to the first winter session of attendance on Surgical Hospital Practice, attended at a recognised hospital or hospitals, Clinical Lectures on Surgery, during two winter and two summer sessions. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery. Of having attended during the whole period of attendance on Surgical Hospital Practice (see Clause 9) demonstrations in the post-mortem rooms of a recognised hospital. Of having attended, at a recognised hospital or hospitals, the Practice of Medicine, and Clinical Lectures on Medicine, during one winter and one summer session.

Special Notice.—Candidates commencing their professional education on or after the 1st of October, 1882, will not be admitted to the Second or Pass Examination until after the expiration of two years from the date of their passing the Primary or Anatomical and Physiological Examination for such diploma, except in the following cases:—When a candidate, before presenting himself for the Primary Examination, shall possess a recognised degree or diploma in Medicine or Surgery, or shall have completed the curriculum of professional education for the diploma. In the case of a candidate who, being desirous of obtaining the Fellowship, shall fail to present himself for the Primary Examination for the Membership at the end of his second year of professional study, but who shall pass at the end of his third winter session the Primary Examination for the Fellowship, it being required in such case that not less than one year of attendance on the Surgical Practice of a recognised hospital shall intervene between the date of his passing the Primary Examination for the Fellowship and the date of his presenting himself for the Second or Pass Examination for the diploma of Member. In the case of a candidate who, having commenced his professional studies by attendance on the practice of a recognised provincial or colonial hospital, and having completed a year of such attendance, shall fail to pass the Primary Examination at the end of his second winter session of attendance at a recognised medical school, provided that in his case not less than one year shall elapse between the date of his passing the Primary Examination and the date of his presenting himself for the Second or Pass Examination for the diploma of Member. When a candidate, owing to illness, duly certified by one or more of the teachers of his medical school, shall be prevented from presenting himself for the Primary Examination on the completion of his second year of professional study. And in the case of a candidate who, from some unforeseen circumstances, shall fail to present himself for the Primary Examination on the completion of his second year of professional study, it being left to the Court of Examiners to determine whether in such case the candidate shall or shall not be required to comply with the regulation.

Certificates of attendance upon the practice of a recognised provincial or colonial hospital unconnected with, or not in convenient proximity to, a recognised medical school will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College. Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied subsequently to the date of registration by the General Medical Council, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and in the case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

[15] By the Practical Course referred to in Clause 5, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, &c.; but it is not hereby intended that the learners shall perform vivisections.

[16] The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

[17] The course of Practical Surgery referred to in Clause 4 is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to surgery, on the living person or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents on the living person or on the dead body; the performance, where practicable, of the operations of surgery on the dead body; the application of surgical apparatus; the examination of diseased structures as illustrated in the contents of a museum of morbid anatomy and otherwise.

[18] The course of lectures on Chemistry included in Clause 5 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

[19] The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

[20] The certificate of instruction in vaccination must be such as will qualify the holder to contract as a Public Vaccinator under the Regulations for the time in force of the Local Government Board.

[21] The winter session comprises a period of six months, and, in Edinburgh, commences on the 1st of October and terminates on the 31st of March.

[22] The summer session comprises a period of three months, and, in Edinburgh, commences on the 1st of May and terminates on the 31st of July.

[23] It is intended that the candidate should receive the instruction required by Clause 10 at an early period of his attendance at the hospitals.

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Professional Examination.—This examination is divided into two parts. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. The Second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery, Medicine, and Midwifery,[24] is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients.

The Primary Examinations are held in the months of January, April, July, and October, and the Pass Examinations in the months of January, April, July, and October. Candidates will not be admitted to the Primary Examination until after the termination of the second winter session of their attendance at a recognised school or schools; nor to the Pass or Surgical Examination until after the termination of the fourth year of their professional education. The fee of £5 5*s.*, paid prior to the first admission to the Primary Examination, is retained whether the candidate pass or fail to pass the examination, but is allowed as part of the whole fee of £22[25] payable for the diploma. A candidate, after failure at any Primary Examination, is required, on admission to any subsequent Primary Examination, to pay a further fee of £3 3*s.*, which is retained, whether he pass or fail to pass the examination, and which further fee is not allowed as part of the whole fee of £22 for the diploma.

The fee of £16 15*s.* is payable prior to each admission to the Pass Examination; but on each occasion of failure the balance of £11 10*s.* is returned to the candidate. A candidate, having entered his name for either the Primary or Pass Examination, who shall fail to attend, will not be allowed to present himself for examination within the period of three months from the date at which he shall have failed so to attend. A candidate referred on the Pass Examination is required, unless the Court of Examiners shall otherwise determine, to produce, prior to his admission to re-examination, a certificate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on Clinical Surgery, subsequently to the date of his reference.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

Regulations relating to the several Examinations applicable to Candidates who commenced their Professional Education on or after the 1st of October, 1884.

Any candidate who desires to obtain both the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to comply with the following regulations, and to pass the examinations hereinafter set forth. Every such candidate who shall commence professional study on or after Oct. 1st, 1884, will be required, at the times prescribed for the respective examinations, to produce satisfactory evidence—1. Of having been registered as a Medical student by the General Medical Council. 2. Of having been engaged in professional studies at least forty-five months, during which not less than three winter sessions and two summer sessions shall have been passed at one or more of the medical schools recognised by the two Colleges. 3. Of having received instruction in the following subjects: (*a*) Chemistry, including Chemical Physics, meaning thereby Heat, Light, and Electricity; (*b*) Practical Chemistry; (*c*) Materia Medica; (*d*) Pharmacy. 4. Of having performed Dissections at a recognised medical school during not less than twelve months. 5. Of having attended at a recognised medical school—(*a*) a course of lectures on Anatomy during not less than six months, or one winter session; (*b*) a course of lectures on General Anatomy and Physiology during not less than six months, or one winter session; (*c*) a separate practical course of General Anatomy and Physiology during not less then three months. 6. Of having attended at a recognised medical school—(*a*) a course of lectures on Medicine during not less than six months, or one winter session; (*b*) a course of lectures on Surgery during not less than six months, or one winter session; (*c*) a course of lectures on Midwifery and Diseases peculiar to Women during not less than three months; (*d*) systematic practical instruction in Medicine, Surgery, and Midwifery; (*e*) a course of lectures on Pathological Anatomy during not less than three months; (*f*) demonstrations in the post-mortem room during the whole period of attendance on clinical lectures; (*g*) a course of lectures on Forensic Medicine during not less than three months. 7 Of having attended, at a recognised hospital or hospitals, the practice of Medicine and Surgery during three winter and two summer sessions. 8. Of having attended at a recognised hospital or hospitals during nine months Clinical Lectures on Medicine, and during nine months Clinical Lectures on Surgery, and of having been engaged during a period of three months in the Clinical Study of Diseases peculiar to Women. 9. Of having discharged, after he has passed the Second Examination, the duties of a Medical Clinical Clerk during six months, and of a Surgical Dresser during other six months. 10. Of having received instruction in the practice of Vaccination.

Professional Examinations.—There are three Professional Examinations, called herein the First Examination, the Second Examination, and the Third or Final Examination, each being partly written, partly oral, and partly practical. These examinations will be held in the months of January, April, July, and October, unless otherwise appointed. Every candidate intending to present himself for examination is required to give notice in writing to the registrar of the Royal College of Physicians, or to the secretary of the Royal College of Surgeons, fourteen clear days before the day on which the examination commences, transmitting at the same time the required certificates.

The subjects of the First Examination are—Chemistry, Chemical Physics, Materia Medica, Pharmacy, Elementary Anatomy, and Elementary Physiology. A candidate may take this examination in three parts at different times, or he may present himself for the whole at one time. A candidate will be admitted to the examination on Chemistry and Chemical Physics, Materia Medica, and Pharmacy, on producing evidence of having been registered as a medical student by the General Medical Council, and of having received instruction in Chemistry, Materia Medica, and Pharmacy; but he will not be admitted to the examination on Elementary Anatomy and Elementary Physiology earlier than the end of his first winter session at a medical school. A candidate rejected in one part or more of the First Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and he will be re-examined in the subject or subjects in which he has been rejected.

The fees for admission to the First Examination are as follows: for the whole examination, £10 10*s.*; for re-examination after rejection in either of the parts, £3 3*s.*

The subjects of the Second Examination are Anatomy and Physiology. A candidate may present himself for examination in either of these subjects or parts separately, or in both at one time. A candidate will be admitted to the Second Examination after the lapse of not less than six months from the date of his passing the First Examination, on producing evidence of having completed, subsequently to registration as a medical student, eighteen months of professional study at a recognised medical school or schools, and of having complied with the regulations prescribed in Section I., Clauses 4 and 5. A candidate rejected in either part or in both parts of the Second Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and will be re-examined in the subject or subjects in which he has been rejected.

The fees for admission to the Second Examination are as follows: for the whole examination, £10 10*s.*; for re-examination after rejection in either of the two parts, £3 3*s.*

The subjects of the Final Examination are: Medicine, including Therapeutics, Medical Anatomy, and Pathology; Surgery, including Surgical Anatomy and Pathology; Mid-

[24] Candidates can claim exemption from examination in Medicine and Midwifery under the following conditions—viz.: The production by the candidate of a degree, diploma, or licence in Medicine and Midwifery entitling him to register under the Medical Act of 1858, or a degree, diploma, or licence in Medicine and Midwifery of a colonial or foreign university approved by the Council of the College. A declaration by the candidate, prior to his admission to the Pass Examination, that it is his intention to obtain either of the qualifications in Medicine and Midwifery mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said qualification, or proof of having passed the several examinations entitling him to receive the same.

[25] This sum of £22 is exclusive of the fee of £2 paid for the Preliminary Examination.

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wifery and Diseases peculiar to Women. A candidate may present himself for examination in these three subjects or parts separately or at one time. A candidate will be admitted to the Third or Final Examination on producing evidence:—(1) of being twenty-one years of age; (2) of having passed the second examination; and (3) of having studied Medicine, Surgery, and Midwifery, in accordance with the regulations prescribed in Section I., Clauses 2 and 6 to 10. The Colleges do not admit to either part of the Third or Final Examination any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months, nor till the expiration of two years after his having passed the Second Examination. A candidate rejected in the Third or Final Examination, or in one or more of the three parts into which he may have divided it, will not be admitted to re-examination until after the lapse of a period of not less than six months from the date of rejection, and he will be re-examined in the subject or subjects in which he previously failed to pass. Any candidate who shall have obtained a colonial, Indian, or foreign qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and examination equivalent to those required by the Regulations of the two Colleges, shall, on production of satisfactory evidence as to age and proficiency in Vaccination, be admissible to the Second and Third Examinations.

The fees for admission to the Third or Final Examination are as follows: for the whole examination, £15 15*s.*; for re-examination after rejection in Medicine, £5 5*s.*; for re-examination after rejection in Surgery, £5 5*s.*; for re-examination after rejection in Midwifery, £3 3*s.*

Notice.—A candidate referred at the Primary Examination in either or both subjects is required, before being admitted to re-examination, to produce a certificate that he has pursued, to the satisfaction of his Teacher, or Teachers, in a recognised place of study, his Anatomical and Physiological Studies, or his Anatomical or Physiological Studies, as the case may be, during a period of not less than three months subsequently to the date of his reference.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The above Colleges and Faculty have made arrangements by which, after one series of examinations, held in Edinburgh or in Glasgow, the student may obtain the diplomas of the three co-operating bodies. The general principle of this joint examination is that it shall be conducted by a board in which each body is represented in those branches which are common to both Medicine and Surgery, but that the College of Physicians shall take exclusive charge of the examination in Medicine, and the College of Surgeons, along with the Faculty of Physicians and Surgeons of Glasgow, of the examination in Surgery.

The three co-operating bodies grant their Single Qualifications only to candidates who are already registered as possessing another and opposite qualification in Medicine or Surgery, as the case may be. The Royal College of Physicians of Edinburgh may, notwithstanding this agreement, grant its licence on examination to candidates already possessed of one or other of the surgical qualifications mentioned in Schedule A of the Medical Act, 1858; and the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, may each grant its licence on examination to candidates already Licentiates of one of the Colleges of Physicians of the United Kingdom, or Graduates in Medicine of a British or Irish University. Copies of the Regulations for the Single Qualification of any of the bodies may be had on application to the respective secretaries.

Professional Education.—Candidates must have been engaged in professional study during forty-five months after passing the examination in General Education,[28] which period will include not less than four winter sessions or three winter and two summer sessions' attendance at a recognised medical school. At the meeting of the General Medical Council in May, 1886, it was recommended that hereafter the duration of study should be five years.

The candidate must produce certificates or other satisfactory evidence of having attended the following separate and distinct courses of lectures: Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Materia Medica, Physiology, Practice of Medicine, Clinical Medicine, Principles and Practice of Surgery, Clinical Surgery, Midwifery and the Diseases of Women and Children, Medical Jurisprudence, Pathological Anatomy. The six months' courses delivered in Scotland, with the exception of Clinical Medicine and Clinical Surgery, must consist of not fewer than 100 lectures. The three months' courses must consist of not fewer than 50 lectures. The candidate must also produce the following certificates: (*a*) Of having attended six cases of labour under the superintendence of the practitioner who signs the certificate, who must be a registered medical practitioner. (*b*) Of having attended for three months instruction in Practical Pharmacy, the certificate to be signed by the teacher, who must be a member of the Pharmaceutical Society of Great Britain, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicines to his patients, or a teacher of a class of Practical Pharmacy. (*c*) Of having attended for twenty-four months the practice of a public general hospital containing, on an average, at least eighty patients. (*d*) Of having attended for six months (or three months with three months' hospital clerkship) the practice of a public dispensary specially recognised by any of the co-operating bodies; or of having been engaged for six months as visiting assistant to a registered practitioner. (*e*) Of having been instructed by a registered medical practitioner in the Theory and Practice of Vaccination. Candidates shall be subjected to three Professional Examinations, herein called the First Examination, the Second Examination, and the Final Examination, to be conducted at separate times, partly in writing and partly practically and orally.

The First Examination will embrace Chemistry, Practical Chemistry, Elementary Anatomy, and Histology, and will take place not sooner than the end of the first year, including a winter and a summer session. The sum of £5 5*s.* must be paid to the Inspector of Certificates for this examination, not later than 11 A.M. of the Saturday preceding it. This sum will be considered as paid to account of the entire fee of £26 5*s.* payable for the three diplomas. In the case of a candidate being unsuccessful at this examination, he will be readmitted to examination after a prescribed interval on payment of £3 3*s.* if he has failed in all subjects, and £2 2*s.* if he has passed in one or more subjects. Any candidate who shall produce satisfactory evidence of having passed an examination in any of the subjects of the First Examination before any of the boards recognised by the co-operating authorities shall be exempt from examination in such subject or subjects. The certificates of examination upon which any candidate may claim exception from any of the subjects of the First and Second Examinations shall, in every case, specify the subjects embraced in such examination.

The Second Examination will embrace Anatomy, Physiology, Materia Medica, and Pharmacy, and will not take place before the termination of the summer session of the second year of study, including two winter and two summer sessions. The sum of £5 5*s.* must be paid to the Inspector of Certificates for this examination, not later than one week before the day of examination. In case of failure, the candidate will be readmitted to examination after the expiration of the prescribed period on payment of £3 3*s.* if he has failed in all subjects, and £2 2*s.* if he has passed in one or more subjects. Any candidate who shall produce satisfactory evidence of having passed in any of the subjects of the Second Examination before any of the boards recognised by the co-operating authorities will be exempt from examination in such subject or subjects; but no examination before such boards will be recognised as giving exemption unless it is co-extensive in its scope with the equivalent examination of this board, and is the only or the final examination on the subject or subjects required by the board at which it was passed.

The Final Examination will embrace the Principles and Practice of Medicine (including Therapeutics, Medical Anatomy and Pathology), Clinical Medicine, the Principles and Practice of Surgery (including Surgical Aatomy, Operative Surgery, and Surgical Pathology), Clinical Surgery, Midwifery (including Gynæcology), Medical Jurisprudence, and Hygiene, and it will not take place before the termination of the full period of study. Candidates shall not be exempted from examination in any of the subjects of the Final Examination, though some of them may have formed part of examinations passed before other boards.

[28] See the Laws relating to Registration.

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All candidates shall be subjected, in addition to the written and oral examinations, to practical clinical examinations in medicine and surgery, which shall include the examination of patients, physical diagnosis, the use of the microscope, surgical appliances, bandages, &c. Every candidate must produce to the inspector, Mr. James Robertson, solicitor, 4, Lindsay-place (George IV. Bridge), Edinburgh, or to Mr. Alexander Duncan, Faculty Hall, 242, St. Vincent-street, Glasgow—(1) satisfactory evidence of his having attained the age of twenty-one years; (2) a certificate of his registration in the books of the General Medical Council (see Chap. IV.); (3) the certificates of the classes above enumerated. Of the fee payable for this examination, which is £15 15*s*., £5 5*s*. must be paid to the inspector not later than one week prior to the examination day, after which no candidate will be entered. The balance of £10 10*s*. must be paid before the candidate is admitted a licentiate of the co-operating bodies. In case of a candidate being unsuccessful at the Final Examination, he will be re-admitted to examination after the expiration of the prescribed period on payment of £5 5*s*.

KING AND QUEEN'S COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

All information relative to the examinations under the Joint Scheme may be obtained from the Registrars of the College of Physicians and College of Surgeons, either of whom will receive the applications of candidates for permission to be examined, and with whom the bank receipt for fees and all certificates &c. are to be lodged at least fourteen days prior to the day fixed for the commencement of the examination.

The examinations commence on the first Monday in April, July, and October of each year, unless otherwise appointed by the Committee of Management.

First Professional Examination.—Candidates are required, before admission to the First Professional Examination, to produce evidence—(1) of having been registered by the General Medical Council as medical students at least nine months before the date of examination; (2) of having attended a course of lectures on Practical Anatomy, and one on Chemistry; (3) of having attended a course of Demonstrations and Dissections; (4) of having attended a summer course on Materia Medica, and one on Practical Chemistry; (5) of having studied Practical Pharmacy for three months in the Compounding Department of a Clinical Hospital, or in the Compounding Establishment of a Licentiate Apothecary or Member of the Pharmaceutical Society. The fee for this examination is £15 15*s*.

Second Profesional Examination.—Candidates are required, before admission to the Second Professional Examination, to produce evidence of having passed the First Professional Examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital for nine months, together with evidence of having taken notes to the satisfaction of the physicians or surgeons in charge of the cases, and certified under their hands of at least three Medical cases and three Surgical cases, in the wards of a recognised Medico-Chirurgical Hospital, and the following courses of Lectures:—Winter courses: Practical Anatomy, Demonstrations and Dissections, Physiology, Surgery. Summer course, three months: Practical Physiology, including Histology. The fee for this examination is £5 5*s*.

Third Professional Examination.—Candidates are required, before admission to the Third Professional Examination, to produce evidence of having passed the second examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital for nine months, together with evidence of having taken notes to the satisfaction of the Physicians and Surgeons in charge of the cases, and certified under their hands, of at least three Medical cases, and three Surgical cases in the wards of a recognised Medico-Chirurgical Hospital, and of the following courses of Lectures:—Winter courses: Demonstrations and Dissections, Medicine, Midwifery, if not deferred to the fourth year. Summer course, three months: Medical Jurisprudence. The fee for this examination is £5 5*s*.

Fourth or Final Professional Examination.—Candidates are required, before admission to the Final Examination, to produce evidence—(1) of having been registered as a medical student by the General Medical Council at least forty-five months previously; (2) of having passed the Third Professional Examination; (3) of having subsequently attended a Medico-Chirurgical Hospital for nine months as extern pupil, or six months as resident pupil, unless a certificate to that effect has been accepted in the third year, and of having attended the following course of lectures:—Winter Course: Midwifery, unless taken in the third year. Certificates are also required—(1) of having attended a recognised midwifery hospital or maternity for six months in the winter or summer of either the third or the fourth year, with evidence of having been present at thirty labours; (2) of having for not less than three months studied fever in a recognised clinical hospital containing fever wards, and recorded from daily personal observation at least five cases of fever to the satisfaction of the attending clinical physician, as attested by his signature;[27] (3) of having attended a course of Operative Surgery in the summer session of either the third or fourth year; (4) of having attended, at a recognised ophthalmic and aural hospital, or at a recognised ophthalmic and aural department of a general hospital, clinical lectures in Ophthalmic and Aural Surgery during a period of three months. The fee for this examination is £15 15*s*.

SOCIETY OF APOTHECARIES OF LONDON.

Every student purposing to study medicine must previously pass a public examination in Arts recognised by the Medical Council. Such examination is held in the Hall of the Society on the first Friday and following day in March, June, September, and December, and is conducted by means of printed papers. Candidates will be examined in the English and Latin languages, Mathematics, Elementary Mechanics, and one of the following subjects at the option of the candidate—Greek, French, German, Logic, Botany, and Elementary Chemistry. The subjects may be passed at one or more examinations, and no re-examination is required in any subject passed. Registered medical students may present themselves for examination in special subjects if desired. A form of notice accompanying the regulations, obtained from the Society, has to be filled in by the candidate and sent with the fee (one guinea) fourteen days before the examination. Lists of successful candidates are published.

The examinations to be passed for the licence are two, named respectively the Primary and the Final, each being written, oral, and practical. The Primary is held on the first Monday and following Wednesday and Thursday in January, April, July, and October. The Final is divided into two parts: Part I. (Surgery) is held on the second and fourth Wednesday and following day of every month; Part II. (Medicine) is held on the third Monday and following Wednesday and Thursday of every month. The course of medical study must occupy four years, of which not less than three winter and two summer sessions must be passed at a recognised hospital and school of medicine.

Every candidate intending to present himself for examination must pay a fee of 10 guineas, of which sum 4 guineas are to be paid at the Primary. He must also give fourteen days' notice, and produce the following certificates: (1) for the Primary Examination, a certificate of the commencement of attendance on lectures, and of the course of medical study pursued; (2) for the Final Examination, a certificate of having completed four years' medical study in conformity with the curriculum prescribed, of moral character, and of having attained the age of twenty-one. On such certificates being found correct, a card of admission to the examination will be sent, stating the time of attendance.

Every candidate, before he can be qualified for the Primary Examination, must have gone through a course of medical study in Chemistry, General and Practical; Materia Medica; Pharmacy and Dispensing; Anatomy and Physiology, including Dissections and Demonstrations; and Histology, with Demonstrations. The above, including Prescriptions, Practical Chemistry in the Laboratory, and an examination on the living body, form the several subjects of examination for the Primary, which examination may be passed after the second winter session.

For the Final Examination the candidate must give evidence, before he can present himself, that he has gone through the following course of medical study:—Hospital Practice, Surgical and Medical, with Post-mortem Examinations; Principles and Practice of Surgery; Practical Sur-

[27] Attendance at a fever hospital will not be recognised if concurrent with that on Practical Midwifery.

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gery; Clinical Surgical Lectures; Surgical Dresser; Principles and Practice of Medicine; Clinical Medical Lectures; Medical Clinical Clerk; Pathology; Forensic Medicine and Toxicology: Hygiene; Insanity; Obstetric Medicine and Gynæcology; Clinical Instruction in the same; a course of Practical Midwifery; attendance on not less than twenty Midwifery cases; and Practical Vaccination.

The Final Examination, which cannot be passed till after the completion of the medical course and the expiration of forty-five months from registration as medical student, embraces the above; and, in addition, in Part I., Surgical Anatomy, Surgical Pathology, surgical instruments and appliances, with a clinical examination of surgical cases; in Part II., obstetric instruments and appliances, microscopic examinations of morbid structure, and a clinical examination of medical cases. Part II. may be passed before Part I. if desired.

The Society give annually prizes for proficiency in Botany, in Materia Medica, and in Pharmaceutical Chemistry to registered medical students prior to the close of the third year, who have not been candidates for the prizes previously. They must reach the required standard. The examination in Botany is held on the third Thursday and following Saturday in June. That in Materia Medica and Pharmaceutical Chemistry is held on the third Wednesday and following day in August. The prizes for each consist of a Gold Medal, to be awarded to the candidate who distinguishes himself the most in the examination; and of a Silver Medal and a Book, or Books, to the candidate who does so in the next degree.

The examination of candidates for a certificate to act as an assistant in compounding and dispensing medicines, will be as follows:—In Translating Prescriptions; in the British Pharmacopœia; in Pharmacy, Pharmaceutical Chemistry, Materia Medica, and Medical Botany. Such examination is held on the third Thursday of every month: seven days' notice must be given, and a fee of 2 guineas paid.

Tickets of admission to the Society's Botanic Gardens at Chelsea, and to the Lectures on Botany when there given, can be had on application at the Hall of the Society.

APOTHECARIES' HALL OF IRELAND.

The Apothecaries' Hall of Ireland is at present engaged in completing a conjoint scheme of examination with the Royal College of Surgeons of Ireland, which, it is hoped, will be concluded by the end of this month. Till then particulars of the scheme cannot be published.

THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

Admission into the Army and Indian Medical Services is gained as the result of competitive examination. Candidates for both services must, before being admitted to examination, possess the double qualification to practise Medicine and Surgery, and be registered under the Medical Act, and must also furnish satisfactory certificates of moral character. Candidates for the Army must be between the ages of twenty-one and twenty-eight, in good health, and both parents of unmixed European blood; for the Indian Service, between twenty-two and twenty-eight, of sound bodily health, and natural-born subjects of Her Majesty. Both are examined as to physical fitness by a Board of Medical Officers. These conditions being satisfied, the candidate is admitted to the competitive examination, which is usually held in London twice a year, in the months of February and August. The subjects of examination are divided into *compulsory* and *voluntary*. The former comprise Anatomy and Physiology, Surgery, Medicine, including Therapeutics and the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of Drugs. The eligibility of the candidate for admission into the service is determined by the result of this part of the examination. The *voluntary* subjects are French, German, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with especial reference to Materia Medica, and for the Indian service Hindustani. Although the results of the examination on voluntary subjects do not affect the question of the eligibility of the candidate for a commission, they influence his position on the lists, which is determined by the numbers obtained under the two heads conjointly. After having passed this examination, the successful candidates for both services are sent to the Army Medical School at Netley as "surgeons on probation," with the rank of lieutenant and the daily pay of 8*s.*, to go through a four months' course of special instruction in the duties required of them in the service. The staff of the school consists of four professors, all of them men of acknowledged ability and high standing in their special departments. Surgeon-General Sir J. Longmore, Kt., C.B., is Professor of Military Surgery; Deputy Surgeon-General D. B. Smith, M.D., of Military Medicine; Surgeon-Major De Chaumont, M.D., F.R.S., of Military Hygiene; and Sir W. Aitken, F.R.S., of Pathology. To each of these an Army Medical Officer is attached as Assistant Professor. The lectures on Military Surgery include gunshot and other wounds, transport of sick and wounded, duties of army medical officers in the field, during sieges, and on board troopships and transports, &c. Those on Military Medicine treat of tropical and other diseases to which soldiers are exposed in the course of their service, the mortality and invaliding by disease, in peace and war, at home and abroad. The course of Hygiene comprises the examination of water and air, the general principles of diet, with the quality and adulterations of food and beverages, the sanitary requirements of barracks, hospitals, and camps, the clothing, duties, and exercises of the soldier, and the circumstances affecting his health with the best means of preventing disease, and instruction in the mode of preparing the various statistical and other returns required of the medical officer. The surgeons on probation are detailed for duty in the wards of the hospital, under the Professors and Assistant Professors of Medicine and Surgery, and receive practical instruction in the mode of examining recruits. The surgeons on probation are provided with quarters, and are members of the excellent mess established at Netley. After having passed through the course of instruction they are examined on the subjects taught in the school, and their position on the list recommended for commissions is determined by the combined results of the competitive and final examinations. At the close of each session five prizes are awarded: the Herbert Prize of £20 to the surgeon on probation who has obtained the highest number of marks at the London and Netley examinations conjointly; the Parkes Memorial Bronze Medal to the one who gains the highest number of marks in the examination on Hygiene at Netley, combined with those given for the answers to a special question set on the same subject; the Martin Memorial Gold Medal to the highest number of marks in the final examination on Military Medicine, with the addition of those gained for a special question connected with it; the Montefiore Gold Medal and £20, awarded in the same manner for Military Surgery; and the Montefiore Second Prize, consisting of works on Military Surgery, to the surgeon on probation who obtains the second highest numbers in this branch.

Surgeons are promoted to be Surgeons-Major on completing twelve years' full-pay service, of which three must have been abroad. Before being promoted they will be required to pass an examination intended to test their progress and proficiency in all those branches of knowledge which are essential to their continued efficiency as medical officers, which may be taken at any time between the fifth and tenth year of service. It will embrace the following subjects: *a.* Surgery, operative and practical, including field surgery and transport of sick and wounded. *b.* Medicine and Pathology, including practical pharmacy and modes of prescribing and administering remedial measures, food, drink, &c. *c.* Hygiene, within the limits treated of in "Parkes' Practical Hygiene." *d.* Duties of executive medical officers during peace and war at home and abroad, and at sea, as defined in the various codes of regulations issued for their guidance. Medical officers possessing the following qualifications will be exempted from examination in Medicine, Surgery, and Hygiene respectively: *a.* The Fellowship of any Royal College of Physicians or Surgeons of Great Britain or Ireland, granted under a higher standard of qualification than that for Licentiate or Member, will be accepted in lieu of an examination in Medicine and Surgery. *b.* The diploma in Hygiene and State Medicine, or any corresponding diploma of any University in Great Britain or Ireland, such diploma being granted after examination, will be accepted in lieu of an examination in this subject. A certificate will be required from a recognised teacher of Surgery in any medical school at home or abroad in which operative surgery is taught, showing that the medical officer has gone satisfac-

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torily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator. A report on any subject of a practical professional character to be selected by the officer himself, and certified to be his own composition, and in his own handwriting, will also be required.

The selection of Surgeons-Major for advancement to the grade of Brigade Surgeon is made on the grounds of ability and merit, in determining which the following points will be considered:—The officer to be so selected must have been favourably reported on by the several military and departmental officers under whom he may have served, as set forth in their Annual Confidential Reports. He must be physically fit for general service, and have the necessary qualifying foreign and Indian service under existing rules. He must, before he can be selected for promotion to the grade of Brigade Surgeon, establish before an examining board, appointed for the purpose by the Director-General, his efficiency in the following subjects:—*a.* Hospital organisation and administration in peace and war. *b.* The administration, interior economy, command, and discipline of the Medical Staff Corps and bearer columns. *c.* The relations of the medical to all other departments and corps of the army, as defined by the various Codes of Regulations in force. *d.* Recruiting and invaliding. *e.* The management of sick and wounded in war. *f.* Field medical organisation. *g.* The transport of the sick and wounded by land and sea. *h.* The medical and surgical equipment and hospital arrangements for an army corps. *i.* The duties and responsibilities of medical officers, quartermasters, and non-commissioned officers and men of the Medical Staff Corps in regard to the charge and supervision of stores and equipments, and the nursing, dieting, and general management of the sick. *k.* The sanitary duties of medical officers in charge of camps and hospitals in the field and at the base of operations. *l.* The sanitary inspection and equipment of hospital ships and troop transports, and all other sanitary duties in camps, garrisons, and quarters. *m.* The origin, progress, and best methods of dealing with outbreaks of epidemic disease among troops under any given circumstance. *n.* The most approved methods of securing the sick, and especially the wounded, against pyæmia, septicæmia, and all other forms of blood poisoning, and the management and treatment of such outbreaks when they occur. *o.* Questions on Operative Surgery and Practical Medicine will also form part of this examination. A medico-topographical report will be required of any district or country in which British troops have been, or are likely to be, actively employed, as well as a sketch of the medical arrangements suitable for an army corps operating in such a district or country, compiled by the officer, and certified to be his own composition and in his own handwriting.

Brigade Surgeons, to be eligible for selection as Deputy Surgeons-General, must have served abroad at least ten years, of which three must have been in India. All officers under the rank of Deputy Surgeon-General are placed on the retired list at the age of fifty-five, and those of that rank and Surgeons-General at the age of sixty.

The regulations above noted respecting the promotion of Surgeons and Surgeons-Major are equally applicable to the Indian Medical Service.

The conditions of admission into the Naval Medical Service are the same as those for the Army; but the candidate is also required to declare his readiness to engage for general service, and to proceed on duty abroad whenever required to do so. After having passed the competitive examination in London the successful candidate will receive a commission as surgeon in the Royal Navy, "and will undergo a course of practical instruction in Naval Hygiene at Haslar Hospital."

Surgeons are promoted to Staff Surgeons after twelve years from date of entry, provided they pass the requisite examination; and Staff Surgeons to Fleet Surgeons after twenty years' service, if recommended by the Director-General. Deputy Inspectors-General are promoted by selection from the Fleet Surgeons, and Inspectors-General from the Deputy Inspectors-General having three years' foreign, four years' mixed, of which not less than two have been abroad, or five years' home service in such appointments as preclude foreign service, provided they have not refused to go abroad when called upon to do so. Inspectors and Deputy Inspectors-General are retired compulsorily at sixty, and other grades at fifty-five years of age, and all ranks at any time if they have not served for five years. In calculating service for retired pay, time on half-pay will be taken as equivalent to one-third service on full-pay.

The following tables, showing the rates of pay and half-pay of the three branches, will probably be acceptable to students who entertain any intention of entering the public service.

ARMY.

Rank.	*Rates of Pay.*	*Gratuities.*	*Relative Military Rank.*
	Daily.		
Surgeon on probation ..	£0 8 0	—	Lieutenant
	Annual.		
Surgeon	200 0 0	—	Captain
,, aft. 5 years' service	250 0 0	—	,,
	Daily.	Gratuity.	
,, 10 ,, ..	0 15 0	£1250	
Surgeon-Major	1 0 0	—	Major
,, aft. 15 years' service	1 2 6	£1800	
,, 18 ,,	—	£2500	

Rank.	*Rates of Pay.*	*Half-pay.*	*Relative Military Rank*
Surgeon-Major:			
,, aft. 20 years' service	1 5 0	£1 0 0	Lieut.-Colonel
,, 25 ,,	1 7 6	1 2 6	
,, 30 ,,	—	1 5 0	
Brigade Surgeon	1 10 0	—	Lieut.-Colonel
,, aft. 5 years in rank	1 13 0	—	(but always
,, aft. 20 years' service	—	1 7 6	senior to
,, 30 ,,	—	1 10 0	Surgeon-Major)
Deputy Surgeon-General ..	2 0 0	1 15	Colonel
Surgeon-General	2 15 0	2 0 0	Major-General

ROYAL NAVY.

Rank.	Daily pay.	Half-pay.	Gratuities and retired pay. Rank.	Gratuity.
	£ s. d.	£ s.		
Surgeon	0 11 6	0 6	Surgeon and Staff	
aft. 2 years' f. p. in rank	..	0 7	Surgeon:	
4 ,,	0 13 6	0 8	aft. 8 years' f. p.	£1000
6 ,,	..	0 9	12 ,,	1500
8 ,,	0 15 6	0 10	16 ,,	2250
10 ,,	..	0 11		
Staff-Surgeon:				
on promotion	1 1 0	0 12		
aft. 2 years' f. p. in rank	..	0 13		
4 ,,	1 4 0	0 14		
6 ,,	..	0 15		
Fleet Surgeon:			Fleet-Surgeon.	Daily.
on promotion	1 7 0	0 17	aft. 20 years'	£1 0 0
aft. 2 years' f. p. in rank	..	0 18	24 ,,	1 2 6
4 ,,	1 10 0	0 19	27 ,,	1 5 0
6 ,,	..	1 0	30 ,,	1 10 0
8 ,,	1 13 0	..		
Deputy Inspector-General:				
on promotion	2 2 0	1 5	..	1 15 0
aft. 2 years' f. p. in rank	..	1 7	..	
4 ,,	..	1 9	..	2 0 0
Inspector-General	2 15 0	1 18		

INDIAN MEDICAL SERVICE.

From date of leaving Netley till embarkation, 10s. per diem.

Pay and allowances in India.

Rank.	*Monthly pay.*	*If in charge of a Native Regiment.*	*Pension, annual.*
	Rs. a. p.	Rs.	£
Surgeon under 5 years' service	286 10 0	450	—
,, after 5 ,,	304 14 2	600	
,, 6 ,,	392 5 2		
Surgeon-Major & Brigade-Surgeon:			
after 10 years' service	410 9 5	800	—
,, 12 ,,	640 14 6		
,, 15 ,,	677 6 11		
,, 17 ,,	..		292
,, 20 ,,	852 3 7		365
,, 25 ,,	888 12 0	1000	500
,, 30 ,,	..		700
Deputy Surgeon-General, 2 at	2250 0 0	(aft. 5 yrs.' service in rank addtnal. to service pension.)	250
,, ,, the rest at	1800 0 0		
Surgeon-General ..	2500 0 0		350
,, in Bengal	2700 0 0		

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The Medical Student's Class Guide.

TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1887-88.

LECTURES, &c.	ST. BARTHOL. HOSP. & COL.			CHARING-CROSS HOSP. & COLL.			ST. GEORGE'S HOSPITAL.		
	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Session.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.
WINTER SESSION.			£ s.			£ s.			£ s.
ANATOMY AND PHYSIOLOGY	Dr. Klein	M. Tu. Th. 10	9 9	Dr. Mott	Daily	6 6	Dr. Delépine	Daily, 12	7 7
							Ditto, *Phys. Chem.*	M T W T F 3½	3 3
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Marsh Mr. Langton	Tu. W. Th. F. 9	7 7	Mr. Bellamy	M. W. F. 9	6 6	Mr. Bennett	M. W. F. 9½	7 7
ANATOMICAL DEMONSTRATIONS	Messrs. Clarke, Lockwood, and Jessop	Daily, 10 to 4	...	Mr. Cantlie Mr. Boyd	Daily	6 6	Messrs. Ross & Allingham	Daily	...
							Ditto, *Osteology*	T. Th. S. 9	...
							Histol. Dr Delépine	M.T.Th.F.10	3 3
CHEMISTRY	Dr. Russell	M. W. F. 9	6 16	Mr. Heaton	M. W. F 4	6 6	Mr. Donkin	T. Th. S. 11	6 6
MEDICINE	Dr. Andrew	M. Tu. Th. 3½	6 16	Dr. Pollock	M. W. 4, Th. 3	7 7	Dr. Dickinson	T. Th. F. 3	7 7
	Dr. Gee								
SURGERY	Mr. Savory	W. Th. F. 2½	6 16	Mr. Barwell	Tu. Th. F. 4	7 7	Mr. Pick	Tu. Th. S. 9½	7 7
HOSPITAL PRACTICE:									
PHYSICIANS	Dr. Andrew	Tu. Th. S.	6	Dr. Pollock	M. Th.	6	Dr. Wadham	M. F. 1	12
	Dr. Church	M. Tu. Th.	mths.	Dr. Green	W. S.	mths.	Dr. Dickinson	M. T. Th. F. 1	mths.
	Dr. Gee	Tu. Th. S.	15 15	Dr. Bruce	Tu. F. 2	10 10	Dr. Whipham	Tu. W. S. 1	10 10
	Dr. Duckworth	M. Tu. Th. F. S.				12	Dr. Cavafy	T. S. 1	
	Dr. M. Duncan (*Obstet.*)					mths. 15 15	*Obst. Phys.:* Dr. Champneys	T. F. 12	
ASSISTANT-PHYSICIANS ...	Dr. Hensley	Tu. F. 11	...	Dr. Abercrombie	Tu. F.	...	Dr. Ewart	M. F. 12	...
	Dr. Brunton	W. S. 11		Dr. Lubbock	W. S.		Dr. Owen	T. S. 12	
	Dr. Norman Moore	M. Th. 11		Dr. Willcocks	M. Th.				
	Dr. S. West			Dr. Murray	W. S. 1.30				
SURGEONS	Messrs. Savory, Willett, Smith, Langton, and Baker	Daily	6	Mr. Barwell	Tu. F.	6	Mr. Holmes	M. W. Th. F. 1	12
		M. Th. F. S.	mths.	Mr. Bellamy	M. Th.	mths.	Mr. Rouse	M. W. Th. F. 1	mths.
		Tu. F. S.	19 19	Mr. Bloxam	W. S. 2	10 10	Mr. Pick	T. W. Th. S. 1	10 10
						12	Mr. Haward	T. W. Th. S. 1	
ASSISTANT-SURGEONS	Messrs. Marsh, Butlin, Walsham, Cripps, and Bruce Clarke	Daily, 12	...	Mr. Cantlie	M. Th.	mths.	*Ophth. Surg.:*		
				Mr. Morgan	Tu. F.	15 15	Mr. B. Carter	T. Th. F. 2	
				Mr. Stanley Boyd	W. S.		Mr. Bennett	M F 12, W T 1	
							Mr. Dent	T. S. 12, W. Th. 1	
	Ophth.-Surgs.: Mr. Power	Tu. Th. S. 1½					*Assist. Ophth.:* Mr. Frost	W. S. 2	
	Mr. Vernon								
PRACTICAL SURGERY ...	...	...	...	Mr. Sheild	M. S. 1.30				
				Mr. Bloxam	T. W. F. 3				
CLINICAL MEDICINE	Drs. Andrew, Church, Gee, and Duckworth	... F. 1	...	The Physicians and Assistant-Physicians	Weekly	...	The Physicians	M. 2	...
CLINICAL SURGERY	Messrs. Savory, Smith, Willett, Langton, and Baker	S. 12.45	...	The Surgeons and Assistant-Surgeons	Weekly	...	The Surgeons	Tu. 2	...
CLINICAL MIDWIFERY, &c.	Dr. Duncan	...	...	Drs. Black & Routh	T. F. 1.30	...	Dr. Champneys	W. 2	...
DENTAL SURGERY	...	S. 10	...	Mr. Fairbank	M. W. F. 9	...	Mr. Winter-bottom	Tu. 10	...
		Operations W. & S. 1½						Operations Thurs. at 1	
	[*Hygiene:* Dr. Thorne M. 10]	Post-mort. exam. daily at 12 & 2½						Operations on the Eye, F. 1½	
SUMMER SESSION.									
MATERIA MEDICA, &c. ...	Dr. Brunton	Tu. Th. S. 10, W. 9	6 16	Dr. Willcocks	M. W. F. 9	4 4	Mr. J. Woodland	M. W. F. 2	4 14
MIDWIFERY, &c.	Dr. M. Duncan	Daily, 9	5 5	Dr. Black	M. Tu. W. F. 3	4 4	Dr. Champneys	M. W. F. 9	4 14
BOTANY	Rev. G. Henslow	M. W. F. 10	4 4	...	...	...	...	...	...
MEDICAL JURISPRUDENCE	Dr. Heusley	M. Tu. S. 9	4 4	Dr. Abercrombie Mr. Heaton (*Tox.*)	W. F. 9 F. 12	4 4	Mr. Owen	Tu. Th. S. 9½	4 14
PATHOLOGICAL ANATOMY	Dr. Norman Moore (& in Winter, F. 11)	F. 11, Tu. 3½	2 12	Dr. Murray	Daily	...	Dr. Delépine	M. 4, W. Th. F. 3½	...
PRACTICAL CHEMISTRY ...	Dr. Russell	M. Tu. F. 11 to 1	3 3	Mr. Heaton	Daily	5 5	Mr. Donkin	Daily	4 4
				Mr. Vasey	M. Th. 2-4	...	Dr. G. B. Howes	M. F. 4	4 4
COMPARATIVE ANATOMY...	Dr. Shore	M. Th. 11	2 12	Dr. Garson	S. 9	3 3	Dr. Whipham	W. 3	3 3
PATHOLOGY & MORB. ANAT.	...	...	...	Dr. T. H. Green	Tu. W. F. 4	...	(in Winter)	...	...
OPHTHALMIC SURGERY ...	Mr. Power Mr. Vernon In Winter	Tu. W. 4 M. 2	2 12	Staff of Royal West. Oph. Hosp.	Daily	...	Mr. B. Carter	W. 4	...
							Pract. Med.: Dr. Whipham	T. Th. S. 9 in Summer	4 4
PSYCHOLOGY	Dr. Claye Shaw	...	2 12	...	...	...	...	...	...
DENTAL SURGERY	...	...	...	Mr. Fairbank	M. W. F. 9	...	Mr. Winter-bottom	Tu. 10	...
PRACTICAL SURGERY... ...	Mr. Butlin Mr. Walsham (and in Winter)	...	...	Messrs. Bloxam & Morgan (in Winter & Sum.)	Tu. W. Th. F. 9	5 5	Mr. Dent	M. 3, T. 3½ W. F. 3	4 4
							Hyg.: Dr. Bridges		
PRACTICAL PHYSIOLOGY...	Dr. Harris (and in Winter)	...	7 7	Dr. Mott (& in Winter)	T. W. F. 2-4	6 6	*Aural Surg:* Sir W. Dalby	T. 2	
PRACTICAL PHARMACY ...	Pharm. Laborat.	...	...	Mr. Sandall	Daily	3 3	...	...	...
OPERATIVE SURG. (DEMONST.)	Messrs. Clarke and Lockwood	...	5 5	Mr. Bloxam	T. W. Th. F. S. 9	*	Mr. Turner	M. W. F. 9½	2 2
							Pract. Midw.: Dr. Champneys	W. 1	...
DISEASES OF THE EAR ...	Mr. Cumberbatch	Tu. F. 2	...	Mr. Cantlie	F. 9	...	Sir W. Dalby	T. 2	...
DISEASES OF THE SKIN ...	Mr. Cripps	F. 2½	...	Dr. Sangster	M. 2	...	Dr. Cavafy	W. 2	...
ORTHOPÆDIC SURGERY ...	Mr. Walsham	F. 12½	...	...	...	...	Mr. Bennett	W. 2½	...
	[*Diseases of Larynx:* Mr. Butlin, Th. 2½]		...			...	[*Dis. Throat:* Dr. Whipham]	Th. 2	...
FEE for all Lectures and Hosp. Med. and Surg. Practice ...	...	...	131 5	...	...	†	...	...	£125 0

* Included in Practical Surgery fee.

† £94 10s. in one sum, or £105 in five instalments.

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TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1887-88—(CONTINUED.)

LECTURES, &c.	GUY'S HOSPITAL.			KING'S COLLEGE AND HOSPITAL.		
	LECTURERS.	DAYS & HOURS.	FEES. One Course.	LECTURERS.	DAYS & HOURS.	FEES. One Course.
WINTER SESSION.			£ s.			£ s.
PHYSIOLOGY	Mr. Golding-Bird Dr. Wooldridge	M. W. 1.45, S. 9½ Tu. Th. 10	7 7 7 7	Dr. Gerald Yeo	Daily, 12½	8 8
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Howse Mr. Davies-Colley	Tu. W. Th. F. 9	7 7	Dr. Curnow	W.Th.11½, F.S.9* M. Tu. W. Th. 9†	9 9
ANATOMICAL DEMONSTRATIONS	Mr. Lane, Mr. Poland, & Mr. Dunn	Daily, 9 to 4	7 7	Dr. Curnow Mr. A. S. Kenny	Daily	7 7
CHEMISTRY	Dr. Debus Dr. Stevenson Mr. Groves	Tu. Th. S. 11	7 7	Mr. Bloxam Mr. Thomson Mr. Johnson	M. W. Th. 10½	8 8
MEDICINE	Dr. Pye Smith Dr. Taylor	M. W. F. 3	7 7	Dr. Beale	M. F. 4, W. 5	8 8
SURGERY	Mr. Bryant Mr. A. E. Durham	Tu. Th. 3½ F. 1½	7 7	Mr. H. Smith	Tu. W. Th. 4	8 8
PRACTICAL SURGERY	Mr. Lucas	M. W. F. 4	4 4	Messrs. H. Smith, Rose, Cheyne, & Barrow	...	3 3
HOSPITAL PRACTICE:	Sir W. Gull, Drs. Owen Rees & Wilks (*consult.*)	...	3 mths. 10 10	Dr. Beale, Dr. Duffin Dr. Playfair (*acc.*)	Tu. F. 2; W. S. 2 Tu. Th. S. 2	6 mths.
PHYSICIANS	Drs. Pavy, Pye-Smith, Taylor, & Goodhart Dr. Hicks (*cons. obst.*) Dr. Galabin (*obst.*)	M. Th. S. M. Th. S. M. W. F. M. Th. F.	6 mths. 15 15	Dr. Burney Yeo Dr. Hayes (*accou.*) Dr Ferrier,‡ Dr Curnow	Tu. F. 1½ M. W. F. 12½ M. Th. 1½	
ASSISTANT-PHYSICIANS	Drs. Hale White, Pitt, Wooldridge, & Perry Horrocks (*obst.*)	M. Tu. W. F. Out-patnts. at 12 Th. S. 12	1 year 24 3 Perpet.	Dr. Tirard Dr. Dalton	Tu. F. 1½ W. S. 1½	
SURGEONS	Messrs. Cock, Birkett (*cons.*), Bryant, Durham, Howse, & Davies-Colley Mr. Bader (*consult.oph.*) Mr Higgens, Mr Brailey (*oph.*); Mr. Moon (*dent.*) Mr Pooley (*assist. dent.*) Mr. L. Purves (*aural*)	M. Th. S. M. Th. M. Th. W. S. M. T. Tu. F. Tu. Th. F. Tu. F.	36 15 3 mths. 10 10 6 mths. 15 15 1 year	Mr. Wood Sir Joseph Lister, Bart. Mr. H. Smith Mr. W. Rose Mr. S. H. Cartwright (*surg.-dentist*) Mr. McHardy (*ophthalmic*)	Tu. Th. S. 1½ M. W. F. 1½ M. W. F. 1½ Tu. F. 1½ Tu. F. 10 M. W. Th. 1½	6 mths.
ASSISTANT-SURGEONS	Mr. Lucas Mr. Golding-Bird Mr. Jacobson Mr. Symonds	W. Th. M. S. Out-patients at 12	24 3 Perpet. 36 15	Mr. Cheyne Mr. Barrow	W. S. 1 M. Th. 1½	...
CLINICAL MEDICINE	Drs. Pavy, Pye-Smith, Taylor, & Goodhart	S. 1½	...	Dr. Duffin Dr. Beale Dr. B. Yeo Dr. Ferrier Dr. Curnow	Alt. F. 3 Alt. Tu. 3 Alt. Tu. 3‡ Alt. M. 3 Alt. M. 3‡	...
	In Summer: Drs. Hale White, Pitt, Wooldridge, & Perry	W. 1½	...			
	Messrs. Bryant, Durham, Howse, & Davies-Colley	W. 1½	...	...	...	...
CLINICAL SURGERY	*In Summer:* Mr. Lucas Mr. Golding-Bird Mr. Jacobson Mr. Symonds	F. 1½	...	Mr. Wood Sir Joseph Lister, Bart.	Tu. Th. 1½ M. W. 2	To Med. & Surg. Practice £42 per. £18 18s. 1 year.
CLINICAL MIDWIFERY	Dr. Galabin Dr. Horrocks	W. 1½ Operations Tu. F. at 1½	...	Dr. Playfair	Alt. Th. 3	...
	[*Surgical Classes:* Mr. Jacobson]	On the Eye, M. F. 1½			Operations W. 3, F. 2 S. at 1	
SUMMER SESSION.						
MATERIA MEDICA & THERAPEUTICS	Dr. Hale White	M. Tu. Th. 2	5 5	Dr. Tirard	Tu. W. Th. F. 8½	5 5
MIDWIFERY &c.	Dr. Galabin	Tu. W. Th. F. 9 A.M.	7 7	Dr. Playfair	Tu. W. Th. F. 9	5 5
BOTANY	...	...	...	Mr. Bentley	M. Tu. Th. F. 12½	4 4
BIOLOGY	Mr. Beddard	Tu. Th. 2, F. 4½	7 7	...	...	...
MEDICAL JURISPRUDENCE	Dr. Stevenson	Tu. Th. S. 10	5 5	Dr. Ferrier	M. Tu. W. Th. 4	5 5
DISEASES OF WOMEN	Dr. Galabin	M. 3	...	Dr. Playfair	...	...
PRACTICAL CHEMISTRY	Mr. Groves	M. W. F. 10 to 1	7 7	Messrs. C. L. Bloxam, Thomson, & H. Jackson	M. W. Th. 10½	6 6
PRACTICAL PHYSIOLOGY	Dr. Wooldridge	Tu. Th. 10,	...	Dr. G. Yeo & Mr. Herroun	Tu. F. S. 10½	6 6
PRACTICAL BIOLOGY	...	...	...	Mr. Martin	Tu. F. 2	8 8
NATURAL PHILOSOPHY	Mr. Reinold	M. W. 12	5 5	Mr. W. G. Adams	Tu. 2	...
COMPARATIVE ANATOMY	...	...	...	Mr. F. J. Bell (in Winter)	M. F. 4	4 4
PATHOLOGY AND MORBID ANATOMY	Drs. Goodhart, Pitt, Perry, Mr. Targett	Daily, 2½ (in Sum., S. 9)	7 7	Dr. Duffin	W. Th. F. 3	3 3
OPERATIVE SURGERY	Mr. Lucas	...	3 3 5 5	Mr. W. Rose	...	6 6
MORBID HISTOLOGY	Mr. Symonds	W. S. 1	5 5	...	...	...
OPHTHALMIC SURGERY	Mr. Higgens	Th. 3	...	Mr. McHardy	M. Th. 1	3 3
PSYCHOLOGICAL MEDICINE	Dr. Savage	Tu. 11, F. 10½	3 3	Dr. Sheppard	...	...
DENTAL SURGERY	Mr. Moon	Th. 12	...	Mr. S. H. Cartwright	Tu. F. 10	...
AURAL SURGERY	Mr. L. Purves	Tu. 12	...	Dr. Pritchard	Th. 2½	...
DEMONST. OF CUTANEOUS DISEASES	Dr. Perry	Tu. 1	...	Dr. Duffin	F. 2	...
VACCINATION	...	...	...	Mr. Dunn	M. 10½	...
HYGIENE	Mr. Turner	M. F. 11½	3 3	Dr. Kelly (in Wint.)	F. 3	1 1
PRACTICAL PHARMACY	Mr. Collier	...	3 3	Mr. Wilmot	Daily	3 3
				[*Clinical Therapeutics:* Dr B. Yeo, Th. 3, in Win.	[*Pract. Pathol.*: Mr. Cheyne]	126 11 6
FEE for Lectures, and Hospital Medical and Surgical Practice	...	...	£131 5	...	...	

* Elementary Course. † Advanced Course. ‡ In summer.

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TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS, AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1887-88—(CONTINUED.)

LECTURES, &c.	LONDON HOSPITAL.			ST. MARY'S HOSPITAL.			MIDDLESEX HOSPITAL.		
	LECTURERS.	DAYS AND HOURS.	FEES. One Session.	LECTURERS.	DAYS AND HOURS.	FEES. One Session.	LECTURERS.	DAYS AND HOURS.	FEES. One Session.
WINTER SESSION.			£ s.			£ s.			£ s.
PHYSIOLOGY	Mr. M'Carthy	M. W. 9 Tu. Th. S. 9	4 4	Dr. Waller	M. W. Th. 12	7 0	Mr. Lowne	M. W. F. 9	8 8
EXPERIMENTAL PHYSIOL.	Mr. M'Carthy	Daily	...	Dr. Waller	Tu. W. F. 10	4 4	Messrs. Lowne & Karop (in Summer)	M. W. F. 9	5 5
PATHOL. & MORBID ANAT.	Dr. Sutton	Daily	...	Mr. Silcock Dr. Maguire	Tu. F. 12	4 0	Dr. Fowler (in Summer)	Tu. Th. S. 9	4 4
ANATOMY, DESCRIPTIVE & SURGICAL.	Mr. F. Treves	Tu. Th. 9 M. W. F. 9	5 5	Mr. Edm. Owen	M. Tu. Th. F. 9	8 0	Mr. Hensman	M. Tu. Th. F. 4	10 10
ANATOMICAL DEMONSTRATIONS.	[*Pract. Anat.*: Mr. C. M. Moullin]	Daily, 10 to 5 (except S. aft.)	5 5	Mr. E. Lane Mr. Hill	Daily 9-5	...	Messrs. Hensman, Sutton, Brodie, Lawson	Daily 9 till 4	6 6
CHEMISTRY	Dr. Tidy	M. W. F. 10.30	7 7	Dr. Wright	W. S. 9 Th. 10	6 0	Mr. W. Foster	M. W. Th. F. 3	6 6
MEDICINE	Dr. Stephen Mackenzie	M. W. F. 4	5 5	Dr. Broadbent Dr. Cheadle	M. W. F.	8 0	Dr. Cayley	Tu. Th. S. 9	8 8
SURGERY	Mr. Rivington	Tu. Th. 4 S. 10 A.M.	5 5	Mr. Norton Mr. Page	M. Tu. Th. 9	8 0	Mr. H. Morris	M. W. Th. 3	8 8
PRACTICAL SURGERY	Mr. Reeves	Tu. Th. (in summer)	...	Mr. Pepper	T. Th. 5	4 4	Mr. A. Clark	W. F. 9	6 6
HOSPITAL PRACTICE:									
PHYSICIANS	Drs. Down, H. Jackson, Sutton, Fenwick, Herman (*obst.*), Mackenzie, Sansom, Turner, Smith, Warner, Ralfe	Daily, 2 Daily, 2 Tu. F. 2	6 mths. 10 10	Dr. Broadbent Dr. Cheadle Dr. Lees Dr. Hicks (*obs.*) *To Out-patients:* Dr. Phillips Dr. Maguire Dr. Pearce	Tu. F. 1½ M. Th. 1½ W. 1½, S. 9½ Tu. F. 9½ W. S. 1½ M. Th. 1½ Tu. F. 1½	6 mths. 5 5	Dr. W. Cayley Dr. Coupland Dr. D. Powell Dr. Finlay Dr. Edis (*obst.*) Dr. Liveing (*skin*)	Daily, 1½ Daily, 1½ Tu. F. 1½ Tu. 4	3 mths. 5 5
ASSISTANT-PHYSICIANS	Dr. Anderson	Daily, 1.3	...	Dr. M. Handfield Jones (*obs.*)	M. Th. 1½	...	Dr. Fowler Dr. Biss Dr. Pringle Dr. Duncan (*obst.*)	Tu 3½, F 3½ M. Th. 1½ W. S. 1½ W. S. 1	...
SURGEONS	Mr. Couper Mr. Rivington Mr. W. Tay (*Oph.*) Mr. M'Carthy Mr. F. Treves Dr. Woakes & Mr. T. M. Hovell (*Aur.*) Mr. Barrett (*Dent.*)	Daily, 2 W. S. 9 S. 9.30 Tu. 9	6 mths. 10 10 10 10	Mr. Norton Mr. Owen Mr. Page *To Out patients:* Mr. Pye Mr. Pepper Mr. Silcock Mr. Norton (*throat dis.*)	M. Th. 1½ Tu. F. 1½ W. S. 1½ M. Th. 1½ W. S. 1½ Tu. F. 1½ M. Th. 9½	6 mths. 5 5	Mr. Hulke Mr. G. Lawson Mr. Morris Mr. S. Bennett (*dental*) Mr. Laug (*oph.*) Mr. Hensman (*aural*)	Mr. Th. 1½ M. Th. 1½ Tu. F. 1½ M. 9½, W. 9 Tu F. 10 Tu. 9	3 mths. 5 5 ...
ASSISTANT-SURGEONS	Mr. Reeves Mr. C. Mansell Moullin Mr. Hurry Fenwick Mr. Eve (*Ophthal.*)	Daily, 1½	...	Mr. Critchett & Mr. Juler (*ophth.*) Mr. Field (*aur.*) Mr. Morris (*skin*) Mr. Hayward (*dental*)	Tu. F. 9½ W. S. 9½ M. Th. 9½ W. S. 1½	...	Mr. Andrew Clark Mr. Pearce Gould Mr. W. Hern (*assist. dental*) Mr. J. B. Sutton [*Pract. Med.*: Dr. Coupland]	M. Th. 1.15 Tu. F. 1.30 W. 9, F. 9½ W. S. 9 M. W. F. 10	... 6 6
CLINICAL MEDICINE	The Physicians and Asst.-Phys.	Twice week 2	...	Dr. Broadbent Dr. Cheadle Dr. Lees	Twice week	...	The Physicians	F. 3	...
CLINICAL SURGERY	The Surgeons and Asst.-Surg.	Twice week 2	...	Mr. Norton Mr. Owen Mr. Page	Twice week	...	The Surgeons	Tu. 3	...
SUMMER SESSION.	[*Exp. Phys.*: Mr. Page, Th. S. dur. Jan. Feb. Mar. 10½]	Operations, M. T. W. Th. & F. 2			Operations W. 1½ P.M. ex. at 2 daily		Superintend. of P.-M. exam.: Mr. Hudson	Operations W. S. at 1 P.M. at 2 daily	
MATERIA MEDICA	Dr. James	Tu. Th. F. 3	3 3	Dr. Lees	T. Th. F. 10	4 0	Dr. Thorowgood	M. W. F. 4	2 2
THERAPEUTICS	...	...	...	...	...	...	Dr. Powell	M. Th. 3	
MIDWIFERY, &c.	Dr. Herman	M. W. F. 9	4 4	Dr. Braxton Hicks Dr. M. H. Jones	Tu. W. Th. F. 9	5 0	Dr. A. W. Edis	M. W. F. 9	5 5
BOTANY	Dr. Warner	M. W. F. 12	3 3	Rev. J. M. Crombie	M. W. F. 11	3 0	Dr. Biss	Tu. 10	2 2
MEDICAL JURISPRUDENCE	Dr. Sansom	M. Th. 3.30	3 3	Mr. Luff	M. T. Tu. 10	4 0	Dr. Finlay	Tu. Th. S. 10	4 4
TOXICOLOGY	Dr. Tidy	W. F. 10	...	...	...	...	...	...	...
PRACTICAL CHEMISTRY	Mr. Page	M. W. S. 9, 10½ (M. W. 12, 2 in winter)	5 5	Dr. C. R. A. Wright	W. F. S. 9	4 0	Mr. W. Foster [*Psycho. Med.*: Dr. Mickle]	M. W. F. 3 F. 10.15	3 3
COMPARATIVE ANATOMY	Mr. C. M. Moullin	Tu. Th. 9	3 3	Mr. Poulton	M. W. 10	3 0	Mr. J. B. Sutton	Tu. Th. 4	2 2
PATHOL. HISTOLOGY	Mr. Eve	Tu. F. 12.45	...	...	...	...	...	...	...
PATHOLOGY AND MORBID ANATOMY.	Dr. Sutton	Th. 12½, S. 10	3 3	Mr. Silcock Dr. Maguire	...	2 2	Dr. Fowler	Tu. Th. S. 9	4 4
OPERATIVE SURGERY	Mr. Rivington	...	3 3	Mr. Pepper	Tu. Th. 5	...	Mr. A. Clark	...	...
PRACTICAL PHYSIOLOGY	Mr. M'Carthy	...	3 3	Dr. Waller	Daily	...	Messrs. Lowne & Karop	M. W. F. 9	4 4
HISTOLOGY AND THE MICROSCOPE.	Mr. M'Carthy (& in Winter)	Tu. Th. 9.15	3 3	...	Tu. W. F. 10	...	...	...	...
OPHTHALMIC SURGERY	Mr. Waren Tay	Tu. F. 4	2 2	Mr. Critchett	Th. 2½	2 12	Mr. Lang	F. 10	2 2
ANÆSTHETICS	Dr. Hewitt	W. S.	...	...	...	...	...	...	...
AURAL SURGERY	Dr. Woakes	Tu. 4	2 2	Mr. Field	F. 3	2 12	Mr. Hensman	Tu. 9	...
DENTAL SURGERY	Mr. Barrett	Tu. F. 4	2 2	Mr. Hayward (in Winter)	...	2 12	Mr. Storer Bennett (in Winter)	Daily, 9.30	...
DISEASES OF THE SKIN	Dr. Stephen Mackenzie	Th. 9	...	Mr. Morris (in Summer)	Th. 3	2 12	Dr. R. Liveing	F. 4	...
DISEASES OF THE THROAT	Mr. Mark Hovell	W. 4	2 2	...	...	...	Mr. Hensman	Tu. 9	...
PRACT. PHARM. & DISPENS.	Mr. Robertson	...	...	...	...	3 3	Mr. Fardon [*Pub. Health*: Dr. Finlay]	...	3 3
FEE for all the Lectures required by the Colleges and Hall	...	...	...	...	...	...	...	...	...
FEE for ditto, and Hospital Medical and Surgical Practice	£105, in three instalments, or £94 10 in one sum.			...	...	120 0	...	...	£100 0

* Med. Tutor, Dr. Phillips; Surg. do., Mr. Pye; Obst. do., Dr. H. Jones—throughout year thrice weekly.

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TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1887-88—(CONTINUED.)

LECTURES, &c.	ST. THOMAS'S HOSPITAL AND SCHOOL. LECTURERS.	DAYS AND HOURS.	UNIVERSITY COLLEGE AND HOSPITAL. LECTURERS.	DAYS AND HOURS.	FEES. One Course. £ s.	WESTMINSTER HOSPITAL. LECTURERS.	DAYS AND HOURS.	FEES. One Course. £ s.
WINTER SESSION.								
ANATOMY AND PHYSIOLOGY ...	Dr. Sherrington	M. W. F. 9½ T. W. F. 4	*Professor E. A. Schafer	Daily, 10 (ex. S.)	2, 4, 5 & 7 gs.	Dr Heneage Gibbes	M. W. F. 1.30	6 6
PRACTICAL PHYSIOLOGY AND HISTOLOGY	Dr. T. C. Charles (in Summer)	M. Tu. W. F. 2	*Professor E. A. Schafer	Daily (ex. F. & S.) 12	...	Dr Heneage Gibbes and in Summer	Th. 1.30 M. W. F. 1.30	7 7 5 5
PHYS. DEMONSTRATIONS	Mr. Copeman	M. F. 10½ T. Th. 12	Dr. Halliburton	...	...	...	...	...
ANATOMY, DESCRIPTIVE AND SURGICAL	Mr. Reid Mr. Anderson	M. 11, T. 9½ S. 9½ & 11	Prof. Thane	Daily, 12	12 12	Mr. Black	Tu. W. Th. F. S. 9	6 6
ANATOMICAL DEMONSTRATIONS	Mr. Reid, Mr. Anderson, Dr. Taylor, & Mr. Makins	Daily, 10½ to 4½ S. 10½ to 1	Mr. P. Flemming Mr. E. H. Thane	...	...	Mr. Hebbert [*Morbid Histology:* Dr Heneage Gibbes, Tu. Th. 11, £5 5s. in Summer]	Daily, 10 to 1	5 5
PATHOLOGICAL ANATOMY... ...	Dr. Payne & Dr. Sharkey	S. 11½ M. 4, W. F. 9*	Prof. Horsley (*Pract. Path.*)	M. & Th. 4–6	2 2	...	...	...
CHEMISTRY	Dr. A. J. Bernays	T. Th. F. 10½	Drs. Ramsay and Plimpton	Daily, (ex. S.) 11	7 7	Dr. Dupré and Dr. Wilson Hake	W. Th. F. 3	6 6
MEDICINE	Dr. Bristowe Dr. Ord	M. Th. F. 4	Prof. H. C. Bastian	Daily, (ex. M. & S.) 9	9 9	Dr. Sturges Dr. Allchin	M. W. Th. 3	6 6
SURGERY	Mr. S. Jones Sir W. Mac Cormac	M. Th. F. 9	Prof. Marcus Beck	M. & S. 9, W. 4	7 7	Mr. Cowell Mr. Macnamara	Tu. Th. 4 F. 3	6 6
GENERAL PATHOLOGY	...	...	[*Chem. Physics:* Prof. Foster]	W. Th. 10	1 11	Dr. Allchin	...	...
NATURAL PHILOSOPHY...	Dr. Stone (*with Physics*)	S. 12	...	...	...	Dr. Ogilvie	...	3 3
HOSPITAL PRACTICE:			Drs. Walshe, Reynolds, Hewitt, Hare	Daily, 1 & 2	12			
PHYSICIANS	Dr. Bristowe Dr. Stone Dr. Ord Dr. Harley Dr. Payne Dr. Gervis (*obst.*)	Daily, Winter & Summer, 2	Sir W. Jenner, Drs. Ringer, Bastian, Roberts, Gowers, Poore, Barlow, Williams (*obst.*), & Crocker (*Skin*)	Each twice weekly Twice weekly	mths. 15 15	Drs. Sturges Allchin, Donkin, Potter (*obst.*), Fox (*Skin*) [*Neur. & Alienism:* Dr. Mercier, F. 4 £2 2s.]	M. Th 1½ Tu. F. 1½ W. S. 1½ Tu. F. 3 W. 1½	12 mths. 15 15
ASSISTANT-PHYSICIANS	Drs. Sharkey, Gulliver, Hadden, and Acland Cory (*obst.*) Semon (*Throat*)	Daily, 1½ T. F. 1½	Drs. Money and Spencer (*obst*)	...	...	Dr. Hall Dr. Bennett Dr. Murrell Dr. Grigg (*Obst.*) Dr. Hall (*Throat*)	M. Th. 1½ Tu. F. 1½ W. S. 1½ Tu. F. 9 W. 9	...
SURGEONS	Mr. S. Jones Mr. Croft Sir Wm. Mac Cormac Mr. MacKellar Mr. Nettleship (*ophthal.*)	Daily, 2	Messrs. Quain, Erichsen, Jones, Ibbetson, and Sir H. Thompson, Profs. Marshall, B. Hill, & C. Heath Mr. Hutchinson (*dent.*) Prof. M. Beck Mr. A. E. Barker Mr. R. J. Godlee & Prof. J. Tweedy	Daily, 1 & 2 Thrice weekly	...	Mr. Cowell Mr. Davy Mr. Macnamara Dr. Walker (*dent.*) Mr. M. Smale (*dent.*) [*Ophth. Prac.:* Mr. Cowell] [*Orthopædic:* Mr. Davy] [*Aural:* Mr. Black]	M. Th. 1½ Tu. F. 1½ W. S. 1½ W. 9½ S. 9½ M. Th. 3 F. 2½	12 mths. 15 15
ASSISTANT-SURGEONS	Messrs. Clutton, Anderson, Pitts & Makins	Daily, 1½	Mr. Victor Horsley Mr. Bilton Pollard	...	...	Messrs. Cooke, Bond, Stonham, & Spencer	M. Th. 1½ Tu. F. 1½ W. S. 1½	...
CLINICAL MEDICINE	The Physicians	After visits	The Physicians	Fortntly, & twice a week	...	Dr. Sturges Dr. Allchin Dr. Donkin	M. Th. 1½ Weekly	...
CLINICAL SURGERY...	The Surgeons in rotation Mr. Croft	After visits M. 9,* T. 9	By the Surgeons	Once a week and Fortntly,	...	Mr. Cowell Mr. Davy Mr. Macnamara		...
CLINICAL MIDWIFERY, &c.... ...	Dr. Gervis	Tu. 4	Dr. Williams Dr. H. Spencer	Fortntly,	...	Dr. Potter [*Path. Dem.*: Dr. Hebb, weekly] [*Minor Surg. & Bandaging* in Summer]	Altern. F. 3 Post-mortem exam. 2 Operations, Tu. W. at 2	...
	[*Vac.*: Dr. Cory, W. 11½]	Operations, W. S. 1½ *oph.* T. 4, F. 2		Operations, W. at 2				
SUMMER SESSION.								
MATERIA MEDICA, &c.	Dr. Stone and Mr. Plowman	M. W. F. 12 noon	Prof. Roberts	M. 9, Tu. W. Th. F. 10.	6 6	Dr. Murrell	Tu. Th. S. 9	3 3
MIDWIFERY, &c....	Dr. Gervis	M. Tu. Th. F. 4	Prof. Williams	Daily, (ex. M.) 9	6 6	Dr. Potter	Tu. W. Th. F. 4	4 4
BOTANY	Mr. A. W. Bennett	Tu. W. S. 10	Prof. Oliver	Daily, (ex. S.) 8	3 13	Mr. Worsley Benison	...	4 4
MEDICAL JURISPRUDENCE... ...	Mr. Clutton, Drs. Bernays & Cory	Tu. Th. S. 9	Prof. G. V. Poore	Tu. W. Th. F. 10	5 5	Dr. Hall Dr. Dupré (*Tox.*)	Tu. W. F. 3	3 3
PRACTICAL CHEMISTRY	Dr. Bernays	M. Th. F. 10 to 12	Dr. Ramsay	Daily, (ex. M. S.)	5 5	Dr. Wilson Hake	M. W. F. 10 to 12	4 4
STATE MEDICINE	Dr. E. Seaton	W. 10½	Prof. Corfield	11	...	...	...	...
MENTAL DISEASES	Dr. Rayner	F. 12	Dr. Mickle	W. 3	2 2	Dr. Sutherland	...	...
HYGIENE AND PUBLIC HEALTH	...	...	Prof. Corfield	Tu. Th. 4	3 3	...	...	...
CLINICAL MEDICINE	The Physicians	After visits	As in Winter	...	...	As in Winter	...	...
COMPARATIVE ANATOMY	Dr. Gulliver (with Zoology)	M. Th. 9	†Prof. Lankester	T. W. Th. F. 1	6 6	Dr. L. Ogilvie	...	3 3
PATHOLOGY & MORB. ANATOMY	Dr. Sharkey Dr. Hadden	Daily, 2	Prof. Horsley	M. S. 10, Th. 4	6 6	Dr. Allchin (in Summer)	M. W. Th. 4	3 3
OPHTHALMIC SURGERY	Mr. Nettleship Mr. Lawford	Tu. F. 5	†Prof. J. Tweedy	M. W. 4	2 2	Mr. Cowell	M. 2½	...
DENTAL SURGERY	Mr. Truman	...	Mr. S. J. Hutchinson	...	...	Dr. Walker	W. 9½	2 2
PRACTICAL SURGERY	Messrs. MacKellar, Clutton, & Pitts	F. 9	†Mr. Bilton Pollard †Mr. R. J. Godlee †Mr. Barker	M. Th. 4	6 6	Mr. Davy	F. 12½	4 4
OPERATIVE SURGERY	Mr. MacKellar, Mr. Clutton	...	Mr. R. J. Godlee	...	5 5	Mr. Davy	...	4 4
PRACTICAL PHARMACY...	Mr. Plowman	...	Mr. Gerrard	...	3 3	Mr. Tanner	...	3 3
FEE for Lectures and Hospital Practice	...	125 Guineas.		...	131 5	In 1 sum, £100. In 2, £105. In 5, £115. No extras ex. dissectns. & exp. physics.		

* In Summer. † In Winter.

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TABULAR LIST OF THE CLASSES, LECTURERS, ETC., AND FEES, AT THE PROVINCIAL SCHOOLS OF MEDICINE, FOR THE SESSION 1887-88.

LECTURES, &c.	BIRMINGHAM QUEEN'S COLLEGE.			BRISTOL MEDICAL SCHOOL.			CAMBRIDGE UNIVERSITY.			LEEDS SCHOOL OF MEDICINE.		
	Lecturers.	Days and Hours.	Fees. One Course.	Lecturers.	Days and Hours.	Fees. One Course.	Lecturers.	Days and Hours.	Fees.	Lecturers.	Days and Hours.	Fees.
WINTER SESSION.			£ s.			£ s.			£ s.			£ s.
ANATOMY AND PHYSIOLOGY	Mr. J. Berry Hayeraft*	M. T. W. Th. F. 11	6 6	Mr. G. M. Smith Dr. Clarke	M. Tu. W. Th. F. S. 10	5 5	Prof. Macalister Prof. Foster	Tu. Th. S. 1 and 9		Prof. Birch and Dr. Barrs	M. T. W. Th. F. 9½	5 5
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. B. C. A. Windle	M. Tu. Th. F. 12	6 6	Mr. Harsant	M. Tu. W. Th. F. S. 9	5 5	Prof. Macalister	M. W. F. 12	...	Prof. Griffith and Mr. Robinson	Daily	5 5
ANATOMICAL DEMONSTRATIONS	Messrs. Jordan Lloyd, Haslam, & Foxwell	Daily	5 5	Mr. Penny	...	...	Prof. Macalister Dr. Hill	Daily, 9–5	...	Dr. Oliver	...	...
PRACTICAL PHYSIOLOGY	Mr. Haycraft	...	...	...	...	...	Prof. Foster (and in Summer)	...	...	Prof. Birch and Dr. Barrs	...	6 6
CHEMISTRY	Dr. W. A. Tilden*	Daily (ex. S.) 9½	5 5	Mr. Coomber	Tu. Th. S. 8	3 3	Prof. Liveing	T. Th. S. 12	...	Prof. Smithells	M. Tu. Th. F. 4	5 5
MEDICINE	Drs. Foster & Sawyer	Tu. W. F. 3	6 6	Drs. Spencer & Skerritt	M. W. F. 9	5 5	Prof. Paget, Dr. Macalister	M. F. 12	...	Prof. Eddison and Dr. Churton	M. W. F. 1	6 6
THERAPEUTICS	...	...	...	...	...	...	Prof. Latham	M. W. alt. F. 10	...	Dr. Hellier	...	...
SURGERY	Mr. Pemberton Mr. F. Jordan	Tu. W. F. 4	6 6	Mr. Dobson	Tu. Th. S. 9 A.M.	5 5	Prof. Humphry	T. Th. S. 12	...	Prof. McGill Mr. Robson	W. F. 2	6 6
HYGIENE	...	...	...	Dr. Davies	M. F. 10 A.M.	2 2	Dr. Anningson	W. 1	...	...	...	...
HOSPITAL PRACTICE:												
PHYSICIANS	General Hospital and Queen's Hospital.	...	31 10	Bristol Roy. Infirmary, and Bristol General Hospital.	Daily, 11½ to 3	...	Addenbrooke's Hospital. Prof. Latham Dr. Bradbury Dr. Macalister	Daily	Perpet. 12 12	Leeds General Infirmary. Dr. Eddison Dr. Churton	...	...
SURGEONS	(*See Additional Information on Schools.*)	...	...	(*See Additional Information on Schools.*)	...	...	Prof. Humphry Mr. Carver Mr. Wallis Mr. Wherry	Daily		Messrs. Jessop, Atkinson, McGill, & Robson	...	...
SUMMER SESSION.												
MATERIA MEDICA, &c.	Dr. Rickards Dr. C. W. Suckling	Tu. W. Th. 13	4 4	Dr. Shaw	Tu. Th. S. 9 A.M.	3 3	Prof. Latham (and *Pharmacy*)	M. W. F. 9		Dr. J. B. Hellier	T. F. 9	4 4
MIDWIFERY, &c.	Mr. Clay and Dr. Bassett	Tu. W. Th. F. 1	5 5	Dr. Swayne and Dr. Lawrence	Daily (ex. S.) 8 A.M.	4 4	Dr. Ingle	M. T. Th. S.		Mr. Wright [*Gynæcology:* Dr. J. Braithwaite]	M. W. F. 11½	5 5
PRACTICAL SURGERY	...	...	...	Mr. Prichard	Tu. Th. S. 9	3 3	Mr. Wherry	Daily		Mr. Robson	...	...
OPERATIVE SURGERY	Mr. Bartleet Mr. B. May	...	...	Mr. Keall	Tu. W. F. 10 A.M.	3 3						
BOTANY	Mr. W. Hillhouse*	M. W. F. 3	4 4	Mr. Leipner	Tu. Th. S. 10 A.M.	3 3	Mr. Vines	M. W. F. 1		Prof. Miall	M. W. F. 2	4 4
MEDICAL JURISPRUDENCE	Mr. Wilders Dr. A. B. Hill	M. T. 1 F. 12	4 4	Dr. Eager Dr. Harrison	M. Th. S. 10 A.M.	3 3	Dr. Anningson	T. Th. S.		Mr. Scattergood [*Hygiene:* Mr. Hartley]	M. Tu. Th. F. 12½	5 5
MENTAL DISEASES	Mr. Whitcombe	...	...	...	...	...	Dr. Rogers	...		Mr. Lewis	W. 3	...
PRACTICAL CHEMISTRY	Dr. W. A. Tilden*	T. Th. 2–4	4 4	Mr. Coomber	M. W. F. 9 A.M.	3 3	Prof. Liveing	Daily		Prof. Smithells	Tu. Th. 10	4 4
PRACTICAL PHYSIOLOGY & HISTOL.	Mr. J. B. Hayeraft*	M. W. F.	4 4	Mr. G. F. Atchley	M. W. F. 8	4 4	Prof. Foster	...		...	...	...
COMPARATIVE ANATOMY	Mr. Bridge	...	...	Prof. Morgan	Tu. W. F. 10 A.M.	4 4	† Prof. Newton (Wint. Mr. Sidgwick)	M. Tu. F. 1		Prof. Miall	...	...
PATHOLOGY AND MORBID ANATOMY	Mr. Barling	...	...	Dr. Smith	M. W. F. 9 A.M.	3 3	Prof. Roy	M. Tu. Th. F. 9		Dr. Jacob	...	3 3
PRACTICAL HISTOLOGY	Mr. Haycraft	...	...	Dr. Baron	Tu. Th. S. 8½	4 4	Dr. Hill	S. 12		...	...	...
DENTAL SURGERY	Mr. Sims	...	3 3	...	...	...	Dr. Cunningham	M. W. F.		...	...	...
DENTAL ANATOMY & PHYSIOLOGY	Mr. Humphreys	...	...	...	...	...	Dr. Cunningham	...		...	...	...
DENTAL METALLURGY	Dr. W. A. Tilden	...	...	...	...	...	...	...		...	...	...
DENTAL MECHANICS	Mr. Elliott	...	...	...	...	...	...	...		...	...	...
CLINICAL MEDICINE	The Physicians of the two Hospitals.	...	...	...	Weekly	...	The Physicians	Daily		Physicians of the Infirmary	Tu. 1	...
CLINICAL SURGERY	The Surgeons of the two Hospitals. [*Hon. Curat. Mus. & Hon. Sec.:* Dr. Windle]	...	...	...	Ditto	...	The Surgeons	Daily		Surgeons of the Infirmary	...	...
FEES for all the Lectures required by the College and Hall	...	...	£63 0	...	...	£63 0	...	...		...	...	£63 0
Composition Fee for Hospital Medical and Surgical Practice	...	...	£42 0	...	...	or £52 10 £36 15	...	...		...	...	£42 0

The fee for each course of lectures or demonstrations is one or two guineas per term.

* Held in Mason Science College.

† With Zoology.

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TABULAR LIST OF THE CLASSES, LECTURERS, ETC., AND FEES, AT THE PROVINCIAL SCHOOLS OF MEDICINE, FOR THE SESSION 1887–88.

LECTURES, &c.	UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.			UNIVERSITY COLLEGE, LIVERPOOL.			OWENS COLLEGE (VICTORIA UNIV.) SCHOOL OF MEDICINE.			SHEFFIELD SCHOOL OF MEDICINE.		
	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.
WINTER SESSION.			£ s.			£ s.			£ s.			£ s.
PHYSIOLOGY	Mr. Williamson Dr. Oliver	M. W. F. 10¼	5 5	Dr. Caton	Tu. Th. F. S. 9½	5 5	Prof. Wm. Stirling§ (*with Histology*)	M. Tu. W. Th. F. 11½	5 5	Dr. Sinclair White Dr. Porter	W. 12½ F. 4	3 3
PRACTICAL PHYSIOLOGY	Dr. Oliver (*in Summer*)	Tu. W. Th. 9	5 5	Mr. Larkin (Demonstrator)	M. W. 2, F. 9½	...	Prof. Stirling, Dr. Stewart, Mr. Kent	Daily, 10 to 5	...	Mr. Frank Harrison	...	3 3
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. Mears	Daily, 9½ M. Tu. Th. F. 12	5 5	Mr. Banks	Daily, 11	5 5	Prof. A. H. Young	Daily (ex.S.) 1	5 5	Mr. E. Skinner Mr. Chas. Atkin	M. W. F. 6 Tu. Th. 5	4 4
ANATOMICAL DEMONSTRATIONS	Dr. Mears	Daily, from 10 to 5	5 5	Dr. Ross	...	3 3	Dr. A. M. Paterson Mr. Robinson	...	1 1	Messrs. Atkin, Kilham, & Dr. S. Roberts	Daily	2 2
CHEMISTRY	Prof. Bedson	M. W. F. 9½	5 5	Dr. Brown	M. Tu. Th. F. 3	5 5	Prof. Dixon Prof. Schorlemmer	Tu. Th. S. 9½	3 10	At Firth College	M. W. F. 11½	4 4
MEDICINE	Prof. Philipson	M. W. F. 5	5 5	Dr. Glynn	Tu. Th. S. 9½	5 5	Prof. Morgan Dr. Ross	M. Tu. Th. 3	5 5	Drs. Bartolomé, Thomas, & Dyson	M. W. F. 5	4 4
SURGERY	Dr. Heath Dr. Arnison	M. W. F. 6	5 5	Mr. Parker	M. W. Th. 3	5 5	Prof. Lund Mr. F. Southam	M. W. F.	5 5	Mr. A. Jackson	M. W. F. 8 A.M.	4 4
PRACTICAL SURGERY	...	...	...	...	M. Th. 4	4 4	Mr. Jones (*with Operat. Surg.*)	Tu. 12	2 2	Mr. R. J. Pye-Smith	...	...
PATHOLOGY	Dr. Drummond (in Summer)	M. W. F. 4	...	Dr. Davidson	Tu. F. 4	3 3	Prof. Dreschfeld Mr Young, *Surg. Path.*	M. 2, Tu Th. 1 Tu 2	4 4	Mr. Coombe, Mr. H. Lockwood	...	...
EXPERIMENTAL PHYSICS	Mr. H. Stroud	Tu. Th. 10	...	Dr. Lodge	4 times wkly.	4 4	Prof. Stewart	M. W. F.	3 10	...	...	...
PUBLIC HEALTH	Mr. Armstrong	T. 3	5 5	Dr. Hope	...	1 1	Dr. Ransome (*in Summer*)	Tu. F. 2	2 2	SHEFFIELD GEN. INFIRMARY.	...	...
HOSPITAL PRACTICE:	NEWCASTLE INFIRMARY.			LIVERPOOL ROYAL INF.			ROYAL INFIRMARY.			Dr. Bartolomé		
PHYSICIANS	Drs. Philipson, Drummond, Oliver & Limont	Each twice weekly, 11	6 mnths 8 8 12 mnths	Dr. Waters Dr. Glynn Dr. Davidson	12 to 2½	6 mon. 6 6 12 mon. 7 7	The Physicians	Daily, 8½ to 12	Composition fee, full period, £42	Dr. Law Dr. Dyson	T. Th. S. 11 M. W. S. 11	Perpet. £15 15; £21 12 mths' prac., £10 10 6 months, £6 6s.
SURGEONS	Dr. Arnison Dr. Armstrong Dr. Hume Mr. Page	Each twice weekly, 10	£12 12 Comp. †£26 5	Mr. Bickersteth Mr. Harrison Mr. Banks	12 to 2½	6 mon. 7 7 12 mon. 10 0	The Surgeons	...		Messrs. Favell, A. Jackson, & Shaw	M. W. Th. S. 11¾	
ASSISTANT-SURGEONS	Mr. T. A. Dodd Mr. Williamson	Once weekly, 11	...	Mr. Parker	...		...	...		PUB. HOSP. & DISP. *Phys.*: Drs. Thomas, Porter, & S. Roberts *Surgs.*: Dr. Keeling Mr. Thorpe, & Mr. Pye-Smith		
SUMMER SESSION.				[*Dental Anat. & Phys.*: Mr. Paul, £3 3s.—*Dental Metallurgy*: Mr. Royston, £3 3s.]			[*Mental Diseases*: Mr. Mould]	Tu. Th. 4	1 11 6	[*Medical Tutor*: Mr. Lee]		
MATERIA MEDICA	Mr. McBean	M. W. 4, F. 5	5 5	Dr. Carter	Tu. Th. F. S. 9 A.M.	4 4	Prof. Leech	M. T. W. Th. 1	4 4	Dr. Young	M. W. F. 8 A.M.	3 3
MIDWIFERY, &c.	Dr. Nesham Dr. Gibson*	Daily, 9 A.M.	5 5	Dr. Wallace‡ Dr Gee (*child. dis.*)	M. W. F. S. 9½ M. W. F. 11	5 5 2 2	Prof. Callingworth Dr. Ashby (*Dis. Chil.*)	M. T. Th. F. 1 W. F. 3	4 4 2 2	Dr. Keeling, Messrs. R. Favell & Laver	M. W. F. 8 P.M.	3 3
BOTANY	Dr. Murphy	Tu. Th. F. 4	5 5	Dr. Shearer	T. W. Th. F. 3	4 4	Prof. Williamson	Daily (ex.S.) 2½	2 12 6	Mr. Birks	Tu. Th. 8	3 3
MEDICAL JURISPRUDENCE	Mr. Page	M. Th. 8	5 5	Mr. Paul	M. W. F. 3	4 4	Dr. Dixon Mann	M. W. Th. 2	4 4	Mr. J. W. Harrison	Tu. Th. 5	3 3
PRACTICAL CHEMISTRY	Prof. Bedson	M. W. F. 10–1	5 5	Dr. Brown	M. T. Th. F. 10	4 4	Prof. Dixon	M. W. 10½	4 4	At Firth College	M. W. F. 11	3 3
COMPARATIVE ANATOMY	Prof. Brady	T. F. 4½	5 5	Dr. Herdman	4 times wkly.	3 3	Dr. A. M. Marshall‡ (*with Embryology*)	M. W. F. 10½	2 12 6	...	...	...
PATHOLOGY & MORBID ANATOMY	Dr. Drummond	M. W. F. 4	5 5	Dr. Barron (*Path. Histol.*)	Twice wkly.	1 1	Prof. Dreschfeld	M. 4, W. 1	2 2	Mr. Coombe Mr. Lockwood	...	3 3
OPHTHALMIC SURGERY	Mr. Williamson	M. 12	...	Mr. Browne‡	W. 4	1 1	Dr. Little	W. F. 4	3 3	Mr. Snell	W. 12½	...
DENTAL SURGERY & MECHANICS	Mr. Fothergill	Tu. F. 4	...	Mr. Phillips	...	3 3	Vacant	M. F. 4½	3 3	...	...	...
OPERATIVE SURGERY	Dr. Armstrong	7 A.M. & 3½ P.M.	5 5	Mr. Parker	Thrice wkly.	4 4	Mr. Jones	M. 4	4 4	...	...	3 3
CLINICAL MEDICINE	Phys. and Surg. of Infirmary	...	...	Phys. and Surg. of Roy. Infir.	...	...	Physicians and Surgeons of the Royal Infirmary	...	...	Phys. & Surg. of Gen. Infirm. & Pub. Hosp. & Dispensary	Tu. 5 Th. 5	...
CLINICAL SURGERY		...	...		...	...	[Comp. fee, Dental course, £50]	...	...		...	...
FEE for all Lectures required by the College and Hall	...	...	£63 0	...	...	£63 0	...	...	£63	...	...	£15
Ditto for Hospital Medical & Surgical Practice	...	...	†£26 5	...	...	£42 0	...	...	£42	...	...	£18 18s.

* Diseases of Women and Children. † In addition to the above, £2 2s. yearly up to three years. ‡ In Winter. § Physiological Laboratory, Prof. Wm. Stirling, daily, 9½ to 5.

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TABULAR LIST OF THE CLASSES, LECTURERS ETC., AND FEES, AT THE MEDICAL SCHOOLS OF SCOTLAND, FOR THE SESSION 1887-88.

LECTURES, &c.	ABERDEEN UNIV. Lecturers.	Fees. One Course.	EDINBURGH UNIV. Lecturers.	Fees. —	SCHOOL OF MEDICINE, EDINBURGH. Lecturers.	Fees. First Course.	GLASGOW UNIV. Professors.	Fees. One Course.	GLAS. ROY. INFIRM. SCHOOL OF MEDICINE. Lecturers.	Fees. One Course.	GLASGOW, ANDERSON'S COLL. MED. SCHOOL. Lecturers.	Fees. One Course.	GLASGOW WESTERN MEDICAL SCHOOL. Lecturers.	Fees. One Course.
WINTER SESSION.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s. d.
ANATOMY (Demonstrs., &c.)	Dr. Struthers, 9, 11	5 5	Sir William Turner	4 4	Messrs. Symington & M. Brown, 9 to 5	7 9	Dr. J. Cleland, 11, 2	6 6	Mr. Clark, 4	4 4	Dr. A. M. Buchanan, jun. 4, sen. 12½	4 4	Mr. J. T. Carter, 11	4 4 0
CHEMISTRY (Practical, &c.)	Prof. Brazier, 3 [*Pract. Hyg.*: Dr. Matthew Hay]	3 3	Dr. Crum Brown, 10 (Adv. Class in Sum.)	4 4	Dr. S. Macadam, Messrs. King, Macadam, & Drinkwater, 10	3 5	Dr. J. Ferguson, 10	3 3	Dr. Milne, 10 [*Dis. of Throat*: Dr. Newman, 3, in Summer]	2 2	Dr. Dittmar, 10	2 2	...	...
PHYSIOLOGY (Inst. of Med.)	Dr. MacWilliam, 2	3 3	Dr. Rutherford, 11	4 4	Dr. James & Mr. J. Hunter, 11	3 5	Dr. McKendrick, 12	3 3	Dr. Barlow, 3	2 2	Dr. Christie, 3	2 2	...	...
GENERAL PATHOLOGY, &c.	Dr. Hamilton, 9	3 3	Dr. Greenfield, 3	4 4	Dr. Alex. Bruce, 9	3 5	3 o'clock	3 3	Dr. Newman, 10‡	3 3	(In Infirmary)	...	...	...
MEDICINE	Dr. Smith-Shand, 3	3 3	Dr. Grainger Stewart, 9	4 4	Drs. Wyllie, Affleck, Bramwell, & Brown	3 5	Dr. Gairdner, 11	3 3	Dr. Anderson, 12	2 2	Dr. Gemmell, 5	2 2	Dr. McVail, 11	2 2 0
SURGERY	Dr. Alex. Ogston 10	3 3	Dr. Chiene, 10	4 4	Mr. Miller, Dr. MacGillivray, Mr. Cathcart, & Mr. F. M. Caird, 10	3 5	Sir G. H. B. Macleod, 1	3 3	Dr. Macewen, 11 [*Public Health*: Dr. Glaister, in Summer]	2 2	Dr. Dunlop, 11	3 2	Mr. Knox, 12	2 2 0
MATERIA MEDICA, &c. ...	Dr. Cash, 4	3 3	Dr. T. R. Fraser, 2	4 4	Drs. Crum Brown & Gibson, 2	3 5	Dr. Charteris, 12	3 3	Dr. Dougall, 1	2 2	Dr. Morton, 4	2 2	...	...
MIDWIFERY, &c.	Dr. Stephenson, 4	3 3	Dr. Simpson, 10 (Dis. Wom. & Child.)	4 4	Drs. Bell, Young, & Milne Murray, 11	3 5	Dr. Leishman, 2	3 3	Dr. Stirton, 3	2 2	Dr. A. Wallace, 1 (In Summer)	2 2	Dr. Reid, 12	3 2 0
MED. JURISPRUDENCE, &c.	Dr. Hay, 9 (in Summer)	3 3	Sir D. Maclagan, 11 (in Summer only)	4 4	Dr. Littlejohn, 2	3 5	Dr. Simpson,‡ 11	3 3	Dr. Glaister, 11 (in Summer)	2 2	Vacant, 11½	2 2	...	...
NATURAL HISTORY	Dr. Nicholson, 2	3 3	Dr. Ewart, 2	4 4	Mr. J. A. Thomson	...	Dr. Young, 9	3 3	...	...	(In Summer)	...	...	...
NATURAL PHILOSOPHY ...	...	...	Mr. Tait, 11	3 3	...	...	Sir Wm. Thomson	4 4	...	...	Prof. Blyth	...	...	...
HOSPITAL PRACTICE:	Aberdeen R. Inf.		Edin. Royal Inf.		Edin. Royal Inf.		Glasgow Roy. Inf. and West Inf., 9		...	...	Glasgow Roy. Inf.		...	...
Physicians	Drs. Smith-Shand, A. Fraser, and Blackie Smith Daily [*Assist.-Phys.*: Dr. Rodger]	One year, £3 10s. Perpetual, £6.	...	Perpet. ticket, £12 12s.	Drs. Muirhead, Brakenridge, Wyllie, Affleck, & Halliday Croom, 12	1 year, £5 5s.	The Physicians and Surgeons of the Infirmaries (and in Summer)	1st year, £10 10s.; 2nd year & perpetual, £10 10s.	Dr. Robertson Dr. Perry Dr. Wood Smith Dr. W. Anderson	Perpetual, including Clin. Lectures, £21	Drs. J. W. Anderson Gemmell, Robertson, & A. W. Smith, 9	1st year, £10 10s.; 2nd, £3 10s.; afterwards free; 6 months, £6 6s.; 3 months, £4 4s.	The Physicians & Surgeons in the Western Infirmary,	
Surgeons	Drs. Ogston, Ogilvie, Will, & Garden; Williamson (*dental*) Daily		...		Mr. Duncan, 12		9 o'clock		Dr. Dunlop Dr. Macewen Mr. Clark Dr. Knox Dr. Fleming		*Out-patients*: Dr. Dougall			
Assistant-Surgeons ...	Dr. McKenzie Booth	...	...	...	...	...	...	...	...	...	*Out-patients*: Drs. Barlow and Adams			
CLINICAL MEDICINE	Drs. Smith-Shand, A. Fraser, and McKenzie Booth	3 3	Drs. G. Stewart, Fraser, & Greenfield, & Dr. Simpson, for Dis. of Women, Tu. F. 12 to 2	4 4	Drs. Muirhead, Brakenridge, Wyllie, Affleck, & Halliday Croom Tu. F. 12‡	3 5	Drs. McCall Anderson & Gairdner, 9 (and in Summer)		The Physicians	...	The Physicians, 9	...	...	...
CLINICAL SURGERY	Drs. Ogston, Ogilvie, Will, and Garden	3 3	Dr. Annandale, M. Th. 12	4 4	Mr. Duncan, M. Th. 12‡	3 5	Dr. Buchanan & Sir G. H. B. Macleod, 9 (and in Summer)	...	[*Dent. Surg.*: Dr. Woodburn, 3] The Surgeons	5 0 ...	The Surgeons, 9	...	...	...
SUMMER SESSION.														
PRAC. ANAT. & DEMONS. ...	Dr. Struthers, 9 to 4	2 2	Sir Wm. Turner, 1, 4	3 3	Messrs. Symington & M. Brown, 9 to 4	2 2	Dr. Cleland and Demonstrators, 11	2 2	Mr. Clark, 12	1 11 6	Dr. Buchanan, 11½	2 2	Mr. J. T. Carter, 2	1 11 6
BOTANY	Dr. Trail, 8	3 3	Dr. Dickson, 8	4 4	Mr. A. N. McAlpine	...	Mr. Bower, 8	3 3	...	...	Mr. Wilson, 3	1 11 6	...	...
HISTOLOGY	Dr. Struthers and Dr. MacWilliam	...	...	2 2	Dr. James & Mr. James Hunter	...	Dr. McKendrick, 12	3 3	Dr. Barlow, 1	...	Dr. Christie, 1	2 2	...	...
COMPARATIVE ANATOMY...	...	...	...	...	Dr. A. Wilson	...	Dr. Young, 12	3 3	...	...	...	...	...	...
PRACTICAL CHEMISTRY ...	Mr. Brazier, 10	3 3	Dr. Crum Brown, 10, 11	3 3	(As in Winter)	3 3	Dr. J. Ferguson, 10	3 3	Dr. Milne, 10½	2 2	Dr. Dittmar, 2½	2 2	...	...
DISEASES OF THE EAR ...	Dr. McKenzie Booth	1 1	...	...	Dr. Duncanson & A. P. McBride	3 3	[*Pract. Mat. Med.*: Dr. Charteris, 12]	3 3	Dr. Macfie, 4	1 1	Dr. Barr, 3	Free	Mr. J. Walker Downie, S. 10	1 1 0
DISEASES OF THE EYE ...	Dr. Davidson	1 1	Dr. A. Robertson, 9	3 3	Roberts n & Berry	...	Dr. T. Reid, 2	1 1	Mr. Clark, Tu. F. 4	...	Dr. Wolfe, 12	Free	...	...
DISEASES OF CHILDREN ...	Dr. Stephenson	...	Drs. Andrew & Carmichael	1 1	Underhill, Playfair	...	...	...	...	...	(With Midwifery)	...	...	...
NATURAL HISTORY	Dr. Nicholson, 2	3 3	Dr. Ewart, 2 [michael*	4 4	Wilson & Thomson	3 5	...	...	...	...	...	...	...	...
MED. PSYCHOL. & INSANITY	Dr. Reid	1 1	Dr. Clouston, † M W F	3 3	Dr. J. Take, 2	2 2	Dr. Yellowlees	2 2	Dr. Robertson, 12	1 1	(With Jurisprud.)	...	...	...
GYNÆCOLOGY	Dr. Stephenson, 11	2 2	Dr. Simpson, 11	4 4	...	...	Dr. Leishman	2 2	Dr. Stirton	...	(With Midwifery)	...	Dr. Reid, 12	2 2 0
MIDWIFERY, &c.	(In Winter)	...	[*Pr M.Anat.&Path* Dr. Greenfield, 11]	4 4	Drs. Croom, Macdonald, Bell, Young	3 5	...	...	Dr. Stirton, 3	2 2	Dr. A. Wallace, 1	2 2	...	...
OPERATIVE SURGERY... ...	Dr. Alex. Ogston, 10	2 2	Dr. Chiene, 8	3 3	... §	...	Sir G. H. B. Macleod, 1	2 2	Dr. Macewen, 12	2 2	*Pb.H.*: Dr. Christie, 4 Dr. Dunlop, 11	Free 2 2	Mr. Knox, 12	2 2 0

* Also in Winter. † With Prac. Instruction at an Asylum (Mon. Wed. Fri.), £3 3s. ‡ In Summer. § Mr. A. G. Miller, Dr. MacGillivray, Mr. C. W. Cathcart, and Mr. F. M. Caird.

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TABULAR LIST OF THE CLASSES, LECTURERS ETC., AND FEES, AT THE MEDICAL SCHOOLS OF IRELAND, FOR THE SESSION 1887-88.

LECTURES, &c.	DUBLIN UNIVERSITY. Lecturers.	DUBLIN R.C. OF SURGEONS. Lecturers. Days and Hours.	Fees.	LEDWICH SCHOOL OF SURG. & MED. Lecturers.	DUBLIN, CARMICHAEL COLL. Lecturers. Days and Hours	Fees.	DUBLIN, CATHOLIC UNIVERSITY. Lecturers.	Days & Hours.	Fees.	BELFAST, QUEEN'S COLLEGE. Lecturers.	Days & Hours.	Fees. First Course.	CORK, QUEEN'S COLLEGE. Lecturers.	Days & Hours.	Fees. First Course.	GALWAY, QUEEN'S COLL. Lecturers. Days and Hours.	Fees. First Course.
												£ s.			£ s.		£ s.
ANATOMY AND PHYSIOLOGY	Dr. Cunningham (*chirurgery*)	Dr. Mapother M. W. F. 3		Mr. T. Mason Mr. M. A. Ward	Dr. J. A. Scott* daily (ex. S.) 2		Dr. Nixon Dr. Coppinger	Daily (ex.S.)12		Dr. P. Redfern	Daily (ex. S.) 2	3 0	Dr. J. J. Charles	Daily 1	3 0	Dr. Pye daily (ex.S.)3	3 0
ANATOMY, DESCRIPTIVE & SURGICAL	...	Profs. Stoker & Fraser		Dr. T. P. Mason and Mr. Ledwich	Dr. Heuston, daily, 1		Dr. R. Cryan Dr. Hayden	Daily (ex. S.) 1		Dr. P. Redfern	...	...	Dr. J. J. Charles	Daily (ex.S.)12	...	Dr. Pye daily (ex.S.) 1	...
PRACTICAL ANATOMY AND DISSECTIONS	Dr. Cunningham Dr. Little	...		...	Dr. Heuston, daily. Drs. Doyle, McVittie, Broomfield, Lentaigne, Beatty, Gunn, McHugh, Falkiner, & Burgess		Dr. Redmond Dr. M'Callagh Dr. M'Ardle Dr. Chance Dr. O'Carroll	7 to 7 daily		Dr. Sinclair	Daily (ex. S.) 12	3 0	Dr. Charles and Demonstrators	Daily, 12	3 0	Dr. Pye (and Demonstrators) Daily, 9 to 4	3 0
CHEMISTRY	Dr. Reynolds	Prof. Sir C. Cameron		Mr. E. Lapper	Dr. Tichborne Tu. Th. S. 3		Dr. Campbell	M. W. F., 11, 12		Dr. Letts	Daily (ex. S.) 3	2 0	Dr. Maxwell Simpson	M. W. F.	2 0	Dr. Rowney M. W. F. 12	2 0
PRACTICAL CHEMISTRY ...	Dr. Reynolds			Mr. E. Lapper	Dr. Falkiner† M. W. F. 12		†Dr. Campbell	M. T. W. F., 11, 1		Dr. Letts (*in Summer*)	Daily (ex.S.) 12	3 0	Dr. Maxwell Simpson	M. W. F.	3 0	Dr. Rowney Tu. Th. S. 2	3 0
MATERIA MEDICA AND PHARMACY	Dr. W. G. Smith	Mr. Macnamara		Mr. R. D. Purefoy	Dr. Duffey† Tu. Th. S. 1.30		†Dr. Quinlan	M. Tu. W. Th. 1		Dr. J. S. Reid	M. Tu. W. Th. 4	2 0	Dr. C. Y. Pearson	Tu. Th. S. 12	2 0	Dr. Colahan M. W. F. 2	2 0
BOTANY AND ZOOLOGY ...	Dr. Wright Prof. Mackintosh	Dr. Minchin		Mr. Robinson	Dr. Cosgrave† M. W. F. 11		†Dr. Sigerson	Th. 2 F. S. 1		‡Dr. R. O. Cunningham	*Zoology* M T W F 1 *(Botany)* M. Tu. W. Th. F. 11	2 0	Professor Hartop	M. W. 3 S. 12	2 0	Dr. W. King Tu. Th. S. 11	2 0
INSTITUTES OF MEDICINE AND PATHOLOGY	Dr. Purser	...		Mr. T. Mason	[*Practical Histology:* Dr. J. A. Scott†] Dr. Beatty (*in Sum.*)		Dr. Lyons	S. 3		...	...	...	...	...	...	Dr. Lynham *Exp. Physics:*	...
NATURAL PHILOSOPHY ...	Prof. FitzGerald	...		Mr. Lapper			†Rev. G. Molloy	Tu. Th. 1 S. 2		Dr. J. Everett (*in Winter*)	M. T. W. T F 11 &1	2 0	Mr. J. England	Tu. Th. 2	2 0	Prof. Larmor Tu. Th. 12	2 0
HOSPITAL PRACTICE	Sir P. Dun's or other Dublin Hospital.			Various Dublin Hospitals.	House of Indust., Adelaide, Meath Jervis-st., City of Dublin, Cork-street (Fever).		...	...		Belf. Roy., Ulstr., Un., and other Hospitals.	...	...	North and South Infirmaries.	...	...	Galway Infirmary & Town Hosp. Daily	Sess 4 4
CLINICAL LECTURES	...	...		...	...		...	...		...	...	...	...	...	...	Drs. Browne, Pye, Colahan & Lynham T. F. 10	...
SURGERY	Dr. E. H. Bennett	Profs. Sir W. Stokes and Hamilton		Mr. Nixon Mr. Stoker	[*Ophthal. Surg:* Dr. Fitzgerald, W. 1 Mr. Corley Tu. Th. S. 12	£3 3s. each Course, except Dissections and Pract. Chem., which are £5 5s. each.	Mr. J. P. Hayes	M. W. F. 3		Vacant	M. Tu. W. Th. 1	2 0	Dr. S. O'Sullivan.	Tu. Th. S. 4	2 0	Dr. J. V. Browne M. W. F. 11	2 0
MIDWIFERY, &c.	Dr. Kirkpatrick	Dr. Roe Tu. Th. S. 3		Mr. S. R. Mason	Dr. Jennings Dr. Macan M. W. F. 3		Dr. Byrne	Tu. Th. S. 2		Dr. Dill	M. Tu. W. Th. 3	2 0	Dr. Corby	Tu. Th. S. 4	2 0	Dr. Kinkead M. W. F. 2	2 0
MEDICINE	Dr. Finny	Dr. Foot M. W. F. 11		Dr. Knight Mr. Redmond	Dr. Moore M. W. F. 12		Dr. R. D. Lyons	Tu. Th. S. 3		Dr. Cuming	M. Tu. W. Th. 4	2 0	Dr. D. C. O'Connor	M. W. 12 S. 12	2 0	Dr. Lynham Tu. Th. S. 2	2 0
MEDICAL JURISPRUDENCE	Dr. Travers	Dr. Davy		Mr. R. Travers	Mr. Auchinleck (*in Summer*) M. W. F. 1	For each Course, £3 3s.; except Dissections, £5 5s.; Practical Chemistry and Practical Surgery, £5 5s.	†Dr. Macswiney	M. T. W. Th. 12		Dr. Hodges (*in Summer*)	M. Tu. W. Th. 2	2 0	Dr. C. Yelverton Pearson	M. W. S. 3	...	Dr. Rowney Dr. Kinkead Tu. Th. S. 4	2 0
COMPARATIVE ANATOMY...	Prof. Mackintosh	[*Hygiene:* Prof. Sir C. Cameron]		...	...		...	...		...	...	...	...	...	2 0	[*Modern Languages:*	...
PRACTICAL PHARMACY ...	...	[*Ophth. and Aural Surg.:* Prof. Jacob]		...	...		...	...		...	...	...	...	...	...	Dr. Geisler, £2]	...
LOGIC	The College Tutors			...	...		[*Ophthalmology:* Dr. D. D. Redmond]	...		...	...	...	Professor Stokes	...	1 0	Dr. T. W. Moffett M. W. F. 1	...

* Prac. Phys. in Summer. † In Summer. ‡ Zoology in Winter; Botany in Summer.

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METROPOLITAN HOSPITALS AND MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE. — The clinical practice of the hospital comprises a service of 750 beds, of which 676 are in the hospital at Smithfield, and 75 are for convalescent patients at Swanley.

Four house-physicians, ten house-surgeons, and a midwifery assistant are appointed annually, each of them holding office for one year, and provided with rooms by the hospital authorities. The ophthalmic house-surgeon is appointed for six months, and is eligible for re-election for a second term of six months. The senior assistant chloroformist and junior assistant chloroformist are appointed annually, and are provided with rooms. Two qualified assistant electricians are appointed every three months. No fee is paid for any of these appointments, and each receives a salary of £25. The clinical clerks, the obstetric clerks, the clerks to the medical out-patients, the dressers to the surgical out-patients, and the dressers in the special departments are chosen from the diligent students. Forty ward dresserships are given annually to the students who pass the best examination in the subjects of study of the first year. Other ward dresserships may be obtained by payment of the usual fees.

A college is attached to the hospital, in which students can reside, subject to the college regulations.

Foundation and other Prizes. — Open Scholarships in Science of the value of £130 each, tenable for one year, will be competed for in September. Candidates must not be more than twenty-five years of age for one, and twenty-one for the other, and must not have entered to the medical or surgical practice of any metropolitan medical school. The subjects of examination are Physics, Chemistry, Botany, Physiology (not more than four subjects to be taken), and Zoology.—Preliminary Scientific Exhibition (founded 1873). The subjects of examination are identical with those of the Open Scholarship in Science. This exhibition, of the value of £50, is tenable for one year. The examination is confined to students of the hospital of less than six months' standing, and will be held in October.—The Jeaffreson Exhibition, of the value of £20, is awarded after examination in the subjects of General Education. It is now an Open Exhibition.—A Senior Scholarship, £50, in Anatomy, Physiology, and Chemistry.—Kirke's Scholarship, and Gold Medal in Clinical Medicine, value 40 guineas. Lawrence Scholarship, and Gold Medal, of the value of 40 guineas (founded in 1873 by the family of the late Sir William Lawrence).—Two Brackenbury Scholarships in Medicine and Surgery, £30 each.—Junior Scholarships in the subjects of study of the first year: 1st, £50; 2nd, £30; 3rd, £20.

A prize for Anatomy has been founded by the late Mr. Henry Skinner in memory of his brother, and by Miss Shuter in memory of her brother, formerly assistant-surgeon to St. Bartholomew's Hospital.

CHARING-CROSS HOSPITAL AND COLLEGE.—Total fees, £91 10s., if paid in a single sum on entry, or £105 if paid in five instalments. General students pay proportionately lower fees, and are admitted without additional fee to the courses of Clinical Medicine and Surgery, to the new classes of systematic practical instruction in Medicine and Surgery, and to the practice of the Royal Westminster Ophthalmic Hospital. They alone are entitled to compete for the Scholarships, Gold Medal, and Pereira Prize.

Preliminary Science Instruction. — Arrangements have been made for students desirous of undergoing a course of instruction in science, such as that required for the Preliminary Scientific (M.B.) Examination of the University of London, to attend at the Normal School of Science, South Kensington.

Two Entrance Scholarships, of the value of £30 and £20 respectively, tenable for one year, are awarded annually in October, after a competitive examination in the following subjects:—*Compulsory*—English, Latin, Mechanics, and Mathematics; *Optional* (only one of which may be selected)—Chemistry, German or French, the subjects being those of the matriculation examination of the University of London. Candidates must give notice of their intention to compete, on or before Monday, September 19th, 1887. Two scholarships are open for competition among general students: the Llewellyn Scholarship of £25, for students who have just completed their attendance on lectures; and the Golding Scholarship of £15, for students who have just completed their first year. The Pereira prize of £5 is open to all general students, and is awarded annually for the best clinical reports. The Governor's Gold Medal is given for excellence in clinical work. Silver or Bronze Medals, or an equivalent in books, are awarded to the most distinguished students in all classes; and special prizes in the classes of Dental Surgery, Practical Surgery, and Practical Histology.

ST. GEORGE'S HOSPITAL.—Perpetual pupils, by payment of £130 in three instalments, or £125 in one sum, are entitled to admission to the medical and surgical practice; to compete for prizes and exhibitions; to hold the appointment of house-physician and house-surgeon, assistant house-physician, assistant house-surgeon, ophthalmic assistant, registrar's assistant, and to become clinical clerks for two periods of three months each, and dressers for similar periods. Gentlemen are admitted to the hospital practice and lectures required by the College of Physicians and Surgeons and the Society of the Apothecaries on payment of £45 at the commencement of the first year of study, £45 at the commencement of the second year of study, £20 for the third, and £15 for each subsequent year of attendance. These payments entitle the pupil to hold the offices of clinical clerk and dresser for three months each, and to become a candidate for the offices of medical and surgical registrar and demonstrator of anatomy and curator of the museum. These are all salaried offices. The obstetric assistant is resident, with a salary of £100.

Entrance Scholarships.—£125, open to sons of medical men; two of £50 each, open to all students commencing their medical studies; £90, open to students who have passed the Cambridge First M.B.; £75, open to students who have been signed up for or passed the Oxford First M.B. or Cambridge Second M.B.

Prizes.—The William Brown Exhibition of £100 per annum, tenable for two years, open to any perpetual pupil of St. George's who is under twenty-five years of age, and who shall have obtained a diploma or licence entitling him to be registered as a practitioner of medicine or surgery in England, within two years previously to the period fixed for the examination (July). The examination is to test the proficiency of the candidate in Medicine, Midwifery, and Surgery, including Ophthalmic Surgery.—The William Brown Exhibition of £40 per annum, tenable for three years, for general fitness for the exercise of the medical profession and for moral conduct, open to perpetual pupils in their fourth year of study.—Sir Charles Clarke's Prize (interest of £200 consols) for good conduct; the Brackenbury Prize in Medicine, value nearly £40; the Brackenbury Prize in Surgery, value nearly £40; the Treasurer's Prize, £10 10s.; the Thompson Medal; the Brodie Prize for Clinical Surgery; the Acland Prize for Clinical Medicine; the Pollock Prize in Physiology; the Henry Charles Johnson Prize in Anatomy; and General Proficiency Prizes, value £10 10s. each, for students of each year.

GUY'S HOSPITAL. — *Appointments:* House-physicians, house-surgeons, obstetric resident assistants, clinical assistants, surgeons' and assistant-surgeons' dressers, surgical ward clerks, clinical clerks, post-mortem clerks, extern obstetric attendants, and dressers and clerks in the special departments, are appointed from among the students, upon the recommendation of the medical staff, according to merit, and without extra payment. The house-physicians, of whom there are three, hold office for six months each, the first two months as third house-physician, another two months as second house-physician, and the last two months as senior house-physician. The third house-physician attends in the Out-patient Department three afternoons in the week, and sees all the cases not seen by the assistant-physician of the day. The second and senior house-physicians have the care of the patients in the Medical Wards, and attend to all emergencies arising in the absence of the physicians. They are provided with board and lodging in the hospital free of expense. The house-surgeons, of whom there are three, hold office for six months each. During the first two months the house-surgeon has the superintendence of the Surgical Casualty Department; for the next two months he has charge of cases in the Special Wards, and assists in the Out-patient Room; and for the last period, as

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senior house-surgeon, he has the care of the patients in the General Surgical Wards, and is responsible for their treatment in the absence of the surgeons. Except for the first two months, he is provided with board and lodging in the hospital free of expense. The surgeons' dressers are selected from those students who have completed their third winter session, and have been most diligent in the junior appointments. They hold office for six months each. Three are attached to each surgeon, and during their weeks of special duty they are provided with board and lodging in the hospital free of expense. The obstetric residents, two in number, are provided with board and lodging in the hospital free of expense.

Scholarships, Prizes, &c.—Entrance Scholarship in Arts £131 5*s*.). Subjects: Latin, Greek, French, German, and Mathematics.—Entrance Scholarship in Science (£131 5*s*.). Subjects: Inorganic Chemistry, Zoology, Botany, Physics. The examination begins on Wednesday, Sept. 28th.—For first-year students: First prize £50, second prize £25, for Anatomy, Physiology, Materia Medica, and Chemistry.—For second-year students: First prize £25, second prize £10, for Anatomy and Physiology. The Sands Cox Scholarship of £15 (tenable for three years) for Physiology. The Michael Harris prize of £10 for Anatomy.—For third-year students: First prize £25, second prize £10, for Medical and Surgical Anatomy, Midwifery, and Therapeutics.—For fourth-year students: First prize £25, second prize £10, for Medicine, Surgery, Midwifery, and Medical Jurisprudence. The Golding Bird prize of £33 for Methods of Diagnosis in Disease.—For senior students: The Treasurer's Gold Medal for Clinical Medicine; the Treasurer's Gold Medal for Clinical Surgery; the Gurney Hoare prize of £25 for Clinical Reports and Commentaries; the Beaney prize of 30 guineas for Pathology; and the Mackenzie Bacon prize of £15 for Nervous Diseases.—The Physical Society awards two prizes, each of £5, to the authors of the best Essays on selected subjects, prizes of £10 and £5 for the best papers read before the Society, and a prize of £5 to the member who has most distinguished himself in the debates of the session.

Fees.—1. A perpetual ticket, including admission to lectures, demonstrations, and hospital practice, competition for prizes, and eligibility for hospital appointments, may be obtained—(*a*) by the payment of 125 guineas on entrance; (*b*) by two payments of £66, one on entrance, the other at the commencement of the ensuing session; (*c*) by the payment of three annual instalments, at the commencement of each academical year: first year, £50; second year, £50; third year, £37 10*s*. 2. A reduction is made in the fees for a perpetual ticket in the case of students who have spent one or more years at another medical school. Students entering as second-year students are charged for their first year at Guy's Hospital, £50; second year, £40; third year, £20; or 95 guineas in one sum on entrance. Students entering as third-year students are charged for their first year at Guy's Hospital, £50; second year, £20; or 65 guineas in one sum on entrance. Students entering as fourth-year students are charged for their first year at Guy's Hospital. £50; second year, £5; or 50 guineas in one sum on entrance.

KING'S COLLEGE.—The physicians' assistants, the physician-accoucheur's assistant, the ophthalmic clinical assistant, the clinical clerks, and the house-surgeons and dressers, are selected by examination from among those matriculated students of the college who are pupils of the hospital. Rooms are provided within the walls of the College for the residence of a limited number of matriculated students. Rooms and commons are provided at the hospital for the resident officers free of charge.

Scholarships.—Warneford Scholarships: Two of £25 per annum for three years for Literature. Science: One of £50 and one of £25 each for two years. Sambrooke: One of £60 and one of £40 for Science. Rabbeth Scholarship of £20 per year for Science. College Scholarships: One of £40 per annum for two years; one of £30 for one year; three of £20 for one year. The Daniell Scholarship, for Chemistry, of the annual value of £20. Sambrooke Registrarships, of the annual value of £50 each, and tenable for two years, are open to all matriculated students who have filled any one of the higher appointments of the hospital, or who have become Associates. The Leathes Prizes, value £7, and the Warneford Prizes, value £40, are given annually amongst the matriculated medical students. Two Medical Clinical Prizes, one of £3 for the winter session, and one of £2 for the summer session, and two Surgical Clinical Prizes, of £3 each, are given. The Todd Medical Clinical Prize consists of a bronze medal and books to the value of £4 4*s*. The Tanner Prize for Obstetric Medicine, value £10, and the Carter Gold Medal and Prize for Botany, value £15, are given annually in July. Class Prizes, value £3 3*s*. each, are awarded annually in every subject. A Warneford Scholarship of £25 per annum for two years for third-year subjects is awarded annually to resident students only.

LONDON HOSPITAL AND COLLEGE.—The Medical School of the London Hospital has lately been entirely remodelled and rebuilt. The present buildings were opened by their Royal Highnesses the Prince and Princess of Wales on May 21st, the accommodation now afforded being more than double that which was provided in the old buildings. The hospital, which is the largest in Great Britain, contains nearly 800 beds. Last year the number of in-patients was 8743, out-patients 80,691, and the number of accidents 11,195.

The following Scholarships and Prizes will be offered for competition during the ensuing winter and summer sessions:—Two Entrance Scholarships in Natural Science, of the value of £60 and £40 respectively, will be offered for competition on September 19th, 20th, and 21st, 1887. The subjects are Physics, Botany, Zoology, and Inorganic Chemistry. The successful candidates must forthwith become full pupils of the hospital and school, if not already entered; and are not eligible to compete for the Buxton Scholarships.—The two Buxton Scholarships, value £30 and £20, will be offered for competition on September 26th, 27th, and 28th, 1887. The subjects are those appointed by the General Council of Medical Education and Registration as the subjects of the Preliminary Examination.—A Scholarship, value £25, in Anatomy, Physiology, and Chemistry, will be competed for at the end of the winter session by first and second year students.—A Scholarship, value £20, in Anatomy and Physiology for first-year students. (At the commencement of the summer session.)—The Letheby Prize, value £30, for Proficiency in Chemistry. (At the end of the summer session.) Open to all full students who have completed their second summer session up to the termination of their fourth year from entrance.—A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Medicine. (At the end of the winter session.)—A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Surgery. (At the end of the winter session.)—A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Obstetrics. (At the end of June.)—The Duckworth Nelson Prize, value £10, will be offered bienially for competition at the end of the winter session, and be open to all students on similar conditions to those of the Hospital Scholarships. The subjects of examination will be Practical Medicine and Surgery.—The Hutchinson Prize, value £35, will be given triennially to the author of the best essay upon a subject in Clinical Surgery. Candidates must be full students of the hospital who have not been registered more than ten years.—Out-patients' Dressers' Prizes. Six prizes, of the aggregate value of £60, will be offered for competition at the end of the winter session. Candidates must pass an examination in Minor Surgery, have dressed diligently for twelve months, and have passed the Primary Examination of the Royal College of Surgeons.—Two Dissection Prizes, value £6 and £4.

Special classes are held throughout the year for the Preliminary Scientific Intermediate M.B. Examinations of the University of London and for the Primary and Pass Examinations for the Fellowship of the Royal College of Surgeons. Special entries can also be made for Medical and Surgical Practice, the Operative Surgery classes, &c.

In addition to the regular courses of lectures, there will be given during the winter and summer sessions a course of Lectures on Clinical Medicine by Sir Andrew Clark, Bart., F.R.S., Emeritus Professor of Clinical Medicine, and courses of lectures on Clinical Surgery by Mr. Jonathan Hutchinson, F.R.S., Emeritus Professor of Clinical Surgery.

During the summer session a course of lectures will be delivered on Pathological Chemistry by Dr. C. H. Ralfe, Physician to the Hospital, on Mondays, at 4 P.M.

ST. MARY'S HOSPITAL.—There are five resident medical officers, four of whom are appointed for twelve months, and one, the obstetric officer, for six months, who board free of expense in the hospital. These appointments are awarded

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after competition, without additional fee. Two Demonstrators of Anatomy are appointed annually, with a salary of £70 and £50 respectively; a Demonstrator of Physiology, at £100 a year; and a Demonstrator of Histology, at £50 a year. All these officers are eligible for re-election. There is also a Demonstratorship in Pathological Anatomy, of the value of £15, and tenable for six months; the holder of this scholarship will assist the pathologist in the discharge of duties in the museum and dead-house. Two Prosectors of Anatomy and two Assistant Demonstrators of Physiology are appointed annually, and receive a certificate and £5 each for satisfactory service in their respective departments. All students are required to perform the duties of clinical clerk and dresser during the last two years of their curriculum. Students of the third year and of subsequent years are also appointed as clerks and dressers to assist the physicians and surgeons in charge of the out-patients. In addition to the instruction given in the wards daily, distinct Clinical Lectures are given on Fridays throughout the academical year, at 3.30 P.M. The hospital contains 270 beds, 130 of which are devoted to medical and 140 to surgical cases. Two wards are appropriated to the Diseases of Children, and one to those of Women; beds are also provided for Ophthalmic, Aural, and Cutaneous cases.

Scholarships, Prizes, and Appointments: Scholarships offered for open competition previously to entering at the Medical School.—Entrance Scholarships: The following will be offered for competition on Sept. 30th and Oct. 1st:—One Scholarship in Natural Science, of the value of 100 guineas, open to any gentleman who has not completed a winter session of study at a medical school. Three Scholarships in Natural Science, each of the value of 50 guineas, under the same conditions. One Scholarship of the value of 100 guineas, open to students from Epsom College, being sons of medical men, and who have not completed a winter session of study at a medical school. Two Scholarships, each of 50 guineas, open to students from the Universities of Oxford, Cambridge, or other University, who have not entered at any London medical school.

In addition to the Open Entrance Scholarships, Class Prizes, and usual Appointments, Scholarships will be offered for competition at the end of each year, open to all pupils. These Scholarships are of the value of £20, £25, and £30, for the first, second, and third years respectively.

A residence for students, 33, Westbourne-terrace, W., in connexion with the hospital, is under the charge of a warden, and the Dean is prepared to receive applications from students desiring to enter upon residence during the ensuing session. Terms: 90 guineas for the academical year, to include special instruction by the Demonstrators on three evenings a week.

MIDDLESEX HOSPITAL.—There is a special Cancer Department, affording accommodation for thirty-three in-patients, whose period of residence in the hospital is unlimited. Classes, open to all the students, are held for practical instruction in Medicine, Midwifery, in the microscopical examination of healthy and diseased tissues, and also in the application of bandages and other surgical apparatus. Students are allowed to take out to read at their own homes the books from the large and carefully selected medical library of the school. The museum has recently been rearranged, and a complete catalogue prepared of the various specimens. Two Entrance Scholarships, of the annual value of £50 and £30, and tenable for two years, are offered for competition at the commencement of the winter session. An Exhibition in Elementary Anatomy, Osteology, and Physiology, value £10 10*s.*, is awarded to students at the end of their first year. The Lyell Medal is awarded annually for proficiency in Surgical Anatomy and Practical Surgery. The Hetley Prize is awarded annually for Clinical proficiency. Two Broderip Scholarships, of the annual value of £30 and £20, tenable for two years, are awarded to those students who pass the best examination at the bedside and in the post-mortem room. The Murray Medal and Scholarship, founded in connexion with the University of Aberdeen, is awarded every third year to a student of this hospital; it will be next awarded in May, 1889. The Governors' Prize of 20 guineas is also awarded annually to the student after his third winter session who shall pass the best clinical examination in the out-patient departments. Valuable class prizes are also given, and fourteen resident clinical appointments are annually awarded, after competitive examination, to students who have completed their education and complied with the regulations of the school.

Arrangements have been made for students desirous of undergoing a course of instruction in Science, such as that required for the Preliminary Scientific (M.B.) Examination of the University of London, to attend such a course at the Normal School of Science, South Kensington. Fee for the whole course, £35. Students who enter for this course will be allowed a deduction of £20 on the fees for the medical curriculum.

A *Residential College*, intended to accommodate about thirty students, and adjoining the medical school, has been erected during the present year. The warden assists the students in their studies.

ST. THOMAS'S HOSPITAL.—*Prizes and Appointments for the year 1887-88.*—For First-year students: Two Entrance Scholarships in Natural Science of the value of 125 guineas and £60 respectively, open to all first-year students, will be awarded during the first week in October, after an examination in Physics, Chemistry, and either Botany or Zoology, at the option of the candidate; the William Tite Scholarship, the proceeds of £1000 Consols (£30 per annum), is awarded each year; also prizes of £20 and £10; summer £15 and £10. For Second-year students: The Peacock Scholarship of 40 guineas, and the Musgrove Scholarship of 40 guineas, are awarded biennially to the students who shall take the highest place in the first-class list in the examinations at the end of the second winter session; they are tenable for two years, provided the holder obtains a place in the first class in the subsequent examinations: making the winter prizes £42, £20, and £10; summer, £15 and £10; with the dresserships and the clinical clerkships. For Third-year students (winter): Second Tenure of Scholarship £42, and prizes of £20, £15, and £10; summer, £15 and £10. Clinical clerks and dressers are selected according to merit. The Grainger Testimonial Prize of £15 annually is awarded to students, who shall be from three to six years' standing, for the best Anatomical or Physiological Essay, to be illustrated by preparations and dissections. The Cheselden Medal for Surgery and Surgical Anatomy, and the Mead Medal for Practical Medicine, are awarded annually to fourth-year students. The Solly Medal, with a prize of from 10 to 20 guineas, will be awarded biennially to a student of the third, fourth, fifth, or sixth year, for the best report of Surgical cases. The next award will be made in 1888. The Treasurer's Gold Medal, for general proficiency and good conduct, is awarded annually to a fourth-year student.

Classes in Practical and Operative Surgery are held four times a week for six weeks prior to the final examinations of the Examining Board in January, April, and July. In connexion with these classes, Clinical Instruction is given in the wards by the resident assistant-surgeon, and a course of demonstrations on Museum Specimens is given by the curator, Mr. Shattock.

UNIVERSITY COLLEGE, LONDON.—*Composition Fees.*—1. For the entire medical education required by the Examining Board in England and the Society of Apothecaries, 120 guineas, if paid in one sum at the commencement of the course; 125 guineas, if paid by instalments, as follows—first year, 55 guineas; second year, 50 guineas; third year, 20 guineas. 2. For those Students who do not require to attend Chemistry, Pharmacy, and Materia Medica at a medical school (under the regulations of the Examining Board in England) the fee will be—100 guineas, if paid in one sum; 105 guineas, if paid by instalments, as follows—first year, 50 guineas; second year, 35 guineas; third year, 20 guineas. 3. For the whole course of instruction for the Intermediate Examination in Medicine of the University of London, 50 guineas. 4. For the course of instruction for the Final M.B. Examination of the University of London, 70 guineas, if paid in one sum; 72 guineas, if paid by instalments, as follows—first year, 40 guineas; second year, 32 guineas. 5. Composition fee for Dental Students, 60 guineas. 6. Composition fee for the whole course of instruction for the Preliminary Scientific (M.B.) Examination of the University of London, 35 guineas.

Exhibitions, Prizes, &c.—Three Entrance Exhibitions, of the respective values of £100, £60, and £40 per annum, tenable for one year, are annually awarded, upon examination by printed papers, to gentlemen who are about to commence their first winter attendance in a medical school. The subjects of the examinations are—Chemistry, Physics,

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Botany, and Zoology. The next examination will take place at the College on September 29th and 30th. The Atkinson Morley Surgical Scholarship of £45, tenable for three years, is annually awarded to the student who, upon examination, is found to possess the greatest proficiency in the Theory and Practice of Surgery. The Charpey Physiological Scholarship of about £105 per annum, tenable for three years, for proficiency in Biological Science. Filliter Exhibition: a prize of £30 is awarded annually, in July, to the most proficient student in the class of Pathological Anatomy. An Atchison Scholarship, value about £55 per annum, tenable for two years. The Cluff Memorial Prize, value about £15, every second year to the most proficient in Anatomy, Physiology, and Chemistry. The Erichsen Prize: a surgeon's operating case of the value of £10 10s., awarded yearly to the student of the class of Practical Surgery who shall most distinguish himself by manipulative skill. The Morris Bursary of £25 a year, tenable for two years. Besides the above, gold and silver medals and other prizes are awarded in each class.

Residence of Students.—University Hall (Professor Henry Morley, Principal) adjoins the College, and is designed to enable men studying in University College to live in chambers under conditions of fellowship adapted to the needs of modern student life. Full information as to cost and conditions of residence in University Hall may be had by application at the office of the College.

Several professors and other gentlemen connected with the College receive students to reside with them; and in the office of the College there is kept a register of persons unconnected with the College who receive boarders into their families; among these are several medical gentlemen.

WESTMINSTER HOSPITAL.—The hospital contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, and for Diseases of Women, and a special ward for Children. The Anatomical Museum is constantly open to the students. There are also a Pathological Museum and a Materia Medica Museum.

A curator of the Museum and pathologist, with a salary of 50 guineas, and a medical and surgical registrar, are appointed annually, each with a salary of £40. Two house-physicians, two house-surgeons, and a resident obstetric assistant are appointed for six months after examination, and are provided with rooms and commons. The senior house-physician, who is also the chloroformist to the hospital, and the senior house-surgeon, who performs special duties, receive in addition an honorarium of 20 guineas each. Clinical assistants to the physicians and surgeons, and to the officers in charge of special departments, are appointed from among qualified students of the hospital.

Scholarships and Prizes.—The Guthrie and Entrance Scholarship, on alternate years, each £40 a year, and one Entrance Scholarship value £40. Entrance Scholarship, summer session, value £40. The Treasurers' Prize, an exhibition in Anatomy, Physiology, and Chemistry, value £10. 10s., tenable for one year for first-year men. The President's Prize, a Scholarship in Anatomy, Histology, and Physiology, value £21, given by his Grace the Duke of Westminster, President of the Hospital, to a student of the second year (to be styled Assistant Demonstrator). At the end of the fourth winter session, prizes of £5 each (books or instruments) in Clinical Medicine and Clinical Surgery. Frederick Bird Medal and Prize, value £15. Subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth. In most of the classes special prizes, value about 2 guineas each, are given by the lecturers.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian-road. Consulting Surgeon: Frederick Le Gros Clark. Physicians: Drs. Cholmeley, Cook, Burnet, Beale, and Beevor. Obstetric Physicians: Drs. Gustavus C. P. Murray and Fancourt Barnes. Surgeons: Messrs. W. Adams, W. Spencer Watson, J. Macready, C. B. Lockwood, and A. W. Allingham. Ophthalmic Surgeon: Mr. Jonathan Hutchinson, jun. Aural Surgeon: Mr. W. R. H. Steawart. Chloroformist: Dr. J. F. W. Silk. Dental Surgeon: Mr. E. Keen. House-Surgeon: Mr. A. M. Cowie, M.B. House-Physician: Mr. C. Mortlock. Dispenser: Mr. J. F. Dunstan.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Consulting Physicians: Dr. C. J. B. Williams, F.R.S., Dr. W. H. Walshe, Dr. R. Quain, F.R.S., Dr. J. E. Pollock. Consulting Surgeon: Professor John Marshall, F.R.S. Physicians: Drs. E. S. Thompson, C. T. Williams, R. D. Powell, J. Tatham, R. E. Thompson, and F. Roberts. Surgeon: Mr. R. J. Godlee, F.R.C.S. Assistant-Physicians: Drs. T. H. Green, J. M. Bruce, J. Fowler, P. Kidd, C. Y. Biss, and C. T. Acland. Pathologist: Dr. P. Kidd. Dental Surgeon: Mr. C. J. Noble. Resident Medical Officer: Dr. H. D. Waugh. Secretary: Mr. H. Dobbin. Four Clinical Assistants reside in the hospital for a period of six months. Pupils are admitted to the practice of the hospital: terms £3 3s. for three months; six months, £5 5s.; perpetual, £10 10s. Lectures and Clinical Demonstrations are given throughout the year by members of the medical staff. The medical practice of the hospital is recognised by the University of London, the Apothecaries' Society, and the Army and Navy and Indian Medical Boards. The hospital contains 321 beds in the two buildings.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road (established 1814). Consulting Physician: Dr. Horace Dobell. Physicians: Drs. Hensley, Gilbart-Smith, Finlay White, Pringle, and Oswald Browne. Assistant-Physicians: Drs. Arthur Davies, Herbert Habershon, and Edward Stewart. Consulting Surgeon: Mr. Jonathan Hutchinson. Surgeon: Mr. A. Pearce Gould. House-Physicians: Messrs. William J. Best, M.R.C.S., L.S.A., and Percy G. Lewis, M.R.C.S., L.S.A. John J. Austin, Secretary. Attendances: In-patients (1886), 305; out-patients (1886), 29,04s. This hospital has recently been enlarged by the addition of a very complete out-patients' department, and also by the erection of a new wing, which provides accommodation for eighty in-patients.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—The new hospital, with the Finchley branch, contains 180 beds and cots. The physicians attend every Monday, Tuesday, Wednesday, and Friday, at 2.30 P.M. In- and out-patients' practice and electrical-room treatment at that hour. Physicians: Drs. Ramskill, Radcliffe, Hughlings Jackson, and Buzzard. Physicians for out-patients: Drs. H. Charlton Bastian, W. R. Gowers, and D. Ferrier. Assistant-Physicians: Drs. Ormerod and Beevor. Surgeons: Messrs. W. Adams and Victor Horsley. Ophthalmic Surgeons: Messrs. R. Brudenell Carter and Marcus Gunn. Aural Surgeon: Mr. A. E. Cumberbatch. Laryngologist: Dr. Felix Semon. House-Physicians: Messrs. Walter Hull and R. T. Williamson. Medical practitioners and senior students may attend the practice after signing their names in the clerk's office.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—The hospital, founded in 1804, and considerably enlarged in 1876, now contains 100 beds for patients, which were occupied during last year by 2049 persons. The out-patients are yearly over 20,000; attendances, 123,555 in 1886. Operations are performed daily from 10.30 to 1 o'clock, and three surgeons attend on each day. Students are admitted to the practice. Fees for six months, £3 3s.; perpetual £5 5s. Demonstrations and lectures are given during the winter. Students of the hospital are eligible for the office of house-surgeon, or may be appointed clinical assistants. The secretary, Mr. Robert Newstead, will furnish further information, as may be desired.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—The hospital contains 50 beds; and the patients, who number 10,000 annually, are seen and operations performed daily at 2 o'clock. The following are the days of attendance of the surgeons: Mr. Power and Mr. Frost, Monday and Friday; Mr. Rouse and Mr. Hartridge, Tuesday and Saturday; Mr. Macnamara, Monday and Thursday; Mr. Cowell, Wednesday and Saturday. The practice of the hospital is open to students. Fees for six months, £3 3s.; perpetual, £5 5s. Students of the hospital are eligible for the post of house-surgeon. Special demonstrations and lectures will be given during the session. Secretary: Mr. T. Beattie-Campbell.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street.—Surgeons: Messrs. B. E. Brodhurst, H. A. Reeves, Charles Read, and William E. Balkwill. Assistant-Surgeon: Mr. H. F. Baker. House-Surgeon: Mr. E. H. Norris. Secretary: Mr. Maskell. Operations on Mondays at 2 P.M. The hospital is open to all legally qualified practitioners. Pupils

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are admitted to witness the practice of the hospital on the following terms: six months, £3 3s.; twelve months, £5 5s.; perpetual, £10 10s.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester-square.—Lectures are delivered in winter on Mechanical Dentistry by Dr. J. Walker, on Wednesdays at 5 P.M. In summer, by Mr. Hutchinson, on Dental Surgery and Pathology, on Tuesdays and Fridays at 8 A.M., and by Mr. Arthur Underwood, on Dental Anatomy and Physiology (Human and Comparative), on Wednesdays and Saturdays, at 8 A.M. *Fees:* General fee for special lectures required by the curriculum, £15 15s.; fees for two years' hospital practice required by the curriculum, £15 15s.; total fees for lectures and practice, £31 10s. Hospital Surgeons: Messrs. Canton, Gregson, Hepburn, Storer Bennett, Claude Rogers, and Woodhouse. Assistant-Surgeons: Messrs. Hern, Matheson, Parkinson, Read, Rogers, Truman, and E. Lloyd Williams. Anæsthetists: Messrs. Braine, Bailey, Bird, and Mills. Assistant-Anæsthetists: Drs. Buxton and Hewitt. House-Surgeon: Mr. H. Williams. Assistant House-Surgeons: Messrs. F. Colyer and G. Seymour. Medical Tutor: Mr. W. Paterson. The winter session will commence October 4th. All communications to be addressed to Mr. Morton Smale, Dean.

SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich, S.E.—This institution is established for the relief of seamen of all nations. Casualties are received at all hours. Apartments are provided in the house of the Principal Medical Officer for students. Honorary Consulting Physicians: Dr. Robert Barnes, F.R.C.P., and Dr. Richard Quain, F.R.C.P. Visiting Physicians: Dr. John Curnow, F.R.C.P., and Dr. Herbert Tyrrell Griffiths, M.R.C.P. Honorary Consulting Surgeon: Mr. J. N. Davies-Colley, F.R.C.S. Visiting Surgeon: Mr. G. Robertson Turner, F.R.C.S. Medical Officer, Well-street Dispensary: Mr. C. E. Cotes, F.R.C.S. Principal Medical Officer: Mr. W. Johnson Smith, F.R.C.S. House-Physician: Dr. E. H. Booth. House-Surgeon: Mr. R. Ritson, M.R.C.S. Secretary: Mr. P. Michelli.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Queen's-square, W.C., and Cromwell House, Highgate.—There are now 121 beds in the hospital, Great Ormond-street, and 52 beds at the country branch; total, 173. In-patients last year, 1144; out-patients, 14,287. The practice at the hospital has recently been thrown open gratuitously to the pupils of the different hospitals and medical schools of London, on conditions which may be ascertained of the Secretary.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL AND MIDWIFERY TRAINING SCHOOL, Marylebone-road, N.W.—Consulting Physicians: Dr. G. O. Rees, Dr. Gream, Dr. Brodie. Consulting Surgeons: Mr. H. Lee, Sir William Mac Cormac. Physicians to In-patients: Dr. Hope and Dr. W. C. Grigg. This hospital, which has been recently enlarged, receives nearly 1000 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing obstetric complications and operative midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical instruction is given on the more important cases which present themselves. Certificates of attendance at this hospital are recognised by all universities, colleges, and licensing bodies. Monthly nurses and midwives are received for training. Fees: Medical students, from £3 3s. for one week, to £26 5s. for three months, exclusive of board and lodging; Pupil Midwives, £26 5s. for three months, and Pupil Nurses, £11 0s. 6d., for eight weeks, both inclusive of board and lodging. For further particulars, application should be made to G. Owen Ryan, Esq., Secretary, at the hospital.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road.—Instituted 1816. Consulting Physicians: Dr. Wilks and Dr. John Williams. Consulting Physician: Dr. Wm. Park. Physicians: Drs. W. A. Duncan, Alex. Haig-Septimus Sunderland, and W. R. Dakin. Surgeon: Mr. H. C. Jacobson. Assistant-Surgeon: Mr. E. Overman Day. Surgeon-Dentist: Mr. W. Whitehouse. Resident Medical Officer: G. W. Moseley. Secretary: Mr. R. G. Kestin. Advanced students in medicine, and such practitioners as may desire it, are permitted to attend the practice of this hospital gratis. If a certificate signifying such attendance be required, the sum of £5 5s. must be paid to the physicians and surgeons in ordinary conjointly.

HOSPITAL FOR WOMEN, Soho-square, W.—Consulting Physician: Dr. Protheroe Smith. Physicians: Drs. Carter, Richard T. Smith, Holland, and Mansell-Moullin. Surgeon: Mr. H. A. Reeves. Assistant-Physicians: Drs. Bedford Fenwick and Oliver. Assistant-Surgeon: Mr. S. Osborne. Pathologist and Registrar: Dr. Norman Dalton. Anæsthetist: Dr. Dudley Buxton. In connexion with this institution there has been for some years a well-organised Clinical Department, which has lately been enlarged under the title of the London School of Gynæcology. To meet the want increasingly felt by medical men of an accurate knowledge of the ordinary diseases of women, ten gentlemen are appointed every three months to act as clinical assistants to the physicians and surgeons seeing out- and in-door patients; The appointments are nominally "open to qualified medical men and to students of medicine after their third year," but in the selection of candidates preference is naturally given to gentlemen already engaged in practice. The large numbers of out-patients afford quite unrivalled opportunities for practical instruction in the use of gynæcological instruments, and for the study of diseases peculiar to women. A course of lectures on the Anatomy and Physiology of the Female Pelvic Organs is given during each quarter by a member of the Staff. Clinical Lectures are given in the Operating Theatre on alternate Thursdays, at 3.30 P.M., throughout the winter and summer sessions. Valuable prizes are given, after examination, annually, open to past and present clinical assistants. Fee for the three months' course, £5 5s. Any further information can be obtained by letter, addressed to the Dean at the hospital.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W., and Churchfields, Margate.—The hospital contains 60 beds and 12 at the home at Margate, and has a large out-patient department (over 500 weekly). Physicians: Dr. Julian Evans and Dr. Ridge Jones. Physicians to the out-patients: Drs. Albert Venn, T. Colcott Fox, F. D. Drewitt, and Henry Philpot. Surgeons: Messrs. Pick and Clutton. Surgeons to the out-patients: Messrs. Walter Pye and D'Arcy Power. Dental Surgeon: Mr. Francis Fox. House-Surgeon: Cameron Kidd. House-Physician: Alexander Harper. Secretary: Captain W. C. Blount, R.N. Out-patients are seen daily as under:—Medical cases: Monday only at 9A.M.; and every afternoon at 1.30. Surgical cases: Daily, except Wednesday and Saturday, at 9.30 A.M. Dental cases: Saturdays at 9 A.M.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Consulting Physicians: Dr. Robert Barnes and Sir Andrew Clark, Bart., M.D. Consulting Surgeon: Mr. Buxton Shillitoe. Consulting Ophthalmic Surgeon: Mr. George Cowell. Physicians: Dr. Eustace Smith, Dr. Horatio B. Donkin, and Dr. H. Radcliffe Crocker. Surgeons: Mr. Arthur Cæsar and Mr. R. W. Parker. Assistant-Surgeon: Mr. L. A. Dunn. Assistant-Physicians: Dr. J. A. Coutts and Dr. Dawson Williams. Administrator of Anæsthetics: Mr. Thomas Bird. Resident Medical Officer: Mr. J. Scott Battams. Secretary: Ashton Warner. Lady Superintendent: Miss F. A. Davies. Matron: Mrs. Fisher.

WEST LONDON HOSPITAL, Hammersmith-road, W.—This hospital has 110 beds. About 1100 in-patients and 14,000 out-patients, whose attendances number nearly 50,000, are treated annually. There are appointments for a House-Physician and two House-Surgeons, with board and residence, tenable for six months. Also appointments for a limited number of Clinical Assistants. Physicians: Drs. G. Goddard Rogers, D. W. C. Hood, and F. G. D. Drewitt. Physician for Diseases of Women: Dr. Albert Venn. Surgeons: Messrs. C. B. Keetley, F. Swinford Edwards, and W. Bruce Clarke. Surgeon for Diseases of the Eye: Mr. B. J. Vernon. Assistant-Physicians: Drs. W. P. Herringham, J. B. Ball, and Seymour Taylor. Assistant-Physician for Diseases of Women: Dr. J. A. Mansell-Moullin. Assistant-Surgeons: Messrs. C. A. Ballance, H. F. Weiss, and B. Wainwright. Assistant-Surgeon for Diseases of the Eye: Mr. H. P. Dunn. Surgeon-Dentist: Mr. H. L. Albert. Pathologist: Mr. H. P. Dunn. Physician in Charge of Throat Department: Dr. J. B. Ball. Aural Surgeon: Mr. B. Wainwright. Physician to Skin Department: Dr. F. G. D. Drewitt. Surgeon to Skin Department: Mr. H. F. Weiss. Surgeon in Charge of Orthopædic Department: Mr. C. B. Keetley. Administrators of Anæsthetics: Messrs. T. Gunton Alderton and Rickard W. Lloyd. Secretary: Mr. R. J. Gilbert.

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EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Consulting Physician: Dr. W. S. Playfair. Consulting Surgeons: Sir Prescott G. Hewett, Bart., and Mr. W. Morrant Baker. Physicians: Drs. Fred. Taylor, James F. Goodhart, Nestor Tirard, and Fred. Willcocks. Surgeons: Messrs. H. G. Howse, R. Clement Lucas, C. J. Symonds, and G. H. Makins. Ophthalmic Surgeon: Dr. W. A. Brailey. Dental Surgeon: Mr. R. Denison Pedley. House-Surgeon: Dr. Geo. A. Carpenter. Hon. Secretary: Dr. I. Dobree Chepmell.

ALL SAINTS CHILDREN'S HOSPITAL, 4, Margaret-street, and 59, Mortimer-street, W. — Founded by the All Saints Sisterhood in 1882 for Chronic Joint Diseases. Twelve beds for boys and eight for girls under the age of ten years. Surgeon, Mr. Noble Smith.

MR. THOMAS COOKE'S SCHOOL OF ANATOMY, PHYSIOLOGY, SURGERY, &c.—By decision of the Royal Colleges of Physicians and Surgeons, gentlemen rejected at their Anatomical and Physiological Examinations (Primary R.C.S., or Second Conjoint) can get "signed up" from this school for the three or six months' work they are now required to put in before re-examination. This school is intended to meet the requirements of two classes of students: 1. Qualified practitioners and advanced students—i.e., gentlemen wishing either to obtain some of the higher qualifications, or to compete for appointments in Her Majesty's Army, Navy, and Indian Medical Services. 2. Students preparing for the usual Primary and Pass Examinations of any of the licensing bodies. The instruction is given on the dissected and undissected body, with normal and pathological specimens, microscopical preparations, chemical, physiological and surgical apparatus, splints, &c. The school possesses a good collection of physiological apparatus, allowing of the demonstration to the class of the great bulk of the usual practical exercises in Physiology; also chemical apparatus, allowing every student not only to see, but to repeat for himself, the analysis of the principal food-stuffs, and fluids and solids of the body, and also all the usual reactions, tests, &c. Gentlemen preparing for the Higher Examinations receive special instruction in the more difficult subjects, and have the advantage of personally repeating the practical exercises in Physiology above alluded to. The operations of surgery are performed by the students on the dead body. Private address: 40, Brunswick-square.

SOUTH LONDON SCHOOL OF PHARMACY.—This school was established in 1868, and removed to the present premises in 1875. Owing to the expiration of the lease at the old premises, it has recently been joined by the analytical and general science teaching branches previously carried on at Kennington-cross, and the whole institution is now consolidated under one roof, so bringing every department under the continuous and direct control of the director, Dr. John Muter, M.A., F.R.S.E., F.C.S., F.I.C., who personally delivers the lectures on Chemistry, Physics, and Botany, and superintends the laboratory instruction. The department most valuable to medical Students is the Medical and General Science Tutorial Department. The subjects taught are:—For Matriculation, &c.: Elementary Chemistry. For First B.Sc. and Preliminary Scientific: Inorganic and Practical Chemistry. For First M.B.: Organic Chemistry, Analysis, and Pharmaceutical Chemistry and Materia Medica. For Apothecaries' Hall and Royal Colleges of Physicians, London and Edinburgh: Chemistry, Botany, and Materia Medica. For Pass M.B. Lond: Practical Toxicology and Forensic Medicine. Students attend by special arrangement, and perpetual or time fees may be had from the Secretary, Mr. Baxter, 325, Kennington-road, London, S.E.

SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Lectures on Chemistry and Physics by Professor Dunstan, F.C.S.; Practical Chemistry, Professor John Attfield, Ph.D., F.R.S., F.I.C., F.C.S., Director of the Laboratories; F. W. Short, Demonstrator; Botany, by Professor Green, B.A., B.Sc.; Materia Medica, by Mr. Holmes, F.L.S.; Practical Pharmacy, Joseph Ince, F.L.S. The session commences on Monday, Oct. 3rd, at 9 A.M. Medical students, or pupils intending to enter the medical profession, are admitted to the lectures, &c., and to a course of practical chemistry of any length in the laboratories. Application for admission to the school, or for further information, may be made to the professors or their assistants in the lecture theatre or laboratories, 17, Bloomsbury-square, London, W.C.

ENGLISH PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

BATH ROYAL UNITED HOSPITAL.—120 beds. Honorary Consulting Physician: Dr. Coates. Honorary Physicians: Drs. Goodridge, Cole, and Fox. Honorary Surgeons: Messrs. Stockwell, Fowler, and Freeman. Honorary Medical Officers for Out-patients: Dr. Field, Messrs. Cowan and Craddock. Honorary Assistant-Surgeons: Messrs. Green, Scott, and Ransford. Dental Surgeon: Mr. Gaine. Pathological Registrar and Curator: Mr. H. Culliford-Hopkins. The hospital is recognised by the Royal College of Physicians, Surgeons, &c., and licensed for dissections. It contains a library and an excellent museum, in which are a large number of interesting specimens, both in Pathology and Comparative Anatomy. Fees for attendance—twelve months, £10 10s.; six months, £5 5s. (Temporary pupils can also, by permission of the Honorary Staff, attend the practice of the Hospital by the payment of £1 1s. for each month.) Instruction in Practical Pharmacy for three months, £5 5s. Number of patients admitted during the past year, 1106; out-patients, 8758. Operations performed, 158. Anæsthetics recorded, 195. For further particulars apply to the Registrar and Curator.

QUEEN'S COLLEGE, BIRMINGHAM.—The Sands Cox Prize, of the value of £20, is offered annually in the Medical Department. It is open to students who have completed their curriculum, and is awarded after examination in Medicine, Surgery, and Midwifery. Two Ingleby Scholarships are offered annually after examination in Obstetric Medicine and Surgery and Diseases of Women and Children. The Scholarships are open to students who have completed the first two years of their curriculum in this College. One or more Sydenham Scholarships will be offered annually, of the value of 30 guineas each. The orphan sons of former students of the Birmingham Medical School have priority of election. No Sydenham scholars are elected whose age exceeds twenty-three years on the day of election. The Scholarships are held for three years, subject to good behaviour. One or more Queen's Scholarships will be offered annually, of the value of 30 guineas. They are held for three years, one-third being paid each year, subject to good behaviour. The Russell Memorial Prize is awarded annually after examination in Nervous Diseases. Students of Queen's College are qualified to compete for all scholarships, gold medals, and other prizes offered by the University of London, the Royal College of Surgeons, and the Apothecaries' Society.

GENERAL AND QUEEN'S HOSPITALS, BIRMINGHAM. — *General Hospital:* Consulting Physician: Dr. Fletcher. Consulting Surgeons: Mr. Crompton and Mr. Baker. Physicians: Drs. Wade, Foster, Rickards, and Saundby. Surgeons: Messrs. Pemberton, Bartleet, Jolly, and Chavasse. Obstetric Officer: Dr. Malins. Assistant-Physicians: Drs. Simon and Foxwell. Assistant-Surgeons: Messrs. Haslam and Barling. — *Queen's Hospital:* Consulting Obstetric Surgeon: Mr. Berry. Consulting Surgeon: Mr. S. Gamgee. Physicians: Drs. Sawyer, Carter, and Suckling. Surgeons: Messrs. Furneaux Jordan, Wilders, Bennett May, and Lloyd, Obstetric Surgeon: Mr. A. F. Hawkins. Ophthalmic Surgeon: Mr. Priestley Smith. Dental Surgeon: Mr. Charles Sims. Physician for Out-patients: Dr. Hogben. Casualty Surgeons: Messrs. Clay and Marsh.

MASON COLLEGE, BIRMINGHAM.—Founded 1875. Opened 1880. The session will commence on October 3rd. Instruction is given in Arts and Science, and students are prepared for the various examinations of the University of London. Entrance and other Scholarships and Prizes are offered for competition. This College is associated with Queen's College, Birmingham, for the purposes of medical education, all students of the latter College attending in the Physical, Chemical, Zoological, Botanical, and Physiological Departments of Mason College. The Library contains upwards of 18,000 volumes. A syllabus containing full information as to the various courses of instruction, fees, &c., will be forwarded on application to the Secretary.

BRISTOL SCHOOL OF MEDICINE (affiliated to University College, Bristol).—Students can complete in Bristol the entire course of study required for the Medical and Surgical Degrees of the University of London, and for the Diplomas

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of the Royal College of Physicians of London and the Royal College of Surgeons of England, the Apothecaries' Society of London, and the Army and Navy Boards. The lectures and instructions given at University College, Bristol, are adapted to the various Preliminary Arts Examinations above referred to, and also to the Matriculation and Preliminary Scientific Examinations of the University of London; while the Medical School, the Royal Infirmary, and the General Hospital together provide for every detail of the professional curriculum required by the University of London and the above examining boards. All necessary information may be obtained from the Dean of the Bristol Medical School, Dr. Markham Skerritt.

BRISTOL ROYAL INFIRMARY (instituted 1735).—264 beds. Physicians: Drs. Spencer, Shingleton Smith, Waldo, and Shaw. Surgeons: Messrs. Board, Dowson, Prichard, Greig Smith, and Harsant. Ophthalmic Surgeon: Mr. Cross. Assistant-Physician: Dr. Prowse. Assistant-Surgeon: Mr. Paul Bush. House-Surgeon: Dr. Swain. House-Physician: Dr. Williams. Secretary: Lieut.-Colonel Graham.

Scholarships and Prizes.—Two Entrance Scholarships, 85 guineas and 10 guineas, awarded annually in October, after examination in general subjects; Surgical and Medical Suple Gold Medals, 5 guineas each, with 7 guineas added in money; Clarke Prize, 15 guineas; Crosby Leonard Prize, 7 guineas; Tibbitt's Prize, 9 guineas; three Pathological Prizes, 3 guineas each.

Dressers reside in the house in weekly rotation, and have charge of all casualties under the supervision of the house-surgeon. Special instruction (including dresserships) for first-year students in the out-patient department. Class instruction in the wards by the physicians and surgeons on four days a week, in addition to the regular clinical lectures. Clinical Clerkships and Dresserships, 5 guineas for each six months. Special departments for Diseases of Women, the Eye, Ear, &c., with Clerkships and Dresserships attached. A Pathological Clerk is appointed every four months, who performs all post-mortem examinations. The large museum and well-stocked library are arranged and managed for the advantage of students.

Further information can be obtained from Dr. Spencer, Dean of the Faculty.

BRISTOL GENERAL HOSPITAL.—164 beds. Physicians: Drs. Markham Skerritt, Harrison, and Baron. Physician-Accoucheur: Dr. Lawrence. Surgeons: Messrs. Lansdown, Dobson, Keall, and Pickering. Dentist: Mr. Parson. House-Surgeon: Dr. Newnham. Physicians' Assistant: Mr. Webb. Assistant Physician: Dr. Clarke. Assistant Surgeon: Mr. Penny. Assistant House-Surgeon: Mr. Barclay. Clinical Clerkship, six months, £5 5*s.* Dresserships, six months, £5 5*s.* Obstetric Clerkship, three months, £3 3*s.* Special clinical instruction is given in Diseases of the Skin, Eye, Ear, and Throat, also in Diseases of Women and in Dental Surgery. Further information may be obtained of the Secretary, at the hospital, or from Dr. Markham Skerritt, Dean of the Hospital Faculty.

Scholarships and Medals.—Lady Haberfield Entrance Scholarship: This scholarship, founded in 1875, of the value of 30 guineas, the interest of £1000, bequeathed for the purpose by the late Lady Haberfield, is awarded annually at the commencement of the Winter Session, after a competitive examination in subjects of general education. Second Entrance Scholarship: An additional Entrance Scholarship of the value of £20 is awarded when more than six candidates present themselves. Clarke Scholarship: A Surgical Scholarship, of the value of £15, founded by H. M. Clarke, Esq., of London, is awarded annually at the end of the Winter Session, after an examination in Surgery. Sanders Scholarship: A Scholarship founded by the late John Nash Sanders, Esq., of the value of £22 10*s.*, is awarded annually at the end of the Winter Session, after examination in Medicine, Surgery, and Diseases of Women. Martyn Memorial Pathological Scholarships, founded in 1878, by public subscription, in memory of the late Dr. Samuel Martyn, Physician to the Hospital. Two Scholarships, each of the value of £10, are awarded annually; one at the end of the Summer Session, and one at the end of the Winter Session. A student may, at the option of the Faculty, hold both these Scholarships. After a competitive examination in Pathology and Morbid Anatomy, the successful candidate is appointed Pathological Clerk to the Hospital for the term of six months. Committee Gold Medal: This medal, presented by the Committee of the Hospital, is awarded annually at the end of the Winter Session to the student of the fourth year who has most distinguished himself during his career at the Hospital and the Medical School. Committee Silver Medal: This medal, presented by the Committee of the Hospital, is awarded annually at the end of the Winter Session to the next most distinguished student of the fourth year. The rules relating to the several Scholarships may be had on application.

ADDENBROOKE'S HOSPITAL, Cambridge.—Clinical lectures in Medicine and Surgery in connexion with the Cambridge Medical School are delivered at this hospital twice a week during the academical year; and practical instruction in Medicine and Surgery in the wards and out-patients' rooms is given by the physicians and surgeons daily, during the vacations as well as term time. Instruction is also given in all the special modes of medical and surgical investigation. Clinical Clerks and Dressers are selected from students according to merit, and without payment.

DEVON AND EXETER HOSPITAL, Exeter.—Medical and Surgical Staff: Consulting Physician: Dr. Drake. Physicians: Drs. Lewis Shapter and H. Davy. Consulting Surgeons: Messrs. A. Cumming and T. W. Caird. Surgeons: Messrs. Blankart, Harris, Domville, and Bell. House-Surgeon: Dr. Blomfield. The hospital contains 214 beds (including special children's wards). There is a good library, museum, dissecting and post-mortem rooms. Attendance on the practice of this hospital qualifies for all the examining boards. Arrangements can be made by which students can attend Midwifery. For further particulars as to fees, &c., apply to the House-Surgeon.

WEST OF ENGLAND EYE INFIRMARY, Exeter.—Surgical Staff: Messrs. Bankart and Toswill. Registrar: Mr. Roper. The infirmary contains fifty beds. Students of the Exeter Hospital can attend the practice of the Eye Infirmary.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne.—The following Scholarships and Prizes are awarded annually:—A University of Durham Scholarship, value £100, for Proficiency in Arts, awarded to full students in their first year. The Dickinson Scholarship, value £15, and a Gold Medal, for Medicine, Surgery, Midwifery, and Pathology. The Tulloch Scholarship, value £20, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, value about £35, for Medicine. The Gibb Scholarship, value £25, for Pathology. The Goyder Memorial Scholarship (at the Infirmary), value about £15, for Clinical Medicine and Clinical Surgery. At the end of each session a Silver Medal and Certificates of Honour are awarded in each of the regular classes. Assistant Demonstrators of Anatomy, receiving each an honorarium of £5, two Prosectors, and two Assistant Physiologists are elected yearly. Two Pathological Assistants, two Assistants to the Dental Surgeon, and two Assistants in the Eye Department are also elected every three months. Medical and Surgical Assistants, Clinical Clerks, and Dressers are appointed every three months.

NEWCASTLE-ON-TYNE INFIRMARY.—Physicians: Drs. Philipson, Drummond, Oliver, and Limont. Surgeons: Drs. Arnison, L. Armstrong, Hume, and Mr. Page. Assistant-Surgeons: Mr. T. A. Dodd and Mr. Williamson. Pathologist: Dr. Drummond. Dental Surgeon: Mr. E. Fothergill. House-Physician: Dr. Edward Cave. House-Surgeons: Dr. W. Raigent and Dr. W. G. Richardson. The infirmary contains 280 beds. There are special wards for the treatment of Children, and for Ophthalmic and Syphilitic Diseases. Clinical Lectures are delivered by the Physicians and Surgeons in rotation. Pathological Demonstrations are given as opportunity offers by the Pathologist. Practical Midwifery can be studied at the Newcastle Lying-in Hospital, where there is an out-door practice of about 300 cases annually. Lectures are given on Psychological Medicine at the Coxlodge Lunatic Asylum by Dr. R. H. B. Wickham, Medical Superintendent. A Special Course of Instruction is given in the Hospital for Infectious Diseases by the Superintendent and City Officer of Health, Dr. H. E. Armstrong.

GENERAL KENT AND CANTERBURY HOSPITAL.—Open for the reception of patients April 26th, 1793. 49,499 in-patients and 88,792 out-patients have been admitted since the hospital was open. The hospital contains 102 beds. Pupils of the staff are admitted to the practice of the hospital, and have the use of the library of the East Kent and Canterbury

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Medical Society, for £7 7s. Operation day, Thursday, 11 A.M. Consulting Physician: Dr. Alfred Lochee. Physician: Dr. Henry Alex. Gogarthy. Consulting Surgeon: Mr. James Reid. Surgeons: Messrs. Charles Holttum, Frank Wacher, T. Whitehead Reid, and John Greasley. Dentist: Mr. Martin L. Bell. House-Surgeon: Mr. Z. Prentice. Assistant House-Surgeon and Dispenser: Mr. William P. Barrett. Secretary: Mr. Charles H. Read. Over 800 in-patients, 3000 out-patients, and 1000 dental cases are attended in a year.

LEEDS GENERAL INFIRMARY AND MEDICAL DEPARTMENT OF THE YORKSHIRE COLLEGE.—The Leeds General Infirmary has accommodation for 320 in-patients, surgical and medical, and during the last year 4428 in-patients and 30,985 out-patients were treated; these numbers show a remarkable increase, if compared with statistics of ten years ago, when only 11,500 out-patients were seen. Clinical teaching takes place daily in the wards, and Clinical Lectures are given in the operating-room. There are Medical, Surgical, Ophthalmic, Aural, and Electrical Departments, in each of which special instruction is imparted to students. A Gynæcological and Extern Obstetric Department, together with Laryngeal and Skin Clinics, are in operation. The Public Dispensary, the Fever Hospital, and the West Riding Lunatic Asylum are other medical institutions which are made use of by the Leeds students.

The Leeds Medical School, now the Medical Department of the Yorkshire College, occupies a central position in the town, close to the General Infirmary, and a few minutes' walk from the new buildings of the Science and Art Departments situated in College-road. The present premises were built specially for the purposes of a medical school, and the teaching in purely medical subjects is there given. The teaching in Chemistry and Physics, Practical Chemistry, Practical Toxicology, Biology, and Botany is given in the College-road buildings, the lecture-rooms and laboratories of which are amongst the most commodious in the kingdom. The accommodation for teaching comprises all the conveniences necessary for the various branches of study. All the other courses required by examining boards are given by Professors and Lecturers. The Museums and Library offer special advantages. Several valuable prizes are given at the end of each session. The following appointments at the infirmary are annually open to students: Resident medical officer, resident surgical officer, resident obstetric officer, appointed for twelve months and eligible for re-election. Two house-physicians, holding office for six months; four house-surgeons, for twelve months; twenty-four physicians' clerks, for three months; twenty-four surgeons' dressers, for six months; eight ophthalmic and aural surgeons' dressers, for three months; eight gynæcological ward clerks, for three months; eight gynæcological out-patient clerks, for three months; twenty-four assistant-physicians' clerks, for three months; twenty-four assistant-surgeons' dressers, for three months; forty-eight dressers in the casualty-room, for three months; twelve post-mortem room clerks, for three months.

There are appointments open to students in other medical institutions in the town, and also in the West Riding Lunatic Asylum.

UNIVERSITY COLLEGE, LIVERPOOL, MEDICAL FACULTY: VICTORIA UNIVERSITY.—The Infirmary attached to the School contains 300 beds, with 40 special beds for the treatment of Diseases of Women. Lock, Lying-in, and Eye and Ear Hospitals are in the immediate vicinity, and their practice is open to the students of the Medical Faculty.

The composition fee for lectures and classes is 60 guineas, which may be paid in two equal instalments with an interval of twelve months; and for hospital practice 40 guineas, which may be paid in the same way.

Two house-physicians and three house-surgeons are appointed from the qualified pupils every six months, also clinical clerks, dressers, and post-mortem clerks.

Two Holt Tutorial Scholarships, each of the value of £100, are awarded annually by the Medical Faculty to senior students. Also an entrance Lyon Jones Scholarship of £21 for two years for students proceeding to the Victoria Degree, and another of the same value, open to all students who have completed their second year. The Derby Exhibition of £15 for Clinical Medicine and Surgery. The Torr and Bligh Gold Medals for Anatomy and Physiology, and the class prizes. During the past year the new Chemical Laboratories have been opened, and the old building added to the Physiological Department. The only changes on the staff are the appointment of Mr. Edgar Browne as lecturer on ophthalmology, Dr. Hope as lecturer on Hygiene, and Dr. Ross as Demonstrator of Anatomy.

LIVERPOOL NORTHERN HOSPITAL.—150 beds. There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Physicians: Drs. Cameron, Carter, and Williams. Surgeons: Messrs. Hamilton, Little, and Paul. Senior House-Surgeon: Dr. F. H. Wigmore. Junior House-Surgeons: Mr. J. R. L. Dixon and Mr. W. C. Helme. 200 beds. Clinical Lectures are given by the physicians and surgeons during the winter and summer sessions. Clinical clerkships and dresserships are open to all students. Special wards for accidents and diseases of children. Resident students received.

NORFOLK AND NORWICH HOSPITAL. — 150 beds. One year's attendance recognised by examining boards. Fees: For the physicians' practice, 5 guineas for six months. For the surgeons' practice, including dresserships, £10 for three months; £15 for six months; £20 for one year; £30 for two years. Pupils resident and non-resident. Physicians: Sir Peter Eade, Dr. Bateman, and Dr. Taylor. Surgeons: Mr. Cadge, Mr. Crosse, and Mr. Williams. Assistant-Surgeons: Dr. Beverley and Mr. Robinson. House-Surgeon: Mr. H. Chester Nance.

NORTHAMPTON GENERAL INFIRMARY.—Established 1743: rebuilt 1793. In-patients, 1693; out-patients, 8223. Beds. 144. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given in Anatomy and Materia Medica, and Practical Pharmacy. Pupils' fee £25 per annum, or a perpetual fee of £50.

MEDICAL DEPARTMENT OF OWENS COLLEGE, VICTORIA UNIVERSITY.—This medical school is located in a large new building, which forms a part of Owens College. It is provided with a very large dissecting-room, physiological laboratory, private laboratories, and work-rooms, besides lecture-rooms, a museum, and a library. In order to give the fullest possible opportunities for teaching and investigation in the departments of Anatomy, Physiology, Pathology, and Materia Medica, a great extension of the school buildings has been made. The more strictly practical departments of medical study are taught partly in the Medical School and partly in the Royal Infirmary, to which are attached a fever hospital, a lunatic asylum, and a convalescent home. Medical and surgical clinical classes are conducted in the infirmary by the professors of medicine and surgery, and separate instruction is afforded in the elements of medical and surgical physical diagnosis, in obstetric medicine, ophthalmic surgery, and pathological anatomy by the different members of the staff of the medical school and infirmary. The following scholarships and prizes are open to students of the medical school:—1. A Dauntesey Scholarship of the value of about £100 is offered annually for competition at the beginning of October to persons who have not been students in any medical school in the United Kingdom, and whose age does not then exceed twenty-five years. The subjects of examination are—(*a*) General and Comparative Anatomy; (*b*) Physiological Botany; (*c*) Chemistry; (*d*) Mathematics or Latin. 2. A Scholarship and Prizes are awarded at the end of each academic year to students of the first, second, and third year. 3. A Platt Physiological Scholarship of £50 a year for two years is offered annually to the student who, having studied for one entire session in the Physiological laboratory of Owens College, has prosecuted the best original investigation in Physiology, and has passed a satisfactory examination in Physiology. 4. Two Platt Exhibitions of the value of £15 each, to be competed for by first and second year students in the class of Physiology. 5. A Dumville Surgical Prize of £20 is offered annually for proficiency in Clinical Surgery. 6. Turner Medical Prize, £25. 7. Medical and Surgical Clinical Prizes, each of the value of 6 guineas, are open to competition each year for the best reports (with comments) of cases which have occurred in the wards of the infirmary.

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MANCHESTER ROYAL INFIRMARY.—Consulting Physicians: Drs. R. F. Ainsworth, Frank Renaud, H. Browne, and Sir Wm. Roberts. Consulting Surgeons: Mr. Geo. Bowring and Mr. Lund. Physicians: Drs. Henry Simpson, John E. Morgan, D. J. Leech, and J. Dreschfeld. Assistant-Physicians: Drs. James Ross and Graham Steell. Obstetric Physician: Dr. Lloyd Roberts. Surgeons: Messrs F. A. Heath, Walter Whitehead, Thomas Jones, and James Hardie. Assistant-Surgeons: Messrs. Fred. A. Southam and G. A. Wright. Ophthalmic Surgeon: Dr. D. Little. Dental Surgeon: Mr. G. W. Smith. Resident Medical Officer: Dr. Ernest S. Reynolds. Resident Surgical Officer: Mr. Joseph Collier. Medical Registrar: Dr. J. S. Bury. Surgical Registrar: Mr. W. Thorburn. Pathological Registrar: Dr. Thomas Harris. Assistant Medical Officers: Drs. S. Moritz and A. T. Wilkinson. Administrator of Anæsthetics: Mr. Alexander Wilson. General Superintendent and Secretary: Mr. W. L. Saunder.

BARNES CONVALESCENT HOME, Cheadle, Cheshire (in connexion with the Manchester Royal Infirmary).—Resident Medical Officer: Mr. E. T. Milner, M.B. Secretary: Mr. W. L. Saunder.

MONSALL FEVER HOSPITAL, Newton Heath (in connexion with the Manchester Royal Infirmary).—Resident Medical Officer: Dr. H. Falconer Oldham. Assistant Medical Officer: Mr. H. Leader Williams. Secretary: Mr. W. L. Saunder.

MANCHESTER GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury and Gartside-street.—The hospital contains 140 beds, including 28 for scarlet fever. The medical staff visit the hospital daily at 10 A.M. Special classes are held for clinical instruction on Saturday afternoons during the winter months. Out-patients are seen daily at 9 A.M. at the dispensary, Gartside-street, Manchester. Physicians: Drs. Ashby and Hutton. Surgeon: Mr. G. A. Wright. Assistant-Surgeon: Mr. Joseph Collier. During 1886 there were 1166 in-patients and 10,158 out-patients under treatment at the dispensary.

RADCLIFFE INFIRMARY, OXFORD.—This infirmary is open to students for Medical and Surgical work in the wards and out-patients' departments. Clinical lectures are given by the Litchfield Clinical Lecturer in Medicine and Surgery. Also tutorial instruction and demonstrations are given in special Regional Anatomy (medical and surgical), methods of Medical Diagnosis, and Surgical Manipulation. The whole course of study at the museum and infirmary combined is intended for students until they have passed the Second Conjoint Examination, or the 1st Oxford M.B.

SHEFFIELD SCHOOL OF MEDICINE.—The infirmary contains 180 beds, a Museum of Pathology, Library, and Post-mortem Theatre, with microscopes and all the appliances for clinical research. The Public Hospital and Dispensary contains 101 beds, and is recognised by the Examining bodies. Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £45. A tutor's fee of £2 2s. is required from students entering for Anatomy and Physiology.

JESSOP HOSPITAL FOR WOMEN, Gell-street, Sheffield.—The hospital is devoted to Diseases peculiar to Women. There is also an Obstetric Department for the admission of a small number of cases. A staff of midwives connected with the hospital attend lying-in women at their own homes, and in case of need are assisted by the members of the medical staff. Out-patients are attended daily. Students can attend the practice of the hospital, and be supplied with cases of midwifery.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—The New Infirmary, opened in 1869, is built on the pavilion plan has accommodation for over 200 patients, including children's wards and special ovarian wards. In-patients last year, 1666; out-patients, 9209. The attendance of pupils at this infirmary is duly recognised by all the examining boards; and there are unusual facilities for acquiring a practical knowledge of the profession. Physicians and Medical Officers: Drs. J. T. Arlidge and C. Orton, and Messrs. Ashwell and J. G. West. Surgeons: Messrs. W. H. Folker, J. Alcock, and W. D. Spanton. Dental Surgeon: Mr. W. Bartlett. Secretary: Mr. R. Hordley, Hartshill, Stoke-on-Trent, from whom particulars as to fees &c. may be obtained.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Founded 1848. Beds, 224. A preparatory school of Medicine and Surgery. The pupils have the advantage of seeing the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. The attendance of pupils at this hospital is recognised by all the examining boards. Operations are performed every Thursday at 11 o'clock, and practitioners are welcomed.

YORK COUNTY HOSPITAL.—Established 1740; rebuilt 1851. 116 beds. In-patients, 1127; out-patients, 7171. Consulting Physician: Dr. W. Matterson. Consulting Surgeon: Mr. W. D. Husband. Medical Officers: Messrs. R. Heweteon, W. H. Jalland, F. Shann, R. Turner, M.B., and R. Petch, M.B. Dental Surgeon: Mr. W. Glaisby. House-Surgeon: Mr. E. F. Morris. Assistant House-Surgeon: Mr. Lancelot Williams. Secretary: Mr. R. Holtby.

SCOTTISH HOSPITALS AND MEDICAL SCHOOLS.

SCHOOL OF MEDICINE, EDINBURGH.—The lectures qualify for the University of Edinburgh and the other universities; the Royal Colleges of Physicians and Surgeons of Edinburgh, London and Dublin, and the other Medical and Public Boards. In accordance with the Statutes of the University of Edinburgh, any four of the medical classes required for graduation, or two complete *anni medici*, may be attended in this school, each of which *anni medici* may be constituted by attendance on two of the six months' courses, or on one of these and two three-months' courses. The regulations require that the fee for any class, taken for graduation in Edinburgh, shall be the same as that for the corresponding class in the University. The whole education required for graduation at the University of London may be taken in this school.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh the perpetual fee is £2 4s. Practical Anatomy (six months' course), £3 3s.; course of demonstrations, £2 2s.; perpetual, £4 4s. Practical Anatomy with course of demonstrations, £4 4s. Practical Chemistry, £3 3s. Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months. Practical Materia Medica, including Practical Pharmacy, Diseases of the Ear, Diseases of the Skin, Diseases of Children, and Diseases of the Tropics and Climatology, each £2 2s. Vaccination, £1 1s. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Anatomical Demonstrations, Operative Surgery, and Practical Medicine and Medical Diagnosis, each £2 2s. Insanity, £1 1s.

EDINBURGH SCHOOL OF MEDICINE AND PHARMACY, Marshall-street, Nicolson-square.—The classes of this school will be resumed for the winter session in October. Chemistry, Midwifery, Surgery, and Medicine. From the Dispensary attached to this institution, Pharmacy, Practical and Theoretical. Practical Midwifery. Out-door Practice. Medical and Surgical Diagnosis. Attendance at this institution qualifies for the University of Edinburgh and all other licensing boards. Tutorial classes in all the branches of the medical curriculum. Preliminary Medical Classes, 11 A.M. to 4 P.M., and in the evening. Particulars of R. Urquhart, Secretary.

ROYAL INFIRMARY, EDINBURGH.—Beds are set apart for clinical instruction by the professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary physicians and surgeons. Special instruction is given in the medical department on Diseases of Women, Physical Diagnosis, and on Diseases of the Skin; and in the surgical department on Diseases of the Eye, the Ear, and Larynx. Separate wards are devoted to Venereal Diseases, Diseases of Women, Diseases of the Eye, also to cases of Incidental Delirium or Insanity. Post-mortem examinations are conducted in the anatomical theatre by the pathologists, who also give practical instruction in Pathological Anatomy and Histology. The fees for hospital attendance are as follows—viz.: Perpetual ticket, in one payment, £12; annual ticket, £6 6s.; six months, £4 4s.; three months, £2 2s.; monthly, £1 2s. Separate payments amounting to £12 12s. entitle the student to a perpetual ticket. No fees are paid for any medical or surgical appointment. The appointments are as follows:—1. Resident physicians and surgeons are appointed, and live in the house

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free of charge. The appointment is for six months, but may be renewed at the end of that period by special recommendation. 2. Special non-resident clerks are appointed for six months. The appointment may be renewed for a like period by special recommendation. 3. Clerks and dressers are appointed by the physicians and surgeons. These appointments are open to all students and junior practitioners holding hospital tickets. 4. Assistants in the pathological department are appointed by the pathologists.

ANDERSON'S COLLEGE MEDICAL SCHOOL, GLASGOW.—The following courses are given, which qualify for all the licensing boards:—In winter: Anatomy, Chemistry, Physiology, Surgery, Medicine, Materia Medica, &c. In summer: Midwifery, Medical Jurisprudence, Botany, Hygiene, &c. The Chemical Laboratory is open daily from 10 to 5. Students of the School are admitted to the Lectures and Clinique at the Ophthalmic Institution free of charge.

Fees.—Each course of lectures (except Anatomy), first session, £2 2*s.*; second session, £1 1*s.*; afterwards free. Anatomy (including dissecting-room), first session, £4 4*s.*; second session, £4 4*s.*; third session and perpetual, £1 1*s.*; summer (including Practical Anatomy), £2 2*s.* Practical Anatomy only, £1 1*s.*; Osteology, £1 11*s.* 6*d.* Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at reduced fees Fees for all the Lectures and Hospital practice required of candidates for triple qualification, £48.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—The winter session will open on October 26th. Courses of lectures are given on all the subjects required by the licensing bodies for qualification, and lectures and demonstrations are also given on Public Health, Practical Physiology, Operative Surgery, Aural Surgery, Dental Surgery, Diseases of the Eye, and of the Throat and Nose. During summer lectures on Insanity are given by Dr. A. Robertson, in the City Asylum under his charge.

Class Fees.—For each course, first session, £2 2*s.*; second session, and perpetual, £1 1*s.*; Anatomy: First winter session, £4 4*s.*; summer session, £1 11*s.* 6*d.*; second winter session, £4 4*s.*; afterwards the fee for lectures and practical anatomy is £1 11*s.* 6*d.* per session. Lectures on Diseases of the Ear, £1 1*s.*; with clinique to those not students of the hospital, £2 2*s.* Dental Dispensary free to students of the hospital; to others, £5; first year, perpetual, £10. Lectures on the Eye £1 1*s.*; other special courses free.

GLASGOW ROYAL INFIRMARY.—Number of beds. 542. In addition to the ordinary medical and surgical wards, there are separate wards for the treatment of Venereal Diseases and the Diseases of Women, whilst Diseases of the Skin, Eye, Ear, Throat, and Teeth are specially treated at the Dispensary. Courses of Clinical Medicine and Surgery are given by the physicians and surgeons; instruction in Pathological Anatomy and Histology is given by the pathologist.

Appointments.—There are four physicians' and six surgeons' assistants. These appointments are free, and can be held for twelve months; they are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in medicine or surgery. Clinical assistants, dressers, dispensary clerks, and pathological assistants are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures.—First year, £10 10*s.*; second year, £10 10*s.*; afterwards free. For six months, £6 6*s.*; three months, £4 4*s.* Vaccination certificates, £1 1*s.*

GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR, 28, Elmbank-crescent.—The hospital, which contains twelve beds for in-door patients, is always open for urgent cases. Hours of surgeons' visits, 2 P.M. daily; clinical teaching daily. Out-patients are seen on Mondays, Tuesdays, Thursdays, and Fridays, at 2 P.M., by Dr. Barr and assistants; and operations and special demonstrations to students and practitioners take place on Thursdays from 3 to 4 P.M.

GLASGOW WESTERN MEDICAL SCHOOL, University-avenue, Hillhead.—The school is situated close to the Western Infirmary, where students obtain their Hospital Practice and Clinical Lectures. To accommodate the increasing number of students, the dissecting rooms have been recently entirely rearranged and enlarged. The attention of students is directed to the unusual facilities presented for the study of Practical Anatomy and Operative Surgery, the supply of subjects being practically unlimited. The dissecting rooms are open for work from the beginning of October till the end of July.

The lectures qualify for the University of Glasgow in accordance with the regulations, the Faculty of Physicians and Surgeons, Glasgow, and the other corporations.

Class Fees.—For each course of lectures, first session, £2 2*s.*; second session, £1 1*s.* Students who have attended a first course elsewhere pay £1 1*s.* Anatomy, including Practical Anatomy, £4 4*s.* Summer session, £1 11*s.* 6*d.*

GLASGOW WESTERN INFIRMARY.—This hospital adjoins the University of Glasgow. Number of beds upwards of 400. Special wards are set apart for Diseases of Women and for Cutaneous Affections. In the out-patient department there are special cliniques for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. All the courses of clinical instruction are recognised by the University of Glasgow and the other boards in the kingdom. In the Pathological Department a systematic course is given in the winter and a practical course in the summer; these are likewise recognised by the University for graduation. Eight resident assistants are appointed annually, without salary, from those who have completed their course. The fee for the hospital practice, including the various courses of clinical instruction, is 20 guineas in one payment, or in two equal instalments for the first and second years; for six months, 7 guineas; and for three months, 4 guineas.

GLASGOW HOSPITAL FOR SICK CHILDREN, situated at Garnet-hill, was opened in December, 1882, and is now available to medical students for clinical instruction in the diseases peculiar to childhood. The hospital includes 57 beds for non-infectious cases only.

GLASGOW OPHTHALMIC INSTITUTION, 126, West Regent-street.—40 beds. Clinical and systematic course of lectures for students during the winter and summer seasons.

ABERDEEN ROYAL INFIRMARY.—Contains about 250 beds. Consulting Physician: Dr. A. Harvey. Physicians: Drs. J. W. F. Smith-Shand, R. Beveridge, Angus Fraser, and P. B. Smith. Surgeons: Messrs. A. Ogston, J. O. Wall, R. J. Garden, and Hall. Dental Surgeon: Dr. Williamson. Treasurer and Secretary: Mr. W. Carnie.

ABERDEEN ROYAL LUNATIC ASYLUM.—Contains about 580 beds. Consulting Physician: Dr. Robert Jamieson. Clinical instruction is given to students during three months in summer.

IRISH HOSPITALS AND MEDICAL SCHOOLS.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Belfast.—Eight Junior Scholarships have been founded in the Faculty of Medicine, of the annual value of £25 each. Two are tenable by Matriculated Students, commencing the first, second, third, and fourth year of their course respectively. The examinations for Junior Scholarships of the second and third years in the Faculty of Medicine take place at the commencement of the second and third year of their medical course. Matriculated Students in Medicine intending to compete for Medical Scholarships of the second year must be of not more than one year's standing as students of Medicine, and must have attended, in some of the Queen's Colleges or in a University capable of granting degrees in Medicine, two at least of the following courses—viz.: Chemistry, Botany and Zoology, Anatomy and Physiology, Materia Medica and Pharmacy, Practical Chemistry, Practical Anatomy. Matriculated students in Medicine intending to compete for Medical Scholarships of the third year must be of two years' standing and not more, and must have attended, in some of the Queen's Colleges or in a University capable of granting degrees in Medicine, four at least of the following courses—viz.: Chemistry, Botany and Zoology, Anatomy and Physiology, Materia Medica and Pharmacy, Practical Chemistry, Practical Anatomy. Matriculated Students in Medicine intending to compete for Medical Scholarships of the fourth year must be of three years' standing and not more, and must, in addition to the qualifications prescribed above, have attended, in their

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third year, two at least of the following courses—viz.: Theory and Practice of Medicine, Theory and Practice of Surgery, Midwifery, and Diseases of Women and Children.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Cork.—The building is provided with a very large, well-ventilated dissecting-room, with physiological and toxicological laboratories, materia medica, anatomical and pathological museums, as well as a room for surgical and obstetrical instruments and appliances. There are well-appointed physical and chemical laboratories, and a large natural history museum in the adjoining building, and part of the College ground is laid out as a botanical garden. The plant houses are now completed and well filled with plants, and are open to the students in the class of Botany.

Fees.—For Practical Anatomy and for Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 first course, and £2 for each subsequent course. Other medical classes, £2 first course, and £1 each subsequent course. Eight scholarships (value about £80 each), as well as several exhibitions and class prizes, are awarded every year.

SIR PATRICK DUN'S HOSPITAL, Dublin (in connexion with the School of Physic).—The payment of £3 3*s.* to the hospital entitles any student to attend the clinic of the hospital for twelve months, and to attend the lectures delivered by the University Lecturer in Operative Surgery. Students who have taken out the degrees of Bachelor in Medicine and Master in Surgery in Trinity College are entitled to attend the hospital as perpetual free pupils.

Clinical Lectures are delivered in the hospital theatre at 10 o'clock on Mondays and Tuesdays. In addition to the hospital fee, the payment of a fee of £9 9*s.* is required for the privilege of attending these lectures. Total fees for hospital and lectures for twelve months, £12 12*s.*

Sir Patrick Dun's Maternity.—Total fees for college students, £3 3*s.* Total fees for externs, £6 6*s.*

THE ADELAIDE MEDICAL AND SURGICAL HOSPITALS, Peter-street, Dublin.—Fee for nine months' hospital attendance £12 12*s.*; six months', £8 8*s.* Summer, three months', £5 5*s.* Three resident pupils are selected half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and in Ophthalmic Surgery will be awarded.

Hudson Scholarship.—In addition to the junior prizes, the Hudson Scholarship, £30 and a gold medal, as well as a prize of £10, together with a silver medal, will be awarded at the end of the session for proficiency in Clinical Medicine and Medical Pathology, Clinical Surgery and Surgical Pathology, Pathological Histology, Surgical Appliances, including instruments and bandaging, Ophthalmology, and Gynæcology.

The certificates of attendance are recognised by all the universities and licensing bodies in the United Kingdom.

LEDWICH SCHOOL OF SURGERY AND MEDICINE, Peter-street, Dublin (formerly original School of Anatomy, Medicine, and Surgery).—There are endowments in favour of students, subject to conditions prescribed by the founder, in the following departments:—Two in Anatomy and Physiology; two in Minute Anatomy; two in Practical Anatomy; one in Surgery. Certificates of attendance on these lectures are received by the various examining boards; by the Apothecaries' Halls of Dublin and London; by the King and Queen's College of Physicians in Ireland; by the Royal Colleges of Physicians, London and Edinburgh; by the Royal University, the Universities of Dublin, London, and Glasgow; by the Glasgow Faculty of Physicians and Surgeons; and by the Queen's University in Ireland. The Senate of the Royal University having recognised the lectures of this school, arrangements have been made to educate students for its Medical and Surgical Degrees in accordance with its requirements. This school is in a central situation, and is replete with every convenience for study and successful instruction. By its teachers it is connected with nine hospitals, four of which are Medical and Surgical hospitals, one for Fever, one for Midwifery and Diseases of Woman and Children, one for Diseases of the Eye and Ear, &c.

Returns for the session 1887-8 have not been received from this school.

CARMICHAEL COLLEGE, Aungier-street, Dublin.—The following scholarships &c. are awarded to students entering for an *annus medicus* for the current year:—The Carmichael Scholarship, value £15; the Maine Scholarship, value £15; also Lecture Prizes, value £3 and £2 each; £97 being given annually in prizes.

DR. STEEVENS'S HOSPITAL.—This hospital, containing beds for 250 patients, is situated close to the Kingsbridge Terminus of the Great Southern and Western Railway occupying a position in the centre of one of the busiest manufacturing districts of the city, otherwise unprovided with medical institutions. Immediately adjoining is St. Patrick's (Swift's) Asylum for the Insane. The hospital is easily accessible by two lines of tramways, and owing to its position affords exceptional advantages for clinical instruction. There is a ward entirely devoted to Syphilitic Disease, a detached building for Fever cases, and an extensive Out-patient Department, with separate Clinics for Diseases of the Skin, Throat, Teeth, and those peculiar to Women.

The hospital is visited daily at 8.30 A.M. by the resident surgeon, and at 9 A.M. by the physicians and surgeons. The surgical wards are also visited each evening. Clinical Lectures are given by the physicians and surgeons during the session. There is accommodation in the hospital for two medical and six surgical resident clinical assistants, who, in addition to their rooms and furniture, are provided with coals and gas.

Fees.—Hospital Practice: Nine months, £12 12*s.*; six months, £8 8*s.*; three months, £5 5*s.* Dressership: Winter, six months, £21; summer, do., £15 15*s.*

MATER MISERICORDIÆ HOSPITAL, Dublin.—This hospital contains 230 beds, 50 beds being specially reserved for patients suffering from fever and other contagious diseases. Two Clinical Lectures will be delivered in each week, in addition to the daily bedside instruction. A special course of lectures on Fever will be given. A certificate of attendance upon this course, to meet the requirements of the King and Queen's College of Physicians, may be obtained. A ward has been assigned for the treatment of Ophthalmic Diseases. Opportunities are afforded for the study of Diseases of Women in the ward under the care of the Obstetric Physician, and at the dispensary held on Wednesdays and Fridays during the session. Lectures on Clinical Gynæcology will be delivered on Wednesdays. "Leonard Prizes" (Clinical): Prizes of the value of £30 will be given at the end of the winter session, in accordance with the directions contained in the will of the late Mark Leonard, Esq. Certificates of attendance upon this hospital are recognised by the Royal University and all the licensing bodies in the United Kingdom.

Fees.—Nine months, £12 12*s.*; six winter months, £8 8*s.*; three summer months, £5 5*s.*

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS, North Brunswick-street, Dublin.—These hospitals contain 312 beds—110 for Surgical cases, 82 for Medical cases, and 120 for Fever and other epidemic diseases.

There will be a distinct course of Lectures and Clinical Instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A course of Practical Instruction in Ophthalmic Surgery will be given. Fee for the certificate, £3 3s.

A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, &c. These appointments are open not only to advanced students, as formerly, but also to those who are qualified in Medicine or Surgery. Dressers are selected from among the best qualified of the pupils, without the payment of additional fee.

COOMBE LYING-IN HOSPITAL, AND GUINNESS DISPENSARY FOR THE TREATMENT OF DISEASES PECULIAR TO WOMEN.—The hospital contains 65 beds, and has also a large extern maternity attached. Nearly 3000 confinements are attended annually by the pupils of the hospital. A special dispensary for diseases peculiar to women is held daily, and clinical instruction given. The certificates of the hospital are recognised by all licensing bodies, and its diploma is accepted by the Local Government Board, &c. Further particulars can be learned from the Master at the hospital.

ROTUNDA HOSPITAL, Rutland-square, Dublin.—This institution consists of two distinct hospitals—namely, the Lying-in Hospital and the Auxiliary Hospital, the latter for the reception of patients suffering from Uterine and Ovarian Diseases. There is also a large extern maternity in connexion with the hospital, and a dispensary for Diseases peculiar to Women, which is open daily. Clinical instruction is given daily (Saturdays excepted) in Midwifery and the Diseases peculiar to Women, special attention being directed to the application of antiseptics in midwifery, and

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lectures on these subjects are delivered regularly throughout the session. Accommodation is provided for a limited number of intern pupils.

MEDICAL TEACHERS.

Dr. ALTSCHUL has made Stuttering, Lisping, Falsetto, recent or of long standing, due to Nervousness, &c., irrespective of age or sex (without any mechanical appliances), his special, life-long study. The voice developed and strengthened.—9, Old Bond-street, W.; and at Brighton and Hastings.

Messrs. BAILLY and COATES prepare candidates for Matriculation, Apothecaries' Hall, College of Preceptors, and all other English, Scotch, and Irish Medical Preliminary Examinations.—30-32 Ludgate-hill, E.C.

Mr. J. BECKTON, C.M., prepares candidates for the London Matriculation, Medical and Law Preliminary, University, Local, and other Examinations. Boarders received.—41, Torrington-square, W.C.

Messrs. BOSWORTH and STERN prepare for Preliminary Medical, First B.Sc., &c.—Kenmore, Putney, S.W.

Mr. L. BRYAN, M.A. Cantab., continues for the thirteenth year his most successful preparation of resident and non-resident students for Matriculation and the Medical Preliminaries. Students entering at any of the hospitals are taken as boarders and receive careful supervision, every home comfort, and assistance in their professional studies.—140, Gower-street, W.C.

Mr. H. CRASSWELLER, B.A., prepares candidates for Medical and Law Preliminaries and Matriculation.—12, Aberdeen-park-road, Highbury, N.

Mr. A. H. DAWES, 1st B.A. Lond., gives lessons privately, in class or by post, in preparation for the London Matriculation and Medical Preliminary Examinations.—31, Southampton-street, Strand, W.C.

Mr. H. N. DIXON gives a thorough and high-class education to Deaf Children based upon the Oral method.—25, St. Paul's-road, Northampton.

Mr. JOHN EVANS, M.A., prepares candidates for all Examinations.—Queen's-park, Oswestry.

Mr. J. GIBSON, M.A., prepares candidates for the London Matriculation, and Preliminary Medical and Legal Examinations.—Quernmore, Bromley, Kent.

Mr. THOMAS LYLE, M.A., F.R.Hist.S., of the London and Dublin Universities, prepares gentlemen, resident and non-resident, for the various Preliminary Arts Examinations and Matriculation at the London University.—Grove House, Shacklewell-lane, London, E.

Mr. MAINWARING, B.A., prepares candidates for all Preliminary Examinations.—115, Edith-road, West Kensington.

Mr. A. ORMOND prepares candidates for Preliminary Medical Examinations.—24, St. Mary Abbott's Terrace, Kensington.

Mr. PIESSE prepares candidates in Materia Medica, Botany, Pharmacy, and Chemical Physics.—Savoy House, 115, Strand, W.C.

Mr. W. VAN PRAAGH has made the cure of all Defects of Speech, both acquired and congenital, his special study.—11, Fitzroy-square, W.

Mr. J. W. SAUNDERS, A.P.S., G.S.T., prepares gentlemen for Examination in Anatomy, Physiology, Botany, Chemistry, Materia Medica, Pharmacy, &c.—6, Rochester-square (late Camden-road), N.W.

Mr. H. SERGEANT, B.A. Lond., holds special classes for London University Matriculation, the Preliminary Medical Examinations, &c.—8, High-street, Camden-town, N.W.

Mr. V. BUTLER SMITH assists pupils in reading up for the London Matriculation, and Legal, Medical, and Pharmaceutical Examinations.—Polytechnic, Regent-street, W.

Mr. H. WAITE prepares pupils for Matriculation, Preliminary Scientific, and the Examinations for Medical Registration of all the licensing bodies.—342, Strand, W.C.

Mr. F. A. WHITE, B.A., prepares candidates for Matriculation and Medical and Legal Preliminary Examinations.—67, Richmond-road, Bayswater, W.

Mr. H. W. WHITE educates Deaf and Dumb Children of the higher classes on the Pure Oral system.—115, Holland-road, Kensington.

Mr. MAURICE WILLIAMS prepares candidates for Examination in Theoretical and Practical Chemistry, Materia Medica, &c.—The City School of Chemistry, 27, Chancery-lane, W.C.

Mr. J. WOODLAND, F.L.S., F.C.S., holds classes and demonstrations in Practical and Theoretical Chemistry, Chemical Physics, Materia Medica, and Pharmacy; in the Botanical classes specimens are supplied to each student, and all apparatus is found for the Practical Chemistry course. These classes are held for candidates for the Primary L.R.C.P., L.S.A., and the M.B. degree of the different Universities, at the Central School of Chemistry.—173, Marylebone-road, N.W.

A TABULAR VIEW OF THE DAYS AND HOURS OF THE INTRODUCTORY LECTURES

To be delivered at the different Medical Schools.

	Lecturers.	Days and Hours.
St. Bartholomew's Hospital	(No Lecture) ...	——
Charing-cross Hospital	(No Lecture) ...	——
St. George's Hospital	Mr. Dent	Oct. 3rd 4
Guy's Hospital	(No Lecture) ...	——
London Hospital	(No Lecture) ...	——
St. Mary's Hospital	Mr. Critchett ...	,, 3rd
Middlesex Hospital	... ...	,, 3rd 3
St. Thomas's Hospital	Mr. Reid	,, 1st 3
University College	Dr. Crocker	,, 3rd 4
Westminster Hospital	Dr. Sturges	,, 3rd 4
Sheffield School of Medicine	Dr. White	,, 3rd 5
Yorkshire College, Leeds	Dr. M. Duncan ...	,, 3rd
University of Glasgow	Prof. Simpson ...	,, 25th
Anderson's College, Glasgow	Dr. E. Duncan ...	,, 25th
Glasgow Royal Infirmary School of Medicine	Dr. Newman ...	,, 26th
Royal College of Surgeons in Ireland School of Surgery	Sir W. Stokes ...	,, 31st

Annotations.

"Ne quid nimis."

TREATMENT OF SCARLET FEVER.

IT would be interesting if a census were to be taken with a view to ascertain what treatment of scarlet fever was most in vogue amongst practitioners of to-day. We suspect that not an inconsiderable portion of this vote would fall to the lot of expectancy, by which must be understood the absence of any attempt to arrest the course of the malady, combined with great watchfulness of the symptoms and the treatment of the most dangerous of these morbid phenomena. The present epidemic is for the most part of a mild nature, but considerable attention has to be given to the throat, which seems to suffer in a marked degree, the glandular swelling being correspondingly marked. Hence it will be found that gargles of all kinds, and especially those of an antiseptic nature, are freely used, together with compresses of various degrees of heat and moisture applied to the neck. Most practitioners, even those of the most expectant schools, employ topical applications to the throat and nose. Many articles are used to relieve the thirst and sensation of dryness, but nothing is more effective than ice and a little raspberry vinegar. It is important to keep the nostrils and nasal passages sweet and clean. For cerebral symptoms, nothing is better than the application of cold, either in the mild form of lint soaked in iced water and applied to the shaven head, or in the more effective capilline tubes, with irrigation. Compression of the carotid arteries and bleeding are seldom practised nowadays, either in scarlet or any other fever. Aconite in minute doses, frequently repeated, is still the favourite drug of many practitioners, but its employment needs the exercise of clinical discretion, especially in children. Actual bathing in cool or tepid water is practised by but few physicians, though the number of practitioners who recommend the use of cold or tepid sponging, the patient lying in bed on a mackintosh, appears to be largely on the increase. Most of the alleged specific and curative agents have long since lapsed into discredit. Belladonna finds but few adherents, and carbonate of ammonia almost none. Considerable difference of opinion exists on the merits of inunction with fat, cold cream, and the like, two of the most recent authors on the diseases of children taking opposite views, Dr. Goodhart advocating and Dr. Angel Money opposing the universal inunction, though the latter sees no objection to relieving the tension of the palms and soles by the application of geoline or vaseline scented with eucalyptol.

ACETONURIA IN INFANCY.

THE researches of von Jaksch and of Penzoldt, and many others, have shown that the occurrence of acetonuria is not the special appanage of grave diabetic accidents (*vide* THE LANCET, vol. ii. 1885, p. 392), but may occur in a great variety of diseases, including fevers, carcinoma, and insanity. There seem also some grounds for believing that even the healthy organism may not be altogether free from the presence of some of this said acetone which is unquestionably a deleterious body, though it is possible that minute doses of it, like minute doses of many other poisons, are borne by the economy with impunity. Baginsky has given much attention to the occurrence of acetonuria in infant life, and from his researches it would appear that amongst children a physiological acetonuria of slight degree and inconstant nature does exist. Pathological acetonuria is common amongst children suffering from febrile disorders, and the presence of acetone in the urine appears to be related directly to the intensity of the febrile process, since a slow

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diminution in the amount of acetone in the urine has been observed in pneumonia from its commencement to its termination. The researches of Baginsky, whilst admitting the existence in a slight degree of acetonuria during the normal life of infants, prove, so far as they go, that acetonuria is specially to be associated with the febrile state, and, in fact, that it increases with an increase in the fever. It has been proved, also, that a fleshy diet increases acetonuria, whilst the ingestion of non-nitrogenous food is not followed by acetonuria. Since acetonuria of a very intense degree may be discovered in the course of convulsive diseases in infancy, it is obvious that many mechanisms are capable of setting up the conditions on which the presence of acetone in the urine depends. It seems clear, however, that neither asphyxia induced by, nor the administration of choral for, the convulsive seizures is an efficient explanation; nor are there good grounds for believing that acetone can be regarded as a common cause of convulsions, for these spasmodic affections may be unattended with acetonuria, and, further, acetonæmia is not usually the cause of tonic or clonic spasms, as the experiments of Baginsky showed. We neither know for certain the place at which acetone originates, the materials out of which it is constructed, the precise effects on different tissues, nor its ultimate fate in the metabolic system. Conjectures have been made that it originates from hydro-carbons of digestion; but Baginsky has discovered acetonuria in a dog fed wholly on animal food, whilst acetone disappeared from the urine when the dog was fed exclusively on hydro-carbonaceous material. It appears probable that nitrogenous material is the source of this chemical body. Baginsky has found a considerable amount of acetone in the urine of a child aged four years, who had swallowed some dilute nitric acid. Grave symptoms, with loss of consciousness, delirium, grinding of the teeth, and small pulse, were observed as the effect of the intoxication; the urine was albuminous also. The acetonuria could not be ascribed to the fever, for the temperature did not go beyond 38·2° C., but there was considerable disintegration of nitrogenous material. Although Jaksch admitted that acetone is formed during the lactic acid fermentation, yet a chemical examination of the contents of the stomach drawn off by washing, and of the intestines as discharged per anum, failed to detect appreciable quantities of acetone; the source of the acetone can therefore hardly be traced to any functional disturbance of the digestive organs.

THE ILFRACOMBE DISASTER.

THE sad yachting accident at Ilfracombe, by which it is feared that fourteen or fifteen lives have been lost, on a smooth sea in a summer afternoon, and within easy sight of land, is in danger of being dismissed a little too hastily. It happened on Friday, between 3 and 4 P.M.; and on the evening of the next day the coroner closed the investigation, and the jury returned a verdict of "Accidental death." When such a dismal disaster as this occurs, the one redeeming use to be made of it is the extraction of such lessons as will tend to prevent the recurrence of another. A little less sail, a little more ballast, a little more discipline in the management of the movements of the passengers, a little more preparation for an ordinary squall and its consequences, a greater number of seamen in a crew,—one or more of these or other such precautions might probably make all the difference and avert catastrophes that not only bring the greatest and most irreparable distress to families, but unnecessary discredit on boating pleasures, and on the admirable and noble class of boatmen who are so unselfish and so efficient. We regret that the accident has not been turned to better account, and that the jury have not come to a more definite conclusion. One lesson of the accident is the value of swimming. One of the survivors, who owes her life to it, is a little girl of nine years, who, it is said, had only had one lesson. It is gratifying to report how prompt and hearty were the efforts of the profession of the town, assisted by several visitors, to restore those brought to shore.

INFLUENCE OF TEMPERATURE ON MORTALITY RATES.

EVERY season of the year as certainly brings its crop of one or another disease as of some special form of vegetation, and those upon whom devolves the duty of providing hospital accommodation for infectious maladies know at what period arrangements must be made for cases of scarlet fever and enteric fever, and during which months it may be anticipated that typhus and small-pox will have the best opportunities for their development. The seasonal prevalence of epidemic disease has been long understood, and the records of the Registrar-General and the writings of Dr. G. B. Longstaff afford ample material for learning the months of the year during which the maximum number of cases of each affection may be anticipated. But, with few exceptions, it cannot be argued that a hot season will produce a greater prevalence of any one disease than a period during which the temperature is lower. Scarlet fever, which is at its minimum from January to May, and attains its maximum in October and November, does not appear to have this maximum accentuated by a specially high temperature of the atmosphere. The circumstances which affect its prevalence are evidently not limited to climatic conditions alone, but are more especially those which have led to the accumulation of susceptible persons in a community. Diphtheria, however, which differs from scarlet fever in the particular that it does not appear to protect the infected individual against subsequent attacks, and therefore cannot by its presence or absence affect the amount of susceptibility of the population, is also liable to periodic prevalence, and attains its maximum influence on the death-rate a little later than scarlet fever, although its distribution during the year is more equal than that of the latter disease. The lowness of temperature of the winter months undoubtedly influences the mortality from affections such as measles and whooping-cough, which frequently kill by pulmonary complication. But their prevalence is also seasonal, and the greater number of deaths from the former diseases actually occurs during May and June, when the temperature is much above that of the average of the winter months. Of the acute infectious diseases, the effect of temperature is, perhaps, most marked in its effect upon the prevalence of small-pox, high temperature appearing to be inimical to its diffusion. The class of affections beyond all others which are developed in periods of high temperature are bowel disorders, and especially infantile diarrhœa, which regularly claims its victims after the first few weeks of warm weather, and which develops an especially destructive power, which is directly dependent upon the height of the temperature. The researches of Dr. William Johnstone of Leicester, which are being continued by his successor in that borough, have raised a strong probability that this disease is of bacterial origin, and the objections to this theory, based upon the fact that as a rule infants alone lose their lives from this cause, has been answered by Dr. Johnstone, who has shown that older members of the invaded household are frequently attacked by similar symptoms, which, however, affect the stronger person less severely. The hot season which England has recently experienced has not been without its effect on infantile mortality from this cause, and London has suffered at the rate of fully 50 per cent. more than the average of the past ten years. A full understanding of all the conditions which tend to produce this terrible mortality is sadly needed in the interest of

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humanity; but work of this character is arduous and intricate, and will require the patient observation of skilled investigators for years before the conditions of life can be accurately appreciated which are responsible for its occurrence.

THE NEW LABORATORY AT KING'S COLLEGE, LONDON.

EVERY effort is being made for the completion of the new Bacteriological Laboratory by October 1st. The laboratory will consist of three rooms. The principal room was one of the largest lecture rooms in the College, and will afford ample accommodation for the practical courses in November and April, and for those who wish to undertake original investigations. Two new rooms are being built for the Professor and his assistants. Each student will be accommodated in a section of the laboratory, where he can work independently and undisturbed. The plan of study followed by each student will depend on the object he may have in view. He may work entirely independently for a month, or for a longer time by arrangement. He may join the laboratory for private study under the supervision of the Professor. He may attend the laboratory when lectures with practical instruction are daily given by the Professor. For this purpose practical courses will be held in November and April. The lectures during these months will be daily from 10 to 11 A.M., and will be illustrated with diagrams and typical preparations, and followed by practical work. The laboratory will be open the first week in October, and closed at the end of June. The hours of attendance will be daily from 10 A.M. till 4 P.M., except on Saturday, when the laboratory will close at 1 P.M. For further particulars applications should be made to Professor Crookshank.

ENDARTERITIS AND SPINAL SOFTENING.

THE pathology of cerebral and spinal softening is still often obscure, especially of the latter. Many cases of so-called transverse myelitis have nothing inflammatory in their nature; some are attributed, and with reason, to anæmic necrosis. The occurrence of such a case in Liebermeister's clinic has afforded Professor Nauwerck the opportunity of making an examination in a comparatively early stage of the disease. (*Beitr. zur Path. Anat. u. Phys.*, Bd. ii., Jena, 1887.) The patient was attacked with paraplegia in October, and died in December, 1885, the fatal issue being hastened by an extensive scald, brought about by her being placed in an over-heated bath. The cord in the region of the fifth to the eighth dorsal nerves appeared soft, moist, swollen, and white, the grey matter being very indistinct. Scrapings of the cut surface yielded spheres of fatty granules and free oil globules. On microscopical examination, in the cervical region there was degeneration of the columns of Goll and the cerebellar tracts. The degeneration involved larger areas as the mid-dorsal region was approached, so that at the level of the sixth dorsal nerve no demarcation was visible between the white and grey substance, the whole of the section appearing cloudy, studded with yellow and greenish-yellow spots. At the level of the seventh nerve the grey matter was slightly defined, but near the left posterior column, reaching to the posterior commissure and involving the central part of the right column of Goll, was a sharply-defined focus, oval in shape and of a yellow colour, which contained small drops of myelin, compound granule corpuscles, oil globules, and some round cells. Below this point the amount of degeneration gradually dwindled, the pyramidal tracts in the lower dorsal region alone being involved. In the main, the degenerative changes were limited to the white matter, the axis cylinders and medullary sheaths being swollen or broken up into masses of myelin and fat granules. Some medullated fibres in the grey substance were similarly changed, but the ganglion cells appeared unaffected. In all parts the destruction of nerve fibres was accompanied by a slight degree of sclerosis from proliferation of the neuroglia. The small focus of softening, which formed a cavity with curdy contents, at the level of the seventh nerve, was the most advanced in degeneration, the neuroglia as well as the nerve elements being destroyed. But in no part was there any evidence of inflammatory change. The small arterioles in the vicinity of the focus of softening presented thickening and hyaline changes in their walls; some of the vessels in the mid-dorsal region being quite occluded by pale thrombi, others showing marked proliferation of endothelium. Similar arteritic changes were traced throughout the dorsal region and into the cervical and lumbar regions. This case seems, then, to link spinal softening with cerebral, placing it among ischæmic processes rather than inflammatory. Nauwerck says this case is the first in which arteriosclerosis has been shown to be the cause of spinal softening; and the cause of the arterial lesion in so young a subject (twenty-four years) is presumably to be found in a severe attack of typhoid fever, which the patient had three years before.

THE PROGRESS OF CHOLERA IN EUROPE.

DURING the past week cholera has continued in Malta, but with some tendency to diminution in the numbers attacked. In the seven days ending August 29th, there were 38 fresh attacks and 26 deaths, the total number of deaths since the commencement of the outbreak at the beginning of August amounting to about 121. In Sicily the disease is principally centred in the provinces of Catania, Palermo, and Messina, the fatal attacks in the seven days ending August 29th having been 48, 47, and 2 respectively. But accounts of the disease, without mention of the number of cases and deaths, also come from other localities. On the mainland cholera cases and deaths still occur daily at Naples, and there are indications of at least solitary attacks in the vicinity of the city, as, for example, at Castellamare. Fourteen deaths are also reported from Capo Colonne, just to the south of Cotrone in Calabria. The order relating to the prohibition of rags from Italy into this country has now been issued, and it will remain in force until the end of the year.

THE SPINAL NERVE ROOTS.

DR. E. SIEMERLING has, at the instance of Prof. Westphal, made a careful anatomical examination of the structure of the roots of the spinal nerves, with a view to throwing light upon the paths taken by lesions of peripheral parts secondary to disease of the cord—e.g., tabes. His monograph ("Anatomische Untersuchungen über die Menschlichen Rückenmarkswurzeln," Hirschwald, Berlin, 1887) is illustrated by plates which clearly indicate the point that each nerve root contains a variable number of small and of large nerve fibres, the smallest being only 1·3μ and the largest 23·9μ in calibre. The maximum thickness is smaller in the posterior (viz., between 8·0μ and 21·3μ) than in the anterior roots (13·3μ and 23·9μ). The fibres are largest in the anterior lumbar and three upper sacral roots; next come the anterior cervical, posterior lumbar and sacral (upper line); next the posterior cervical and last two sacral roots. The dorsal roots have about an equal proportion of small and large fibres. In the whole series there is about the same relative proportion of large to small fibres in the posterior (viz., 1:1·2) and anterior (viz., 1:1·1) roots. But except in the dorsal region, the number of large fibres is greater in the anterior roots than in the corresponding posterior, which, except in the lumbar region, contain about an

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equal number of each variety. The number of large fibres and their thickness correspond to the size of the root, and these fibres are therefore largest and most abundant in the anterior lumbar, cervical, and sacral roots. The fine fibres are for the most part disposed in groups of larger and smaller size between the bundles of large fibres; and the greater the number of small fibres in proportion to the large, so much the larger are the groups in which they are collected. These small fibres are isolated and scattered in the anterior cervical, lumbar, and upper three sacral roots. In the posterior cervical, lumbar, and upper three cervical, as well as in the last two sacral roots, the fine fibres are disposed in small groups. In the dorsal roots they are collected into large bundles. The anterior roots of the cervical and lumbar regions are the first to be fully developed. The mode of research adopted by Dr. Siemerling was to make transverse sections of the nerve roots, to calculate the number of fibres contained in each, and to make careful measurements of them. This was done not only in the adult body, but also in the new-born and the fœtus; so that it must have entailed a great deal of labour, which will, it is to be hoped, be proportionately fruitful.

THE PREVENTION OF SUMMER DIARRHŒA.

WE have on more than one occasion drawn attention to the excellent work which has been done by Dr. Victor C. Vaughan, of the University of Michigan, in regard to the production of the poison tyrotoxicon in milk and cheese, and as to his views that the development of this substance in milk is a frequent cause of choleraic diarrhœa in infants. According to a report recently presented to the State Board of Health of Michigan, the poison has been found not only in milk and cheese, but also in ice-cream and oysters; and pending the publication of the completed document, so much of the report as bears upon the prevention of cholera infantum has been issued for the information of the public. By the poor, as is well known, milk is often not obtained until after it is no longer fresh; it is badly stored until used; and it is on such milk that children are fed. The cleansing of feeding bottles is also less attended to by the poor than by others, and the crusts of decomposing milk which form round the neck of the bottle and in the tube and nipple tend to the rapid decomposition of the contents of the bottle itself. It is also essentially amongst the poor that diarrhœa is so fatal to the infant population. Dr. Vaughan, under these circumstances, lays down certain rules which should especially be borne in mind in the warm months of autumn weather, and which concern the collection and storage of milk. Only the milk of healthy cows should be used, and, to favour healthiness, swill and the refuse of breweries, or fermented food, should not be given to the animals. The pastures should also be free from noxious weeds. Stagnant water, as a drink for milch cows, should be avoided; the animals should not be worried or heated, and their udders should be washed before milking. The milk should be at once cooled down to at least 60° Fahrenheit within an hour; and, in addition to certain usual cautions in methods of delivery, it it laid down that only tin, glass, or porcelain vessels should be used for the storage of milk. It is not known how the poison tyrotoxicon is produced, but it is believed either to be the butyric acid ferment or some ferment which is frequently developed along with the *Bacillus butyricus*, and if milk be inoculated with this and kept at the temperature of the body the poison will appear. The butyric acid ferment often develops in the stomach, and the bacillus grows best in the absence of air. Having regard to these considerations, Dr. Vaughan points out how largely children are allowed to drink milk in the summer months as food or merely to quench thirst, and he believes that when summer diarrhœa occurs, one of the first points to be attended to is to stop the administration of milk in any form. The ferment, he holds, is in the alimentary canal, and to give milk is simply to supply the germ with material for the production of the poison. This no-milk treatment is by no means a new idea, but Dr. Vaughan holds that the main reason for adopting it—namely, the fact that a powerful poison is formed from the putrefaction of milk—has not been understood. He suggests that, under the circumstances referred to, chicken and mutton broths, beef juice, and rice or barley water should take the place of milk.

THE BREATHING SPACES OF OXFORD.

THE recent memorandum by Dr. Thorne Thorne and Mr. Gordon Smith on the overcrowding of houses on area in Oxford, and on the unwillingness of the Local Board to take action with a view of preventing extension of the mischief, has been received with mingled feelings in Oxford. The *Oxford Times* considers that the city has been "somewhat unjustly scandalised"; but it immediately proceeds to indicate how trivial the unjustness must be, by regretting that the inspectors did not deal with what is evidently considered by them as a still greater, indeed "the one actual blot," in Oxford—namely, the "huddling together in mere hovels in narrow passages of hundreds of human beings compelled to live in tenements almost deprived of light and air," and this under sanitary conditions alleged to be as bad as can possibly be. In short, all that can be said for Oxford in this respect is that, in addition to the general crowding together of business houses and courts in the central parts of the city, disgraceful hovels in "unsavoury courts" exist, and that the individual tenements are overcrowded to an extent that is discreditable. The instructions under which the Government inspectors acted seem to have limited them to one point only, but the local press shows how well they might have been extended to other matters also. Almost everyone in the city is taken to task about the Oxford "slums." The Colleges are declared to be great "sinners" who altogether fail to show a good example, and the local authority are accused of not being slow to follow in the retrograde path of the University authorities. In short, it is Oxford as a city and a university town—that is to say, Oxford as a whole—that is to blame. We imagine that this is precisely the contention of those who have recently reported on the city, and it goes for very little, after this admission, to urge in extenuation that people who have to live, eat, and sleep in such crowded spots can, if they have time to take a five minutes' walk, find in the College gardens a large number of "lung spaces."

ODONTALGIA v. NEURALGIA.

THE great difficulty occasionally experienced in diagnosing whether neuralgic pain of the fifth nerve is due to peripheral irritation from disease of the teeth or to some affection of the nerve trunk, made Prof. Victor Horsley's paper on this subject at the Odontological Society of considerable interest, especially to dental surgeons. The principal points of distinction may be summed up under the following heads: 1. Trophic changes, such as muscular wasting in the parts to which the pain is referred, chronic congestion, or alternating dilatation and constriction of the bloodvessels, point to mischief in the trunk of the nerve. 2. Alterations in sensation, anæsthesia or hyperæsthesia of the skin, especially when gently touching the skin causes extreme pain, while firm pressure causes no pain at all, are, he believes, never due to dental irritation. 3. The origin and character of the pain are sometimes useful as a means of diagnosing the two conditions. When the pain begins in the skin or bone, and subsequently is referred to the teeth, the probability is that

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the lesion is in the nerve trunk; if it is stated to begin in the teeth, it may or may not be due to them. Professor Horsley expressed the view that *constant* pain is in most cases of peripheral origin, whereas intermittent pain is due to trouble nearer the nerve centre; but this is opposed to the experience of most dental surgeons, intermittent pain being a frequent accompaniment of dental disease. Lastly, the existence of "tender spots" along the course of the nerve or its branches is generally an indication of irritation along the whole course of the nerve, but occasionally occurs in cases of peripheral irritation.

PROFESSOR PEL ON ACUTE RHEUMATISM.

IT has been remarked by Professor Pel of Amsterdam that the cases of ague and rheumatic fever which have been admitted into his clinic during the last few years have borne an inverse ratio to one another in point of numbers. Thus, in 1875, there were 10 cases of ague and 22 of rheumatic fever; in 1876, 14 of ague and 9 of rheumatic fever; the number of cases of ague then rose very high, being for the next five years 31, 40, 41, 31, and 23 respectively; while the rheumatism cases were comparatively infrequent, the numbers being 7, 10, 11, 11, and 9. In 1882, the ague cases numbered 9, and the rheumatism cases 10. The latter then again began to rise, being for the next three years 42, 43, and 44; while the ague cases numbered only 12, 10, and 14. The influence of climate on rheumatism has been touched upon by various authors, one of the best known papers on the subject being that of Dr. Gabbett, which was published in THE LANCET of Oct. 20th and 27th, 1883. Edlefsen also communicated an important paper to the Wiesbaden Congress in 1885, showing that the mortality from acute rheumatism bears some relation to the rainfall. Professor Pel finds that rheumatism often attacks a number of persons on the same day, and on comparing these "rheumatism days," as he calls them, with meteorological records, he has observed that they are usually days on which little or no rain has fallen. They do not occur during long rainy periods, and the temperature only seems to have any effect when its fluctuations are considerable. He has also remarked that from five to ten days before a "rheumatism day" a considerable downfall of rain has usually occurred. He has a strong belief in the specific nature of rheumatic fever, and in support of this points to its resemblance to other specific fevers in the manner of its invasion, in its liability to affect serous membranes, in its epidemic character, and in the special characters marking particular epidemics. He also narrates the case of a woman just recovered from typhoid fever and double pneumonia, who was seized with rheumatic fever on the same day that five other patients suffered from relapses. She occupied a bed between two patients with acute rheumatism. It only wants, he thinks, the discovery of the specific micro-organic cause of the disease in the inflamed serous membranes to render the present presumption of its specific origin a certainty.

URETERO-GENITAL FISTULÆ.

DR. C. D. JOSEPHSON describes in the reports of the Sabbatsberg Hospital, Stockholm, a case of uretero-uterine fistula, in which he performed nephrectomy with satisfactory results. The patient was twenty-four years of age, and the confinement was her third. Forceps were employed. During the puerperal period she had fever, and there was some effusion into the pelvis. She also suffered from incontinence of urine, while at the same time she was able to micturate in a normal manner. The left ureter was found to open in the cervix uteri. Dr. Josephson discusses this case, and twelve similar cases which he has found in medical literature. He suggests the possibility of a sudden rupture during labour either when the ureter has been fixed to the cervix uteri by a previous inflammation, or when the tissues have become friable or incipient gangrene has occurred owing to the pressure of the child's head. The fistula may, however, be established during the puerperal period, owing to the formation of an abscess or to a gangrenous condition of the tissues. The pathognomonic signs of the existence of this rare accident are a constant dribbling of urine, while at the same time it is passed in an ordinary manner, and especially the possibility of filling the bladder with a coloured liquid without producing any colouration in that which runs away involuntarily. The treatment consists either in the performance of nephrectomy or in the occlusion of the vagina. Uretero-vaginal fistulæ, of which twenty-three cases are cited, are divided into four groups. 1. Simple fistulæ (uncomplicated with vesico-vaginal fistulæ) caused by a labour under conditions similar to those which give rise to uretero-uterine fistulæ. 2. Those complicated with vesico-vaginal fistula. 3. Those caused by operative procedures, such as the opening of an abscess, the excision of the cervix, or the total extirpation of the uterus. 4. Congenital fistulæ. The symptoms are similar to those of uretero-uterine fistula. The treatment consists in a complicated plastic operation as practised by Simon, Bandl, Schede, and others. When this operation is impracticable, nephrectomy or occlusion of the vagina should be performed. Dr. Josephson suggests that in these cases it might be possible to attempt the formation of an artificial urethra, consisting of a fistulous canal between the interior of the bladder and the urethra above the uretero-vaginal fistula.

INDUCTION OF PREMATURE LABOUR IN THE BERLIN CLINIC.

FROM a graduation dissertation on artificial induction of premature labour by Dr. Johannes Panienski, founded on the practice of the University Clinic for Women in Berlin, we learn that in the ten years 1877-1887 this operation was performed twenty times for contracted pelvis. In 10 of these cases there was a flat rickety pelvis, with a conjugate diameter of from 8 to 7 centim.; in one case, indeed, it only measured 6·7 centim.; and here, notwithstanding that the transverse diameter of the fœtal cranium was 8·5 centim., both mother and child did well. As induction of premature labour is undertaken in cases of contracted pelvis chiefly with the view of saving the child, it is noticeable that only 3 of these 10 children lived, but that out of 12 children previously born of the same women only one had lived. Labour was induced twice in cases of flat, non-rickety pelvis with conjugate diameters of 9½ and 8½ centim. respectively; in the first case, because the 5 previous children had all presented transversely, 4 of them being still born. In both cases of induced labour the children lived. In 2 cases there was a generally contracted pelvis, with a conjugate diameter of 7¼ centim. In 6 cases there was an oblique contracted pelvis, with a conjugate diameter of 8 centim., 5 of these being in the same woman. Of the 20 cases, 2 were primiparæ; the 18 others resulted in the deaths of 9 children—i.e., 50 per cent.; whereas of the 26 children of which the same women had been previously delivered at term, 23, or 88 per cent., were stillborn, so that we may consider that operative interference saved 38 per cent., reckoning those as living which were alive when the mother left the clinic on the eleventh or fifteenth day. The induction of labour was carried out under the strictest antiseptic precautions. Seventeen of the 20 women passed through the puerperal period in a perfectly normal manner; one died from air embolism; one showed signs of septic mischief, and one suffered from slight perimetritis—both these, however, completely recovered. The method employed was that of Krause, with this modification—viz., that a bougie

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was used instead of a catheter. In one case an attempt was made to bring about the labour by a subcutaneous injection of pilocarpine, but this proved useless, even though hot vaginal douches were subsequently administered; so recourse was had to the bougie. The action of the bougie is prompt and certain, though not alike in all cases. The time from the introduction of the bougie to the birth of the child varied from 6 hours to 16 days, the average time being 79 hours. The first pains were felt in from 1½ hours to 5 days after the operation, the average time being 24 hours. The duration of the pregnancy varied from 32 to 36 weeks. With regard to diseased conditions of other organs, labour was induced 11 times, 4 times for kidney affections depending on pregnancy, 6 times for chronic nephritis, and once in a case where there was an uncompensated cardiac affection, which gave rise to very serious symptoms—viz., almost complete blindness from albuminuric retinitis; a considerable amount of ascites with hydrothorax and enormous œdematous labia, together with paroxysms of dyspnœa. In three of the kidney cases there was eclampsia. The results were encouraging, as all 11 women recovered. The bougie was employed 9 times, puncture of the membranes twice. Pilocarpine was first tried on the case with œdema; it produced sweating, but entirely failed in inducing pains.

HÆMOPTYSIS TREATED BY INJECTIONS OF ERGOTIN.

M. GUELLIOT publishes in a Rheims medical journal some notes of a case in which he injected ergotin into the lung. The patient had been suffering for two years from daily hæmoptyses, which had been treated in various ways, but unsuccessfully. Subcrepitant rales could be heard in considerable numbers three fingers' breadth above the liver in front. The man had had pleurisy twenty-two years previously. His general appearance was good, and no tubercle bacilli could be detected in the sputum. M. Guelliot determined to try the effect of injections of ergotin in glycerine into the affected region, employing the strictest antiseptic precautions. After a few drops of the solution had been injected the patient brought up sputum of a distinctly sweetish taste, showing that the injected liquid had been absorbed. The injections were continued, the quantity of liquid introduced being gradually increased. The hæmoptysis began to diminish. The treatment had, after a time, to be stopped, as signs of broncho-pneumonia developed. Ultimately the patient died. The base of the right lung was found to be in a state of grey hepatisation, and there were pleuritic adhesions round all the lower half; also some tubercles at the apex. The interesting point about the case is the fact that after fifteen or twenty ergotin injections the hæmoptysis diminished in a remarkable degree.

SURGICAL SCARLET FEVER.

HOFFA (Volkmann's Sammlung, 292, abstract in *Centralb. f. Bacteriol.*, Bd. ii., No. 8) says that cases of so-called "surgical scarlet fever" fall under one of four categories. They may be—1st. Cases of congestive erythema, clearly due to vaso-motor disturbance. 2nd. Toxic erythema, like the erythematous rashes due to drugs, and depending upon absorption of products of tissue destruction. 3rd. Septic or pyæmic rashes, as the outcome of general septic infection, and probably due to capillary embolism of micro-organisms. 4th. True scarlatinal infection, as verified by one or other of the concomitant symptoms, angina, swelling of submaxillary glands, nephritis, and desquamation. To describe the scarlet fever as "surgical" the infection must occur at the wound, and the exanthem spread therefrom over the body. Such cases, Hoffa states, are rare; and he details the only two which have come under his personal observation. One was a case under treatment for rupture of the urethra with extravasation of urine, which was doing well, until on the ninth day a scarlatinal rash appeared, and spread from the wound over the abdomen and buttocks. It was accompanied by sore throat, and disappeared in a week, but the patient succumbed from cardiac degeneration and acute nephritis. The other case was one of fracture of both femora, and a wound extending into the rectum; was attacked four days after the former case, and recovered with marked desquamation. Streptococci (like the S. pyogenes and the erysipelas coccus) were cultivated from the skin and blood of the first case; but inoculation experiments gave no result.

HYDROCHLORATE OF APOMORPHINE.

THIS useful salt has been extensively tried by Dr. Stocquart of Brussels as a remedy for certain kinds of cough, and he speaks highly of its value. The kind of cough in which it has proved most successful is a distressing and frequent hacking unattended with expectoration, or with exceedingly difficult expectoration, and the improvement of the patient's condition is usually effected in a few days. The drug is as a rule well borne, although a few individuals manifest a special susceptibility to its action, and rarely nausea, colic, and diarrhœa result from its employment. The dose is a minute one, only three or four milligrammes of this alkaloid being given in water in the twenty-four hours; and as the solution rapidly alters by keeping, it is advised to prevent its decomposition by the addition of a few drops of hydrochloric acid, which does not interfere with the therapeutic effects.

URÆMIC HEMIPLEGIA.

GENUINE hemiplegia, or loss of power of the will to move the limbs on one side of the body, does occur in uræmia, but only rarely. As a rule, hemiplegia associated with uræmia is due to a gross vascular lesion. But cases like one described by Dr. Wiglesworth in the July number of the *Liverpool Medico-Chirurgical Journal* prove the dependence of hemiplegia during uræmia on some other cause than a coarse lesion. At the same time, we are not satisfied with the explanation of MM. Chantemesse and Raymond, who, with Dr. Wiglesworth, consider that a serous effusion due to Bright's disease may compress the cerebral arterioles, already weakened by degenerative changes, and so cause paralysis, for it is possible that the same local agency which causes clonic spasms may, if acting in stronger force, cause paralysis; we mean that the same poison may directly cause local loss of function, without the mechanism of a serous effusion having any necessary action in the causation.

GASTRIC ATROPHY AND PERNICIOUS ANÆMIA.

IT may be remembered that to Dr. Fenwick we owe the discovery that certain cases of progressive anæmia depend upon, or at any rate are associated with, atrophy of the gastric mucous membrane. Since then other writers upon pernicious anæmia have described the same lesion in the stomach—one such case recorded by Drs. Henry and Osler being contributed last year to the *International Journal of Medical Science*. In that case there was complete absence of the peptic glands, and gastric digestion was wholly in abeyance. The subject came up for discussion at the recent meeting of the Association of American Physicians (*Boston Medical and Surgical Journal*, No. 26). Dr. Kinnicutt of New York related two cases, in which the typical symptoms of pernicious anæmia were well marked. In each case the only organ found to be affected was the stomach. Its lining membrane was smooth, and microscopic examination showed a great deficiency of the gastric tubules, which

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were either wholly wanting or else existing only in their more superficial portions. Dr. Delafield regarded the lesion of the stomach as secondary, and pointed out that in many other diseases leading to starvation the symptoms of pernicious anæmia are not developed. Both Dr. Henry and Dr. Osler, who also spoke, held that there is a group of cases, clinically indistinguishable from other cases, of pernicious anæmia, in which gastric atrophy is the primary and essential lesion.

INTUBATION OF THE LARYNX.

IN the course of a paper upon Intubation of the Larynx (*Berl. Klin. Wochensch*, No. 32), Dr. Caillé of New York states that the operation has been performed in 429 cases, with 114 recoveries, or about 26 per cent. The majority of these cases were diphtheria, and more than half were children of three years old and under. It is only fair to state that with improvements in instruments better results have been obtained by O'Dwyer than in his earlier cases, so that as an operation it can hardly as yet be compared with tracheotomy. The advantages of intubation are stated by Dr. Caillé to be—1. That it obviates the necessity of administering an anæsthetic, and thus can promptly relieve dyspnœa. 2. There is no such prolonged after-treatment such as tracheotomy needs. 3. No wound is inflicted as a rule, and therefore no path laid open for infection. 4. The consent of parents to the operation is easily obtained. Dr. Caillé looks to far better results being obtained in the future than hitherto, and urges that especial care should be taken to prevent pneumonia from entrance of foreign matter (*Schluck-pneumonie*), and to this end the tube must be such as not to hinder deglutition. The paper enters into full details of the procedure and the accidents that may arise.

DR. MAX ON RHUS AROMATICUS IN ENURESIS.

DR. MAX, physician to the Children's Infirmary, Brussels, has recently made trial of a remedy recommended by Dr. Ellis, in his work on the Diseases of Children, for incontinence of urine. After referring to the various causes and the different specific forms of treatment of this affection, he remarks that he has never seen the remedy referred to—viz., rhus aromaticus—recommended, except in Dr. Ellis's book, and that he experienced some difficulty in obtaining it, which he ultimately, however, succeeded in doing from the New York Botanic Garden. A tincture was prepared by macerating 200 grammes of the bark in 1000 grammes of spirit at 80° C. This was prescribed in several cases in quantities of from twenty to fifty drops per diem, taken in three doses—i.e., about seven to seventeen drops three times a day. The results were in the majority of cases most satisfactory. In no case was any untoward effect produced.

HEMIPLEGIA IN CHILDREN.

THE chief cause of hemiplegia in children is believed to be embolism, according to the clinical lecture given by Dr. Abercrombie at the Hospital for Sick Children, and published in a medical contemporary. His arguments are not altogether unassailable, and consist chiefly in the observations made in the post-mortem room, that the lesions of atrophy and sclerosis of the brain are mainly confined to that area which happens to be "motor" in function and mainly supplied by the middle cerebral arteries, which are, all will admit, more frequently the seat of embolism than other cerebral arteries. Whilst admitting the general truth of the statement that the "motor" areas are more commonly the seat of sclerosis than other parts of the brain, we cannot subscribe to the statement made by Dr. Abercrombie "that the sclerotic changes are not found to any great extent elsewhere in the brain than in the motor area." He carefully, however, proceeds to say that the sclerosis is not necessarily limited to the motor area; but where not so limited, it is generally found in adjoining convolutions, and here comes an assumption "as if it had spread there." We have nevertheless seen sclerosis freely scattered about, just as might fairly be expected on the hæmorrhagic theory of its origin, or, we may remark, on the theory of arterial sclerosis due to syphilis, which cause is indeed allowed by the author to be operative in a certain proportion of cases. The view which goes by the name of Strümpell's hypothesis does not appear to find much favour in this country.

"LUPUS" OF THE VULVA.

IN the August number of the *American Journal of Obstetrics* Dr. Grace Peckham contributes a case to this vexed question, together with a discussion of the whole subject, and an analytical table of forty-eight collected cases. The paper is illustrated by several reproductions of Huguier's drawings, and by a coloured picture of the author's case. The paper leaves the subject much where it was. Microscopical examination seems to be capable of little more than the exclusion of epithelioma, carcinoma, and sarcoma, and to be practically incapable of differentiating between "lupus" and syphilis, around which question the controversy centres. We are surprised that the author, in a paper published in August, 1887, should make no mention of a series of highly important papers by Dr. Matthews Duncan on this subject, read before the Obstetrical Society of London on May 6th, October 7th, and December 2nd, 1885, published in the Transactions of the Society for the year 1885, and reported in abstract at the time not only in THE LANCET, but in the *American Journal of Obstetrics*. Without analysis and criticism of these the paper misses much of its value. The question in most of these cases is—"lupus" or syphilis?

ARSENIC AND MUMMIFICATION.

PROFESSOR ZAALJER, of Leyden, has recently published a number of observations he has made on the bodies of persons who have been poisoned by arsenic. He finds that the degree of putrefaction of bodies containing arsenic is chiefly determined by the state of the temperature of the air before they were buried. In the grave the putrefactive process progresses at various rates, being sometimes slow and sometimes rapid. Having examined a large number of cases, he comes to the conclusion that the arsenic which had been administered had exercised no effect whatever on the rate of decomposition, or on the mummification so that the so-called arsenical mummification has really no existence whatever—at all events, in cases where poisonous doses of arsenic have been taken. He asserts, therefore, that mummification is absolutely useless as medico-legal evidence of poisoning.

A LARGE NASAL CALCULUS.

DR. NOLTE reports, in the *Allgemeine Medicinische Central Zeitung*, a case of nasal calculus occurring in a woman of forty. The patient came to him complaining of a sore in the mouth accompanied by considerable fetor. On examination, at the centre of the junction of the hard and soft palates, there was found a small round ulcer with eroded edges, in the middle of which a rough, somewhat movable object was felt. The hardness of the body and the note on striking it suggested a nasal calculus, which, on account of its heaviness and its rough surface, had by degrees bored through the palate. For two years the patient had perceived a peculiar and not easily described feeling in the nose. To remove the stone, Dr. Nolte made a longitudinal incision, and, after enlarging the opening, extracted a neuriform nasal calculus of the size of a pigeon's egg, with

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several large and small processes. The fetor from the mouth soon disappeared, and the patient was well in eight days. The stone was analysed by Herr Ekarius, and found to contain the following substances: phosphate of lime, carbonate of lime, phosphate of ammonia and magnesia, iron, potash, and traces of soda, also indurated nasal mucus.

THE HEALTH OF THE CROWN PRINCE.

THE Crown Prince of Germany has, we understand, derived great benefit from his stay in the Highlands. The disposition to attacks of sudden and rather severe congestion of the mucous membrane, which has been a feature of the malady throughout, is less marked, and the catarrhal attacks much less severe. Vocal fatigue is also much less pronounced, and the general health is all that could be desired. His Imperial Highness has slightly prolonged his stay in London in order to avoid crossing the sea in the tempestuous weather of the last day or two, as Dr. Morell Mackenzie considers that the infirmity which even Princes on Royal yachts cannot escape might have an injurious effect on the throat. Mr. Mark Hovell will accompany his Imperial Highness to the Southern Tyrol.

SCARLET FEVER IN LONDON.

THE demand for hospital accommodation for cases of scarlet fever in London is still increasing, as many as 132 patients suffering from this malady having been admitted into the hospitals of the Metropolitan Asylums Board during last week. Nevertheless, the mortality from this disease is much below the average of the last ten years, the number of deaths registered in the thirty-third week of the year being but 23, as compared with an average of 33·9. Some proportion of this demand is doubtless due to the increasing confidence which is felt by all classes in the treatment of patients in the hospitals of the managers; but this will not entirely explain the large number of admissions to hospital, and the fact remains that a widely spread epidemic of mild scarlet fever exists in all parts of the metropolis. The question has been raised in the daily press as to whether this may be due to an infective milk supply. The distribution of the cases appears to negative this suggestion, although it is possible that earlier cases due to this cause might soon be masked by the rapid development of the disease.

IT is announced from Hamburg that a severe outbreak of trichinosis has just occurred there. In one house alone nine persons are suffering from the disease. The authorities have seized a number of living hogs, as well as a quantity of pork, believed to be infected with the dangerous parasite. The outbreak is stated to be due to the German habit of eating uncooked ham, and often pork, in a half-raw state.

THE official returns as to vaccination show that in Leicester during the past twelve months, out of 5000 births only 550 children were vaccinated, of whom 39 were vaccinated by private medical men, the remainder being vaccinated at public vaccination stations.

A CASE of scurvy being reported on board the sailing ship *Castle Roy* on reaching the Victoria Dock from Calcutta, the port sanitary authority of London has ordered an inspection of all the ship's provisions.

IN Southern Russia, hydrophobia, during the past few weeks of abnormally hot weather, appears to have become epidemic; and the Pasteurian Hospital at Odessa is overwhelmed with cases.

GERMAN Medical Science has suffered a severe loss by the sudden death of Professor Möller at Königsberg.

BACTERIOLOGICAL RESEARCH.

THE study of animal and vegetable micro-parasites—protozoa, bacteria, and the more highly organised micro-fungi—has created a marvellous activity in the field of pathological inquiry. In nearly all the large medical and veterinary schools on the Continent, laboratories have been established or provision in some way made for instruction and research in bacteriology. As a result, the credit of the discoveries which have been made falls almost entirely to French and German investigators. And so rapidly has the new science progressed, that the text-books of pathology have been rewritten; the literature on the subject itself includes many volumes and a mass of scattered papers in scientific and medical journals; and even periodicals are now issued which are devoted almost, if not entirely, to pathological mycology. In this country it is only quite recently that the medical and veterinary professions and the public generally have been thoroughly aroused to a sense of the necessity for paying more attention to pathogenic micro-organisms. The agriculturist and the breeder of stock have been led to appreciate how seriously these micro-parasites affect the welfare of their crops and animals respectively. The public has awakened to the knowledge that human beings are not only liable to be directly attacked, but they may also fall victims through the medium of the lower animals. A wide field for investigation is thus open on the lines of Pasteur's valuable researches on the silkworm disease, fowl cholera, anthrax, and rabies, and of Koch in his brilliant researches in connexion with the etiology of tuberculosis. Several investigators in this country have taken up the question of the transmission of diseases from animals to man, such as tuberculosis, scarlet fever, and diphtheria. But there is ample room for many more investigators in the same and similar fields. There is both much to be done and to be undone. The first necessity is the instruction of those who wish to undertake bacteriological researches, so that they may be competent to start as independent investigators. The study requires a practical knowledge of the recent advances in microscopy and of the biological methods which are essential for keeping the organisms under continuous observation, and for gaining an insight into their life-history; while pathological histology, chemistry, and experimental pathology must all be made use of in endeavouring to determine the exact part micro-organisms play in the production of morbid phenomena. Such work, to be thoroughly and completely done, is almost of necessity beyond the reach of those who are otherwise actively engaged in the practice of their profession. Like the work of the professional analyst or any other expert, it must fall almost entirely into the hands of specialists. Access to a laboratory equipped with all the necessary apparatus, incubators, sterilisers, &c., is essential, while help from the laboratory assistants in the purely technical details, such as the preparation of the nutrient media, is necessary to effect a vast saving of time. But apart from undertaking laborious original researches, a practical acquaintance with the subject is of unquestionable value. The detection of the tubercle bacillus in the sputum dispels any doubt which may exist as to the nature of the case in question. The detection of the anthrax bacillus with equal certainty enables a diagnosis to be made in a case in which there might otherwise be considerable difficulty in arriving at a definite conclusion. The detection of the characteristic fungus in actinomycosis reveals at once the nature of a tumour which has been, and often still is, described by a variety of names which convey no idea whatever of the real character of the disease. And yet how few practitioners there are in either the medical or the veterinary profession who are acquainted with the appearance of these organisms and the technique for rapidly demonstrating them under the microscope. "A little knowledge is a dangerous thing" is a saying which applies very forcibly to bacteriology. It is not enough to be simply aware of the fact that a particular micro-organism is to be found in a disease; its characteristics, especially its microscopical appearances, must be thoroughly familiar to the observer. Septic bacilli, for example, may readily be found in the blood of the spleen some hours after death, and the untrained practitioner on the look-out for "rods" may only too readily jump to the

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conclusion that he has encountered a case of anthrax. The need for practical instruction as well as for facilities for original research has been increasingly felt during the past two or three years. In another column we have given particulars of the new laboratory at King's College, by which this want will be supplied. We hailed with satisfaction the announcement last spring that arrangements had been made for a course of lectures and practical instruction in Bacteriology, or what might less conveniently but more correctly be termed Human and Comparative Micro-parasitology. The applicants for admission, consisting principally of medical officers of health from various parts of the country and veterinary surgeons, were very numerous, and several had to be refused owing to the limited accommodation. To meet the demand, the Council of King's College, with commendable foresight, have set aside one of the largest lecture rooms in the College to be equipped as a bacteriological laboratory, while two extra rooms are in process of erection for the Professor Superintendent and his assistants. Courses of instruction, with lectures, will be given in November and April, and there will be ample accommodation all the year round for those wishing to work privately or to undertake original researches. We are glad to think that London will at last be provided with a laboratory which will bear comparison very favourably with Professor Koch's laboratory in Berlin.

WOMEN AND LIFE ASSURANCE.

To say that the world owes the modern system of life assurance to women would be only a strong way of putting what is an undeniable and even commonplace fact—namely, that the great majority of life assurance contracts are entered into for the benefit of women, and under a sense of the duty which a man on whom a wife, a sister, or a mother is dependent, owes her, to provide against leaving her destitute in the event of his premature decease. The scheme of life assurance enters, indeed, in a vast variety of ways into our modern social relations. It makes numberless business arrangements possible which without it would be impracticable by reason of the life risks involved, and serves most usefully to cure, or at least reduce, the hardships growing out of unwise settlements and other unfortunate dispositions of property. But, taken altogether, these do not constitute probably even any considerable proportion of the vast aggregate of something like £430,000,000, which represents the collective contingent liability of the ordinary life assurance companies at present doing business in the United Kingdom. "Remember your wife and family" is the admonition with which the life assurance agent clinches his argument in ninety-nine colloquies out of a hundred; and it is a consideration which generally and properly prevails. He is but a poor sample of humanity—and, happily, exceptional—who can either consider with equanimity or dismiss from his thoughts the prospect of ruin in a home which, maintained in comfort by his own exertions, is unprotected against the pecuniary disaster of his decease. Thus female, or, to speak more generally, domestic, influences have been, and always will be, the principal "exciting cause" of life assurance.

But women, who have taken so preponderating a share heretofore in the benefits of life assurance may be expected in future to acquire a new interest in it, not only as beneficiaries, but also as life-risks. It is the obvious outcome of existing conditions. Never in our national history has the number or proportion been so great as now of women who enjoy separate incomes, whether derived from property or the fruit of their own toil. Where there is property, there, of course, its responsibilities will fall, and thus arise in relation to a large proportion of the female population the very same conditions which have given occasion for life assurance in the past. The practice will speedily follow upon the heels of the occasion, and there can be no doubt that the near future will witness a very large extension of life assurance operations along these lines. The omens are indeed so clear that both the Legislature and the companies have laid themselves out to cultivate this field. The Married Women's Property Act of 1882 gave to women the power to effect trust policies similar to those by which under the Act of 1870 married men had been able to put the proceeds of a life assurance policy beyond the reach of creditors, and in many ways the representatives, both in the press and in society, of the life assurance interest have been manifesting an awakening sense of the value for business purposes of the female life.

The taking of a new departure is not, however, altogether as simple as might be supposed. We can well imagine that women, as a rule, are not quite so easily accessible as men to the life assurance agent; but, be that as it may, it is certain that the female life has quite a distinct status from the male, and should theoretically be provided for by different tables. To some extent this is recognised by the insurance companies, and provision is made accordingly. It is well known that observation shows the female to be more tenacious of life than the male, and this advantage becomes more marked as years advance. Indeed, throughout the childbearing period the female community is at a relative disadvantage, and it is not until about her fiftieth year that the woman begins to enjoy an assured vital superiority over the man. Such things need of course to be taken into account, and it must be admitted that the materials do not at present exist for determining with any certainty whether or not the strain of "business" life is prejudicial to the female constitution. There are some grounds for suspecting that the superior longevity of elderly women as compared with men of equal years would disappear if the two classes could be made to exchange conditions of life; but of that we shall know more as the science of vital statistics becomes more complete. At present an opinion on that point must be very largely conjectural.

To a certain extent, then, the actuaries in providing for female life assurance are, for the present, condemned to work in the dark. But this is not so in regard to the adaptation of what materials are at hand to the special needs of a female class. It is doubtless true that the call for a new development arises out of the growing assimilation of female to male requirements. But the assimilation is and can only be partial. Speaking broadly, it may be said that while the principal object and use of life assurance must in all cases be the provision against premature decease, the subordinate purpose of making provision for old age by this means is relatively much more important in the case of a woman than of a man. Hence deferred annuities and benefits of that class assume an importance in this connexion quite distinct from what they have in other circumstances. In this and other ways it is possible so to mould and adopt a scheme of life assurance as to give it a wholly new character, and one fitted for a new career. Changes and adaptations of this sort are being gradually, and, as we think, very usefully, made by those who manage life assurance business.

With regard to a medical examination, we would remark that it is often much more formidable in imagination than in reality. Many persons, both men and women, shrink from it as they might from a serious surgical operation. Of course, this is simple folly. The underlying fear, no doubt, is that something may be found "wrong." It certainly needs but little philosophy to see that this is not only a weak, but also a mischievous apprehension. If anything *is* "wrong," the sooner the discovery is made the better; and, on the other hand, what happens in the very great majority of cases is that the proposer gets a clean bill of health, and goes away feeling as if he had renewed his lease of life. The result in any case is well worth the small amount of time and inconvenience involved in undergoing the examination. In truth, the chief part of an examination for life assurance consists usually in question and answer. The nature of the physical examination must, of course, in a large measure depend upon the indications afforded by the appearance of the proposed life and the facts elicited by the oral examination. This is, indeed, a matter in respect of which much must, and very much ought to be, left to the discretion of the examiner. The fact is one which the directors of insurance companies would do well habitually to bear in mind. The schedules of questions which they commonly furnish to their medical examiners usually err upon the safe side, that is to say they are apt to be over-full of detail. This must be so. They are intended not only to bring every possible point to the examiner's mind, but also in many cases to take the measure of any lesion that may be discovered. Hence the very formidable proportions to which some of them extend. Such exuberance does not matter so long as it is clearly understood that the company respects the examiner's discretion, and will consent to forego details which he,

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having the proposer before him, may judge to be immaterial. Insistence upon the minutiæ of a report, while it does not add to the value of the result obtained, does add seriously to the irksomeness of the examiner's duty, and puts a real, though perhaps somewhat imaginary, difficulty in the way of proposers. Remove all unnecessary obstacles is obviously the present watchword of the insurance companies. And they are right. Vast as are their operations, they have still a large field to conquer, and, at any rate so far as ladies are concerned, they will find it to their advantage to repose a large confidence in the practitioner who is charged with the responsible and delicate duty of the medical examination.

THE INTERNATIONAL MEDICAL CONGRESS.

In general session of the forthcoming Congress, the following addresses will be delivered:—Dr. Austin Flint of New York, "Fever: its Causes and Rational Treatment"; Dr. Mariano Semmola of Naples, Italy, "Bacteriology, and its Therapeutical Relations"; Dr. P. C. Unna of Hamburg, Germany, "The Relations of Dermatology to General Medicine"; Dr. C. Fielding Blandford of London, England, "The Treatment of Recent Cases of Insanity in Asylums and in Private Houses"; Dr. A. Lutaud of Paris, "The Influence of Discoveries of American Surgeons on the Development of Gynæcology in Europe"; and Dr. Neudorfer of Vienna, "The Military Medicine of the Present and that of the near Future." The session is so organised that general meetings will be held on each morning of the week, and meetings of the sections during the later hours of each day.

Diseases of Children.

The following is the complete programme of this Section:—Professor J. Lewis Smith of New York, Chairman. The Section will hold its first session at 3 P.M. Monday, Sept. 5th, when the following papers will be presented:—1. An Investigation to determine whether the Absence of Sewage and of Water Pollution diminishes the Prevalence and Severity of Diphtheria, by Dr. C. W. Earle of Chicago. 2. Rate of Growth in American and British Children, and its Bearing on the Investigation of Diseases, by Professor W. Stevenson of Aberdeen, Scotland. 3. Diseases of Faulty Habit, by Dr. James F. Goodhart of London, England. 4. Deleterious Results in Children of a Narrow Prepuce and Preputial Adhesions, by Professor L. A. Sayre of New York.

At Tuesday's sessions the following papers will be read: 1. The Milk Supply of Cities; Adulterations and Modes of Detecting Them, by Dr. Cyrus Edson of New York. 2. The Nutrition of Infants, by Professor Albert Leeds of Stevens Institute, Hoboken, New Jersey. 3. The Use of Cow's Milk in the Feeding of Infants, by Professor W. C. Vaughan, University, Michigan. 4. Anatomical Characters of Membranous Croup as observed in fatal cases in the New York Foundling Asylum, by Dr. W. P. Northrup. 5. Remarks on Tubage of the Glottis, and the manner in which it was practised in France, by Dr. H. Bouchet of Paris. 6. Intubation of the Larynx, with demonstration on the living subject, by Dr. Joseph O'Dwyer and Dr. Dillon Brown of New York. 7. Intubation *versus* Tracheotomy in the Treatment of Croup, by Professor F. E. Waxham of Chicago.

At Wednesday's sessions the following papers will be read:—1. The Treatment of Strumous Glandular Enlargement of the Neck, by Dr. Martin Oxley of Liverpool, England. 2. Infantile Convulsions in connexion with after Neurotic Tendencies, by J. A. Coutts of London, England. 3. A Study of some of the Bacteria found in the Dejecta of Infants affected with Summer Diarrhœa, by Dr. W. D. Booker of Baltimore. 4. Hallucinations in Young Children, by Dr. E. Bouchet of Paris. 5. Cerebral Irritation in Children, by Dr. Jules Simon of Paris. 6. Treatment of Diphtheria by Antiseptic Sprays, by Dr. Grancher of Paris. 7. Treatment of Physiological Derangements in Children due to Over-feeding, by Dr. Cadet De Gassicourt of Paris. 8. Notes of Malaria of Children in Brazil, by Dr. Moncorvo of Rio de Janeiro.

At Thursday's sessions the following papers are announced:—1. Observations regarding True Pneumonia in Children, by Professor A. D'Espine of Geneva, Switzerland. 2. Paper by Professor Oscar Wyss of Zurich, Switzerland. 3. Some Observations on Headaches in Children, and their Relation to Mental Training, by Dr. W. M. Day of London, England. 4. Scarlatinal Nephritis from a Clinical and Pathological Standpoint, by Dr. Henry Ashley of Manchester, England. 5. On the Pathology of Scarlatinal Nephritis, by Dr. Frank Grauer. 6. The Contagious Principle of Pertussis, by Professor A. Vogel of Munich. 7. The Nature of Whooping-cough, and its Antiseptic Treatment, by Dr. Moncorvo of Rio de Janeiro. 8. On Acetonuria in Children, by Dr. A. Baginsky of Berlin, Germany. 9. Hereditary Syphilis and Rachitis in Brazil, by Dr. Moncorvo of Rio de Janeiro. 10. Marasmus, by Dr. J. N. Love of St. Louis, Mo.

At Friday's sessions the following papers will be read:—1. The Treatment of Lateral Curvature, by Dr. J. Knight of New York. 2. Anchylosis of the Knee-joint in the Straight Position by Excision as a Remedy for the Atrophy and Deformity following Acute Poliomyelitis of Childhood, by Professor Stephen Smith of New York. 3. Hip Disease, Practical Points in its Treatment, by Dr. A. J. Steele of St. Louis, Mo. 4. Forcible Correction of Contracted Knee-joint, by Dr. E. W. Bradford of Boston, Mass. 5. Progress of Orthopædic Surgery, by E. Noble Smith of London, England. 6. Section of Contractured Tissues essential before Mechanical Treatment can be effectual, by Professor Lewis H. Sayre of New York. 7. The Scope and Limitations of Orthopædy, by Dr. C. F. Taylor of New York.

Anatomy.

The following is a list of papers proposed to be read in the Section on Anatomy:—The Bladder, by Reginald Harrison, F.R.C.S., &c., Liverpool, England. The Wolffian Bodies, by Wm. Mitchell Banks, M.D. Ed., F.R.C.S., &c., Liverpool, England. A paper (subject to be announced), by Professor E. Frommann, Jena, Germany. The Intercerebral Nerve Tracts in the Light of Atrophy Methods of von Gudden, by B. C. Spitzka, M.D., &c., New York. On the Development of the Torus Longitudinalis in Teleosians and its Homology in higher Vertebrates, by Professor Rabe Rückard, M.D., &c. On the Surgical Collateral Branch of each of the Main Arteries of the Human Body, by Edward Souchon, M.D., New Orleans, La. A Contribution to the Pathology of Hip Disease, by Milton Josiah Roberts, M.D., New York. Anatomy of the Male Urethra and its relation to Stricture, by E. R. Palmer, M.D., Louisville, Ky. Does a Relationship exist between Anomalies of the Visual Apparatus and the so-called "Neuropathic Tendency?" by A. L. Ranney, M.D., New York. A paper (subject to be announced) by Thomas G. Morton, M.D. Compression Myelitis in Pott's Diseases, by George R. Elliott, M.D., New York. Anatomy of the Foot and its relation to the Operation of Tenotomy, by Lewis Hall Sayre, M.D., N.Y. Anatomy of the Bladder and its relation to Rupture, by I. N. Bloom, M.D., Louisville, Ky. Dissection of a very Young Human Embryo, by Augustus C. Bernays, St. Louis, Mo. On the Urethra, by Reginald Harrison, F.R.C.S., &c., Liverpool, England. Anatomy and Surgical Importance of the Renal Capsule and the Perirenal Adipose Tissue, by L. H. Dunning, M.D., &c., South Bend, Ind. Specimen, by W. T. Oppenheimer, M.D., &c., Richmond, Va. The Didactic Teaching of Human Anatomy, by F. W. Langdon, M.D., &c., Cincinnati, Ohio. A Contribution to the Pathology of Spinal Caries, by Milton Josiah Roberts, M.D., &c., New York. Umbilical Cord, by C. W. Kelley, M.D., &c., Louisville, Ky. Frozen Sections of the Male Pelvis showing relations of Peritoneum to Rectum, Bladder, and Median Line of Abdominal Wall, with special reference to Suprapubic Cystotomy, by Albert B. Strong, M.D., &c., Chicago, Ill. The Mesocephalon of the True Reptile, by B. C. Spitzka, M.D., &c., New York. The Anatomy of the Rectum and its relation to Reflexes, by J. M. Matthews, M.D., &c., Louisville, Ky. Paper (title not announced), by L. S. McMurtry, M.D., &c., Danville, Ky. Studies in Brain Surgery, by Hal. O. Wyman, M.D., &c., Detroit, Mich. The Peritoneum and its relation to Injuries of the Bladder, by N. B. Carson, M.D., &c., St Louis, Mo. Contribution to the Pathology of Knee-Joint Diseases, by Milton Josiah Roberts, M.D., New York. The Groove of the Central Veins on the Inner Table of the Calvaria, by Frank R. Fry, M.D. &c., St. Louis, Mo. Anatomical Considerations concerning the Application of Plaster-of-Paris Dressings to Fractures of the Femur, by W. B. Rogers, M.D., &c., Memphis, Tenn. The Anatomy of the Urethra and Prostate Gland and Bladder, with special reference to Surgical Relief for Enlarged Prostate in Old Men, by Wm. C. Wile, M.D., &c., Philadelphia, Pa. Presentation of Anatomical Specimen, by George Benjamin Johnston, M.D., &c., Richmond, Va. Anatomical Points involved in Loss of Complete Scalp, including one Ear and greater portion of the Eyelids, by F. C. Schaefer, M.D., &c., Chicago, Ill. The Colon, by S. K. Crawford, M.D., &c., Chicago, Ill. Anomalies of the Middle Thyroid Artery, with presentation of Specimen, by Max J. Stern, M.D., &c., Philadelphia, Pa. The Anatomy and Relations of the Cæcum and Vermiform Appendix, with special reference to the Surgery of the Parts, by Hermann M. Briggs, M.D., &c., New York. On Comparison of Twenty Superior Maxillary Bones, by E. M. Wilson, M.D., &c., Bridgeport, Conn. The Destruction of Dissection-room Offal, by H. C. Boenning, M.D., &c., Philadelphia, Pa. Anatomical Points of Value in the Diagnosis and Treatment of Some of the Joint Affections, by N. Stamm, M.D., &c., Fremont, Ohio. A Plea for some Reforms in the Present Methods of Teaching Anatomy, by Wm. Perrien Nickson, M.D., &c., Atlanta, Ga. The Anatomy of the Vermiform Appendix, with some of its Anomalies, by F. M. T. McKennan, M.D., &c., Pittsburg, Pa. The Proper Methods of Teaching Anatomy, by A. P. H. Leuf, M.D., &c., Philadelphia, Pa. Paper (title not announced), by Joseph Dickson, M.D., &c., Pittsburg, Pa. Reports of Three Cases of Nephrectomy, with special reference to the Anatomy, by Geo. Halley, M.D., &c., Kansas City, Mo. The Anatomy of Stricture, by J. Kneely Rhodes, M.D., &c., Philadelphia, Pa. The Pivotal Point in Anatomy and the Principle Underlying it, by W. H. Triplet, M.D., &c., Woodstock, Va.

HOLIDAY COLONY IN SPAIN.

El Siglo Médico states that a small "holiday colony" of eighteen poor children, belonging to the public elementary schools of Madrid, has just been taken by Señor Cosio, Director of the Pedagogic Museum, and two schoolmasters to San Vicente de la Barquera, where they will remain a month. This is the first "holiday colony" which has been publicly arranged in Spain, and seems to have excited a good deal of interest, the Inspector-General of Education, Señor Robledo, and a large concourse of people having attended to witness the departure of the little travellers. The Northern Railway Company, too, has exhibited its willingness to participate in this useful scheme by making a reduction of 75 per cent. on its fares for the benefit of those comprising or accompanying the colony. Though the number of children is very small, it is to be hoped that in future years means may be found to extend the boon to a far wider circle.

M. AUDRY ON THRUSH.

M. AUDRY, writing on the evolution of the fungus of thrush in the *Revue de Médecine*, states that he finds it can be cultivated just as well in neutral or alkaline media as in those which have an acid reaction. This tends to diminish the importance which has usually been attributed to the acidity of the mouth in the etiology of thrush. It is, he thinks, possible that this acidity is the consequence rather than the cause of the spread of the disease, for he has remarked that broth cultures of the fungus which were neutral at the commencement of the experiment became slightly acid. It was found to develop well in media containing glycerine, but not in pure glycerine. It could not be cultivated in broths containing borax, so that M. Audry's observations tend to confirm and justify the practice of treating thrush by local applications of this substance

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

DUNLOP, JAMES C., M.B., C.M., M.R.C.S., has been appointed Resident Surgeon to Chalmer's Hospital, Edinburgh.

DUNSTAN, ROBERT, M.R.C.S., L.S.A., has been appointed Medical Officer for the St. Just District of the Truro Union.

GRIFFITH, T. WARDROP, M.B., C.M., has been appointed Professor of Anatomy in the Yorkshire College, Leeds.

GROSS, CHARLES, M.B., B.S.Lond., F.R.C.S.Eng., has been appointed Medical Superintendent of the New Infirmary at Champion-hill of the St. Saviour's Union.

GWYNNE-HUGHES, DEVEREUX, L.R.C.P., L.R.C.S.Ed., has been elected Resident Medical Officer at the Sydney Hospital.

JONES, DANIEL M., M.D., C.M.Ed., has been appointed Medical Officer for the Marske District of the Guisborough Union.

KING, THOMAS RADFORD, M.D.Ed., has been appointed Medical Superintendent of the Lunatic Asylums at Porirua and Wellington, New Zealand, vice Levinge, transferred.

LEVINGE, EDWARD GEORGE, M.B.Dub., L.R.C.S.I., has been appointed Medical Superintendent of the Christchurch Lunatic Asylum, New Zealand, vice Hacon, resigned.

OLIVER, JOHN W., M.D., M.Ch., M.A.O. Roy. Univ. Irel., has been appointed Assistant Medical Officer to the Hackney Infirmary, Homerton, E., vice R. Evans, M.R.C.S., L.R.C.P., resigned.

WILLIAMS, W. C., has been appointed Analyst for the County Palatine of Lancaster.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

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Births, Marriages, and Deaths.

BIRTHS.

BROWN.—On the 28th ult., at Afnslie-place, Edinburgh, the wife of J. Graham Brown, M.D., F.R.C.P.E., of a daughter.

BUNN.—On the 28th ult., at Berndale, Upper Norwood, the wife of C. Grinling Bunn, M.R.C.S., L.R.C.P., of a daughter.

GRANGE.—On the 29th ult., at Mansfield House, Moffat, N.B., the wife of W. D'Oyly Grange, M.D., of a son.

PERN.—On the 25th ult., at Botley, Hants, the wife of Alfred Pern, F.R.C.S., of a son.

THOMPSON.—On July 28th, at Madras, the wife of Surgeon C. M. Thompson, Indian Medical Service, of a daughter.

MARRIAGES.

ARTHY—FINDLAY.—On the 31st ult., at the Parish Church, Stretford, Lancashire, George F. S. Arthy, M.R.C.S., to Annie Eliza, eldest daughter of Bruce Findlay, of the Royal Botanical Gardens, Manchester.

FENTON-JONES—FOSTER.—On the 25th ult., at St. James's Church, Tatham, by the Rev. Arthur W. Foster, assisted by the Revs. E. Denny and J. C. Hyatt, William Hugh Fenton-Jones, M.D., A.M.Oxon., to Alice, eldest daughter of the late William Foster, of Hornby Castle, Lancashire, and Harrowins, Yorkshire.

JACKSON—RAY.—On the 26th ult., at St. Mark's, North Audley-street, Allan Heslop Jackson, M.R.C.S., to Eva Lindley, elder daughter of James Ray, M.R.C.S., of Lowestoft.

RANDALL—BEAUFOY.—On the 16th ult., at Coity Parish Church, Bridgend, Glamorganshire, Wyndham Randall, M.R.C.S., L.R.C.P.Ed., to Emma, youngest daughter of the late John Beaufoy, of Coventry.

DEATHS.

DEFRIEZ.—On the 29th ult., at Bethnal-green-road, Joseph George Defriez, M.R.C.S., aged 66.

DICKSON.—On the 7th ult., at St. Julien's, Malta, Sir Joseph Ritchie Dyon Dickson; for forty years Physician to Her Majesty's Legation at the Court of Persia.

MITCHELL.—On the 26th ult., at Walton-on-the-Naze, Jas. Barr Mitchell, M.D., L.F.P.S., of Titchfield-terrace, Regent's-park, and formerly of Paris, aged 69.

NICOLSON.—At Cumberland-street, Edinburgh, John Balfour Nicolson, M.D., R.N., aged 68.

IN MEMORIAM.

WAKLEY.—On August 30th, 1886, at Heathlands-park, Longcross, Chertsey, Surrey, James Goodchild Wakley, M.D., for twenty-five years Editor of THE LANCET, youngest son of the late Thos. Wakley, M.P.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

To Correspondents.

WE tender our best thanks to those gentlemen who have kindly supplied us with the returns and prospectuses upon which the information given in this Students' Number of THE LANCET relative to the various medical examining bodies, hospitals, and medical schools of the United Kingdom is based.

The present number being principally devoted to information especially interesting to students, we are necessarily compelled to defer the publication of communications on other important subjects.

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Inaugural Address

DELIVERED AT THE

NINTH INTERNATIONAL MEDICAL CONGRESS,

Held at Washington, U.S., in September, 1887,

BY NATHAN SMITH DAVIS, M.D., LL.D.,

PRESIDENT OF THE CONGRESS.

GENTLEMEN,—With a full consciousness of my own deficiencies, and still with a heart overflowing with gratitude, I thank you for the honour you have bestowed in selecting me to preside over the deliberations of this great and learned assembly. It is an honour that I appreciate as second to no other of a temporal nature, because it has been bestowed neither by conquest nor hereditary influence, nor yet by partisan strife, but by the free expression of your own choice.

Addressing myself now more directly to those here assembled, who have left homes and loved ones in other lands and encountered the fatigue and danger of travelling by sea and by land, in the name of the medical profession of this country I welcome you, not only to this beautiful city and the hospitality of its citizens, as has been so admirably done already by the honourable representative of the Government who has just taken his seat, but I cordially welcome you to the open arms and warm hearts of the medical men of *this whole country*, in whose name you were invited here three years since, and whose representatives are now here side by side with you, gathered from the east, the west, the north, the south, as well as from the rugged mountains and fertile valleys of the centre, to make good the promise implied by that invitation. If they do not cause you to feel at home and happy, not only in the social circles and halls devoted to the advancement of science, literature, and art in this city of our nation's pride, but wherever you may choose to roam, from the rocky coast of New England on the Atlantic to the Golden Gate of the Pacific, it will be from no want of earnest disposition to do so.

And now, I not only thus welcome you from other lands, but I take great pleasure in greeting you one and all as leading representatives of a profession whose paramount object is the lessening of human suffering, by preventing, alleviating, or curing diseases wherever found, and in whatever class or grade of the human family. Nay, more, with profound reverence I greet you as a noble brotherhood, who, in the practical pursuit of that one grand object, recognise no distinction of country, race, or creed, but bind up the wounds and assuage the pains of the rich and poor, ruler and ruled, Christian and pagan, friend and foe alike. Not that every medical man does not love and defend his own country and fireside with as fervid a patriotism as the members of any other class of men. But as disease and pain are limited to no class or country, so is the application of his beneficent art limited only by the number of those suffering within his reach. With a common object so beneficent in its nature, and opportunities for its practical pursuit so universal, it is but natural that you should be found searching for the most effectual means for the accomplishment of the one object of lessening human suffering in every field of nature and in every department of human knowledge.

The living human body—the chief object of your solicitude—not only combines in itself the greatest number of elementary substances and the most numerous organs and varied functions, so attuned to harmonious action as to illustrate the operation of every law of physics, every known force in nature, and every step in the development of living matter from the simple aggregation of protoplasm constituting the germinal cell to the full-grown man, but it is placed in appreciable and important relations with the material objects and immaterial forces existing in the world in which he lives. Hence a complete study of the living man, in health and disease, involves a thorough study, not only of his structure and functions, but more or less of every element and force entering into the earth, the air, and the water with which he stands in constant relation.

The medical science of to-day, therefore, embraces not only a knowledge of the living man, but also of such facts, principles, and materials gathered from every other department of human knowledge as may increase your resources for preventing or alleviating his suffering and of prolonging his life. The time has been when medical studies embraced little else than the fanciful theories and arbitrary dogmas of a few leading minds, each of which became for the time the founder of a sect or so-called school of medicine, with his disciples more or less numerous. But with the development of general and analytical chemistry, of the several departments of natural science, of a more practical knowledge of physics, and the adoption of inductive processes of reasoning, the age of theoretical dogmas and of medical sects blindly following some more plausible leader passed away, leaving but an infinitesimal shadow yet visible on the medical horizon. So true is this, that in casting our mental vision to-day over the broad domain of medicine, we see its votaries engaged, some searching for new facts and new materials; some studying new applications and better uses of facts and materials already known; some of them are in the dead-house, with scalpel and microscope, not only studying the position and relations of every part from the obvious bones and muscles to the smallest leucocyte in health, but also every deviation caused by morbid action or disease. Some are searching the fields, the forests, the earth and the air, both for more knowledge concerning the causes of disease and for additional remedial agents; some are in laboratories, with crucible, test-glass, and microscope, analysing every morbid product and every remedial agent, separating the active principles from the crude materials and demonstrating their action on living animals; while far the greater number are at the bedside of the sick and wounded applying the knowledge gained by all other workers to the relief of human suffering. A more active, earnest, ceaseless, and beneficent field of labour is not open to your vision in any other direction or occupied by any other profession or class of men. And thus has the science of medicine become a vast aggregation of observed facts, many of them so related to each other as to permit practical deductions of permanent value, while many others remain isolated through incompleteness of investigations, and therefore liable to prompt, hasty, or even erroneous conclusions. Indeed, the most effective and embarrassing feature in the science and art of medicine at this time is the rapid accumulation of facts furnished by the vast number of individual workers, each pushing investigations in some special direction without concert with his fellows, and without any adequate conception of the coincident lines of observation necessary to enable him to see the true bearing of the facts he evolves. Hence he is constantly mistaking mere coincidences for the relation of cause and effect, and the pages of our medical literature are being filled with hastily formed conclusions and rules of practice from inadequate data. This results, in part at least, from the extent and variety of the fields of inquiry and the complexity of the problems presented for solution. For nowhere else within the realms of human thought does the mind encounter problems requiring for their correct solution the consideration of a greater number of data than in the study of etiology and pathology. To determine the appreciable conditions of the earth, air, and water of any country before, during, and after the invasion of an epidemic disease long enough to include several consecutive visits of the same, is not possible for a single individual, nor for any number of observers acting separately or without concert. Yet just this complete knowledge is necessary to enable us to separate the conditions that are merely coincident or accidental from those that are such constant accompaniments of the disease as to prove a necessary relation between them. And it is only by such persistent, coincident, systematic observations of many individuals, each having a definite part, and the results carefully compared analytically and synthetically at proper intervals, that the real conditions and laws controlling the prevalence and severity of epidemics and endemics can be clearly demonstrated. It is not enough to discover the primary infection, or the *contagium vivum*, whether it be the bacillus of cholera, yellow fever, or tuberculosis, for abundant experience has shown that not one of these will extend its ravages in any community or country unless it finds there is a soil or pabulum congenial for its support and propagation.

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It is on the development and diffusion of knowledge concerning the local conditions necessary for receiving and propagating the specific infections of disease that nearly all the important sanitary measures of modern times have been based. And it is on a further development of knowledge in the same direction, gained by more systematic, continuous, and coincident investigation, that we shall most successfully protect our race from the pestilences that have hitherto "walked in darkness and wasted at noonday." It was the extensive and ever-extending field of medical science, the complexity of the problems pressing for solution, and still more the individual responsibility of applying the resources at command to the direct treatment of disease, that early disposed medical men to seek each other's counsel, to form groups or clubs for comparison of views and mutual improvement. The manifest advantages of these soon prompted more extended social gatherings, until at the present time a large proportion of the more active members of the profession in every civilised country are participating in municipal, district, national, and international medical organisations. The aggregate benefit derived from all this active intercourse is beyond easy expression in words. In the more frequent and familiar comparison of cases and views on all professional subjects in the local societies, closer habits of observation and a wider range of thought are induced, while narrow prejudices and bigotry give place to generous rivalry and personal friendships. In the larger gatherings, the formal preparation of papers and reports on a great variety of subjects impels their authors to a wider range of study and greater mental discipline, while the collision with other minds in discussion brings all aspects of the subject to view, enlarging the scope of mental vision, starting new trains of thought, and begetting a broader and stronger mental grasp with purer and nobler aims in life.

I think I am justified in saying that no other one influence operative in human society during the present century has done as much to develop and diffuse medical knowledge, to stimulate its practical and successful application, both in sanitary measures for preventing disease and in the direct alleviation of suffering at the bedside, and in unifying and ennobling the profession itself, as has been accomplished by the aggregate medical society organisations of the world. Yet their capacity for conferring other and perhaps still greater benefits, under proper management, will have become manifest in the near future. And that I may accomplish the chief object of this address, I must ask your indulgence while I indicate some of the more important additional benefits in advancing medical science and saving human life through the instrumentality of our medical society organisations, and the methods by which they may be accomplished.

Every experienced and intelligent practitioner of the healing art is familiar with the fact that all acute general diseases are influenced in their prevalence and severity by seasons of the year, topographical and other conditions of the earth, meteorological conditions of the atmosphere, and the social condition and habits of the people themselves. The most familiar endemics vary annually in the same localities, while the great epidemics that have for ages broken over the comparatively limited boundaries of their habitats only at intervals of years, and extended their ravages from country to country, and receded again to the source from which they apparently originated, differ widely in the different periods of their prevalence. But in studying the essential causes of any one of these general diseases and the laws and conditions under which such causes operate, he soon finds certain factors, essential for the solution of his problems, wanting. For instance, if he wishes to identify the date of the first attack of epidemic cholera in a given locality, and the character of bowel affections immediately preceding, the ordinary statistics of mortality will give him only the date of death, which may have been from one to seven days later, or it may have been preceded by one or more cases that recovered. If he is anxious to determine the reason why the disease, on entering one community, develops with such rapidity that in a few days its victims are found in every grade of the population and in almost every street, while in another it develops slowly, adhering persistently to particular classes or localities, he may find in the ordinary meteorological records the thermometric, barometric, and hygrometric conditions of the atmosphere, with the direction and the velocity of the winds, but he finds nothing regarding those important though variable elements known as ozone and hydrogen peroxide, active oxidisers; or those nitrogenous products called free and albuminoid ammonia. Neither do the sanitary records give the desired information concerning the composition and impregnations of the soil, or of the organic and inorganic emanations that may arise therefrom. An adequate knowledge of these absent factors relating to the condition of the earth, air, and water over districts large enough to embrace localities subject to invasions of the epidemics and others known to be exempt, through a sufficient length of time to cover several periods of prevalence and periods of absence alike, is essential for enabling us to comprehend the causes that make one district amenable to the prevalence of a disease and another not, as well as the marked differences in the severity and mode of progress of the same disease at different periods in the same localities and same classes of the people. The same additional knowledge would also furnish the basis for further sanitary measures of the greatest practical value. And yet it must be obvious that the co-operation of numbers of medical men directly engaged in the field of general practice, with others possessed of more practical facilities for chemical and microscopical research, is necessary for successfully prosecuting such coincident and continuous investigations as would be likely to secure the desired results. Only well-trained general practitioners in every locality chosen for observation could observe and record the date of the initial symptoms of acute general diseases coming under their notice, and at stated intervals collate and report them to a central committee. The daily observations concerning the presence and relative proportion of active oxidisers and of nitrogenous organic elements in the atmosphere and the water would require the selection of one or two experts in chemical and microscopical research for each locality, all making their observations coincidently in time and by uniform methods. There are included in the organised medical associations of each country the men and materials necessary for prosecuting every well-defined line of inquiry; and these associations, by their stated meetings and their facilities for intercommunication and concert of action, present the entire machinery needed, and are only waiting for well-planned and systematic use.

The tendency to make the permanent medical organisations available for prosecuting work in the directions I have indicated has already been manifested to a limited extent, as may be seen in the formation of the Collective Investigation Committee of the British Medical Association and of the International Collective Investigation Committee, organised during the sitting of the Eighth International Congress at Copenhagen. An earlier movement more fully of the character I have been endeavouring to explain was made by the American Medical Association in 1875,[1] when a standing committee was appointed to establish in a sufficient number of localities regular coincident daily observations and records concerning all appreciable meteorological conditions, including organic and inorganic elements found in the atmosphere, and the date of beginning of acute general diseases, and report the results at each annual meeting of the Association. The committee made reports embodying facts of interest and permanent value in 1877,[2] in 1879,[3] in 1881,[4] in 1882,[5] and in 1883.[6] The latter report contains, among other items, a complete tabulated statement of the free and albuminoid ammonia in the atmosphere for every day in the year ending Aug. 31st, 1883, as determined for the committee by Professor J. H. Long in connexion with the laboratory of the Chicago Medical College. The committee is still prosecuting its work with material in hand for a still more important report at an early day. The greatest difficulty encountered has been to enlist a sufficient number of active practitioners in each locality, who faithfully record the desired clinical facts and report the results to the committee. But this and all other obstacles can be overcome by persevering and well-directed work.

I trust no apology is needed for having embraced this occasion to attract your attention to the very important question how to make all our medical associations more useful in promoting the science of medicine by more complete methods of investigation, especially in directions where the coincident action of several persons in different places is essential for success. I fully appreciate the

[1] Trans. of the American Medical Association, vol. xxvi., p. 135.
[2] Ibid., vol. xxviii., p. 153.
[3] Ibid., vol. xxx., pp. 38–147.
[4] Ibid., vol. xxxii., p. 481.
[5] Ibid., vol xxxiii., p. 43.
[6] Journal of American Medical Association, vol. ii., pp. 85 and 169.

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great benefit resulting from the simple mingling of large numbers of medical men in social contact, where each is made to hear constantly, whether on the street, in the hotel, or the assembly room, new suggestions, new modes of expression, and to observe the physical and mental effects of the various habits and customs of the different peoples, until each one leaves the general gathering with largely increased mental activity and resources, as was so happily expressed by Sir James Paget in his address to the Congress of 1881 in London. And I appreciate in a still higher degree the benefits derived from the preparation and reading of papers by individuals, and the discussion of important questions, in all our assemblies. But, for reasons I have already briefly stated, I hope to see added in every permanent general medical society two standing committees: one, to whom should be referred for critical examination every communication claiming to embody a new discovery in either the science or art of medicine; and the other should be charged with the work of devising such lines of investigation for developing additional knowledge as require the co-operation of different individuals, and perhaps societies, and of superintending their efficient execution until crowned with success. If 10 or 20 per cent. of the money paid for initiation and membership dues by the members of each society were appropriated and judiciously expended in the prosecution of such systematic and continuous investigations from year to year, it would accomplish more in advancing medical science directly, and indirectly in benefiting the human race, than ten times that amount would accomplish if expended in any other direction. For it must be remembered that when money is expended for material objects, even for food, clothing, or medicine, such materials feed, clothe, or relieve but one set of needy individuals and are themselves consumed; but the expenditure of money and time in such a way as to develop a new fact capable of practical application either in preventing, alleviating, or curing disease—that fact does not, like the food or medicine, perish with the using, but it becomes literally imperishable. Neither are its benefits limited to one set of individuals, but it is transmitted with the speed of the lightning over the land and under the sea to every civilised people; and whatever benefits it is capable of conferring are as capable of being applied to a million as to one, and of being repeated with increasing efficiency from generation to generation.

It has been tersely and correctly stated that associated action constitutes the characteristic and predominating power of the age in which we live. It is by associated action that education in its broadest sense, religion, and civilisation have been more rapidly diffused among the masses of mankind during the present century than during any other period of the world's history. It is by the association of capital, wielded by the associated intellects of the nineteenth century, that highways of commerce have been opened over the valleys, through the mountains, across the deserts, and on the oceans, over some of which the material productions of the nations are borne by the resistless power of steam, and along others the products of mental action are moved with the speed of electric currents, until both time and space are so far nullified that the most distant nations have become neighbours, and the inhabitants hold daily converse with each other from opposite sides of the globe. Indeed, it is only by means of such of these highways as have been constructed within the memory of him who addresses you that you have been gathered in this hall from the four quarters of the earth, and through which an account of your doings may be daily transmitted to your most distant homes. I congratulate you on the fact that the profession you represent has taken the lead of all other professions or classes of men in rendering available these grand material achievements of the age for cultivating fraternal relations, developing and interchanging knowledge, and planning concerted action for rendering human life everywhere healthier, happier, and of longer duration.

This is the ninth grand International Congress in regular series within little more than two decades, and let us hope that all its work will not only be done in harmony and good order, but with such results as will add much to the aggregate of human happiness through all the coming generations. Without trespassing further on your patience, I must ask your forbearance with my own imperfect qualifications, and your generous assistance in the discharge of the responsible duties you have devolved upon me.

Clinical Lectures
ON
DISEASES OF THE EYE.

Delivered at the Nottingham and Midland Eye Infirmary,

BY C. BELL TAYLOR, M.D., F.R.C.S.,
HONORARY SURGEON TO THE INFIRMARY.

LECTURE VI.

GLAUCOMA.

GENTLEMEN,—When Mr. Mayhew, the late eminent veterinary surgeon, described rabies in the dog, he used to say: "The eyes, which glow like living coals in the early stages of the malady, become *bottle green*, and in many cases slough and fall from the sockets ere death closes the scene." Now I need not tell you that *glaucos* is Greek for green, and it is precisely this bottle-green reflex which you notice in the pupillary area of the patient you have just seen which is the origin of the term "glaucoma"—the subject of this evening's lecture. I know you will say: "If that is so, it is strange that this remarkable symptom should be conspicuously absent in so many of the cases which come under treatment at this institution." Well, it does seem strange; but the fact is, that the term as at present understood bears little relation to its original etymology, but is used indiscriminately to cover the whole series of morbid changes which are the result of increased intraocular tension or fulness of the globe. What is the cause of increased intraocular tension? Well, if you mean the primary cause—the *causa causans*,—all I can do in the way of response is to call your attention to certain facts which may assist you in forming an opinion. A lady addicted to play, but a bad loser, was one evening most unfortunate at cards. Under the influence of the chagrin so occasioned, she developed glaucoma and lost the sight of the right eye. Warned by this terrible mishap, she abandoned her favourite pastime for a year and a half, when, being tempted, she again ventured, was again unfortunate, and lost the sight of the remaining eye. (Fischer.) A distinguished engineer, during the siege of Paris, ascended in a balloon to make observations, was caught in a contrary current, driven within the enemy's lines, and taken prisoner. That same night he was attacked with glaucoma in both eyes. (Wecker.) A nurse, worn out with watching at the bedside of a dying patient, fell asleep and was suddenly roused by a loud crash. The sash cord had broken. Glaucoma came on within an hour in the right eye, and the left was speedily affected in the same way. (Lawson.) I could multiply such recitals from many similar cases occurring in my own practice, but here is evidence enough to show that misery and misfortune, anxiety and worry, stand in the relation of predisposing cause and effect to glaucoma, and that nervous shocks will precipitate an attack. Some pathologists affirm that the eye is affected through the medium of the fifth and ciliary nerves, others that the sympathetic is principally involved. However that may be, it is certain that the proximate or immediate cause of a rise in tension is one or other of two conditions—either secretion is in excess, or the normal outflow is impeded. The vitreous and aqueous chambers of the eyeball are, as you know, respectively permeated and filled with a watery fluid; if the former is removed, suspended, and pricked, it drains slowly away; if the latter is punctured, it escapes at once. But you will hardly appreciate without reflection the extraordinary rapidity with which this fluid circulates. The late Dr. Bence Jones demonstrated by actual experiment that a small dose of iodide of potassium appeared in the aqueous chamber almost simultaneously with its imbibition; and it is well known when fluorescine is injected under the skin that the play of colours is speedily perceptible in the pupil (Ehrlich). What is the mechanism of this wonderful process? How does this watery fluid get into the eye? and how does it get out of it? According to received physiological views, it is secreted by the choroid, iris, and pigment epithelium of the ciliary folds, permeates the vitreous chamber, passes backwards along the optic nerve, and forwards through the pupil into the aqueous chamber and canal of Schlemm,

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whence it finds its way into the episcleral veins, and you can readily understand that any check to its outflow, or excess in secretion, must at once be attended with a rise in tension, and that is precisely what happens when a patient is said to be suffering from glaucoma. If the initial lesion is hypersecretion, the disease is primary or idiopathic; if the outlets are first blocked by accident or pre-existing disease, the affection is, of course, secondary; and it is well to remember that the causes which block the outlets are apt also to excite irritative hyper-secretion, and that excessive secretion, by pushing forward the lens and iris base, is also certain to impede the normal outflow, so that the disease moves in a vicious circle and tends continually to get worse. Primary glaucoma seldom occurs under fifty years of age, and only then, as a rule, in persons with a certain predisposition, but secondary glaucoma may be induced at any age and needs no predisposition. The infant sent here last week by Dr. Walker had marked glaucoma, the result of hæmorrhage between the choroid and retina. It may also proceed from almost any inflammatory affection of the eye, and from various accidents, injuries, and surgical operations. "It is mournful," says von Graefe, "to see how many eyes, after escaping entire destruction from ulceration, as in ophthalmia neonatorum, are afterwards rendered blind by secondary glaucoma, the result of adhesions for which active treatment has not been adopted in time." I have also seen it complicate the various forms of keratitis iritis, sympathetic ophthalmia, and excluded pupil, cataract, dislocated lens, wounded lens, intraocular tumours, ruptured capsule, and extreme myopia.

Of primary glaucoma you will meet with two principal varieties—the simple and the inflammatory. The patient we have just left in the ophthalmoscope room, who is fifty-four years of age, and both of whose eyes are affected, is quite a typical example of the former condition. His wife tells us that he has destroyed his sight by using too strong magnifying glasses, and that his vision varies, being worst at night, worse at some times in the day than at others, and worse on some days than on others. He is a big-framed man, with a full hard pulse, and complains of attacks of dimness of vision, similar to what would be caused by clouds of smoke or fog, with a rainbow round luminous objects. He is subject to headache; the iris is sluggish, and the cornea insensitive. The general acuity of vision is distinctly lessened, amounting to slight short sight; but the peripheral portions of the retina have suffered most, specially, as we ascertained by lamplight (which is best for this purpose), to the inner or nasal side. On ophthalmoscopic examination we found that the optic disc is what is termed cupped, or rather excavated, for it is hollowed out at the sides with overhanging edges, and the pressure which has driven back the papilla has also detached the choroid, so that the disc is surrounded by a whitish ring of exposed sclera. We have ascertained that this is a true excavation and no optical delusion by the parallax, with both the direct and indirect methods of examination, and we have also calculated its depth by reducing to millimetres the different values of the lens required to see the base of the cup and the surface of the retina. "But," you may say, "granting that there is a cup, how do I know that it is a glaucomatous, and not a physiological or congenital cup, or the result of atrophy from absorption of nerve tissue consecutive to cerebral change?" Well, I know that it is a glaucomatous and not a physiological cup, because the physiological cup affects both eyes alike, and in this case the right eye is much the worst of the two. This cup, moreover, occupies the entire area of the papilla, and, most characteristic feature, the vessels are crowded to the nasal side; whereas the physiological cup, however steep it may be, never involves the whole of the disc, and there is no like tucking under, lateral displacement, or changed calibre of retinal vessels. I know this is not a case of simple atrophy, absorption of nerve tissue, or amblyopia from cerebral change, because, apart from other important symptoms, the destruction of the field of vision in cases of atrophy begins on the temporal, and not—as in glaucoma cases—on the nasal side. I know also this is the result of increased tension, because, although there is no spontaneous pulsation of retinal vessels, throbbing is easily induced, as you saw, by the slightest touch on the surface of the eyeball, the artery beating in the centre of the disc and the veins collapsing in concert at its periphery. For the rest, strange to say, the eye looks fairly natural; is not inflamed or congested; nor are the episcleral veins notably enlarged; nor is tension, just now at any rate, very greatly increased. Let us consider what is the cause of these curious symptoms; and first, as to his wife's suspicions. There is no reason to believe that he has been using too strong glasses, for the fact is, the man's accommodation is paralysed from pressure on the ciliary nerves, and strong glasses are a necessity, if he is to see small objects at all. Indeed, you may always suspect glaucoma when a patient is constantly changing his glasses. His vision is worst at night, and varies from day to day, because of slight exacerbations, and because the eye sympathises with fatigue and the general constitutional condition; the clouds of smoke and rainbows are caused by œdema of the corneal epithelium from infiltration with intraocular fluids (Fuchs); the cornea is anæsthetic from pressure on the ciliary nerves as they pass along the inner surface of the sclerotic, and the whole visual acuity is diminished from this cause, as well as from retarded blood supply, the inner or nasal side suffering most, because the vessels supplying the corresponding outer half of the retina have the longest course to run, and are consequently most exposed to pressure. The optic disc is hollowed out because it is the weakest part of the sclerotic, and is therefore the first to give way; the artery pulsates because the intraocular pressure is so great that the blood can only pass at the moment of the heart's contraction; and the fact that all this takes place without any marked hardening of the globe is a proof, either that slight tension long continued will cause grave intraocular changes, or that in this case it has been effected during exacerbations, which are such a distinct feature in almost all forms of glaucoma.

Inflammatory glaucoma, of which you have seen many examples, may prove so intense as to destroy sight in twenty-four hours—hence called *fulminans*. It may resist all treatment, including iridectomy; in fact, get worse whatever you may do—hence called *malignant;* and short of these aggravated conditions, which fortunately are rare, it may occur in a chronic or acute form. The female patient with the green eye (γλαυκον ομμα) *glaucon omma*, to whose case I directed your attention at the commencement of this lecture, is a good example of acute glaucoma. She is fifty-six years of age, has recently lost her husband, and had troubles of various kinds. Six weeks ago she went to bed as well as usual, but was roused in the middle of the night by a violent pain in the right eye, which was swollen, inflamed, and watering freely. She was treated by a local practitioner, but the disease progressed steadily from bad to worse, until at last all perception of light was gone. At present you see that the iris has lost its tint and lustre; that the cornea is dull and anæsthetic; that the eye is as hard as a stone, and that the widely dilated pupil presents a peculiar tint, compounded of a yellow lens and turbid blue aqueous humour. In these cases the disc is not usually cupped, simply because the pressure has not lasted long enough to induce that change. If, however, the fundus can be illuminated, you will see the artery throbbing without any superadded pressure; or, if nothing else is to be seen, the optic disc looming through the turbid vitreous like the sun in a fog. As the disease advances, the iris loses its colour; the pupil dilates, assumes an ovoid form, and is insensible to light; the vitreous and aqueous humour become more or less opaque, and the former has usually so pushed forward the lens and iris base that the anterior chamber is wellnigh obliterated. The patient's sufferings in some cases are little short of agony; in others fever runs high and vomiting is frequent. With many pain is referred to other parts, so that the eye, as the *fons et origo mali*, is apt to be overlooked, and the attendant misled as to the nature of the case. I was once called to a patient whom I found on her hands and knees groaning with her face buried in the pillow. The case had been diagnosed as severe migraine, and six teeth extracted in the hope of relief. Another had had her head shaved and been bled and blistered, on the ground that she was suffering from meningitis; and a third was reported as affected with gastric fever. Iridectomy acted like magic so far as the relief of pain was concerned in each of these cases, but was too late to restore sight in the first two, and was only partially successful in the third. Chronic, inflammatory, and irritable glaucoma present the same symptoms as the acute, but to a less degree; and these forms of the disease, like simple glaucoma, are also characterised by marked exacerbations and remissions.

With regard to treatment. The indications in secondary, consecutive, and traumatic glaucoma are clear enough. We must, whenever possible, remove the cause of disaster.

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A broken-up lens that blocks the angle of the chamber or presses upon the iris must be let out; the dislocated lens must be extracted, and tension after capsular operations treated by paracentesis. Adhesions with ulceration require iridectomy; and the same operation must be performed whenever glaucoma complicates iritis, irido-choroiditis, and excluded pupil. As to cases of simple and inflammatory glaucoma, it has been very generally taught that all the resources of the Pharmacopœia are powerless to cope with these maladies—an assertion hardly, however, in accordance with facts; for just as a sudden fright, probably by dilating the pupil, may cause or precipitate an attack of glaucoma, so will eserine, by inducing an opposite condition, avert it. Just as anxiety and prolonged vigils may cause increased tension, so will morphia or other hypnotic, if it ensure profound sleep, abort it. Just as a rise in blood pressure from excitement and derangement of the sympathetic and fifth nerve may provoke excessive secretion, so will medication, such as blood-letting, ice, or hot fomentations, elaterine, eserine, pilocarpine, and large doses of quinine (10 grains, Mittendorf), tend to stave off an attack or mitigate its severity. I do not say that such remedies will avail in a severe case, cure or prevent recurrence in slighter ones, or avert gradual deterioration of sight in any; but there is no doubt that the disease may be kept at bay for a time by judicious medication, and it would be unwise to ignore the value of such remedies when from any cause operation is postponed.

(To be concluded.)

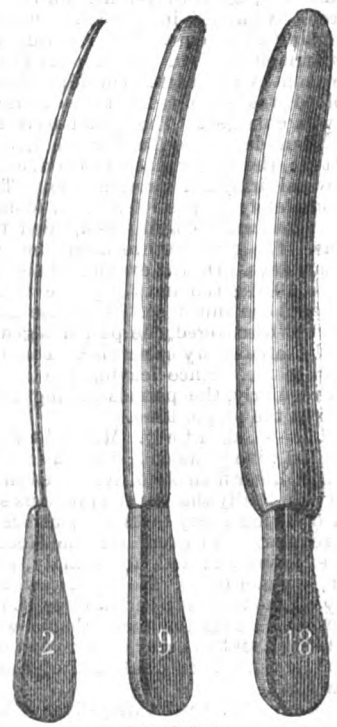
ON RAPID DILATATION OF THE CERVIX UTERI.[1]

BY A. H. N. LEWERS, M.D., M.R.C.P. LOND.,
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THE object of the present paper is to draw attention to the safety and other advantages of the rapid method of dilatation of the cervix by means of Hegar's dilators, as contrasted with that of dilatation by tents. Although this rapid method is familiar to gynæcologists, it is not by any means so generally well known as it deserves to be—probably because these dilators are not figured in any of the works on diseases of women commonly used in this country; and I think it may be said that when the necessity for dilating the cervix arises most practitioners still rely on the older method—slow dilatation by means of some form of tent. The disadvantages and dangers of tents are, however, so serious, that I think anyone who will give the rapid method a fair trial will be inclined to abandon the use of tents altogether. Dilatation by tents is not uncommonly followed by more or less severe attacks of pelvic inflammation, peri- or para-metritis, and several deaths from their use have been recorded. Probably, if during the process of preparation all tents were impregnated with a powerful antiseptic, these bad results might be avoided. At present this is not done; and even if it were, we could never be personally satisfied that the particular tents about to be used had been efficiently rendered aseptic by the manufacturer. By using Hegar's dilators any danger of septic poisoning can be entirely avoided.

Hegar's dilators are slightly curved ebonite cylinders about three inches and a half long, the distal end forming a blunt cone and the proximal being fitted with a handle. There are twenty-six sizes usually supplied, the transverse diameter varying from one-twelfth of an inch to one inch. (See Fig. 1.) The method of using them is as follows:—The patient is put in the lithotomy position, and the vagina thoroughly syringed with some efficient antiseptic, such as 1 in 2000 corrosive sublimate solution. Sims's speculum is introduced and the anterior lip of the cervix seized with a pair of vulsellum forceps, preferably a pair having a catch at the handles like Spencer Wells's forceps. The direction of the uterine cavity is then ascertained with an ordinary sound. The dilators should have been previously placed in numerical order in a shallow porcelain tray and covered with a 1 in 20 carbolic lotion. One of the dilators corresponding to the supposed calibre of the cervical canal is then dipped in carbolised oil and passed through the cervix, which is held steady by the vulsellum forceps in the left hand. If the dilator used only passes with difficulty, it is held in position a minute or two before withdrawing it. It is important to have the next larger size ready to pass at once after withdrawing each dilator. In this way the dilators are passed one after the other till the cervix is sufficiently open to admit the finger. This degree of dilatation is usually obtained after No. 19 of the series has passed. If any morbid condition is discovered in the cavity of the body of the

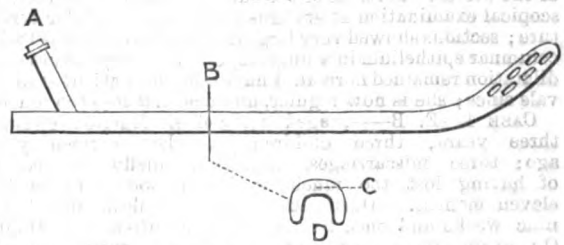
FIG. 1.



Hegar's Dilators.

uterus, this is treated by suitable means. Polypi, for instance, or pieces of placenta can be removed. If a growth of doubtful character is discovered, a small portion may be removed for microscopical examination. Whether anything abnormal has been found in the interior of the uterus or not, it is of great importance to wash out that organ with carbolic lotion or iodine water. For this purpose nothing answers better than the double-channelled tube shown in Fig. 2. No matter how tightly

FIG. 2.



TUBE FOR WASHING OUT THE UTERUS.

The indiarubber tube of an ordinary Higginson's syringe fits on at A. The horseshoe shape of the tube on transverse section at any part (say B) is shown. The fluid injected at A passes between the layers of the tube, as at C. This fluid, after escaping from the holes at the distal end, returns along the groove D, which runs on the under surface of the tube for its whole length.

the tube may be grasped by the uterus, the fluid injected readily escapes along the deep groove on the under surface. These tubes are made of celluloid or glass. Those used in my cases were of celluloid. Subsequently the patient should have antiseptic vaginal douches three times a day for a few days; iodine water is the antiseptic I usually employ for this purpose. If the dilatation is per-

[1] Read before the Harveian Society of London.

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formed soon after a miscarriage, or soon after labour, no anæsthetic is needed, but in other cases it is necessary. The only objection of importance that has been made to the use of Hegar's dilators is, that they are apt to cause deep lacerations of the cervix. I do not think this is an objection of much practical weight. I have used them in a good many cases, and seen them employed in many others without any laceration occurring, and I think this accident must be due to too great force having been employed. In the following seven cases the cervix was dilated with these instruments.

Case 1.—E. S——, aged thirty-nine. Married sixteen years; seven children. Admitted into the London Hospital complaining of losing a large quantity of blood on and off ever since a miscarriage she had five months previously, when about three months pregnant. On admission it was found that some blood was escaping from the external os, and that the uterus was enlarged. The sound passed three inches and a half. Four days later, under ether, the cervix was rapidly dilated: the finger passed into the uterine cavity came on several irregular prominences. These were removed as completely as possible. They looked like pieces of placenta. Pure carbolic acid was applied to the interior of the uterus. The temperature after the dilatation was normal for four days. On the evening of the fifth day there was a rise to 101·4°; the next day the temperature was again normal and continued so. No cause for the rise on that one day was discovered, the patient's general condition being perfectly satisfactory otherwise. Three months later she came to see me. Since leaving the hospital she had menstruated regularly, the periods lasting four days only, and recurring at the proper time.

Case 2.—J. L——, aged forty. Married twenty years; six children, the last nine years ago; four miscarriages, the last before the birth of her fifth child. Admitted into the hospital complaining principally that for the previous six months her periods had occurred every fortnight; before that she had been quite regular. No cause for the bleeding was discovered on examination, and, accordingly, the cervix was dilated rapidly under ether. Nothing, however, was found in the cavity of the uterus to account for the bleeding, and it seemed probable that the menorrhagia was due to the menopause being about to occur earlier than usual. In this case the temperature after dilatation of the cervix never rose above normal.

Case 3.—M. W——, aged thirty-five. Married sixteen years; twins a year after marriage; two miscarriages, the last eleven years and a half ago. Admitted at the hospital on account of menorrhagia of fifteen months' duration. She had been under treatment in the out-patient department, but had obtained no relief. On examination, the uterus was found to be enlarged, and the sound passed four inches. The uterus was freely movable. The vaginal portion of the cervix was healthy. The cervix was rapidly dilated under ether. On passing the finger into the body of the uterus, soft irregular projections, particularly extensive on the right side, were met with. These were thoroughly scraped away with a spoon, and tincture of iodine applied to the interior of the uterus. Portions of the substance removed on microscopical examination afterwards showed a glandular structure; sections showed very large irregular cavities lined with columnar epithelium in a single layer. The temperature after dilatation remained normal. I have seen this patient at intervals since; she is now regular, and does not lose too much.

Case 4.—E. B——, aged forty-five. Married twenty-three years; three children, the last sixteen years ago; three miscarriages. Admitted chiefly on account of having lost too much at her periods for the last eleven months. During this time the flow once lasted nine weeks and once five weeks, and often a fortnight. On examination there was found an erosion on the anterior lip of the cervix; for a time it was thought doubtful whether it was not commencing malignant disease. Under local treatment, however, the erosion improved rapidly, but the menorrhagia was still as bad as ever; the cervix was therefore rapidly dilated. A little sessile lump the size of a split pea was found in the cavity of the uterus near the point of entrance of the right Fallopian tube; it did not admit of removal. The temperature after dilatation remained normal in this case also. This was probably one of the menorrhagic cases commonly met with, apart from local disease, about the time of the menopause.

Case 5.—H. H——, age thirty-seven. Married fifteen years; no children; one miscarriage ten years ago. Admitted complaining of having lost too much at her periods for the last six years, sometimes bleeding for three weeks at a time. The cervix was rapidly dilated till the finger could be passed into the uterine cavity. Nothing abnormal was detected. In this case it is worth noticing that the time occupied in dilating the cervix was only twenty minutes. The patient had had no children, and the external os was small. The temperature on the second day was 100·8° in the evening, but except on that occasion was normal throughout.

Case 6.—G. M——, aged thirty-nine. Married eight years; had one child when she was fifteen years old; none since. Admitted into the hospital complaining of having had a red vaginal discharge for three months. Three months previously she had one of her ordinary menstrual periods, but instead of this passing off in the usual way she continued to have a red discharge till she came to the hospital. In the out-patient department no cause was found for the hæmorrhage, and she was therefore taken in that further investigations might be made. When the anterior lip of the cervix was seized with vulsellum forceps preparatory to dilatation the lip was necessarily somewhat everted, and it was at once evident that there was malignant disease within the cervical canal that had not extended beyond the external os. The cervix was rapidly dilated, and it was found that there was extensive malignant disease in the cervical canal. The cavity of the body of the uterus was healthy. As here we are only concerned with the case so far as it was affected by dilatation of the cervix, I need only say that on the evening of the day when dilatation was performed the temperature was 100·2°; but after that it remained normal.

In the preceding six cases dilatation of the cervix was performed in the non-pregnant condition, in the following case it was done at the sixth month of pregnancy for the purpose of terminating the pregnancy on account of persistent hæmorrhage that was seriously affecting the patient.

Case 7.—Mrs. F——, aged thirty-seven. Married thirteen years; had had four children, the last five years ago; no miscarriages. She was brought to me by Dr. Cockell of Dalston complaining of attacks of pain from time to time across the lower part of the abdomen and back, and of irregular hæmorrhages. Three months before I saw her she had an attack of bleeding lasting five weeks; then she went a month free from bleeding; then it came on again, small clots being passed. The bleeding continued till the time I saw her. The uterus was about the size it reaches at the sixth month of pregnancy. The patient was a good deal pulled down by the bleeding, and it was clearly desirable that the uterus should be emptied as soon as possible. Accordingly the cervix was dilated with Hegar's dilators. As soon as it was sufficiently open to admit of my finger I felt the placenta attached right over the internal os; in fact, it turned out to be a case of placenta prævia. I separated the placenta all round as far as I could reach, and then ruptured the membranes, brought down a leg, and so delivered. The whole period occupied from the time she began to take the anæsthetic till the uterus was emptied was one hour and twenty minutes. Strict antiseptic precautions were used, the vagina being washed out with iodine water before beginning, and the uterus washed out afterwards with the same antiseptic. Two or three injections of ergotin were given hypodermically during the operation. Dr. Cockell wrote to me some time after to say that the case had done extremely well, and that the temperature had never risen above normal. I certainly think that if this case—one of placenta prævia—had been treated by tents instead of the rapid method of dilatation the record would have been a very different one.

PROPOSED COTTAGE HOSPITAL AT ROMFORD.—Early in the year it was resolved to commemorate Her Majesty's Jubilee in the neighbourhood of Romford, Essex, by the establishment of a Cottage Hospital. Tenders for the erection of a hospital capable of accommodating eight patients on a site generously given by a local landowner, W. Mashiter, Esq., have been accepted, and it is hoped that the hospital will be opened before the year closes. The hospital, which is intended to accommodate the residents of the liberty of Havering atte Bow (which includes the parishes of Havering, Hornchurch, and Romford) will cost about £600 for its erection. The committee, of which Mr. A. Wright, M.R.C.S., is treasurer, and Mr. F. Wilson, secretary, have received promises of support to the extent of £850 towards the building and furnishing fund, and £150 as annual subscriptions.

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A CONTRIBUTION TO THE PATHOLOGY OF THE BLOOD.

BEING AN ACCOUNT OF CERTAIN CRYSTALLINE CHANGES OCCURRING IN THE HÆMOGLOBIN AFTER WITHDRAWAL FROM THE BODY, IN THE SUBJECTS OF CERTAIN DISEASES, ESPECIALLY THOSE OF SEPTIC ORIGIN.

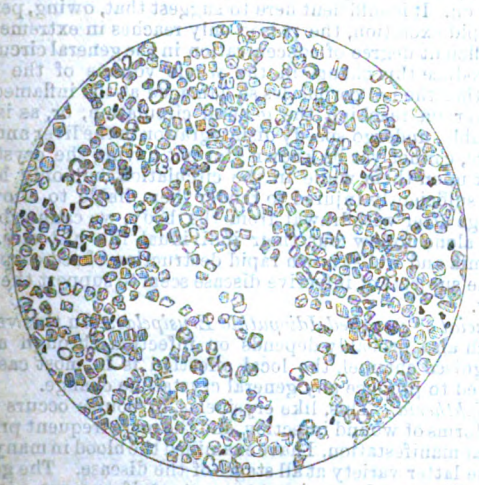
BY C. J. BOND, F.R.C.S.,
SURGEON TO THE LEICESTER INFIRMARY.

PART I.

I MAKE no apology for bringing forward again the well-known subject of crystallisation of the hæmoglobin of the red blood corpuscles; for I think, when viewed in the light about to be described, it is capable of suggesting many useful hints towards the better understanding of the pathology of many diseases, especially those which are associated with the septic processes.

If a drop of normal human blood be drawn from the finger, placed on a slide, and covered with a cover glass, no crystallisation of the hæmoglobin occurs. A ring or cake of dried serum forms around the edge of the cover glass, keeping the blood fluid within for many days; and although some changes occur, such as partial exudation of the hæmoglobin into the serum, there is no crystallisation of the hæmoglobin either in the serum or corpuscles. This is true

FIG. 1.



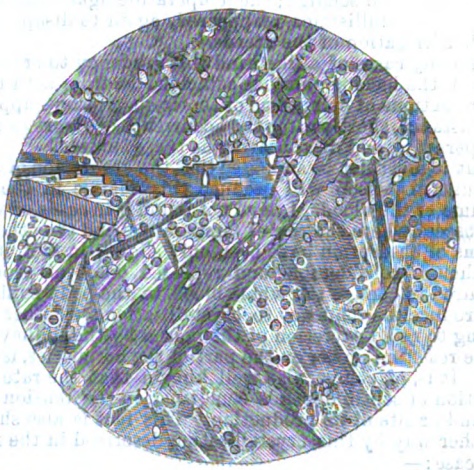
Normal human blood to which has been added a drop of putrid serum: after twenty-four hours. Shows early stage of crystallisation in septic blood, chiefly in red corpuscles. The ink dots (•) are placed near the corpuscles which show the change best—namely, the ridged, barred appearance, or the flat square plate or crystal form.

of the blood of many of the mammals under like conditions—i.e., the blood of the ox, sheep, dog, cat, mole, rabbit, and guinea-pig: and also in the nucleated blood of birds, frogs, toads, and newts. On the other hand, the blood of the apparently healthy mouse, both wild and tame varieties, shows, under the same conditions, well-marked crystallisation of its hæmoglobin, both in corpuscles and serum, in from twenty to thirty hours. Between these two extremes are many stages, the blood of different animals varying greatly in its tendency to crystallise when withdrawn from the body, that of the same animal varying also according to the healthy or diseased condition it may be in at the time. It is to this crystalline change which human blood undergoes when withdrawn from the body in certain diseases that I wish to draw attention, and especially in those diseases which are associated with the presence in the body of the pathogenic organisms.

At the outset, I would have it clearly understood, that what I maintain, and what I hope to prove, is, not that the blood crystallises in the body in the subjects of septic diseases, but that in certain animals, and in man, under certain conditions of disease, the blood, after withdrawal from the body, shows under the microscope a tendency for its hæmoglobin to undergo exudation and crystallisation, in a period of time varying from twelve hours to several days. Neither do I wish to claim for this phenomenon more importance than it deserves; but value it rather from the way in which, though itself a post-mortem change, it enables us to group together certain diseased conditions, and in these remarks I desire to point out the various diseases in which this crystalline change occurs.

In the first place, as these crystals are somewhat easily overlooked, it may be well to give an example and describe the actual appearances under the microscope. If a drop of blood be taken from the cleansed finger of any patient who is suffering severely from absorption of the products of putrefaction either in a wound or elsewhere, and if such a drop of blood be placed between a slide and cover glass and allowed to remain at the ordinary temperature of the room (60° F.), it will be found that, though it may appear quite normal at the time of withdrawal, after a time varying from twenty to thirty hours, the specimen will show the following changes:—First, the exudation of the hæmoglobin out of the corpuscles into the serum in an area round the margin of the cover glass is in excess of the exudation in normal blood, and gives the serum a marked yellow tinge. Secondly, in a zone just inside this ring or area the corpuscles have lost their spherical or disc-like shape, and have many of them become single, or several crystals of hæmoglobin, and show the prismatic or needle shape peculiar to those crystals; while in some few corpuscles the inside of the corpuscle has apparently crystallised, and the little bars or

FIG. 2.



Normal human blood to which has been added a drop of putrid serum: after two days. Shows later stage of crystallisation which has occurred in the hæmoglobin dissolved in the serum.

needles can be plainly seen inside and apparently distinct from the enclosing stroma. Further, in a marked case the crystallisation will have proceeded further, and have occurred in the form of long parallelograms or needles in the area of exudation mentioned above. In fact, the amount of exudation and the fulness of crystallisation are in proportion to the severity of the symptoms—that is, to the amount of poison absorbed. In a very slight case there is no apparent change; in one in which absorption is more complete or prolonged over a longer time there is slight excess of exudation with crystallisation in a few scattered corpuscles; in a fatal case the whole slide may appear studded with crystals. (See Figs. 1 and 2.) Now since this change does not show itself while the blood is still in the circulation, we can only call it a tendency existing in the circulating blood of patients who are the subjects of certain diseases to undergo, after withdrawal from the body, a peculiar crystalline change, a tendency which is not so shown by the blood of healthy persons. For several years I have examined the blood of many hundreds of patients in this simple way with reference only, or chiefly, to this point of crystallisation, noting down what occurred and the condition of the patient. I propose firstly to give in an abstract form, the result of this examination, grouping the cases under the several heads of the different diseases; and then

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to offer some remarks on the nature of the change that the blood undergoes.

Sapræmia or Septic Intoxication.—In this affection the symptoms—rigors, high temperature, sickness, diarrhœa, headache, or delirium—are due to the presence in the circulation of an unorganised substance, the product of decomposition, and associated with the life history of the organisms of putrefaction, the poison itself being called by various names—sepsin, zymin, &c. In severe cases the crystalline change is well marked. It varies, moreover, in direct proportion to the amount of poison absorbed, and to the interval elapsing between its introduction and the withdrawal and examination of the drop of blood. The following case illustrates these points:—

A patient was suffering from decomposition of a retained placenta, having a temperature of 106° on the second day after delivery, a pulse of 150, rigors, delirium, pain in the bones, and diarrhœa. The blood at this time, examined by Koch's method, showed no organisms whatever, but after remaining on the slide sixteen hours, marked crystallisation of the red corpuscles could be seen. The placenta was removed under $CH.Cl_3$, and the uterus thoroughly washed out with carbolic acid lotion. On the following morning—that is, in about twenty hours after the removal of the placenta—the temperature was normal and the pulse 100, the patient being almost convalescent. The blood now showed no tendency to crystallise at all, proving that, the source of the poison having been removed, and that already in the circulation having been excreted or destroyed, the blood had regained its normal condition in less than twenty-four hours. But, further, in two days' time slight decomposition again occurred in the uterine discharge; the temperature again rose to 102°, and the crystallisation reappeared, again to disappear on a further irrigation of the uterus.

In many cases of a like kind this tendency to crystallisation of the hæmoglobin has coincided in time with marked exacerbations of symptoms of septic absorption—appearing, for instance, shortly after the occurrence of rigors or rises of temperature, and disappearing as these subside.

But it must not be supposed that the absorption of a small amount of poison will produce this change in the whole volume of the blood. I have not found it in cases of wounds or abscess where the rise of temperature and the other symptoms of absorption have been only slight; in fact, it seems as though considerable and repeated doses of sepsin are required to change the whole blood in the body sufficiently to produce the tendency to crystallisation: whether this be owing to rapid excretion of the poison by the kidneys, or to some resisting power on the part of the corpuscles, is doubtful. It is, of course, also well known that the rate of absorption of sepsin depends somewhat on the tension in the wound or site of its production. This fact is also shown in another way by this crystallisation described in the following case:—

The blood was examined from the finger of a patient with a feculent abscess in a neglected and inflamed hernial sac. It showed marked crystallisation in forty-eight hours. A free incision was made, and the pus let out. Sixty hours afterwards, the tension having disappeared, although the cavity continued to discharge a quantity of most offensive pus, the crystallisation could no longer be detected.

The Septic Infective Diseases: Septicæmia and Pyæmia.—I have examined the blood repeatedly in many cases of septicæmia and pyæmia—in cases which have and in those which have not been accompanied with abscesses in the internal organs, with suppuration of joints, and with secondary localised inflammation of the connective tissues. The crystalline tendency does not seem so constant or in such direct proportion to the severity of the symptoms at the time as in the case of sapræmia or septic intoxication, although it is present in most cases of septicæmia, and in nearly all fatal cases towards the end of the disease. It varies, too, in the extent of the crystallisation and in the length of time the blood must stand on the slide after withdrawal before it appears, from day to day of the illness, and seems to have more connexion with the amount of poison absorbed at each separate septic focus than with the number or position of the abscesses. It appears, in fact, to depend not so much on the presence of the organisms in the blood as on the chemical products of their growth, and this view will receive further confirmation when we speak of anthrax.

Erysipelas and Erysipelatous Inflammation of Cellular Tissue.—In slight cases of this affection, where the local affection is not very extensive and the constitutional symptoms slight, the general blood, or that from the general circulation, shows no change. When, however, there is marked constitutional disturbance, the crystallisation appears in from twenty-four to forty-eight hours after withdrawal. But it was in the case of erysipelas that a difference was first noticed according to the site from which the blood was taken. Thus in the case of a man with marked erysipelatous cellulitis of hand and forearm without suppuration, the temperature being 104°, blood taken from the margin of the inflamed area crystallised fully in twenty-four hours, whereas a drop taken from the finger of the other hand only did so very partially after forty-eight hours. Also in a case of so-called "perambulating" erysipelas, in which the erysipelatous wave started from the breast and travelled over the greater part of the body, blood taken from the red inflammatory area about four inches wide crystallised well, while that taken from the healthy skin in front of the wave and from the tissue which had recovered after the wave had passed over it, showed little or no change. Thus we see that blood taken from a part of the body which is the site of an inflammation of an infective character shows a tendency to undergo crystalline degeneration, whereas the general blood of the body in such a case only does so after long and repeated constitutional infection. We must remember not only that the poison, whatever it be, is manufactured at this area, but that in addition, owing to the extreme local vascular congestion, the blood is more or less stagnant here and lies long in contact with the inflamed tissues, and perhaps also with the organisms themselves; but this point will receive further consideration later on. It is sufficient here to suggest that, owing, perhaps, to rapid excretion, the poison only reaches in extreme cases a sufficient degree of concentration in the general circulation to produce this change in the whole volume of the blood. Whether the red corpuscles so damaged at the inflamed area recover on reaching the general circulation, or, as is more probable, undergo speedy disintegration in the liver and elsewhere, cannot yet be known; for not having the crystalline mark upon them while in the circulation, but only having been sufficiently injured to render them liable to show this change after withdrawal from the body, we cannot by this sign alone follow out their individual life histories. The anæmia and well-known rapid destruction of red corpuscles in the subjects of infective disease seem to support the latter view.

Facial or so-called Idiopathic Erysipelas.—In this variety, which also probably depends on infection through an unrecognised channel, the local affection is in most cases too limited to produce any general crystalline change.

Diphtheria.—This, like erysipelas, of course occurs in the two forms of wound infection, and the more frequent primary throat manifestation. I have examined the blood in many cases of the latter variety at all stages of the disease. The general crystalline tendency is not constant if present; it only occurs after the blood has remained on the slide from forty-eight hours to three or four days, and appears to bear some slight relation to the amount of constitutional infection, and very little to the local symptoms.

Typhoid Fever.—In all the uncomplicated cases of typhoid in which I have examined the blood—that is, cases arising in previously healthy persons, and uncomplicated with pneumonia, bedsores, abscesses, &c.,—the crystalline blood change has never been detected. This is somewhat remarkable when we remember that typhoid fever, like diphtheria and erysipelas, is a specific disease having a local manifestation in the intestines and constitutional effects, as seen in the rash, &c.; in this it resembles measles, scarlet fever, and small-pox, and it is interesting to note that, as in typhoid fever, so too the crystalline change is also absent in uncomplicated cases of *measles*, *scarlet fever*, and *small-pox*. *Typhus* I have not had an opportunity of examining. With regard to this latter group of diseases—diphtheria, typhoid, measles, and scarlet fever,—there are one or two interesting points which need further remark. They are more or less protective (that is, one attack confers immunity from a second) in a gradually increasing degree as we ascend the series: diphtheria least so; scarlet fever most so. Also diphtheria is perhaps the most local, and scarlet fever the most general or constitutional in its manifestation. And, as if to correspond to this, diphtheria at one end of the series shows the crystalline blood change slightly, while it is absent in the other diseases. What is the exact meaning of this association we are not yet able to say.

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Anthrax, or Splenic Fever.—This is, perhaps, the one example of a disease having an infective origin of which the pathology or life history is fully known. First, in animals. In guinea-pigs, although the blood readily crystallises when treated in certain ways, it never does so when normal blood is placed on a slide in the manner described above; it does, however, crystallise on the slide if the animal be suffering from, for instance, a septic peritonitis, thus showing that the change is a test of some value in the case of these animals. A guinea-pig was inoculated subcutaneously with anthrax spores; in forty-eight hours it died, with marked symptoms of splenic fever. The blood examined at various stages of the disease was crowded with the bacilli, but showed no tendency to crystallise on the slide either in the corpuscles or in the hæmoglobin that had exuded into the serum.

In the case of a veterinary surgeon who became inoculated while making a post-mortem on a cow, dead of splenic fever, a well-marked characteristic malignant pustule appeared at the site of inoculation on the wrist. Examination of the discharge from this showed great numbers of the bacillus anthracis; the patient recovered after energetic injection round the pustule of pure carbolic acid. The general blood was examined before and during treatment; no bacilli were detected in it, and it never showed any crystalline tendency.

This was a case of so-called external anthrax or malignant pustule, in which the constitutional infection was very slight, and the influence of the organisms or the absorption of poison at the site of inoculation insufficient to produce a crystalline change in the whole volume of the blood. A distinction must be drawn between these cases and those of internal anthrax, in which the spores are received into the lungs; in these cases the constitutional effects appear to be more marked, and I have not been able to examine the blood in them. Judging, however, from the facts in animals, it would seem that anthrax ought really to be looked upon as a mycosis; that death is brought about by the invasion and plugging of the capillaries and lymphatics of the host by the thousands of bacilli, and not by the manufacture of any chemical poison, and this view receives some confirmation from the absence of the crystalline change in the blood in this disease.

Pneumonia.—The relationship between this disease and the presence of the organisms first described by Friedländer is now fairly well established. Whatever be the real relationship, however, whether the high temperature, &c., is the result of absorption of chemical products in the affected lung or due to other causes we do not know. In these acute cases the crystalline tendency is not at all constant, it was absent in a well-marked case in a boy with a temperature of 106°, and it only appears in fatal cases just before death or in long-continuing cases attended with breaking down of lung tissue. In the absence of further evidence, I think another cause besides septic absorption will be found to explain the high temperature and constitutional symptoms, and I think the absence of the crystalline change points to this suggestion.

Ague.—I have examined the blood in several well-marked cases of ague in the hæmatial and following stages, and have not noticed any alteration of the corpuscles in the direction of crystallisation. Although ague is known to be caused by the presence of organisms in the system, we do not yet know the pathology of its latency and periodicity. If again the symptoms are due to absorption of chemical products, this is not sufficient in amount, or prolonged enough in time, to affect the whole volume of the blood.

Phthisis.—In this disease the crystalline tendency can generally be detected towards the end of fatal cases. In some acute cases it is, however, absent.

General Tuberculosis.—Two cases were examined, and no change detected.

Cancrum Oris.—Blood taken from the finger in a well-marked case of this emphatically infective process showed marked crystallisation in twenty-four hours.

Reviewing, then, this list of so-called infective diseases in which the blood has been examined, we find that the crystalline tendency is most marked in those diseases in which there is commonly the greatest evidence of absorption of chemical products; these are sapræmia, septicæmia, and pyæmia, erysipelas, cancrum oris, and advanced cases of phthisis. In the others it is inconstant or absent, and, as has been pointed out in the case of anthrax, this absence [illegible] the possibility of the constitutional symptoms in these cases being due not merely to chemical absorption, but to some other as yet unknown factor or factors; this applies to such diseases as typhoid, pneumonia, scarlet fever, measles, &c. If we allow ourselves to speculate a little further on a question regarding which the evidence is at present very incomplete—if, for instance, we regard the immunity from subsequent attack conferred by one attack of many of these diseases to be due to the fact that the products or substances evolved and circulating during the first attack have so acted on and changed the blood and tissues as to render them proof against further invasion by the same organisms—then, judging from the foregoing observations, it would appear that it is not the absorption and circulation of the highly differentiated protective product which produces in the blood this crystalline change, for it is absent in scarlet fever, measles, &c.; but that the less differentiated non-protective simple product of putrefaction does so to a marked extent, as in sapræmia, &c., and this points to a marked difference in the products produced by the life and growth of different organisms.

ON A CASE OF CARDIAC DILATATION.

BY GRAHAM STEELL, M.D.,
ASSISTANT PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

IN THE LANCET of Aug. 14th, 1886, I recorded a case of heart disease as an example of that considerable class in which the primary incidence of disease is upon the muscle, and not upon the valves. I am now induced to publish a somewhat similar case, which, however, offers one important difference—namely, the absence of murmur. Although in the former case the murmur disappeared under treatment, and was thus a temporary feature, the importance of the difference referred to is not on that account diminished. The coincidence of the disappearance of the murmur with recovery naturally pointed to regurgitation through the mitral curtains, consequent on defective muscular adaptation, as the cause of the circulatory disturbance. Further, an important, if not the essential, *rôle* in the production of the dilatation of the ventricle may be claimed for the valvular incompetence with some reason. In the case of structural damage of the mitral valves entailing their incompetence, we know how often dilatation of the left ventricle takes place. This is seen especially in the young, in whom there is least likelihood of inherent defect of the heart muscle. The explanation of the dilatation under the circumstances is, probably, that the obstruction to the circulation—namely, the backward flow into the auricle—reacts during the diastole on the ventricle, which then receives an abnormally large amount of blood as the result of the valvular incompetence. The first tendency is to dilatation; only afterwards does hypertrophy become established. In the case now to be described there can be no such explanation of the dilatation, at least if it be granted that mitral incompetence is expressed clinically by murmur. In the full intensity of the disturbance of the circulation we had, I believe, trustworthy evidence of the competence of the mitral valves, yet the circulatory disturbance was the same in both my cases—pulmonary congestion and general venous stasis,—and yielded in precisely similar manner to the same treatment.

It has long been known that there is a form of cardiac dilatation which during life is accompanied by no evidence of valvular incompetence of any kind, and in which the circulatory disturbance is identical with that commonly resulting from valvular incompetence. Before the capacity of the left ventricle is increased, I hold that one of two events has occurred—namely, valvular incompetence or imperfect emptying of the ventricle, the so-called *asystole*, a condition which I shall term *systole catalectic*. Let us take, for example, a simple case of aortic stenosis carried to a considerable degree. It seems to me that no enlargement of the left ventricle will occur so long as two conditions are fulfilled, and these two conditions are (1) that the mitral valves shall remain competent, and (2) that the ventricle shall complete its systole on every occasion. We know that in health the supra-papillary space of the ventricle contains a small quantity of blood at the end of systole, and by a completed systole I only mean the normal emptying of the chamber. Systole catalectic must, I fancy, be a more common result of a failing ventricle than we are wont to

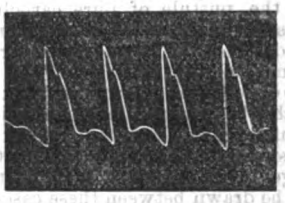
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believe. Do not the huge rounded ventricles which we so often see on the post-mortem table emphatically teach this? Can we imagine that these huge deformed ventricles have closed in normal fashion for weeks or months before the patient died? To return to aortic stenosis: The obstacle which this lesion opposes to the circulation the ventricle encounters during the systole, and to enable the ventricle to overcome the obstacle increased power in its wall is alone necessary. Hypertrophy—not dilatation—results so long as the conditions that I have named are fulfilled. Their fulfilment, however, implies a well-nourished heart. Should the nutrition of the heart fail, its contractile power inevitably also fails; and whether it be mitral incompetence or systole catalectic, or both, that follows, the ultimate result is the same—dilatation. What has been said of aortic stenosis applies with equal force to the high arterial tension associated with Bright's disease and other states. When there is incompetence of the aortic valves in place of stenosis of the aortic orifice, all the circumstances of the case are altered. The obstacle opposed to the circulation is met by the ventricle during diastole in the first instance. Yet it has to be overcome by the ventricle during systole. The very transference implies a degree of dilatation. From the outset here the tendency is to dilatation, and only later does hypertrophy come, as it were to the rescue.

Both in the case which I formerly published and in that which I now publish failure in the nutrition of the heart muscle seems to have been the first morbid change. In the former mitral incompetence became early established; in the latter systole catalectic supervened, while the mitral curtains closed normally. I am unable to give an explanation of the different effects in the two cases respectively. The general resemblance to Bright's disease of the case to be narrated is very remarkable. It would have been still more so had there been albuminuria, which one cannot regard as other than a likely consequence of the disturbed circulation. Had albuminuria existed, it would in all probability have proved transient. On the other hand, it must be remembered that cardiac failure is a not very rare accident in Bright's disease, and it is then of much importance, in regard to treatment, to recognise the cardiac element in the case. When this combination exists, the characteristic high arterial tension of Bright's disease disappears, and the pulse becomes of low tension, and so resembles the pulse of mitral regurgitation.

T. S——, aged thirty-two, a carter, was admitted into the Manchester Royal Infirmary on July 8th, 1887, having presented himself at the out-patient department on the previous day suffering from dropsy of the lower and upper extremities, and of the trunk and scrotum. Nine weeks before admission he had a fit one morning while at work. His tongue was not bitten, but he believes that he was convulsed. He was quite unconscious for a time. He went back to work the same day, but felt very dizzy. Five weeks before admission he noticed swelling of the lower extremities as high as the thighs, and gave up work. A fortnight later, while going upstairs he became very breathless; but for the last three years his wind has been bad, exertion bringing on shortness of breath. He noticed his arms swollen for the first time on July 7th, and his scrotum only on the day of admission. He has suffered more or less from cough and expectoration for the last ten years. Two years ago he expectorated some blood after coughing severely. Several weeks later he had a sharp attack of epistaxis. With these exceptions his health has been very good. There is no history of syphilis, rheumatic fever, or gout, nor, indeed, of any illness before the occurrence of the fit. His father died at the age of forty-five of heart disease; he had been known to be suffering from the complaint, but died after a quarter of an hour's serious illness. His mother died at the age of thirty-four, but the cause of death is unknown. He had two brothers and a sister, but all three died before the age of twelve; the last was killed by accident, and the cause of death of the brothers is unknown. The patient is a widower, and had six children, but all died within a year of birth except one, who survives, aged fifteen. He is a well-built, strong-looking man, of rather fair and healthy complexion. His lower extremities, trunk, and arms (including hands) are œdematous, and pit on pressure. He can lie upon his back, or upon either side, without discomfort. There is no arcus senilis. There are no tophi on the ears. Temperature in axilla 98·4°. Since the age of fifteen the patient has been in the habit of drinking beer freely. He has taken spirits very seldom. Of late years his daily allowance of beer has amounted to four or five pints. He has no cardiac pain and no dyspnœa while at rest. He has suffered from palpitation after exertion, but there is none at present. The pulse is full, soft and regular (see Chart 1). On inspection of the chest, a slight diffuse pulsation is visible in the fifth space, in and to the left of the nipple line, also in the epigastrium. The impulse is barely perceptible with the hand, being very weak and ill-defined. The external jugulars are distended, and pulsate slightly. The arterial pulsation in the neck is perhaps exaggerated. The heart is ascertained by concussion to be considerably enlarged, both sides taking part in the enlargement. The maximum extent of dulness from the middle line is to the right two inches, to the left five inches and a half. There is no dulness above the third rib. There is no murmur audible in any area. The first sound is somewhat dull and prolonged. The second pulmonary sound is somewhat accentuated. In the mammary line the lower liver border is situated two inches below the costal margin. The total hepatic dulness in the same line measures six inches. A few rhonchi are heard over the lungs generally. Over the base of the right

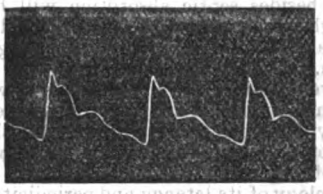
CHART 1.



lung posteriorly there is dulness, loss of vocal fremitus, and diminished breath sound. The chest wall is very œdematous. The urine is of a deep amber colour, acid, and deposits lithates; sp. gr. 1021. Not a trace of albumen can be discovered by any of the following tests: cold nitric acid, boiling picric acid, and the acid saline solution.

July 11th: Pulse 84; respiration 24. Complains of having no use in his legs, but has complete power of movement of them. He is very breathless when he gets out of bed. Thick lithate deposit in the urine, which contains no albumen. Yesterday he began taking the following mixture: infusion of digitalis, 4½ oz.; tincture of squills, 3 dr.; infusion of senega, 12 oz.: one fluid ounce three times a day. Dulness at the base of the right lung less; fremitus perceptible; fine crackling sound with inspiration over dull area.—12th: To have 5 grains of calomel to-night.—13th: Digitalis mixture to be taken only twice daily.—14th: Urine less deep in colour, and does not deposit lithates.—17th: To have only one dose of digitalis to-day. Legs still œdematous; lower part of the back very œdematous; passing more

CHART 2



urine.—18th: Two doses of digitalis.—19th: One dose in the morning.—20th: Digitalis stopped. Dropsy practically gone; no pitting on pressure anywhere; feels quite well except in legs, which are somewhat stiff down the backs; tongue clean and moist. Respiration 28; pulse 72. A few rhonchi are audible over the chest, and there is a little frothy mucous expectoration. Ordered the following mixture: tincture of nux vomica and tincture of perchloride of iron, of each 2 dr.; water to 12 oz.: one fluid ounce three times a day, also a cough mixture, if the cough is troublesome. At the apex of the heart the sounds are deficient in tone, but there is no murmur either here or at the base. Since the last report the aortic second sound has gained much in intensity, while the pulmonary second sound has diminished in intensity. The lower border of the liver is now situated in the mammary line barely an inch below the ribs. A sphygmogram taken to-day shows a very decided increase of vascular tension. (It closely resembled the tracing taken on the 23rd, and appended.)—23rd: Sphygmogram taken to-day (see Chart 2).—24th: Patient allowed to get up to-day. He is quite convalescent.—28th: Percussion

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of the heart to-day shows a decided diminution of dulness to the right of the middle line, and it now extends only one inch from mid-sternum in that direction. The dulness to the left remains unchanged. The general condition of the patient is excellent.

The following is the record of the daily quantity of urine passed:— July 9th, 13 oz. (digitalis commenced); 10th, 10 (?) oz.; 11th, 22 oz.; 12th, 24 oz. (calomel, 5 grs.); 13th, 20 oz.; 14th, 52 oz.; 15th, 63 oz.; 16th, 54 oz.; 17th, 78 oz.; 18th, 88 oz.; 19th, 110 oz.; 20th, 70 oz. (digitalis stopped); 21st, 70 oz.; 22nd, 64 oz.; 23rd, 66 oz.; 26th, 55 oz.; 27th, 48 oz.

STROPHANTHUS AS A HEART TONIC AND DIURETIC.

BY WM. BUDD, M.D. BRUX., &c.

IT is notorious that there is no class of drugs so uncertain in their action as diuretics, and the physician is often perplexed and disappointed by the failure of one drug after another to increase the amount of fluid secreted by the kidney, and to relieve his waterlogged patient. Through the important researches, however, of Professor Fraser, we have a heart tonic and diuretic at our command which I think is likely to prove far more valuable in suitable cases than digitalis, caffeine, &c.; and it has the double advantage over digitalis that it is not cumulative. I trust that the record of the following two cases, in which the great benefit produced seemed to be the result of the administration of the drug in question, may not be without interest to the profession.

CASE 1. *Morbus cordis; emphysema; œdema pulmonum.*—H. B——, aged sixty-seven, came under my care on March 23rd. Has never had acute rheumatism. Has a mitral systolic bruit, most audible at the apex of the heart, hyper-resonance on percussion, generally over the chest, with prolonged expiratory murmur and minute crepitation at the bases of both lungs. The urine was slightly albuminous and very scanty, of specific gravity 1020, and no casts; pulse 92, feeble and irregular. The amount of urine secreted was scarcely eight ounces a day, and there was considerable anasarca. My treatment consisted in the administration of hydrogogue purgatives, such as compound jalap powder, and various diuretics, such as carbonate of potash, squills, digitalis, and blue pill, but without any marked increase in the amount of urine. At this time orthopnœa was very distressing, and the patient was obliged to sit upright in an armchair night after night. On April 26th the urine was so scanty that it could not be collected for measurement, and the anasarca was rapidly increasing, and the crepitation over the bases of the lungs had considerably extended. The patient's face was livid and extremities cold (pulse 100, feeble and irregular), and he was evidently in a critical condition. I then ordered five minims of tincture of strophanthus to be taken three times a day. On April 28th I was pleased to find the condition of my patient much improved, his pulse was considerably stronger and quite regular, and the quantity of urine began to increase, and amounted to thirty-five ounces in the twenty hours. There was also a marked amelioration in all his symptoms. I had the urine collected as detailed in the subjoined table:—

April	30th	... ...	35 oz.	May	16th	... ...	80 oz.
May	1st	... ...	46 „	„	17th	... ...	84 „
„	2nd	... ...	52 „	„	18th	... ...	80 „
„	3rd	... ...	64 „	„	19th	... ...	76 „
„	4th	... ...	65 „	„	20th	... ...	80 „
„	5th	... ...	85 „	„	21st	... ...	80 „
„	6th	... ...	99 „	„	22nd	... ...	74 „
„	7th	... ...	95 „	„	23rd	... ...	76 „
„	8th	... ...	106 „	„	24th	... ...	78 „
„	9th	... ...	105 „	„	25th	... ...	90 „
„	10th	... ...	104 „	„	26th	... ...	90 „
„	11th	... ...	104 „	„	27th	... ...	80 „
„	12th	... ...	105 „	„	28th	... ...	65 „
„	13th	... ...	100 „	„	29th	... ...	75 „
„	14th	... ...	83 „	„	30th	... ...	75 „
„	15th	... ...	85 „	„	31st	... ...	72 „

On May 18th I noted that the œdema had disappeared to a great extent, and that of the lungs had entirely cleared up, air passing freely into the lungs. On the 22nd I gave the strophanthus twice daily only, and thirty grains of compound jalap powder every other night. On May 30th it was noted that the anasarca had absolutely disappeared. On June 16th the patient was free from dropsy and from œdema of lungs, and expressed himself as feeling very well.

CASE 2. *Morbus cordis; albuminuria; ascitis; anasarca.*—F. W——, aged forty-one, married and the mother of five children, came under my care on March 12th. There was a loud systolic bruit at the apex of the heart, the impulse of which was very much increased; the pulse was very small, and both irregular and intermittent. The liver was also considerably enlarged, extending two inches below the margin of the ribs, and there was a certain amount of ascitic fluid in the peritoneal cavity. Urine contained one-third albumen; specific gravity 1015. I could detect no casts under the microscope. She stated that considerable œdema of the legs had existed for many weeks. I ordered her tartrate of iron, with squill and digitalis, and also to drink lemonade made with acid tartrate of potash, and compound jalap powder every other night. The urine was very scanty, and very little improvement took place. On March 23rd I ordered five minims of tincture of strophanthus three times a day, and continued the compound jalap powder every other night. On March 25th the pulse was stronger and more regular; the urine by measure was found to be 16 oz., and increased in amount daily, as will be seen below.

March	26th	... ...	20 oz.	April	10th	... ...	68 oz.
„	27th	... ...	20 „	„	11th	... ...	80 „
„	28th	... ...	30 „	„	12th	... ...	56 „
„	29th	... ...	35 „	„	13th	... ...	48 „
„	30th	... ...	40 „	„	14th	... ...	45 „
„	31st	... ...	56 „	„	15th	... ...	48 „
April	1st	... ...	55 „	„	16th	... ...	46 „
„	2nd	... ...	58 „	„	17th	... ...	49 „
„	3rd	... ...	56 „	„	18th	... ...	50 „
„	4th	... ...	60 „	„	19th	... ...	54 „
„	5th	... ...	72 „	„	20th	... ...	50 „
„	6th	... ...	78 „	„	21st	... ...	42 „
„	7th	... ...	65 „	„	22nd	... ...	36 „
„	8th	... ...	76 „	„	23rd	... ...	42 „
„	9th	... ...	65 „				

On April 14th I noted that there was only a trace of albumen present, and also that the œdema of the legs was much reduced, as was also the amount of ascitis. On April 30th she was quite free from either œdema or ascitis, and she expressed herself as feeling as well as she had been for years.

Remarks.—I think these two cases show the undoubted beneficial effect of strophanthus after the failure of digitalis, &c. Its great advantages over the latter drug are that no cumulative effect was observed even after it had been given for several weeks continuously, nor was there any gastro-intestinal disturbance, which is so frequently produced by digitalis; and in disturbances of the circulation, when the blood-pressure is low, strophanthus is capable of producing a marked diuretic effect.

Exeter.

ON A CASE OF EMPYEMA.

BY ANDREW DUNLOP, M.D.,

CONSULTING PHYSICIAN TO THE JERSEY GENERAL DISPENSARY AND INFIRMARY.

ON the evening of March 3rd, 1886, I was called to see A. B——, male, aged seventeen. I found him suffering from pain in the right mammary region; he had cough, and he was spitting up somewhat tenacious mucus coloured nearly throughout with bright-red blood. There were no definite physical signs, the temperature was 102°, the appetite was poor, and the bowels were regular. The history given was that while in the enjoyment of good health he was exposed to cold on the night of March 1st, and that he began to suffer from malaise next day. On the morning of the 3rd he had distinct rigors and began to suffer from pain in the right side. During the day he seemed to get worse, and I was sent for. On the 4th signs of pneumonia began to show themselves at the right base, and next day they were fully

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developed, along with some indications of pleuritic effusion. During the first ten days of his illness the morning temperature ranged between 100° and 102°, and that of the evening between 102·4° and 103·8°. The pulse was good, its rate never being above 108. The respiration sometimes reached 60, but the patient was never distressed with dyspnœa. There was almost constant, and sometimes severe, pain in the right side, and there were profuse perspirations. At first the pneumonic symptoms and signs predominated, but soon they began to subside, and those of the pleuritic effusion gradually occupied the first place in importance. On the 12th the temperature fell to normal, and by this time nearly all blood had disappeared from the expectoration, and there was much less pain in the side. The effusion, however, had increased, and there was now absolute dulness all over the back, except, perhaps, in the supra-spinous fossa, and in front the dulness reached as high as the upper border of the fourth rib when the patient sat up. After this, everything went well for a time. The temperature kept normal, the respirations gradually fell from 36 to 34, the pulse kept at about 96, and there were indications of commencing reabsorption of the fluid. The patient began to sit up a little every day, he had little cough, his breathing was easy, and he felt that he was gradually improving. On the 22nd, however, he began to complain of severe pain on the right side, and his temperature rose again. Between this date and the end of the month the effusion gradually increased, until there was complete dulness all over the right side, except under the clavicle, where there was a well-marked tympanitic note. A similar note was produced all along the right border of the sternum, extending about an inch outwards. The temperature kept about 101°, and the pain in the right mammary region was severe, but the respiration did not rise above 34, and there was almost no dyspnœa. During the first week of April the right pleural cavity became completely filled, the liver was depressed, and the patient suffered from piles. The heart was pushed to the left, and the right side measured about an inch more than the left. The temperature, however, sank to normal, and the respirations were only from 25 to 30. On April 8th I aspirated in the fifth space, a little behind the mammary line, but I could only succeed in withdrawing about half an ounce of fluid, the aspirator getting constantly blocked with shreds of flocculent matter. The fluid withdrawn, however, was pus, of a bright-yellow colour, and free from odour. On the 10th I aspirated again, this time in the fourth space, just in front of the anterior axillary line, and withdrew about twenty ounces of inodorous pus. Dr. le Rossignol, who saw the patient with me, agreed that the best course would now be to wait for a few days and watch the effect of the aspiration; then, if the pus reaccumulated rapidly, to diminish it by a second aspiration, and a day or two later to make a free incision. After the aspiration there was a somewhat tympanitic percussion note all over the front, with good respiration in the subclavian region; behind, the chest was dull all over, with only a little faint respiration audible. The temperature was normal (after this it never rose, except once, to 99·5°), the pulse was 120, and the respiration 24. By the 15th the chest had filled up again to a considerable extent, there being dulness in front as high as the upper border of the third rib. It was noticed about this time that the finger tips, which had been gradually enlarging, had become very distinctly clubbed. On the 16th an attempt was made to aspirate, but owing to the blocking of the tube very little was drawn off. On the 19th, with the kind assistance of Dr. le Rossignol and Mr. Hind, chloroform was administered, and an incision was made between the sixth and seventh ribs, beginning just behind the anterior axillary line, and extending forward for about a little more than two inches. A free opening was made into the pleural cavity, and two fingers were passed into it to stem the torrent of pus, which escaped in large quantity. Antiseptic precautions were taken, but no spray was used. After the pus had ceased to flow freely, an indiarubber drainage tube, about three inches long and pretty nearly half an inch in diameter, was passed into the chest. This tube was attached to a broad indiarubber chest piece, under which was placed a piece of protective, and under this again, next the wound, a piece of lint soaked in carbolic oil. Over the whole was placed a thick pad of salicylic wool, which was kept in position by means of a broad binder. The dressing was changed in the evening, the tube being taken out, washed, and replaced. The wool was found saturated with pus. By the 23rd the discharge had diminished very greatly. At first, at each change of dressing, night and morning, the wool was found saturated with pus, but now there was only about two or three ounces. Each time the dressing was changed the tube was taken out and thoroughly cleansed. Latterly a fold or two of carbolic gauze had been placed over the chest piece and orifice of the tube, as the wool was found to block it and to get into the wound. I had also begun to change the dressing under carbolic spray. The temperature had never risen since the operation, and the patient was comfortable. In the course of another week there was little discharge except when the patient sat up, and then there was a free rush, sometimes apparently amounting to about a pint. This gradually lessened, and towards the middle of May, when he had begun to sit up a little each day, there was only an ounce or so of discharge when he first got out of bed. The dressing was now only changed once a day, and the tube had been more than once replaced by a shorter one of lesser diameter. He ate well and gained flesh rapidly, and the digital clubbing began to diminish. The chest wall on the affected side had fallen in a good deal, the sinking being especially marked under the clavicle, and the liver had risen quite up to, if not above, the level of the incision. The percussion note was good, though rather tympanitic in quality all over the front; it was fair down the back to the base, where it was dull, and there was a dome-shaped area of dulness in the lower axillary region. Somewhat weak respiration was heard all over the front; still weaker breathing was heard over the upper two-thirds behind; but the breath sounds were quite inaudible over the dull areas at the base and in the infra-axillary region. At the beginning of June there was only a spot or two of pus on the dressings, with a little watery discharge; sometimes the wool was quite clean. The breathing was now better heard, and the patient was moving about a little. On June 5th the tube was removed, and the wound healed up completely almost at once. On July 18th I made the following note of his condition: "Has gained flesh considerably. Little digital clubbing. Considerable re-expansion of the right chest has taken place, but it is still contracted, especially under the clavicle; the right nipple is lower than the left. Under the nipples the right side measures about a quarter of an inch less than the left. The expansion on breathing is three-quarters of an inch on the right side and one inch on the left. The right side is resonant all over, the percussion note being a little tympanitic in front. Good breathing is heard all over the front, and somewhat weaker breathing over the upper three-fourths of the lung behind. The respiration is still weaker at the base, and is only faintly audible in the lower axillary region. The wound has evidently been long thoroughly healed. Very slight lateral curvature of the spine, the concavity to the right. In good health and can do a fair amount of exercise. He notices, however, that he perspires easily." On Nov. 2nd I saw him again, when the following note was made: "Has grown stout and strong. Little deformity of chest. Right side a quarter of an inch less than left; right nipple lower than left. The breathing heard over the front of the right side is equal to that on the left; it is weaker behind, and faint at the base and infra-axillary region. Chest movement good. Exceedingly little curvature of spine." I next examined him on May 23rd of this year. He was stout, and looked in excellent health. He told me that at some athletic sports, about a fortnight previously, he had won the 100 yards race, and came in second for the quarter of a mile. He says he feels perfectly strong and well. On looking at his chest, there was little to be noticed, except that the right nipple seemed a little lower than the left, and that the chest was perhaps somewhat flattened under the clavicle. Under the nipples the right side measured about one-eighth of an inch less than the left. The side moved freely, and the percussion note was good all over. The breathing was normal, except at the base behind, and over the axillary and infra-axillary region, where it was somewhat weak. The spine was quite straight, and there was hardly a remaining trace of digital clubbing.

Remarks.—The complete and fairly rapid recovery in this case is encouraging. I suppose the comparatively early date at which the radical operation became obviously necessary, and was performed, largely contributed to the satisfactory result. It might, I think, have been performed still earlier, with the advantage of saving about a fortnight of the acute part of the illness. There has been a great variety of opinion with regard to the site of the incision and the after treatment of these cases. The recommendations of Dr. Douglas

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Powell seem to me to be the most judicious that have come under my notice. The common sense view of the matter is to have the opening as low down as is consistent with safety and the comfort of the patient, and to make and keep it sufficiently free to ensure the complete emptying of the cavity. It is also necessary to take care that all air entering the cavity shall be as aseptic as possible. Of course the lowest point in the chest, whether the patient is lying or standing, would be found in the posterior wall; but an opening there involves cutting through the large muscles of the back, a procedure which might cause trouble at the time, and possibly inconvenience to the patient afterwards. I should recommend the incision to be made in the infra-axillary region as low down as is found to be safe, and as far back as is possible without exposing the larger muscles. It should be remembered how often the last traces of pleuritic effusion are found in this situation. In the present case I had intended to make the incision further back, but for some reason—I forget what—which presented itself at the time of the operation, I made it in the position described. No injections were used. They did not seem to be necessary, and it is well to avoid the *nimia diligentia*. The blocking of the aspirator gave annoyance on two occasions. This I found to be largely due to the small bore of the ends of the piece of glass tubing inserted in the indiarubber pipe. These openings on examination were seen to be less than the diameter of the cannula of the trocar I used, Potain's largest.

Jersey.

ON THE RADICAL CURE OF HYDROCELE.

BY F. A. SOUTHAM, M.B. OXON., F.R.C.S,

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THE radical cure of hydrocele at the present day is usually carried out in one of the following ways—viz., by injection, by antiseptic incision, or by excision of the tunica vaginalis.

The last of these three methods—viz., that by excision of the parietal portion of the tunica vaginalis, first introduced by von Bergmann, and described by Bramann[1]—is a plan of treatment which, so far as I am aware, has not hitherto been much adopted in this country. The operation is a simple one, and in four cases in which I have adopted it has been attended by the most satisfactory results. Bull of New York,[2] who has employed the same method in three cases, regards it as "the only truly radical operation," and speaks very highly of it. It may be performed in the following manner, which, except in a few minor details, is identical with that of von Bergmann. The cavity of the tunica vaginalis is laid freely open by a vertical incision between two and three inches in length, made over the most prominent part of the swelling; the fluid will at once escape, and, as it does so, it is useful to secure the margins of the opening in the tunica vaginalis on each side with a pair of catch forceps, otherwise there may be a little trouble in distinguishing them after the evacuation of the fluid, and the walls of the sac have collapsed and fallen together. The tunica vaginalis is then dissected out on either side up to the point where it is reflected upon the epididymis, testis, and cord, by putting it on the stretch and separating it from its connexions with the surrounding parts by means of the finger, assisted by a scalpel or pair of scissors. It is astonishing how little hæmorrhage accompanies the proceeding if the finger is chiefly used. In my last case not a single vessel had to be secured. The whole of the tunica vaginalis is then removed, with the exception of the portion covering the epididymis, testis, and cord, by cutting through it close to those structures with scissors. All bleeding points having been secured, a drainage tube is brought out through the upper part of the wound and a counter opening made at the most dependent point of the scrotum. The interior of the wound, which will have contracted very considerably, is dusted over with iodoform, closed with a few sutures, and dressed with iodoform gauze and wood-wool pad, care being taken that the scrotum is afterwards kept in an elevated position. Healing rapidly takes place, the slight swelling which follows the operation soon subsides, and the patient will usually be able to leave his bed and get about in the course of a week or ten days, as shown by the cases mentioned below. Though applicable to all cases of hydrocele, this method is especially valuable in those of long standing, where the tunica vaginalis has become much thickened and of dense consistence. As compared with the other plans of radical cure, the excision method has this advantage—viz., that it is almost practically impossible for a recurrence of the hydrocele to take place.

In the method by injection with iodine or carbolic acid (the latter fluid being now generally used), a recurrence takes place in a certain proportion of cases. Of three cases, which I have recently treated in this way, the hydrocele returned in one (see Case 3). It may be alleged against the excision method, as compared with the injection treatment, that it is more severe, and necessitates confinement to bed; but even in cases of injection the inflammatory symptoms are often so marked that the patient is unable to get about for several days. In the three cases which I injected with carbolic acid, the patients remained in hospital respectively for nine, twelve, and fourteen days after the injection before the swelling and other symptoms had sufficiently subsided to enable them to resume their ordinary occupation.

The excision method is, I think, much superior to Volkmann's plan of simply incising freely the cavity of the tunica vaginalis. The process of repair in the former is much more certain, for, if an attempt is made to obtain direct union of the opposed serous surfaces after incision, there is always a possibility of non-obliteration of a portion of the cavity of the tunica vaginalis and a liability to recurrence of the hydrocele. If, on the other hand, as commonly happens, the cavity is obliterated by a process of granulation and suppuration, healing is quite as slow as, if not more so than, in cases where the serous membrane is removed. In a case treated by incision under my care some time ago (see Case 4) the wound had not healed at the end of four months, a troublesome sinus remaining, which had to be freely laid open and scraped before it could finally be made to close. If, after excision, uniform pressure is made upon the scrotum by the dressings, so as to maintain the opposed surfaces of the deep parts of the wound in contact with one another, healing will rapidly take place, often almost without any suppuration, just as is frequently seen after removal of the testis. In the course of a few months it will be found that the scar of the operation has almost disappeared; the scrotal tissues move freely over the surface of the testis, and it requires a careful examination to detect that any operation has been performed upon the part.

Of the following cases three were treated by injection, two by incision, and four by excision of the tunica vaginalis: in each instance except one the hydrocele was of the common variety.

CASE 1. *Injection with carbolic acid; cure.*—Aged forty-four years; tapped once previously.—Jan. 13th, 1887: All fluid drawn off and one drachm of equal parts of glycerine and carbolic acid injected and left in the cavity of the tunica vaginalis; scrotum tender and swollen for about a week. On the twelfth day the swelling of the scrotum had subsided, but the testis was slightly enlarged and tender on pressure. Left for the convalescent hospital at Cheadle.

CASE 2. *Injection with carbolic acid; cure.*—Aged forty-seven years. Tapped three times previously.—Feb. 2nd, 1887: Injected as in previous case, followed by considerable effusion into tunica vaginalis. As this did not become absorbed, the swelling was tapped on the tenth day, and four ounces of turbid, port-wine-coloured fluid drawn off. No further effusion took place, and the patient left the hospital four days later.

CASE 3. *Injection with carbolic acid; recurrence.*—Aged forty years. Tapped seven times previously.—Feb. 6th, 1887: Injected as in preceding cases, followed by very slight effusion. Left hospital on the ninth day, swelling having quite subsided. A month later the patient returned with a recurrence of the hydrocele, which was treated by excision of the tunica vaginalis. (See Case 7.)

CASE 4. *Antiseptic incision; sinus for four months: cure.*—Aged thirty-seven years. Tapped once previously. On Aug. 26th, 1885, a free opening under the carbolic spray was made into the cavity of the tunica vaginalis, the edges of which were stitched to the skin, the wound being plugged lightly with iodoform gauze. The cavity contracted, but did not close, a deep sinus remaining, from which there was an abundant discharge of pus. On Dec. 17th the sinus was laid

[1] Berliner Klin. Woch., April 6th, 1885, p. 209.
[2] New York Medical Journal, March 13th, 1886.

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open and scraped, and in the course of a few weeks it gradually healed.

CASE 5. *Antiseptic incision; cure.*—Aged nine years. Hydrocele of the cord. Tapped several times previously, and injected once with iodine. On Aug. 24th, 1882, antiseptic incision. On the thirteenth day the patient left the hospital, the wound having almost healed.

CASE 6. *Excision of tunica vaginalis; cure.*—Aged forty-seven years. Tapped four times previously. On June 30th, 1886, the parietal portion of the tunica vaginalis was removed in the way described. On the tenth day the wound was almost healed, and the patient left for the convalescent hospital at Cheadle.

CASE 7. *Excision of tunica vaginalis; cure.*—Aged forty years. Tapped seven times previously, and injected once with carbolic acid (see Case 3). On April 5th, 1887, operation; fifth day, tube removed; ninth day, wound healed; fourteenth day, left hospital for Cheadle.

CASE 8. *Excision of tunica vaginalis; cure.*—Aged fifty-three years. Tapped three times previously. On May 23rd, 1887, operation; second day, tube removed; fifteenth day, wound healed; eighteenth day, left hospital for Cheadle.

CASE 9. *Excision of tunica vaginalis; cure.*—Aged thirty-eight years. Tapped three times previously. On July 5th, 1887, operation; sixth day, tube removed; ninth day, wound healed; fifteenth day, left the hospital.

Manchester.

DR. R. KOCH'S BACTERIOLOGICAL WATER TEST.

BY G. BISCHOF, F.C.S., F.I.C.

No. III.[1]

EXTENSION OF TIME OF CULTURE.

ONE of the sources of error in Dr. Koch's method of water testing by gelatine-peptone is due to the interference, mainly, of the liquefying colonies with the culture of other colonies present. The former do not only, as a rule, more or less monopolise the area of the nutritive medium, thus preventing the free development of other colonies, but they are the principal obstacle necessitating the limitation of cultures to mostly three days, which leaves us in ignorance of what would have taken place thereafter. For these reasons it appeared to me that the usefulness of bacteriological water testing would be increased if means could be found to extend the time of culture by limiting the extension of objectionable colonies. A primary condition of success in that direction is that the samples of water and the gelatine should be mixed uniformly with the greatest possible care. The encroachment by objectionable colonies may be prevented through their destruction by heat, or by the application of antiseptics. Heat—say the introduction into the colonies of a platinum wire made red hot by electricity—might answer, but there would be too great a danger of the liquid spurting out and infecting the surrounding parts.

Experiments were on this account made with a variety of liquids, commencing with a cold saturated solution of mercuric chloride, which was introduced by means of a fine capillary tube in connexion with a small vessel containing a supply of the antiseptic reagent. Notwithstanding the employment of a magnifying glass in the examination of the plates, the difficulty then arose that after a time it was almost impossible to find out whether a colony was new or had already been treated. The solution of mercuric chloride was therefore mixed with a like volume of cold concentrated cupric sulphate, the colonies treated being thus stained and readily recognised. Several glass plates with nutritive gelatine and some samples of water having been placed in the usual way each into a damp chamber, the liquid mixture could be introduced to any part of the plates by tilting the upper dish at the place nearest to some colony. When several colonies close to each other have to be treated, the dish is supported, whilst introducing the liquid, by a glass rod properly shaped for the purpose, in order to reduce the tilting of the cover and consequent change of air within to a minimum. If the atmosphere of the laboratory is somewhat impure, it is advisable to avoid the tilting entirely, and to introduce instead the sterilising medium through a small hole bored in the upper dish near its top, closing the opening at other times by a stopper. In view of the observation made by me some time ago,[2] that culture in darkness mostly results in a reduction of the number of colonies, it may be stated that in all experiments bearing upon the extension of time of culture the samples were freely exposed to light, so as to have the most favourable conditions for the development of colonies. In four cultures of a sample of water the following numbers of liquefying colonies were observed on each plate treated with the mixed liquid:—

	Plates.				
	No. 1.	No. 2.	No. 3.	No. 4.	Average.
After 2 days	3	1	2	4	2·50
,, 3 days	0	1	3	1	1·25
,, 4 days	9	13	18	13	13·25
,, 5 days	15	7	14	14	12·50
Total	27	22	37	32	29·50

This experiment shows at once that if culture, as hitherto usual, had been interrupted after three days, a small portion only of the liquefying, and, it may be added, of all microphytes present, would have developed colonies, and that it is a mistake to suppose that the colonies capable of growing in gelatine-peptone are obtained by three days' culture. On the sixth day the experiment was interrupted, as the blue tinge almost throughout the gelatine showed that the cupric sulphate, as probably also the mercuric chloride, had spread to such an extent that there was great danger of the free development of colonies being prevented by these substances.

Only one more liquid experimented with may be mentioned—viz., a strong solution of methyl blue in absolute alcohol. Contrary to expectation, this gave a very unsatisfactory result, liquefaction being to all appearance even increased by the treatment. The explanation of this probably is that the very small quantity of the liquid, which can be added without overflow, was so diluted by the surrounding liquid that it ceased to act as an antiseptic, serving, on the contrary, as food.

After this and other similar experience a number of solid media were tried. They were in each case finely pulverised, but without being reduced to dust. Several, as coke and animal charcoal of various origin, failed to attain the object, or even accelerated liquefaction; and only two, crystallised potassic permanganate and spongy iron, were found to answer. The former offers the obvious advantage of being readily soluble. Very little of it is required to completely sterilise a liquefying colony of moderate size, and, supposing a sufficiency of the material, it is not necessary to be very particular to spread it all over the liquefied spot. After a short time it will be dissolved and disseminate throughout the colony, which henceforth ceases to increase. The permanganate does not spread at all beyond the colony, and I frequently noticed the formation of different new colonies bordering on a sterilised one. This also refers to spongy iron, which, however, mostly forms a ring slightly tinged by some ferric compound around the colony. It is difficult to understand the action of that material, as the alkalinity of the liquefied gelatine almost excludes any slight solubility of ferrous compounds such as in ordinary water. As very little only of the sterilising medium can be applied, spongy iron was selected which had been reduced by water gas, this being the purest and richest in metallic iron. Either of the solid media is introduced by means of a kind of pipette. A small bulb is blown at one end of a glass tube about the size of a quill, and a small perforation made in the side of the bulb. To the other end of the glass tube a short piece of tubing about two or three times wider is fused, and a glass stopper ground into the open end. The perfectly dry material being filled in, the pipette is closed by the stopper, then, in the case of permanganate, held vertically, the bulb at the top, so that the material recedes into the enlarged portion. The fine tube is passed in the usual way through the flame of a burner, after which the pipette is inverted so that the material fills the fine tube and bulb and is quickly introduced between the dishes. The opening in the bulb being turned downwards over a colony, the granules are spread on to it in any quantity desired, if necessary by gently tapping

[1] No. II. appeared in THE LANCET, April 9th, 1887.

[2] Journ. Soc. Chem. Ind., March, 1886.

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against the dish. Spongy iron is not affected by any reasonable degree of heat, and the bulb and tube may in its case be sterilised whilst filled with the material, which should be introduced into the centre of the colony so as to form a small cone reaching slightly beyond the colony. If the colonies are not large, the cone remains dry, and one treatment is sufficient, at least for nine days, which is the maximum of time hitherto experimented on, but on the least sign of failure the application must be repeated.

In the first experiment in which permanganate was made use of as steriliser, culture was successfully extended to nine days, when 1230 total and 28 liquefying colonies were found per cubic centimetre, the corresponding plate, on which spongy iron was used, giving 880 total and 36 liquefying colonies. In regulating the quantity of water for an experiment, too many colonies on a plate should be avoided. I have had from 20 to 25 liquefying colonies, but that is about the maximum which can be conveniently treated. Penicillium and other similar colonies sometimes give almost as much trouble as liquefying colonies, but they may be sterilised preferably by permanganate, which in their case must be spread carefully over the entire colony. On the whole, permanganate seems preferable on account of its ready solubility, but, as far as my experience goes, spongy iron may be used should there be a reason to render permanganate undesirable. With a moderate number of colonies to be sterilised on a plate, one inspection, and, if necessary, treatment every twenty-four hours is sufficient, the first inspection being generally required after a sample has been cultured for forty-eight hours. Blank experiments were made, which proved that these manipulations do not with due care introduce any serious risk of infection of the gelatine; also that the several materials experimented with are not themselves productive of colonies when placed on the sterile nutritive medium. It is obvious that by the extension of culture the objection that many organisms require more than three days to form colonies, and thus escape notice, is, to some extent at least, removed.

Various opinions have been expressed as to how the merely numerical result of cultures should be interpreted. It has been asserted that the numbers of colonies found allow of a direct conclusion as to the quality of samples of water; so that, for instance, a sample in which 100 colonies per cubic centimetre have been found might be considered very good. Others maintain that a comparative construction only is permissible, inasmuch as the colonies in a sample of water are compared with those in the same sample after it has received a certain treatment—say, by filtration through sand; and that the improvement or deterioration thus effected is in a certain ratio to the number of colonies in both. I have on various occasions expressed doubt as to both these views, as some of the conclusions to which they lead are at variance with established bacteriological facts.[1] At any rate, it seems clear that what we must aim at is a distinction between harmless and hurtful microphytes in water—in fact, rather a qualitative than a quantitative test; and the standard of quality of water should be the absence or presence of pathogenic organisms. Extension of culture having demonstrated that after three days a small proportion only of the microphytes present is revealed, it seems impossible ever to decide after three days' culture that no hurtful microphytes are present in a sample. In the experiments hitherto made, culture after nine days mostly shows a very marked increase of colonies up to fifteen times, as compared with culture for three days. Even after nine days colonies continue to make their appearance, and there is no doubt that the number of organisms capable of growing in gelatine-peptone, which are obtained after nine days, might still be increased. Moreover, the longer culture is continued, the more developed are the colonies, and the more they exhibit characteristic distinctions. Interesting colonies may be protected against the invasion of others by being surrounded, say, by permanganate, and they may thus frequently be cultured on the original plate without the necessity of making pure cultures on another plate. This probably can be utilised, not only in testing water, but in pathological research generally. The utility of the extension of culture will be illustrated by reference to a practical case—that is, to an experiment made on a London water before and after filtration through sand.

On the 16th of last July a number of samples were taken both from the river Thames at Hampton and the supply of the Grand Junction Company from their standpipe at the Marble Arch, which gave the following results per cubic centimetre:—

A. *Tested at once after collection.*

I. After 3 days' culture:

Thames	2465 tot. col. ...	218 liq. col.	} Total reduc.	
Grand Junc. ...	47 ,, ...	0 ,,	} 98 per cent.	

II. After 9 days' culture:

Thames	8523 tot. col. ...	769 liq. col.	} Total reduc.	
Grand Junc. ...	202 ,, ...	33 ,,	} 97·6 per cent.	

B. *Tested after 10 days' storage.*

I. After 3 days' culture:

Thames	5908 tot. col. ...	56 liq. col.	} Total reduc.	
Grand Junc. ...	2701 ,, ...	19 ,,	} 54·3 per cent.	

II. After 9 days' culture:

Thames	45486 tot. col. ...	406 liq. col.	} Total reduc.	
Grand Junc. ...	39754 ,, ...	123 ,,	} 12·6 per cent.	

The figures show that after three days' culture and ten of storage the total colonies in the sample of Thames water were increased by 140 per cent. against 5647 per cent. in the Grand Junction Company's water. The liquefying colonies in Thames water decreased under these conditions by 74 per cent., whilst those in the Grand Junction Company's water increased by 1900 per cent. The total colonies in the latter water had thus increased about 40 times more than those in Thames water. After nine days' culture and ten of storage the increase of total colonies in Thames water was 434 per cent., in Grand Junction water 19,500 per cent. The liquefying colonies in Thames water had then decreased by 47 per cent., those in the Grand Junction sample increased 273 per cent. The total colonies in the Grand Junction water had therefore in this case increased 45 times more than those in Thames water. We shall presently have to attempt an explanation of these singular differences.

The reduction shown by the filtration of Thames water under the several conditions is: In the sample tested at once after being collected, the reduction was after three days' culture 98 per cent., and after nine days' culture 97·6 per cent., the reduction of the liquefying colonies being 100 and 95·7 per cent. respectively. After storage of the samples for ten days, the reduction of total colonies was diminished after three days' culture to 54·3 per cent., and after nine days' culture to 12·6 per cent., the reduction of the liquefying colonies being 66 and 69 per cent. respectively. The flasks used for storing the samples were provided with glass and asbestos stoppers, and not opened until the water was mixed with gelatine-peptone.

Remarkable is the difference in the effect of extended culture on the sample mixed with the nutritive medium at once after collection, and the other mixed after ten days' storage. In the case of the former there was no practical difference in the reduction after three and nine days, whilst after the storage the reduction of total colonies after nine days' culture is shown to be almost 80 per cent. less than after three days. This seems to show that, given the conditions under which life can be freely developed—that is, when the organisms are surrounded by their natural element, water,—the filtered sample deteriorates so much more than the unfiltered, that, upon the showing of the gelatine test, any gain, apparent or real, by the filtration, is in a comparatively short time apt to disappear almost entirely. This would be not unlike the patching up of cracks and fissures in a building with plaster and paint; it looks all right for a time, but soon matters are as bad as ever. There is in this no condemnation of sand filtration, which unquestionably improves river water very materially, but a condemnation of the sensational percentage reduction hitherto shown by the gelatine test.

But is it reasonable to expose samples of water to the conditions which led to the reduction in the filtered sample of only 12·6 per cent. of total colonies? There can be no doubt on one point—viz., if the test is made to yield by extended culture a much larger portion of the organisms actually present in water than by culture for a shorter time, the larger figure obtained is the more reliable, because it must approach more closely the true condition of things. More hesitation will be felt regarding storage for some days before the water and gelatine-peptone are mixed. It certainly may be argued that samples without storage represent the condition in which water is delivered by the company—that is, at their standpipe, and not in the consumer's dwelling. Keep your cistern as clean as practicable, and you probably will never find the 98 per cent. reduction. Thus I tested lately the water from the cistern

[1] Proc. Inst. Civ. Eng., vol. lxxxv., Part 3. THE LANCET, April 9th, 1887.

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in my laboratory, which is very fairly clean, and through which an unusually large quantity of water passes mostly day and night. Allowing a few days for a corresponding sample of water from Hampton to reach the cistern the result was an indicated total reduction of 36 per cent. It therefore seems justifiable, as long as water is supplied by the intervention of cisterns in which storage takes place, to compare samples of unfiltered and filtered water after a reasonable storage, thus imitating the conditions under which the latter is consumed. Even then the conditions of our experiment are too favourable, because in cisterns water is exposed to aerial and other contamination, which is excluded in the sample flasks. We need not maintain that 12·6 per cent. is the correct figure, but there is no reason to give any greater claim to 98 per cent. The figures hitherto generally given might pass unnoticed, had not hints been thrown out at various times that they are to be regarded as the standard by which water companies should arrange their filters. This may lead to serious expense to them without benefit to consumers, and real beneficial progress may thus be prevented. Even were a fallacy detected in these conclusions, it is quite out of the question to place reliance on numerical results of bacteriological testing, unless the time of culture for each sample be stated.

Before concluding, I wish to guard against the inference that I accepted any one of the figures in the table to be a true exponent of the reduction effected in Thames water by the filtration through sand. It is well known that a not inconsiderable proportion of the metropolitan supply is derived from other sources besides the rivers; and had the sample of unfiltered water which was tested been a true average sample of the company's supply, the reduction would in all probability, *cæteris paribus*, have appeared less favourable. False security is a condition which before all things should be guarded against as much as possible in sanitary matters.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SYMPTOMS OF IRRITANT POISONING IN A FAMILY, DUE TO DISEASED BREAD.

BY J. CHALMERS ROBERTSON, M.B.

ON Thursday, July 9th, 1887, I was called to the house of a Mr. T——. On arrival, I found a family consisting of Mr. T——, aged forty; five children, ages varying from eight to eighteen, and a niece aged eighteen, all suffering from symptoms of irritant poisoning. Their illness had commenced almost simultaneously in the early evening of Tuesday, July 7th, with violent sickness, followed by profuse diarrhœa. They were seen twice by their usual medical attendant, who was on the point of starting for his holiday, and who requested me to take up the case.

I found Mr. T—— complaining of great pain about the epigastrium, and he seemed unable to retain anything; he had had considerable diarrhœa, but this had now ceased. The eldest son, aged eighteen, had had slight pain and diarrhœa, but scarcely noticeable. The third son had great diarrhœa; the fourth the same, but with considerable sickness. The elder daughter had sickness only; the younger was somewhat sick, but the pain and diarrhœa in this latter case were very severe, and were only with difficulty subdued. The niece had diarrhœa only. The mother (Mrs. T——), the second son, and an infant in arms escaped entirely.

It seemed clear that here was a family poisoned, and the question was, what was the cause? I at once inquired as to whether any tinned food had been eaten, but there had been none. I then made inquiry as to exactly what had been eaten during the previous Monday and Tuesday, but there was nothing which seemed to account for the symptoms. On further examination, however, as to what was eaten for breakfast on Tuesday (the morning of the day when the illness began), my attention was directed to a loaf of bread which Mr. T—— said he thought at the time "had a funny taste." The eldest son had said he did not like that bread, and ate only a small piece. The second son had none whatever, neither had Mrs. T——, nor, of course, the infant. All these facts were elicited only on careful cross-examination, as the family had not had the slightest suspicion of the loaf in question being the cause of their troubles. There was now something of which to lay hold. Every member of the family who had partaken of that loaf in ordinary quantity had been rendered ill; one member who had merely eaten a small piece felt uncomfortable; those who did not eat any remained well. Fortunately a piece of the loaf remained, the small top part of a cottage loaf. I was struck by the amount of mould upon it, although it was only five days old, and had been kept in a bread-pan in a perfectly dry cupboard, the weather at the time being, moreover, very hot. My friend, Mr. George Brownen, F.C.S., very kindly undertook the examination of this piece of bread, and in his report he said: "I can find no mineral irritant, or poison as arsenic, antimony, or zinc, and the proportion of alumina will not (by its excess) indicate alum. The sample of bread is, however, acidulous and mouldy, and this fermentation and fungoid infection has penetrated deeply, but irregularly, the substance of the loaf, and its microscopic characters are circles of green mould (mucor); capsular filaments of aspergillus (A. primigenius), feathery patches of penicillia, abundance of spores, but no insect organisms or maggots."

Parkes, in his Manual of Practical Hygiene, sixth edition, article Bread, says that "flour may be grown and fermenting, or with fungi forming. The fermenting flour produces dyspepsia and diarrhœa; the heat and moisture of the stomach, no doubt, excite at once very rapid fermentation; the glutin, already metamorphosing, acts very energetically on the starch and CO_2 is rapidly developed; hence uncomfortable feelings, flatulence, imperfect digestion, and diarrhœa." Further on, speaking of flour, originally good, but altering either from age or from not having been well dried, Parkes says: "The bread is often acid and sometimes highly so" (it was in the case under consideration). "This may produce diarrhœa, though such bread has sometimes been used for a long time without this effect; usually persons will not eat much of it. If the bread be too moist, fungi form."

Now, whether the flour was originally bad, or whether it underwent some alteration afterwards, I am unable to say, but there seems no reasonable doubt that the disease in the loaf was the cause of the illness with which I had to deal. It is quite possible that we have in undetected diseased bread an important factor in the causation of diarrhœa, and one which we would not readily suspect, and I shall be glad if abler pens than mine will take up a matter so closely related to the welfare of the community.

Wandsworth Common, S.W.

DISLOCATION BACKWARDS OF THE CARPUS AND HAND.

BY CHARLES R. WALKER, M.D.

THE following description of a case of this rare form of displacement, which occurred a few weeks ago, seems worthy of record.

Alfred C——, aged sixteen years, a grocer's apprentice, while pulling towards him with his right hand a heavy cask suddenly slipped backwards, his elbow (right) coming in contact with another cask behind him. A fellow-workman, who came to his assistance, finding the arm powerless and distorted, brought him immediately to me. The great amount of deformity was very striking. The hand was bent a little backwards, but was not abducted, and the fingers were flexed. Anteriorly, and a little below the wrist joint, was a large prominence continuous with the bones of the forearm. This consisted of the lower ends of the radius and ulna, which could be very distinctly felt. The styloid processes, conspicuously projecting, were entire, and preserved exactly their relative position. Posteriorly and a little above the wrist was another prominence which was formed by the carpal bones, the upper row exhibiting a well-marked arch under the tense skin. Crepitus was absent, as also any other sign of fracture. Reduction was easily effected, the bone surfaces gliding into apposition with a distinct jerk. He could now, though with some pain, move his wrist in all directions, and when the arm was extremely pronated he was able to supinate it. His general health seemed to be good, and there did not appear

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to be any abnormal laxity of the joints generally. The limb was kept on a splint and evaporating lotions applied, and in a fortnight's time he was able to do light work, the wrist being still somewhat weak.

Remarks.—The mechanism of dislocation seems to have been as follows:—When the boy stumbled, his grasp of the moving cask tightened, and in endeavouring to recover himself the whole weight of his body was exerted on his right arm, so putting the ligaments of the wrist joint on the stretch. Almost immediately the movement of the arm backwards was arrested by the elbow sharply striking the other cask behind. The hand being fixed and bent backwards, the radius and ulna were thus easily jerked out of place. It was remarkable how easily the different bony parts involved could be recognised almost as if one were examining the bare skeleton. Moreover, the dislocation was quite uncomplicated, for the wrist was frequently and carefully examined by myself and others, but no thickening of bone or other sign of fracture in any part could at any time be detected. The peculiar and unusual deformity, the straightness of the hand, the relative position of the styloid processes, which were entire, the arch of the carpal bones, the absence of crepitus, and the ability to supinate fully after complete pronation, were sufficient aids to diagnosis from other injuries at the wrist joint.

Leytonstone.

COCAINE EXTERNALLY AND INTERNALLY.

By G. WALTER STEVES, M.D., &c.

THE value of cocaine as a local anæsthetic is now well established, and few who have carefully tested its use, either by the simple application of a solution to the skin or mucous membrane or by hypodermic injection, will be sceptical as to its efficacy. During the past two years I have used it pretty largely in general practice, and the interest attaching to the extent and variety of its applicability, both in medicine and surgery, induces me to add this note.

Externally I have found cocaine useful in neuralgias, two obstinate cases of sciatica yielding under its application; in operating on cysts and small tumours, such as ordinary sebaceous and Meibomian cysts; a fibro-cellular tumour, about two inches in diameter, was removed from the gluteal region of an old lady without the slightest pain; in pruritus ani; in stitching two cases of ruptured perineum, where the laceration was considerable; in opening abscesses in various parts; in coccydynia; in two cases of chronic articular rheumatism, where the excessive nocturnal pain resisted ordinary treatment. As an ointment I am finding its application of great assistance in the treatment of an obstinate case of vaginismus.

Internally I believe the drug to have special efficacy in certain cases of gastralgia. In two instances, one of which was accompanied by intense gastric irritability (all food and liquid being immediately vomited), the exhibition of the drug was followed by almost immediate relief. Other treatment by morphia, belladonna, &c., had been previously tried, with no beneficial results. One of the above cases was that of a hysterical young lady under my care about a year ago, who, in addition to excessive gastric pain and epigastric tenderness, suffered from a general condition of hyperæsthesia. A notice of this patient is particularly interesting, as she had been under my observation for ten days with no improvement whatever, but after the cocaine had been administered for twenty-four hours the pain was subdued, and remained so. She has not had an attack since, although previously to this similar seizures had been periodical, especially on the approach of menstruation.

The above heterogeneous collection at least illustrates some of the uses to which cocaine may be applied by the general practitioner, and possibly may suggest others. In a recent issue of THE LANCET (August 6th) there is mentioned the case of a young woman lately under Dr. Frey of Berne, in which a general condition of hyperæsthesia was associated with intense irritability of stomach and constant vomiting, where cocaine promptly relieved all alarming symptoms. We may fairly hope that as such cases of severe functional and "sympathetic" stomach derangement are so benefited, some of the distressing symptoms which so frequently accompany internal organic disease may also be alleviated by its use; so far, however, I have seen no mention of its exhibition in the latter class of cases. Its antiseptic influence might also be in its favour. Internally I have prescribed the hydrochlorate (dissolved in water) in quarter-grain doses every four hours, or oftener when the gastric pain was excessive. For external application the solutions have varied from 4 to 10 per cent. in strength.

Liverpool.

TWO MIDWIFERY CASES.

By J. H. BATTYE, M.D.

DURING the week ending August 20th I met with two remarkable cases in midwifery which I desire to place on record, as both are to me unique. One has a bearing on Dr. Oliver's "Notes on Sterility," which recently appeared in THE LANCET, and the other is remarkable for its prolonged first stage.

On August 18th, 1887, after twenty-four years and five months of married life with her present and only husband, at the age of *forty-five* I delivered a tradesman's wife of her first-born child, a male, at full term, the labour being perfectly natural and lasting twenty-eight hours from the first pains till the expulsion of the placenta. The patient is rather stout and has enjoyed very good health, and she did not suffer during gestation. There was not the usual morning sickness or any constitutional disturbance to show pregnancy; and when I first saw her on May 23rd she came to me fearing an unnatural growth, and I did not discover that she was pregnant, as in consequence of the thickness of the abdominal walls I could not feel the uterus properly; but when I next saw her, on July 13th, a great deal of the adipose tissue had disappeared, and I had no difficulty in making out the uterus and feeling the movements of the child. Before labour came on I must admit I felt somewhat anxious about her on account of her age, and because it was to me a unique case; however, my anxiety proved quite needless, as she is able to suckle her child, which is strong and vigorous, and both up to the present time have progressed as well as anyone could wish.

As a contrast to the above case with regard to duration of labour in primiparæ, another case, occurring the same week and completed the same day, gave me a record of the longest first stage of labour I have yet met with. This occurred in a coachman's wife, aged thirty, to whom I was called at 11 P.M. on Tuesday, Aug. 16th, pains having commenced at 10 A.M. On examination the os uteri would admit only the tip of the finger, so I gave her a dose of opium (tincture of opium, 15 min.) to enable her to get some sleep, and left her. In spite of the dose of opium, she had little sleep because of the pains; and on calling at 9 A.M. on Aug. 17th and examining, although the pains were good, I found the os very little dilated compared with the previous evening, not the size of a threepenny piece. At 4.30 P.M., being in the neighbourhood, I called again and found the os dilated to the size of a sixpence, not rigid, but soft, and the pains good, every ten minutes. At 11 P.M. I was called away to the case previously related, which occurred some five miles distant from this; and on my return on Thursday afternoon at 5.20 P.M., I found the os only the size of a shilling, although up till noon on the 18th (Thursday) the pains had continued every ten minutes. After noon till an hour before my return they had not been so frequent, but they occurred then at intervals of every five minutes while I was present, and yet there appeared no rigidity of the os. Having been in labour so long, I determined upon fetching Barnes's dilating bags, but before doing so I pushed up the head a little, letting down some liquor amnii, and now for the first time I felt the bulging of the membranes. On my return with Barnes's bags at 6 P.M. I found the os dilated beyond the largest size, and at 7.30 P.M. I ruptured the membranes, as the os was completely dilated. I had, however, to complete delivery by forceps at 9 P.M. in consequence of the exhaustion of the patient.

My explanation of this prolonged first stage of labour is this:—The patient had had a remarkably sick gestation, having vomited during labour till 9 A.M. on the 18th; that by the act of vomiting the child, which presented in the first cranial position, had been driven down so low in the pelvis that the liquor amnii could not get past the head until I pushed it back at 5.20 P.M. on the 18th, when for the first time I could make sure that the membranes were entire. According to the times I have given, it will be seen that the duration of the first stage was fifty-seven hours and a half. The patient has since made uninterrupted progress towards recovery.

Denbigh-street, S.W.

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CASE OF FATAL POISONING BY NITRIC ACID.

By WILLIAM MILLIGAN, L.R.C.P.ED., M.R.C.S.

As fatal poisoning by nitric acid is not very common, it is well, perhaps, to place on record such cases as occur.

On Sunday morning, March 26th, at 10 A.M., I was called to see a married woman, aged thirty. I found her in a condition of mental derangement, which appears to have come on very rapidly, as the night before she was assisting in her husband's shop as cashier, and although her manner seemed a little strange and unusual, no particular attention was directed to it. I took her to her room, fastened the windows, removed razors, &c., and gave strict injunctions to the husband that she was not to be left without an attendant. At 6 P.M., seeing that she was sleeping quietly, her sister left her for a few minutes, when she got out of bed, ran down a passage into a back bedroom, and then swallowed some nitric acid from a bottle, and regained her bed before her friends, who heard the noise, could reach her. I found her completely collapsed, body and extremities cold, pulse frequent, irregular, and very small. Frothy mucus oozed from the lips, and occasionally there was violent retching, but very little was evacuated. The lips and gums were chalky white, and on the chin there was a yellow stain; the tongue was covered with pale yellowish coating. The condition of collapse lasted for four hours, during which we were assiduous in applying hot bottles, &c., and ether was injected subcutaneously several times. I then gave an enema of hot spirit and water with two eggs, and in half an hour there was return to consciousness, and the patient made signs expressive of intense pain in the chest and abdomen. Hypodermic injections of morphia gave great relief. Another small nutrient enema was given about 5 A.M., and at nine the general condition was much improved. At 12 o'clock, eighteen hours after taking the poison, the patient suddenly expired. Unfortunately the coroner considered the cause of death so evident that he would not order a post-mortem examination. On inquiry from the chemist, I find he sold half an ounce of nitric acid to a lodger in the house for the purpose of removing corns. This quantity appears to be the smallest fatally poisonous dose in an adult I can find recorded.

South Tottenham.

SUCCESSFUL TREATMENT OF PRURITUS VULVÆ.

By FRANCIS TAYLOR SIMSON, L.R.C.P. LOND., &c.

MRS. X——, an elderly lady, wife of a wealthy merchant, consulted me some time back complaining of great irritation of the vulva and perineum. She was suffering from diabetes, but although under treatment the specific gravity of her urine decreased from 1049 to 1026, yet the pruritus increased in severity. In spite of all that could be suggested by myself and many of the best London consultants, life became almost unbearable. Directly she became warm in bed the irritation would commence. She would scratch herself "almost to pieces," and would frequently leave her bed half-a-dozen times during the night to sit in a bath of cold water. She tried alkaline baths, hydrocyanic acid, black wash, chloroform liniment, &c., without avail. On July 28th she came up from the country to see me, although she felt it might be in vain. I then gave her the following ointment:—Cocain., 15 gr.; aquæ dest., q.s.; lanolin., ½ oz.; to be used every night, and lotio hydrargyri nigra to be applied in the morning after bathing. Since she used this ointment the irritation gradually decreased, until it entirely left her, and long and healthy sleep returning has made life again worth the living.

Lavender-hill, S.W.

THE BOARDING-OUT OF PAUPER CHILDREN.—The Elham (Folkestone) Board of Guardians, on the 2nd inst., had under their consideration the question of the boarding-out of pauper children. The matter had been under consideration for some time past, the object of the guardians being to bring up children under such a system as should free them from the vice and contamination of life in a workhouse. It was decided to expend £2500 in the erection of three cottage homes in the village of Cherston, a few miles from the workhouse, on the principle of Dr. Barnardo's homes.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

AN UNUSUAL CASE OF SCIRRHUS OF THE BREAST; REMARKS.

(Under the care of Mr. FREDERICK TREVES.)

THE form of growth taken by the carcinoma in the case here recorded is, as Mr. Treves remarks, very unusual. The ordinary variety of scirrhus is so well known that the deviation from the typical case is seen on perusal of the account of this one, whilst the remarks appended bring the special points more clearly forward.

A woman aged thirty-seven was admitted in November, 1886, with a remarkable form of scirrhus of the breast. She was emaciated and cachectic-looking, and profoundly anæmic. The mammæ were very small. The whole of the pectoral region of the chest was studded with a multitude of small rounded nodules, that stood out like shot under the skin. The centre of the right mamma was occupied by a very hard mass, about the size of a hen's egg, composed of a series of dense round nodules loosely held together. Each separate globe was about the size of a marble, and the nodular character of the tumour was visible through the skin. The integument of the breast was of normal colour, and was adherent to the growth; the nipple was retracted, and the main part of the tumour was fixed to the pectoralis muscle. For a considerable distance round the mamma the subcutaneous tissue was occupied by widely disseminated nodules. The majority of these lay between the breast and the axilla; some extended as high up as the clavicle, others reached the middle line, while some were found scattered over the upper part of the abdomen. All these nodules were hard, round, and free; they slipped about like foreign bodies under the skin, and the integument over them was of normal aspect. The nodules varied in size from a small shot to a bean. The largest were near the heart, and the further the distance from the nipple the smaller the little bodies became. They amounted in number to over a hundred, and some thirty of these were the size of large peas. A peculiar nodular cord ran from the mamma into the axilla, where it was lost. The nodules themselves were roughly grouped along lines that radiated from the nipple. Large veins ran between the breast and the clavicle. There was a slight enlargement of the axillary glands, and also of those in the supra-clavicular region. The left breast was occupied by a precisely similar growth to that on the right side. It was smaller, but its nodular character was even more pronounced. It was free from the skin and the pectoral muscle. Around it were some sixty nodules of like character to those already described. They had not extended so far as those of the right side; none had reached the clavicle or the median line, and neither the armpit nor the abdomen. No enlarged glands could be felt in either the axilla or the supra-clavicular region. The affected regions were entirely free from pain and tenderness. The patient could only remember a slight occasional twinge in the right breast.

There was no history of cancer or tumour in any member of the patient's family, and she had had no injury to the breast. She had had ten children, all of whom are living. She had suckled each child except the last for a period not less than thirteen months. She had always had easy confinements, and had never had any trouble with the breast during lactation. The patient first noticed a small round nodule on her right breast ten months ago. The mass was close to the nipple, and was discovered by accident. She was at the time two months advanced in pregnancy with her last child, and was enjoying excellent health. The first nodule appeared in the left breast eight months ago. Fresh nodes appeared around the original ones, and, partly fusing with them, produced the principal tumours. Fresh crops of nodules, extending from the nipple area, had been appearing ever since. She was confined at full term; the labour was easy and the child is sound and vigorous. No change

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occurred in the right breast after the confinement, but the left breast became swollen and tender; a little milk escaped, but disappeared in three days. She made no attempt to suckle the child. The disease has not spread more rapidly since the lying-in. For the last seven months the patient has failed in health. She has become wasted and weak. Six months ago a cough commenced, and this has persisted ever since. On admission, the patient was exceedingly feeble, and was much troubled with the cough. Her temperature was normal. On being informed that any operation was out of the question, the patient left the hospital after a few days' rest.

Remarks by Mr. TREVES.—The case is peculiar in many respects, and is, in my personal experience, unique. It is, in the first place, unusual for a scirrhus to appear during pregnancy, and still more unusual for it to involve both breasts under those circumstances. The growth appears to show in an exaggerated way the mode in which a scirrhus extends. It is well known that the extreme margin of the morbid growth shows under the microscope a disposition to form nodular masses and cords. All rapidly growing tissues that invade the lymphatics and the lymph spaces show the same tendency. An advance guard of nodules precedes the spread of lymphadenoma, and the spreading of lymphatic growths in the lung in tuberculosis is attended with the formation of nodular masses. In that form of cancer known as *cancer en cuirasse*, the skin around the mamma and far away on the chest becomes hard with the induration of cancer. The part becomes hide-bound, and the skin leathery. But I have not seen an example of this variety where a nodular disposition of the growth has been evident. It is not infrequent to find a noded cord leading from the breast to the axilla in a somewhat early stage of scirrhus of the ordinary form. I have met with an instance where the whole of the skin in the mammary region became infiltrated with cancer, apparently as a result of the very long continued poulticing of a scirrhous breast. The infiltration in this case was integumentary, and although it was not uniform, it hardly assumed a distinctly nodular character.

GENERAL HOSPITAL, BIRMINGHAM.

ANEURYSM OF THE SUPERFICIAL FEMORAL ARTERY IN HUNTER'S CANAL, PRECEDED BY ANEURYSM OF THE COMMON FEMORAL OF THE OPPOSITE LIMB, BOTH TREATED BY LIGATURE; REMARKS.

(Under the care of Mr. BARTLEET.)

FOR the following account we are indebted to Mr. Stephen Townesend, assistant house-surgeon.

J. C——, single, aged thirty-two, a tin-plate worker was admitted on May 10th, 1887, for a pulsating swelling on the anterior and inner aspect of the left thigh in the position of the upper part of Hunter's canal. For some weeks previously he had been subject to pricking pains in the region of the terminal branches of the long saphenous nerve, at the inner side of the foot and ankle, and to aching pains in the calf of the leg. He had noticed the pulsating swelling about ten days before coming to the hospital.

On admission, a swelling of the size and shape of a hen's egg was found at the point above named. It had distensile pulsation. The pulsation was controlled by pressure on the femoral artery.

The patient had never suffered from syphilis, had always been temperate, and had very rarely touched spirits. He had not been exposed to any great physical labour or any severe strain. He had an attack of acute rheumatism at fifteen, and again at twenty-one. In June, 1886, he had the external iliac artery tied by Mr. Bartleet for an aneurysm of the common femoral on the right side. Remembering the success of this operation, Mr. Bartleet determined to treat this second aneurysm (of 1887) by the ligature at once, without giving any other method a trial. Accordingly, on June 17th, he ligatured the superficial femoral about three inches below Poupart's ligament, making the incision, after his usual custom, from above downwards and outwards obliquely to the line of the artery. The vessel was tied with a single ligature of strong catgut. A small drainage tube was introduced. The operation was performed under the spray. The wound was completely healed by the third week after the operation, without the occurrence of any untoward symptom, general or local. The tumour at this period was firm, non-pulsating, and considerably reduced in size.

Remarks.—There are two or three points of interest in this case. First of all, the occurrence of aneurysm at all in an otherwise perfectly healthy young adult without any predisposing constitutional condition or local traumatic cause. Secondly, the appearance of another tumour soon after the first, and seated in the comparatively rare situation of Hunter's canal. The etiology of both aneurysms is obscure. The parents of the patient are both living and healthy. He distinctly denies ever having suffered from any venereal affection, nor does he present any signs of constitutional syphilis. His statement that he has been of abstemious habits is fully supported by his appearance. His occupation does not involve unusual physical labour, nor has he been exposed by accident to any severe strain. Many pathologists regard syphilis as by far the most common cause of aneurysm in the adult, but the occurrence of such a case as the above suggests that, as hæmophilia owes its origin to constitutional tendencies, so there may be a condition which may be termed an "aneurysmal diathesis," and, further, as syphilis is not altogether infrequent in the adult, that, in some cases at least, aneurysm and syphilis may be, not dependent, but merely synchronous conditions.

GLASGOW ROYAL INFIRMARY.

HERNIOTOMY; GANGRENE OF INTESTINE; RESECTION OF BOWEL; ENTERORRAPHY; RECOVERY.

(Under the care of Dr. FLEMING.)

WE are indebted for the notes of the following case to Mr. G. G. Ferguson.

J. C——, aged forty-eight, fish hawker, was admitted on April 27th, 1887, with large strangulated hernia. He stated that he had had hernia for twelve years, which, in spite of the intermittent use of various forms of truss, frequently came down. He always succeeded in returning it, although often with great difficulty and after many hours, during which he had severe pain and vomiting, until November 24th last (five months' ago), when Dr. Knox operated for strangulation and stitched the pillars of the ring together. He did not wear any truss, and the bowel remained up until April 22nd.

On admission, herniotomy was at once performed by Dr. Fleming, and, as the bowel was found gangrenous, it was laid open and slightly stitched to the external wound. The man did very well after the operation, the temperature never rising above 99°. A month afterwards it was noted that he was distinctly emaciating and was in low spirits, although naturally a very cheery man; he was also suffering extremely from the irritation of the fæces continually pouring out of the artificial anus, this irritation even preventing him from sleeping. In consultation it was decided to attempt resection and stitching of the bowel. The operation being fixed for Wednesday, June 1st, on the preceding Sunday he was put upon the most solid and dry diet possible; next morning he had a dose of castor oil, and as soon as it had acted freely he was confined to milk diet, and a grain of solid opium given by the mouth every three hours.

Operation.—Under chloroform, a thick ligature was first tied round the projecting end of the bowel, the ends being left long. By this means any further discharge of fæcal matter was prevented, and a distinct advantage gained in the subsequent manipulation of the bowel. An incision was made through the skin round the projecting end of the bowel and about a quarter of an inch from it, and was prolonged upwards. By putting the bowel on the stretch by means of the ligature already applied, it was easily dissected free and a portion pulled down with the mesentery. By following this the lower end of the bowel was found, and Bishop's clamp applied, one limb to each end of the bowel, leaving about an inch inside the clamps. About half an inch of this was cut off with scissors, and the incisions carried in a converging direction until they met about two inches up in the mesentery. There was thus removed a nearly equivalent triangle of mesentery, each side of which measured about three inches, along with about half an inch of bowel attached to the angles of the lower side. The freshly cut edges were then brought together by the approximation of the limbs of the clamp. The muscular and serous coats being distinctly retracted, it was easy to bring the mucous coat into accurate apposition by a large number of fine interrupted sutures of carbolised silk, the knots being in the lumen of the bowel. The last stitch or two had of course to be tied outside, but

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the knots were easily pushed inside with the eye end of the needle. The peritoneal and muscular coats were then brought together by a series of Lembert's sutures, also of carbolised silk, very closely introduced. The edges of the mesenteric wound were stitched in a similar way by numerous Lembert's sutures, first on one surface and then on the other. The clamps having been removed, the places where the bowel had been compressed by it were carefully watched, until in a few seconds they ceased to be distinguishable. The bowels became immediately distended with gas, and some pressure had to be used to return it to the abdomen, during which it was proved that the joint was air-tight. The pillars were brought together, and the wound dressed with alembroth gauze.

The patient was kept under opium for five days, and fed entirely on peptonised milk. On June 8th his bowels were freely moved by an enema, and after a few days and one or two more enemata acted regularly and spontaneously. The temperature never rose above 100·4°, and this was due to intercurrent facial abscess from carious teeth. On July 16th he was dismissed well, having been kept in the hospital more than a week. A truss was ordered him to support the abdominal wall, which had been weakened by the incisions of the various operations.

ANTRIM COUNTY INFIRMARY, LISBURN.

CASE OF CEREBRAL ABSCESS FOLLOWING WOUND OF THE SCALP; TREPHINING; DEATH; REMARKS.

(Under the care of Mr. ST. GEORGE.)

N. B——, aged eighteen, a farm servant, was admitted about 11.30 P.M. on June 9th, 1887, suffering from a severe contused wound of the scalp, extending for about three inches over the right frontal eminence. The history of the injury was that while playing with some other lads at a game of throwing stones he was accidentally struck on the temple. He was stunned, but not made completely insensible. After the accident he walked into Lisburn, a distance of three miles.

On admission it was found that the patient had lost a good deal of blood, but otherwise he did not complain. The upper part of the wound was filled with a large firm clot. The wound was brought together lightly with three catgut carbolised sutures, and dressed with iodoform, without disturbing the clot.

June 10th.—Ordered a pill consisting of five grains each of blue pill and extract of rhubarb, with a seidlitz powder the following morning.

16th.—The patient complained of headache, and vomited for the first time. He had up to this gone on very well. Ordered five grains of calomel and saline draught every three hours, with ice to the scalp.

18th.—The vomiting had ceased, but the temperature had gone up to 100°. Ordered five minims of tincture of aconite with each saline draught every three hours, and to be purged again with the pills as on June 10th.

19th.—The pills and seidlitz powder not having acted, he was ordered a draught of white mixture.

20th.—Temperature 102° and the mental faculties stupid, but he is sensible and answers questions when roused. No vomiting. Ordered six grains of quinine every six hours. To continue the saline mixture and aconite.

26th.—Seems a good deal better. Temperature fallen to normal. The quinine and aconite were omitted, and he was ordered twenty minims of solution of perchloride of iron three times a day with infusion of cinchona. On examining the wound with a probe, rough bone was found at the upper angle; rest of wound healthy.

29th.—Very stupid. Lies chiefly on the right side. Conscious, but will not speak unless roused. Very thirsty. Temperature 100°. To omit iron solution, and repeat saline mixture and pills.

July 2nd.—No improvement. Complains still of headache, but lies quietly on the right side. Conscious if spoken to. Pulse 40; respiration 15; temperature 99°. To repeat the pill and omit the saline mixture. Ordered five grains of iodide of potassium, with half an ounce of infusion of cinchona, every four hours.

5th.—No improvement. Pulse 34; respiration 15; temperature 97°. Ordered half an ounce of whisky every four hours. Pupils slightly dilated; respond feebly to light. Conscious when roused. Complains of his head.

This state went on until the morning of July 8th, when he began to show signs of paralysis of the left leg and arm, and in the afternoon of the left side of his face. The pupils were dilated, and he would not speak. Mr. St. George therefore, as a last resource, trephined over the upper angle of the wound, where the periosteum was stripped off from the bone. On removing the disc of bone the dura mater bulged forwards and was incised freely. A little pus and a good deal of venous blood resulted. A drainage tube was introduced, and the whole lightly dressed with carbolised gauze. The patient was removed to bed about 10 P.M. He rallied well from the chloroform, moved his left leg and arm, put out his tongue when desired, and also swallowed whisky and milk. When spoken to he said he felt better. However, he slowly sank, and died on the following morning at 6 o'clock.

Mr. St. George made an examination of the body in the afternoon of July 9th, about ten hours after death. The head only was examined. The periosteum was very easily stripped from the bones in the neighbourhood of the wound, and there was a slight congestion of the vessels of the right parietal bone just posterior to where the trephined portion of bone had been removed. On removing the skull-cap the vessels of the dura mater were found to be greatly congested, and the dura mater itself was slightly adherent at the site of injury. There was no fracture on the internal surface of the parietal bone, and a little posterior to the trephined portion there was an abraded portion, and round this the dura mater was attached. At the point where the portion of bone had been removed was found the opening of an abscess, extending under the dura mater and into the brain substance. The abscess was as large as a hen's egg, and also opened upon the skull at the abraded portion.

Remarks by Mr. ST. GEORGE.—The great difficulties in the diagnosis of intra-cranial abscesses were in this case heightened by the slow progress of the symptoms, paralysis not appearing until the very last day, when the abscess had reached such a size as to be hopeless. Still the satisfactory results, the improvement in the patient's state by the removal of the pressure, such as the disappearance of the paralysis, the recovery of consciousness, &c., would lead me in future to trephine early, and make free drainage, if possible, of the abscess, as the best and only chance of saving what otherwise is a hopeless case.

Reviews and Notices of Books.

Pulmonary Consumption, its Etiology, Pathology, and Treatment. By C. J. B. WILLIAMS, M.D., LL.D., F.R.S., and CHARLES THEODORE WILLIAMS, M.A., M.D. Second Edition. Enlarged and rewritten by Dr. C. THEODORE WILLIAMS. London: Longmans, Green, and Co. 1887.

THIS, although stated to be a second edition, is to all intents and purposes a new work. No better evidence of the extent to which the bacillary doctrine has revolutionised our conception of phthisis could have been afforded than the contrast presented by the theories contained in the original work, published in 1871, and this. Seldom in the history of medicine has a greater change been seen in the current conceptions of a disease. Then the influence of humoral pathology had not died out, in spite of the cell doctrines which had gained so much acceptance; for, if we do not err, the theory advanced by the authors was in favour of a dyscrasia, a blood condition, and the formation of tubercle from blood products. But apart from their views, the influence of German pathology had largely overridden the original conceptions of Laennec, and phthisis was subdivided into varieties, mainly referable to inflammatory changes, to which tubercle was superimposed as a secondary phenomenon or accident, the result of infection through caseous material. The notion of infectiveness was initiated, then, long before a determined search was made for a special virus, and when this was discovered the pendulum swung back almost to the standpoint of Laennec—viz., that no phthisis could occur without tubercle, or, *mutatis mutandis*, without the bacillus. Dr. C. T. Williams has from the first recognised the bearings of the new discovery, and is as thorough in

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his adoption of it as M. Sée. He has rewritten his work from this new standpoint, for in almost every page the influence of the bacillary doctrine makes itself felt. Nor is his acceptance of the doctrine at all hampered by doubts as to the origin of the bacillus or its mode of entrance into the body, for although he is forced to admit that predisposing causes play a great part, it is plain that he does not consider they are always necessary. It is, moreover, most interesting to observe how this new interpretation of the pathogeny of consumption fits in with the facts long known from clinical observation, and we may be grateful to Dr. Williams for having taken so decided a step towards proving the harmony which exists between old-established facts and new theories.

As to the matter of the book, it is on the whole well arranged and concisely stated. There are deficiencies—as, for instance, in the chapters on Morbid Anatomy, which are not so full as they might be in the detail which has accumulated in past years, and which the Brompton Hospital has done so much to furnish. But we observe with pleasure that Dr. Ewart's instructive study of the formation of cavities in phthisis receives full attention, and his doctrine of secondary infection of the opposite lung is freely adopted. Considerable space is allotted to the bacillus tuberculosis, and the history of the investigations that led up to its discovery is retold, whilst its clinical importance is is duly appraised. It will, we think, be seen that this is not so high as might be thought, but some instructive cases are given where diagnosis was aided by the detection of the bacillus in the sputum. In the chapter on Etiology the question of inheritance is discussed from the records of 1000 cases treated in private practice, which showed 48·4 per cent. with a family history of consumption, and only 12 per cent. of direct hereditary transmission. Hardly sufficient stress, perhaps, is laid upon the environment of the patients that show inherited taint, and, although not explicitly stated, it would seem that Dr. Williams thinks that a direct transmission of the virus is possible. Amongst possible predisposing causes, the influence of damp, of certain trades, of alcoholism, and of syphilis is directly mentioned; but less attention is given to the evil influence of sedentary town life and unhealthy surroundings, which have so large a share in producing the tendency to the disease or in laying the subject open to the bacillary invasion. The following summary of conclusions upon the question of infection will bear quoting (p. 88):—

"1. The evidence of large institutions for the treatment of consumption, as the Brompton Hospital, directly negatives any idea of consumption being a distinctly infective disease, like a zymotic fever.

"2. Phthisis is not, in the ordinary sense of the word, an infectious disease—the opportunities for contagion being most numerous, while the examples of its action are exceedingly rare; nevertheless, its communicability is possible under extremely favourable circumstances.

"3. In the rare instances of contagion through inhalation, the conditions appear to have been—(1) close intimacy with the patient, such as sleeping in the same bed or room; (2) activity of the tubercular process, either in the way of tuberculosis or of excavation; (3) neglect of proper ventilation of the room.

"4. In addition to the above, a husband may, though he rarely does so, infect his wife by coition; and this risk is considerably increased in the event of pregnancy.

"5. Infection through the milk of a tubercular cow, in cases where the udder is affected, is possible.

"6. By the adoption of proper hygienic measures, such as more ventilation and separation of consumptive from healthy people at night, and by proper care being exercised about the selection of cows for the milk supply, all danger of infection can easily be obviated."

These conclusions are perhaps such as are warranted by present knowledge, but we venture to think that time will require their modification in more than one particular.

Before describing in detail the several varieties of consumption, the authors contribute chapters on the clinical symptoms of consumption in general, including one chapter—all too brief—by the veteran stethoscopist, Dr. C. J. B. Williams, on the physical signs; and on certain special phenomena, as hæmoptysis, temperature, diarrhœa, albuminuria, and pneumothorax. The chapter on Temperature in Phthisis is one of the best studies of clinical thermometry that we possess; and it contains a series of observations which have been for the first time made in a sufficiently large number of cases and on a systematic plan with praiseworthy care and elaboration. The average curves resulting from these observations, which were carried on for several years at the Brompton Hospital, are most instructive; and of particular interest is the fact that, in spite of pyrexia, there is in a very considerable proportion of cases a gain in weight attributable to feeding, which more than counterbalances the wasting influence of pyrexia. The thermometric curve is described as being the balance between the two factors of increased metabolism and of constitutional depression or lowered vitality; so that, according as one or other prevails, there are supernormal or subnormal temperatures. Another study nearly as elaborate is that on the albuminuria of phthisis, the pathology of which is mainly to be found in lardaceous disease evolved by the phthisical process. In the greater proportion of cases the kidneys were lardaceous, in others fatty. Diarrhœa is attributed (1) to dyspepsia (as in the first stage), (2) to tubercular ulceration, and (3) to lardaceous disease; and abundant clinical illustration is given of these three types. In the chapter on Pneumothorax the most interesting fact is the record of four cases of recovery, with little or no effusion, which were observed many years ago, and are well worthy of preserving in view of the recent interest in the subject. But, of course, in the majority of cases the supervention of pneumothorax (like the rupture of a pulmonary aneurysm into a cavity) is one of the final events, and is of the worst omen. It is only in those rare cases of "apparently healthy" individuals that one may venture to regard pneumothorax with equanimity. A description of the several clinical varieties of phthisis (in which we regret to see the retention of the term "scrofulous") occupies several chapters, but need not detain us; and an elaborate statistical analysis concludes the clinical part of the work with the Duration of Pulmonary Consumption.

But, after all, the study of the disease, pursued as it is here with so much care and elaboration, and illustrated by numerous cases from an unusually rich field of clinical experience, leads us up to one subject—that which is most important, and yet most difficult—namely, treatment. Some readers may turn first to these last chapters, to learn what is to be said by the latest authorities upon this question. Here, again, we find the predominant influence of the bacillary doctrine, all measures being directed either to destroy the parasite or to enable the organism to withstand its ravages. The measures directed to maintaining nutrition, the regulation of diet, the promotion of exercise, the residence in a suitable climate, the prescription of cod-liver oil and of digestive tonics,—these, and other means for improving the general health, are as much indicated on the bacillary hypothesis as on the older doctrines. It is needless to say that all these measures receive adequate notice, with many valuable hints upon dietary, clothing, and habitation. Dr. Williams's experience of the employment of compressed air baths as prophylactic, but not curative, is worthy of attention. A chapter is devoted to Climatic Treatment, which, although necessarily condensed, is nevertheless full of suggestion, and we gladly welcome the extended list of conditions which contra-indicate the resort to mountain

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climates, for these are often too much neglected. Dr. Williams says:—

"The cases where the mountain treatment is of greatest benefit are those of ordinary first-stage phthisis, where the physical signs do not amount to more than a few crepitations audible at one apex, with slight dulness and bronchophony, where the cough is not troublesome and the expectoration is scanty, though containing a few tubercle bacilli, and where loss of flesh and night sweats have continued for a few months." (Page 374.)

Similar appropriate reference is made to the suitability of the milder climatic resorts and to the value of sea voyages. As to medicinal treatment, naturally cod-liver oil receives the largest share of attention, and the value of stomachics is chiefly as an aid to the digestion of this fatty substance. Of antipyretics, the palm is given to the latest introduced—viz., antifebrin,—although exhaustion from the sweating it entails is a drawback. Under the head of Palliative Treatment are discussed measures for dealing with hæmoptysis, diarrhœa, pneumothorax, laryngeal ulceration, and other complications; whilst the final chapter deals with the Antiseptic or Bacillicidal Treatment (including intra-pulmonary injections and the drainage of cavities), from antiseptic inhalations to the gaseous rectal injections of Bergeon—methods which can hardly as yet be said to have advanced beyond the experimental stage.

We have thus cursorily passed through the pages of this work, and we may congratulate Dr. C. T. Williams upon its general excellence and the painstaking care with which he has brought the subject up to the level of modern ideas. It is a fair and faithful record of the outcome of personal observation and an extended acquaintance with the labours of others. The style in which it is written is sober and judicious. It may lack the vivacity that embellishes the writings of the French school, and in some parts we may miss the profundity of the German; but it nevertheless faithfully reflects the knowledge of the day, and may be profitably consulted by the medical practitioner, who has few diseases to deal with which more tax his judgment and his skill. We are, moreover, glad to meet once more, in the two chapters which he has contributed to the work, with the writing of one who more than a generation back led the van in the field of pulmonary pathology. We are reminded in the perusal of the work that, much as our conceptions of disease may alter, and valuable as may be the new facts discovered by new methods, nothing can change the import of facts accurately observed and carefully recorded, whereby our conclusions are rendered sounder and more complete, whilst our hypotheses are held in check.

On some of the Mental Affections of Childhood and Youth. Being the Lettsomian Lectures delivered before the Medical Society of London in 1887; together with other papers. By J. LANGDON DOWN, M.D. Lond., &c. London: J. and A. Churchill.

THIS valuable contribution to psychological literature is due to a request from the Medical Society of London that the lectures delivered there by Dr. Langdon Down should be republished. To these lectures are added certain "fugitive" papers, as the author calls them, printed in chronological order. The first impression created in the mind by this work, is that it takes its origin from the pen of one who writes, not because he wants to say something, but because he has something to say. When we are told that a period of nearly thirty years spent among children with various phases of mental affection might entitle the author to bring before the Medical Society material which could only be accumulated by few, we cannot do otherwise than anticipate hearing something in medicine which is at least original. And this expectation is fully realised.

Commencing with a sketch of the history of the education of the idiot, Dr. Down tells us that steps in this direction were at first isolated efforts under the guidance of M. Séguin at the Bicêtre, that in 1842 Dr. Guggenbuhl established a school at Abendberg in Switzerland, and about the same time M. Saegert at Berlin engaged in the instruction of idiotic deaf-mutes. In 1846 a school was established at Leipzig, and soon afterwards the subject was amply ventilated by Mrs. Plumbe, Dr. Andrew Reed, and Dr. Wilbur. In 1858 Earlswood Asylum first came into existence, and Dr. Langdon Down undertook the superintendence.

Now a word of criticism as to nomenclature. Dr. Down would apply the term "imbeciles" to subjects of senile changes of nutrition. He says: "I know of no defining limitation between so-called idiocy and so-called imbecility. The division, therefore, into imbeciles and idiots is thoroughly misleading. I have no great liking for the term 'idiot.' It is so frequently a name of reproach. The word 'idiot' means 'solitary.'" As far as we remember, Dr. Fletcher Beach equally condemns the word "idiot." He believes it to be an insult to call a person an idiot. In the first nomenclature of diseases of the Royal College of Physicians, published some twelve years back, a "high" idiot was to be called an imbecile, and a "low" idiot an idiot. The word "idiot" is derived from ἰδιώτης, a private person, meaning probably in ancient Greece or ancient Rome that an individual so-called ought to be kept in seclusion. Of course, the value of all the terms are very much changed since those classical distinctions were enunciated. Still, with all deference to Drs. Down and Beach—we must recognise the value of the terms "idiot" and "imbecile," as adopted in the first nomenclature of the College of Physicians, as, in the first place, bringing to the mind concisely the condition of the patient, and, as far as we can judge, being neither of them likely to offend the unfortunate persons to whom they are applied. Dr. Beach would call all idiots "imbeciles," and Dr. Down, with still more consideration, would call them all "feeble-minded"—that is, subjects of amentia,—while he would reserve the term "imbecile" for subjects of dementia, senile or otherwise.

But we turn with much pleasure to the author's original sub-divisions of idiocy. We have always conceived that the sub-divisions of Dr. Ireland, classical though they may be, are yet guilty of somewhat overlapping one another. Doubtless Dr. Down has studied Dr. Ireland's and M. Séguin's views on this subject. What, however, appears to us to be the chief merit of Dr. Down's work is that his sub-divisions, although appearing somewhat fanciful at first, are yet founded on principles of real practical importance with regard to prognosis. Briefly speaking, he makes two sub-divisions. Under the first, Ethnic, he includes Malay, North American Indian, Mongolian, and Caucasian. The last named, the Caucasian, is alone accidental—that is, produced by causes operating after birth. The other ethnic types are invariably congenital. And upon this point depends much in prognosis, at least as regards improvement. But as we proceed we find another classification, based on the etiology of the cases. And this, as the author says, is valuable from its practical bearing. This classification includes the forms congenital, accidental, and developmental. "Congenital" idiocy requires but little explanation. "Accidental" implies that some accident or some extension of disease equivalent to an accident had wrought on the cerebral centres disastrous changes, interfering with intellectual manifestations. On investigating, however, a large number of cases, Dr. Down became familiar with many instances which it was impossible to include in either of these categories. There was no history of accident or of any illness akin to accident. There was a cessation of the increasing intelligence which had marked the child's early career. Anxiety was felt on account of the deferred

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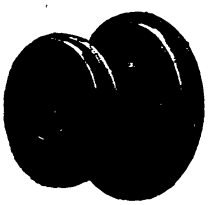
speech; and this is frequently connected with second dentition. In the same category are those who, although they may have passed the first and second dentition harmlessly, break down at the time of puberty. The physical and mental phenomena in such patients are described at great length, and throw much light upon the similar cases which we all have to deal with, although displaying less marked symptoms.

Of course, in the work before us we meet with several collections of observations with which we are already familiar, but which we are grateful now to find engrossed in a permanent form for more convenient reference. Such are the causation of idiocy, the influence of alcohol in its production, of phthisis, of marriages of consanguinity, and the influence on the offspring of "over-education" in women. In this list may also be specially mentioned Dr. Down's previous papers on the condition of the mouth in idiocy, on the relation of the teeth and mouth to mental development, on the obstetrical aspects of idiocy, and various pathological communications which will bear comparison with those emanating from the researches of any sub-section of the Pathological Society. Dr. Down's book on idiocy is the most trustworthy work on this important and interesting subject.

New Inventions.

THE "SIMPLEX" MECHANICAL TELEPHONE.

THIS instrument is intended to be employed over short distances only, and is useful in warehouses, hotels, hospitals, and dwelling houses. No batteries are required for this telephone, and there is nothing in the instrument to get out of order or which requires replenishing. A single instrument acts as transmitter and receiver at each end, the two being connected by a tight steel wire which is conducted by special insulators. A great recommendation of this telephone is its moderate cost, which varies from 30*s.* to 60*s.* a set, according to circumstances. From personal experience we can testify to the simplicity and efficiency of the apparatus. The inventor and patentee is Mr. T. Harding Churton, of Park-square, Leeds.



DRAINAGE SCHEME IN THE LOWER THAMES VALLEY.

A CORRESPONDENT sends us the following account of the new system of sewage treatment which is in course of trial at Acton. There is much in the scheme which seems promising, but we are unable as yet to express a positive opinion in regard to it:—

"The Acton parish has soon followed the suit of some of the other local athorities along the Thames valley in providing for its district a system of sewage disposal, which enables it to pass into the river Thames a clarified effluent water, instead of polluting crude sewage. Acton would seem to have taken rather an enterprising step in this matter, by adopting a system of sewage purification which has not hitherto been in operation at any public sewage works. The system is that of the International Water and Sewage Purification Company, which differs in many salient points from the generally prevailing 'lime process' of sewage clarification. In this case no lime, indeed, is used. The principal substance in this new system is magnetic ferrous carbon—prepared from a murky material hitherto considered useless—rich in ferrous alum and carbonised iron. In the process of precipitation this magnetic ferrous carbon is used in combination with what are termed 'compound sewage salts,' consisting of proportions of sulphate of alumina, sulphate of magnesia, and sulphate of calcium. The company, it seems, do not claim to have made a discovery of any new substance with startling properties. The operation and effects of the process are based upon well-known chemical principles, and it is in the mode of preparing and applying this substance to the purposes of water and sewage purification that the company think they have found something which goes a long way to solve the problem of treating sewage effectively and economically. It is found that by virtue of the soluble iron and alumina salts in this magnetic ferrous carbon it acts as a rapid precipitant, and, being carbonaceous and porous, that it also acts as a disinfectant and deodoriser. The complete process of clarification does not end in precipitation. In order to render the effluent water faultlessly pure, it is passed through a bed of magnetic spongy carbon and sand. At Acton it was noticed that the effluent water as it came direct from the precipitation tanks bore a reddish tinge, but chemical testing proved that this discolouration was due to the presence of iron, which would have a purifying effect than otherwise upon the river water. But the effluent water, after being passed through the bed of magnetic spongy carbon, appeared quite bright and clear. A telling demonstration of the purity of the filtered effluent was the fact that a number of gold-fish were swimming about gaily in a large globe filled with the filtered effluent. The sight proved a most interesting one to the many sanitary engineers present at the opening of the works on Thursday week last. A recent analysis showed that as much as 96 per cent. of putrescible organic matter in solution was removed, as also all suspended matter. It would seem that here is solved the question how to secure a pure effluent without the use of lime, and without the necessity of acquiring large areas of land for irrigation, or also without the pecuniary and sanitary risks attending a sewage farm. The filter-bed at Acton, where the scheme is to provide for the requirements of a population of 20,000, occupies an area of less than seventy feet square, magnetic spongy carbon being so efficacious that it can operate in a considerably less space than most of the filtering materials made from clay deposits or earthy substances carbonised. It is well known that the stratified structure of these latter substances interferes with their filtering powers, except in the direction of the laminæ, and are therefore liable to silt up and become impervious to moisture. Another feature of the new process is the character of the resultant sludge. The liquid sludge passes from the precipitation tanks into a rotatory agitator, where more of the company's chemicals are added, for the purpose of producing practically a second precipitation, to further ensure the impossibility of putrefactive changes taking place in the solid sludge after being pressed. The company contend that by their treatment of the sludge the manurial qualities in it are fixed by the further addition of the magnetic ferrous carbon, and that if the same quantity of lime had been added, as is the case in the lime process, the manurial properties in the shape of ammonia would be driven off, and the phosphoric acid rendered insoluble and of no use to plant life. A ready demand is therefore expected for the sludge, which is to be sold as manure in powder."

ROYAL COLLEGE OF SURGEONS.—We extract the following from the *Builder* of the 20th ult.:—"Messrs. Higgs and Hill of South Lambeth, contractors, are carrying out the designs of Mr. S. Salter of Woburn-place, architect, for the addition of another floor, in two stages, to the front portion of the Royal College of Surgeons in Lincoln's-inn-fields. As it now stands, that building is mainly the work of Sir Charles Barry, who (1835–7) extended the front to 108 feet, and designed the massive Ionic portico. The original structure had been erected by Dance on the removal thither of the College from their Hall in Old Bailey—site of the now Sessions House and Criminal Courts—upon their incorporation in 1800. John Hunter's anatomical collection was opened to view here in 1813. In 1836 the Museum was enlarged, and again some years later, when the Fellows acquired possession of the ground in Portugal-street, at the rear, which had been the site of the Lincoln's-inn-fields Theatre or Duke's playhouse. About the middle of the eighteenth century the theatre was converted into a soldiers' barrack, and then into an auction-room. It was finally demolished in August, 1848, having latterly served for Spode and Copeland's china warehouse."

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 10, 1887.

OUR columns show that the Ninth International Medical Congress has been already duly opened, and doubtless by the time our impression of to-day reaches its destination will have become practically a matter of history. It is no light compliment to the profession of medicine that the President of the United States should have graced the initial stages of the Congress with his presence and co-operation, and that he should have been supported and followed in this by Mr. BAYARD (Secretary of State), who delivered an eloquent address, and expressed his belief that medicine constituted the noblest school of human usefulness. It is said that a thing well begun is half completed. And this may fairly be said of the International Congress. The details to hand of the addresses in the Sections do not enable us yet to estimate the scientific value of the Congress. We must wait patiently for fuller reports of the papers. But we learn that 5000 physicians were in attendance, and, as will be seen by our report by cable, there has been great range of subjects, and great cordiality of hospitality, crowned by an evening reception at the White House by President CLEVELAND and Mrs. CLEVELAND. The United States, regarded as a government, have hitherto been rather loose in their recognition of medicine as a profession. Each State has had its own regulations for the promotion and supervision of medical education and qualification, and the best Americans would be the first to admit that for the most part these regulations are very lax and inadequate, allowing of a great deal too many medical schools, and making medical qualification far too easy. It may reasonably be hoped that the President and his distinguished colleague will carry away from this International Congress deeper impressions of the grandeur of the medical calling, and of the responsibility of States for requiring that those who follow it shall give some substantial guarantees of general and medical education such as alone can fit them for coping intelligently with disease and guiding the public in medical questions, for acting, in the happy words of Secretary BAYARD, "as guardians of the nation's health." Mr. BAYARD would seem to have indicated that, in his opinion, the best thing that States could do for medicine as a science was not to interfere with it. This is not very complimentary to the State, which really has immense power, which it ought to use, for encouraging such a beneficent and important branch of knowledge as medicine. It must have struck him that all the members of the Congress and of similar Congresses were those who bear some mark of State recognition. Even the United States do not carry out their favourite doctrine of non-interference with the practice of medicine. Their medical schools and the recognition of some qualifications for practice, wherever and however obtained, are still matters of State regulation, however vague and various this is when we compare one State with another. A little reflection on the ubiquity of disease, and of the enormous suffering which it entails, will make it apparent to such men as the President of the United States and Mr. BAYARD that the efficiency of the medical art ought to be a chief concern of governments, and that, in the medical sense of the word, above all others *salus populi suprema lex*. Public medicine is now with us a most vital part of State responsibility, but ordinary curative medicine is no more to be neglected by wise governments than a good water supply or cheap supplies of sound food. In this sense the presence of such distinguished representatives of the nation in the Ninth International Congress is most gratifying to us, and will, we doubt not, be productive of good fruit.

The interesting address of the President, Dr. DAVIS of Chicago, will be found in another column. It would be vain to deny the disadvantage to the Congress caused by the death of the lamented Dr. FLINT, who was so ardent in the promotion of international amenities, and so open to the reception of light from all quarters as to cross the Atlantic almost annually, and to go, at an advanced age, to Copenhagen to arrange for this present Congress. It is gratifying that his name still figures honourably in the records of the Congress, and that his son, Dr. AUSTIN FLINT, read an able paper, from the physiological standpoint, on Fever: its Causes, Mechanism, and Rational Treatment. We await with interest further reports, and are gratified meantime at the auspicious opening of the Congress, and the association with it of the highest representatives of American influence and Government.

ADMIRABLE CRICHTONS, equally conversant with all departments of human thought and human work, are impossible in this age, and it therefore happens that various branches of science are, from year to year, represented on the presidential chair of the British Association. Last year we had for president an eminent geologist, and this year a distinguished chemist. Sir HENRY ROSCOE brought from the laboratory of BUNSEN, the birthplace of spectroscopic analysis and of so much else which has moulded modern science, a training in research which he has put to good account in England. We owe to him not only many good and useful discoveries, but an important impetus to chemical education and a more general recognition of its value. His election to Parliament was regarded with mixed feelings by chemists, who, while feeling proud that their science had found so able a representative, could not forget the risk that the new duties might involve an abandonment of the scientific work from which so much was hoped.

When the President is a chemist, we look for an address in which Chemistry and the cognate branches of science form the chief features, and generally for a review of the recent progress of the science. Upon Sir HENRY ROSCOE a further duty naturally fell, for in the jubilee year he could hardly avoid a history of the great scientific events of the last fifty years. No one living was better fitted for the task, for in the well-known treatise which he, in conjunction with Professor SCHORLEMMER, is giving to the world, an historical sketch has been prefixed to almost every chapter. Accordingly, we find in the presidential address a narrative which leaves but little to desire. It was unfortunate for Dr. SCHUNK the president of the Chemical

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Section, that his address was necessarily preceded by one which could hardly fail to throw it into the shade. Dr. SCHUNK was indeed unfortunate in a double sense, for not only did he follow ROSCOE in this, but CROOKES in the last annual meeting. His address was interesting, but it was far below the standard set by Sir H. ROSCOE, and still less could it compare with the brilliant speculation or scientific poem in which Mr. CROOKES held his hearers spell-bound last year.

The President's address opened with a graceful tribute of respect to those two great Manchester worthies, DALTON and JOULE; the former even now remembered by a few, the latter still living in the highest honour among us. Both of them may fairly be described as the founder of an empire in science, although neither broke the first ground. The empires are those of matter and of energy. Many men not less illustrious sided in their conquest and final union, and a vast area still awaits discovery and annexation; but no one now doubts the reality of the past conquests, or their supreme importance to mankind. The idea of atoms has been supplemented by that of molecules, and all scientific men hold them, not as finalities, but as temporary expressions of the ever-growing truth. The hypotheses which now prevail, and which are at present essential to research, may, and perhaps will, take a very different form ere long, but we cannot doubt that in one form or other they will stand the verification of future discovery. JOULE'S greatest achievement was the experimental determination of the mechanical equivalent of heat, and the importance of this cannot easily be over-estimated. It led to the recognition of the doctrine of conservation of energy, which is entitled to precedence even over the great law of gravitation.

In the fifty years' survey with which the presidential address is mainly concerned we are presented first with the immortal labours of LIEBIG and WÖHLER. LIEBIG clung to "vital force," although he did more than anyone else to demolish it in its old acceptation. But his labours placed organic chemistry, and with it the chemistry of agriculture and physiology, upon a new basis. He erred, of course, and his tendency to sarcasm served to intensify his errors. He scoffed at substitution, ignored for the most part organic synthesis, and was persistently wrong in his conception of fermentation changes and the origin of muscular power. But in addition to the vast mass of fact which he, with his great colleague, collected, he revolutionised ultimate organic analysis, gave to chemistry the conception of the radical, and laid down lines of chemical classification which are still valuable aids in the science. Even the term "vital force" is only wrong if it be taken as implying creation of energy during the phenomena of life. Heat, electricity, gravitation, and chemism must still be reckoned as different forms of the force which causes energy, and we cannot as yet with any certainty identify the cause of nerve-energy with any one of them. As long as the secret of life is hidden from us we must be cautious while admitting the great law of conservation how we deny the possible existence of a force as different from electricity as electricity is from heat or gravitation. DALTON'S greatest work was done before the Victorian half-century, but it stretched into it, and its influence animated the whole. Among the most interesting passages in Sir HENRY ROSCOE'S address were those in which the modern calculations of the size and velocity of motion of atoms, or, more correctly, of molecules, were discussed. As to size, we are not indeed able to see them, but it does not seem quite impossible that one day we may. A microscope can magnify 8000 times. If the image so formed were again magnified 8000 times—if, so to speak, one microscope could take up the work of another, some molecules at any rate would be visible, although even then the velocity of their movements would probably prevent one seeing them. Hydrogen molecules are said to move with an average velocity of seventy miles per minute. Not less interesting is the account of the law of periodicity in atomic weights, which was first observed by NEWLANDS, and afterwards developed by LOTHAR, MEYER, and MENDELEJEFF. At the last meeting Mr. CROOKES exhibited a diagram, suggested in part by Professor EMERSON REYNOLDS, in which the most recent extensions of this law were shown in a zig-zag line, irreverently described by the wits of the Association as the "chemical corset." Sir HENRY ROSCOE supplied another illustration, not, indeed, diagrammatic, but verbal, which was effective and suggestive, though in a different way. We must refer to the address for the details, but it consisted in placing side by side a few simple pedigrees, with the dates of birth of each individual. Taking these dates as from left to right, and following the same order in each horizontal line, the numbers follow progressively, though with variations in the intervals. Each perpendicular column then represents a family in which common traits may be expected, and there will still be a periodicity throughout the whole. One cannot help being reminded here of Dr. STERRY HUNT'S hypothesis, in which, rejecting DALTON'S theory, he seeks to account for all chemical phenomena by evolution, differentiation, and integration of species.

Space prevents us from following the presidential address through its remaining sections. Spectroscopy received a full share of attention, as did thermal chemistry—a branch of the science which is rapidly replacing by absolute numbers the tables of affinities which figure in old treatises. Nearly all other branches of physical chemistry were brought under review, and subjected in many cases to keen criticism. Organic chemistry, with its wonderful modern syntheses and discriminations of structure, vital phenomena, and pathological chemistry, were also considered.

THE terrible fire at the Exeter Theatre, with its fearful sacrifice of life, comes so quickly after the calamity at Paris when the Opera Comique was destroyed, that it would be difficult to say anything that should not seem stale or commonplace on the subject. Nor is any useful purpose to be fulfilled by mere sentimental remark. It is very regrettable that such holocausts should be offered; and all that can be urged in favour of additional precaution to avoid "accidents" of this class may be urged with peculiar fitness on the present occasion; but we must be excused for leaving to others the practice, but too common, of heaping blame upon some person, or persons, to be singled out—a builder, or licensers, or managers of this or that particular place of amusement—as responsible for what has occurred. In truth, the fault lies at the

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door of the community as a whole, rather than at that of any individual or persons. Of course theatres, of all places of concourse, ought to be so constructed as to render escape in an emergency easily practicable. Meanwhile, we have no hesitation in stating that what happened at the Exeter Theatre might almost have happened round a bonfire on Salisbury Plain if a crowd had been equally panic-stricken. It is the panic, with its blind rush of scared and selfish people, that constitutes the *immediate* cause of the calamity. If only the crowd could be controlled, and its exit made quietly, no life would be lost; whereas where there is a mad struggle to escape, some must fall, and others will stumble over them. The same thing occurs in rushes on level ground and in the open air.

If we really desire to go right down to the bottom of the evil, it is necessary to look very far beneath the mere surface facts of a calamity like that which has befallen the playgoers of Exeter. What a panic-stricken crowd really needs is control by authority. Even in this last melancholy occurrence, when the manager appeared at the door of the pit, being recognised, his presence inspired confidence, and he quickly succeeded in clearing that portion of the house without either loss of life or accident. If he could have appeared at the exit from the gallery, it would have been just the same with that portion of the audience, and the one hundred and seventy lives might have been saved. Had the exit been twice as wide and easy as it was, given a panic and without control, the calamity would have been proportioned to the number of persons panic-stricken, rather than to the insufficiency of the way of escape. The lesson to be learned from this and many other facts in connexion with the present and similar calamities is that there ought to be stationed in every separate part of the auditorium one or two officials who should be recognised as especially charged with the safe custody of the audience. They should not be attendants, or police constables, or firemen, but officials wearing a distinctive uniform, and having a status above that of the persons to whom we have referred, so that they might both command respect and inspire confidence. It would be well if a distinct corps could be formed, under the control of the Home Secretary, and independent of the theatres, though the force might be supported by contributions levied on the lessees of places of amusement. To this corps the sole duty of protecting audiences should be entrusted. It would be their business to see that all doors of exit were open, and that every means of escape were practicable. They should have nothing whatever to do with extinguishing a fire, but be held directly responsible for the safety of the audience and for help in its bewilderment. A panic-stricken crowd would look to these officials for protection, and it should be made imperative to submit to their direction. Those who know most of human nature will be aware that even in the wildest excitement there is an underlying desire to be controlled, and a firm authoritative guide will seldom fail to assert his supremacy. The first condition of respect in an emergency is confidence; and the knowledge that a particular official, of suitable physique and instantly recognisable by his uniform, was present, would cause the majority to look to him instinctively for help. This mental attitude alone would render escape more easy.

What we would urge is that in each part of an auditorium of a theatre one or more of these officials should be placed, and that they should be held responsible for taking means to clear the particular part of the theatre entrusted to them with safety to the outgoing crowd. As to the cost of maintaining such a corps, suppose it amounted to a tax of five pounds, or in some cases a larger sum, per night for a theatre, that would not be an unfair impost for the management, considering how greatly it would conduce to the popularity of theatres which are now avoided by no inconsiderable number of persons, simply because they are afraid to frequent places of amusement, knowing that in any moment of danger there is sure to be a panic, and that when it occurs there will be no sort of control or protection, but everyone will be thoroughly selfish and intent only on his own personal safety. The knowledge that a special corps of life-guardians was in attendance would conduce more to confidence in general, and coolness in any critical moment, than any other means that could be devised. We commend the suggestion to those upon whom the provision of means for the public safety devolves, and by whom something must be done, or outraged public opinion will assuredly begin to revolt.

IF we may judge from the amount of attention and space that medical literature is devoting to the subject, one of the dark fields of pathology which is about to receive at least some if not a flood of light is gastric disease. We do not, and in fact cannot, expect any very great advance to be made in this obscure subject without the preliminary settlement of certain elementary considerations. Thanks largely to the laborious investigations of the German physiologists, we may now say that it looks as if in the near future some definite methods will be discovered by means of which we shall be enabled to assert whether any particular stomach which may claim the attention of the scientific physician is or is not in a healthy condition, and this information we expect to be obtained on data other than can be supplied by the patient. We are fast approaching to the acquisition of sound knowledge in respect of the duration of the digestion of various articles of food, and of the causes which tend to delay the departure and accelerate the disappearance of food in the stomach, but we are yet in want of a definite and workable method of estimating the acidity of the gastric juice, and of recognising the bodies to which this acidity is to be attributed. It is sincerely to be desired, for the sake of scientific clinical medicine, that some means may shortly be devised applicable to individual cases, and capable of being used in diagnosis. It cannot be denied that diagnosis needs further elaboration when we bear in mind the poverty of our resources in this regard. Some years ago some hope was engendered by the announcement in a rather enthusiastic way by, we believe, a considerable continental authority, that in all cases of carcinoma of the stomach the juice removed from that organ by means of a tethered sponge was devoid of hydrochloric acid, whilst the succus similarly removed from the stomachs of patients suffering from other diseases than carcinoma contained hydrochloric acid in recognisable quantity. This discovery, had it been one, would have

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proved an incalculable boon to clinicians, but observations made since the announcement have shown, we believe satisfactorily, that cases of carcinoma of the stomach are not always marked by the absence of hydrochloric acid in the juice, and, on the other hand, that cases of gastric disease, which to all appearances are not carcinomatous, yet possess the negative quality of being found wanting in hydrochloric acid. BENO LEWY has studied cases in which great atrophy of the mucous membrane of the stomach was attended with suppression of the secretion of hydrochloric acid. M. GRUNDZACH has examined the contents of the stomach of several hundreds of individuals who did not present any signs of carcinoma of this organ. In five of the cases examined, the hydric chloride was invariably absent. Now, although all the five patients were dyspeptics, yet their ages (about thirty) and the absence of any other symptoms, with the very long duration of the dyspepsia, would seem sufficient to negative carcinoma. In none of them was there any interference with the mechanical functions of the stomach, for this again emptied itself in the usual space of time required by healthy organs. The integrity of the motor mechanism of the stomach in these cases seems to show that it is the aliment and not the gastric juice which sets the contractility of the walls of the stomach in action; though it is quite possible for a very acid juice to excite undue manifestations of contraction with too rapid emptying of the stomach, which may be followed by characteristic diarrhœa.

The question of the presence of dilatation of the stomach appears to be more fully studied abroad than at home; and we cannot but think that this possible factor in gastric conditions has not always received the consideration it merits. Of course we refer to the idiopathic dilatation, supposing it to exist, and not to that which is secondary to obstructive disease of the pylorus. GERMAIN SÉE believes that dilatation may be due to degeneration of the muscle of the stomach walls, to atony of the organs associated with general asthenia, and to a special muscular atony which, after having alternated with phenomena of exaggerated excitability, in neurasthenicæ, finishes by becoming predominant and persistent. In cases of simple muscular atony, which may be due to congenital feebleness, as ALBERT MATHIEU again suggests, the stomach, incapable of resistance, is passively distended under the influence of the pressure if not the weight of the aliment. The importance of dieting such an alleged case is only too apparent, and, whether the pathology be correct or not, we can bear personal testimony to the value of suppressing such articles of diet as green vegetables, salads, green fruits, and potatoes, except in the smallest quantities and especially prepared. The number of meals may be increased, whilst the amount taken each time should be very small. MATHIEU demurs to the use of adulterated wine, and thinks beer may be drunk, but only with the meals. For the relief of painful sensations M. SÉE recommends the employment of hot drinks—weak tea in the morning and light "grog" in the evening. In order to regulate the bowels in such cases, he advises the taking of a powder composed of magnesia, cream of tartar, and precipitated sulphur, mixed in equal proportions. To promote the general tone of the patient tepid and cold douches are advised, preferably of the shower-bath description, and lasting from twenty-five to thirty seconds, repeated every other day. It has been somewhat aptly said that gastrectasis is in some fashion a kind of asystole of the stomach, and that as we require digitalis for the heart, so some medicament of similar action on the stomach is needed. Nux vomica is employed, but ipecacuanha is more successful according to others, and may be administered in syrup of orange; it does not avail, however, if the muscular fibres are degenerated as well as atonied. Chloroform water and hydrochlorate of cocaine, as well as warm drinks, may be employed to relieve the gastralgia.

IF it be true that coming events cast their shadows before, it is equally true that past events leave their shadows behind. The repeal of the Contagious Diseases Acts has produced the most disastrous results in all the English and Irish districts where they had been previously enforced. As has been before noticed in these columns, the present condition of these places is exactly the reverse of that which was reported by the Select Committee of the House of Commons in 1869. It was then: "Prostitution appears to have diminished, it worst features to have softened, and its physical evils abated." At the present time it is notorious that prostitution has largely increased; its worst features—shameless solicitation in the streets, the increased number of juvenile prostitutes and of brothels—have become hardened; while its physical evils in the form of syphilis and gonorrhœa have been greatly intensified. In India it would appear that the authorities have had the experience both of the benefits of the Acts and of the disastrous results of their repeal. The consequences have been that efforts are being made to re-enact the Acts in Calcutta. The Health Society of that city and other advocates of sanitary reform are striving hard to regain what has been lost, and to defend what has still been maintained—a law relating to cantonments, locally known as Act III. of 1880, which has lately been experimentally suspended with the worst possible results. These efforts are being pursued in the midst of an agitation similar to that which has been so active and so unfortunately successful in England. The persons who are so engaged seek to prevent the re-enactment of the Acts in Calcutta, and also to ensure the repeal of the local Act just alluded to. It is greatly to be hoped that they will be unsuccessful, and that wiser counsels will prevail. In the *Journal of the Health Society of Calcutta* there has been recently published a paper giving some facts and figures which show very conclusively both the benefits of legislation and the terrible evils resulting from its withdrawal. It appears that the Surgeon-General of Bengal reported in 1884 that "no sanitary improvement could possibly be brought to more absolute demonstration than the vast decrease of the worst of the contagious diseases in Calcutta, and its practical disappearance from the garrison under the working of the Act of 1868." Statistics confirm this. Among the garrison the ratio of syphilis was 10 per cent. of its whole strength. It sank in 1869 to 9 per cent., in 1870 to 6 in 1872 to 5·7. It never again reached 5 per cent. while the Act was enforced, and was in four years less than 2 per cent. The statement previously made, that it practically disappeared, is therefore no exaggeration. In

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1883 it rose at once to 10 per cent. in consequence of the Act having been suspended, and in the following year to 30 per cent. In that same year (1884) the large proportion of 58·14 per cent. of the garrison suffered from some form of venereal disease. Such has been the effects of repealing the Act in Calcutta; and it is well known to the military and naval authorities at home that the prevalence of disease among our troops and seamen is at least equally, if not more, severe. Those who are acquainted with India will know well that prostitution is there a matter of "caste," and that the daughters of prostitutes are from their birth inevitably doomed to that life. It is, therefore, not surprising to learn that the Act has met with no opposition from them, since it has proved the best friend they ever had, saving them from more disease and suffering than all that has ever been either accomplished or attempted by philanthropists. The statistics already given of disease among the troops give some indication of what must have been the condition of these women before the Act was passed, to which state they have by the suspension of this beneficent measure been permitted to return. When the Acts in England and Ireland were suspended in 1883, and repealed in 1886, much surprise was expressed by certain peers and members of Parliament that the members of the medical profession did not send in a memorial in their favour. Some went so far as to express indignation as well as surprise. On behalf of the profession, it may be said that any such proposed memorial would, after all that has been said and done by its members both individually and collectively on behalf of these Acts, have been entirely superfluous. It is well known that these Acts have the support of all the leading members and of an overwhelming majority of the whole of the medical profession. It is not for the profession but for the public to decide the question. All that concerns the former has been long since settled in favour of the Acts. If the prevention of loathsome diseases among the unfortunate prostitutes in garrison towns and naval seaports, as well as among the soldiers, sailors, and civilians, be not a sufficient reason for restoring the Acts, the time is not far off when such restriction will be demanded for a less worthy reason—the financial one. Once let it be established that these diseases are more costly than the means to cure them, and self-interest will effect what more worthy motives have failed to accomplish.

Annotations.

"Ne quid nimis."

MEDICAL EDUCATION AND INFECTIOUS DISEASES.

THE remarks of Professor Haughton of Dublin, in the recent discussions in the Medical Council, on the necessity for insisting on students seeing the infectious fevers and the treatment of them as a vital part of their education, receive a striking confirmation in a report to the Corporation of Newcastle-on-Tyne by Mr. H. E. Armstrong, medical officer of health, on the subject of a recent outbreak of typhus. This disease of late years had until very recently been rare. In many towns it has probably been entirely absent for years. Unfortunately, the disease at the present time appears to be likely to be more rife in the metropolis, several cases having, within the last few days, been received in the hospitals of the Metropolitan Asylums Board. Still, it would certainly be possible for students to go through their ordinary curriculum in many schools and not see one case of typhus. Mr. Armstrong says that at the present time no English university or medical examining body requires compulsory attendance at a hospital for infectious diseases as part of the curriculum for its degree or diploma, with the exception of the University of Durham. This is rather a strong statement; but if any contradiction of it is possible, the sooner it is made the better. If not, we commend it to the committee now charged with a consideration of the best methods of increasing the practical element in medical education. To have such statements made to corporations, and repeated in the daily papers, is not calculated to increase the public respect for medical education, or for the Medical Council. It is no answer to such an assertion to say that the infectious and eruptive fevers cannot be treated in general hospitals. It would be improper to treat them there except under the most exceptional circumstances, and with the extremest care. But they can now be studied on a large scale in hospitals set apart for such cases, and they can be largely studied in private practice under conditions of pupilage. In the face of such statements as Mr. Armstrong's, we think the Medical Council will neglect its duty if it does not make very plain representations to the examining bodies on this point. It is said that difficulty sometimes arises from the reluctance of medical students to visit wards or cases of an infectious character; but we trust this is a libel. Certainly no student is worthy to enter the medical profession who is not prepared to take all such risks as are involved either in learning or practising his profession.

METROPOLITAN DUAL CONTROL.

UNDER the above heading *The Times* publishes an article by a correspondent which discusses the anomalous position in which the Metropolitan Asylums Board are placed, by having to provide hospital accommodation for all persons suffering from infectious disease, whatever their social position may be, and he points out that this has arisen from the omission of the metropolitan sanitary authorities to exercise the powers conferred upon them by the Sanitary Act of 1866. In this matter, however, these authorities are less to blame than the Legislature, which imposed a duty upon district bodies which could only be properly performed by one acting for the whole metropolis. Serious difficulties have arisen in consequence, and residents in London have been slower to resort to institutions through which the only medium was the relieving officer, than would have been the case had the hospitals been a branch of sanitary administration. The increased facilities which now exist for the admission of cases of infectious disease have led to the much larger use of the hospitals of the managers, and no doubt tend to exaggerate at the present time the evidence that London is suffering severely from scarlet fever. The statement on Wednesday that there were 1067 scarlet fever patients in these institutions ceases to excite the same alarm when it is considered that the cases are in the proportion of 1 to 4000 of population, and that the disease is of an especially mild type; this fact deserves to be remembered, for the free publication of statistics of the epidemic is undoubtedly conveying to many minds the belief that a more serious calamity has befallen London than is really the case. That Londoners thus willingly send the sick to hospital is matter for congratulation; and the writer above referred to expresses the sentiment of all engaged in preventive medicine when he suggests that the cost should fall upon the community rather than upon those who have sought isolation. The removal of infectious persons

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from houses in which they cannot remain with safety to other persons is so distinctly of advantage to the public, that it would be false economy to discourage removal by taxing the patient with the cost of his maintenance.

RECOVERY IN A SUPPOSED CASE OF MYXŒDEMA.

DR. F. W. WARFVINGE, a Swedish physician, has published an account of an interesting case occurring in a carpenter's apprentice, aged nineteen, who had previously enjoyed good health. About eight weeks before admission into hospital he began to be easily tired, and when he walked suffered from pains in the legs, and especially in the calves. At the same time he began to "see double." Besides these symptoms, it was noticed that he would repeat the same questions over and over again. His legs began to swell first, and then the swelling extended to other parts of the body. Gradually his intellectual as well as his physical powers diminished; he became apathetic and indifferent to what was going on about him, and lay half asleep most of the day. When he got up he experienced considerable difficulty in standing, and could not walk without assistance. He also had difficulty in retaining his urine, which did not present an altogether normal appearance. He was admitted into hospital on March 31st, 1886, and then presented the following symptoms: Appearance very apathetic; face rigid, wanting in expression, bloated, with the more prominent parts effaced. All the rest of the body was swollen, without there being any true œdema. On the lower extremities, where the swollen appearance was most strongly marked, the pressure of the fingers produced a slight impression, which immediately disappeared. The skin was everywhere infiltrated, thickened, of an elastic hardness, dry to the touch, of a dirty grey colour, with a slightly cyanotic tinge on the lips and cheeks. The neck was short and thick. No trace of the thyroid body could be detected on palpation. The patient suffered from general nervous depression; he was incapable of any occupation, and dull and indifferent to what was going on about him; his memory was defective, and he did not remember what had only recently occurred. He could not walk unless he was supported under the arms, and his gait was slow, heavy, awkward, and dragging. He moved his arms slowly and with difficulty, and could only exert a slight pressure with the hand. His sensations were blunted. He did not complain of any pain, slept well, had a fairly good appetite, and his bowels acted regularly. The respiratory and circulatory organs presented nothing abnormal. The blood was found to contain the normal number of red and white corpuscles. No enlargement of the spleen. No albuminuria either then or subsequently. At first the quantity of urine passed per diem was rather low, being only 900 to 1000 cc., and sometimes there was difficulty in retaining it. The temperature was normal all through. He was treated by hot baths and solution of arsenite of potassium (liquor arsenicalis), of which four drops were given three times a day. He soon began to improve, progressing slowly but uninterruptedly till he left the hospital, after having been in it thirteen weeks. His control over his muscles had not then quite returned, and his gait and other movements were still somewhat awkward and embarrassed. In other respects he appeared to be in good health, his skin had regained its normal appearance, and he had for a considerable time been able to make long journeys without fatigue. His mental condition also had become quite normal. After a course of baths during the summer he presented an appearance of perfect health, and this he has retained for a year. Though the symptoms in this case appear to indicate its identity with other cases of myxœdema, it differs from them in the rapidity of its course, and in the ultimate recovery of the patient, for the disease has hitherto been looked upon as incurable. Whether the arsenical treatment had anything to do with the favourable issue is a matter upon which Dr. Warfvinge does not wish to offer any opinion.

THE SANITARY CONDITION OF CAPETOWN.

Mr. EASTON deserves the thanks of the inhabitants of Capetown for exposing in a public lecture recently delivered the terrible and dangerous condition of the slums of that city. The municipal authorities and the police had given him, he said, every assistance in his investigations, which, indeed, would otherwise have been simply impossible. In the course of his peregrinations two rooms were pointed out to him not twelve feet square, in each of which fifteen persons, men and women huddled together, had slept for the night, in addition to which the passages had been lined with human beings right through to the back yard and into the yard itself. He had himself stepped over the sleeping bodies in the passages and rooms as he passed through a house, and could well believe that he did not on that occasion see the worst. He went on to say that at the east end of the town he saw a room about ten feet by twelve, occupied by fifteen Kaffirs, packed almost to suffocation, and in a state of indescribable filth. He remarked: "I sometimes think that if all the inhabitants were bent on suicide, and had made up their minds to bring about and die of typhoid fever, they could not do more towards compassing their desired end. It is a standing invitation to all forms of disease and death. But there is something more horrible still. In those parts of the town, where the masses of the poor, the idle, the dissolute, and the criminal congregate, there is a terrible percentage of disorderly houses of the very lowest type, spreading far and wide the most loathsome of diseases, so that one might say without exaggeration that here you have to deal with a seething mass of corruption brought about both by the vices of the people and by their filthy surroundings." He was much struck with the absence of elderly people, and on mentioning this to someone, he was told "they all die off; drink and living in such dens were more than the strongest constitutions can stand." As all these unclean specimens of humanity have votes, this may be one reason why no serious attempts are made to cleanse the Augean abominations. Each of the four sanitary districts has one inspector, but Mr. Easton suggests that three or four more ought to be appointed. Probably, however, it will require the visitation of some fearful epidemic to awaken the authorities to any real sense of their responsibilities.

A PLEA FOR SUPRAPUBIC LITHOTOMY.

DR. T. SVENSSON of Stockholm, having practised all the recognised methods of operating for stone in the bladder, has had complete success since he commenced to perform the suprapubic operation for large stones and in severe and complicated cases. He has performed this operation with various objects, and he considers it by no means dangerous in itself if it is only executed with the necessary precautions (in two sittings, with antiseptic methods, a cautious injection into the bladder, &c.). Thus he removed by suprapubic lithotomy, or spicystotomy as he terms it, a stone nearly as large as a hen's egg, from an old man, who was extremely weak, and who was suffering at the time from senile gangrene affecting the foot and the lower part of the leg. A few weeks later amputation had to be performed through the thigh; but the patient was afterwards sent to his home (which was at a considerable distance) completely cured. Dr. Svensson does not invariably perform the operation at two sittings, and he does not resort to it, of

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course, in all cases of stone. Lithotrity at a single sitting, litholapaxy, as well as median lithotomy, always, he considers, present their own indications, which is not the case with the lateral operation. In the performance of suprapubic section, he agrees with Petersen that plugging the rectum, while at the same time the bladder is filled, contributes in a marked degree to facilitate the operation and to render it free from danger. Complete suture of the wound is not generally desirable, but the application of some sutures to the bladder serves to check posterior hæmorrhage, and may be requisite for this purpose. Usually before opening the bladder Dr. Svensson passes a running noose of thread through the wall of the bladder so as to include the line of incision, thus providing a remedy in case hæmorrhage should occur. His experience is that posterior hæmorrhage occurs in an eighth of the cases if sutures are not applied to the wound in the bladder. He endeavours to show that the suprapubic operation is safer than other methods, the patient recovering more rapidly than after litholapaxy, the pain also being very slight. An additional advantage is on the side of suprapubic section: it is available for other affections of the urinary passages, and without it some of these diseases would be incurable. He hopes in a subsequent paper to give an account of his experience in the Sabbatsberg Hospital.

SCARLET FEVER IN LONDON.

As many as 156 cases of scarlet fever were admitted into the hospitals of the Metropolitan Asylums Board during the week ending September 2nd, and the resources at the disposal of the managers are being seriously taxed. Stockwell Hospital, which has 322 beds, will, it may be anticipated, receive a considerable number of patients during the present week, and probably by the end of the month the whole of the accommodation which the five London hospitals can provide will be exhausted. Already there are more than 1000 patients under treatment in these institutions; no diminution in the epidemic can be hoped for until after the first week in October, but in all probability from that time it will decline. The managers still have at their disposal the hospital at Winchmore Hill and the hospital ships, and these should serve for any increase during the few weeks of epidemic prevalence that remain. It is interesting to note that, notwithstanding the large number of persons who are attacked, the deaths from scarlet fever are below the average for the same period during the last ten years. There is reason for congratulation that no single case of small-pox has been admitted during the past week into the managers' hospitals, but enteric fever and typhus are making some demands for accommodation.

PHYSIC AND PHYSIOLOGY FOR FOOLS.

ONE of the most melancholy features of present day journalism is the rapidity with which it is becoming the medium of the propagation of false physiology and falser physic. It would be ludicrous if it were not so pitiable, as showing how ignorance is rampant, that such lucubrations as have been published of late in one of the most widely circulated of our London evening papers should ever have been permitted to be inserted with all the honours of type and position. The writer, whose name and address are appended to his contributions with the affix "M.D.," is, we may observe, not to be found in the Medical Register. Indeed, a few extracts from his latest advocacy of "Apples as Food" speak for themselves, and carry with them their own condemnation of the scientific pretensions of the writer. The article is headed a "Remedy in Consumption." It opens with the information that "Consumption is nothing more than a specific deviation in the nutritive process by the withdrawal of free phosphorus," and goes on to say that the blood of the consumptive is deficient in this element and in fibrin. The reader is further informed that "fibrin is the formative or nutritive portion of the digested food advanced into the final state of preparation for organisation"; that "while retained within the channels of the circulation it builds up various structures of the nature of tendon and gristle." Also that "tubercle is caused by a deficiency of fibrin and phosphorus, for fibrin cannot be formed without phosphorus in the blood"; that "multitudes of important vital agents called *phosphoric cells* ..... which are endowed with a kind of vitality ..... convert the raw albumen of the chyle into vital fibrin." It appears, according to this authority, that "the tuberculous constitution is "deficient in these phosphoric cells," and "this is one step at least in accounting for the deficiency of fibrin"—and so on in the same strain through another column, all leading up to the precious conclusion that a diet of apples, potatoes, and tomatoes, or the administration of their infusions by inhalation (!) forms the sovereign remedy because they furnish a supply of free phosphorus. It is insulting to the intelligence of the community that such sorry stuff as this should be found in the columns of a newspaper, even in the "silly season." Carlyle's memorable dictum is not far from the truth, if this is to be the kind of instruction accepted by mankind.

MORPHIINOMANIA.

OF late years we have become painfully alive to the fact that the too rapidly increasing total of luxuries which accompany civilisation includes the use of opium for other purposes than the treatment of disease, and that this misuse of the drug is by far less exceptional than it has been. In an article in the *Nineteenth Century* for this month, Dr. Seymour Sharkey refers to the inroads which this detestable vice is making into health and happiness, especially on the Continent, but also in this country. The picture which he draws of the consequences that certainly follow this form of indulgence is by no means overdrawn. The false ease, the relapse into misery, the failure of function, mental and bodily, the moral perversion, the difficulty of reform—these are no new features in the history of the opium-taking habit. Deliverance from its baneful mastery is, happily, not impossible; but we need not say that here the great superiority of prevention over any method of cure whatever is clear beyond all need of proof. The habit of morphia or opium taking is formed, as a rule, in either of two ways: it may begin as an idler's pastime, a quasi-scientific diversion; or it may be formed almost accidentally out of the legitimate use of the drug as a medicinal agent. In a sense, it may appear hardly necessary that we should seek to impose the restraint of our advice on those with whom this practice is a mere amusement. They know the danger which lurks within their newly-found pleasure; it is a matter of common notoriety; but they are confident of their skill to avoid it. Why warn them further? To argue thus, however, is only to fold our arms in the presence of the enemy, and it is also evident that the consequences of this hurtful custom in many cases do not light only on the offender himself. We must therefore remind any who may be lingering over this temptation that they have not to do with a luxury in which moderate indulgence is either natural, healthful, or even possible, but with a substance which, taken in health, can only injure, and whose power can only be gauged by painful reflection. On behalf of that other class in whom the habit is formed by past experience of relief of pain, we would strongly deprecate the over-confidence which occasionally induces such patients to treat any symptoms of discomfort or pain by having unauthorised recourse to the

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old remedy. We cannot in such cases insist too strongly on the necessity of retaining the use of a drug so seductive yet so powerful exclusively within the province of the physician. As regards the treatment of the established habit, it is even more true of opium than of alcohol that no middle course is possible between abstinence and infatuation. The vice of morphinism, if it is to be abandoned, must be at once and totally relinquished. The privation will indeed be felt, but not for long, and the freedom finally attainable is worth the effort.

SIR W. R. GROVE, F.R.S.

THE retirement of Mr. Justice Grove removes, happily without extinguishing, one of the brightest ornaments of the English Bench. Events, and especially scientific events, move so fast nowadays that it seems quite an age since Mr. Grove, as he was in 1847, received the Bakerian medal of the Royal Society for his lecture on Voltaic Ignition. And, measured by events, an age it is. But it has dealt very kindly with Sir William Grove. It has crowned his early labours with abundant success and assured to him a lasting place in the memory and affections of the world of science. The author of the now classic essay on the "Correlation of Physical Forces," and the inventor of the "gas voltaic battery," bears a name which will be remembered and revered when the recollection of his legal career is preserved only in law books. But that will not be just yet, for the impression of his urbane manners and judicial bearing will not easily pass from the recollection of his contemporaries, even of those who only saw him from the unenviable position of litigants. We cordially wish him a long enjoyment of that *otium cum dignitate* which he has so well earned and is so eminently fitted to adorn.

OPHTHALMIC PRACTICE IN RUSSIA.

DR. KUBLI has recently published a report of the last five years' work of the ophthalmic out-patient department of a St. Petersburg charitable institution. The number of cases reported on is 23,286, all being adults, as children's eye diseases are provided for in a different institution. The most common affections were, of course, those of the conjunctiva, which comprised more than 10,000 of the total number of cases; next to these came affections of the cornea and sclerotic (5000). There were 213 cases of glaucoma and 449 of diseased lens (cataract?). Amongst the rarer forms of ophthalmic disease there were noted 6 cases of tarsitis of syphilitic origin, 5 of amyloid degeneration of the conjunctiva, one of partially persistent pupillary membrane, one of cysticercus in the vitreous, and one of hysterical amblyopia. Dr. Kubli prefers yellow wax and olive oil as a basis for ointments. He has seldom been obliged to resort to total extirpation. For acute and gonorrhœal conjunctivitis he has tried corrosive sublimate in solutions of various strengths. The 1 to 10,000 solution was very badly borne; the 1 to 15,000 was too irritant; the 1 to 20,000 was borne well, but it was of doubtful efficacy, and when used for a length of time not infrequently set up erythema, œdema, and eczema of the lid. He prefers a 4 per cent. solution of boracic acid or chlorine water to corrosive sublimate, carbolic acid, or salicylic acid. A 2 per cent. solution of jequirity was tried in a number of cases of granular lids without any satisfactory result. In phlyctenular conjunctivitis, he prefers dusting with finely powdered iodoform to calomel and iodol applications. In severe ulcerating and purulent corneal affections, he has employed eserine and pilocarpine with good results. For tattooing leucomas he prefers a simple Lüer's needle, such as is used for conjunctival incisions. After applying very finely powdered indian ink to the surface with a spatula, he pricks the latter all over with the needle held obliquely, and then rubs the indian ink into the punctures with an indiarubber spatula. In atrophy of the optic nerve, subcutaneous injections of chloride of thebine (thebinum muriaticum), containing 0·001 to 0·003 gramme, were tried without any effect.

THE HOMELESS POOR.

THE vagrants who sleep in Trafalgar-square, on the benches in St. James's Park, on the Thames Embankment, and other public places, must be regarded as evidence of considerable poverty, such as was the forerunner of typhus in the days when epidemics of this disease were more frequent than they are at present. The absence of typhus from London, to which we have become accustomed, must not blind us to the fact that we have still in this great city ample material in which it can develop; and if it should be found that there is exceptional poverty, and a cold winter should supervene, sanitary authorities may have to exercise considerable vigilance to prevent an outbreak. Already there are some indications of the existence of this disease in London. Two cases have been removed during last week to the hospitals of the Metropolitan Asylums Board from Bethnal-green and from separate houses, one from Islington, four from two houses in Whitechapel, and one from another house in the same district; thus one week's record shows that six houses have been invaded. Occurring early in September, these cases cannot but be regarded as ominous, and we may look with some anxiety to the time when winter gives increased opportunities for the development of this disease. It is a matter of much importance to know the manner in which typhus has been introduced into the metropolis, and whether these cases have any relation to one another. The hope of guarding against further introduction must depend upon this being done; yet, likely enough, apart from such inquiry as we may anticipate will be made by the health officer of each district, there is no central department that will concern itself with these occurrences. The risk to London is seriously increased for want of this organisation.

EELS IN LONDON WATER MAINS.

IT will be remembered that during the course of last year numerous complaints were made by the inhabitants of West Ham as to the existence of eels, both alive and dead, in the water pipes of the East London Water Company, and that the circumstance was attributed to the giving way of a filter at Lea Bridge in 1879, subsequently to which the eels had bred and multiplied in the filtered water, and even in the mains. Public inquiry into the matter was at last instituted, and it was held by Major Scott, water examiner, and by Mr. W. H. Power, of the medical department of the Local Government Board. In a very elaborate report they entirely dispose of the preconceived notions as to the source from which the eels came, and they express their conviction that the eels obtained direct access to the interior of the Old Ford reservoir. In explaining the process by which this took place, some very interesting material as to the natural history of eels is supplied. It has somewhat recently been ascertained that full-grown eels are in the habit of descending rivers towards the sea each autumn, and that each spring myriads of minute eels ascend the rivers, coming out of brackish waters and penetrating to the furthest limits of inland streams. A gravid female eel and the male eel have, however, as yet never been seen. Then, again, it is explained that eel fry in their journey up stream have a great power for surmounting what appear to be impassable barriers by climbing ashore and passing overland. Now adult female eels and their young, whether discontented, as the report suggests, with the flavour of the polluted Lea, or for other reasons, would

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find in the shelving banks by the Water Company's works the best of opportunities for favouring their whim for wandering ashore, and it would be but a little distance to the attractive and grass-clothed roof of the reservoir. Disporting themselves here, they would find no difficulty in dropping into the reservoir itself by means of apertures in manholes and ladder holes, and, once having gained admission, their migratory instinct and their lack of adequate food would doubtless lead them to start on a journey *down stream*, whence they would soon find themselves pumped into the mains. This explanation of the existence of eels in the water mains appears a much more satisfactory one than any other put forth, and it avoids the difficulty, inherent in any other hypothesis, of explaining how eels, however small, could pass through the pinhole apertures in the screens, which are so placed as to prevent the passage into the reservoir of any such objects from the river. The conclusions arrived at are well reasoned out, and the report is one which possesses a good deal of general interest.

GRANULAR OPHTHALMIA IN THE RUSSIAN ARMY.

DR. TALKO, writing in a Polish journal on granular ophthalmia (trachoma) in the Russian army, gives it as his opinion that the reason why this affection is always rife in the army is that recruits who are suffering from it are accepted, and they doubtless infect others. In the year 1885, 8350, or 67·2 per 1000, of the recruits were returned as "trachomatous." In some years the number of recruits affected has been as high as 10,000. The different arms of the service seem to be affected in very different proportions. Thus, while 83·6 per 1000 of the infantry, 59·9 per 1000 of the engineers, and 23·8 per 1000 of the artillery were affected, the disease was unknown amongst the Cossacks. This Dr. Talko accounts for by the fact that the Cossacks are not kept so much in barracks as the others, but are exercised more in the open air, besides which the disease is not met with among the young Cossacks on the Don.

GRAND CANARY AS A HEALTH RESORT.

AMONG the more important papers read at the recent meeting of the British Medical Association was one by Mr. Mordey Douglas of Sunderland on the virtues of Las Palmas, on the N.E. coast of Grand Canary, and long since described in the gazetteers as the largest, most beautiful, and most populous towns in the Canaries. Mr. Douglas enters into a minute comparison of the respective advantages of Oratava, the capital of Teneriffe, expresses a very decided opinion in favour of Las Palmas, and gives the following as the principal points of advantage: (1) a much larger amount of sunshine; (2) as regards the Atlantic, a drier air; (3) as regards the winds, a drier air; (4) as regards rainfall, a drier air, because of greater rapidity of evaporation, to say nothing as to quantity; (5) a much more invigorating climate. This element of invigoration in the air is by Mr. Douglas specially associated with the north-east trade wind, which, beginning in the calm region of the Tropic of Cancer, almost constantly fans the eastern coast of Grand Canary with its gentle, dry, invigorating breezes; whilst the island of Teneriffe, being on the outer edge of the trade wind, is, according to Mr. Scott (Elementary Meteorology, p. 423) during the winter enveloped in the south-west moist counter current. As regards the temperature, the mean of the six coldest months is 63·10°, and the daily range is 10·86°. Though slightly warmer than Madeira, it does not feel so, owing to the refreshing trade wind. Mr. Douglas considers the climate of Las Palmas specially suitable to cases of phthisis of a pneumonic origin, but would expect it to prove beneficial in cases of chronic bronchitis, kidney disease, rheumatism, or the infirmities of age. As regards the last class of diseases, the proximity of home and of high medical and surgical skill is not to be overlooked. Mr. Douglas speaks feelingly on the subject of the *Gran Canaria* as having been apparently saved by it from a dangerous phthisical condition. He went branded with the words "no hope," and came back in comparatively obvious health, and we believe he means to give still further proof of his belief in the climate by returning to it for another winter. Las Palmas is said to be easily reached from Liverpool by the excellent steamers of the British and African and the African Companies, one of which sails every Saturday. It is to be regretted that the time allotted to Mr. Douglas did not permit of his giving his clinical facts and cases in support of the strong opinion he has expressed in favour of Las Palmas as a climate for phthisical and other diseases. It is desirable that such information should be published. The unfortunate events in the Riviera last year naturally increase the embarrassment of physicians and patients in deciding on a place of winter resort. Besides, the whole subject of a suitable place and climate for the delicate and the phthisical is under special discussion just now. The old notion of shutting them up in a simply warm place is very considerably discredited, and replaced by a strong conviction that purity of atmosphere and a refreshing or invigorating element are equally essential and indispensable. Even a cold atmosphere for certain cases is beneficial, and to all the invigorating element is highly valuable. Under these circumstances, we commend to all practitioners a careful perusal of Mr. Mordey Douglas's address, by which, we think, he has made a valuable contribution to climatic therapeutics.

GLANDERS IN A WOMAN.

A WOMAN, aged twenty-seven, was admitted into St. Thomas's Hospital, under the care of Dr. Hadden, on Aug. 26th. The patient lived with her husband in a mews in New Kent-road. It seems that the woman used often to attend to the horses, and her sister declared that "she was more like a man about the stableyard than a woman." About a month before her admission a horse died from "inflammation of the lungs" in a stall adjoining the room in which the patient lived. It was stated that the horse had no discharge from the nose. About three weeks later another horse died, and the husband attributed his wife's illness to contagion from this animal. The woman began to feel ill about a fortnight before admission, but did not take to her bed until a week later. She was clearly in a dying state when seen on admission: she could not respond when questioned, was constantly muttering, and the hands and lips were tremulous. The lips were dry and covered with sordes, and the tongue was coated with dry, yellowish-brown fur. The respirations were shallow, 50 per minute; the pulse 120, and very feeble. The cutaneous affection was of a twofold nature: there were a limited number of small cutaneous abscesses, mainly on the chest, and rather a larger number of raised red lumps, varying in size from a shilling to half-a-crown, corresponding to deeply seated inflammatory centres. No enlarged glands were detected. There was no discharge from the nose, and no affection of the conjunctivæ. The temperature rose from 103·8° on the day of admission until it reached 108·4° on the evening of the next day, when she died. At the post-mortem examination several deeply seated abscesses, some subcutaneous, others in the muscles, were found scattered over the trunk and limbs. The nasal and laryngeal mucous membranes were not affected. Only one abscess was discovered in the internal organs, and that was found in the right lung, abutting on the surface. We are informed that the coroner has refused to hold an inquest, and it may be that he is acting within his powers. It is

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very clear, as a correspondent to a contemporary evening paper has pointed out, that the matter should be investigated on sanitary grounds, and we trust the local authorities will be alive to the importance of the inquiry.

AN ELOGE ON THE PROFESSION.

IN a charming volume of poems, just published under the title of "Underwoods," Robert Louis Stevenson, in dedicating his book to "a few out of many doctors who have brought me comfort and help," introduces it with the following eloquent eulogium upon our profession:—"There are men and classes of men that stand above the common herd; the soldier, the sailor, and the shepherd not unfrequently; the artist rarely; rarelier still the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilisation; and when that stage of man is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practise an art, never to those who drive a trade: discretion, tested by a hundred secrets; tact, tried by a thousand embarrassments; and, what are more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing." Mr. Stevenson is a nephew of Dr. G. W. Balfour, Vice-President of the Royal College of Physicians of Edinburgh, so well known by his excellent work on Diseases of the Heart. He is the grandson of the eminent engineer who designed and built the Bell Rock Lighthouse, and son of the equally eminent engineer, the late Mr. Thomas Stevenson, by whom the Skerryvore Lighthouse was erected.

AN ALLEGED NEW SYMPTOM OF TUBERCULAR MENINGITIS.

THE existence of a small circle on the iris close to the pupillary border, which it completely surrounds, is the new symptom to which Dr. Skeer has drawn the attention of the Pathological Society of Chicago. When this circle commences to appear it is more or less indistinct, and resembles a whitish ribbon of somewhat transparent aspect, whose inner margin is extended almost to a level with the free border of the iris. At the end of from twelve to thirty-six hours the whole border of the iris is invaded, and has taken on a blanched tint of irregular and granular aspect. These changes, which commence simultaneously in the two eyes, are more apparent in irides of a brown colour, and they may disappear sometimes with great rapidity (so that it is necessary to examine the eyes every day), and give way to yellow-brownish rings, which increase in size as the pupil dilates. Dr. Skeer believes the changes to be tuberculous in nature and pathognomonic of tubercular meningitis.

UNOFFICIAL FORMULARY.

IN August, 1886, a committee was appointed at the British Pharmaceutical Conference to prepare a formulary of unofficial remedies. The result of the work is now before us in some eighteen pages, comprising thirty-six formulæ. The avowed intention is to bridge over the period of probation through which new remedies necessarily pass before their official recognition in the British Pharmacopœia. Hence the great object of this formulary is not so much to indicate what new drugs may be employed, but rather to suggest the most suitable solvents for those substances which have already acquired a certain reputation, to indicate what appear to be the best proportions, and also the most appropriate adjuvants. Where nauseous qualities exist, an attempt has been made to correct or disguise them. The desirability of some such "unofficial" information must have been long felt by both prescriber and dispenser, who certainly like to feel sure of the composition of their remedies. As it stands, the "unofficial formulary" is a protest against the use of remedies of secret composition. Many of the formulæ, like the *tinctura chloroformi et morphinæ* of the British Pharmacopœia may be regarded as guesses at the composition of well-known proprietary drugs. Others, on the other hand, deal with substances such as grindelia, hamamelis, hydrastis curare, convallaria coto, quillaia, &c., all of which have already gained a certain reputation, although they have not yet been allowed a place in the British Pharmacopœia. The work reflects great credit upon the committee entrusted with the duty of preparing it, and will doubtless be welcomed both by physicians and pharmacists. The only criticism we would offer at present is as to the suggestion that the formulæ of the unofficial formulary should be indicated in prescribing by adding the the letters "B.P.C." The first two letters have already such widespread and definite application that it appears a pity to disturb them, especially as the meaning of the third initial does not appear to be very clear.

CHOLERA INTELLIGENCE.

CHOLERA, although not extending rapidly in Malta, shows some signs of further activity. During the week ending September 5th, there were forty-one fresh attacks and twenty-seven deaths, and of the latter seven took place on the 5th. The disease is scattered over various parts of the island, and in all probability the real number of non-fatal attacks is not accurately known by the authorities. As yet it is almost, if not altogether, limited to the poorest portions of the native population, who are ignorant and disinclined to receive medical assistance. Amongst them there is already a great deal of destitution, and having regard to the fact that this so often becomes a strong predisposing cause of the disease, it is to be hoped that the appeals for charity which have been organised locally, and which have been submitted to the Lord Mayor of London, will receive adequate response. In Sicily there is an almost continuous daily record of deaths from the provinces of Catania and Palermo. There is also special intelligence as to a fatal outbreak at Trapani, on the extreme west coast, and at Grotte in Gergenti. The news from Naples comes but sparingly; cholera deaths, however, are still occurring there; and on the 4th inst. two deaths in Rome appear to have been properly attributed to the same cause.

MICRO-ORGANISMS IN THE ALIMENTARY TRACT.

THE interesting and valuable communication of M. Vignal to the Académie des Sciences, published in *La France Médicale*, No. 99, deserves a passing notice, for it seems to give us a glimpse into the future of physiological chemistry. M. Vignal has discovered a great number of microbes, not only in the mouth, but also in the fæcal discharges from the intestines; but the importance of this discovery does not consist either in the detection of the microbes, or in their presence in great numbers. These microbes M. Vignal has found to possess very remarkable powers of chemical metabolism, for seven of them dissolved albumen, whilst five of them caused it to swell up and become transparent. Nine of the micro-organisms could dissolve gluten, seven coagulated milk, and six dissolved casein, whilst three transformed starch into dextrin, and no less a number than nine transformed lactose into lactic acid; seven inverted crystallised sugar, and seven fermented glucose with the production of alcohol. Amongst these micro-organisms, six resisted for twenty-four hours the action of the gastric

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juice at a temperature of 36° C., and the presence of spores seems to give still larger powers of indestructibility. Pancreatic juice artificially prepared and of strong digestive powers, as also bile, possessed no destructive action on these organisms. The outcome of these researches appears to be that M. Pasteur's opinion, which attributes a great *rôle* to the work of organisms in digestion, receives much support, and we may also grant the conclusion that the phenomena of digestion are far more complex than appears to be the case at first sight.

THE BISHOP OF CARLISLE ON ADVANCE IN MEDICAL SCIENCE AND ART.

IN a sermon preached in Manchester Cathedral to the members of the British Association for the Advancement of Science by the Bishop of Carlisle, a well-merited reference was made to the enormous boon conferred on suffering humanity by the progress of medical and surgical science and art during the past fifty years: "Let them think of medicine and surgery. The progress of science could not put a stop to sickness and suffering. Civilisation and artificial habits of life probably even increased and multiplied disease, but everyone must be aware how absolutely different the treatment of disease and accident was now from what it was half a century ago."

MEASLES PARALYSIS.

ALTHOUGH Landouzy, in his excellent work on the Paralysis of Acute Diseases, asserts that, without being exceptional, paralyses are less frequent with measles than with variola, yet it may be questioned whether measles does not distinguish itself, rather more frequently than is generally supposed, as the efficient cause, in certain cases, of obscure nerve disease amongst children. There are grounds also for believing that disseminated sclerosis may find a cause in measles. M. Négrié of Bordeaux has observed a case of acute ascending paralysis consecutive to measles, and he has published the clinical aspect of the case in the Bordeaux *Journal de Médecine*, No. 3 (August 21st, 1887). The child was three years old, and on the tenth day of full convalescence after measles considerable weakness was first discovered in the upper and lower limbs and in the neck muscles. Headache, pains in the limbs, and a fever of nearly 104° F. were other symptoms. The paralysis increased in degree, so that sitting was impossible; the knee jerks disappeared and the plantar reflexes appeared to be diminished. Before speaking, the child was noticed to make some jerky inspirations. Sensation and the sphincters were not affected. Paralysis of respiration seemed to be the principal cause of death, which took place five days after the *début* of the paralytic symptoms. Négrié does not make any reference to the possibility of the presence of diphtheria in the case in question.

A COMPENSATION CASE.

A DIFFICULTY has arisen at Newton-Poppleford as to whether compensation can be given by the St. Thomas rural sanitary authority in the case in which bedding and clothing were destroyed in an instance of alleged fatal cholera, the destruction having been carried out on the advice of Dr. Pullin, a private medical practitioner. The widow is by no means well off, the action taken was adopted in the interests of public health, the promptitude of Dr. Pullin has been recognised by all, and yet the authority decline to give the compensation asked for. It is quite true that, according to the strict letter of the law, "the authority" must direct the destruction, and it may then "give compensation for the same." But it is perfectly well known that since the authority, as such, only meet at distant intervals, the provision would be perfectly useless if their actual assent were always required. The reasonable attitude for them to assume would be to adopt the action taken by Dr. Pullin on their behalf and pay the compensation. No one would ever interfere or find fault, and an equitable termination would be brought about. We understand that the Local Government Board have been communicated with, but except in the case of a surcharge we do not well see how they can help the authority. The intention of the clause clearly is that the authority should act as it sees fit in the matter.

HYSTERICAL RELIGION.

OF course nothing disrespectful to the idea of a truly religious sentiment must be inferred from our use of the phrase *hysterical religion*. What we mean to designate by that term is religious fanaticism essentially emotional in its nature, and probably also in its origin. "Jumping," "Shaking," and the like are distinctly morbid disturbances brought about by abandonment of the controlling will and judgment to the seasory impulses or the passions. Weak minds are supposed to be more prone than those which are normally robust to make this surrender of self-control, but, as a matter of fact, it may be, and doubtless is, not unfrequently made by the strongest of intellectual organisms under the influence of such strong "feeling" as may readily be produced by overtaxing the higher cerebral centres. The wondrously complex mental apparatus is easily thrown out of working order, and it is not in the least surprising to find the more delicately organised and sensitive machinery of mind work so disabled. It follows upon this consideration that the subjects of "hysterical" disturbance in connexion with religious thought and emotion are rather to be pitied than blamed for their vagaries. Nor are we prepared to say that, however much the existence of distinctly hysterical religions may be regretted, they ought to be put down by law. At the same time it is clearly in the interests of public health and sanity that they should be adequately controlled, and we cannot help thinking that the young girls who hop in "glory holes" ought to be placed under some kind of supervision, if only that they may not be allowed to fall victims to the men "full of devils" who are *not* turned out of the places of "worship" where these decidedly undesirable orgies are held.

PEAT MOSS AS A DEODORISER.

DR. D. M. USPENSKI, in a preliminary note in the *Vrach*, describes a number of bacteriological and other observations he has made on a kind of peat moss belonging to the sphagni, which is indigenous in many parts of Russia and Siberia, and which is used with considerable success in the form of coarse powder for disinfecting cesspools and privies in Warsaw, Riga, and other towns. It is found that about four ounces sprinkled over an ordinary stool is sufficient to deodorise and dry it, so that the receptacle can be emptied and cleaned at proper intervals without any unpleasantness arising. This substance seems to have a wonderful power of absorbing moisture, for it was found by experiment that a pound of it which already contained 25 per cent. of water was capable of absorbing no less than seven pounds and a half more water. When added to fæcal matter in the proportion of 10 per cent. by weight, it changes it into an almost dry mass of an earthy appearance, devoid of smell and easy to remove. A hundred pounds of the powdered moss will absorb 1438 litres of ammonia. The dry mass obtained by the action of the moss on fæces, on being analysed by Mr. Miltser, was found to contain from 2·38 to 2·66 per cent. of nitrogen, and from 0·96 to 1·15 per cent. of phosphoric acid, and of course formed a very

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valuable manure. The powder as received contained 23·9 per cent. of water and 5·38 per cent. of ash, and without any preliminary drying they absorbed fourteen times their own weight of water. Bacteriological experiments proved that the moss has a great capacity for diminishing micro-organisms of various kinds. If this substance can be easily and cheaply obtained, it would appear to offer advantages over the dry earth we are accustomed to use, and in large towns would doubtless prove very valuable.

PROFESSOR NOTHNAGEL.

A HOLIDAY contributor writes:—"Miraculous is scarcely too strong a description of the escape this illustrious physician had the other night on the Moskow-Smolensk Railway. On the summons of M. Poljakow, manager of the Moscow network, he had gone to a consultation in that city, and, his professional mission over, he had entered a sleeping car on his homeward journey on the night of Aug. 20th. He had barely settled down in bed when he had occasion to leave his *coupé*, and, after making his way along the passage, opened the wrong door and fell out upon the metals. How he alighted without further injury than a slight bruise on one of the temples and another on the foot remains a mystery even to himself. As it was, his position was eminently a critical one. Bareheaded and in the scantiest night gear, he found himself on a dark rainy night on the lonely line—no one in the train, it seems, having been aware of his fall. With great difficulty and discomfort, and in the midst of a storm, he reached the house of the nearest guardian of the line, and was by him accompanied to the Iwanowka station; thence he got by train to Dünaburg, where the station-master gave up to him his clothes and travelling effects, as well as his pocket-book containing more than 10,000 roubles, also left behind him in the carriage. Science and suffering humanity may well congratulate themselves on the special providence that seems to have safeguarded their distinguished votary."

THE SPREAD OF THE TUBERCLE BACILLUS BY FLIES.

IN a communication made to the Académie des Sciences by MM. Spillman and Haushalter, and recorded in *La Semaine Médicale*, the question of the spread of the tubercle bacillus by means of the common house fly is considered. The authors state that they have seen flies enter the spittoons containing the sputum of phthisical patients; they were then caught and placed in a bell jar. On the following day several of these were dead. Examination of the abdominal contents and the excrement of these flies on the inside of the jar showed the presence of many tubercle bacilli. The authors point out the wide dissemination of the disease which may take place in this way, and recommend as a preventive the employment of covers with a small opening.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—M. Giraud-Teulon, member of the French Academy of Medicine. He was at first a student in the École Polytechnique and the École d'Application at Metz and afterwards took up the study of medicine. From his admission to the Doctorate in 1848 to his death he occupied himself with investigations connected with medical physics, the mechanism of respiration and locomotion (his views differing greatly from those of M. Marey), the effect of the atmospheric pressure on the serous cavities, and, finally, a large number of questions concerning ophthalmology. He wrote important memoirs on the differences between the arterial and venous vessels in the retina, and the signs of grave affections of nutrition characterised by subsequent lesions of the membranes of the eye and of the lens. He invented several instruments, including a binocular ophthalmoscope.—Dr. Friedrich Fuhrmann, *Sanitätsrath* in Görlitz.—Dr. Victor Friedländer, of Breslau.—Surgeon-General Heinrich Christoph Niese, who succeeded Langenbeck as Staff Surgeon-General of the Schleswig Holstein Army.

A WANT IN MANCHESTER.

A CORRESPONDENT informs us that great inconvenience is experienced by strangers visiting Manchester during the meeting of the British Association from a want of public urinals. This is a real inconvenience in many other places as well as Manchester, and the time has come when provision should be made in this respect for both males and females. We have often advocated this in our pages. At the Section rooms ample provision has been made, but on Sunday and after 3 o'clock on other days these are closed to the members, and this has been severely felt in the absence of a sufficient public provision. The secluded gateways leading to one or other of the great warehouses in which Manchester abounds are, judging from the odour thereabouts, made to supply the want.

REFLEX NEUROSES FROM CONSTIPATION.

BESIDES disturbances of the circulation, and especially palpitation, irregularity of pulse, and vertigo, which may be attributed to excitation of the cardiac branches of the great sympathetic, Kisch believes that rebellious hemicrania often recognises no other cause than constipation. Certain kinds of sciatic neuralgia, and lumbo-abdominal pains, or ovarian aches, and even neuralgiæ of the fifth pair, have been ascribed to habitual constipation. Although Kisch has collected forty-eight cases in which cessation of constipation was followed by relief from diverse and chronic neuralgiæ, we may well question whether intestinal sluggishness was the *causa causans* of the various neuralgiæ. The alteration of even one element cannot be effected without the production of more than one result.

EMPTY HOUSES.

A MEDICAL CORRESPONDENT, writing to the daily press, calls attention to the risks to householders resulting from the evaporation of water from traps, occurring during a period when the house is unoccupied, and states that it has fallen to his lot to see more than one outbreak of sore throat, which he believes is caused by this circumstance. It may be hoped that the usual house cleaning, which necessitates the occupation of the house immediately before the return of its owners, is for them a safeguard; but the subject is well worth the attention of householders, in the interest of caretakers as well as of themselves, and the careful charging of traps and the thorough ventilation of houses are necessary wherever they have been left uninhabited during any period of time.

INFLUENCE OF COMMON SALT ON GASTRIC SECRETION.

DR. REICHMAN describes, in the *Gazeta Lekarski*, his experiments on the effect of the ingestion of chloride of sodium on the secretion of gastric juice. The conclusions he arrives at are that it has not a stimulating action on the secretion, but that it diminishes the acidity of the gastric juice even in solutions containing less than 5 per cent. of the salt. This diminution of the acid reaction of the gastric juice depends chiefly on transudation from the bloodvessels of the mucous membrane of the stomach, and perhaps, to some extent, on an increased secretion of mucus.

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THE ILLNESS OF THE CROWN PRINCE.

ON Wednesday last at Balmoral Her Majesty conferred the honour of knighthood on Dr. Morell Mackenzie in recognition of the professional services recently rendered by him to the Crown Prince.

THE MOXON MEMORIAL.

WE are requested to state that the sum at the disposal of the committee of the Moxon Memorial amounts to £605 16*s.* 10*d.*, and that early in October a meeting will be held to determine the proportion in which it is to be assigned to the Royal College of Physicians and to Guy's Hospital, for their respective memorials.

ACCOMMODATION FOR SCARLET FEVER PATIENTS.

IT is well at this moment to remind the public of the admirable accommodation, on moderate terms, to be had at the London Fever Hospital, Liverpool-road. We learn that there are at present forty beds vacant in the institution.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—Dr. Dragendorff, Professor of Pharmacy, has been elected Corresponding Member of the Belgian Academy of Sciences.

Havana.—The Spanish Government has issued a number of new regulations which will improve the education given in the Cuban capital and assimilate the course of study to that given in Madrid.

Warsaw.—Dr. K. P. Kowalkowski has been appointed Extraordinary Professor of Hygiene.

RETIRED Deputy Surgeon-General J. R. Jackson, I.M.D., was fatally wounded on the 1st inst. while shooting on a Scotch moor. A friend who accompanied him was loading a gun, when it accidentally discharged, and the contents lodged in Dr. Jackson's side, death ensuing in about a quarter of an hour. The deceased, who was fifty-five years of age, leaves a widow and two children.

THE annual report of the Police Committee of the Tweed Commissioners, recently issued, states that this year 9521 diseased salmon, grilse, and trout have been taken out of the river. Professor Greenfield of Edinburgh is, we understand, investigating the nature of the micro-organisms in the river water in connexion with the salmon disease.

DR. BILLROTH continues to make satisfactory progress towards complete recovery. He is now able to ascend the Schafberg on foot (some 6500 feet above the sea level, and commanding "le plus beau panorama d'Allemagne"), and to return, also on foot, to his pleasant quarters on the Wolfgang-See, without feeling over-tired.

IT has been decided by the Brighton and Hove Intercepting and Outfall Sewers Board that, subject to the consent of the Brighton Town Council and the Hove Commissioners, a sum of £9000 shall be spent on the extension of the outlet of the intercepting sewer, so as to carry it 500 feet further seawards.

THE Office of the Army Medical Department has been removed to No. 2, Victoria-street, Westminster, S.W.

IT is rumoured that the Emperor of Austria intends to confer a decoration of a high class upon M. Pasteur.

THE NINTH INTERNATIONAL MEDICAL CONGRESS.

(FROM OUR SPECIAL CORRESPONDENTS.)

Per Anglo-American Telegraph Company.

ON Monday, the 5th inst., the ninth International Medical Congress opened under most favourable auspices at Albaugh's Opera House, Washington. The building was crowded with members of the medical profession from all parts of the world. A short speech of welcome was delivered by President Cleveland, who at the close of his address was rewarded with enthusiastic applause. After the election of a president and officers of the Congress, Mr. Bayard, Secretary of State, gave an eloquent address, in the course of which he pointed out that the development of America was due to the non-interference of the Government with natural advancement in this democratic Republic. The brotherhood of science well realised the importance of such non-interference, none more than practitioners of medicine and surgery. He welcomed the members of the Congress as the guardians of the health of nations. In medicine he recognised the noblest school of human usefulness; in the presence of such development as it is at present making, he recognised the means of cure, of the amelioration of suffering, and the prolongation of human existence. In the endeavour to discover the true principles which make life worth living, one must, he said, acknowledge the debt owing to those whose chief reward is the still small voice of approving conscience. The following responded to Mr. Bayard's address:—Dr. Lloyd, Deputy Inspector-General of Hospitals and Fleets, for Great Britain; Dr. Lefort for France, Senator Semmola for Italy, Dr. Unna for Germany, and Dr. Reyber for Russia.

Dr. Davis (Chicago), President of the Congress, then delivered his address, which is printed in full in another part of our present issue.

Dr. Alvarado, representing the Mexican Government, then read a paper on the Pathogenesis of Yellow Fever.

Professor Geikil (Toronto) read a paper on Pneumonia, in which he described pneumonia as being met with in all parts of Canada, no district being exempt from the disease.

During the delivery of the President's address and the reading of these papers there was a large audience, and at the close an animated discussion, in which many of those present joined, took place.

In the Section of *Surgery*, the President, Dr. Briggs of Nashville, delivered his address, in the course of which he entered at length into Modern Surgery of the Abdomen with Antiseptic Appliances.

Dr. Parker (Chicago) read a paper on the Study of Gunshot Wounds of the Intestines. He discussed and showed examples of many cases in which after death it was conclusively proved that an abdominal operation would have saved the life of the sufferer, and concluded by earnestly advocating, as the result of his experience, the early performance of operation in cases of such a nature.

Dr. Senn read a paper on Experimental Intestinal Surgery.

In the Section of *Obstetrics*, the President (Dr. Miller, Chicago) delivered an address, the three chief topics upon which he touched being Craniotomy, the cultivation of skill in Diagnosing Extra-uterine Pregnancy, and the rendering of the Puerperal State Aseptic without danger from the use of toxic substances. He expressed his belief that in future craniotomy would only be exercised in most unusual circumstances, and that the life of the child would be saved with but little danger to the mother. He advocated the destruction of the fœtus by electricity in extra-uterine fœtation to prevent rupture.

A paper on the Value of Contractions of the Uterus in Diagnosing Pregnancy, by Dr. Braxton Hicks (London), was, in the author's absence, read by Professor Earle, Chicago. During the whole period of pregnancy, contractions, Dr. Hicks stated, occur at short intervals, and as they can be felt by palpation, these contractions are useful as a means of distinguishing tumours from pregnancy. It is physiologically important to empty the uterine veins, as constant relations exist between the carbonised blood in the veins and the contractions and movements of the fœtus.—

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In the discussion which followed, Professor Simpson, of Edinburgh, confirmed the importance of these contractions as an aid in the diagnosis of pregnancy. Professor King and Professor Charpentier, of Paris, also took part.

Dr. MacCullum (Montreal) read a paper on Vicarious Menstruation.

Professor Lazarewitch (St. Petersburg) and Dr. Stewart (Philadelphia) showed improved forceps, which were criticised severely by Professor Opie, of Boston.

In the Section of *Public and International Hygiene*, the President, Dr. Joseph Jones, of New Orleans, read a paper on Public Hygiene, in which he sketched the progress of sanitation, and discussed modern sanitation in its threefold aspect—viz., domestic, public, and international. He indicated the importance of the duty of personal and domestic hygiene, the duty of municipal and other health authorities, and, lastly, the importance of nations comparing their methods of sanitation, and informing one another on the principles of hygiene.

The Section of *Vital Statistics* was well attended, and the address much applauded.

In the Section of *Diseases of Children*, papers were read by the President, Dr. Smith, of New York, and by Dr. Jules Simon, of Paris (who was not present in person), on Cerebral Irritation in Children. He referred to forms not due to heredity, congenital syphilis, &c., but to insanitary and exciting surroundings.

Professor Sayre (New York) read a paper on the Deleterious Results of Narrow Prepuce and Adhesions.

Dr. De Saint-Germain (Paris) in a short paper advocated igni-puncture of the tonsils by cautery in place of tonsillotomy. He recommended a puncture of three-eighths of an inch repeated each week, and stated that such procedure would almost invariably bring about a cure in a month.

Most of the eighteen Sections are well attended, especially the Gynæcological and Pathological ones.

In the *Ophthalmological* Section good discussions took place on a paper by Dr. Mooren (Germany) on Eye Troubles: their relation to Occipital Disease.

A paper was read by Dr. Connor (Detroit) on Hot Water Treatment in Eye Diseases, the discussion on which brought out various methods of applying heat to the eye.—Dr. Thompson (Indianapolis) advocated slippery elm poultice; Dr. Keyser, steam; Mr. Henry Power (London), dry meal and dry hops, but never steam.—Dr. Abadie (Paris) said he had a very poor opinion of hot water or heat unless there was much pain. In his practice he relied on more active medicaments, such as iodoform, morphia, and leeches, combined with judicious internal treatment.

In the evening a large *soirée* took place in the Pension Building. Upwards of six thousand persons were present, the admission being entirely unrestricted. The decorations in the great hall were very pretty. Much bunting was displayed, the American flag predominating; flags of all nations were used.

A sumptuous banquet by American medical editors to foreign editors and distinguished guests was given at Rigg's House. One hundred and fifty covers were laid. The decorations were superb, no less than 3000 roses being used in the floral ornamentation.

On the 6th inst. a general address by Dr. Austin Flint (New York) was delivered on Fever: its Causes, Mechanism, and Rational Treatment. There was a large audience, and the Opera House was well filled. Dr. Flint observed that fevers were due to a certain specific cause, probably micro-organisms. As we were not able to destroy these, we must be content to moderate their action and sustain the vital powers. The production of animal heat involves oxidation of part of the organism, or of articles of food represented by formation and discharge of nitrogenised matters. As regards its relations to general nutrition and the production of animal heat, water formed in the body by the process of oxidation should be considered excrementitious. Fever might be defined as a condition of excessive production of heat involving defective nutrition or inanition, an excessive production and discharge of nitrogenised excrementitious matters and carbonic acid with waste and degeneration of tissues, and partial or complete suppression of production and discharge of water. The active symptoms in fever, apart from complications and accidents, are proportionate to the elevation of temperature. These conditions must be ameliorated by treatment chiefly directed towards the reduction of temperature, as by the abstraction of heat by cold or the use of antipyretics, which without affecting the special cause improves the symptoms. During the period of inanition the consumption of the tissues in the production of animal heat is in a great measure saved by the increased production and excretion of water in fever. The effects of inanition are manifested by the destruction and degeneration of tissues, which are intensified by deficient formation and excretion of water. Alimentation is difficult mainly on account of the derangement of the digestive organs. This may be met by the administration of food easily digested or already partially digested. Hydro-carbons are important factors in the production of animal heat. Alcohol is promptly oxidised, and is capable of absorption without digestion. So far as it is oxidised in the body, alcohol in fevers supplies matter consumed in the production of heat, and saves destruction of tissue. The introduction of matter thus consumed diminishes pyrexia. As oxidative alcohol involves the formation of water and limits tissue destruction, its action tends to restore normal heat production processes. The aim of treatment is, Dr. Flint observed, to limit and reduce pyrexia by direct or indirect means, to limit the destruction of tissue and provide for its repair, and by alimentation to provide matters for consumption in the abnormal production of heat, and thus place the system in the most favourable conditions for recuperation.

In the evening a reception was held by the President of the United States and Mrs. Cleveland at the White House from 8 to 10. The Corcoran Art Museum was also open for members of the Congress and ladies. The scene was an animated one, the people and costumes being most diverse.

The Section of *Medicine* was chiefly occupied in discussing the question of vaccination.

Dr. Korosi (Buda Pesth) read a paper on the Preventive Power of Vaccination, and combated all objections from statistics, &c, from his own observations.

Dr. Whitmarsh (England) read a paper on Vaccination and Pasteur's Treatment, which gave rise to an animated discussion, in the course of which Dr. Leale deprecated alarming patients who had been bitten.—Dr. Welch gave a strong argument in support of vaccination by the comparative immunity from the disease enjoyed by hospital *employés*, and the fact that there are few vaccinated patients—under 5 per cent.—received into small-pox hospitals, and these rarely died. The danger of syphilis was, he remarked, remote, and erysipelas usually arose from carelessness.

In the *Surgical* Section a paper was read by Dr. Homans (Boston) on 384 Laparotomies for various diseases which he had met in his own practice. Ventral hernia occurred in 10 per cent. of the cases operated upon under the spray and bichloride of mercury. The fatal cases often resulted from trifling faults of the operator. The removal of the ovaries and tubes without objective symptoms was most reprehensible. Dr. Matthews (Louisville), in a paper entitled "When is Colotomy Justifiable?" said that the operation should not be performed when the stricture is three inches and a half above the anus, nor for cancer of the lower bowel, nor for tumours which closed the bowel, nor for congenital occlusion of the rectum when the rectum is occluded above three inches up. Colotomy for cancer does not prolong life. In the discussion which followed, Dr. Benton (England), Dr. O'Neal, Dr. Anthony, and others joined. The discussion showed most members to be in favour of operation in malignant disease for the relief of pain.

In the Section on *Diseases of Children*, papers were read on the Milk Supply of Cities, by Dr. Edson (New York); on the Nutrition of Infants, by Professor Leeds (Hoboken); and on the Use of Cows' Milk for Infants, by Professor Vaughan (Michigan). Professor Vaughan's paper was a most interesting one, and provoked much discussion. He said that cows' milk for infants must be from healthy animals, and must be well preserved from putrefaction both before and after it is taken into the child's stomach, a thing which is impossible if the infant is over-fed or breathing a polluted atmosphere.

Several papers on Intubation of the Larynx were also read. One by Dr. O'Dwyer (New York) was of considerable length. Comparing the results of tracheotomy *versus* intubation, he said that the question is—Which can be performed or permitted? With most medical men tracheotomy was never popular, and it is performed only in a minority of croupous cases, owing to the repugnance of the patient's friends. It is not done in one-fourth of the fatal cases in New York. The true mortality after tracheotomy is not known, as many fatal cases are never published. He concluded by strongly advocating intubation.

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Dr. Waxham also read a paper on the same subject, in which he strongly endorsed the same views.

This Section was a very popular one, and the papers read in it and the accompanying discussions have excited considerable interest.

In the Section of *Obstetrics*, a paper was read by Professor Cameron (Montreal) on the Influence of Leukæmia in Pregnancy. There were, he said, but few cases reported where leukæmia occurred during pregnancy, and none where a leukæmic woman became pregnant. He cited a case of a lukæmic woman who, becoming pregnant, produced children with leukæmic tendencies.

A paper was read by Professor Charpentier (Paris) on Uræmia. Injections of urea into pregnant animals, he observed, caused the death of the fœtus prior to that of the parent, and from this it may be concluded that the fœtus eliminates urea more slowly than the mother. Professor Lusk said that the paper threw light on an important subject, which it was desirable should be settled. He doubted the importance of urea, because cases were frequently met with in which an excess of urea was accompanied either by the death of the fœtus or the occurrence of dangerous symptoms in the mother. Dr. Maccullum (Montreal) pointed out the desirability of inducing premature labour in cases of albuminuria, if urea was dangerous to the fœtus.

A paper was read by Professor Simpson (Edinburgh) on Uniformity in Obstetrical Nomenclature. The communication embodied the results of the inquiries made by the committee appointed at the London International Congress.

Professor Lusk read a paper on the Prognosis of Cæsarean Section. He condemned craniotomy whilst the child was living and viable, and advocated early section by skilled operators.

A paper on the same subject was also contributed by Dr. Saenger (Leipsic).

In the Section on *Hygiene* a paper was read by Dr. Day (Batonrouge) on the Effects of an Overflow of the Mississipi. It contained the result of inquiries from 500 physicians in the South, which showed that, as a rule, river overflows were injurious to the public health, the evil effects being minimised by good drainage.

A paper was read by Dr. Grant Bey (Cairo) on the Hygiene of Modern Egypt.

Dr. Leighton (Newhaven), in a paper on the Place of Sanitary Science in Education, advocated a more definite position in teaching schools, colleges, &c., for the study of popular literature, and assistance from the press and pulpit.

The *Military* and *Ophthalmic* Sections were very busy. In the former papers on Gunshot Wounds were read by Drs. Hyde and James, which led to an animated discussion on explosive bullets. The United States is not yet, it seems, in accord with Europe on this question, but no such bullets have actually been used since 1863. Dr. Smith wished to bring the subject under the notice of the Congress and the President of the United States.

Surgeon-Major Langridge read a paper on Sunstroke. He cited his Indian experiences, and described how soldiers could best withstand heat. Drs. Marston, Goodman, Sherwood, Collins, and others, took part in the discussion. A paper by Sir Thomas Longmore, on Field Dressings, was read by Dr. Marston.

In the *Ophthalmological* Section, Mr. H. Power (England) read a paper on Microbes in the Development of Eye Diseases, in which he pointed out that whilst it was easy to recognise pathogenic cocci and prevent their entrance, it was difficult to destroy them when once in. He advocated the use of boric acid. Many members took part in the discussion which followed.

Professor Mooren (Dusseldorf) contributed a paper on the Methods of Extraction of Cataract. He had had 5000 extractions, and was of opinion that iridectomy should be done always at the time of operation.

Dr. Galezowski (Paris) also read a paper on the same subject.

On the 7th inst. an unpleasant incident occurred between two Italian delegates. Professor Durante claimed to be sent by Government, but had to give place to Dr. Semmola, who is a senator in the Italian Parliament. The affair was, however, satisfactorily adjusted through the kindly and opportune mediation of Dr. Hamilton. At the conclusion of Dr. Semmola's address quite a dramatic scene took place on the stage of the Opera House, when the two delegates publicly shook hands. Dr. Semmola's address was delivered with fine effect in French. He said that the object of medicine was to cure disease; if there were no ills there would be no doctors. To cure diseases we must know the causes which produced them, the external causes visible and tangible, and we must discover the internal ones. It was the aim of medical science to solve this problem, and for its solution we must employ the true method for solving all problems—viz., the experimental method. Before the experimental method was known doctors lost themselves in fantastic speculations, and it was only after the discovery of the experimental method that serious study began its marvellous progress. Physiology made light of experimental methods when studied under morbid condition, but doctors wanted to hurry on because they wished to cure the sick; but it is impossible to apply the experimental method and at the same time to go fast. If medicine be a science, we must not leave the experimental method, otherwise, like the labours of Sisyphus, there can be nothing but renovations, errors, loss of time. Some errors are repeated without knowing it. The chief error of to-day is that of bacteriology being considered the key to all pathology. Bacteriology should be studied because it teaches what exists in the microscopical world. This world is filled with enemies to mankind. We drink millions of microbes in our water, we respire millions in the air we inhale. Sometimes these microbes affect us, sometimes killing in a few hours. It is in cases like this, with our duty to cure the sick under our care, that we should go slowly; because if before there has been a careful demonstration we attempt to deduce a remedy, we are in danger of doing harm instead of curing. This is the great harm modern bacteriology does doctors. It has at once been concluded that microbes are the cause of disease, whereas in many cases microbes are but the effects of disease. We ought to reproduce the disease artificially by means of microbes before definitely concluding that they are the cause. The experiments which have been made do not give satisfactory results, except in the instances of carbuncle and tuberculosis. To conclude hastily that this or that microbe existing in such and such disease is the cause of it is to ignore the experimental method of demonstration. In this case of the experimental method the demands would be complicated, because not only have we to know that microbes existed, but we would have to know what the condition of the blood was which is necessary for the culture of that particular microbe. Science tells us that for the present the problem cannot be solved. We know very little of the normal condition of the blood. Biological chemistry is still in its infancy; man cannot separate himself from these millions of parasites among whom he lives. Bacteriology may guide us in the cure of disease, but we must not only learn all that is possible of the microbe itself; but, more important than all, we must ascertain all that is possible respecting the conditions of the field of culture. But science of the present day knows nothing of the conditions of these fields of culture in living organisms, and it is thus evident that in its present condition bacteriology cannot guide us in the treatment of internal diseases. The followers of the older school of medicine used to talk of organic dispositions and tendencies to such and such diseases. This language has no meaning. When bacteriology speaks of a need for special fields of culture, it says the same thing, because we do not know of what the field of culture consists; therefore it cannot be called a science, because science is never composed of unknown things. It goes from the known to the unknown. Science must indicate perfectly the conditions of the phenomena of disease, and then only can we find the remedy to correspond. Medicine must advance like physiology, chemistry, and physics, and proceed by way of experiments and demonstrated facts. Look at the progress made by physics and chemistry as applied to industries. Look at the telegraph, telephone, steam-engine, photograph, &c. The experiments which led to these results were not composed of unknown things and hypotheses, but were made up of a chain of experiments, each link of which was perfectly forged and welded. Thus there was no weak link in the chain, and phenomena reduced by the laws of science at man's disposal can be reproduced at his pleasure. But man does not command nature; he learns her laws and respects them. If he supposes fact instead of demonstrating it, the phenomena are not reproduced when he resorts to hypotheses. The power of man disappears if nature's laws are not respected; the telephone does not work, the electric light does not flash, the steam-engine stops. The doctor,

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then, is the only one who pretends to become the master of nature without knowing her laws." Referring, again, to the failure of medicine to follow up a discovery in a scientific way, with thorough research and demonstration, and to its tendency to accept conclusions quickly, Professor Semmola said modern bacteriology may lead the way to a most fruitful field of inquiry in the future, but at present it produced no practical results in the cure of internal diseases. It has not been demonstrated in what measure microbes are the cause of diseases, and he therefore hoped that the younger generation would continue experimental researches with the thoroughness of method which the great masters have transmitted to us; they must renounce preconceived ideas of medicine, and interrogate nature without torturing her; scientific independence must be preserved, and they must not proceed without measuring their steps. He trusted that his desire for scientific independence in such researches would be echoed in this land of independence. At the conclusion of the address, a vote of thanks to Dr. Semmola was supported by several delegates on the stage, who made very complimentary reference to the value and interest of the address.

Up to Wednesday at noon the number of members registered at the offices of the Congress was 2600. About 300 of these are foreign, all European countries being represented, France, Germany, Russia, Italy, the Balkan provinces, &c. England sends a large contingent—Seaton, Marston, Power, Langdon Down, Isambard Owen, Pavy, Savage, West, G. Hewitt (London), Simpson (Edinburgh), Chavasse (Birmingham), L. Roberts (Manchester), Tomkins (Leicester), Tate (Nottingham), Taylor (Liverpool), Cunningham (Cambridge), and others. The total number of members present exceeds the record of former Congresses, but the bearers of many well-known European names are conspicuous by their absence, as also are some Americans. The meeting is an undoubted success, but many of the leading men, especially those residing in New York, are absent. Much hospitality is shown to foreigners by the citizens—garden parties, banquets, receptions, &c. Visitors are to be taken to Niagara free of expense. On the 8th inst. a banquet is to be given by Washington city. The weather is glorious, and the heat moderate. The organisation of the Congress is scarcely perfect in some respects, and many lessons might have been learned from former similar meetings. The United States Congress is not sitting, consequently many of the leading citizens are away for the summer. Their absence has a tendency to limit private hospitality, but much difficulty has been experienced even now in the dull season of the year to provide accommodation for the influx of some 4000 visitors from the most remote parts of America, South, North, Canada, &c. Washington is a beautiful city, and all the sights, Government buildings, &c., are open for inspection by members of the Congress.

THE INTERNATIONAL CONGRESS OF HYGIENE.

THE final touches have now been given to the programme of this gathering. The opening ceremony will take place on September 26th, at 11 A.M., in the great hall of the Musikverein, when the Crown Prince Rudolf, "the protector of the Congress," will bid its members welcome in the name of the Kaiser. On the evening of the 28th, again in the name of the Kaiser, the members will be formally received in the Hofburg. Their number is now 1410, representing, as we have already shown, nearly every civilised state in the world, and every considerable association concerned directly or remotely in public hygiene. This number is likely to be still further increased, as the Congress extends its hospitality up to the close of its sittings, a hospitality which includes the gift of the very valuable publications dealing with all the topics to be discussed. The Vienna town council has shown itself fully alive to the importance of the occasion, and is taking every care that no former seat of Congress, neither Paris, nor Brussels, nor Geneva, nor for that matter the best traditions of the magnificent princes of the Venetian and Florentine Republics, shall be quoted to their disadvantage. The town hall is itself, as few such buildings can, to festive celebrations and to the worthy reception of distinguished guests. The volunteer Rettungsgesellschaft (Preservation Society) of the city will exhibit on the Trabrennplatz (racecourse) their preserving apparatus and sanitary *matériel*. The municipality of the various guilds and mercantile firms, to say nothing of neighbouring landed proprietors, in contributing to the funds of the Congress, has been munificent. The surplus, after the defrayal of all expenses, will be applied, as already stated, to the erection of an institution for perfecting hygienic manufacture in all its aspects, for which suggestions and criticisms are freely invited from members of the Congress.

As we write, the announcement reaches us that, by command of the Kaiser, a gala representation, in honour of the members of the Congress, will be enacted in the Court Opera House, which for that occasion will be placed at their special disposition. The performance will take place on Tuesday, Sept. 27th, and will conclude, appropriately, with the ballet of "Excelsior."

THEATRE FIRES.

THE Home Secretary is reported to have said on Tuesday night, in answer to Dr. Tanner: "Outside the metropolitan area there is no power in any Government Department or in any local authority to inspect theatres or insist on structural alterations, except as a condition of licensing the theatre in the first instance, except possibly under local Acts. Within the metropolitan area the Metropolitan Board of Works have sufficient power to enforce any precautions which may be necessary, and have largely acted on those powers."

In this connexion the following extracts from the last report of the Metropolitan Board will be found of interest:—

"The Board's jurisdiction over new theatres, and over music-halls containing an area for the accommodation of the public of not less than 500 square feet, is defined by the 12th section of the Metropolis Management and Building Acts Amendment Act, 1878, which prohibits the opening of any such place of public entertainment without a certificate from the Board to the effect that it was, at the time of its completion, in accordance with the regulations which the Board was empowered by the Act to make for the protection from fire of these buildings. The regulations now in force were made on May 2nd, 1879. The applicant for a certificate is required, in the first instance, to submit drawings of the proposed new building for the inspection of the Board, and, in the event of these being found satisfactory, they are conditionally approved; but the sealed certificate is not issued until the building has been completed, in accordance with the approved drawings, to the satisfaction of the Board.

"The 11th section of the Metropolis Management and Building Acts Amendment Act of 1878 gives the Board a limited jurisdiction over the theatres and larger music-halls which were in use at the passing of the Act, on July 22nd, 1878. The Board can take action with respect to any such building when it appears that the place is so defective in its structure that special danger from fire may result to the public frequenting the same, and that the structural defects can be remedied at a moderate expenditure. The consent of the Lord Chamberlain or of the Secretary of State, as the case may be, must be obtained before any notice can be served by the Board upon the owner. Having obtained this consent, the Board may serve the owner with notice requiring him to make such alterations in the building as may be necessary to remedy the defects within a reasonable time, to be mentioned in the notice. In default of compliance with the notice, the owner becomes liable to a penalty of £50, and a continuing penalty of £5 a day. Within fourteen days of the receipt of the notice the owner may appeal to an arbitrator, to be appointed by the First Commissioner of Works. The arbitrator, whose decision is final, may make such order as he thinks fit, and direct by whom, and in what proportion, the costs of the arbitration are to be paid.

"The theatres within the jurisdiction of the Board, which were inspected by the chief officer of the fire brigade in order to ascertain their actual condition in respect of security from fire, were forty-one in number; and it was stated in the last report that the whole of these, with the exception of those that had been closed, had been put into a satisfactory structural condition."

This is all very well so far as it goes, but if peril arises, as seems to have been the case in the sad fatality at Exeter, from the improper disposition of scenery not at the moment in use, how does an annual inspection by an officer of the fire brigade afford any protection against this risk?

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5166 births and 3348 deaths were registered during the week ending September 3rd. The annual rate of mortality in these towns, which had declined from 23·7 to 23·3 per 1000 in the preceding three weeks, further fell last week to 18·9. During the first nine weeks of the current quarter the death-rate in these towns averaged 21·7 per 1000, and was 0·5 above the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·3 in Huddersfield, 15·6 in Bristol, 16·6 in London, and 17·2 in Derby. The rates in the other towns ranged upwards to 25·0 in Manchester, 25·8 in Wolverhampton, 25·9 in Blackburn, and 29·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined in the preceding five weeks from 1301 to 925, further fell last week to 792; they included 500 from diarrhœa, 84 from scarlet fever, 76 from whooping-cough, 49 from measles, 47 from "fever" (principally enteric), 31 from diphtheria, and 5 from small-pox. These diseases caused the lowest death-rates last week in Bristol and Huddersfield, and the highest in Plymouth, Wolverhampton, and Oldham. Diarrhœa caused the greatest mortality in Brighton, Plymouth, Bolton, and Wolverhampton; measles in Birkenhead and Oldham; scarlet fever in Blackburn, Bolton, and Oldham; and "fever" in Leicester, Oldham, and Portsmouth. Of the 31 deaths from diphtheria in the twenty-eight towns, 20 occurred in London, 3 in Newcastle-upon-Tyne, and 2 in Hull. Small-pox caused 5 deaths in Sheffield, but not one in Greater London or in any of the twenty-six other large provincial towns. Only 3 cases of small-pox were under treatment on Saturday last in the Metropolitan Asylum hospitals receiving cases of this disease, of which one was admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 178 and 160 in the preceding two weeks, rose again last week to 169, and were within 1 of the corrected average. The causes of 62, or 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Wolverhampton, Bradford, Sunderland, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Preston, Halifax, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·6 and 18·7 per 1000 in the preceding two weeks, declined again to 18·5 in the week ending September 3rd; this rate was slightly below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 15·1 and 16·2 in Leith and Perth, to 21·4 in Dundee and 26·5 in Paisley. The 463 deaths in the eight towns last week were within 3 of the number in the preceding week, and included 39 which were referred to diarrhœa, 31 to whooping-cough, 18 to scarlet fever, 12 to "fever," 2 to diphtheria, and not one either to measles or small-pox; in all, 102 deaths resulted from these principal zymotic diseases, against 87 and 111 in the preceding two weeks. These 102 deaths were equal to an annual rate of 4·1 per 1000, which was 0·4 below the mean rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had increased from 28 to 53 in the previous four weeks, declined to 39 last week, of which 9 occurred in Glasgow, 8 in Edinburgh, and 6 in Paisley. The deaths referred to whooping-cough, which had been 24 and 26 in the preceding two weeks, further rose last week to 31, and included 10 in Glasgow, 8 in Dundee, and 4 in Edinburgh. The 18 fatal cases of scarlet fever showed a further increase upon recent weekly numbers; 8 occurred in Glasgow, 4 in Dundee, and 3 in Edinburgh. The 12 deaths referred to "fever," exceeded by 8 the number in the preceding week, and included 5 in Glasgow and in Dundee. Of the 2 fatal cases of diphtheria, 1 occurred in Greenock and 1 in Dundee. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 69 and 73 in the preceding two weeks, were 71 last week, and exceeded by 8 the number returned in the corresponding week of last year. The causes of 67, or more than 14 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 35·5 and 29·3 per 1000 in the preceding two weeks, rose again to 37·5 in the week ending September 3rd, and exceeded the rate recorded in any week of the present year. During the first nine weeks of the current quarter the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 21·4 in London and 18·6 in Edinburgh. The 254 deaths in Dublin last week showed an increase of 56 upon the number returned in the preceding week; they included 31 which were referred to diarrhœa, 23 to measles, 5 to "fever" (typhus, enteric, or simple), 4 to whooping-cough, 2 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 78 and 48 in the preceding two weeks, rose again last week to 65; they were equal to an annual rate of 9·6 per 1000, the rate from the same diseases being 3·4 both in London and in Edinburgh. The fatal cases of diarrhœa, which had been 27 and 13 in the previous two weeks, rose again to 23 last week. The deaths referred to measles, which had been 39 and 30 in the preceding two weeks, were 31 last week. The fatal cases of "fever" exceeded those recorded in any recent week, and the deaths referred to whooping-cough and to scarlet fever also showed an increase. The deaths of infants and of elderly persons exceeded those returned in the preceding week. Two inquest cases and 3 deaths from violence were registered; and 57, or nearly one-fourth, of the deaths occurred in public institutions. The causes of 43, or nearly 17 per cent., of the deaths registered during the week were uncertified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: The undermentioned Surgeons-Major retire on retired pay with the honorary rank of Brigade Surgeon (dated August 31st, 1887):—James O'Reilly, M.B., and Jerome William Morgan. The undermentioned Surgeons on probation to be Surgeons (dated July 27th, 1887):—Henry Ernest Hill Smith, Wm. Perceval Gore Graham, M.B., George Forbes Alexander, M.B., Charles Stuart Spong, William Boog Leishman, M.B., Edmund McNeill Woods, M.B., James Thomson, M.B., Gerald Thos. Rawnsley, Charles William Reilly, Ernest Carrick Freeman, John Ernest Trask, William Jones Crofton, M.B., Norman Hay Forbes, Alfred Percy Blenkinsop, John Paterson, M.B., Vesey Henry William Davoren, Alfred Wright, Robert Jas. Copeland, M.B., John Girvin, Anthony John Luther, Harold Samuel Peeke, Alfred Latour Borradaile, M.B., Rich. Henry Smyth, M.B., Thomas Birt, and William Hallaran, M.B.

ADMIRALTY.—The following qualified candidates for the Naval Medical Service have been appointed to be Surgeons in Her Majesty's Fleet:—James Bradley, M.D., Geo. Hewlett, M.B., George Alexander Waters, M.D., William Gordon Stott, M.B., Charles Sharman Woodwright, Michael O'Brien, M.D., Jonathan Shand, M.B., and William Arthur Whitelegge, B.A., M.D. (dated Aug. 17th, 1887).

The following appointments have been made:—Fleet Surgeon N. Connolly, to the *Turquoise* (dated Aug. 16th, 1887); Staff Surgeon A. R. Joyce, to the *Hercules* (dated Aug. 16th, 1887); Surgeon J. A. Beattie, to the *Turquoise;* Surgeon H. F. Kiewitz, to the *Ranger;* Surgeon J. E. Penn, to the *Vernon;* Surgeon G. D. Treu-Roper, to the *Jackal;* Surgeon A. W. M'Leod, to the *Duncan;* and Surgeon W. G. K. Barnes, to the *Orontes* (all dated Aug. 16th, 1887).

ARTILLERY VOLUNTEERS.—1st Volunteer (Sussex) Brigade, Cinque Ports Division, Royal Artillery: Henry Algernon Hodson, Gent., to be Acting Surgeon (dated Aug. 27th, 1887) 1st Volunteer (Hampshire) Brigade, Southern Division, Royal Artillery: Ernest Frederic Eliot, Gent., to be Acting Surgeon (dated Sept. 3rd, 1887).—2nd Northumberland (the Percy): Acting Surgeon J. H. Davidson, M.B, resigns his appointment (dated Sept. 3rd, 1887).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the King's Own (Royal Lancaster Regiment): Acting Surgeon J. Murray, M.B., is appointed Surgeon (dated Aug. 27th, 1887).

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1st Dorsetshire: Honorary Assistant Surgeon A. Emson resigns his commission (dated Aug. 27th, 1887).—2nd Volunteer Battalion, the Lincolnshire Regiment: Acting Surgeon J. P. Stewart, M.B., resigns his appointment (dated Sept. 3rd, 1887).

THE VOLUNTEER MEDICAL STAFF CORPS.—The Maidstone Division: The transfer of Surgeon and Honorary Surgeon-Major D. H. Monckton, which was notified in our issue of May 7th, 1887, to bear date April 1st, 1887, and not as therein stated.

Correspondence.

"Audi alteram partem."

PAIN AND ITS INTERPRETATION.

To the Editors of THE LANCET.

SIRS,—May I presume on your courtesy and space for a brief retort? I can assure Mr. Gillies I was not thinking of panegyrics in provincial "weeklies" when I said "universal experience and common sense" were against his contentions, and I am content to appeal from his to the more impartial judgment of the readers of THE LANCET as to our respective "methods." I have re-read Mr. Gillies' original article, and I adhere to my statement that he had not therein excepted cancer from his sweeping assertions as to the "eminently merciful" character of pain. It would be interesting to take the case of the travails of childbirth, and see how the rival theories supported respectively by Mr. Gillies and myself would meet that difficulty. Is pain "eminently merciful" there? Why, the theory of individual compensation—or, as Mr. Gillies finds such consolation in the *Daily News* phraseology, shall I say the "blessing in disguise theory"?—will not hold water. Evolution, on the other hand, is ready with an explanation. Man has not gained the upright posture and his cerebral development without paying heavily for these distinctions. These two factors are responsible for most, if not all, of the obstetric difficulties which woman experiences over and above the normal pains of parturition (if such there be). Evolution tells us we are but parts of a plan, and individual suffering is lost in the grandeur of the whole. If "*pain never comes where it can serve no good purpose*," what daring presumption it must be to attempt to abolish that much-disguised blessing by the use of anæsthetics! But Mr. Gillies is satisfied that all is well, every seeming exception can be disposed of, and he is not afraid that anything determined right for the individual shall be found wrong for the whole. Such optimism is refreshing, but in logic such reasoning is known as *petitio principii*, and in philosophy such assertions imply a familiarity with the intentions of Omniscience to which I dare not pretend. Glorying in teleological implications, Mr. Gillies pays me the greatest compliment he can when he says "he did not understand my rendering of the matter."

I am, Sirs, yours faithfully,
W. J. COLLINS, M.S., M.D., B.Sc. Lond.

Albert-terrace, Gloucester-gate, Aug. 28th, 1887.

To the Editors of THE LANCET.

SIRS,—I have read Mr. Gillies' "Interpretation of Pain" and Dr. Collins's criticism thereon very greedily, for "pain" is an all-engrossing subject. No one familiar with the doctrine of evolution and the rudiments of mental philosophy can fail, if he have thought the matter out for himself, to agree with Dr. Collins' critical remarks. Mr. Gillies argues for the universal beneficence of pain, but, by his acknowledged inability to follow Dr. Collins when the latter gentleman points out that the capacity for pain has very largely evolved by a survival of the fittest, Mr. Gillies foregoes what is perhaps the strongest argument in favour of his view. It is possible that pain is no necessary ingredient of mind, any more, for instance, than sight is; but whether or not (and the matter is too involved to be here discussed), there is no doubt that the capacity for pain has largely evolved by natural selection. For instance, an animal which is very painfully affected by the operation of an injurious agent is more likely to shun the same and to survive than one that is less painfully affected by it; and thus we see how by accumulation the capacity for pain has grown, and how, moreover, it has come to be a most potent weapon against evil. If by grasping with his hand a burning object a child experienced a sensation akin to that obtained by sucking a sweetmeat, a host of children would be lured on to destruction; and, indeed, we have only to look around to see how capable is pain to ward off evil. It is a common observation that delicate, hyperæsthetic people often reach a very ripe age, so carefully does their hyperæstheticism lead them to avoid injurious influences; while, on the other hand, strong and vigorous individuals are frequently prematurely cut off owing to their callousness of pain. Now, whatever evolves in an individual on the principle of natural selection must be beneficial to that individual. Therefore pain must be beneficial. But I fear we cannot say of it that it is an unmixed blessing. Viewed from a utilitarian point of view, it is decidedly imperfect, and it behoves us, as practical medical men, to know in what respect. Were pain perfect in the above sense it would have to fulfil the following conditions: It should always occur upon the first operation of an injurious agent, and should cease immediately upon its removal, or when some other useful purpose—e.g., rest—has been effected. Now, pain does not universally fulfil these conditions. It errs both by defect and by excess: for, on the one hand, it does not always occur when it can be of use, either not occurring at all or too late; and on the other hand, it arises when it can be of no use—nay, very often when it is positively harmful. It is impossible to develop these two propositions adequately in this place, for I am compelled to be very brief. Concerning the first kind of imperfection: Pain is not present in noma, nor (very often) in hydatid and several other disorders. In many diseases, though of use when it *does* come, it would have served a better purpose had it appeared earlier, during the first operation of the pathogenic agent, as in rheumatism, gout, syphilis, and the specific fevers. Finally, it may come too late, as in perforating ulcer, which may be unattended by pain till the fatal paroxysm of agony occurs. It is true that many diseases, and amongst them some of the above, are due to imprudence, the erring individual knowing well that pain will be the outcome of his conduct. But prudence depends, as Bain points out, upon the vividness of ideal pain, and if the latter is not stronger than the anticipated pleasure, so as to overcome it, it fails to deter, and the fault must be laid at the door of pain, which does not adequately persist in the memory. As regards the imperfection by excess, too many examples, alas, could be quoted; the fact can be established by asking two questions: In how many homes are good and loving people at the present moment praying for the happy *release*? How many doctors are there now struggling, might and main, against pain, not only by removing the cause, which, pushing Mr. Gillies's remarks to a practical issue, would be the only justifiable method of dealing with it, but by every means in their power, and that, too, not solely for the purpose of giving ease for a time, but very often because the pain is distinctly harmful, because, if it cannot be overcome, it may turn the scales in the favour of death? The subject of pain is an awful one, and it is one with which medical men have especially to do; but, for these very reasons, it behoves us, if we write upon the philosophy of it, to be most careful that we approach the subject from a strictly scientific point of view.

I am, Sirs, yours faithfully,
Guilford-street, W.C., Aug. 28th. HARRY CAMPBELL, M.D.

To the Editors of THE LANCET.

SIRS,—Mr. H. Cameron Gillies, in his reply to Dr. Collins's letter, makes a candid but surprising confession. He says: "As to Dr. Collins's own rendering of the matter, which I honestly confess I did not understand...." Surely there was nothing at all incomprehensible in Dr. Collins's "rendering." It would, then, appear that Mr. Gillies does not understand what every believer in the great truths of evolution must admit to be the real meaning of pain. Does, or does not, Mr. Gillies close his eyes to the fact that with the steady onward march of development and natural selection, the nervous system becomes more and more appreciative of *all* sensations? Can he deny that the greater the capacity for enjoyment becomes, the greater must also be the capacity for suffering? If Mr. Gillies deny this, it would be difficult

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to convince him on any point. If, on the other hand, Mr. Gillies admit the increasing capacity for pain, why seek to find "interpretations" and "prophecies" in the realms of unsupported conjecture when pain stands out simply as an evidence of evolution? No one has ever denied the "warning cry" of pain; but to assert that a given amount of pain is, in the same measure, a prophecy of recovery, is only another way of saying "the more your nervous system is disturbed the more you are likely to survive" (in, at any rate, by far the largest proportion of cases). How is the prophecy fulfilled in the case of a man suffering the tortures of hydrophobia? The fact that some fatal lesions are unaccompanied by pain and that others are attended with intense suffering should show that pain cannot be looked upon as a constant factor, and is therefore utterly unreliable as a means of prognosis.

I am, Sirs, yours truly,

A. ST. CLAIR BUXTON, F.R.C.S.

Orchard-street, W., September 5th.

THE INOCULATION OF RABIES.

To the Editors of THE LANCET.

SIRS,—The letter in your number of Aug. 27th from Mr. Vincent Richards comes (? from India) at the right time for receiving the attention it deserves. The two questions he would submit to experiment should be answered before the practice of rabic inoculation extends. Analogy is against the view that inoculations are effective *after* infection has taken place. We vaccinate persons who have been exposed to small-pox as early as possible, in the hope that they may not then have received infection; for, happily, all do not at once suffer from the infections to which they are exposed. At one time it was thought that, as vaccination had a shorter time of incubation than small-pox—eight instead of twelve days,—if we could vaccinate within four days of the exposure to small-pox there would be time for prevention. Again, that if the vaccination could proceed to the stage of areola, it would be timely. The experience of our late epidemics of small-pox suffices to upset both theories. It is only where the person who had been exposed to small-pox had *not really been infected* that the vaccination, after the lapse of a few days, would be protective against subsequent danger. At present we have only analogy to guide us: the inoculation of rabbits has produced a form of disease with a shorter incubation than that of furious rabies; the inoculated disease may prevent danger from some future risk of being bitten by a rabid animal, and yet be powerless against the bite already received. Without the experiments suggested by Mr. Vincent Richards it would take years to set this question at rest.

I am, Sirs, yours faithfully,

September, 1887. WILLIAM SQUIRE, M.D.

GRATUITOUS ADVICE AT LONDON HOSPITALS.

To the Editors of THE LANCET.

SIRS,—I have just had an illustration (which I think is worth recording) of the demoralising influence of gratuitous advice at London hospitals upon the upper or well-to-do classes. A lady drove up to my house with her maid, who, she informed me, was suffering from strumous abscess, but was able to attend to her duties. She had got an order for her admission into the Harrogate Bath Hospital (of which I am one of the physicians), but did not wish her to go in, as she was so useful to her. Could she have advice, waters, baths, &c., as an out-patient? I told her she could not. She then said, "She had heard how very kind I was to the poor, and that I would probably tell her what treatment the girl required, or the name of a medical man who gave gratuitous advice." I said that there were none who gave gratuitous advice under such circumstances. She then asked me what treatment I would advise, and, after receiving it, left me with profuse thanks for my kindness. I need scarcely add she did not offer to pay the fee I should have charged her, but told me how much interested her own medical man was in the case, which I have no doubt had manifested itself in the same way as I was compelled to do—viz., *gratuitously*. The case had been an out-patient in London. Comment is needless.

I am, Sirs, your obedient servant,

Harrogate, Aug. 29th. THOS. BRITTON, M.D.

VEXATIOUS ACTIONS: GIBSON AND WIFE *v.* JEFERIES AND HILLS.

To the Editors of THE LANCET.

SIRS,—May I ask you for the assistance you always so readily give to make known the grievances of our profession?

The brief account of the above case in your edition of Aug. 20th could not convey an idea of its importance to general practitioners, as well as all in the practice of midwifery. In the end of last year, owing to severe illness, I was unable to attend the plaintiff. Mr. Hills, a friend and neighbouring practitioner, at great personal inconvenience and from pure friendship and sympathy, did so for me. As was proved at the late trial, he performed his part conscientiously and with evidence (as was testified by so high an authority as Dr. Graily Hewitt) of all the necessary skill. Now what does this case show? That we are all liable at any moment, *without any grounds*, to have actions instituted against us when in the proper discharge of our duties, our professional reputation damaged, and often put to enormous expense defending an action that ought never to have been brought. Besides the injury and injustice to us, may there not be also serious consequences to our fellow-creatures if we are allowed to be so hampered in the performance of our duties? Our vocation is to endeavour to save life, and it is possible to reward our efforts, as this case and many others of late show, by an action at law with its attendant depressing anxieties and loss. I read a few days since in a daily paper of a sailor who risked his life in rescuing a drowning man; on swimming ashore with him, the latter turned on his rescuer and beat him severely. I see but little difference in his case and ours, with the exception that the sailor will perhaps more rapidly recover from the consequences. I am, Sirs, yours faithfully,

Battersea Park, Aug. 30th, 1887. W. C. JEFFRIES.

THE THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me once more a space in your columns to answer many correspondents' inquiries? The following will cover questions which have been put to me. There is no occasion for those *at present* desiring membership to secure a proposer and seconder. All who desire to join the society can do so, subject to the rule previously printed in your journal, by simply sending in their names to me or to any member of the Council. After the first meeting the admission will only be by ballot. The subscription, 10*s.* 6*d.* per annum, does not include the price of the quarterly journal, this not being yet fixed, and is not payable until after the inaugural meeting. The time and place of meeting will be duly advertised in the medical papers, and, in addition, notice will be sent by post to each member. I shall be glad to receive fresh names, as we wish to meet our President, Dr. Sydney Ringer, F.R.S., with a full congress. May I remind your readers that the subscription will be raised after the original members' list is full. Thanking you warmly for the valuable aid you have afforded the Society by granting the use of your journal for constant communications,

I remain, Sirs, yours faithfully,

64, Longridge-road, S.W. A. GEORGE BATEMAN, Hon. Sec.

THE MEDICINE STAMP TAX.

(*From a Correspondent.*)

SPASMODICALLY the officers of the Medicine Stamp Department of Somerset House make raids on chemists for selling drugs and medicines which are neither nostrums, patent, secret, nor proprietary. About two years ago they made a special crusade against all foreign medicines. This, however, created such an outcry that the Chancellor of the Exchequer, being repeatedly questioned in the House, investigated the matter, and not only annulled that portion of the medicine stamp tax which applied to foreign medicines, but further promised to bring forward at an early day, either in the then present session or the following

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one, legislation for the complete revision, reformation, or repeal of the medicine stamp tax. However, the change of Government thwarted this proposed reform, and with the exception of the annulment of that portion of the Act relating to foreign medicines, no change whatever has been made. Of late the Medicine Stamp Department of Somerset House has shown excessive zeal in prosecuting chemists for selling simple pharmaceutical medicines which have not the slightest resemblance to patent medicines—e.g.: simple quinine, made up into pills by means of sugar, gum arabic, glycerine, or other excipient; quinine pure and simple, enclosed in a capsule of gelatine or covered with sugar; rhubarb, made into a fluid extract or tincture by extracting its properties with alcohols; menthol, dissolved in spirit to form a solution; powdered rhubarb and soda triturated together are under certain conditions held liable. The Board of Inland Revenue rule that each of the before-mentioned, or the mixture or combination of any two or more drugs, or the addition to a drug of any other substance (although it be but a vehicle or adjuvant), are thereby removed from the category of "medicinal drugs—entire" (or crude drugs), and become nostrums, liable to the stamp tax, in each and every case where the medical properties are stated upon the label, or set forth in advertisements to the medical profession and chemists in medical and pharmaceutical journals. All compounds and mixtures of the Pharmacopœia come under this ban according to this arbitrary ruling, and the chemist vending is liable to a heavy fine if he states the medical properties upon the label, or in any advertisements to the medical profession or trade. The chemist may not dispense paregoric, tincture of arnica, or even syrup of squills, without placing upon them a Government stamp if he states upon the label the uses of these medicines. In the case of purely family remedies, and of medicine chests for travellers, it is often of great importance that full particulars of the diseases in which they are beneficial or useful should be set forth.

It should be noted that drugs in their crude state are not liable to the stamp tax. Peruvian bark or Jesuits' powder may be advertised by nostrum vendors to cure all the ills that flesh is heir to without requiring a stamp upon it, but if quinine, its representative active principle, pure and simple, be vended with any adjuvant or other vehicle for masking its intensely bitter taste, it is, under the same conditions, liable to the enormous medicine stamp tax. One of the anomalies of the Somerset House authorities' decisions is that certain preparations can be recommended as "cure alls," though uttered in the form of patent medicines, without being required to pay the stamp tax. The natural effect of the rulings of the Somerset House authorities in respect to the discrimination between crude drugs and improved forms for administering the more eligible preparations of such drugs, is to discourage the chemist in developing the manufacture of legitimate chemical and pharmaceutical preparations. It is quite true that by a very fine technical interpretation of some of the clauses of this ancient and obnoxious Act (which has done so much to increase the sale of poisons under the protection of the stamp), it is within the power of the Board to compel chemists to stamp legitimate Pharmacopœial medicines, or suffer heavy penalties.

This tax bears with special severity upon the poor, who are by their misfortune proportionately the greatest consumers of such medicines as come under the Act. It has been well said that "the poor man, when he falls ill, besides the suspension of his daily wages and the greater necessity for nourishing food, is called upon, when he is least able to spare anything, to pay a high price for his medicine, although that medicine is a necessity of life, and without it he may remain sick, unable to work, and a burden to his family"; and "the price of medicine is of small amount to the rich and well-to-do, but to the vast masses of the labouring classes the fictitious value put on medicine by the Stamp Act is of tragical importance." This Act, be it remembered, was instituted at the time of a great national emergency as a means of raising money to carry on the war against Napoleon, and all other similar Acts of extraordinary taxation then instituted have been repealed. Great Britain stands alone of all the nations of the earth in imposing an enormous stamp tax upon medicines. The United States, with all her extravagant ideas of protection and taxation, during her great national crisis of the civil war, imposed a stamp tax of 4 per cent. on secret medicines only, which they repealed entirely very soon after the war was ended. In this country we have since 1812 exacted the heavy tax of 12½ per cent. on medicines selling for 1s. and upwards, while medicines selling for 6d. such as are consumed most by the very poor, have to pay the enormous sum of 25 per cent., and more than half of the entire medicine tax is collected on these smallest stamps.

The Times (August 7th, 1884), referring to this Medicine Stamp Act, says: "Common sense, common prudence, coupled with commercial interests, alike clamour for its repeal"; and on August 13th, 1884, says: "If a medicine be good, it is surely unjust to raise its price by a tax." The British Medical Association passed strong resolutions praying for the absolute repeal of the medicine stamp tax, declaring that "it is unjust to impose a tax upon medicines."

But it is not alone the burden that this iniquitous Act imposes upon those least able to bear it that has to be considered; it affords a sheltering guise beneath which dangerous poisons, which ought only to be administered under a physician's prescription or direction, can be placed freely within reach of the public. If for want of time the Government cannot take immediate steps to repeal the entire Act, they should, without a moment's delay, annul those clauses which apply to any and all medicines which do not come under the head of patent or secret compounds. It is certainly within the power of the Chancellor of the Exchequer to do this, as there are abundant precedents—one, indeed, in connexion with this Act — namely, the annulment of the clause relating to foreign medicine, by Mr. Childers when Chancellor of the Exchequer in Mr. Gladstone's Government.

LIVERPOOL.

(From our own Correspondent.)

THE ENLARGEMENT OF THE BOOTLE HOSPITAL.

BOOTLE, which forty years ago was a pleasant little village within easy distance of Liverpool, has grown to be an incorporated town, containing about 30,000 inhabitants. What was formerly the Bootle Dispensary, instituted in 1846, expanded first into a cottage hospital, and next, in 1872, into a hospital containing 38 beds. For some time past these latter have been found quite insufficient to supply the demand for patients whose condition rendered treatment within the hospital absolutely necessary. On Aug. 27th an addition to the hospital was opened by Mr. T. H. Ismay in the presence of the Mayor (Alderman Wm. Jones) and many of the local clergy, ministers, and leading townsmen. This new portion contains wards named the "Derby," the "Artisans," and the "Danson" wards, with recreation room, operating rooms, out-patients' department, &c. Accommodation for infectious cases has been provided in separate wards so as to admit of perfect isolation. Towards the cost the sum of £1564 had been raised by the Jubilee Committee, it having been previously decided that this should be Bootle's tribute of loyalty to the Queen. The total cost is £11,800, nearly all of which has been provided, a Mr. Rowlandson furnishing one ward, and the *employés* of the White Star Company another.

THE SATURDAY HALF HOLIDAY AND CRIMES OF VIOLENCE.

In addition to the many accidents at the docks and elsewhere which furnished patients for the Bootle hospital, the town has a most unenviable notoriety for crimes of brutal violence, frequently resulting in death, and generally occurring on the afternoon or evening of Saturday. So established was this as a fact, that it led to the pleasantry of substituting "Brutal" for "Bootle." It is believed that a newly organised police force will effect a change for the better; and it is also hoped that working men will be induced to employ their half holidays in a more rational manner than in those drunken debauches in the public-house which both in Bootle and Liverpool are the precursors to acts of violence. It is not many years ago since the late Baron Martin greatly offended local susceptibilities by describing one of these cases brought before him as "a regular Liverpool case." And yet it was perfectly true.

THE MIXTURE OF DRUGS.

At the Police Court on Sept. 2nd a chemist was fined £5 and costs in the first of four charges of mixing methylated spirit with pure spirits of wine; fines of £1 and costs being

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inflicted in the remaining three cases. The prosecution was taken up by the Inland Revenue, an officer of which called at different establishments of the defendant, and purchased paregoric, tincture of Cayenne, and sweet spirits of nitre, all of which were found to contain a quantity of methylated spirit. The defence was that it had been done by the assistants to conceal the fact that they had been drinking the spirits of wine.

"CHEWING GUM."

A local confectioner has been fined five shillings and costs, amounting in all to twenty shillings, for selling as "chewing gum" a compound which, according to Dr. Campbell Brown's analysis, contained 38 per cent. of solid paraffin, the remainder being composed of sugar and colouring matter.

Liverpool.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

SEA TRIP FOR THE POOR.

MR. T. S. ALDER, a chemist of this city, last week organised a most successful seaside excursion for the poor children of this city, as well as for such of the aged poor as were able to join the excursion. About 5000 children and 1000 adults were conveyed in special steamers from Newcastle Quay to Tynemouth, where they were treated to games and various amusements on the sands, finishing up with tea &c., and all were safely taken to their homes, not a single accident occurring to mar the day's enjoyment. But it is well to allude to a point which may be remembered should the trip be repeated another year; and it is that children in a state of activity at the seaside have very brisk digestion and soon begin to suffer acutely from hunger; in this case they were kept far too long without food, notwithstanding the abundant supply provided. All the other arrangements were perfect, including ambulance attendance under Dr. Lightfoot, &c. But with active children frequent feeding is a *sine qud non*.

POISONING BY ACONITE.

A sad case of accidental poisoning by aconite occurred last week at Fence Houses, a village in the county of Durham. A man named Hughes asked his wife early in the morning to hand him a liniment, which he was using for his back; she did so, and put the bottle back in a cupboard. Soon afterwards he wanted some cough mixture, and took out the liniment bottle in mistake, drinking a teaspoonful in half a wineglassful of cold water. The mistake was immediately found out by the man and his wife, and Dr. McGill was called in, under whose treatment he revived for a while, but soon afterwards died from the effects of the poison.

JARROW.

The Memorial Hospital erected about ten years ago by Sir C. M. Palmer to the memory of his wife has been so useful that an extension is necessary, which will comprise a boy's ward, a girl's ward, lying-in ward, medical department, with extension of the dispensary and other necessary offices.

TYPHUS IN NEWCASTLE.

Our medical officer of health has presented a special report on the recent outbreak of fever in Newcastle. Mr. H. E. Armstrong's report presents many points of interest forcibly put as to the Corporation having powers to remove all cases to hospital where isolation could not be carried out for want of requisite means. Mr. Armstrong points out that another lesson from the outbreak is the importance of medical students being taught the different varieties of fever and other infectious diseases as part of their curriculum.

Newcastle-on-Tyne, Sept. 5th.

THE SANITARY INSTITUTE OF GREAT BRITAIN.—The Institute has issued its preliminary programme of the tenth Congress, to be held at Bolton on the 20th inst. and four following days. The opening address will be delivered by Lord Basing, F.R.S. On Wednesday an address will be given by Dr. Russell Reynolds, F.R.S., in the Section of Sanitary Science and Preventive Medicine. On the following day Professor Hayter Lewis, F.S.A., will discourse on a subject connected with sanitary engineering and architecture. On Friday Dr. Dupré, F.R.S., will deliver an address in the Section of Chemistry, Meteorology, and Geology. On Saturday addresses will be delivered to the working classes by various gentlemen on subjects of popular interest from a public health point of view.

DUBLIN.

(From our own Correspondent.)

LOCAL GOVERNMENT BOARD FOR IRELAND.

IN the last annual report attention was drawn to the fact that there was a decrease in the average daily number of persons relieved in the workhouses in the year ending Jan. 1886, as compared with the number relieved in the preceding year. The returns for the year under consideration show a further decline in the average daily number of persons relieved in the workhouses. On the other hand, there has been an increase of 19,276 persons in the average daily number who obtained out-door relief, but this increase was mainly due to the operation of the Poor Relief Act of last year. During the twelve months ending January 15th last, the total number of deaths in the workhouses amounted to 10,694, being a decrease of 281 as compared with the previous return. Deaths by fever were 346, as against 371; by lung disease, 1848, as against 1997; and there was only one death from small-pox, being one less than in the previous year. As regards the number of cases in which medical relief was afforded under the Medical Charities Act, it appears that there was a decrease of 18,085, including those prescribed for at dispensaries, and attended at their own homes, as compared with the preceding year. During the year ended September 30th, 1886, 94,361 persons were vaccinated, showing a considerable decline, amounting to 7451 as compared with the previous year. The total expenditure of poor-rates for poor relief, medical relief, burial grounds, sanitary measures, superannuation, &c. was in 1886, £1,360,597, or an increase of £102,132.

HYDROPHOBIA.

Lord Donerailе's death from hydrophobia makes, it is stated, the ninety-sixth death of persons who have undergone M. Pasteur's method of treatment. A large number of those who have been bitten by rabid animals recover no matter what treatment is used; and, therefore, the apparent cures by a certain method of treatment require to be largely discounted. On the other hand, when nearly 100 persons have succumbed from hydrophobia, although M. Pasteur's directions have been carefully caried out, it shows undoubtedly that up to the present a specific for the cure of this dread malady has not yet been discovered.

THE PREVALENCE OF OPHTHALMIA IN THE CORK WORKHOUSE.

The Cork guardians last week received from the Local Government Board the report of their inspector, Dr. O'Farrell, on the prevalence of ophthalmia in the workhouse. He states that the schoolrooms and dormitories are cheerful, clean, orderly, and well ventilated. The ventilation of the boys' hospital, as pointed out by Dr. Sandford, needs improvement, and the sewerage of the entire school buildings require attention. The playgrounds being covered with limestone gravel the children are enveloped in clouds of dust during dry weather, which must have a most irritating effect on their eyes, tender and predisposed as so many of them are to ophthalmia. As regards the important question of treatment, the report considers (1) the means likely to check the present outbreak, and (2) those general hygienic measures which favour the origin and propagation of ophthalmia and other diseases among them. The essence of acute ophthalmia being contagion, he recommends that all children who have discharge or other active symptoms should be isolated as far as possible; while attention should be paid to the lavatory and bathing arrangements. He suggests increased medical inspection and supervision, and recommends that the guardians should appoint a house-surgeon or assistant house-surgeon, preferably one with a special knowledge of eye diseases, who would undertake the supervision and treatment of all the children; that he should examine all fresh admissions into the schools, and that he should treat the severe eye cases in hospital under the direction of the visiting medical staff. Dr. O'Farrell also recommends increased attention to physical training; and that all the children should be encouraged to use gymnastic exercises. The schools and dormitories should be heated during winter, and there should be increased accommodation for the younger children, so that each should have a separate bed, also increased attention to their cleanliness and physical development. These

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are the main points dealt with in a very able report, and a special meeting of the guardians has been called to consider it.

THE COACHFORD POISONING CASE.

Dr. P. Cross, retired surgeon-major, A.M.D., who was arrested on suspicion of having poisoned his wife, will be tried at the next sessions.

Last week Madame Marie Roze visited Jervis-street, and sang a number of songs for the amusement of the inmates.

Dublin, Sept. 6th.

BELFAST.

(From our own Correspondent.)

THE ROYAL HOSPITAL.

FROM the report presented at the last quarterly meeting (held on Aug. 22nd), we learn that during the past three months 469 intern patients, and 2819 extern patients were treated. Great regret was expressed owing to the death of Prof. Gordon and Dr. J. Moore, who for a long series of years were surgeons to the hospital. In reference to the important subject of finance, we find that a total of £3269 7*s.* 1*d.* has been received for the present year. The total expenditure up to the end of July, including the balance due at the end of last financial year, has been £3948 10*s.* 1*d.* Of this amount the sum of £1100 2*s.* 8*d.* is still unpaid. The ordinary income of the hospital still falls far short of the ordinary expenditure, but fortunately during the present year there have been some special sources of income which enable the Board to meet the claims upon them without strain or inconvenience. During the past eleven months the sum of £4000 has been invested to the credit of the hospital. In accordance with a rule of the hospital, all the attending medical officers are elected for periods of four years, at the end of which they retire, but are eligible for re-election. The following members of the staff, whose term of office had expired, were re-elected at this meeting. Physician: Dr. Ross. Physician for Diseases of Women: Dr. John W. Byers. Surgeon: Dr. Walton Browne. Ophthalmic Surgeon: Dr. Joseph Nelson. Assistant Physician: Dr. J. A. Lindsay.

ULSTER MEDICAL SOCIETY.

At the annual meeting of this Society held on Aug. 24th, the report, giving full details of last year's work, and the treasurer's statement, which showed that there is a substantial balance in hand, were submitted. Dr. Robert Esler was elected President, and Dr. John Macaw Secretary for the ensuing session.

THE MORGUE.

A short time ago public attention was drawn to the situation of this building by the circumstance that an owner of property in the neighbourhood made an application at the police court. He stated that owing to the presence of the Morgue his property is seriously deteriorating, that his tenants are leaving, and that disease may at any time break out among the children who are constantly running about in its vicinity. The matter was brought before the Public Health Committee of the Town Council. At this meeting it was shown that bodies of persons who have died of infectious disease are not taken to the Morgue, and that only those who have been drowned or have in some other way come to a sudden death are left in this place. The subject was ultimately referred to Dr. Samuel Browne, consulting sanitary officer of Belfast, and it is hoped that arrangements may be made by which this most unhandsome building may be removed from its present situation in the centre of Belfast.

HOSPITAL SATURDAY.

The recent collection throughout Belfast for the Royal Hospital realised the sum of £226 10*s.* 6*d.* Although the day was rather unfavourable, it must be admitted that, considering the population of the town (220,000), this is anything but satisfactory, and the more to be regretted as it shows a falling off from last year.

Belfast, Sept. 3rd.

A Sister of the Red Cross at Odessa has been bitten on the hand by a man suffering from hydrophobia whom she was nursing. She has been treated as if she had been bitten by a rabid dog.

PARIS.

(From our own Correspondent.)

M. LUYS AND HYPNOTISM.

THE Academy of Medicine of Paris is not only a learned society. It serves also as a consulting body to the Government in matters of public health, and hence the utterances which receive its sanction may be taken to represent the official science of the day. Hitherto its members have been sober—at any rate, in the precincts of the Academy—in their expression of opinion concerning hypnotism; and if communications have been made from time to time on this subject, they have mostly been characterised by mere triviality, the more irrational statements in the so-called "psychical" science having been reserved for the other societies. M. Luys, however, is ambitious of official recognition for the vagaries of hypnotism; and he has had the happy idea of entertaining the Academy with his researches about the "Solicitation expérimentale des phénomènes émotifs chez les sujets en état d'hypnotisme." It is regrettable that the "facts" stated at the last meeting should have been brought forward by one who has hitherto enjoyed the reputation of a *savant* on cerebral physiology, and whose work on the brain is a standard text-book; but M. Luys will have done a service in forcing the Academy to an expression of opinion concerning the practices carried on in many of the Paris hospitals, where hypnotism, daily misapplied under a therapeutic pretext, has nearly constantly one only effect—that of destroying the mental and moral equilibrium of those previously sound in this respect, and of inducting many patients into the gravest degradation of hysteria. M. Luys' communication relates to the action of certain medicines upon hypnotised subjects by radiation, from the inside of hermetically sealed glass tubes. This interesting discovery, which dates, at any rate, from Hahnemann, was rediscovered by MM. Bourru and Burot, and related by them at the Congress of Grenoble, and they have since written a book on the subject. M. Luys has repeated and extended their experiments with eighty-six different substances, and finds that the effects produced upon the hypnotised organism by the action of the stimulating agents are of two orders. In one the subject is silent, and reacts as an automaton; morphine, strychnine, valerian, and sparteine produce phenomena of the kind. In the other the subject enters into the phase of lucid somnambulism, hears and enters into communication with the outside world. This is effected by Indian hemp, coffee, alcohol, and various odorous substances. In the first series of experiments the subjects are placed in a state of lethargy. The sealed tube containing the medicine is put at the nape of the neck, and in a short time the face expresses a state of feeling—generally that of displeasure. In those who enjoy a dual personality (*sujets dedoublés*) the same substance will provoke an expression of suffering or malaise when applied to the right side of the brain, and a state of joy and expansion when placed on the left. Essence of thyme causes the submaxillary and thyroid regions to swell, the face to become turgescent, and the eyes to protrude. It must be noted that all this is recorded photographically. Morphia placed on the left side of the nape of the neck gives rise immediately to a feeling of terror. If the application is continued, the subject, actuated by the "instinct of protection," expresses the greatest anger. Upon changing sides and placing the tube behind the right ear, this subsides, and the face becomes calm and placid. Strychnia produces convulsions when applied on the left side; on the right, a state of gaiety and "jubilation." To quote a last example: Valerian gives rise to emotions having a character of great sadness. "The subject," says M. Luys, "is under the influence of an irresistible impulse to scrape the earth. He kneels down to do so, and the idea comes to him that he is in a cemetery. He performs the exhumation of a beloved friend, placing aside the soil with his hands and piously gathering together the remains. He makes a little mound upon which he places a cross, and goes through the funereal ceremony with groans, genuflexions, crossings, and kissings of the earth!" Not only is the preceding statement profoundly ridiculous, coming from a physician versed in mental science, but it is also opposed to what was obtained with the same agent by MM. Bourru

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and Burot. Valerian was found by these observers to cause "violent excitement," and to give rise to the same emotions as in a cat. The subject runs about sniffing, scratches a hole, and places his face in it. If these were isolated experiments, having been only preceded by those already mentioned—as the perpetual secretary of the Academy, in expressing his astonishment at M. Luys' communication, seemed to believe,—it would scarcely be worth while to discuss their explanation; but according to M. de Rochas, who has published a recent work on "Non-defined Forces," similar results have been obtained in the wards of M. Brouardel, the present dean of the Faculty, of M. Charcot, and of M. Dumontpallier. In the wards of M. Dumontpallier, "opium (applied in tubes), has induced sleep in a hystero-epileptic. In M. Charcot's service a woman submitted to alcohol presented an irresistible sleepiness, staggering, heaviness of the head, moderate and agreeable intoxication, and vomiting—symptoms which were arrested by ammonia. In a patient (!) in the service of M. Brouardel the action of alcohol was chiefly exerted on the legs. Valerian caused heaviness of the head, somnolency, and a kind of drunkenness." There can be no doubt that these experiments have been performed with the results published; and, if the experimenters think that the application of their tubes and the symptoms which follow have a relation of cause and effect, they are, of course, entitled to that belief. But in my opinion the experiments are carried on in the very worst possible conditions for a scientific test, and in many cases the observers seem not only to ignore the psychology of hysteria, but also to be unacquainted with the most elementary principles of hypnotism. I have seen the operator guilelessly whisper to a visitor that such and such an effect would be produced, apparently unaware of the fact that in the hypnotic condition there is a state of hyperacousia which makes the faintest sound audible. When the subject does not actually hear what is the name of the medicine under experiment, she is almost sure to have to go through her performance in a certain order. The experimenter generally shows the phenomena *crescendo*, from the less to the more astounding, and should there be any change in this respect to the trained subject the expression of the face and the inflexion of the voice are very sufficient guides. There is also such a thing as auto-suggestion, and from what I have seen, it is very often the would-be suggester who comes away from the séance with a delusion.

Paris, Sept. 7th.

Obituary.

THOMAS CUMING, M.D., F.K.Q.C.P.I.

WE have to record the death of one of the oldest medical practitioners in Ulster—Dr. Thomas Cuming, who died on Sept. 4th, at his residence, Armagh, in his ninetieth year. Dr. Cuming studied at Edinburgh and Dublin, and was a graduate of both Universities, and he was also elected a Fellow of the King and Queen's College of Physicians, Ireland. He was for a time physician to the Wellesley Fever Hospital, Dublin, and assistant physician to the Institution for Diseases of Children, Pitt-street, Dublin. He was also at one time lecturer on Practice of Medicine at the Richmond School of Medicine, and on Diseases of Children at the Pitt-street Institution, Dublin. When a very young man Dr. Cuming settled in Armagh, where he soon found himself fully occupied with a serious outbreak of fever; and so much was he personally respected, and his skill as a physician admitted, that he rapidly came to the front as the leading medical man in Armagh and the surrounding district. For many years he was consulting physician to the Armagh Lunatic Asylum, of which he was a trustee; and when a younger man he was an active member of the Armagh Natural History and Philosophical Society. It is said that never but once for sixty years was he absent from the annual meeting of the Armagh auxiliary to the Hibernian Bible Society. He was physician to the late Lord Primate of Ireland, and it was during his visits to the Palace in the winter that he caught a cold, and for a time it seemed doubtful as to whether the doctor or his patient would succumb first. It was a great grief to him not to be with his friend the Lord Primate to the end of his last illness. Dr. Cuming was a man highly beloved and respected both as a friend and as a physician, and his death removes one of the links connecting the present with the past generation.

Medical News.

SOCIETY OF APOTHECARIES.—The following gentlemen having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates to practise as Licentiates of the Society on Aug. 15th:—

Atkinson, Guy C. Barlow, Danby Parsonage. Grosmont.
Bays, James Thomas, Queen-street, Peterborough.
Blake, Edwin H., Claremont, Cleveland-rd., Wanstead, Essex.
Cotton, John, Holly Mount, St. Anns, St. Helens, Lancashire.
Heelas W. Wheeler, The Holt, Wokingham, Berks.

The following gentlemen passed the examination in Surgery held on July 27th and 28th, and Aug. 10th, 11th, 24th, and 25th—

Bays, James Thomas, St. Mary's Hospital.
Beaumont, William Henry, the London Hospital.
Buist, James Joseph, St. Bartholomew's Hospital.
Clarke, Edward Alfred, Owens College, Manchester.
Ellis, William, St. George's Hospital.
Fletcher, Frederick James, Queen's College, Birmingham.
Garvey, Henry Patrick, Dublin.
Gunning, Montague Shirley Wyatt, University College.
Hudson, James Wasdale, Middlesex Hospital.
Jenkinson, Joseph Arthur, Owens College, Manchester.
Parsons, George Gooden, London Hospital.
Williams, William Wilfred, Guy's Hospital.

At the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry, given annually by the Society, the successful candidates were:—

First. William McAdam Eccles, student of St. Bartholomew's Hospital. The Gold Medal.
Second. Alfred Banks, student of St. Thomas's Hospital. The Silver Medal and Books.

VACCINATION GRANT.—Mr. R. L. Shone, medical officer to the Mortlake district, has received the Government grant for successful vaccination in his district (third time).

AT a meeting of the Merthyr Tydvil Local Board on the 7th inst., it was reported that an outbreak of typhus had occurred at Dowlais.

DEATH WHILE UNDER THE INFLUENCE OF CHLOROFORM. The death, in the Gloucester Infirmary, of a patient to whom chloroform had been administered preparatory to an operation rendered necessary by an injury to the hand, is reported.

PROFESSOR GUSTAF BRAUN has, it is reported, sent a telegram from Vienna to the Queen of Denmark respecting the Duchess of Cumberland, stating that "the physical and mental condition of Her Royal Highness is very satisfactory."

ON the 6th inst. a public inquiry was held at Chichester, before Major Hector Tulloch, R.E., a Local Government Board inspector, with reference to the application of the Town Council for powers to borrow a sum not exceeding £2250 for the purpose of building an infectious diseases hospital.

HOSPITAL SATURDAY FUND.—On the 3rd inst. the subscriptions of the various industrial establishments of London on behalf of this fund became due. It is of course too early to speak with any degree of certainty as to the result of the workshop collection, but it is confidently believed that it will reach at least £7000.

SCARLET FEVER IN DUNDEE.—During last month there was an alarming increase of infectious disease in Dundee. Notwithstanding the exertions of the sanitary authorities, scarlet fever is now very prevalent in the town. The disease is not confined to any particular district, and last month ended with a total of 294 more cases than on the 31st of July.

TEMPERANCE SUNDAY.—At a gathering of representatives from various religious bodies, held at the Memorial Hall, Farringdon-street, on the 6th inst., it was resolved:—"That this conference of representatives of the principal Nonconformist temperance organisations unanimously recommends that the last Sunday in November in each year should be observed as Temperance Sunday." The conference also unanimously recommended that a united demonstration be held during the week following the sermons in November.

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NEW COTTAGE HOSPITAL AT SYDNEY.—The ceremony of laying the foundation stone of the new buildings for the Cottage Hospital at North Shore, Sydney, was performed by Sir Henry Parkes on the afternoon of June 4th. The buildings will contain three wards for men, women, and children, will accommodate about forty patients, and have all the necessary offices required for the proper treatment of the sick.

ULSTER MEDICAL SOCIETY.—The annual meeting of this Society for the election of office-bearers was held recently in the Museum, Belfast. The retiring president, Dr. Whitla, was strongly urged to accept re-election in recognition of his valuable services during the past session, but declined the proffered honour owing to press of engagements. On the motion of Dr. Whitla, seconded by Dr. Burden, Dr. Esler was then unanimously elected president for the ensuing year. Several members bore testimony to Dr. Esler's untiring labours as treasurer and in other subordinate offices, which contributed in so large a measure to the numerical strength and financial prosperity of the Society. The other offices were filled as follows:—Vice-presidents, Dr. Dempsey and Dr. O'Neill; treasurer, Dr. Stanley B. Coates; secretary, Dr. M'Caw; librarian, Dr. Strafford Smith; pathological secretary, Professor Sinclair; Council—Professor Dill, Dr. Kevin, Dr. Calwell, Dr. O'Connor, Dr. Bigger, and Dr. Burden.

THE SALARIES OF MEDICAL OFFICERS OF HEALTH.—At a meeting of the Totnes Union Rural Sanitary Authority, held on the 3rd inst., a letter was read from the Bodmin Rural Sanitary Authority on the subject of the remuneration of a medical officer of health, the Local Government Board having refused to sanction the appointment of their officer on the ground of the inadequacy of the salary, thereby depriving them of a moiety of the salary allowed by the Parliamentary grant. The Bodmin Authority considered the action of the Board arbitrary and unreasonable, and in view of the possibility of other unions having experienced the same difficulty, it had been suggested that united action on the part of those who were similarly affected might be the means of securing a fair and proper consideration of the whole matter. Another letter on the same subject was read from the Sanitary Authority at Okehampton. After some discussion it was decided that the clerk should ascertain the salaries paid by other authorities, and further consideration of the question was then adjourned.

THE BURMESE CAMPAIGN.—The *London Gazette* of the 2nd inst. contains dispatches received by the Secretary of State for War from the Secretary of State for India in Council relative to the Burmese campaign. The Viceroy of India mentions the name of Deputy Surgeon-General J. McN. Donnelly. The Commander-in-Chief in India mentions the services of Surgeon-Major W. Taylor, Medical Staff, and Deputy Surgeon-General G. Farrell, C.B. Brigadier-General Anderson mentions the following officers:—Surgeon-Major T. W. Patterson, Medical Staff, Senior Medical Officer, 4th Brigade, and Surgeon-Major F. W. Wright, M.B., Indian Medical Service. The following officers have been brought to notice by Brigadier-General Stewart for good service:—Surgeon J. P. Barry, M.B., Indian Medical Service, and Surgeon W. A. Sykes, Indian Medical Service. Brigadier-General Low, C.B., has named the following officers:—Surgeon-Major J. F. Supple, Senior Medical Officer, 6th Brigade, and Surgeon A. P. Adams, Indian Medical Service. Brigadier-General Cox has brought the following officer to notice:—Surgeon-Major J. S. Wilkins, Indian Medical Service. The Principal Medical Officer has recommended the following medical officers for special zeal and ability:—Surgeon-Major R. de la Cour Corbett, M.D., Medical Staff; Surgeon R. V. Ash, M.B., Medical Staff; Brigade-Surgeon W. H. Roberts, M.D., Madras Medical Service; Surgeon-Major T. W. Patterson, Medical Staff; Surgeon D. Elcum, Madras Medical Service; Surgeon H. K. Fuller, M.B., Madras Medical Service; Surgeon-Major E. Fawcett, Madras Medical Service; Surgeon-Major J. S. Wilkins, Bombay Medical Service; Surgeon-Major W. Venour, Medical Staff; Surgeon-Major F. W. Wright, M.B., Bengal Medical Service; Surgeon-Major C. F. M'Vittie, Madras Medical Service; Surgeon M. O'C. Drury, Medical Staff; Surgeon W. A. Sykes, Bengal Medical Service; Surgeon-Major J. F. Supple, Medical Staff; Surgeon-Major C. F. Ogilvie, M.D., Bombay Medical Service; Surgeon-Major J. T. B. Bookey, Bengal Medical Service; Surgeon-Major R. D. Murray, M.D., Bengal Medical Service; Surgeon J. Macgregor, M.D., Bombay Medical Service; Surgeon W. A. Morris, Medical Staff; Surgeon P. F. O'Connor, Bengal Medical Service; Surgeon R. E. S. Davis, M.B., Madras Medical Service; Surgeon A. P. Adams, Madras Medical Service, of whom General White selects the following for special mention:—Surgeon-Major R. de la Cour Corbett, M.D., Medical Staff; Surgeon-Major R. V. Ash, M.B., Medical Staff; Surgeon-Major T. W. Patterson, Medical Staff; Surgeon-Major J. S. Wilkins, Bombay Medical Service; Surgeon-Major W. Venour, Medical Staff; Surgeon-Major F. W. Wright, M.B., Bengal Medical Service; Surgeon W. A. Sykes, Bengal Medical Service; Surgeon-Major J. F. Supple, Medical Service; Surgeon A. P. Adams, Madras Medical Service. General White mentions the services of Deputy Surgeon-General G. Farrell, C.B., and Surgeon-Major H. W. A. Mackinnon. Brigadier-General W. S. A. Lockhart, C.B., C.S.I., Commanding the 3rd Brigade, submits an additional list of officers in his command who have rendered good service up to date, in which appear the names of Surgeon W. G. Birrell, M.B., Medical Staff; Surgeon A. W. F. Street, Indian Medical Service; Surgeon P. de Conceiçao, Indian Medical Service; and the late Surgeon E. W. Kelsall, Medical Staff. Colonel Stedman mentions the names of Surgeon-Major J. C. G. Carmichael, M.D., 3rd Goorkha Regiment, Surgeon A. W. F. Street, Bombay Medical Service; and Surgeon P. C. H. Gordon, Medical Staff. Major-General J. J. H. Gordon, C.B., commanding the Eastern Frontier District, March 21st, mentions the services of Surgeon F. A. Rogers, Indian Medical Service.

MEDICAL NOTES IN PARLIAMENT.

House Boats on the Thames.

IN the House of Commons, on the 1st inst., Mr. Coghill asked the President of the Local Government Board whether he was aware that since his attention was called to the matter in February last the water of the Thames had continued to be polluted by the sewage and other refuse of house boats and steam launches.—Mr. Ritchie said that since March last two bye-laws which had been made on the subject by the conservators had come into force on June 18th. Shortly after that date the conservators addressed notices to the owners of house boats, drawing special attention to the requirements of the bye-laws to prevent the pollution of the river by the discharge of sewage. He had made further communications with the conservators, asking what steps they had taken to see that their bye-laws were carried out.

Rank of Army Medical Officers.

On the 5th inst., in answer to Dr. Clark, Mr. Stanhope repeated the statement that the recent Royal Warrant by abrogating relative rank detracted in no sense whatever from the status, precedents, or privileges of medical officers. Whatever privileges they had under Clause 17 of the Royal Warrant of 1858 they have now, with this exception, that in some cases they rank higher than they then did. He was not aware that there was any difficulty in obtaining qualified candidates. The hon. member was quite mistaken in supposing that he had promised a committee, nor did he think that it would serve any useful purpose.

Fever Hospitals.

On the 6th inst., in reply to the Marquis of Carmarthen, Mr. Ritchie stated that the question whether the South-Western Hospital or that at Winchmore-hill should be opened was considered by the managers of the Metropolitan Asylums Board, who determined by a considerable majority in favour of opening the former. The Winchmore-hill Hospital was not furnished, and it would, therefore, have taken longer than the other hospital to prepare for patients. The matter, however, was one of urgency, and the committee had already found it necessary to act upon the resolution of the managers, and to open the South-Western Hospital. No evidence had been adduced to show that during the seventeen years which have elapsed since this hospital was first opened fever has spread from it to the surrounding houses, and, under all the circumstances, he had not thought it necessary to interfere with the decision of the managers on the subject.

The Medical Staff in India.

Sir W. Foster asked the Under-Secretary of State for India whether an executive officer of the medical staff in India, who officiated for less than one month as Deputy Surgeon-General, in the absence of the Deputy Surgeon-General on sick leave or furlough, received no allowances for the period, although he performed the duties in addition to his other duties; whether in such an instance the "half-staff" of the appointment reverted to the State; whether the acting officer would be held pecuniarily liable in the event of loss of stores or other mistakes; and whether officers officiating on the military (combatant) staff in a similar way would draw the "half-staff" for broken periods, and why the difference was made in the case of medical officers.—Sir J. Fergusson, in reply, said that in accordance with the undertaking given by him on June 17th, when this question was first put, a despatch on this subject was addressed to the Government of India, but no reply had yet been received.

The Burning of the Exeter Theatre.

Sir J. Puleston asked the Home Secretary whether as the Exeter Theatre had been recently built any official survey had been made before it was open.—Mr. Matthews replied that no official survey was held by the Home Office, because the Home Office has no authority in the matter. The jurisdiction lies with the justices at special sessions.—Dr. Tanner

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said he wished to ask the Secretary of State for the Home Department whether, in consequence of the frequently recurring disasters and loss of life in theatres and other places of public amusement, steps would be immediately taken to appoint two or more inspectors under the department whose duty it should be to inspect all places of public amusement in Great Britain and Ireland, and who should have power at once to prevent any performance or public meeting being held in such theatres or places as should not be adequately provided with commodious exits for use in all cases of sudden emergency; and, also, whether, bearing in mind the fact that most fires originated on the stage, as was the case in the dreadful calamity last night in Exeter, the iron drop scene should in future be deemed a necessary appurtenance to every theatre.—Mr. Matthews regretted to say that it would not be possible to act on the suggestion without legislation. Outside the metropolitan area there was no power in any Government department or in any local authority to inspect theatres or to insist on structural alterations in an existing theatre. Within the metropolitan area the Metropolitan Board of Works have sufficient powers to enforce the precautions which they may deem necessary; and they have largely acted on those powers. The dreadful calamity which has occurred at Exeter shows the necessity of legislation for provincial theatres, and the Government would give their attention to the subject.

Mr. Lawson obtained leave to introduce a Bill, which was read a first time, to prevent nuisances on vacant grounds and open spaces.

BOOKS ETC. RECEIVED.

ARGUS COMPANY, Albany, New York.

Fourth Annual Report of the Bureau of Statistics of Labour of the State of New York for 1886. Transmitted to the Legislature, January, 1887. pp. 860.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

A Treatise on the Animal Alkaloids, Animal and Vital; or, the Ptomaines and Leucomaines, considered in relation to Scientific Medicine. By A. M. Brown, M.D. With an Introduction by Prof. A. Gautier. pp. 182. 6s.

BERGMANN, J. F., Wiesbaden.

Die Heilquellen des Taunus. Herausgegeben von Hofrath Dr. Grossmann. Sn. 448.

BLAKISTON, SON, & Co., New York.

The Principles of Antiseptic Methods applied to Obstetric Practice. By Dr. Paul Bar. Translated by H. D. Fry, M.D. pp. 175.

CHATTO & WINDUS, Piccadilly, London.

Hydrophobia; an Account of M. Pasteur's System. By Renaud Suzor, M.B., C.M.Edin. pp. 231, with 7 Illustrations.

CHURCHILL, J. & A., New Burlington-street, London.

Handbook of Gynæcological Operations. By Alban H. G. Doran, F.R.C.S. pp. 485, with Illustrations.

A Manual of Physiology for the Use of Junior Students of Medicine. By Gerald F. Yeo, M.D.Dub., F.R.C.S. Second Edition. pp. 668, with Illustrations.

The Commoner Diseases and Accidents to Life and Limb. By M. M. Basil, A.M., M.B., &c. pp. 104.

CROSBY, LOCKWOOD & Co., Stationers' Hall-court, London.

Handbook of House Property. By E. L. Tarbuck, Architect and Surveyor. Fourth Edition, enlarged. pp. 278.

DOIN, O., Paris.

Traité Pratique des Maladies du Nez et de la Cavité Naso-pharyngienne. Par Dr. Morell Mackenzie. Traduit de l'Anglais et Annoté par les Drs. E. J. Moule et J. Charazac. pp. 446, avec 82 figures.

LEWIS, H. K., Gower-street, London.

Sprains, their Consequences and Treatment. By C. Mansell Moullin, M.A., M.D.Oxon. pp. 268.

Gout and its Relations to Diseases of the Liver and Kidneys. By Robson Roose, M.D., F.C.S. Fourth Edition. pp. 169.

MACLACHLAN & STEWART, Edinburgh. SIMPKIN MARSHALL & Co., London.

Observations on Mental Derangement. By Andrew Combe, M.D. Edited and abridged by Arthur Mitchell, C.B., M.D., LL.D. pp. 114.

OLDENBOURG, R., München u. Leipzig.

Zum gegenwärtigen Stand der Cholerafrage. Von Max v. Pettenkofer. Sn. 753, mit vier Tafeln.

WHITTAKER & Co., Paternoster-square, London.

A Dictionary of Terms used in Medicine and the Collateral Sciences. By the late Richard Hoblyn, M.A.Oxon. Eleventh Edition, revised by J. A. P. Price, B.A., M.D.Oxon. pp. 806.

Report on the Trinidad Leper Asylum for 1886; by Beaven Rake, M.D.Lond.—Le Charbon des Animaux et de l'Homme; par Prof. I. Straus (Delahaye, Paris).—On Abdominal Section for the Treatment of Perineal Injury; by Sir Wm. MacCormac, F.R.C.S.—Beobachtungen über Malaria insbesondere das Typhoide Malariafieber; von Dr. P. Werner (Herschwald, Berlin). — Arsberättelse fran Sabbatsbergs Sjukhus i Stockholm för 1886; afgifven af Dr. F. W. Warfvinge.—Dentistry and its relation to the State; by W. Mc P. Fischer, L.D.S.Eng., with Preface by Sir J. Tomes.—Suprapubic Cystotomy for purposes other than the Extraction of Calculus; by J. H. Packard, A.M., M.D.—La Chirurgia Renale; per il Prof. Antonio D'Antona.—Index Medicus, Vol. IX., No. 7.—Programme of Technological Examinations, City and Guilds of London Institute.—Senkung und Vorfall von Scheide unde Gebärmutter sowie die Veralteten Dammrisse; von Dr. G. Walcher (H. Laupp'schen Buchhandlung, Tübingen).—Gratuitous Advice to Parents and Teachers on the Physical and Moral Training of Young Men and Boys; by A. M.R.C.S., L.S.A., &c. (Ranken, Drury-lane).—A Catalogue of Some Books relating to the Disposal of the Bodies and perpetuating the Memories of the Dead; by John Townshend, Counsellor of the Supreme Court, New York (private distribution).—Currency, or Bi-metallism Examined; by Wm. Birkmyre (Macnaughton and Sinclair, Glasgow).—Petroleum; Valuable Hints to those who use it (302, Strand).—Orteil en Marteau—Nouveau Traitement par Ostéotomie Cunéiforme; par Dr. E. Cohen (Baillière et Fils, Paris).—Magazines for September:—Good Words, Sunday Magazine, Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Scribner's Monthly.

Births, Marriages, and Deaths.

BIRTHS.

COLLINS.—On the 5th inst., at Jessamine Cottage, Ash-next-Sandwich, Kent, the wife of M. J. Collins, L.R.C.S.Ed., &c., ex-Surgeon, R.W.J.M.S., of a son (Reginald Michael).

FRANKS.—On the 2nd inst., at Fitzwilliam-square, Dublin, the wife of Kendal Franks, M.D., of a daughter.

ISAAC.—On the 1st inst., at Mornington-crescent, N.W., the wife of G. Washington Isaac, M.B., of a daughter.

ORR.—On the 30th ult., at Wollaston, Wellingborough, the wife of James W. Orr, of a daughter.

PARSON.—On the 6th inst., at Cumberland House, Kew, the wife of C. Jenner Parson, M.D., of a daughter.

PHILLIPS.—On the 1st inst., at Denny House, Waterbeach, near Cambridge, the wife of H. Astley Phillips, M.D., of a son.

RAHILLY.—On the 1st inst., at Merton Lodge, Clifton, the wife of Surgeon-Major Rahilly, Army Medical Staff, of a son.

ROBERTS—On the 29th ult., at Ealing, the wife of H. Prescott Roberts, M.D., prematurely, of a daughter (stillborn).

STEEL.—On the 5th inst., at Radnor Villa, Upper Chorlton-road, Manchester, the wife of Graham Steell, M.D., of a son.

WHEELER.—On the 27th ult., at Pembridge-gardens, W., the wife of John Wheeler, M.D., M.Ch., M.A.O., of a daughter.

WHYTE.—On the 30th ult., at Lovegrove-terrace, Mile-end, Portsmouth, the wife of Alexander Whyte, M.B., M.R.C.S., of a son (stillborn).

MARRIAGES.

ARCHER—LOWNE.—On the 3rd inst., at St. Michael and All Angels', North Kensington, W. G. Archer, Esq., M.B.Cantab., F.R.C.S., son of the late John Archer, Esq., F.R.C.S., of Birmingham, to Nellie, the only daughter of Benjn. Thompson Lowne, Esq., F.R.C.S.

HARVEY—MARSHALL.—On the 1st inst., at the Parish Church, Mitcham, Surrey, by the Rev. F. Legg, Vicar of Christ Church, Mitcham, assisted by the Rev. O. H. Seaton, Thomas Pashley, eldest son of the late G. T. Harvey, of Baron Grove, Mitcham, to Helen May, second daughter of Edward Marshall, Surgeon, of Church House, Mitcham, Surrey.

HOPE—BRIGGS.—On the 31st ult., at St. John's, Angell Town, Brixton, by the Rev. C. J. Rashleigh Cooke, M.A., Vicar, George Hope, L.R.C.P., M.R.C.S., L.S.A.Lond., only son of Major George Hope, late of the 77th Regiment, D.C.O., to Louise, eldest daughter of Colonel John Briggs, late of the 82nd Regiment, P.W.V.

LUCKMAN—MUIR.—On the 25th ult., at Christ Church, Timperley, by the Rev. W. Bellars, M.A., of All Hallows, London (cousin of the bride), assisted by the Rev. C. B. Gwynne, B.A., Edward Llewellyn Luckman, M.R.C.S., L.R.C.P., of Altrincham, to Fanny, third daughter of W. B. Muir, of Timperley, and niece of the late Sir W. M. Muir, M.D., K.C.B., Director-General of the Army Medical Department.

PHILLPOT—LUXMOORE.—On the 31st ult., at St. George's, Hanover-square, by the Rev. A. Thornton, LL.B., George Frederick Phillpot, M.R.C.S., L.R.C.P., &c., of Brooklands, Hemel Hempstead, Herts, third son of T. Aston Phillpot, Esq., of Summerfield House, Hartlebury, Worcestershire, to Harriett Augusta, only surviving daughter of the late William Edwd. Luxmoore, Esq., of Lawn-park, Hemel Hempstead.

DEATHS.

BLOWER.—On the 30th ult., at Duke Place, Bedford, after an illness of twenty-eight years' duration, William Blower, M.R.C.S., L.S.A., aged 84.

CORNISH.—On the 2nd inst., at East-street, Taunton, Charles Henry Cornish, F.R.C.S.E., aged 80.

CUMING.—On the 4th inst., at his residence, The Mall, Armagh, Thomas Cuming, M.D., in his 90th year.

HALLOWES.—On July 4th, at Bourke, New South Wales, suddenly, Miller Coleman Hallowes, L.S.A., in his 57th year.

JACKSON.—On the 1st inst., at Kirkbuddo, Forfarshire, James Rawlinson Jackson, Deputy Surgeon-General, I.M.D.

LOWTHER.—On the 7th inst., at 3, Nelson-avenue, Hull, George Lowther, F.R.C.S., aged 79.

OLIVER.—On the 28th ult., suddenly, at his residence, Montgomery House, Harbury, Warwickshire, Richard Owen Oliver, M.R.C.S., aged 61.

PITCHER.—On the 7th inst., at Southport, Arthur Henry Pitcher, L.S.A., eldest son of the late John Henry Pitcher, Proctor, of Doctors' Commons, in his 44th year.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADKINS, GEORGE, L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Plympton St. Mary Rural Sanitary District, Devon.

BOND, W. A., M.A., M.D., B.C.Cantab., has been appointed Resident Accoucheur to St. Thomas's Hospital.

BROOK, W. F., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Throat Department of St. Thomas's Hospital.

BULSTRODE, H. T., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., has been appointed Non-Resident House-Physician to St. Thomas's Hospital.

CALVERT, J. T., L.R.C.P., M.R.C.S., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

CRISP, E. H., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Ear Department of St. Thomas's Hospital.

CROTHER, THOMAS, M.D. King's Col. Aberd., M.R.C.S., has been appointed Medical Officer of Health for the Midgley Urban Sanitary District, Yorkshire, vice Britton.

DUNCAN, H., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

FOX, HERBERT, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer of Health for the Stainland-with-Old Lindley Urban Sanitary District, Yorkshire, vice Britton.

HAWKINS, H. P., M.B., B.S.Oxon., M.R.C.S., L.S.A., has been re-appointed Resident House-Physician to St. Thomas's Hospital.

HINNELL, J. S., M.R.C.S., L.S.A., has been reappointed Ophthalmic Clinical Assistant to St. Thomas's Hospital.

HOYLE, JOHN, M.B., C.M.Ed., has been appointed Medical Officer of Health for the Barkisland Urban Sanitary District, vice Britton.

JONES, H. S., M.R.C.S., L.S.A., has been appointed House-Surgeon to St. Thomas's Hospital.

LEAH, THOMAS, M.R.C.S., has been reappointed Medical Officer of Health for the East Stonehouse Urban Sanitary District, Devonshire.

MACEVOY, H. J., L.R.C.P., M.R.C.S., has been reappointed Resident House-Physician to St. Thomas's Hospital.

MARSHALL, ANDREW, M.D., has been appointed Consulting Honorary Medical Officer to the Preston and County of Lancaster Royal Infirmary.

ORD, W. W., M.A., M.B., B.S.Oxon., M.R.C.S., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

POGSON, WILLIAM, L.R.C.P.Ed., F.R.C.S.Ed., has been reappointed Medical Officer of Health for the Leeds Rural Sanitary District.

RIGBY, JAMES A., M.D. Lond., has been appointed Honorary Medical Officer to the Preston and County of Lancaster Royal Infirmary, vice Marshall, resigned.

SMYTH, H. J., L.R.C.P., M.R.C.S., has been reappointed non-Resident House-Physician to St. Thomas's Hospital.

SISSONS, WILLIAM HARLING, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Barton-upon-Humber Urban Sanitary District.

SOLLY, E., L.R.C.P., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Ear Department of St. Thomas's Hospital.

TEBB, W. SCOTT, M.A., M.B.Cantab., L.R.C.P., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Throat Department of St. Thomas's Hospital.

TONKING, J. H., L.R.C.P., M.R.C.S., has been appointed House-Surgeon to St. Thomas's Hospital.

WHISTON, P. H., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Residence, board, and washing, but no salary.

DEVON AND EXETER HOSPITAL.—House-Surgeon. Salary £120 per annum, increasing £10 a year until it rises to £150, with board and lodging.

EAST SUFFOLK HOSPITAL.—Honorary Physician.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Surgeon to out-patients.

FEMALE LOCK HOSPITAL, Harrow-road, W.—House-Surgeon. Salary £100 per annum, and board and lodging.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian-road, N.—Obstetric Physician to in-patients.

LEAMINGTON AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION.—Resident Medical Officer. Salary £200; £50 for conveyance; midwifery fees, &c.; good residence, coachhouse, stable, rent, and taxes free.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—House-Surgeon. An honorarium of £70 per annum, and board and lodging in the hospital.

SHEFFIELD GENERAL INFIRMARY.—Two Assistant Physicians and two Assistant Surgeons.

ST. LUKE'S HOSPITAL.—Resident Clinical Assistant. Board and residence.

TAUNTON UNION.—Medical Officer. Salary £75 per annum, together with fees for midwifery, &c.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser. Salary £80 a year, with board, lodging, and attendance (wine, spirits, beer, and washing excepted), together with fees from pupils, if any.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 8th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 2	29·30	S.W.	60	57	89	63	57	·15	Cloudy
,, 3	29·85	W.	61	56	107	68	55	·05	Cloudy
,, 4	29·67	W.	63	58	112	69	55	·24	Cloudy
,, 5	29·56	S.W.	58	56	97	70	55	·14	Cloudy
,, 6	29·61	S.W.	61	57	110	70	56	·04	Raining
,, 7	29·63	W.	59	56	103	66	54	·19	Cloudy
,, 8	30·39	N.E.	53	47	...	...	46	·04	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

"MASSAGE AND ELECTRICAL TREATMENT."

WE have received a letter from the Managing Director of the "Limited Company" referred to in an annotation which appeared in our impression of the 27th ult., page 427. The writer complains that our "strictures on Dr. Leeson are scarcely just, as he is legitimately engaged in superintending and carrying out at our establishment modes of medical treatment that, rightly or wrongly, are receiving extensive countenance from medical practitioners, and that the methods employed by him, as the Company's consulting physician, are identical with those in use by many of his professional brethren." The Managing Director evades the issue raised in our annotation. The legitimate use of electricity as a therapeutic agent is one thing; the obtrusive advertising of the name of a medical practitioner as the employer of such agent, and at the same time as a candidate for the treatment of a disease in which electricity is not specially indicated, is quite another.

Medicus.—The best text-book is Blandford's. Miller's "Hints on Insanity" is small, but good. Bucknill and Tuke's book is the standard work of reference on the subject, but probably too elaborate for our correspondent's purpose. The recent works of Drs. Clouston and Savage are excellent, but are somewhat bulky. Then there are the works of Maudsley, Esquirol, and Greisinger. Good epitomes suitable for students are to be found in Bristowe, Tanner, Russell Reynolds, and in Quain's Dictionary.

Dr. Laquer (Wiesbaden).—Arrangements have already been made.

PROFUSE PERSPIRATION.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged if any of your readers will advise me in the following case.

A gentleman, apparently in perfect health, suffers great inconvenience from profuse perspiration. Walking a short distance, any slight exertion, or entering a warm room causes the perspiration literally to pour off him. He thinks this has much increased since he had syphilis and a long course of mercurial treatment three years ago. Treatment for the past twelve months has been belladonna internally and externally, mineral acids and tonics, oxide of zinc, sponging, and all the usual remedies. Belladonna externally has done good temporarily. If any of your readers can suggest any means to give him relief I shall be thankful.

I am, Sirs, yours faithfully,

September, 1887. YORK.

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THE PREPARATION OF ANTISEPTIC SPONGES.

THE *Vereinsblatt Pfalzischer Aerzte* states that in the antiseptic process sponges of medium porosity are the most easily treated, those in which the pores are too fine being freed with difficulty from sand and shell-lime. They are well dried by heat, and are freed from coarse sand by being beaten with canes, being then placed upon a coarse hair-sieve, and washed until the water runs off absolutely clear and free from sediment. The sponges are then subjected to the action of a solution of permanganate of potash (1 in 1000) for about two hours, and enough crude muriatic acid is added to cause the violet colour to entirely disappear. By repeated washing with water the sponges are purified still further, until the water used in washing no longer reddens blue litmus paper. They are then well dried and placed in a solution of sublimate (1 in 1000), where they are left ten or twelve hours. By occasional washing with distilled water the solution of chloride of mercury is removed, and the sponges are then dried in a room free from dust (or, preferably, in a drying press), until no loss in weight takes place. For preserving the sponges metal vessels or wide-necked glass receptacles closing tightly are indispensable.

M.D.—Wishes to be informed of an institution in which admission may be gained, free or on payment of a small weekly sum, by a lad aged fifteen, who has crippled lower limbs. There is no affection of any other part. The intellect is bright, and his whole time is spent in reading and writing. It is thought desirable that he should learn some light trade as a means of earning his livelihood.

Ignoramus.—Dr. Lutaud, editor in chief of the *Journal du Medecine de Paris*, has published a book which gives the statistics mentioned.

Mr. J. B. Pike.—The cases are not parallel.

"PARALYSIS AFTER DELIVERY."

To the Editors of THE LANCET.

SIRS,—In reference to the letter by "Volzi" in to-day's issue, I beg to suggest that the temporary paralysis described by him might have been due to the same cause as that of "cramps" occurring both during and subsequently to labour—viz., by pressure of the child's head (especially when partially encased by forceps) on the large nerves of the lumbar plexus, causing (firstly), as a rule, cramps in the corresponding (according to position of patient—of course, usually the left) side, or rather leg; and then, if the pressure be increased, as in difficult instrumental delivery, causing partial or complete dissolution of the nerve-current, and consequent paralysis; the pricking sensation of "pins and needle" appearing when the nerves are recovering their functions. The puffiness in the ankle, I imagine, proceeds from the same pressure on the inferior cava. "Volzi" also asks if this form of paralysis is of common occurrence. I have not attended a case where the paralysis has remained so long as six weeks, but have attended within the last twelve months, out of about 200 cases, three or four, in all of which the paralysis lasted, on the average, about a week.

I am, Sirs, yours faithfully,

August 27th, 1887. EXTREME PRESSURE.

To the Editors of THE LANCET.

SIRS,—The probable explanation of the case reported by "Volzi" is that some damage was inflicted on the nerve trunks in the pelvis. Seelig-müller has published a very similar case. In the instance in question there had been a difficult instrumental labour, which was followed by neuralgic pains in the course of the sciatic nerve, and later by paralysis with atrophy of the leg. I cannot tell your correspondent if this is a common occurrence. I have had no personal experience on the point. It would be interesting to learn the experience of obstetricians.

I am, Sirs, yours truly,

Welbeck-street, W., Sept. 1st, 1887. W. B. HADDEN.

Junior Practitioner.—Information regarding the sanitary condition of Dresden may be obtained from Baldwin Latham's book. With regard to Brussels, our correspondent might apply to the Secretary of the Bureau d'Hygiène.

Mr. Palmer (Newport).—Will our correspondent state more particularly what substance is referred to under the name "gelatine emmel."

Mr. T. W. Jones (Ventnor).—Yes.

INFANTILE DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—It appears to me that one of the most cogent and common causes of the diarrhœa now prevalent among children, and of its extreme fatality among the lower classes, is not sufficiently discussed in your influential columns. While straining at gnats do we not swallow camels in neglecting to inform the public of the dangers arising from the indiscriminate use of green and unripe fruits, especially by children who have as yet not all their teeth? One does not nowadays enter a tramcar or pass a perambulator without seeing an infantile occupant discussing a green apple or an unripe plum, fed to its destruction by its misnamed "nurse" or ignorant mother.—I am, Sirs, yours sincerely,

London, Aug. 28th, 1887. PÆDIATRIX.

THE STUDENTS' NUMBER: ADDENDA ET CORRIGENDA.

IN the list of lecturers at the London Hospital which appeared in our Students' Number the name of Dr. Lewers, Assistant Obstetric Physician to the institution, was inadvertently omitted. The names of the professorial staff of Queen's College, Birmingham, were also incorrectly given. They should read as follows:—Medicine: Sir Walter Foster, M.D., F.R.C.P., M.P.; Sir James Sawyer, M.D.Lond., F.R.C.P. Surgery: Oliver Pemberton, F.R.C.S.; Bennett May, M.B., B.S.Lond., F.R.C.S. Anatomy: Bertram C. A. Windle, M.A., M.D., B.Ch.Dub. Demonstrators of Anatomy: Jordan Lloyd, M.B., M.S., F.R.C.S.Eng.; W. F. Haslam, F.R.C.S.Eng.; F. Marsh, F.R.C.S.Eng. *Systematic Physiology: F. J. Allen, M.A., M.B.Cantab., M.R.C.S. *Chemistry: William A. Tilden, D.Sc.Lond., F.R.S. *Chemical Physics: W. Poynting, M.A., D.Sc.Cantab. Pathology: Gilbert Barling, M.B., B.S.Lond., F.R.C.S.Eng. Demonstrator of Medical Pathology: Arthur Foxwell, B.A., M.B.Cantab., M.R.C.P. *Histology and Practical Physiology: F. J. Allen, M.A., M.B.Cantab., M.R.C.S. *Botany and Vegetable Physiology: William Hillhouse, M.A. Cantab., F.L.S. *Practical Chemistry: W. A. Tilden, D.Sc.Lond., F.R.S. Materia Medica and Therapeutics: Edwin Rickards, M.A., M.B. Oxon., F.R.C.P.; C. W. Suckling, M.D.Lond., M.R.C.P. Forensic Medicine: J. St. S. Wilders, M.R.C.S. Toxicology: A. Bostock Hill, M.D., F.I.C.S., Sc. Cert. Cantab. Midwifery and the Diseases of Women: John Clay, M.R.C.S. Practical Surgery: Demonstrators—Vacant. Ophthalmic Surgery: J. Vose Solomon, F.R.C.S. Lunacy and Mental Diseases: E. B. Whitcombe, M.R.C.S. Curator of the Museum: Bertram C. A. Windle, M.A., M.D., B.Ch.Dub. Medical Tutor: E. Hogben, B.A., M.B., B.Ch.Dub., M.R.C.P.Lond. The classes marked * will be held in Mason Science College.—In the table showing the rates of pay, &c., in the Army Medical Service, which appeared on page 472, the words "relative military rank" were by an oversight printed in place of "ranks as."—We are also requested to state that the practice of the Birmingham and Midland Orthopædic Hospital is open to students of the Birmingham School of Medicine.—Post-graduate courses of lectures—i.e. lectures only open to legally qualified practitioners—are delivered in connexion with the Charing-cross Hospital Medical School and the Leeds General Infirmary; also at Edinburgh.

Mary E. Johnson.—We must refer our correspondent to our advertising columns, or to the Charities Register and Digest, published by Longmans.

Mr. J. C. Murphy.—We are not in possession of any information on the subject beyond that contained in our advertising columns.

Mr. J. H. Potter.—1. It is not possible to answer this question.—2. Not at all likely.

E. F. Lee had better submit the matter to her ordinary medical attendant.

"SWEATING OF THE FEET."

To the Editors of THE LANCET.

SIRS,—Dr. Taylor* states that he has found a remedy for sweating of the feet in borate of soda. I would venture a theory. Has not the oleaginous exudation from the feet more affinity to the soda than the boracic acid, thus rendering it more soluble? Would your correspondent be kind enough to apply the soda and the borax separately, and thus prove which is most efficient? Has the decline of the hot weather anything to do with the cure by salicylic acid? In my case, at present under treatment, alum was tried and found ineffectual, whereas soda has proved a complete success. No remedy I believe will suffice to prevent its recurrence during the hot weather.

I remain, Sirs, yours truly,

Newhaven, Aug. 30th, 1887. D. RICHARDSON, M.R.C.S., L.S.A.

* The signature was misprinted. It should have been "J. Slight, M.D."—ED. L.

To the Editors of THE LANCET.

SIRS,—Permit me to mention two methods of treating the above complaint which I have found perfectly successful. One is the use of a dusting powder consisting of 15 parts boracic acid, 25 parts oxide of zinc, and 60 French chalk, applied freely to the socks as well as to the feet. The other method is to apply Barff's boroglyceride after carefully drying and rubbing the feet. In this way a slight case was cured in four days. Special attention should be paid to the skin between the toes.

I am, Sirs, yours faithfully,

Finsbury-circus, Aug. 26th, 1887. F. R. WALTERS, M.D. Lond.

THE BROWN DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—Please allow me to acknowledge the following contributions to the above fund:—Dr. Wyman, £2; Dr. B. Hamilton (Dublin), £1 1s.; T. E. Bowkett, Esq., 10s.; Dr. W. Laidlaw Purves, 5s. Amount previously received, £34 17s. I am, Sirs, yours faithfully,

G. STANLEY MURRAY, M.D.

23, Upper Richmond-road, Putney, Sept. 6th, 1887.

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SNAKE-FARMING FOR PHARMACEUTICAL PURPOSES.

A WRITER in a newspaper having expressed surprise at anyone attempting to farm rattlesnakes, as at least one man in America does, and having asked what can be the use of a dead rattlesnake, the *Monthly Magazine of Pharmacy* remarks that it is evident that the writer is unaware that the homœopaths make use of the poison of the rattlesnake under the name of "lachesis," which drug, indeed, was said by a homœopathic journal not very long since to have caused the death of a patient, an overdose having been taken. The *Magazine* then goes on to supply some interesting information with respect to the rattlesnake trade. The breeder, who is anything but a mythical individual, has, it seems, a farm of forty acres in Illinois, where he grows snakes by the thousand. His land has never been ploughed, and is devoted entirely to this "odd sort of agriculture." It is interesting to know that the contract price for "rattlesnakes' tails in bulk" is £1 per tail, and that a pharmaceutica firm in Philadelphia contracts to take 250 tails every year. We have given the wholesale price at which the product is quoted, for it is never retailed, any more than the serpents themselves, the extract called lachesis being the ultimate object of rattlesnake rearing. With regard to the enterprising breeder, an American correspondent writes: "Unless he has learnt the art of snake-charming, that Illinois farmer will probably take a look at his stock once too often."

An Old Subscriber.—The first arrangement was the best; but in both the interval between the last meal in the evening and the first meal in the morning is too long. The serving out some small refreshment on rising is a good plan; but in addition we would advise a light supper of some kind. The following is the dietary that has frequently been adopted on our recommendation, and found to act well:—6.30 A.M.: Cup of milk and piece of bread. 8.30: Breakfast, with eggs, fish, bacon, cold meat, &c. 1.30: Dinner. 6 P.M.: Tea, with preserves or butter. 9 P.M.: Supper, bread and cheese, or porridge, or cup of hot milk with slice of bread.

Nemo can only obtain answers to such questions by addressing them specifically to club surgeons on a large scale.

Surgeon.—Our correspondent should address his question and a copy of the advertisement he sends us to the Dean of the Medical Faculty of the University of Edinburgh.

Mr. J. H. Parkinson (Sacramento).—We are unable to extend our exchange list at present.

CASE OF DISLOCATION OF BOTH HIPS; DISLOCATION OF RIGHT SHOULDER, AND FRACTURE OF TWO RIBS; RECOVERY.

To the Editors of THE LANCET.

SIRS,—Possibly the following case may be interesting to the readers of THE LANCET:—

I was called in to attend G. S——, a collier, aged thirty-six, on July 31st, 1886. Whilst at work on that date a fall of the roof took place just above where he was working, striking him on the back of the neck and doubling him up. His companions state that quite a ton of earth fell upon him. He was brought home quite unconscious. I was sent for, and found the above-named injuries. The right leg, which was dislocated on to the pubic bone, was reduced the first, whilst the man was partially unconscious. This was reduced by extension backwards and outwards, and a napkin used for counter extension. After extension had been kept up for about ten minutes, the head of the bone slipped in. The left leg was then taken in hand, but, from the severe struggling of the patient, could not be reduced without chloroform. After placing him thoroughly under its influence I attempted the reduction (this was on to the dorsum ilii). By bending the knee and flexing the thigh, and giving it a rotatory movement, at the same time having counter extension used with a napkin, I had the satisfaction of finding this joint easily reduced. I then, before the patient became conscious, reduced the dislocation of the shoulder, which was subcoracoid. I then attended to the injury of the ribs. The patient made a good recovery, being up and walking about in fourteen days, and at work in ten weeks. He had some stiffness in his shoulder, which prevented him from using his arm before the end of that period. Since then he has followed his usual occupation. I am, Sirs, yours faithfully,

September, 1887. SURGEON.

Mr. Samuel Coates must act on his own sense of what is right and dignified in the case. He should have no further dealings with the parties referred to.

S. M. Hadi.—Both of the physicians named are deceased.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me what the chances of experienced, hospital-trained, reliable private nurses are in Sydney or other Australian cities—whether much in demand or not?

I am, Sirs, yours obediently,

Sept. 3rd, 1887. J. C.

A CATERPILLAR IN THE NOSE.

To the Editors of THE LANCET.

SIRS,—A woman complained of pain, irritation, and stuffiness of the right nostril; the symptoms came on suddenly, and were very troublesome, she often experiencing a sensation as of something about to go down the throat. Nothing, however, was to be seen. In a few days a bloody purulent discharge was set up, and in about a week's time on blowing the nose she dislodged a caterpillar, experiencing immediate relief; it was about an inch long and half an inch in diameter. The legs were perfectly developed, tail bifurcate, with a fleshy mass half an inch long projecting from it (I suspect from injury); the insect seemed to be much dwarfed and shrivelled, with head disproportionately large to body. It lived some hours after being expelled from the nose, and was then brought to me. I ordered the nostril to be syringed with boracic lotion, and conclude the recovery was speedy and complete, having heard nothing more of the woman. I may remark that the cottage in which she lived was densely overhung with Virginia creeper, whence I have no doubt the insect primarily issued. I am, Sirs, yours faithfully,

Aug. 24th, 1887. GOOD.

Assistant.—We think B is entitled to make strong representation that he did not contract to do locum tenen's work, and has a reasonable claim to extra remuneration for such work.

CORRIGENDUM.—In Dr. Yule's article, "Chronic Hypertrophic Cirrhosis of Liver," Aug. 27th, p. 413, for "altering venous blood in other systems before it is arterialised" read "the liver likewise alters the venous blood of the whole body before it is arterialised."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Morell Mackenzie, London; Dr. Budd, Exeter; Dr. Cartwright Reed, South Africa; Mr. F. Treves, London; Sir H. Perrott, London; Dr. Stanley Murray, Putney; Dr. W. B. Hadden, London; Messrs. Hedgecock and Co., London; Dr. F. A. A. Smith, Cheltenham; Dr. T. D. Savill, London; Dr. F. Sturges, Beckenham; Dr. C. Robertson, London; Mr. T. Richards, Mansfield; Mr. Petrie, London; Messrs. Maythorn and Son, Biggleswade; Dr. O'Brien, Hampstead; Messrs. Oliver and Boyd, Edinburgh; Dr. G. W. Steeves, Liverpool; Dr. Connor, Lower Edmonton; Dr. C. F. Hutchinson, Scarborough; Messrs. Thompson and Co., London; Dr. F. R. Walters, London; Dr. Carraldo, Hong Kong; Mr. C. Potter, Stockport; Dr. Campbell, Kansi, Hawaiian Islands; Mr. L. Braddon, Upton-on-Severn; Messrs. Blakeston and Son, Philadelphia; Mr. Wright, Romford; Messrs. Oppenheimer and Co., London; Mr. A. S. Jones, London; Messrs. Bates and Co., New York; Dr. Collins, London; Dr. Squire, London; Messrs. Burroughs and Wellcome, London; Mr. R. Ewing, Chiswick; Messrs. Street and Co., London; Mr. Harness, London; Dr. Battye, London; Dr. Harry Campbell, London; Mr. C. H. Phillipe, Hanley; Dr. R. Cran, North Lakhimpur; Mr. J. Erskine, Glasgow; Mr. S. Coates; Messrs. Bates and Co., London; Mr. W. C. Jeffries, Battersea; Messrs. Recke and Co., London; Dr. Jas. Oliver, London; Dr. Yule, London; Dr. Beaven Rake, Trinidad; Mr. Meadows, Hastings; Dr. Slight; Messrs. Mayer and Meltzer, London; Dr. Meany, London; Mrs. Lidden, Crouch Hill; Dr. Sadler, Barnsley; Dr. H. W. Jones, London; Messrs. Leader and Sons, Sheffield; Dr. R. P. Harris, Philadelphia; Messrs. Dawson Bros., Montreal; Mr. F. T. Simson, London; Mr. C. H. Hyles, Gold Coast; Mr. B. Marshall, Atherton; Mr. C. Lucas; Messrs. Johnson and Co., Edinburgh; Mr. C. J. Bond, Leicester; Mr. Holloway, West Green; Mr. T. H. Churton, Liverpool; Messrs. Wright, Dain, and Co., Birmingham; Dr. T. Britton, Harrogate; Messrs. Churchil and Co., London; Mr. C. Chittenden, Bexhill; Mr. Pike; Messrs. Bell and Co., Edinburgh; Mr. C. J. Robertson, Wandsworth; Messrs. Mackie and Co., London; Mr. A. Neve, Kashmir; Mr. D. Richardson; Mr. J. Lewis, Birmingham; Mr. Martindale, London; Lieutenant-Col. A. S. Jones; Dr. Pullin, Sidmouth; Dr. Kardon, Evershot; Mr. Bell, Doncaster; Dr. Skerrett, Bristol; Dr. Kitchingman, Slingsby; Mr. A. J. Harvey; Mrs. Carless, Liverpool; Mr. D'Orsey, London; Mr. Burdett, London; Dr. Bahadhurji, Berlin; Mr. Soper, Dartmouth; Mr. Cornish, Manchester; Messrs. Poole, Glasgow; Mr. Birchall; Mr. Pentland, Edinburgh; Mr. Russell, Glasgow; Mr. Watt, London; Mr. Browne, London; Mr. Woodcock, Bradford; Mr. Potter, Yeovil; Mr. Peacock, London; Dr. Billiaschen, Paris; Mr. Blakeston, Wareham; Mr. Gabes, London; Mr. Barlow, Birmingham; Dr. Annett, Calvados; Mr. Fuge, Taunton; Dr. Hicks, Hendon; Mr. Ellis, Newcastle; Mr. Hosegood, Witherage; Dr. Boggs, Paris; Mr. Barrs, Leeds; Mr. Davies, Little Bedwell; Mr. Hunt, Bristol; Mr. Morgan, Westminster; Mr. Logan, Glasgow; Mr. Townsend, Exeter; Mr. Hughes, Deal; Dr. Allwright, Maidstone; Mr. Sargent, London; Mr. Walker, Aberdeen; Dr. Jay, Lymington; Mr. Dowligh, Trowbridge; Mr. Bond, Brill; Mr. Goset, London; Dr. Barrant, Edinburgh; Dr. Steeves, Liverpool; Dr. Wise, Maloja; Dr. Conkill, Matlock; Mr. Bedingfield, Worthing; Dr. Cole, Bardesley; Dr. Fulton, Toronto; Mr. Singh, Sakkur; Mr. Harris, London; Dr. Waterhouse, Tullyallan; Dr. Rorie, Dundee; Dr. Dane, Finchley; Mr. Townsend, Exeter; Mr. Gross, London; Mr. Martin, Rotherham; Mr. Mercier, London; Mr. Brown, London; Mr. Ma'ster,

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Chichester; Mrs. Wigg, Leicester; Mr. Hunt, Eastville; Mr. Boyce, Birmingham; Mr. Hulsh, Ryde; Mr. Bee, London; Messrs. Farwig and Co., London; Mrs. Ellis, St. Leonards-on-Sea; Messrs. Smith and Son, Dublin; Dr. Maxwell, Woolwich; Mr. Richardson, Leamington; Mr. Mayhew, Ipswich; Mr. Asquith, Birmingham; Dr. Macdonald, Dorchester; Mr. Evans, Oswestry; Dr. Blythe, Marylebone; B. L. M.; Nemo; Beta; York; Assistant; The Director-General of the Army Medical Department; Surgeon; S. U. U.; M.D.; A Graduate in Medicine and Surgery; Questio; C. S. R.; An Assistant for Sixteen Years; M.D., Birmingham; A. B., Bayswater; G., Derby; Extreme Pressure; A. B. G. D., Edinburgh; M.D., Maidenhead; Oak; Head Master, Malvern; M., Paddington; A. W., Sydenham; J. W. H.; An Old Subscriber; Medicus, Godalming; M.D., Surbiton; D. C.; Milton Chemical Company, Glasgow; Medicus, Aberystwith; Matron, Newport; A Union Medical Officer.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Fenton Jones, Tatham; Mr. Stenhouse, Glasgow; Messrs. Willoughby and Son, Gravesend; Mr. Heywood, Manchester; Messrs. Aldridge and Co., Bournemouth; Mr. Richardson, Knocknowan; Messrs. Thorne and Co., Bristol; Miss Carson, Burton-on-Trent; Messrs. Thorne and Co., London; Dr. Moir, Glasgow; Mr. Hunt, Bristol; Messrs. Keith and Co., Edinburgh; Dr. Taylor, Newcastleton; Messrs. Mason and Co., London; Mrs. Hay, Birkenhead; Mr. Galway; Messrs. Clark and Co., Belfast; Mr. Briggs, Cambridge; Mr. Collins, London; Mr. Earl, Southport; Mr. Harris, Clevedon; Dr. Powne, Chard; Mr. Andrew, Newark; Messrs. Heamley, Boston; Mrs. Olivier, Wilton; Mr. Paine, Worthing; Mr. Freeman, Reading; Dr. Phillips, Aughnacloy; Rev. W. Grundy, Malvern; Messrs. Carlyle, Liverpool; Mrs. Purchas, Bolton; Mr. St. Mercier, London; Dr. Jones, Monmouth; Dr. Butler, Castle Donington; Mr. Carnies, Edinburgh; Mr. Eschwege; Mr. Johnston, Twyford; Miss Betts, Leamington; Dr. Williams, London; Mr. Jones, Cork; Mr. Gibson, Craigbank; Dr. Gemhil, Derby; Messrs. Warren and Co., Bristol; Mr. Gayley, Borrisokane; Mr. Weymouth, Brandesbury; Mr. Reay, Eastbourne; Mr. Casidy, Hunmanby; Dr. Marshall, Atherton; Mr. Quiver, Bristol; Mr. Bogle, Harrogate; Mr. Wheeler-Manchester; Dr. Colmer, Yeovil; Mr. Lyster, Athloe; Mr. Sacker, London; Mr. Crassweller, London; Dr. Iles, Taunton; Mr. Roberts, Ambleside; Mrs. Garrod, Diss; Mr. Bolter, Richmond; Mr. Marshall, Mitcham; Mr. Mackenzie, Aberdeen; Mr. Collins, Ash; Mr. Pinder, Broughton; Mr. Philpott, Hemel Hempstead; Mr. Cooper, Great Brodley; Mr. Nicholay, Newport; Mrs. Terrell, Hertford; Mr. Salmon, Ruthin; Mr. Smith, Kennetty; Mrs. Powell, Newark; Mr. Edwards, Epping; Mr. Stevens, St. Austell; Dr. Roberts, Penygroes; Mr. Hoar, Maidstone; Mr. Stroner, Sandy; Mr. Storey, Birmingham; Dr. Symons; Matron, Weston-super-Mare; M.D., York; Alpha, Rochester; J. H., Scarborough; A., Gloucester; Ross, Scarborough; Berba; Medicus, Richmond; Medicus, Pontypool; H., Chelsea; S. A.; A. M.; O. J., Liverpool; Medicus, Glasgow; E. T. C., Southsea; H. D.; H. T., Birmingham; R. S.; L. M. B.; Matron, Barrow-in-Furness; Lady Superintendent, Canterbury; Wood, Brighton; F. Z.; Surgery, Portsmouth; Locum, Kimberley; Medicus, Liverpool; F. P. H.; H. B., Worthing; M. F. L.; Box; A. L. K.; X., Glasgow; C. H. M., Bromyard; W. A., Bideford; X., Huddersfield; P. G. A.; Cornea; Ditton Priors, Bridgnorth; B. N.; C. O., Barnsley; Nightbell; Medicus, Calvados; Surgeon, Minchinhampton; T. R. C.; Malvezo; Sartis, Croxdale; Stonehouse, Wellington; J. C. T.; F. T., Birmingham; M.D., Crewe; Medicus, Salford; L. A. H., Bradford; D., Cradley Heath; F. E. S., Clifton; X. Y. Z., London; Delta; Senex; Medicus, Northampton; Sallust; W. J. S., Manchester; A. A., Eccles; M.D., Bradford; D. D.; Ross; C.C.M.; Secretary, Manchester.

Scottish News, Bootle Times, City of Georgetown (Demerara) Argosy, Manchester Guardian, Liverpool Courier, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
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CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 6.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, September 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
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CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, September 9.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 10.

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Lectures
ON
PRACTICAL LEGAL MEDICINE.

Being the Post-Graduate Course delivered at St. Mary's Hospital,

BY AUGUSTUS J. PEPPER, M.S. LOND.,
LATE EXAMINER IN FORENSIC MEDICINE TO THE UNIVERSITY OF LONDON.

LECTURE II.

SPECIAL POST-MORTEM EXAMINATIONS.

GENTLEMEN,—My lecture to-day will treat of a series of special post-mortem examinations, made for the purpose of supplying evidence before a legal tribunal. I speak of them as special on account of some mystery which surrounded the death; or because unusual care was required in the necessary manipulation; or, lastly, because the facts ascertained were liable to doubtful interpretation. Our system of teaching forensic medicine is, according to my experience, singularly faulty, excepting the toxicological section. I do not remember to have seen a post-mortem examination made in the schools with the object of illustrating questions that might arise in civil suits or criminal trials. This defect in the curriculum of medical education I have found, as examiner, reflected by the answers of candidates at examinations. The application of medical knowledge to the administration of justice is one of the highest functions of our profession, and yet the practitioner is left to acquire his education in applied legal medicine after he has become qualified. Apart from the knowledge of poisons, most of our examining bodies require very scanty proof of the candidate's acquaintance with practical jurisprudence. It is no wonder, then, that many mistakes are made in medico-legal investigations. I have frequently been impressed, when demonstrating some particular method of examining the cadaver, by the remarks of medical men that whilst students they had learnt so little of the subject. It is to be hoped that ere long the neglect here complained of will be remedied.

We will take for our first study the question of *criminal abortion*, and discuss the post-mortem procedure for its elucidation. Now, if we exclude the effects of mechanical injuries and the detection of abortifacients, there are no signs which would warrant a medical man in saying that an abortion had been criminally induced or attempted. The ascertainable causes of natural abortion are numerous, and beyond this there is a large residuum of cases which it is wellnigh impossible to explain by examination of the dead body. In giving evidence, therefore, it is necessary to be very guarded in stating an opinion. The necropsy is performed in order to determine—(1) whether an abortion has taken place; (2) in that event, whether naturally or criminally. Careful inspection should be made of the external genitals, and of the adjacent parts of the buttocks, thighs, and abdomen, to see if there be any punctured wounds; for the criminal abortionist, being either unskilled or acting with trepidation, often inflicts injuries unnecessary to his purpose. Moreover, the uterus has been intentionally punctured through the abdominal wall. Do not make a digital or instrumental examination of the vagina *in situ*, for the information you would gather thereby would be limited, and you are liable to make abrasions which would complicate further inquiry. Open the abdomen by a longtitudinal incision, and divide the recti muscles at their insertion, so as to give ample view of the pelvic contents, and to avoid rough handling of the latter. Put a double ligature on the lower part of the sigmoid flexure. Note the presence and degree of peritonitis, pelvic cellulitis, or pelvic adhesions, old or recent. Search for a punctured wound of the anterior wall of the uterus, and for the correspondence of such with a puncture of the abdominal wall. The uterus and its appendages, the rectum and bladder, are to be removed *en masse*. If the pregnancy has not advanced beyond the third month (I am assuming that the womb has not been emptied), there will be no occasion to do more than to divide the soft structures binding the aforesaid viscera to the pelvis, to make externally an incision surrounding the vulva and rectum, and then to free the entire mass by passing the knife around the pelvic outlet, keeping the edge directed outwards. By gentle traction the structures thus detached can be lifted without injury from the pelvis. If the pregnancy is further advanced, it is better to saw through the pubic bones outside the spinee, for the uterus impinges on the pubic crest, and in trying to make the subpubic incisions you would have to pull the uterus upwards, and this might entail rupture of the membranes or laceration of the placenta—a mishap I once witnessed. Now lay the parts removed on a clean slab or dish, with the bladder upwards. Take a pair of scissors with shot-guarded points and open the bladder by a median incision, and the vagina in like manner. Examine the latter for foreign bodies, for any discharge, and for punctures or lacerations. Cleanse the mucous membrane by a stream of water, and not by wiping or scraping. Note the character of any wounds, and make an incision through them to ascertain the depth to which the blood has been extravasated. A wound made accidentally during the examination will be free from hæmorrhage in the tissues around it. Do not forget that the vagina may be wounded by a legal procuration of abortion; by an attempt to extract the products of conception in an abortion naturally commenced; or by the use of instruments for examination of the passages or for cleansing them. So, too, the os uteri may be lacerated by parturition. But the wounds inflicted in criminal abortion are commonly punctured, and, if lacerated, they are usually far more extensive than would be caused by lawful manipulation. The criminal abortionist, I repeat, generally uses greater violence than is necessary to accomplish the ends he has in view. Next, the cavity of the uterus should be opened by a median longitudinal incision with the blunt-pointed scissors. Examine what contents there may be, noting particularly any laceration or detachment of the placenta; then carefully remove the contents and look for injuries of the uterine wall, and note if they correspond in direction with similar injuries of the vagina or cervix. In July, 1884, a woman was admitted moribund into University College Hospital. Before admission she had been attended by a nurse, and the medical man in charge suspected typhoid fever, for there had been profuse diarrhœa, with pain and swelling of the abdomen. Before the doctor saw her the hæmorrhage of abortion had been construed as profuse menstruation. I assisted at the post-mortem examination. There were punctured wounds of the skin on each side of the vulva. There were punctured and lacerated wounds of the labia and vagina. The posterior lip of the os uteri was bruised. The uterus, which with the ovaries attached weighed thirteen ounces, was empty. There was a large, circular, sloughy, raised surface on the posterior wall, the placental site; on the anterior wall there was a smaller elongated sloughy patch, as if the tissue had been ploughed up. In a line with this there was a linear laceration of the cervix. All these wounds had been inflicted during life. At the inquest the jury returned an open verdict. The case is instructive in many ways: the simulation of natural disease, the failure of detection of the real condition, and lastly, the gross outrage which had been committed.

If the abortion has been procured at an early date—that is, under the third month,—and the uterus has been entirely evacuated, it might be contended at the inquest or trial that pregnancy had not occurred, but that the enlargement of the uterus was due to disease of its structure. Even in these cases you will rarely fail to establish the facts independently of non-medical evidence, circumstantial or direct. If the placenta has only just formed, you may find portions hanging like fringes at the site of attachment. At an earlier date you will see a circular patch where the mucous membrane is flocculent from villosity, or, if smooth, it will be more vascular than the lining membrane of the uterus generally. This was the condition of the uterus in the Turnbull case tried at the Central Criminal Court on January 15th, 1886. If there is peritonitis, search for wounds of the pelvic peritoneum. The inflammation, however, has generally spread in continuity from the uterus along the Fallopian tubes, in which event the latter will contain purulent fluid. There may be pelvic cellulitis or abscess with or without peritonitis. You will of course look for signs of blood-poisoning in distant parts. Turnbull was committed for trial for having illegally procured abortion on two women—Clifford and Burton. At the post-

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mortem I found purulent peritonitis in the one case, and pelvic abscess in the other.

If practicable, examine the ovaries for a *corpus luteum* before removing the viscera from the pelvis. Our principal text-books on Forensic Medicine—Guy and Taylor—appraise with very different values the corpus luteum as trustworthy evidence of recent pregnancy. Taylor, although admitting that the corpus luteum undergoes a higher development if conception takes place, argues mainly to the end that there are too many exceptions to the general rule to allow of its being considered of much worth, save by way of corroboration of the evidence afforded by other signs of pregnancy. The view just stated is the one which prevails with the majority of medical jurists, who maintain that in the early stages of pregnancy the corpus luteum is not sufficiently distinctive, whilst at a later period it is not required, since there are other signs of greater import. From a number of observations, I feel inclined to attach greater weight to the corpus luteum. In the case of the woman Clifford the pregnancy had advanced two and a half months; the uterus was found to have been entirely emptied of the products of conception, and I can conceive that the question of pregnancy from an examination of the uterus alone might have been challenged, but in the right ovary there was a deep orange-coloured corpus luteum five-eighths of an inch in diameter,—a development I believe to be inconsistent with the theory of changes dependent simply on menstruation. The absence of the usual growth of the corpus luteum may not be of much value as a negative sign; for in the woman Burton, although pregnancy had reached the end of the third month the corpus luteum was insignificant, its growth having been impeded by fibroid induration of the ovarian capsule.

Of course, you will not fail to examine the rectum for foreign bodies, for the effects of irritant or corrosive poisons, and for signs of mechanical injury. Criminal abortion by mechanical means is sometimes induced by self-injury, and it may be by the use of some such instrument as a skewer or knitting-needle. Now, although the mutilation of the parts cannot with certainty be told from injuries inflicted by another person, there are some points that might justify you in giving an opinion, and even a strong one, as to the probability of its source. If the punctures are confined to, or mainly situated in, the posterior wall of the vagina, they are not unlikely to have been made by the woman herself, and if at the same time the uterus is free from all evidence of violence the view just enunciated is greatly strengthened. If the abortion had been induced by a medical man, there would in all likelihood be an absence of grave vaginal injuries; and, assuming their presence, they would, I believe, be accompanied by uterine punctures, lacerations, or abrasions. If the abortion had been procured by an ignorant and unskilful person other than the victim, the injuries would probably be greater than a woman would be likely to inflict on herself. The testimony you could give in such a case, considered apart from collateral evidence, would not justify a coroner's jury in returning a verdict of murder or manslaughter, but it would warrant them in leaving the question an open one, and so recording it.

I will now direct your attention to the *examination of the cranium and its contents*. No other part of the body affords greater scope for careful discrimination of the results of injuries and disease. If you hold a skull up to the light, the cranial vertex having been removed, you will see that it is translucent at the orbital roof and in the temporal and cerebellar fossæ, and hence that in these regions it would be easy to fracture the bone. Such injuries would be more frequent than they are but for the natural means of protection. The cerebellar plate is guarded by a mass of muscles at the back of the neck, the squamosal bone is covered by the temporal muscle, and the orbit is shielded by the organ of vision. The brain may be penetrated by accident or design by a thrust through the roof of the orbit, so look for a punctured wound beneath the upper eyelid. It is common knowledge that death is not rarely caused by blows on the temple, the brain being lacerated by splinters of bone. At an assize trial a man was convicted of manslaughter by striking his victim on the temple. It was urged in mitigation of punishment that the skull was unusually thin. The medical man who gave evidence stated that at its thinnest part it was no thicker than a sixpence, a condition I believe not far removed from the average. The mistake thus unconsciously made enabled the prisoner to get off with a light punishment. Whenever death is supposed to be due to an intra-cranial lesion, it is better to begin the post-mortem examination by removing the skull-cap and dissecting the brain and its membranes, for if the large veins of the neck or thorax be wounded, the blood drains off from the venous sinuses, and so their degree of fulness would be altered. Having done this, search for fracture of the bone, and for wounds or inflammation of the dura mater. Do not forget that a blow on one side of the head may injure the brain and its coverings in the immediate vicinity, or at the opposite point by *contre-coup*. On reflecting the dura mater, see if there be intra-arachnoid adhesions, suppuration, or hæmorrhage. The last is not uncommon in children dying at birth, or at a later period in chronic wasting disorders. It may also result from fierce mental excitement, even in the adult, though in these cases I suspect the vessels are in some way diseased. From these data you will be careful not to assign this form of extravasation as necessarily due to injury. The Pacchionian glands vary in size according to the age of the individual; in one instance where they were very large they were mistaken for "tumours of the brain," and they were so described in my presence. When very small they may be confounded with miliary tubercles, and it is the belief of some that they were so in the case of Mrs. Staunton—historically known as "the Penge mystery." Tubercular meningitis limited to the vertex is very rare. Moreover, the Pacchionian glands are mere outgrowths from the arachnoid; they have no intimate connexion with the pia mater. There are few cases in which the convolutional veins are not well filled in the cadaver, especially the large ones at the posterior part of the brain, where the congestion is largely owing to gravitation. It is only after considerable experience of necropsies that one is able to affirm that such congestion is indicative of particular obstruction to the cerebral circulation during life. Clearly these veins will participate in the congestion of the venous system generally; e.g., in all forms of asphyxial death; this was noted in my first lecture. But there are many causes of unwonted distension of the cerebral veins of local origin—notably in thrombosis of the lateral sinus and in every variety of meningitis. If there is great excess of fluid in the lateral ventricles, the cerebral convolutions will be flattened by pressure against the skull, and the corpus callosum will be arched to a corresponding extent. To ascertain the amount of fluid, puncture the roof of the ventricles and draw off the fluid with a syringe.

This is a fitting occasion for studying the question of *intra-cranial suppuration*. Pus between the bone and the dura mater arises from injuries to the head, and in some cases from disease of the middle ear. In the latter affection, however, the dura mater is seldom detached to any great extent, but it is common to meet with diffuse arachnitis and pia meningitis, and even cerebral or cerebellar abscess. Suppurative arachnitis is usually the result of injury, ear disease, syphilitic inflammation of the bone, or pyæmia. It is highly important not to confound suppurative arachnitis with widespread effusion of puro-lymph beneath the pia mater and within its meshes. The latter form of meningitis is met with in tuberculosis when it is chiefly basal; it also occurs as an idiopathic disease in very young children, and may be set up from some distant local centre of infection; but, as already said, pyæmic meningitis involves chiefly the arachnoid. There is one exception—viz., where it has arisen in consequence of pyæmic abscess in the brain. I have examined two cases of purulent arachnitis following closely in the wake of vaccination. In both, from want of proper care and cleanliness, unhealthy ulceration had spread from the vaccination sores, and at the inquests I deposed that death arose from pyæmic inflammation of the arachnoid. In the former case this conclusion was assailed by high authority, as it was considered as not proved that the meningitis was not idiopathic in nature; but I think that the discrepancy of opinion is explained in that the traversers had in mind pia meningitis, and not arachnitis, which really occurred. The second case substantially supported this view I had taken of the former; for besides suppurative arachnitis there were abscesses in the cellular tissue and in many joints. One of the medical inspectors of the Local Government Board agreed that these multiple lesions were to be traced to absorption of septic matter from the ulcers in the arm. No one believes more strongly than I in the efficaciousness of vaccination as a life-saving institution, that the unfortunate events just referred to are not in any way owing to vaccination *per se*, and, further, that they are wholly preventable.

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At an inquest held in March, 1886, I was requested to give evidence in the case of a man who had died from meningitis nine weeks after he had met with a railway accident. The issue was the more important because it involved the question of compensation. At the necropsy I found advanced phthisis, tubercular epididymitis, and tubercular meningitis. The main question to be decided was how far the accident might have accelerated death. I stated it was possible that the injury might possibly have been a local exciting cause of the meningitis, but under any circumstances there could have been but a short tenure of life.

[The lecturer's remarks on criminal abortion were illustrated by preparations taken from cases that had been the subject of judicial inquiry.]

A CONTRIBUTION TO THE PATHOLOGY OF THE BLOOD.

BEING AN ACCOUNT OF CERTAIN CRYSTALLINE CHANGES OCCURRING IN THE HÆMOGLOBIN AFTER WITHDRAWAL FROM THE BODY, IN THE SUBJECTS OF CERTAIN DISEASES, ESPECIALLY THOSE OF SEPTIC ORIGIN.

BY C. J. BOND, F.R.C.S.,
SURGEON TO THE LEICESTER INFIRMARY.

PART II.

WE have now to consider the condition of the blood in those diseases, or rather aggregation of symptoms, associated with the presence in the blood or tissues of substances or chemical products, not owing their origin to the life-history of micro-organisms. These conditions fall into two divisions: one in which the substance or poison is introduced from outside, as in the case of a patient saturated with ether; and another in which the poison is produced in the body by disturbed or perverted metabolism and nutrition, as in the case of jaundice or uræmia. Now, as, indeed, we should expect from previous considerations, we find that, taken as a whole, the crystalline tendency is absent in all these cases.

Thus, in the first division, it is absent in the blood of patients who have been long under the influence of ether or chloroform. As a rule, it is absent in cases of opium poisoning. In one fatal case, however, slight crystallisation appeared after the blood had remained on the slide for forty-eight hours, and in this case the man had been in a state of complete coma or semi-asphyxia for twelve hours previously.

The second division will next be considered.

Rheumatic Fever.—The crystalline tendency is absent even in well-marked cases, with a temperature of from 101° to 104°. In one case of hyperpyrexia, however, in a syphilitic subject, in which the temperature rapidly rose from 99° to 107°, it was interesting to note that at noon, the temperature being 107°, a drop of blood showed the crystalline change well after standing fifteen hours; whereas at 9 P.M., after energetic treatment with the ice pack, when the temperature gradually fell to and remained at 99°, a drop of blood only showed a very slight crystalline change after standing forty-eight hours; and two days later, the temperature still being 99°, no change could be detected even after standing two or three days. The only explanation of the presence of the crystalline change in this case of extreme pyrexia is that it occurred in a patient who was suffering at the time from paraplegia due to syphilitic disease of the cord, and the sudden rise of temperature may have been due to further nerve influence, and not to chemical poisoning.

Rheumatoid Arthritis.—The crystalline tendency is absent in these chronic cases.

Uræmia and Uræmic Coma.—I have examined the blood in many cases of Bright's disease terminating fatally in coma or convulsions, and have never detected the crystalline tendency. Here the evidence is strong that the symptoms are due to some partially oxidised products of tissue change circulating in the blood, and the absence of crystallisation is worthy of notice.

Diabetes.—The blood in two cases of ordinary diabetes in which large quantities of sugar were passed daily showed no change. In two cases of diabetic coma or acetonæmia, fatal in from thirty to thirty-six hours, very slight crystallisation occurred after the blood had remained five days, and in another case of diabetic coma it was absent.

Jaundice.—We are only dealing here with jaundice as a certain symptom or condition of the system due to the retention of a certain substance or substances, and not with reference to the disease producing it. In simple cases of jaundice, due, for instance, to catarrhal obstruction of the duct, I have never detected any crystalline change in the blood; on the contrary, the presence of bile salts in the blood seems to lessen the usual amount of exudation of the hæmoglobin out of the corpuscles into the serum after withdrawal.

We may assume, therefore, from these facts, that the presence of chemical substances in the blood, which, like sugar in diabetes, or the nitrogenous bodies in uræmia, or the supposed lactic acid in rheumatic fever, or the bile salts in jaundice, are not formed by the growth of vegetable micro-organisms, is not in itself sufficient to produce this crystalline change in the hæmoglobin.

The following diseases are due to pathological change in the blood or certain organs not yet demonstrated to be due to micro-organisms.

Anæmia.—This is the condition in which, above all others, we should anxiously look for this crystalline change. It is, of course, however, necessary to distinguish carefully between the different diseases included under this name. In idiopathic anæmia or chlorosis, so common in young women, the blood has been examined in severe cases, and no crystalline tendency detected. This disease being probably due to a defective formation and supply of red corpuscles, it is interesting to know that those corpuscles which are in circulation have not that peculiar tendency to degeneration which leads them to crystallise after withdrawal from the body.

Anæmia from Hæmorrhage.—Here, too, there is no crystalline change; the corpuscles which remain appear healthy.

Pernicious Anæmia.—Four well-marked cases of this disease were examined repeatedly, and they present some interesting points of contrast. In two cases the blood contained only 50 per cent., or only half the normal numbers of red corpuscles, and these were badly shaped, and 23 per cent. and 50 per cent. respectively of the normal amount of hæmoglobin. Both patients had been ill for a long time, and had received no benefit from taking iron. Both recovered after taking arsenic for about two months, and in both cases the temperature was normal throughout. In neither case was any crystallisation detected in the blood. In two other cases, one a girl aged sixteen, and one a man aged thirty-six, the symptoms were alike, but differed from those in the last two cases. In both there was at times sickness; both had relapses, relieved by arsenic, made worse by iron. In the man's case, he had an illness of the same kind a year previously, for which he took arsenic. He died eventually three months after leaving the hospital, probably from the same disease. The girl ultimately recovered. In both cases the temperature was constantly above normal, and occasionally ran up to 102° and 103°. In both there was the crystalline change in the blood; this disappeared in the girl's case as convalescence came on. In the man's case, a marked relationship existed between the amount of crystallisation of the blood and the amount of arsenic taken. Thus, it was found that after the arsenic had been taken for one week there was only slight crystallisation after the blood had stood five or six days, and eventually none at all. Whereas, if the arsenic were discontinued for some days, crystallisation reappeared after the blood had stood from twenty-four to forty-eight hours, and this association was repeatedly tested. These facts point to the suggestion that cases of pernicious anæmia are not all alike in their pathology; they differ in the important respects of temperature and crystalline degeneration in the blood-corpuscles. Moreover, cases in which these latter symptoms exist are more severe, and seem to have some of the appearances seen in cases of septic poisoning. The poverty of red corpuscles in this disease appears, according to recent researches (Hunter, Radcliffe, Oliver, &c.), to be due to an excessive destruction of these bodies in the liver, and perhaps in other organs; whether this is due to the agency of micro-organisms or to a peculiar action of the hepatic cells is not settled, and the arsenic may either act on the red corpuscles, or, as is more probable, on the liver cells themselves. It is also interesting to note that in one case the patient had previously suffered from jaundice. What the real difference is, if any exists, in intimate pathology between these two groups of cases cannot be at present demonstrated; it may be one only of

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degree of destruction of red corpuscles; but from our previous knowledge of the conditions under which crystallisation occurs in the blood, we should have been led to expect the presence in the blood of the latter group of cases of some poison or ferment associated with the growth of micro-organisms.[1]

Addison's Disease.—In two well-marked examples of this disease the blood was found to crystallise in from twenty-four to forty-eight hours after withdrawal, and the change was more marked the more severe the anæmia and debility—the nearer, in fact, to the fatal termination. It is, of course, well known that the blood is much changed in Addison's disease, the red corpuscles being diminished in number and misshapen; and now we see that, in addition, there is a tendency for its hæmoglobin to crystallise. The cause of this change, like that of the bronzing of the skin and the anæmia, is unknown, but may very probably be closely associated with these, perhaps having with them one common cause. It is, however, interesting to note that, as in the case of pernicious anæmia, the crystalline change bears some direct relation to the temperature, which varys irregularly in this disease.

Splenic Leucocythæmia.—It was the well-marked manner in which crystallisation occurred in the blood of persons suffering from this disease that first drew my attention to this subject. Indeed, it has been noticed by previous observers that after death the hæmoglobin readily crystallises in the blood of such patients. The crystals appear on the slide not only in the red corpuscles, but also in the form of large plates in the exuded hæmoglobin. Now, at once it is right to state that there is evidence to show that the crystallisation is due to the presence in the blood of the leucocytes in large quantities, and not to any primary change or degeneration in the red corpuscles. This point will be discussed later, but this statement applies to cases in which the spleen is the organ solely or chiefly enlarged, and in which there is marked leucocythæmia; and it receives confirmation from the fact that in well-marked cases of Hodgkin's disease, in which the lymphatic glands may be enormously enlarged, but in which there is no marked excess of lecocytes in the circulation, crystallisation does not occur.

Tumours or New Growths.—For the purpose of this inquiry cases of tumour or new growth must be classified not according to their embryonic or histological characters, but may best be divided into two large divisions. 1. Cases in which the new growth is very vascular, rapidly growing, and situated in parts where rapid infiltration of surrounding tissues can occur, as in the case of internal organs, especially the liver. This group will include such forms as the soft round-celled sarcomata and the encephaloid carcinomata. 2. Cases in which the new growth is only moderately vascular, slowly growing, and more or less defined or limited in outline. This will include the non-malignant forms, and such cases of malignant disease as epithelioma, scirrhus, &c. In viewing tumours, moreover, in their relation to this blood change, we must exclude cases in which there is any possibility of septic poisoning by ulceration or peritonitis, &c., and also all cases in which there is a marked increase in the number of leucocytes in the blood, since we have reason to believe that, as in the case of splenic leucocythæmia, these bodies are capable of themselves producing this change. Further, the blood examined must be drawn from the finger or some convenient spot away from the tumour, for—and this point is very important—if a drop of blood be obtained by a hollow needle directly from a rapidly growing vascular new growth, and placed on a slide, it will of course contain numbers of cells and tissue elements from the tumour itself. Now such blood so treated and allowed to remain will show the crystalline change well in from twenty-four to forty-eight hours. In fact, the cells of the neoplasm seem to act in contact with the red corpuscles, in the same way as the leucocytes in splenic leucocythæmia. Bearing these conditions in mind, I have found that in several cases included in Group 1, one a case of encephaloid of the liver, and one of lympho-sarcoma of the mesenteric glands, the crystalline change exists. Further, such cases in the course of the disease show at times irregular rises of temperature, reaching it may be 100° or 101°, and lasting perhaps a few days, or for longer intervals. It is in these cases that the change is most marked, and in one case was limited to the pyrexial periods and absent when the temperature was normal. In the case of Group 2, on the other hand, I have failed to detect crystallisation even in cases of so-called cancerous cachexia when due to such tumours as scirrhus of the breast.

With regard to an explanation of these facts, we may at once assume that it is not by virtue of their malignancy alone—that is, by virtue of their being sarcomata or cancers—that these growths produce this result; for if a tumour composed of muscles or leucocytes had the same vascularity, the same rapidity of growth, it would probably produce the same effect. Further, the general volume of the blood seems to be affected, as we have seen, only in cases under Group 2, and in these only at a late period of the disease. The production of this blood change seems to be clearly connected in some way with the rapid cell growth and cell decay, the tissue change, and the increased metabolism which is going on at the site of the growth, and which produces its effect primarily on the blood circulating in the tumour. May not, in fact, the occasional elevation of temperature, alike with the crystalline degeneration of the red corpuscles, point to the liberation at this spot of some chemical product, the result of the rapid growth, decay, and death of these cell elements? Knowing, as we do, that blood left in contact with the tumour cells crystallises readily, even when a drop drawn from the general circulation shows no change, we may explain the absence of the crystalline change in slowly growing tumours, and in many cases of malignant disease, on the supposition that, the breaking up and elimination of red corpuscles being active, the rapidity of growth and change at the site of the tumour is not sufficient to influence the whole volume of the blood. At all events, looked at from this standpoint, I think that a little light is thrown on the relation of the life of the tumour to the life of the individual, and on the influence of their rapid growth on the general nutrition, and the way in which they produce general blood change, anæmia, and death.

No mention has yet been made of cases of high temperature due primarily to neurotic influence. Thus the blood has been examined in cases of marked pyrexia reaching 106° or 107° coming on suddenly after injury to the spinal cord high up in the neck; but this condition has been so transitory, the patients dying so soon, that I have not been surprised at the non-detection as yet of any crystalline change, especially when we bear in mind the probable absence in these cases of poisoning in the septic sense of the word. I have also failed to observe it in cases of rapid and transitory rises of temperature with rigors, following the passage of catheters &c., when due to reflex irritation, and not absorption of septic matter.

The Influence exercised by Local Conditions on the Blood in respect to this Crystalline change.—By local conditions are meant alterations in the tissues of any part of the body in which the blood circulates, such as a lowered vitality or death due to mechanical or chemical causes. We have already seen that blood from a case of splenic leucocythæmia, containing as it does such numbers of leucocytes, crystallises markedly; also that blood obtained from a rapidly growing sarcoma and left in contact with the sarcoma cells on a slide does so also, although blood drawn from the finger of the same patient does not crystallise. In like manner a drop of blood flowing from a puncture made in granulation tissue does not crystallise, while blood on a slide containing the teased-up granulation cells does so readily. The same holds good for the spleen and liver. Now the question arises, How is this action on the red corpuscles brought about? Do the leucocytes, as they die and disintegrate, produce or liberate some ferment or chemical substance having this effect? Or do they simply act by depriving the hæmoglobin of the red corpuscles of its oxygen? And further, is the same influence exercised by damaged portions of any other tissues of the body as well as leucocytes and cell elements? The following observation may throw light here. The blood was examined from a calf's tail, and found not to crystallise. A ligature was then placed tightly around the lower end of the tail; the blood, thus rendered stagnant and in contact with the partially devitalised tissues, was examined at intervals of two and twelve hours and on the second day after, at which time the ligature was removed and necrosis had commenced; no crystallisation was detected except in one or two corpuscles on the second day. Also a drop of blood taken from tissues inflamed by mechanical means alone and unassociated with the presence of micro-organisms,

[1] This was written in 1886, before Dr. Copeman's article in THE LANCET of May 28th, 1887, on the Blood in Pernicious Anæmia.

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as in eczema and burns of limited extent, does not crystallise, though this may be due to the fact that the individual corpuscles remain within the limited area of inflamed tissues for such a short time. Burns of large extent, in which there is a great reaction after the shocks, especially in fatal cases, generally produce a general crystalline change in the whole volume of blood, even although suppuration has not yet occurred; this result may, however, be due to great congestion and interference with the large internal organs. On the whole, then, we may conclude that spleen pulp, leucocytes, and tumour cells, when injured by withdrawal from the body, exert some influence on blood in contact with them, leading to crystallisation of the hæmoglobin of the red corpuscles. Further, where great numbers of these cells or tissue elements live, degenerate, and die in the body, they produce the same change in the blood circulating amongst them, and in some cases this influence may be so great as to affect the whole volume of the blood, as in the case of rapidly growing malignant disease. The more highly organised tissues, when injured, do not seem to exert the same influence either when in contact with blood on a slide outside the body or on blood circulating amongst them in the body. Extensive burns seem to be an exception, but we must in all these cases bear in mind the possibility of septic infection, which will of course produce the result.

As to the nature of this influence—whether, that is, these damaged leucocytes produce this crystallisation of the hæmoglobin by (1) the production or liberation by or from themselves of some chemical body or ferment, as in the case of coagulation; or (2) by depriving the red corpuscles of oxygen, or by both means combined, we do not yet know. As regards the manner of their action on a slide outside the body, it is interesting to note that the presence of mere organic foreign bodies, such as starch granules, in a drop of blood will not produce crystallisation, whereas the addition of some yeast fungus or torulæ brings about marked crystallisation; this fact suggests that the change in the blood is brought about by some action connected with the life of the leucocytes.

The Influence of the Death of the Body on the Blood.—Blood taken ten or twelve hours after death from the heart or large thoracic vessels of healthy persons who have died suddenly from accident almost always crystallises in about twenty-four hours; whereas blood taken from the vessels of the limbs crystallises but rarely, and then only after a long interval. Now we know that blood drawn during life and allowed to stand in a clean vessel does not crystallise even on a slide, at any rate in the case of man; and the difference in behaviour between the blood from the thorax and that from the limbs is probably due to the fact that the blood in the large cavities is kept warm for some hours after death, and within easy reach of the septic gas-containing hollow abdominal viscera. Moreover, the fluids in these cavities, thorax and abdomen, undergo a rapid change of some kind after death; for though normal pericardial fluid, when added to a drop of normal blood on a slide, produces no change, pericardial fluid taken from a healthy man twelve hours after death, and added to a drop of normal blood, produces marked crystallisation, although no organism can be detected in the fluid at the time. Further, the condition of the patient at the time of death also makes a great difference. Thus the blood of persons dying from wasting and febrile diseases, even though not crystallising during life, does so after death much more quickly and readily than the blood of healthy persons dying suddenly.

Crystallisation in Animals.—The tendency to crystallisation of the hæmoglobin in different animals of course varys greatly, not only in health and when treated by the many and well-known methods and reagents, but also in disease and when observed after the method explained above. Thus, in the mouse, wild and tame, at one end of the series, crystallisation readily occurs in the unaltered drop of blood on a slide, as explained above; in the field mouse it does so more slowly and less fully, also in the rat; and in the hedgehog, mole, guinea-pig, and rabbit it occurs with great difficulty when treated thus, though easily obtainable from these animals by treating the blood with reagents. In the dog there is no crystallisation in health; and in the cat there is slight crystallisation in a few corpuscles from the general circulation; it is, however, well marked in blood taken from the splenic vein during life, and less so in the hepatic vein; the animal, however, was dying from chloroform poisoning by inhalation; but this excess of crystallisation in the splenic vein points again to the influence of the spleen pulp on the red corpuscles circulating in it. The larger domestic animals seem to resemble man in the matter of crystallisation. Thus, in the sheep, though absent in health, I have detected the change in the blood of "rotten" sheep, also in cases of uterine inflammation after lambing, and in cases of the peculiar wasting affection found on cold undrained lands attended with destructive joint changes; on the other hand, it was absent in a lamb and sheep both dying suddenly from pericardial effusion or "red water." Although the crystals of hæmoglobin, appearing thus spontaneously, as it were, in the blood, belong in different animals, with few exceptions, to the same system, yet in these different species they present tendencies to assume for the most part one shape or size peculiar to that species or animal. Thus, in the sheep, in addition to the needles, the plates are generally of a diamond shape, unlike those of man. This points to a considerable difference in the intimate constitution of the hæmoglobin of various animals—a subject well worthy of further investigation. In the case of a wild mouse caught near Wimbledon in 1880, in which numerous actively moving flagellate organisms, probably identical with those described by Lewis as occurring in the rat, were found in the blood, very slight crystallisation was detected—less, in fact, than usual; thus giving another example, as was suggested in the case of anthrax, of an affection in which the parasite kills the host by the mechanical invasion of its fluids and tissues, rather than by the production or liberation of any chemical product. I have not detected any crystallisation in the nucleated corpuscles of toads, newts, or birds; in the fish, however (roach), it occurs readily, in health, in the form of needles and diamond plates. Thus, though animals differ in the tendency to crystallisation during health and in the unaltered blood, they resemble man in this respect, that in diseases of a septic nature and in others, and in the case, too, of blood to which septic serum has been added on a slide outside the body, crystallisation generally occurs.

What is the nature of this change shown by the hæmoglobin under these peculiar conditions? Whether we regard the blood according to the older views as an albuminous fluid only, in which float the corpuscular bodies, red and white, or whether we regard it in a new light suggested by Wooldridge and others, and consider it as a sort of embryonic tissue, an undifferentiated fluid protoplasm, in which the red corpuscles arise, or are born, as it were, by the differentiation and colouration of the little portions of protoplasm forming each corpuscle,—whichever view we take, we are here concerned only with the ultimate composition of the blood, and simply regard it as composed of an albuminous fluid portion or plasma, and a more solid or corpuscular portion, each corpuscle of which consists of a protoplasmic stroma containing in loose combination, or in some sort of physico-chemical association, a proteid-coloured body called hæmoglobin. This body is capable of existing in a crystalline and in a colloidal form, and in an oxidised and in a reduced condition, and it is now for us to attempt to explain the occurrence of the crystalline form in the blood of man in disease, since it only exists during health in the colloidal state. As regards the real nature of this change, we know that it is not due to a mere alteration of plasma or corpuscles due to high temperature, for it is absent in rheumatic fever. Neither is it owing to a disturbance of the relation between solid and fluid constituents, for it is not found in the blood of persons extremely anæmic from severe hæmorrhage. Neither is it simply a diminution in the volume or amount of the hæmoglobin, for it is absent in chlorosis. Now it happens that the result obtained by the disease—for instance, septicæmia—on the blood in the body can be produced by the addition to a drop of normal blood on a slide outside the body of some of the poison producing the disease. Thus, if a drop of putrefactive human serum be added to a drop of normal blood on a slide, well-marked crystallisation of the hæmoglobin occurs in twenty-four hours. And this holds good of other diseases, care being of course always taken to use only serum as the vehicle of the poison, so as to alter the composition of the blood as little as possible. In this way various agents can be used and the nature of the change more easily investigated. If a specimen of blood in which this change is going on be watched under a cover glass, it will be found that the first change, occurring in from six to eighteen hours, is nearly always an exudation more or less of the hæmoglobin into the serum; the corpuscles grow pale, while the serum assumes a yellowish tinge. A little later, in

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from twelve to twenty-four hours, it will be found that crystallisation has occurred, and this chiefly in the red corpuscles, and, if the exudation of hæmoglobin has been marked, in the dissolved hæmoglobin also, around the margin, not, however, the extreme edge, of the cover glass. If normal blood be allowed to stand in quantity to which some hydrocele fluid which has been exposed to the air for some days is added, crystallisation does not occur to any extent in the blood standing in mass, but it appears as soon as a drop of such septicised blood is transferred to a slide and allowed to remain twenty-four hours; and if some of the same hydrocele fluid be added to a drop of fresh blood on a slide, crystallisation also occurs in twenty-four hours; whereas, fresh hydrocele fluid, free from organisms or their products, has no power to produce this change. From this it appears that the change brought about by the poison in the first instance, is an increased exudation of the hæmoglobin out of the corpuscles into the plasma, and then, when the conditions are favourable as to evaporation &c., as on a slide, crystallisation occurs in the exuded hæmoglobin and also in the corpuscles, the crystallisation being the second term in the series of changes. But this crystallisation is not merely an accident due to the exudation of the hæmoglobin and subsequent evaporation of the serum. This is proved by the fact that it is absent in the blood of typhoid fever patients, although in this disease there is considerable exudation of the hæmoglobin, and the conditions favouring evaporation are the same. And further, in many cases where the poison is highly concentrated, crystallisation occurs within the red corpuscles, before exudation of the hæmoglobin can occur. Thus the first effect of the poison in a moderate dose is to produce exudation of hæmoglobin, and, secondly, the conversion of this body from the colloid to the crystalline condition.

Now, bearing in mind that, though soluble in serum, the hæmoglobin does not leave the red corpuscles under normal conditions and in health, and since mere alteration of the density &c. of the serum alone has no power to bring about crystallisation, we are led to think that the action of the poison falls chiefly on the red corpuscles, and consists in a lowering of the vitality of the stroma, rendering it incapable of retaining the hæmoglobin in association with itself, just as, in order to prepare hæmoglobin artificially, it is necessary to detroy the stroma by reagents, or by repeated freezing and thawing. Further, this hæmoglobin, being itself a highly complex substance composed of a proteid body (globulin) and a coloured compound (hæmatin), is probably also affected itself; its vitality is also reduced, for it is converted from the semi-fluid colloidal state in which it exists in association with the stroma into the rigid, less vitalised, crystallised state. But this is not all. If a drop of normal blood be watched on a slide for some days, it will, on examination with the micro-spectroscope, always show the two narrow bands characteristic of oxyhæmoglobin; it becomes—remains, in fact, in an oxygenated or arterial condition, even though venous or deoxidised when first drawn. On the other hand, in poisoned or crystallisable blood, one of the first changes after the exudation of the hæmoglobin is that, no matter in what state it was first placed on the slide, it invariably shows the one broad band characteristic of reduced hæmoglobin; it becomes, in fact, very venous in proportion as the exudation and crystalline changes progress. This reduced spectrum is not obtained at first alike all over the field, but occurs first in patches where the exudation and crystallisation are setting in—not, however, just round the extreme margin of the cover glass, for here, just inside the dried blood, which forms a protecting scab, is a zone of highly oxygenated blood, in which neither exudation nor crystallisation ever takes place. The crystalline and venous changes occur in a wide zone just inside this oxygenated zone, and this relation of zones is, no doubt, determined by the physical conditions of exposure, evaporation, &c., the important point being, that these changes do not occur in blood which is not diseased, or has not been treated with septic serum in the way described. Further, although the crystals of hæmoglobin, when obtained by the usual methods, are capable of existing in the oxidised or in the reduced condition, yet when occurring in such poisoned blood, they are, like the blood, always in the reduced or venous state; this is shown both by their purple colour and by the micro-spectroscope.

Now, this fact—namely, that the hæmoglobin of patients suffering from these diseases, septic and others, in which crystallisation occurs when placed on a slide, always loses its oxygen, whereas the hæmoglobin of normal blood, when so treated, always gains or retains its oxygen, no matter in what state it is when drawn—is very important. Such hæmoglobin has not lost the power to take up oxygen, for when exposed to the air the blood again becomes arterial, but when confined under the cover glass and the air excluded by the dried scab, it in some manner has the oxygen removed from it. Now the question is, What is the agent by which this loss of oxygen is brought about? Mere organic foreign bodies, such as starch granules, do not produce either exudation, crystallisation, or reduction of the hæmoglobin. If, on the other hand, some living torulæ cerevisiæ be added, then deoxidation occurs in addition to the exudation and crystallisation described above. Torulæ differ from starch granules, especially in these particulars—that they are alive, that they are associated under certain conditions with fermentative changes, and that they require and abstract oxygen from the surrounding media. Moreover, we have seen before that the contact of leucocytes or sarcoma cells with the blood under like conditions will bring about this exudation, crystallisation, and deoxidation, and there is evidence to show that leucocytes and bodies resembling them, in addition to requiring oxygen, are associated, when injured or undergoing disintegration, with some ferment-like bodies, having important effects on the blood as regards its tendency to crystallisation.

Judging, then, from the foregoing facts, I may state that the blood in the septic and infective diseases mentioned above, also when associated with the presence of large quantities of leucocytes or sarcoma cells and cell elements of a like nature, or when treated outside the body by the addition of septic serum, undergoes certain changes in which the hæmoglobin especially suffers—passing through a triple retrogressive change of exudation into the serum, deoxidisation, and crystallisation. Though, of course, it is extremely difficult to separate and distinguish between effects due to the mere presence of the micro-organisms and those due to the products of the growth, yet we know that in some affections, at any rate such as sapræmia, the change in the hæmoglobin is associated with the presence in the blood of certain chemical products, the micro-organisms themselves not getting into the circulation. From these and other facts we are led to believe that it is the chemical albuminous ferment-like bodies which are produced by the growth of the organisms in the one case, and the products of the disintegration of the devitalised leucocytes or tumour cells in the other, which brings about these changes in the hæmoglobin, and not the mere presence of the organisms or leucocytes themselves.

I am fully aware that there are many cases in which a further examination of the blood may throw important light. Thus it would be especially interesting to note the presence or absence of this change in the case of poisoning by snake bite, the poison of which has now been more fully worked out; also the injection of the isolated products—such as sepsin &c.—themselves into the circulation would give additional evidence; also the injection of bodies of an analogous nature—such as the ferments, pepsin, trypsin, &c. For these and other experiments, further opportunities may arise.

In conclusion, I venture to think that the results obtained and stated in the foregoing pages explain certain phenomena which have hitherto existed as isolated facts. It has been known for some time that the actual quantity of oxygen in the arterial blood of animals suffering from septic diseases is diminished; this is now explained by the deoxidising action of the poison on the hæmoglobin. It is also of course frequently observed that considerable post-mortem blood staining of the endocardium and interior of the large vessels occurs in the bodies of patients dying from septic diseases. We have seen above how the action of the poison of these diseases is to cause exudation of the hæmoglobin from the red corpuscles into the serum, and so to bring it in contact with the tissues.

DRAINAGE OF THE CITY.—At a meeting of the City Commission of Sewers on Tuesday, the Streets Committee were charged with the duty of considering whether any, and, if any, what better method could be adopted for cleansing the catchpits, gullies, and drains in the City and for improving the construction of the drain pipes leading to the main sewers.

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CYSTOTOMY IN ADVANCED VESICAL CANCER.

BY T. D. COLLIS BARRY,
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THE following three cases are practical illustrations of the advantage to be derived from cystotomy with perineal drainage in cases of advanced cancerous growths of the bladder.

CASE 1.—F. W——, aged forty-three, engineer, had been suffering for five months from severe pain in the lower part of the back, dragging pains in the groin and perineum, accompanied latterly by hæmaturia and intense flashing pain during and after micturition, described by the patient as commencing in the perineum and extending along the urethra to its termination. The patient had been under treatment at a hospital, and his case diagnosed as cancer of the bladder. Upon examination with a No. 8 sound, the latter met with an obstruction just behind the prostate gland, and with the finger in the rectum a growth upon the base of the bladder in this situation was distinctly perceptible, and there was little doubt that it was of a cancerous character. The examination of the urine and deposits microscopically gave no distinctive indications. The pain became so intense, and the repeated desire for micturition so constant, that the patient's life became a misery to him. The association of the flashing pain with each act of micturition suggested the advisability of opening the bladder from the perineum, and inserting a tube after the manner usually adopted in cystotomy. After operation half a grain of morphia was administered hypodermically to allay pain and induce sleep. The following morning the temperature had risen to 101°, but fell to normal during the day. There was no pain accompanying the emptying of the bladder, the urine passing away by the perineal opening freely. There was a little cystitis, which was got rid of by washing out with hot boracic acid solution. The temperature remained normal from the second day after operation, and the pain formerly complained of had disappeared entirely. The patient was up in ten days from the date of the operation, and for seven months was able to get out of doors without any more inconvenience than that caused by the presence of the perineal tube. Shortly after this (nine months after cystotomy) his strength began to fail, and he died after a few days' confinement to bed.

CASE 2.—J. S——, aged forty-six, sailor, lately returned from Northern India. He had been under treatment for cancer of the bladder in the Calcutta Hospital, but had left there in order to rejoin his ship. The symptoms were much the same as in the preceding case, but there was more loss of flesh and more cachexia. The use of the sound gave little evidence beyond proving the existence of a small sacculation behind the prostate gland. There was enlargement of the inguinal glands on both sides, and the same flashing pain preceded and accompanied micturition as in Case 1. Cystotomy was performed, and after a somewhat tedious recovery he began to regain his strength, and the pain formerly accompanying micturition entirely ceased. He was able to walk out for a short distance every day, and he passed the remaining nine months of his life in comparative comfort, death eventually occurring through a fall from a vehicle.

CASE 3.—A. B——, aged sixty, engineer, had been under treatment for cancer of the bladder for three months. When he first came under my care he was suffering from intense pain preceding micturition, and there was enlargement of the right inguinal glands. Cystotomy was resorted to, and within three weeks the patient was able to get about with the help of a stick. For three months he was able to go out of doors morning and afternoon, with his perineal tube attached to an indiarubber urinal. The pain formerly accompanying micturition, though not entirely ceasing, was, nevertheless, so slight as to cause him little or no inconvenience until three months after operation, when the cachexia suddenly and rapidly increased, and he died after a few days' illness.

Remarks.—It will be observed that in all three cases recorded the disease was advanced and the flashing pain accompanying micturition the most prominent symptom, and it was with a view to relieve this distressing symptom that the operation was in each case performed. The relief afforded by the perineal drainage in these cases is unmistakable, and the shock following the operation is so slight that it need hardly be taken into account even in the most debilitated. The operation is certainly justifiable in all cases where there is much pain, and holds out a very fair prospect of relief during the remaining months of life. It is found convenient to have the perineal tube fitted with a silver tap, which the patient can use when he desires to empty the bladder, otherwise he must have the tube connected by means of a rubber tube with a portable urinal.

Netley.

CASE OF ANOMALOUS NERVE DISEASE,

WITH NECROPSY AND EXAMINATION OF CORD.

BY JAMES MATTHEW CAW, M.B.,
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IDA A——, aged fourteen, domestic servant, was admitted to the Woolwich Infirmary on Nov. 4th, 1886. Previous to her removal from her home it was found necessary to administer chloroform, on account of the suffering experienced on movement and touch of the lower extremities. She complained of inability to move the lower limbs, which were drawn up in the flexed position; of excruciating attacks of pain in the lower part of the spine and sacral region; and of intense pain of the legs, from the sacrum and iliac crests downwards, when touched or on attempting to move them. She had always enjoyed good health until her present illness. There was no history of any inherited taint, her mother, brother, and sister being apparently quite healthy. Nine weeks before admission her mother gave her a dose of "pennyroyal," thinking to aid the menstrual flux, which she thought was somewhat delayed (the girl had been "unwell" for the first time about a month previously). Next morning, while sitting at breakfast, she was seized with a feeling of cramp in her legs, and sensations as of "pins and needles." On rising to go to her work (that of a day servant) she fell, but was able to reach her destination, though with some difficulty. The feeling described lasted throughout the day, and she had to be conveyed home in the evening. Then, for the first time, while sitting on a chair, she was attacked by an excruciating pain in the lower part of the spine, which she described as being "like knives digging and scraping." During the night she had several of these attacks, which compelled her to lie on her side with her legs drawn up. Never since the first seizure had she been able to move her legs without severe pain. The numbness gave way to intense sensibility of the skin of the lower limbs, which became rigid and fixed in the flexed position (legs on thighs and thighs on abdomen). Attacks of pain, as described, occurred two or three times every day. A bedsore on each hip had developed, and several ulcerous patches over the lower limbs. She had had no return of menstruation since the commencement of her illness.

On admission the patient was observed to be an intelligent girl with a pained expression of face. Her lower limbs were drawn up as described. She began to cry when she thought she was to be touched. The upper limbs and trunk were unaffected. There was intense hyperæsthesia of the lower limbs. The latter were covered with ulcerating patches, which seemed to greatly undermine the skin. On each tarsus were one or two perforating ulcers, leading down to carious bone. Over each hip was a large bedsore, exposing the capsule of the joint. The vulva and parts surrounding were covered with an eczematous rash, due in all probability to neglect of cleanliness. There were several blebs containing a dark-coloured serum over the legs, varying in size from a sixpenny-piece to half-a-crown; these on bursting were found to leave ulcerating patches, the larger having little or no tendency to heal. Her appetite was good; defecation was attended with severe pain of a lancinating character, and micturition was easy and apparently normal.

The patient continued in much the same state for three months after admission; ulcers forming, healing up, and re-forming; excruciating attacks of pain coming on about twice a day; the bedsores on hips increasing, and extending underneath the skin to the vulva, which began to slough, attended by considerable bleeding. The disease did not extend up the trunk, or involve the arms. She gradually sank from exhaustion and hæmorrhage, intelligence remaining pretty clear till the last. No treatment seemed of avail.

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Iodide of potassium, nitrate of silver, &c., did not seem to have any effect on the lancinating pain. The sores were treated with powdered iodoform applied on wool. The diagnosis which appeared most probable was that of hæmorrhage into the cord, followed by myelitis and softening. This seemed the more likely as the onset of the disease occurred at the time when the second menstrual period was expected, and possibly a vicarious hæmorrhage might have taken place into the spinal cord.

At the necropsy the lower extremities were observed to be much swollen, and presenting the appearances already described. The uterus and abdominal organs were healthy. On removing the spinal cord no hæmorrhage, meningitis, or patch of softening was observed. Having hardened the spinal cord for three weeks in bichromate solution, I examined it under various powers of the microscope. Only in the region of the lumbar enlargement was anything abnormal detected. Of many sections from this part of the cord which I examined, nearly all showed signs of absorption or softening of that part of the grey matter situated near the junction of the grey commissure with the grey matter—that is, in the neighbourhood of Clarke's posterior vesicular column. At the necropsy the sodden, rotten state of the skin was particularly noticeable, being hardly capable of retaining the stitches which were inserted on sewing up the body.

The case seems to have been one of acute degeneration of the grey matter, most probably involving the tract containing the trophic nerves of the skin, which are said to pass along the middle of the grey matter. The intense hyperæsthesia distinguishes it from acute anterior poliomyelitis, although it is most probable that the anterior cells of the grey matter were also considerably involved.

ANALYSIS OF THE URINE IN TWO CASES OF CEREBRAL ABSCESS.

BY W. F. SOMERVILLE, M.A., B.Sc., M.D.,
ASSISTANT SURGEON TO THE GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR.

Two cases of abscess of the brain have recently occurred in the Glasgow Ear Hospital, under the care of Dr. Thomas Barr. I had the opportunity of examining the urines of these patients, and the results obtained appeared to me to illustrate well the great advantage, as an aid to clinical diagnosis, of the complete examination of the urine. The analysis was conducted in accordance with the method originated by Mr. A. E. Haswell, pathological chemist to the St. Joseph's Children's Hospital, Vienna.

In all, six specimens of urine were examined: two from a girl aged twenty (K. A——), who died, the diagnosis being confirmed by post-mortem examination; and four from a boy aged nine (W. H——), who recovered after evacuation of the abscess by Dr. Macewen. These specimens naturally fall into two groups: in one are the urines of the girl who died, and of the boy before operation; whilst included in the other group are the specimens of the urine passed by the boy subsequent to operation. A comparison of these two groups will illustrate certain striking differences between the urines excreted when pus was present in the brain and those after its removal.

GROUP A.—The following characters common to these three specimens are to be observed:—

1. In each there are distinct evidences of the existence of a *status febrilis*. These are most conspicuous in Nos. 2 and 3. Taking the latter as an example, we observe that the quantity of urine passed in twenty-four hours is small—0·41 litre,[1]—the specific gravity excessive, the reaction acid, and the colour high; that the elimination of urea, even during temporary starvation, is relatively abundant; and that the amount of extractive material—principally pigments—is increased. All these facts tend to demonstrate the presence in the body of a *status febrilis*. This is the more worthy of attention, since the thermometer did not reveal any decided elevation of temperature, though it is clear from what is stated above that the metamorphosis of tissue must have been proceeding with abnormally excessive activity.

[1] Of course, it must be borne in mind that the quantity of fluid imbibed by the patient at this period was small, he lying in a comatose condition. No fluid, however, was lost by vomiting.

2. A great diminution in the amount of chlorides relatively to the total dry residue is noticeable. Thus in urine No. 3 the dry residue is 74 per mille, and the proportion of chlorides in that amount of dry residue should be 11·1, whereas it is only 4·1. A similar disparity exists in urines Nos. 1 and 2.

3. There is a decided increase in the amount of phosphates excreted relatively to the dry residue. For example, in urine No. 3 the amount eliminated was 9·1 per mille, when with a dry residue of 74·5 per mille it should have been 5·5. The same feature is seen in urine No. 2, and to a less extent in urine No. 1, which was passed a month before death, when it may be presumed that the cerebral mischief was but limited. It is to be remarked that this increase in the total amount of phosphates includes an increase of earthy phosphates. This is very prominent in No 1, and less so in No. 2, whilst in No. 3 the increase of earthy phosphates is but fractional. But it must be observed that urines Nos. 2 and 3 indicate the existence of more active febrile processes, and accompanying such processes we should expect to find a diminution of earthy phosphates. The fact that these salts in No. 2 are not diminished, and in No. 3 approximate to the normal standard, must be regarded as equivalent to an actual increased elimination.

GROUP B.—The characters which attracted attention in the urines of Group A may now be compared point by point with the corresponding features of the urines of Group B.

1. From the analysis of the urines of Group A several facts emerged indicating the existence of excessive tissue changes. These features were most marked in urine No. 3. Now, when attention is directed to the corresponding points in the urines of Group B, it is at once seen that a conspicuous difference exists. Further, it will be observed that the improvement in these respects is progressive. The facts as regards quantity and specific gravity are as follows:—In urine No. 4 only 0·28 litre is passed in twenty-four hours, and the specific gravity is 1030. It will be noticed, therefore, that the quantity passed in twenty-four hours shortly after, is less than that passed during the twenty-fours preceding operation; but whilst this is the case, the specific gravity has fallen from 1032 to 1030. At the same time the reaction has become less strongly acid, and the colour of the urine is lighter. In other respects the urines resemble one another, so that we conclude from urine No. 4 that undue tissue change is proceeding (i.e., after operation), though this is not so extreme as before operation. (See urine No. 3.) In urine No. 5, seven days after operation, the quantity of fluid has considerably increased—viz., to 1·28 litre,—whilst the specific gravity has fallen to 1009·5. Urine No. 6, thirteen days after operation, measures 1·31 litre in twenty-four hours, and the urinometer indicates a density of 1012. The marked and progressive improvement is here conspicuous. Further, these two specimens do not illustrate in their other features the presence of a *status febrilis*. The reaction in the one is alkaline, in the other neutral. Each is of a pale amber colour. There is no marked proportionate excess of urea, and though the amount of extractive material is still abnormally large when compared with the total dry residue, the above facts show that some explanation of this, other than excessive tissue change, must be sought for.

2. The change in the elimination of chlorides is significant. In urine No. 4 the chlorides, though still far below the amount which ought to be present in a dry residue of 69·9 per mille—i.e., 10·3,—are not so deficient as in urine No. 3. The dry residue in urine No. 5 is 22·1 per mille, and the normal proportion of chlorides in this is 3·3 per mille; the actual proportion present is 2·4 per mille. Whilst No. 6, with a dry residue of 27·9 per mille (normal proportion of chlorides 4·1 per mille), yields 4·7 of chlorides.

3 There is seen to be a progressive diminution of the phosphates, which ultimately reach the normal standard. Thus in urine No. 4 the normal proportion of phosphates relatively to the dry residue is 5·2 per mille, whereas they were found to be 6·2 per mille. In No. 5 the normal proportion is 1·6; the proportion present is 1·79. Whilst in No. 6 the amount of phosphates present bears to the dry residue a normal relation. The earthy phosphates in the three urines are observed to be either approximately normal or subnormal; whereas in the urines of Group A—i.e., whilst pus was forming in the brain—these salts were found in excess.

It is impossible within the limits of this paper to state fully the diagnostic value of these facts. Many of them

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GROUP A.

	No. 1.*	No. 2.*	No. 3.
Name, sex, and age	K. A——, female, aged twenty	K. A——, female, aged twenty	W. H——, boy, aged ten
Date of analysis	Sept. 30th, 1886 (30 days before death)	Oct. 30th, 1886 (12 hours before death)	Jan. 22nd, 1887 (day of operation)
Amount of urine examined	A small quantity of the morning's urine	A small quantity of urine	In 24 hours 0·41 litre passed
Sediment (microscopic examination)	A few red blood corpuscles, epithelial débris, an occasional epithelial tube cast, few pus corpuscles, mucus and vaginal epithelium	Urates, mucus, epithelial débris	Amorphous urates, débris, mucus
Colour	Amber	Sherry-coloured, turbid	Red-brown
Odour	Urinous	Urinous	Strongly urinous
Reaction	Slightly acid	Acid	Acid
Specific gravity	1024	1027	1032
	In per mille.	In per mille.	In per mille. Grms. in 24 hrs.
Water	944·0	937·1	925·5 ..... 379·5
Dry residue	56·0	62·9	74·5 ..... 30·5
Organic material	45·9	49·6	58·3 ..... 23·9
Ash	10·1	13·3	16·2 ..... 6·6
Extractive material	(relatively decreased) 7·9	(relatively decreased) 8·7	(relatively and absolutely decr.) 11·5 ..... 4·7
Urea	(relatively increased) 35·0	(relatively increased) 39·3	(relatively incr., absolutely decr.) 44·3 ..... 18·1
Chlorides	(relatively increased) 2·6	(relatively increased) 4·1	(relatively incr., absolutely decr.) 4·1 ..... 1·6
Sulphates	(relatively much decreased) 2·8	(relatively much decreased) 2·7	(relat. much decr., absolutely incr.) 3·0 ..... 1·2
Phosphates	(relatively decreased) 4·7	(relatively decreased) 6·5	(relatively decr., absolutely decr.) 9·1 ..... 3·73
Uric acid	(relatively increased) Increased	(relatively increased) Increased	(relatively incr., absolutely decr.) Increased
Pigments	Indican increased	Urocrythrine present; indican increased	Urophaein and urocrythrine present; indican much increased
Albumen	Faint trace	Faint trace	None
Sugar	Faint trace	None	None
Ammon. carb.	Normal	Normal	Distinct traces
Alkali phosphates	2·2 (relatively decreased)	4·9 (relatively increased)	7·6 ..... 3·1 (relatively incr., absolutely decr.)
Alkaline earth phosphates	2·5 (relatively increased)	1·6 (relatively increased)	1·5 ..... 0·61 (relatively norm., absolutely decr.)
Abnormal substances	Urate ring with HNO_3; a precipitate on boiling almost completely soluble in acetic acid	Urate ring and precip. on boiling; almost completely soluble in acetic acid	Urate ring seen on adding HNO_3
Nitrogen	16·3	18·3	20·6 ..... 8·0

* In urines Nos. 1 and 2 a twenty-four hours' collection was unfortunately not obtained; hence definite conclusions could not be so certainly arrived at.

GROUP B.

	No. 4.	No. 5.	No. 6.
Name, sex, and age	W. H——, boy, aged ten	W. H——, boy, aged ten	W. H——, boy, aged ten
Date of analysis	Jan. 24th, 1887 (urine passed 12 to 36 hours after operation)	Jan. 29th, 1887 (7 days after operation)	Feb. 4th, 1887 (13 days after operation)
Amount of urine examined	0·28 litre in 24 hours	1·28 litre in 24 hours	1·31 litre in 24 hours
Sediment (microscopic examination)	Urates, débris, mucus	A very little mucus and débris	Epithelial débris, mucus
Colour	Sherry	Pale amber	Pale amber
Odour	Urinous	Urinous	Urinous
Reaction	Acid	Slightly alkaline	Neutral
Specific gravity	1030	1009·5	1012
	In per mille. Grms. in 24 hrs.	In per mille. Grms. in 24 hrs.	In per mille. Grms. in 24 hrs.
Water	930·1 ..... 260·4	977·9 ..... 1251·8	972·1 ..... 1273·5
Dry residue	69·9 ..... 19·5	22·1 ..... 28·2	27·9 ..... 36·5
Organic material	56·1 ..... 15·7	16·7 ..... 21·3	19·4 ..... 25·4
Ash	13·8 ..... 3·8	5·4 ..... 6·9	8·5 ..... 11·1
	(relatively decr., absolutely decr.)	(relatively decr., absolutely decr.)	(relatively normal, absolutely decr.)
Extractive material	12·5 ..... 3·5 (relatively incr., absolutely decr.)	3·0 ..... 3·8 (relatively incr., absolutely decr.)	5·4 ..... 7·0 (relatively incr., absolutely slightly decr.)
Urea	41·7 ..... 11·6 (relatively incr., absolutely decr.)	13·0 ..... 16·6 (relatively slightly incr., absolutely decr.)	13·0 ..... 17·0 (relatively decr., absolutely decr.)
Chlorides	4·3 ..... 1·2 (relatively much decr., absolutely much decr.)	2·4 ..... 3·0 (relatively slightly decr., absolutely decr.)	4·6 ..... 6·1 (relatively incr., absolutely decr.)
Sulphates	3·0 ..... 0·8 (relatively decr., absolutely decr.)	1·2 ..... 1·5 (relatively slightly decr., absolutely decr.)	1·8 ..... 2·3 (relatively decr., absolutely decr.)
Phosphates	6·5 ..... 1·7 (relatively incr., absolutely decr.)	1·79 ..... 2·29 (relatively slightly decr., absolutely decr.)	2·0 ..... 2·6 (relatively normal, absolutely decr.)
Uric acid	Increased	Decreased	Decreased
Pigments	Urophaein present; indican decidedly increased	Indican (indigo) increased	Urocrythrine slightly increased, indican (indigo) much increased
Albumen	None	None	None
Sugar	None	None	None
Ammon. carb.	Distinct traces	Decidedly increased	Normal
Alkali phosphates	5·23 ..... 1·46 (relatively incr., absolutely decr.)	1·6 ..... 2·04 (relatively slightly incr., absolutely decr.)	1·38 ..... 1·8 (relatively very slightly decr.)
Alkaline earth phosphates	1·28 ..... 0·35 (relatively almost normal, absolutely decr.)	0·19 ..... 0·24 (relatively decr., absolutely decr.)	0·6 ..... 0·78 (relatively very slightly incr.)
Abnormal ingredients		Faint play of colours with HNO_3	Faint play of colours with HNO_3
Nitrogen	19·4 ..... 5·4	6·0 ..... 7·6	6·0 ..... 7·8

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have considerable negative significance, and would at once enable the physician to limit the possible diagnoses. The positive conclusions to which the analyses in Group A point are three in number: 1. That a *status febrilis* exists. 2. That this is accompanied by inflammatory exudation (diminution of chlorides). 3. That great destruction of nervous tissue is going on (increase of phosphates). Moreover, the high colour and excessive specific gravity of the urine, with the amount of earthy phosphates eliminated, indicate that this destruction is occurring in the nervous tissue of the brain. The analyses under Group B emphasise the significance of the facts to which special attention has been directed, and the assistance to be derived from such knowledge exemplifies the value as an aid to clinical diagnosis of a complete examination of the urine.

CASE OF

PLASTIC OPERATION FOR DESTRUCTION OF NOSE BY SYPHILIS.

BY C. M. CAMPBELL, M.D.

W. W——, an undersized boy, aged fifteen. Parents alive and healthy; five brothers and sisters alive and healthy; one brother died, aged fourteen months. When aged seven he suffered for two years from his eyes (keratitis?), and at nine from a general skin eruption, consisting of red, dry, scaly patches. This lasted an uncertain period, and was followed by hard glandular swellings in the neck, which remained several years. When aged thirteen he began to snuffle, the nose became swollen and tender, and he lost flesh rapidly. At this time (exact date uncertain) the bridge of the nose was lacerated by a stone, and the wound remained an open sore. He was treated for this condition in

FIG. 1.



a provincial hospital, where it was diagnosed as lupus; but in spite of every care the disease advanced. In January, 1887, perforation took place, the nasal bones exfoliated, and the patient became alarmingly weak. He was admitted into St. John's Hospital for Skin Diseases on Feb. 24th, presenting the following conditions: Great prostration, feeble pulse, anorexia, and insomnia. The nose, except the tip and alæ, had disappeared, and in its place was an irregularly-shaped aperture, an inch and a quarter by three-quarters of an inch, with ulcerating edges, opening into the nares. Discharge profuse and foul; septum gone. (See Fig. 1.) The tip and alæ were of a dusky purple colour, as if about to slough. The free edge of the soft palate ulcerating, and deeply cleft by a ragged fissure to the right of the uvula, which hung by a thin shred of tissue. Tonsils and pharynx swollen, red, and showing several shallow ulcers. Teeth irregular and ridged, but did not exhibit Hutchinson's notches well marked. Treatment: Full diet, with claret; pulv. hydr. c. creta, gr. iii., om. noc.; mist. sodii iodi. (gr. xv. of the salt) ter dies sum.; nasal cavity repeatedly syringed with sol. hydr. perchlor., 1 in 1000, and insufflated with iodoform. The case at once began to improve, and after five weeks the edges of the nasal wound had healed; the tip and alæ became normal in colour, but much contracted, so that the single nostril (the septum being gone) scarcely admitted the tip of the little finger. The nasal wound now measured one

FIG. 2.



inch by half-an-inch; the faucial and palatal ulcerations had healed, and the general condition greatly improved. Mist. sodii iodi continued; hydr. c. cretâ stopped. The face being hideously disfigured (see Fig. 2) and phonation interfered with, I resolved to make an attempt to close the aperture, but judged that it would be unwise, in the doubtful

FIG. 3.



condition of the patient's tissues, to do more than this in the way of making a new nose.

On April 20th, under chloroform, the nostril was fully dilated, and the upper free border of the tip and alæ vivified. Incisions were made along the outer borders of the alæ, and carried outwards and then upwards towards each eye. The edges of the nasal aperture were then vivified, and the flaps dissected upwards until sufficiently free to meet in the mesial line without tension. About an inch and a half of stout rubber tubing was passed up the nostril, keeping it dilated, and over the tube the flaps were adjusted and secured to the tip, alæ, and to each other in the mesial line, by harelip pins and silver sutures. The cheeks on each side were drawn towards the nose by strips of salicylic plaster, and the surface dusted with iodoform, and covered with cotton wool. The needles and sutures were removed on the fourth day. The flaps had then joined, except for about one-fifth of an inch in the mesial line near the tip. This, however, granulated and closed, without any aperture, in a few days. On April 28th the iodide of sodium was stopped, and syrup of hypophosphites (one drachm, three

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times a day) prescribed. On May 5th the wound had healed, and the patient appeared as in Fig. 3. Phonation had greatly improved. The patient was discharged, with directions to continue dilatation of the nostril, which showed a tendency to contract.

Remarks.—There was no clear history of syphilis on the parental side, and the case was sent to St. John's Hospital as one of lupus. The absence of lupus on the face, and the limitation of the rapidly destructive processes to the nose and naso-pharynx, rendered such a diagnosis inadmissible. The good effect of iodide of sodium in full doses (forty-five grains a day) was well illustrated in this case. Whether the syphilis was inherited, or acquired accidentally in childhood, I am unable to decide.

Hereford-square, South Kensington, S.W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

WHAT IS THE AVERAGE LAPSE OF TIME BEFORE THE RETURN OF CANCEROUS DISEASE AFTER OPERATION?

By FRED. A. A. SMITH, M.D.

WE all know how difficult it is to get patients the subjects of cancer to submit to an operation before the disease has made such progress that life becomes unbearable. Then, and not till then, will they submit to an operation which for obvious reasons is too often only palliative, with the consequence of an early return of the disease and death. My reason for writing these few lines is to show in a small way how great the boon might become would patients only submit to early operation. Even should the tumour be found after excision to be innocent, a constant source of mental discomfort is clearly removed, and tumours of all descriptions are unsightly and troublesome. The subjoined case was operated upon by me in 1868, and until a few weeks ago the lady has had no return of the disease, when she observed two small tumours in the cicatrix of the former operation, with constant pain.

In 1868 a lady, aged forty-one, consulted me about a painful tumour in her right breast. It was the size of a large walnut, smooth, and movable in all directions. She was advised to submit to an early operation, and after a few weeks' consideration consented, the consequence being that for nearly nineteen years no return of the disease took place. After excision, well-marked cancer cells were observed under the microscope. I should like to know whether many such cases have been observed, and whether an early excision of the secondary growth is not equally advisable, because the lady does not wish to have the tumours removed. At present they are small, smooth, and movable, but may rapidly enlarge at any time.

Cheltenham.

A READY METHOD OF REMOVING FOREIGN BODIES FROM THE ANTERIOR NARES.

By T. OSBORNE-WALKER, M.R.C.S.

I HAVE many times been called upon to remove peas, buttons, and various substances from the nostrils of children, who have themselves introduced them there. The last case occurred to a little boy, whom his mother brought to my surgery on Aug. 1st with a boot-button tightly impacted in the angle between the vomer and os nasi at the bridge in the right nostril. Ineffectual attempts at extraction had evidently been made, as shown by blood oozing from the nostril, and some, coagulated, adherent to the button, partially concealing its outlines from view, and also by the button being fixedly jammed in. As is my practice in such cases, I first confined, to prevent struggles and interruption, the child's arms, hands, and legs, by folding tightly round these and the body a long, clean white apron, which the mother was wearing, and then, placing the child on his mother's lap, facing a window, while I stood behind the patient, and, bending over and depressing with two fingers of my left hand the apex of the nose, to admit as much light as possible upon the object to be removed, I introduced with my right hand very carefully, to avoid its descent into the pharynx or larynx, the spoon end (with the concavity directed forward) of an ordinary pocket-case director, with which I ejected at once the button with a simple lever movement or jerk.

By attention to the following points the removal is instantaneously effected: The close confinement of the hands, arms, and legs by a shawl, blanket, or apron; a good light; a reliable person to securely hold the child; the position of the operator behind the patient; depressing well the apex of the nose to obtain a good view of the object; and lastly, getting the concave face of the spoon of a director fairly behind the body before making the forward lever movement.

Crick.

IMPERFORATE ANUS.

By JAMES DALGLEISH, M.B., C.M. EDIN.

THE following case is, I think, worthy of consideration as showing how much may be left to nature in the repair or growth of the tissues in very early infantile life.

My attention was called to the fact that an infant, otherwise quite healthy, at the fourth day of its life had not had any motion of the bowels. On examination I found the anus apparently normal. The appearance was, however, deceitful, as on entering my digit I discovered that it terminated in a *cul de sac* about an inch deep. I pierced the mucous membrane forming its floor, through an ear-speculum, with a tenotomy knife, but was disappointed to find that no meconium appeared, and that evidently there was more abnormal than the septum of mucous membrane I had expected. The child was being well nourished and showing little sign of discomfort. The next day I operated. Without enlarging the natural external aperture, which was dilatable enough to admit my forefinger, I found by cutting through an amount of cellular tissue, which occupied the place of the rectum, that the bowel terminated as high up as my finger could just reach with an effort—i.e., about three and a half inches. With my finger, carbolised, I broke down a clear passage to this point, and, pushing my knife on the flat along my finger, I freely incised an opening in the gut, when there was a most plentiful flow of meconium, and presently the ordinary fæcal discharge. Beyond instructions towards the greatest possible cleanliness, I took no more pains in the case, and now, two months later, there has evidently been a downward growth of the mucous membrane to form a rectum. The child has regular motions, and, as far as the *primæ viæ* are concerned, has never shown a bad symptom. The reservation I make simply refers to an attack of bronchitis from which it has since suffered.

Trowbridge, Wilts.

CASE OF SUPERFŒTATION.

By GEORGE GILES, L.S.A.

As there has been a great diversity of opinion upon the possibility and probability of the above subject, the following facts may be of interest.

On Aug. 6th, 1887, Mrs. H——, who had gone to visit her mother in Holbeck, was suddenly taken in labour, and Dr. Mann (Messrs. Mann and Woodcock) attended, and delivered her of a fœtus at half-term about 8 P.M. Being compelled to go to another case about 11 P.M., Dr. Mann requested me to call and see if it was not a case of twins. I did so, and on external manipulation found another fœtus, and which I got away alive (the first being dead), about fourteen inches long, weight about four pounds, and which appeared about seven months and a half old, although very livid. This child lived from two to three hours. The placentæ were quite distinct (the second placenta being of a large size). The liquor amnii was also separate. It is quite evident that when gestation had progressed from two and a half to three months, in the case of the elder fœtus, that a secondary conception undoubtedly took place, the second ovum becoming developed independently of the first. I have preserved the first fœtus, the second having been interred before I called again. The question of bifid uterus I did not ascertain, but up to the present the woman is doing well. Playfair says it is probable; Galabin does not make any note of it.

Leeds.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

NORTH LONDON HOSPITAL FOR CONSUMPTION.

EMPYEMA OF FOUR YEARS' DURATION TREATED BY INCISION AND DRAINAGE; MELANCHOLIA; REMARKS.

(Under the care of Dr. SQUIRE.)

THE treatment of empyema by incision and drainage in cases where it seems hardly probable that any good can be done in other ways, because of disease in other parts and the feebleness of the patient, receives encouragement from the record of the following case. Four years is a long time for the disease to exist in these days when the treatment is fully recognised, and cases seldom present themselves for help at so late a stage. Extreme emaciation and feebleness, some hectic, wearing cough with profuse expectoration, with signs of disease in the lungs, and albuminuria made the man's condition most serious. The onset of melancholia when otherwise the patient was progressing satisfactorily is interesting. For the notes of the case we are indebted to Mr. P. Moriarty O'Brien, resident medical officer.

G. S—— was admitted on Feb. 3rd, 1887, in a very weak condition. Family history good. The patient was strong, and had always been healthy till four years previously. He then had a rigor; no symptoms followed, and he was able to resume his work next day, and continued working for two months, when he again had a rigor, this time very severe in character. He was then compelled to give up work, as he felt very ill. Cough, with free muco-purulent expectoration, vomiting, dyspnœa, loss of appetite, sweats, and great thirst were present, but there was no pain to speak of. He was then admitted into Whitchurch Infirmary, where he remained nine months. During this time he improved, his breathing became better, and towards the end of the time he began to gain flesh, and to be able to walk short distances. On leaving the infirmary, he went to Andover Union, where he remained between four and five months, his condition remaining about the same. Since leaving the union he had been at home, gradually losing flesh and strength, and had been bedridden for the last two years. During the first seven months of this time, the expectoration increased in quantity. An abscess then formed in the right side, which broke and discharged a quantity of offensive pus. Three sinuses formed (two of which had healed during the last two months). Following this discharge of pus, the expectoration diminished in quantity, but remains considerable even to the present time—upwards of a pint in twenty-fours; this, however, is steadily diminishing. For some months the discharge from the sinus remained very profuse, but gradually lessened, and is now less than an ounce in twenty-four hours.

Present state.—The patient is a medium-sized, fair-complexioned man. He has the appearance of having been very strongly built, but now appears very weak, and is unable to stand without assistance. His face has a pasty appearance, very unhealthy and pallid. The skin is hot and clammy; no lividity or duskiness. The finger and toe ends are clubbed. No œdema now present or recollected. Decubitus almost entirely right-sided; rarely dorsal; never left-sided. Tongue clean, moist, and fairly healthy in appearance; appetite good; bowels regular; no diarrhœa; no sickness except sometimes on coughing. There has never been any hæmoptysis, but the phlegm has occasionally presented streaks of blood. Night sweats slight, and occasional sweating of hands and feet, profuse at beginning of illness. The cough is not very troublesome; it comes in fits, and is accompanied by retching. The expectoration is profuse and muco-purulent (it amounts to upwards of a pint in twenty-four hours); during the fits of retching half a pint is brought up. There is no distress, pain, or dyspnœa (formerly a marked symptom), and he speaks without effort. Specific gravity of urine 1024; slight amount of albumen, also slight mucous deposit. Pulse 96, regular, sustained tension, and firm. Temperature in the morning, 98°; evening, 101°. The following are the physical signs: On inspection the remains of a large chest are found, the bones being large and spaces wide; the coverings are much wasted. On the right side there is marked bulging in the lower mammary region from the fourth to the seventh rib, and laterally from the right border of the sternum to the anterior axillary line, but the whole right side appears fuller than the left. On deep inspiration the right upper front above the nipples appears motionless, and is much flattened; the same region on the left moves well. Clavicular hollows not marked. The sinus above mentioned is situated in the fifth space in the anterior axillary line, two inches and a half below and an inch and a half posterior to the nipple line. The inferior costal spaces on this side are difficult to define, the tissues appearing matted together. No fluctuation to be made out; no mapping out of the superficial veins, except about the shoulders, and here only slightly. Left mammary region below the nipple flatter than normal. Palpation shows absent vocal fremitus below the nipple on the right side; slight above this, and fairly good in scapular regions; good all over the left side. On percussion an impaired resonance is found over the front of the left apex, extending to the second rib; there is dulness in the supra-scapular region, but good note elsewhere. On the right side dulness, differing in degree and character, is found all over the lung. Good resonance is found in the mid-sternum, but less of resonance in other regions; high-pitched to the third rib and in the supra-scapular fossa. From this level to the fifth rib level, and over an area oval in shape, measuring five inches by four, the long diameter reaching to beyond one inch in the nipple line, there is a note, hollow in character; in the axilla there is absolute dulness. Posteriorly the mid-scapular dulness is less wooden in character than over the back generally. Auscultation shows over the left side coarse respiration. Inspiratory murmur exaggerated all over; more harsh in character over the apex, where bronchophony is heard; there is undue conduction of heart sounds all over the front. On the right side, practically nothing audible, respiratory or adventitious, beyond very faint entry of air at the extreme apex in front. Suspicion of scraping friction sounds over the mammary region; no ægophony, or any approach to it. Cardiac dulness commences at the upper border of the third rib, and extends on the left side as far as the nipple line. Impulse is seen in the third and fourth spaces; the maximum intensity is felt in the fourth space in the nipple line. Friction sound heard in the second and third spaces, on the left side occasionally double. Very faint sawing bruit localised at apex; sounds are ringing.

Feb. 16th.—The patient's condition has remained much the same as on admission. He has vomited once in twenty-four hours; during a fit of coughing, bringing up about half a pint of muco-purulent material. The opening in the right axillary line was enlarged by Mr. Godlee to-day, two small portions of rib removed, and a drainage tube inserted. Chloroform was the anæsthetic used. During its administration blueness of the face, pallor, and coldness of the extremities, with much troublesome cough, were noted. Forty ounces of fetid pus came away through the incision. The probe showed a large cavity extending almost to the apex; the ribs were very much approximated, extremely soft, and spongy. The wound was dusted with iodoform, dressed with boracic lint, over this being placed a pad of tenax, and then the bandage. The wound was dressed again in the evening, the discharge being profuse, coffee-coloured, and offensive.

17th.—Wound dressed this morning; discharge same as last evening. Much nausea existed after the chloroform, which was relieved by sucking ice.

19th.—From this date onwards the cough and expectoration ceased, the temperature not rising above 98·4°, and the general condition improving. The area mentioned above—viz., third to fifth rib—in which the note was high pitched, has extended into the axilla and upwards towards the apex. Some crackling sounds heard over the cardiac area; no bruit. Discharge changed gradually to a chocolate-coloured, thick, offensive pus.

March 2nd.—Felt faint twice to-day; pulse 104, full and feeble. Drainage not sufficient, so that it was necessary to turn the patient on his side to empty the cavity. Amount

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diminished; still offensive. Harsh tracheal breath sounds now heard over inner half of infra-clavicular region; elsewhere no sounds to be heard; here and there echo and bell sounds on percussion of coins; on the left side the crackling sounds heard over the cardiac area have extended.

7th.—Wound dressed daily. Discharge lessening; reduced to two ounces to-day; not offensive now. The tube, which at first caused distress through pressure on the diaphragm, which ascended after the evacuation of the pus, was shortened, and now causes no pain. The patient is still faint on assuming the sitting posture. Cavity contracting to a sinus, and external opening showing great tendency to close.

20th.—Discharge now reduced to less than one ounce. Cavity much contracted. Tubular respiration extending a good deal over the chest. For the last few days the patient has been very troublesome, desiring to leave the hospital. Has suffered from melancholia during the last four or five days, and last evening, taking advantage of the relaxation of watchfulness on the part of an attendant, obtained possession of a knife and inflicted a wound on his throat. The wound was cross-shaped and jagged, but superficial. There was a good deal of venous hæmorrhage; this ceased on bringing the edges together. The wound was dressed with eucalyptic ointment.

25th.—Suffered no ill consequences from the wound in the throat, which is healing by first intention. There is still about an ounce of discharge from the chest. Melancholia still present.

April 2nd.—Wound in neck healed. Tube to be removed from chest in a few days. Patient up for the last few days; much stronger. Left the hospital this afternoon against advice, as he is still very weak.

On making inquiries as to the patient's present condition, it was ascertained that he had retrograded, and now resented any interference. His mental condition seemed to be much worse. In the words of the gentleman who saw him, "He seemed scarcely himself," and was the cause of much trouble and anxiety to those attending on him.

Remarks by Dr. SQUIRE.—It is now fortunately rare to see an empyema that has been allowed to burst through the chest wall. This burst at the point most commonly selected—namely, the fifth interspace anteriorly, between the serrations of the serratus magnus. The long continuance of the disease made permanent cure almost impossible; but free exit for the pus gave much relief, and the almost entire cessation of cough after the operation fully justified its performance. The weakness due to the long and wasting illness at last resulted in melancholia.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

A CASE OF INCISED AND PENETRATING WOUND OF ABDOMEN, WITH PARTIAL DIVISION OF SMALL INTESTINE; PUNCTURE OF SIGMOID FLEXURE IN ONE, AND OF MESENTERY IN FIVE, PLACES; COPIOUS HÆMORRHAGE; COLLAPSE; DEATH; NECROPSY; REMARKS.

(Under the care of F. H. WIGMORE.)

FOR the notes of this case we are indebted to Mr. R. Hamilton.

G. M——, a fine, healthy-looking man, aged twenty-nine, was admitted on July 23rd, with an incised and punctured wound of the abdomen, two inches and a half long, and running obliquely downwards in much the same situation as the incision which is usually adopted for ligature of the left common iliac artery. About six feet of the small intestine protruded through the wound, and lay upon the abdomen, while the mesentery, bleeding profusely, was tightly nipped in the incision, and thus prevented any backward flow of blood into the peritoneal cavity. The general condition of the patient was one of great pain, prostration, and collapse. No time was to be lost. It was necessary to control the hæmorrhage. The man was therefore placed at once upon the operating table and ether administered. The mesentery was punctured in five places—in one torn from the small intestine, which at that spot was bruised, though not lacerated to perforation,—and the hæmorrhage from these was prevented by the introduction of five ligatures through the substance of the mesentery, including in their tightened loops the bleeding vessels. The gut was then examined, and found to be cleanly divided through half its circumference. With a continuous suture of catgut the edges were brought into apposition. In two places the bowel was slightly bruised. The whole of the protruding gut and mesentery was carefully washed with a warm solution of perchloride of mercury (1 in 2000), and returned to the abdomen. There was no hæmorrhage, effusion, or fæcal extravasation into the peritoneal cavity, and the wound was closed in the usual manner with silver sutures. The spray was used throughout the operation, and a dressing of salicylic wool applied. At one stage of the proceedings the collapse was very extreme; the pulse failed, and the general aspect of the patient was that of impending death. A hypodermic injection of ether (fifteen minims), hot flannels, and an enema of two ounces of brandy to some extent rallied him, and he was put into a warm bed, with hot bottles. The temperature immediately after operation was 96°, pulse 160, and respiration 50.

As the collapse continued, two drachms of brandy were ordered to be given every quarter of an hour, with a hypodermic injection of ether alternating with them, and the continuous application of hot flannels. Any diminution in this stimulation caused an immediate failing of the pulse. After three hours and a half the general condition was to some extent improved. The bowels were moved twice during this period; the stools contained no blood. He passed his urine without instrumental interference. At 9 P.M. (five hours after the operation) he began to complain of nausea, and the stimulants were reduced and a grain of opium given. At 10 P.M. the temperature was 98°; pulse 120; respiration 47. At 10.30 A.M. he vomited, and this recurred eight times up to 1.55 A.M., when it ceased. Ice to suck, iced milk in very small quantities, and two drachms of brandy were given every hour. The pulse frequently failed, and this was met by hypodermic injections of ether. At 12.35 he complained of great abdominal pain, and an ice-bag was applied and continued until 4.25 A.M.; it gave him some relief. At 3.30 the temperature rose to 98·4°; pulse 150; respiration 27. At 7.30 A.M. the bowels were again moved. After this hiccough commenced; the temperature fell to 96·4°; pulse 84; respiration 46. At 9.50 A.M. he became quite collapsed and died, consciousness remaining with him to the last.

Necropsy by Mr. DIXON.—The abdomen was not distended, but retracted. The wound was healthy. The under surface of the great omentum was found slightly adherent to that part of the small intestine involved in the injury, and the coils here were themselves slightly matted together by threads of plastic lymph. There were no signs of repair in the wound of the gut. The bowel had sloughed in two places opposite points at which the mesentery had been tied to stop hæmorrhage, and corresponding with the bruises noted above. On lifting the intestine, fæces were extravasated through these perforations. No extravasation had occurred during life. Two small clots of blood were discovered adhering to the mesentery. A further examination disclosed a puncture of the sigmoid flexure close to the rectum. The perforation was just large enough to admit a probe of medium size, and was surrounded by a greenish slough, the outer margin of which passed into a congested zone, gradually shading off into the natural healthy colour of the contiguous gut. The other organs of the body were healthy.

Remarks.—This case illustrates very well the great and lasting collapse which immediately follows a serious injury to the abdomen and some one or other of the contained viscera, and the difficulty there is in rallying the patient from this condition of utter prostration. It might be interesting to note what part is played by mental emotion in the production and continuance of shock, and whether in such a state it is better to administer ether or chloroform when necessity requires an anæsthetic. When the patient's mind is quiet, large and grave operations may be performed without any of these serious and distressing symptoms presenting themselves. In this particular case the deceased was pursued some distance by a man who held a two-edged table knife, with which he intended to perpetrate the act he subsequently accomplished. The deceased is said to have turned round and met the knife in its descent, and then to have rushed about the street, crying out, and with his intestines protruding. Here, at any rate, mental emotion must have been considerable; and when his depositions were taken his pulse failed at the sight of the prisoner, and his already grave condition was aggravated. During the operation the pulse and general state became worse, and this notwithstanding the hæmorrhage had stopped and ether was administered. Under the careful use of chloroform in cases of this kind, a marked improvement has taken place. The exhibition of opium

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or morphia in cases like this is a great part of the recognised treatment. The pain, vomiting, and the passage of three stools all pointed to an injurious activity of the gastro-intestinal tract; but after consultation it was agreed that the prostration contra-indicated its present use. The usual difficulty in the administration of stimulants arose here, as it does in cases of a like or diverse nature. The effect of the brandy upon the pulse was watched with extreme care. This case is one in which the use of stimulants was advantageous. Too often they are given in set doses, and not increased or diminished as the fluctuating circumstances demand. Thus the end of their beneficial tether is soon reached, and no further stimulation is possible. Besides, after a certain point is arrived at, which will vary with each individual, the stimulating effects of alcohol give place to symptoms closely approximating narcotism. The sloughing of the gut where bruised is of interest, for the bruising alone did not seem sufficient to account for the death of the part. It seems strange that, with so free an intercommunication between the vessels, the cutting off of the blood supply to so slight an extent should have operated adversely. Had the bruising not been present, the mere tying of the vessels would not, in all probability, have produced the results discovered at the necropsy. Had the bruising alone been present, it does not appear as an adequate cause of such an end. Again, would it have occurred if shock had not brought all vital processes to a minimum? This opens up that important question, still shrouded in so much, but lessening, obscurity, What part is played by nerve force in the development, production, healing, and nutrition of the human tissues?

Notices of Books.

The Commonhealth. A series of Essays on Health and Felicity for Every-day Readers. By BENJ. WARD RICHARDSON, M.D., F.R.S. London: Longmans, Green, and Co. 1887.—The great and general interest which attaches to all questions of sanitation is much enhanced when these are, as in the work before us, presented to the reader in a simple, free, and lucid style. The twelve lectures contained in this volume derive an additional charm from the fact that they are largely concerned with those aspects of hygiene which appear in the round of every-day life. They are not free from the pleasing mirage of poetic enthusiasm, the sometimes too fervent hope of fresh conceptions, but they also abound in tried wisdom and shrewd practical suggestion. The first, entitled "The Seed-time of Health," conveys some excellent advice respecting the management of children, that part of it which deals with the evils "inflicted" on the health of childhood being particularly noteworthy. In two following discourses recreation is made the subject of careful treatment. If at times the author seems to strain somewhat his argument against certain forms of exercise, as when he asserts that no positive good has accrued to the public health from the Volunteer movement, and condemns wholesale as dangerous rowing, football, and polo, there is much that we can cordially endorse in his downright reprobation of the feverish excitement, the overdone competition, and the practice of laying wagers, which accompany so many amusements and mar their good effect on mind and body. It must also be admitted that after all exceptions there remain many forms of healthful recreation which receive a word of warm approval. Physical exercises as a part of our national system of education are discussed with a due appreciation of their value. The chapters on school work, indeed, contains many other practically useful suggestions. "Cram" receives, as might be expected, unsparing condemnation; and there is wisdom in the remarks which inculcate on parents and teachers the duty of studying the constitutional types of children, in order that they may regulate their training accordingly. The subject of Dress is treated in some detail, with commendably free criticism of the existing code of fashion, but in a tone equally commendable for its moderation. There are chapters on the Diseases of Public Life; on Women as Sanitary Reformers—a useful treatise, requiring of women, perhaps, too deep an insight into physiology and hygiene for any but a leisured few to attain to or apply, though not more than is desirable; on the Poverty of Wealth, advocating neither poverty nor wealth but a happy mean, on Cycling as a Health Pursuit, and on Felicity as a Sanitary Research. We have not space at our disposal to discuss the merits of these various papers. Each of them is well worthy of perusal, and readers, if they find in them not a little debatable matter, will also find much that is instructive in itself and pleasing in its presentation.

The Laws relating to the Adulteration of Food and Drugs. By WILLIAM JAMES BELL, B.A., LL.M., Barrister-at-Law of the Inner Temple. Printed for private circulation by Walter Eyre, New-square, Lincoln's-inn. 1887.—It would have been better if Mr. Bell, to whom we already owe a useful treatise on the Sale of Food and Drugs Acts, 1875 and 1879, had published this thesis in the ordinary way; for it is calculated to be useful to all who are interested in the subject of adulteration. It may be divided into three parts—the first historical, the second descriptive, and the third critical and suggestive. The historical portion, though short, is exceedingly clear. Adulteration is spoken of by Pliny, and has in England been made the subject of many enactments; but no comprehensive law was passed until after public attention had been drawn to the matter by THE LANCET in the well-known reports of the Analytical Sanitary Commission, which commenced in 1850. The history of the present Acts follows, with a summary of their provisos and an excellent criticism on their shortcomings. As we have often pointed out, the gravest defects of the Acts are the want of fixed standards and the extreme irregularity of the machinery for enforcing analyses and securing due punishment for offences. Finally, we have a series of sensible suggestions for the amendment of the present law, and are glad to be able to agree with most if not all of them. We should indeed prefer, as Mr. Bell does, that a new Act be passed, and that it should be wide enough to cover all adulterations, including those of butter; but we do not deny the possibility of meeting some of the present difficulties by an Amendment Act, which should confer more stringent powers upon the Local Government Board, as well as upon local authorities. On one point we must dissent from Mr. Bell's opinion, for we cannot see how the public is to be protected against the sale of very inferior milk, unless some limit of strength is fixed by law. Of course the fixing of such a limit unfortunately implies permission to water or skim down to it, but that is freely practised at the present time, and cannot be stopped by inspection or analysis. We can only hope, in conclusion, that if Mr. Bell does not publish his thesis, he will at any rate include it in the next edition of his book.

The Asclepiad. No. 15. Vol. IV.—This number is appropriately devoted to the Jubilee purpose of showing the advancement of medicine under the auspicious reign of Queen Victoria, and it gives a good epitome of the great advancements made in practical medicine, preventive and curative, by—as Dr. Richardson neatly and with true Imperial purpose phrases it—the Victorian Faculty of Physic throughout the empire. From a humane point of view, doubtless, the author is right to give the first place to the advancement made in the treatment of the insane; we feel disposed to think, however, that what the author terms "the *second* great advancement of practical medicine" should have been assigned the first place, and chiefly on account of the utilitarian principle; for the proportion of actually insane people is fortunately small, whereas the benefits of preventive medicine are practically universal, and the application of results achieved in this sphere must

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benefit the whole of civilised mankind. Even from a standpoint of nobleness of aim and splendour of achievement, preventive medicine should, we think, be assigned the first place. Indeed, it is clear that Dr. Richardson would not largely disagree with us on these points, for we find him writing: "Medicine, in her practical handiwork, never did anything more noble than when she put her hand to prevention." Attention is properly paid to the importance of the step which was taken in 1837, when on a sound basis a public and systematic registration of births and deaths was instituted, and when a weekly publication of mortality-returns and of the causes or diseases by which death was brought about was begun in good earnest. But with the advancements in preventive medicine it would be more fitting to deal in another place than in a notice of a quarterly journal. A high place in the record of advancement is necessarily assigned to anæsthesia, and with admirable fitness the biography of this number is concerned with one whose achievements were made in the several departments of advancement, and whose name will long live as a worthy type of the English scientific observer—Dr. John Snow.

Militärmedicin: kurze Darstellung des gesamten Militär-Sanitätswesen. Von Dr. H. FRÖLICH, K. Sächs Oberstabsarzt, 1 Cl. Braunschweig: Friedr. Wreden. 1887. (*Military Medicine: a short Exposition of Universal Military Matters.* By Dr. H. FRÖLICH, First Class Chief Staff Surgeon of the Saxon Army. Brunswick: F. Wreden. 1887.—As a handy book of reference, Dr. Frölich's work will be very useful to military surgeons of every country—at all events, to those of them who read German. After a short historical account of the literature of the subject, including references to Deuteronomy, Egyptian papyrus MSS., and Greek and Latin authors, a voluminous list of works published in various countries during the present century is given. The body of the volume consists of chapters on the *personnel* of the medical services of different armies, military medical education, recruiting, hygiene and diseases, and statistics of various kinds. Descriptions, with occasional illustrations, are given of various methods of transporting the wounded, and of arranging field hospitals and tents generally. The rations and clothing of the different armies are described, and a tolerably complete list of the more important works and papers on the different special subjects is appended to each chapter. The index would be more useful if it were more detailed. A good description is given of the arrangements at Netley, more space being allotted to this than to any continental military medical school.

An Address to Asylum Attendants "off Duty"—Invalided. By the Rev. HENRY HAWKINS, Chaplain of the Middlesex Asylum, Colney Hatch.—This little work supplies a want which must often have been felt by asylum chaplains and superintendents. It contains words of comfort for sick attendants, and advice to them during their illness to set their house in order and to sympathise with their fellow-sufferers. It should, we think, be distributed to the attendants in asylums, not only when they are ill, but when they are in good health; and if they take the kind words contained in it in a grateful spirit, it would doubtless have a practical effect upon their lives and actions. Attendants as a class are not only healthy in body, but also conscientious in the discharge of their duties. But there is no reason why we should not make attempts to improve them, as suggested in this pleasant little volume, which has been so carefully written for their benefit.

The Misuse of Marriage: A Voice. London: Remington and Co.—The aim of this little book is chiefly to denounce unequal marriages—namely, those between old men, who may have led immoral lives, and young girls. The author states that such marriages are reprehensible from every point of view, frequently entailing domestic scandals and divorce cases, and inflicting injury not only on the wives but on the children. He remarks, "When I see the legitimate requirements of a woman's nature trampled under foot by selfish and unprincipled men, it does not require any profound knowledge of physiology, psychology, or any other ology to say her offspring must suffer. I have heard over and over again from the mouths of the young that they cannot help this or that besetting sin or maniacal outbreak of passion, and it has caused me no wonder when I reflect how many children are infamously begotten, not only *in* sin, but *by* sin." He also states he has heard women remark that they do not mind what a man's previous life may have been if he remain true to them after marriage. To this he says: "To think that the past life of one half in making a whole does not affect the other half is one of those delusions which accompany vicious moral teaching. There are scientific reasons, I maintain, for what I advance in this paragraph. The impure life of one has often been the physical ruin of the other, and still more often the cause of the foulest moral pollution." On this point it is impossible to speak too strongly, and women would consult their own interests, that of their children, and the highest interests of society and morality, if they refused to marry or to give their daughters in marriage to men who are known to have led distinctly immoral lives.

La Chirurgia Renale (Renal Surgery). By Professor ANTONIO D'ANTONA. Rome: 1887.—The *brochure* before us is an address delivered before the Italian Surgical Society. Professor D'Antona briefly but fairly reviews the subject from the time of Simon's (of Heidelberg) first operation in 1871 to the present time; he then discusses the diagnosis, symptoms, indications, and contra-indications, and the methods of operating, founding his observations on his own personal experience of nine cases. These include one case of tubercular kidney and one of sarcoma, both successfully removed. The address is interesting as a record of practice, although it does not contain anything either very startling or very new.

The Ten Tribes. By ALDER SMITH, M.B., F.R.C.S. Robt. Banks and Son.—Dr. Alder Smith has published in pamphlet form a paper he recently read before the Prophecy Investigation Society upon the Ten Tribes, in which he supports the view that they are to be looked for amongst a number of apparently Gentile nations. There is no question of a physiological or medical nature touched upon, but the paper is worthy of perusal by all who take an interest in ethnological questions as connected with the historical and prophetical portions of Holy Writ.

Lewis's Pocket Case-book for Practitioners and Students. Designed by A. T. BRAND, M.D. London: H. K. Lewis.—This is a convenient pocket-book, with pages so mapped out as to give at a glance, under the heading of the different systems, the principal symptoms and facts of any case, with a page or two to spare for comments, therapeutical or otherwise. It is short and compact, and presupposes brevity and concentration in the practitioner; but it seems calculated to supply a want.

MADRAS MEDICAL COLLEGE. — The anniversary of this College was held in July last, Deputy Surgeon-General Roe being in the chair. The report of the 52nd academical year of the institution showed a steady maintenance of its prosperity. A remarkable feature in the returns of the examinations was the large percentage of failures in the Primary. Of 78 candidates who went up for the first L.M.S. only 18 passed, the weak point in most cases being Practical Anatomy. In the Preliminary Scientific, again, of 15 candidates only 4 passed. These large percentages of rejections indicate a state of things which seems to require earnest investigation. An address was given by Surgeon H. A. F. Nailer, one of the professors, and the meeting was brought to a close by some useful remarks by the chairman to the past and present students of the College.

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THE NINTH INTERNATIONAL MEDICAL CONGRESS.

(FROM OUR SPECIAL CORRESPONDENTS.)

Per Anglo-American Telegraph Company.

ON Wednesday, the 7th inst., at the meeting of the *Surgical* Section, an important discussion took place on Laparotomy, following various papers on this subject, on Gastrotomy, and Foreign Bodies in the Œsophagus. Amongst the speakers were Dr. Richardson (Harvard University), and Dr. Sayre (New York). The Treatment of Abscesses from Diseased Vertebræ formed a subject of debate by Mr. Edmund Owen (London), Dr. Sprengel (Dresden), Mr. Chavasse (Birmingham), Dr. Lange, and many others.

In the *Medical* Section, the Natural History of Disease was introduced by a paper by Dr. Ouchterlony (Louisville), and gave rise to an animated discussion, in which Drs. Arnold (president of the Section), Hemingway, Scott Bell, Pavy, and others joined. A paper by Dr. Cerothers (of Hartford, Conn.) on Diseases Induced by Inebriety gave a historical *résumé* of the subject. The author regarded inebriety as a central brain disease, and always associated with brain and body degeneration, largely inherited. The tendency to inebriety often followed, directly or indirectly, from disease or injury. The symptoms of direct physical causation were very common, but often masked. Treatment in hospitals he believed to be a necessity. Inebriety was a complex psychosis. It was increasing in the United States, and required very careful study and treatment. A good discussion followed the reading of the paper.

In the *Hygienic* Section, Dr. B. W. Richardson (London) read a valuable paper on the Growth of Preventive Medicine in Great Britain. Dr. Friere (Rio Janeiro) brought forward the subject of Vaccination in Yellow Fever, and exhibited specimens and preparations showing the microbe of the disease. He extolled vaccination as a prophylactic against yellow fever, and declared it to be safe and efficiently protective. At the conclusion of the discussion on this paper it was resolved: "This Section recommends co-operative investigations of results from inoculation as a protective, and that the Governments of various countries should assist in the work." Dr. Seaton (Chelsea, London) read a paper on Metropolitan Defences against Infectious Diseases by means of Hospitals, Ambulances, Ships, &c. The chief difficulty in London, he said, was the multiplicity of authorities. In the provinces it was much better.

In the *Obstetrical* Section, the discussion on the previous day's paper on Cæsarean Section was maintained by Professor Simpson (Edinburgh), Dr. Martin (Berlin), Dr. Headley (Melbourne, Australia), Dr. Doleris (Paris), and others. In the afternoon the subject of the Relation of the Atmosphere to Puerperal Fever was introduced by Dr. Kucher; that of Puerperal Septicæmia, by Dr. Madden (Dublin), in a paper read by Jaggard; and that of the Intra-uterine Douche and Curette in Puerperal Fever, by Professor Earle.

In the *Gynæcological* Section, the question of the treatment of Uterine Fibroids by Electricity was brought forward by Dr. Cutter, which gave rise to a lengthy discussion. Dr. Graily Hewitt then read a paper on the Relations of Changes in Tissues and Changes in the Shape of the Uterus. Gynæcologists, he said, were often reproached because displacements diagnosed during life were not disclosed at the necropsy. Chronic metritis covered a large number of conditions. A softened condition of the cervix uteri, due to loss of tone, was often associated with flexion, and arose from want of general nutrition. This softness, occurring at puberty, might disappear as health was regained or became permanent. Undue softness might lead to chronic metritris, but was not the disease itself. He quoted approvingly Dr. Mary Jacobi's study of endometritis, and thought the affection to be exceedingly rare. Dr. D. W. C. Wade, speaking on displacement of the uterus, put his remarks in the form of axioms, some thirty-nine in number, and dwelt upon the importance of such conditions, the necessity of examination, and the adoption of means for their relief. He made his own pessaries of copper wire covered with soft rubber. Results of Operation of Shortening Round Ligaments for Displacement of the Uterus, was the title of a paper read by Dr. W. L. Reed, of Liverpool. He had operated in thirteen cases. He quoted the opinions of a number of operators, the bulk of whom were adverse to the operation. When the perineum was destroyed, it might be advisable to perform this operation preparatory to other methods. Seven of his cases operated upon were successful. Dr. J. H. Kellogg made some observations on uterine displacement corrected by modifications of Alexander's operation. He had performed the operation twenty-two times, and believed it to be indicated in marked displacements of the uterus either backwards or forwards. The procedure might also be found beneficial in displacements of the ovaries, and might, he believed, frequently be substituted for extirpation of those organs.

The evening of Wednesday was devoted to social festivities. A garden party was given in the charming residence of ex-Commissioner Mr. Josiah Dent. The presentations were made by Dr. Ruth, of the United States Navy. The beautiful grounds were crowded with visitors. In the course of the evening receptions were held to foreign members by representative and Mrs. Glover; also at Mr. Thomas Wilson's. The elegant suppers were attended by streams of guests from 8 to 12 o'clock. The members of the Dental and Oral Section were entertained at dinner by Dr. Baxter, medical purveyor to the United States Army, and Dr. A. R. Robinson (New York) entertained the dermatologists at an elegant banquet.

On Thursday the fourth general meeting was held, at which Professor Unna of Berlin delivered his address on Dermatology. He spoke of the relation of dermatology to general medicine and of the interest the subject should have for the general practitioner, as skin diseases entered so largely into his work. Dermatology was a branch of pure science, but in that respect it was still young, and would require the conscientious labour of ardent competent observers before it could take the rank it merited. Serious difficulties had hindered a proper study of skin diseases, and had prevented many from devoting themselves to it. From time to time men of distinguished ability had taken the subject in hand and had given themselves up to it. Under their fostering care great progress had been accomplished. This department of medicine required special organisation for its study and treatment. It had a physiology and pathology of its own. What was wanted was a central organisation where the subject could be studied as a whole, where morbid symptoms, structural alterations, and the general course of disease might be watched. There were diseases due to external causes, constitutional condition, season, climate &c., in all countries, races, sex, and age. Among externa agencies, parasites occupied a most important place in nosology, probably because the effects were visible to the naked eye. The proper study of dermatology would do much to advance other branches of medicine, both surgical and medical, the position and relation between them being intermediate. The Professor recommended, instead of making experiments on animals for pathological and physiological purposes, that human skin should be used. He quoted numerous experiments made in this way tending to prove that this method had already led to the discovery of new facts. The founding of additional lectures and the establishment of private laboratories were required in order to carry out the proper investigation of the phenomena of skin disease. This branch would ultimately become one of the most important departments in the study and practice of medicine. He expressed a hope that the Government of the United States, with its accustomed liberality, would be the first to see the necessity for changes such as he had suggested, and put them into practice.

In the *Medical* Section the subject of Morphology of Rheumatic Blood was introduced in a paper by Dr. Cutler of New York. 1. The form of elements found in the blood of rheumatic patients he classified as follows: (*a*) Oxalate of lime; (*b*) cystinic; (*c*) phosphatic; and (*d*) uric acid. 2. The peculiarities of the red blood-corpuscles and serum, including thrombosis and embolism. 3. Lantern illustrations of the pathogenesis of albuminuria. Professor Semmola spoke on points of Treatment in Typhoid; Dr. Shingleton Smith on Diabetes; and Dr. Pavy, of London, to a very large audience, described the condition of the blood in the disease, the experimental induction of diabetes, the best modern test for the presence of sugar in the urine, the early diagnostic signs, and the best method of treatment. The diet should consist of meat, butter, cheese, and a little milk and almond

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bread; whilst the medicinal agent to be employed was opium or codeine.

In the *Surgical* Section, the discussion on Dr. Richardson's paper on Gastrotomy was resumed. Dr. Assally of Bucharest extolled the merits of iodol in surgery. He said that, externally, iodol retards suppuration, deodorises and hastens healing; it was efficacious in chancres, and was superior to iodoform. There was no unpleasant odour, and it was not toxic in its effects. It was good internally in secondary syphilis, in paracentesis, and the early stages of hip-joint disease.

Mr. Edmund Owen (London) read a paper on Endocranial Surgery. Professor Durante of Rome read an interesting paper on Cholera Infantum. Dr. Maxwell of Florida showed that the usually assigned causes were not sufficient to account for it; they were only contributory, not proximate. The true cause was not yet known; it would probably be found to be a micro-organism. He advocated the use of steam as a disinfectant.

In the *Gynæological* Section Dr. Bell read a paper on Vaginal Extirpation of the Uterus for Carcinoma; Dr. Jackson one on the Modern Treatment of Uterine Cancer; and Dr. Treholme, one on Extirpation of the Uterus for Bleeding Myoma.

In the Section of *Obstetrics* a long and animated discussion was continued on Puerperal Septicæmia, in which Professor Simpson of Edinburgh, Dr. Graily Hewitt, Dr. Cameron of Montreal, and others shared.

In the Section of *Diseases of Children* an elaborate paper on Nutrition of Infants was contributed by Professor Leeds of New Jersey. The author divided his subject into (1) a brief statement of the present condition of our knowledge on this topic; (2) the presentation of results of original analyses of food in its natural state, and as artificially altered by simple treatment, or as compounded and manufactured articles; (3) composition of fluids, &c., used in nutrition, and as actually made ready for immediate use; (4) the alteration of foods by keeping, or by the action of therapeutic agents or preservatives; (5) comparison of results of analyses and experiments, with deductions therefrom; (6) conclusions and practical recommendations. Finally, Professor Leeds made references to the experiments on the digestive ferments carried out by Sir William Roberts.

In the evening there was a buffet banquet at Pension Hall, at which over 4000 persons were present. The magnificant interior was gaily decorated with flags and banners, the noble Corinthian columns being draped with American flags and those of other nations. The electric light fountain was also shown, whilst excellent music was furnished by the Marine band. The crush at the tables of refreshments was rather severe at times. Dr. Burnette entertained the foreign members in the Ophthalmic Section at a dinner; whilst the American members of the Nervous Diseases Section showed a similar hospitality to their foreign *confrères*.

On Friday, at the fifth general session, an address was delivered by Dr. F. Blandford of England on the Treatment of Insanity in Private Houses and in Asylums. The paper gave various typical cases of mania or dementia met with in practice, suggested modes of treatment, and described many cases of mania that could be treated successfully at home if the family were willing to defray the cost entailed. The author believed that nine cases out of ten should be removed to a more suitable place than an asylum. As regards treatment, to harness a patient to a bedstead by his wrists or ankles was not treatment at all. Unfortunately, even in this day, such practices were occasionally adopted. He spoke of the reluctance felt by relatives of persons needing treatment to sending them to an asylum. Non-asylum treatment of persons suffering from depression or melancholia had generally been tried before the services of a specialist had been called in. But asylum treatment was necessary in most cases of suicidal patients, though, as shown in the reports of the English commissioners, confinement in an asylum would not always prevent suicide. Melancholia was the most tedious of all curable forms of insanity. Weeks and months were often required to effect improvement in the condition of such unfortunates. Here the question of expense came in. In the case of poor patients, to properly care for them at home involved great expense to keep them free from old surroundings, which were likely to aggravate the malady. Exaggerated egoism was a noticeable feature in such cases. At home, where the patient was the centre of attention, this was encouraged. In an asylum, on the other hand, where the patient became one of many, where he sat at table with some twenty others, no one seemed to care whether he refused food or not. For many, therefore, asylum treatment was the best, as it involved what he would call judicious neglect. Speaking on the question as to how far it was possible to treat cases outside an asylum without recourse to lunacy laws, he thought physicians ought to have the opportunity of treating such cases outside an asylum until it was deemed by them necessary to seek asylum treatment, since recovery might take place in some cases without recourse to an asylum.

Many of the Sections were but thinly attended. In that of *Medicine*, a paper on Atypical Typhoid was read by Professor Dabney of Virginia. He divided his subject into the following sections:—(1) Typhoid fever is atypical in respect of temperature; (2) typhoid fever is atypical in respect of eruption; (3) typhoid fever is atypical in respect of intestinal symptoms; (4) the causes of atypical forms of typhoid fever, which were *(a)* climate, *(b)* season, *(c)* complications, *(d)* individual peculiarities, *(e)* prevalence of other diseases. He then described the morbid anatomy of the disease, and concluded with observations on the diagnosis, prognosis, and treatment in atypical forms of typhoid fever.

A paper, entitled Considerations on the Pathogenesis of Diseases in Women was read by Dr. William B. Neftel of Chicago, in which he gave a description of a series of experiments on animals, with the object of investigating the effects of pulmonary compression in favouring the development of tuberculosis. He found the morbid condition produced by experiments to consist in arterial anæmia and venous stasis. The same condition occurred in women from tight-lacing, causing a predisposition for settlement and proliferation of the bacillus tuberculosus. The author alluded to certain pathological considerations which support the hypothesis. The International Medical Congress was requested to appoint a committee to investigate the whole question of dress for women.

On the subject of Diphtheria in Canada, introduced by Sir James Grant, the speaker stated that diphtheria was prevalent after a mild winter with little snow.

An important report was made by the committee appointed to examine Koroski's paper referring to statistics published by Dr. Keller, physician to the Austrian railways, in which he attempted to prove that vaccinated persons die in greater proportion than unvaccinated. Koroski undertook the laborious task of examining and checking Keller's figures and their sources, and as a result the committee now reported that Keller's statistics were utterly false and untrustworthy.

In the *Military and Naval* Section many interesting and able papers were read on Thursday. The proceedings, moreover, were enlivened by a pleasing incident—namely, the presentation of an elegant vase of onyx, framed in gold, to Dr. H. Smith of Philadelphia, the president of the Section. Inspector-General Lloyd of London took the chair, and Deputy Surgeon-General Marston and others spoke in complimentary terms of the general hospitality shown by their American brethren, and by Dr. Smith in particular. Dr. Marston said, speaking for the foreign guests, they would be profoundly ungrateful if they did not highly value all that had been done for them in America. He could wish nothing better or more pleasurable than to introduce Dr. Smith to his friends and their families in England as a specimen of a true American gentleman. Dr. Smith in reply, said he must not forget to observe that the members of the Executive Committee were as worthy of praise as himself. If his efforts had not been so warmly seconded in London and on the Continent the success of the Congress would not have been so conspicuous. He warmly acknowledged the action taken by British physicians to neutralise malicious misrepresentations by those who were willing to cast discredit on his country and his profession in order to gratify personal pique. He could not better express his regret at their course, of which he spoke more in sorrow than in anger, than by applying to them the words of the Wizard of the North:—

> "Breathes there a man, with soul so dead,
> Who never to himself has said,
> This is my own, my native land,"

At the general sessions the Secretary-General of the Congress, Dr. Hamilton, reported that the Committee of Representatives of all the European nations present had unanimously selected Berlin as the place for next meeting, in 1890.

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In the evening the foreign members and their ladies were entertained at a reception from 4 to 7 o'clock at Grasslands, the luxurious seat of Mr. Secretary Whitney.

On Saturday, the concluding day of the general session, votes of thanks were given to the President, General Secretary, &c., by representatives of the various European countries, who spoke in the highest terms of the manner in which they had been received. Dr. Graily Hewitt and Mr. Edmund Owen of London spoke for England. The meeting concluded with a farewell address from the President, who in a few eloquent and touching words remarked that, if alive, he would attend the Berlin Congress. In the morning the members went to Mount Vernon, Washington's burial-place, and nearly 400 left the same night for Niagara. The total number of members was 2760. A large photograph was taken of members in a group on the steps of the Treasury House. The meeting on the whole was successful, in spite of many eminent men holding aloof. The papers were numerous, but, with few exceptions, of not very striking merit. Hospitality was not quite so abundant and profuse as at London and Copenhagen, many wealthy citizens being away from Washington for the season. The officials, from the Secretary-General downwards, have done all in their power to make the Congress a success and to afford a hearty welcome to foreigners, but the working details of organisation would have borne improvement, very little pecuniary help having been given by the Government.

The ninth International Medical Congress has now dissolved, having met on Saturday morning simply to adjourn. The meeting was fixed half an hour earlier than usual, so that foreign members might catch the train to take them to Mount Vernon. Secretary-General Hamilton was busy at the table ten minutes before President Davis requested the attention of the meeting. The Secretary-General then presented the resolutions adopted by the Sections, which he said would be printed in the Transactions. Amongst these resolutions is one by the Section of Climatology proposing the establishment of national bureaus of vital statistics, one by the Section of Military Surgery relative to the prohibition of explosive projectiles in warfare, and one by the Section of Hygiene on teaching hygiene in public schools.

Dr. Graily Hewitt (London) said: "I come before you as one of the foreign members of Congress who have been requested to express in a few words the appreciation felt by the foreign members of Congress of the efforts made by the executive in furtherance of the objects of the meeting; we beg to convey our thanks for the attentions bestowed on us, and our appreciation of the success which has attended their efforts. I desire to express our sense of the hospitality, kindness, and attention, both public and private, received at this great meeting, attentions which will contribute to make our visit to Washington a source of congratulation and happy memory in the future. I beg to submit the following on the part of the foreign members of Congress:—'We desire to convey to the President of the United States our best thanks for his presence at the ceremony of the inauguration of this Congress, and we desire to express to the Executive Committee of the Congress, particularly to Dr. Henry H. Smith, Dr. John B. Hamilton, Dr. A. Y. P. Garnett, Dr. Tonen, and Dr. Arnold, our high appreciation of the efforts made for the efficient organisation, action, and working of the Congress, which have rendered it so great a success; and we convey our warmest thanks to the citizens of Washington for the kind hospitalities, public and private, we have received during our pleasant visit to this beautiful city.'"

Dr. Martin (Berlin) expressed in German his thanks for the kindness he and other members of Congress had received, and his gratification at the success of the Congress. He had come with some doubts, but these had all been removed, and the great success of the gathering would secure it a high rank among the medical Congresses which had been held. It was the custom to engrave the names of the victors at the Olympic games on plates of gold; they could not so record the names of their entertainers, they could only mark the expression of their sentiments by a vote of thanks.

Dr. Landolt (Paris), addressing the Congress in French, said: "I have been commissioned to express to the President of the United States our sentiments of profound gratitude; although unable to find words suitable to the occasion, I accepted the honour, and, since gratitude springs from the heart, there is no need of eloquence to make it understood. Mr. President and gentlemen, we have already assisted at a series of International Congresses, and have been well received everywhere. The countries of Europe have rivalled each other in zeal to make our stay with them in their beautiful cities pleasant, but not often has it been our lot to see the Chief of the State mingle in person among us, and take part in our labours. The President of this great Republic came among us to speak a welcome with sympathetic voice; he invited us to his own home, and gave each a hearty grasp of the hand, significant of the most cordial hospitality. The sanction given by President Cleveland to the Congress has imparted the greatest charm to our stay in this capital, and, returning to our hearths, we shall preserve the most grateful and respectful remembrance of the President of this great Republic, and say to the whole world that the United States, being so favoured, possesses, above everything, a chief who directs them surely on the way to progress and prosperity."

Mr. Edmund Owen (London), in a speech which was vociferously applauded, his references to Mrs. Cleveland especially meeting with hearty favour, said he desired to second Dr. Hewitt's resolution. In science there were no politics, and he was extremely happy to have visited the United States during the presidency of Mr. Cleveland. He asked an American friend, a very intelligent man, if he voted for Mr. Cleveland. His friend said "No." He asked him if he was satisfied now, and received the laconic answer, "Guess I am." If that question were put to this meeting—Are we satisfied? I say, "I guess we are." A man like the President might have found something else to occupy his attention—say, in the White Mountains—this time of year; he might have been driven away by the doctors, but instead he remained to welcome them. "When the history of this grand country comes to be written, we trust President Cleveland will have a niche in the temple of fame side by side with those great men, Lincoln and Garfield. When you are in our country, we love to hear you say, 'We admire your Queen.' We say in all truth, we admire, we love your Queen of beauty and grace. In seconding this vote of thanks, I simply express the prayer that Mr. President Cleveland and Mrs. Cleveland may long continue in strength and health to preside over a happy, prosperous, and united country." Dr. Hamilton, Secretary-General, then presented Dr. Hunt of this city, on behalf of the Section of Oral and Dental Surgery, with a handsome gold-headed cane, as an expression of appreciation of his courtesy.

Dr. Hamilton replied to the speeches of the foreign delegates, and said: "Mr. President, I could not fail to be deeply sensible of the great kindness bestowed upon me, and the many words of encouragement received during the present meeting and the past six months. I am profoundly grateful for the expressions now placed upon record; but, sir, the success of the Congress is due to no one man; all on this side worked with the spirit and enthusiasm of Americans, whose hearts were in their work; but all efforts would have been in vain, and the strongest would have failed, had it not been for the noble army of scientific men abroad who, deaf to all misrepresentations of disappointed factionists, came from the universities of old England, the vine-clad hills of France, the seats of learning of Germany, the cities of the Alps, from sunny Italy, the lowlands of Holland, the fastnesses of the Danube, from far-off but ever-near Russia, from the golden shores of China, from Japan, Cairo, and the sands of Egypt, and the everlasting hills of Palestine. I say to these representatives here assembled that to them we owe a debt of gratitude which time cannot efface; as these, our dear colleagues, braved the dangers of the deep, and sustained in some cases the shock of calumny in order to be with us, so let us here say that when again we meet at Berlin in 1890 let it be to renew friendships formed here, and once more grasp the hands of those who have been true to us now."

Dr. Davis (President) after referring to his professional life of more than half a century, said one of the objects of his life had been to promote harmony among all branches of medicine; to-day the happiest feeling of his life was that he could now stand here in the capital of the United States, and not only see the profession he loved united and working harmoniously, but stand among representatives of almost every country of the globe. He thanked those who had come across the water to attend the Congress, not only in his own name, but in the name of the profession of America, in whose name the Congress had been invited to sit here. There were members of the profession from every State in this great union assembled to greet the foreign members, of whom there was a larger gathering

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in this Congress than in any one preceding. He thanked the members of Congress for the courtesy shown in sustaining him in the discharge of his duties. "Life with me," he said, "will not be long, but if it is spared with sufficient health I shall feel great satisfaction in meeting my friend Dr. Martin and all his comrades in Berlin in 1890."

The Niagara excursion proved an unqualified success. Two special trains, with sleeping cars, left Washington on Saturday evening. They stopped *en route* at Watkins' Glen, a wild, rocky mountain gorge, which was rendered additionally interesting by numerous torrents and cascades. The scene altogether was weird and beautiful in the extreme. Niagara was reached on Sunday night. The visit to the rapids was made on Monday, when all the several spots from which a view of the falls from both sides could be obtained were visited. To the foreign members hotel expenses, railway fares, drives, and everything were free. An impromptu meeting was got up at Niagara, Dr. Pavy in the chair. A resolution was proposed by Dr. Coghill (Ventnor), seconded by Surgeon-General Rayer (Russia), and supported by Surgeon Langridge and others, acknowledging the magnificient hospitality shown to the foreign visitors by their American entertainers. A vote of thanks was also passed to the organising committee with much applause.

It is understood that the next Congress, to be held at Berlin in 1890, will be presided over by Professor Virchow.

ERRATUM.—In our last issue, page 540, first column, the name of the author of the paper on Sunstroke was wrongly printed "Langridge," instead of Anderson.

ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD.

ON January 1st, 1887, there was a total of 822,215 paupers in England and Wales, and, compared with the corresponding date in the previous year, this exhibited an increase of 2116 in-door and 7144 out-door paupers. The increase ranged from 3·8 per cent. in the north midland division to 0·6 in the south midland division, the largest numerical increase being that of 3575 in the metropolis. In referring to the causes of this increase, it is stated that it has to some extent been brought about by the increased number of sick in the Poor-law infirmaries, where improved treatment and care has led to an undoubted lengthening in the lives of the sick, and into which the poor, who have a great reluctance to the workhouse as such, have no objection to enter. As regards the expenditure on poor relief, it appears that in the last financial year there was, as compared with the previous one, an increase in 13 unions, amounting in all to £36,520, the largest being an increase of 6·9 per cent. in the York union; and a decrease in 31 unions, amounting in all to £231,890, the largest decrease being one of 6·6 per cent. in the metropolis. The cost per head on the mean number of paupers of all classes was £10 12*s.* 6½*d.* for England and Wales and £22 5*s.* 2½*d.* for the metropolis.

In the Local Government and Public Health Department of the Board returns have been issued showing that since the constitution of the Board in 1871 sanction has been given to the borrowing of £36,722,067, and this mainly for sanitary improvements. Of this sum, £31,249,949 has gone to urban districts, and £2,378,331 to rural districts. During the same period power has been given by means of local Acts for raising £43,759,711. The principle of repayment of a moiety of salaries for medical officers of health and inspectors of nuisances seems to be increasing, and at present such repayment is made as regards 1163 of the former and 1067 of the latter officers. In certain instances this repayment is withdrawn, and such was the case in a certain number of instances in which the Board refused to sanction proposed reductions in salaries; indeed, the report before us makes special reference to the inadequacy of the salaries frequently proposed by sanitary authorities, and it is pointed out that one of the objects of the grant is to secure the appointment of efficient officers, and the proper discharge of their duties. Such repayment is now also extended to increases of salaries granted to medical officers of health and inspectors of nuisances to whom duties under the Dairies, Cowsheds, and Milkshops Order, 1885, are delegated.

With reference to defaulting authorities, the case of Cheshunt is of somewhat long standing, and at present the issue of the mandamus which was obtained against that Board is still deferred, because the authority have acquired a loan of £15,000 for the compulsory purchase of land for their sewerage works. The other cases mainly bid fair to come to a satisfactory solution, although in some instances difficulties have to be contended with. Near Canterbury the city wells are apparently open to pollution by reason of certain cesspools just outside the city boundary. The rural sanitary authority appeared ready to remedy the mischief by draining into the city sewers, but the Town Council have refused the necessary permission. In the meantime, such risk as exists must remain.

A large number of port sanitary authorities which heretofore were only appointed temporarily have now been placed on a permanent footing, an arrangement which must necessarily promote our organisation for the improvement of the sanitary state of vessels and crews, and for preventing the importation of disease from abroad. This work of permanent port constitution is still in progress, and expenditure is going on around our coasts as to port officers, hospitals, &c.

Under the Sale of Food and Drugs Act, 1875, we find that during the past year one sample was analysed for every 1181 persons, and that, in London, St. Mary (Newington) stands alone in sending in an absolutely *nil* return. This local inaction has been marked ever since the commencement of the Acts, and a dairyman in the adjoining parish, and who was fined, somewhat naturally complained that he only watered his milk to the same extent as a neighbour and rival, who was allowed to adopt this form of competition because he happened to live on the other side of the way. There were also three counties and sixty-six boroughs in which no single sample was submitted for analysis during the year. Of samples analysed, the highest percentages of adulterations were — spirits 17·8, butter 17·3, coffee 15·1, pepper and milk each 13·0, mustard 12·7, and drugs 10·8; the total proportion of adulterations being 11·9 per cent. of articles analysed, as opposed to 13·2 last year—indeed, it is the smallest proportion as yet reached. As regards milk, the report expresses a fear that some of the apparent gain is attributable to the lowering of the analyst's standard, and not to an improvement in the milk; and it refers to the difficulty of deciding between a milk that has been fraudulently watered and a genuine sample from a badly fed cow; indeed, it is well known that many dairymen adopt the practice of watering rich milk down to a limit which will pass the test. The analyst for the city of London points to a real difficulty when he states that public analysts have come to the conclusion that as yet "none of the processes of analysis in general use ensure uniformity of results." With respect to butter, there is evidently a steady increase in the sale of so-called butterine, mostly manufactured in Holland. The worst feature of this sale is that the butterine is bought by butter manufacturers and mixed with butter, to the sole advantage of those guilty of the fraud. Butterine, or rather, to give it the legal name, "margarine," itself is usually a wholesome article of diet.

The vaccination returns show clearly where failure to comply with the law in this respect mainly lies. In the provinces a somewhat steady increase in default is going on, the births not finally accounted for in this respect being 5·3 per cent. in 1884; but the evil is principally located in the following unions, where the percentages are excessive: Keighley, 71·7 per cent.; Leicester, 47·9; Dewsbury, 37·6; Derby, 29·4; Henley, 19·2; Oldham, 17·2; Barrow-on-Soar, 15·2; and Eastbourne, 15·2. It will need a "day of reckoning" to convince these people that their children have a right to the possession of the same protection against small-pox as they themselves have. The calf-lymph station may fairly be regarded as meeting the case of such objectors as can assign a reasonable ground of objection; and we are glad to learn that during the year 5329 persons resorted to it. A large amount of animal lymph was also distributed from it. Reference is made in the report to a number of other subjects. These include a summary of the medical work, but as to this a separate report is annually issued by the medical officer to the Board.

THE Chelsea Board of Guardians, on the recommendation of a committee appointed to examine into the condition of the post-mortem room of the parish, have decided to pull down the present structure and erect a new one.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 17, 1887.

THE history of the London scarlet fever epidemic has entered on a new phase since the extraordinary meeting of the managers of the Metropolitan Asylums Board on Saturday last. Scarlet fever is steadily increasing, and, so far as can be judged from former experience, both the extent of the epidemic and the mortality are likely to become aggravated during the next two months. London is, however, provided with a body having special powers, organisation, and resources for dealing with infectious diseases in such a way as to minimise their danger to the community, and yet at a critical moment in the course of an epidemic they meet, they talk over the prospects before London, and end by passing a resolution which, in so far as it is not altogether meaningless, is directly hurtful to the interests of the inhabitants of the metropolis. In five weeks the admissions from scarlet fever into the Asylums Board hospitals had increased from 91 to 195. The Asylums Board had available for that disease 1282 beds; 1045 of those beds were occupied early this week, and the fresh admissions are daily on the increase. Fortunately, there is a large new hospital at Winchmore-hill, which, if utilised pavilion by pavilion as the need arises, could be properly fitted for the sick in about a fortnight, by which date the 200 beds still available elsewhere may be expected to be occupied. In the face of this emergency, the managers, having first decided by a vote of hands to defer all consideration of the subject for the very period of a fortnight which gave them their only chance of doing their duty, ended by a formal vote of "the next business"; and then they wended their ways homeward, leaving London and scarlet fever prospects to take care of themselves.

We are quite prepared to admit that there are many matters which call for modification as regards the duties and responsibilities of the managers of the Metropolitan Asylums Board Hospitals, but to avail themselves of such an opportunity as the present one to discuss these subjects indicates, to say the least, a defective sense of public duty. One manager wants to limit the length of the period of detention in hospital, so as to return the patients back to the public precisely in the stage in which every tyro knows them to be obviously infectious and dangerous. Another utilises a scarlet-fever emergency to raise questions as to the reception of non-paupers, and as to the need for recovering expenses from those who can afford to pay. A third would diminish the amount of floor space per patient, and this, too, at the moment when it is proposed to take the convalescents away, and so to aggregate together, with diminished air space, those who, above all others, need ample breathing room. Such are the matters that came under discussion at Saturday's meeting, and they will not fail to have convinced the London public that, after all, there must be something radically wrong in the constitution of the Metropolitan Asylums Board itself.

We would for the moment limit ourselves to two points in which it is evident that the constitution of that body needs amending. In the first place, it is essentially a Poor-law body, and as such it is unfitted to deal with the important sanitary considerations which are referred to it. The Poor-law element is always raising its head at meetings where matters affecting the health of the metropolis are under discussion, and at which representatives of the sanitary authorities are markedly absent. This point was especially alluded to in the Report of the Royal Commission on Small-pox and Fever Hospitals, and a reorganisation of the Board was declared to be necessary. But year after year passes, and nothing is done to remedy the anomaly. In the second place, the Board have no medical adviser. Had the matters dealt with at last Saturday's meeting come before the town council or local board of any ordinary English town, the recognised adviser in matters affecting the health of the town would have been present; he would distinctly have informed his authority of the extent of the danger and of the measures necessary in order to meet it; and in the face of his skilled advice it would hardly have been possible for the most retrograde body to have dealt, as the managers of the Metropolitan Asylums Board were compelled by a majority of their number to deal, with an emergency such as London now has to meet, and this unaided by the very body whose duty it is to cope with the difficulty.

Possibly the minority found themselves hampered because a number of their colleagues who are not tied by Poor-law notions happen to be away from the metropolis at this time of the year; but it is to be hoped that an effort will be made to call back such members as can be trusted to place the welfare of the metropolis before all other minor considerations, and that a second meeting will be summoned. In the meantime, we can only hope that the increased readiness on the part of the population to resort to hospitals tends to give to the rapid increase in the number of admissions a more serious meaning than the actual circumstances would otherwise justify.

As the area of knowledge extends and its depth increases, facts, as we know them, wear different aspects and things seem to change; and as the transformation proceeds the old names and formulæ become obsolete or acquire new significances. Practically to-day systems and schools, so called, of medicine have died out, and all that relates to the method or principle of the art of healing may be grouped under two heads—namely, Rational Medicine and Empiricism. It is not worth while to recall the historic or traditional meaning of these terms. The sense in which we employ them is the common as distinguished from the technical or scholastic. By rational medicine we mean that which consists in the reasonable and purposive use of agents to do certain specific work which is upon ascertained grounds held to be necessary or conducive to the remedy of disease and the recovery of health. There is no mystery in this method, nor does it include or imply any purpose or procedure which is not in accordance with the laws and processes common to all science and art. The medical scientist does not deal in any special art or mystery. He proceeds on common-sense principles, and by logical methods of inference lays down his plans

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and carries them out by plain and obvious means and agencies. He is a scientist of the same school and type as other scientists, and he works in medicine precisely as they work in other departments—for example, geology, zoology, or physics. In proportion as he is a sound practitioner of medicine is he a rational scientist; and, as a matter of fact, if a scientist from any other department engaged in the specialty of medicine he would need only to deal with the new sets of facts in the old methods. This is the test of all true science in art, that the method of work is the same, however widely the province of labour may differ; and it follows that the labourers in the divers fields can understand each other, help one another, and mutually criticise and correct each other's endeavours. Rational medicine is sound in proportion as it is *orthodox* not in the sense of being conformable to any special canon of truth, but in accord with the universal principles of science. The attempt to set up any special hypothesis or to lay down any particular law is in itself an act of revolt against science, and stands self-condemned as irrational. Thus if *similia similibus curantur* were not a fallacy, it would hold good throughout the whole domain of science—not in medicine only, but in every department. Its character as a proposition in which an essential part of the theorem is suppressed is a self-evident proof of its heterodoxy. No one ever alleged that the similarity of the *similia* extended to their quantitative as well as to their qualitative properties; and as the formula did not express this limitation, it omitted to state an essential part of the truth, and so became a false statement of the worst possible kind—in short, a fallacy; the truth suppressed being that all agents act differently in different magnitudes or doses, and that therefore *similia* in one dose must be dissimilar in other doses, and the doses in which they were or were alleged to be, administered were not the doses in which they were similars. This, apart from all the superadded fallacies of infinitesimalism and the like, which have emphasised the grotesque absurdity of "Homœopathy," would alone place that so-called *system* of therapy outside the pale of rational medicine, and the like is true of all other systems. Whatever and wherever a claim is set up for any method or scheme of principles as peculiar to the art of healing, the fundamental law of rational medicine, as a branch of science, is violated, and either the pretence is idle, or the theory on which it is based is unsound.

The fact that rational medicine is an integral part of science as a whole, and conformable to its universal laws and principles, formulates many minor facts interesting alike to the profession, the practitioner, the student, and the public. For example, it follows that all the old exclusiveness is at an end, and that as the knowledge of nature becomes more widespread among the people, the profession must needs stand on a simple footing of specialty in science—that is, greater acquaintance, and consequent expertness, in dealing with a particular class of facts, and nothing more. As we said just now, the medical scientist differs only from the scientist in geology in that he has made the facts grouped for convenience under the heading "Medicine" the subject of his special study as a scientist, instead of directing his attention to the group of facts designated "Geology." He is neither more nor less a scientist than his compeer in other departments. It follows, again, that the practitioner of medicine must practise in conformity with methods and upon principles common to all practitioners in the several branches of science; and therefore his work must be easily understood by them and amenable to the scrutiny of competent critics in general science, if only they will take the trouble to make themselves acquainted with the special facts of medicine. Again, the student must needs be grounded in the principles of general science and acquainted with its methods before he takes up the specialty of medicine. There can be no such thing as an exclusively medical education; and while the student of medicine must be first a student of science, no student of science can find the door of medicine barred against him, or find that the key of knowledge does not open this department as easily as any other. Further—and this may, in some senses, seem to be the most pregnant of the consequences dependent from the fact that rational medicine is an integral part of science—the confidence of the public in the profession and its practitioners is likely to be ultimately measured by the status in science which they attain, rather than by the successes they achieve in the struggle against disease. It will before long come to be perceived, and even now it is beginning to be seen, that the prestige of the profession as a whole and the reputation of its members do not so much rest on what they do as upon what they *are*. The System and the Charlatan may catalogue their successes and parade them as the grounds of a claim to public respect and confidence, but as medicine assumes its true place as a branch of science and its practitioners are regarded as men of science, this appeal must not only appear incongruous, but by the force of circumstances prove to be no longer of any avail. This is the hope we have of the regenerating power of truth. As science sways in medicine, it will become less and less a craft, and at length develop into a purely scientific art, stripped of all unworthy disguises and simply rational. We see the same change coming over all branches of applied knowledge; and true progress must sooner or later—the sooner the better for ourselves and the community at large—bring rational medicine into the closest and simplest relation with other branches of science until knowledge becomes one.

Empiricism is the antagonism of all this. In its modern sense, at least, the term empiricism may be taken to mean wilfulness, in ignorance or defiance of law. The essence of empiricism is an assumption of exclusive skill in the individual. It is not even the idea of exclusiveness in knowledge of the sort which may for a time exist, when, of several competing practitioners in any art, one may attain to a deeper insight of principles, around which he casts a mystery. The empiricist in medicine affirms his power and right to employ remedies discovered by some genius of his own. He does not hold himself bound to account for their modes of action even to himself, still less to others. It is enough for him that they serve his purpose, or that he thinks they will do so. He tries experiments, and if they succeed he repeats them without any feeling of responsibility to determine by what law his procedure is governed. He is of the same mind as the counsel who cares nothing for the soundness of his legal argument if only he can win his client's suit. It is as though

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the mariner should care nothing for astronomy, or magnetism, or the laws of winds, and currents, and storms, if only he reach safely the port for which he is steering. Of course there is no science in the method of the practitioner of this class, and, except in so far as he is blindly using the brains of better men, there is nothing of science in the system on which he works. Probably all empiricism is really at bottom a fraud, and those who pretend to exercise it are, knowingly or unconsciously it may be, acting upon suggestions emanating from authorities who are not acknowledged. In any case, as a method or system, empiricism, as we see it around us to-day, is one of the most contemptible and mischievous of the uses to which men—sane and honest men—can put the faculties of will and sense. To do an act without knowing or caring why it is done, except that a certain result will probably be attained, is to fall back on that elementary process of reasoning by which the lower animals arrive at the conclusion that they must eat to live, or seek cover for shelter in a storm. *Experientia docet* is a maxim at the very initial point of mind-work. The outcome of such work can at best be only the heaping together of facts in confusion. Science is in no way advanced by such labour, though it may chance that the accumulated results of experience will sometimes supply the scientist with materials he would otherwise need to go further afield to obtain. Even if it be granted that the empiricist does now and then seem to strike a lode of valuable ore, as by a divining rod, the fact that his success is not achieved by the working out of any *rational* process of applying knowledge not only deprives him of all claim to the character of a scientist, but obviously affords no ground of expectation that he will be able to repeat his enterprise. The empiricist is isolated. He has nothing whereby he can link himself with others. He does not himself know how or why he is successful, and his success affords no ground of confidence. On the basis of empiricism nothing can be built. The sum of knowledge is not increased by it, and the pursuit of science is rather retarded than advanced, for men are led to trust to chance for the gifts of genius, instead of setting honestly and intelligently to work to win the knowledge of facts according to natural laws.

It is of the highest moment that those who are commencing the study of medicine should recognise the fact that only rational medicine is a branch of science; and it would be well if those who practise medicine could be induced to make this fact a cardinal point of their philosophy, with all the intellectual, actual, and ethical considerations and consequences it implies.

WE published last week a communication from a correspondent on the subject of the medicine stamp tax, from which it appears that the Revenue authorities have recently been applying the Act under which it is levied with peculiar stringency, in all probability urged by the old patent medicine proprietors. The time is therefore opportune for a renewal of the protest which we have often before made against this antiquated, unjust, and even pernicious form of taxation.

There would be ample ground for invoking legislative interference if only to readjust this tax on the ground of its unequal incidence. For the upshot of various statutes and their judicial interpretation has been to reduce the law at the present time to a state of utter confusion. The original Act of GEORGE III., by which medicines were rendered liable to duty, was couched in the most comprehensive terms. These were made subject to various exceptions by subsequent Acts of Parliament, with the object and general effect of excluding from the category confectionery and beverages. One of the repealing Acts, however, was so worded that when it came to be construed by the Court of Appeal in the well-known case of the ATTORNEY-GENERAL *v.* LAMPLOUGH, it was held that the administration of a medicine through the medium of artificial mineral water entitled it to exemption from the duty. The Revenue Commissioners, again, have adopted of their own motion the view that preparations which are administered by burning and inhalation of the fumes are not to be regarded as "used or applied externally or internally." Such preparations are accordingly treated to exemption also, and in the result it is matter of the merest chance whether a particular medicament will be held to be liable to duty or not. We quote from our last week's correspondent (p. 545):—

"Chemists are prosecuted for selling simple pharmaceutical medicines which have not the slightest resemblance to patent medicines—e.g.: simple quinine, made up into pills by means of sugar, gum arabic, glycerine, or other excipient; quinine pure and simple, enclosed in a capsule of gelatine or covered with sugar; rhubarb, made into a fluid extract or tincture by extracting its properties with alcohols; menthol, dissolved in spirit to form a solution; powdered rhubarb and soda triturated together are under certain conditions held liable. The Board of Inland Revenue rule that each of the before-mentioned, or the mixture or combination of any two or more drugs, or the addition to a drug of any other substance (although it be but a vehicle or adjuvant), are thereby removed from the category of 'medicinal drugs—entire' (or crude drugs), and become nostrums, liable to the stamp tax, in each and every case where the medical properties are stated upon the label, or set forth in advertisements to the medical profession and chemists in medical and pharmaceutical journals. All compounds and mixtures of the Pharmacopœia come under this ban according to this arbitrary ruling, and the chemist vending is liable to a heavy fine if he states the medical properties upon the label, or in any advertisements to the medical profession or trade."

In the LAMPLOUGH case two courts gave judgment for the Crown, and only after a most elaborate legal argument did the Court of Appeal pronounce in favour of the defendant. That the tax collector should be turned loose upon the public with a weapon like this in his hands is not only a grievance crying loudly for redress; it is a disgrace to the statesmanship of our Legislature, and one which, without distinction of party, it concerns all politicians who lay any claim to enlightenment promptly to remove.

But this is the least of all the objections to this impost. On fiscal grounds it is difficult to conceive of any objection to any tax which cannot be urged against this one. Should taxes be apportioned to the means of the taxpayer? The bulk of this tax is collected from the poor. Should the payment of a tax be arranged with a view to the convenience of the taxpayer? This one is levied in times of sickness chiefly. It is collected, therefore, at a time when the payment of anything in the nature of a tax constitutes a peculiar hardship, when the ordinary expenses are increased by the demands made upon a poor man's purse for special food and the like, and when perhaps the ordinary income is

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reduced or even suspended altogether in consequence of the patient's incapacity for work. Thus in the time and circumstances of his greatest need this additional burden is cast upon him, and his convenience is studied only for the purpose of its being outraged. And, finally, should the collection of a tax be economically done so that as little as possible may be taken from the pockets of the community beyond what goes into the exchequer? This is collected in the costliest way imaginable. The manufacturer or importer advances it in the first instance, and treats the money so laid out as part of his capital expenditure, on which he will, of course, expect to obtain his ordinary trade profit. This he secures by charging the wholesale dealer with the duty *plus* his ordinary profit, in addition to the cost-of-production price. Of course, the wholesale dealer recovers his outlay in a similar manner, and with a corresponding further addition for trade profit, from the retailer, and the retailer in his turn reimburses himself at the expense of the consumer. The exchequer receives only the amount originally paid by the manufacturer *less* the ordinary expenses of collection; the taxpayer is mulcted in the whole accumulated profits of the various traders through whose hands his medicine has passed, in addition to this ordinary charge. Some years ago we showed by an analysis of figures that in this way a *sixpenny stamp* involves, in a very ordinary case, an addition of about *two shillings* to the retail price,[1] so that for the privilege of contributing something less than sixpence to the national exchequer the unfortunate taxpayer has to pay eighteenpence to the financiers whom the Government scheme interposes between himself and Somerset House. Surely there never was a tax more radically or incorrigibly bad. If any considerable proportion of our Imperial revenue had to be levied on such a method as this, the QUEEN'S Government could not be carried on for a single week. The only explanation that can be offered of the survival to our own times of an impost so oppressive, so unremunerative, and so unjust is that politicians have consented to regard it as a matter insignificantly small and to treat it with contempt. Small it may be from the point of view of the Chancellor of the Exchequer, for of the ninety and odd millions which he annually demands, it yields him very much less than one five-hundreth part. But from the payer's point of view it is anything but insignificant; for him it lays wait until his "rainy day" comes round, and falls with its tripled or quadrupled weight precisely at that time when the smallest addition to his outgoings is felt to be a serious burden.

But the worst feature of this tax has yet to be mentioned. Its uncertainty, its oppressiveness, its wastefulness, are much; and they are inseparable faults. But if it were desired to add to all these one crowning mischief, no better—i.e., no more mischievous—plan could have been devised than that of collecting the duty by means of a stamp. The stamp is nothing but an official receipt for duty paid; But again and again has it been represented by unscrupulous vendors as being some sort of Government voucher of the excellence of the nostrum with which it is sold. Mistakes of this sort are constantly being made by uneducated people. Within the present session there have been brought to the notice of the Government in the House of Commons repeated instances of the same kind of thing in the most diverse fields. And on all these occasions the mouthpiece of the Government has expressed a fitting sense of the duty which lay upon the representatives of the Crown to disavow these mischievous fictions, and take steps so far as possible to remove the appearance of official authority in their support. But never has the prestige of Government been more impudently or more profitably claimed than by some vendors of "patent" medicines that might be named. The class of remedies somewhat inaccurately termed in common parlance "patent" comprises, without a doubt, some of undeniable excellence; but it contains also many that are fraudulent and some that are deleterious. But for each and all of these an unscrupulous vendor may claim what virtues he pleases, and cite in proof of his claim the authentic Government stamp. True, his argument does not prove his conclusion, but it convinces a certain number of possible customers, and that is the material point in his view. That also is, we admit, *the* material point in our view. It is startling, it is scandalous, that the Government stands by, and for a paltry bribe of £150,000 a year becomes a party—a conniving party—to such wholesale and shameless fraud. If on fiscal grounds we urge the repeal of this obnoxious tax, on moral grounds we demand it. The present session is now over, but we shall make it our business to renew the agitation from time to time until the good cause prevails.

[1] See THE LANCET of July 5th, 1884, p. 22.

THE questions with which we propose to deal in discussing some points in connexion with hysteria have to do with that class of phenomena which some sceptical minds, especially in England, are apt to reject from careful consideration, or, if they accord any consideration to them, adopt a different explanation from that which is current amongst the French. We are tempted to recur to the subject because of the recent appearance of several new publications dealing with the subject matter, and especially we may mention the book of M. PAUL BERBEZ[1] and a paper by M. RENDU in the *Archives de Neurologie* (No. 41, vol. xiv.). In order to obtain a clear notion of the views which are pretty generally entertained on this subject in France, and which, we may add, are not without adherents in England, America, and Germany, it may be well to state a theoretical explanation of the alleged phenomena.

Of all the parts of the nervous system none is more impressionable than the cerebral cortex to changes of various kinds happening at the peripheral apparatus of afferent nerves, whether these be the special organs of sense or other less definite terminal organs. We do not wish to deny that this statement has not something of the nature of an assumption, but it is, we think, one which will bear inspection by the light of ascertained facts. Hysteria, if it has any special place and habitation, is most likely a derangement of certain areas of the cerebral cortex, but this is perhaps an even bolder assumption than the preceding. A further step towards understanding the present position of the subject may be taken by simply stating what are believed to be the ascertained facts of hystero-

[1] Paris: A. Delahaye et Lecrosnier, Rue des Carmes.

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traumatism—the term traumatism being employed in the widest sense to signify any shock, wound, or concussion.

Certain predisposed organisms or individuals do suffer, or aver that they suffer, after the receipt of some traumatism from rather characteristic phenomena, which may take the shape of an unpleasant idea, a disagreeable sensation, or an emotion of the gay or sad kind, and not necessarily of the intense sort. Some of these impressionable individuals experience a fixed pain in one joint, or acquire a rigidity of a limb, or even a limp form of paralysis. Since such affections sometimes disappear entirely, even after having lasted for many years, we cannot reasonably regard their causes as of an organic nature; and furthermore it is highly improbable, considering the slight variations exhibited in the morbid phenomena, that a contracted or a dilated state of the bloodvessels of the faulty nerve centres can be the essential cause of the derangement. The belief that the genuine nervous matter has undergone some slight but effective change seems to us to be far more in accordance with the facts of nervous physiology, and we can think of no better analogy than the one which Dr. RUSSELL REYNOLDS employed long ago, and which conceives that nervous matter may be "magnetised and demagnetised," in the same way as iron may be, without altering in any considerable degree its essential constitution. The real cause, then, of hysterical paralyses, pains, and the like is the special state of the brain; and the occasional cause—i.e., the traumatism—can have but a slight action. We assume, therefore, that some individuals are morbidly mobile in the nerve centres—or, to keep up our analogy, we may say more easily "demagnetised" in certain parts of their cerebral centres.

It has been thought by some observers that the change in the cerebral centres is really and chiefly the outcome of the traumatism, which they conceive brings about a definite organic change of slight intensity—as, for example, the least possible ecchymosis. In cases of nervous disease ensuing on severe traumatism, as happens in railway accidents, such a hypothesis offers a perfectly possible solution of the symptoms; but at the same time, in addition to mere physical shock, hæmorrhages, and inflammations, there almost always exists a certain degree of psychical or hysterical disturbance, which intensifies and adds to the symptoms chiefly induced by the actual lesions, and this psychical element must vary with the individual, being of greater force in those who belong, or come nearest, to the group of hysterical, not to say neurotic, people.

For practical purposes the symptomatology and the diagnosis of these affections are by far the most important considerations. The symptoms are as varied in seat as they are in character, and the combination of them is also remarkable for its variability. The paralyses may be of the so-called *limp* kind (*les paralysies flasques*), or some stiffness may attend the paralysis (*les paralysies avec contracture*). The paralysis may be limited to one limb, or even to parts of a limb, or it may take the form of a hemiplegia or paraplegia. The diagnosis may be rendered more difficult by the absence of any history of nervous attacks or hysterical phenomena, and there may be even no affection of the special senses. Of this combination M. RENDU gives an interesting illustration in the case of a girl aged seventeen, who had an incomplete paralysis of the right hand associated with preservation of the electric contractility, but with loss of the muscular sense: "the absolute anæsthesia involved every form of articular sensation."

Perhaps the least well recognised forms of hystero-traumatism are those cases in which monoplegiæ constitute the principal nervous element. The following is an outline of such a case from E[illegible]REBEZ's book: A cavalier, aged twenty-four, without any family history of nervous disease or any personal history of nervous affections, sustained a fall from his horse on May 8th, 1884, and broke the radius of his right forearm. The splint was removed at the end of fifty days, when there was found to be, not unnaturally, some difficulty in moving the limb; this paralysis, instead of mending, increased to absolute loss of power of the whole of the right upper limb, which underwent no improvement for the better during the next four months. After this period a careful examination demonstrated the complete paralysis of motion and of sensation to pain, touch, and temperature, which anæsthesia extended to the deep parts of the limb, so that violent torsion of the limb was actually painless, and electrical currents of great intensity were borne without apprehension and without pain. The muscular sense was completely lost, but the muscular contractility was normal in the paralysed limb. The anæsthesia extended as far as the shoulder, and was bounded by a zone of diminished sensibility, so that the line of demarcation was difficult to establish. There was some contraction of the visual field of the right eye and abolition of the pharyngeal reflexes (anæsthesia), with preservation of the knee jerks and cremasteric reflexes.

THIS is the season *par excellence* of continental travel. A large number of our countrymen, including a good contingent of the members of the medical profession, are now engaged in clambering among Alpine snowfields and glaciers, or floating upon the fair lakes of Switzerland and Italy, or inspecting the art treasures of Munich, Florence, and Venice. The practice is one to be on the whole commended, although a word of passing regret may be expressed that so many go far afield for their pleasure and leave unexplored the scenes of great beauty and high historic interest in which our own country so remarkably abounds. But while continental travel, duly regulated and pursued with intelligent interest and with the pre-existing educational fitness necessary for its appreciation, may be in a high degree pleasurable and instructive, we are strongly of opinion that the average tour is often an unmixed failure, whether regarded from the point of view of health or intellectual profit. To many it is a time of worry and weariness, and to some a source of really grave impairment of physical strength. We propose to glance for a moment at some of its special dangers, which a little wisdom and experience should enable the traveller to guard against.

There is, first, the danger which so few escape, of over-excitement and undue physical effort. We attempt too much in our tours, and forget that the brain-worker, whether lawyer, physician, or merchant, is commonly out of condition and unfit to encounter severe fatigue. The man, who, after twelve months of continuous mental labour and little muscular exercise, posts from London to Chamouni or

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Zermatt, and incontinently essays the ascent of Mont Blanc or the Matterhorn, is really guilty of an unpardonable forgetfulness of the conditions and limitations of healthful recreation. If he escape with mere fatigue and the sense of having misused his holiday, he will have reason to rejoice that he has not also overstrained his heart and done irreparable mischief. We have taken an extreme case, but in minor degrees this error is in daily and hourly practice during the holiday season. Mountain-climbing, while perhaps the most delightful and exhilarating of pastimes, has of course other and more special dangers. The unlooked-for fog or snow-storm, the treacherous path through the moraine, the sudden rush of the avalanche, have cut short many a happy and useful life. The list of fatal Alpine accidents has been this year unusually heavy, and their plain and pregnant lesson is the utter folly of even hardy climbers venturing unknown ascents without the assistance of trained guides. Mountain-climbing is, in fact, almost as much a special *métier* as the management of a ship; and practical training can be as little dispensed with in the one case as in the other. With proper help, this amusement seems to be as safe as any other form of vigorous out-door sport, in all kinds of which more or less risk is necessarily present.

Pedestrianism, whether mountain-climbing, or the less fatiguing walks among the valleys or in the open country, requires due regulation if mischief is not to result. The pedestrian should be lightly clad with some woollen material next his skin. He should not burden himself with much luggage, and he should pay special heed to his foot-gear. If a long journey be contemplated, an early start should be made, and ample time allowed *en route* for rest and refreshment. Snow-water, honey, and the fruit so freely offered by itinerant vendors are best avoided by the pedestrian in Switzerland, and universal experience proves that alcohol in any form is injurious during active effort. Coffee or tea may be drunk with advantage, and solid chocolate is one of the best sustainers, if regular food be not obtainable.

In whatever manner the traveller elects to spend the time of his tour, whether in mountaineering, or the more sedate pleasures preferred by the majority of tourists, the due regulation of food must occupy a considerable share of his attention. As a rule, the food of the continental *déjeûner* and *table d'hôte* is perfectly wholesome, but ordinary prudence would suggest the avoidance of the raw ham and sausage often offered in Germany, the use of which is unquestionably fraught with serious danger of *trichinosis*. The cold veal and salad, so popular on the Continent, are apt to be trying to feeble digestions, and although *vin ordinaire* is a very harmless beverage, it should not be consumed in large quantity by those unaccustomed to the use of acid wines. The drinking water at many continental resorts is undoubtedly open to grave suspicion, and the use of some standard and not too mineralised table water is to be commended. It is well for the traveller to remember that the ordinary *carafe frappée* and *siphon d'eau de seltz* are really made with ordinary town water, and that their use is therefore open to all the usual risks.

In former days a large proportion of the continental hotels were notoriously deficient in sanitation, but this is now rather the exception than the rule. The credit of this reform undoubtedly belongs largely to our own nation, which has always been impatient of sanitary defects, and has gradually succeeded in impressing its views upon other nations. Nevertheless, if the traveller stray far beyond the accustomed haunts, and especially if he penetrate where the English tourist is unknown, he should still be upon his guard.

An occasional source of danger, especially in Italy, is the unguarded passing from the blazing street into some chilly cathedral or picture gallery. The tourist should remember in such cases that any sensation of "chill" indicates danger, and should act accordingly.

With regard to railway travel on the Continent, the regulations are such as often to compel the use of the first-class carriages, and the traveller pays exorbitantly for such special comforts as the *coupé-salon* or *coupé-lit*. It is well for the tourist to recollect that in most cases he will be compelled to leave the train on crossing the Customs frontier, and care should obviously be exercised if this be at night. It is a common error to make the return journey home at express speed, and the more delicate class of travellers may in this way lose much of the benefit previously accruing from their tour.

Annotations.

"Ne quid nimis."

LONDON MORTALITY FROM SCARLET FEVER.

THE evidence afforded by the returns issued by the Metropolitan Asylums Board of a recent marked increase in the weekly number of London cases of scarlet fever admitted to those hospitals, renders it desirable to ascertain whether the returns of the Registrar-General show anything like a corresponding increase in the registered deaths from this disease. In the three decennia 1841-50, 1851-60, and 1861-70, the annual death-rate from scarlet fever in London was successively 0·86, 1·02, and 1·13 per 1000; the annual rates in those thirty years ranged from 0·35 and 0·41 in 1841 and 1846, to 2·12 in 1848, 1·84 in 1869, and 1·87 in 1870. During the more recent decennium 1871-80, the mean annual rate declined to 0·60, the lowest rate being 0·19 in 1873, and the highest 1·06 in 1875. During the forty-three years 1838-80 the death-rate from this disease fluctuated widely from year to year, showing epidemic fatality at four or five year intervals. Since 1880, however, when the rate in London was 0·82, it has steadily declined year by year to 0·18 in 1885 and 0·17 in 1886, these being lower rates than have been recorded in any previous year since the commencement of civil registration in 1837. In the first two quarters of this year this comparative immunity from scarlet fever in London continued, and the annual rate did not exceed 0·16 and 0·18 respectively. Moreover, notwithstanding the evidence of increased prevalence afforded by the Metropolitan Asylum Board returns, no definite increase in the deaths from this disease occurred until after the middle of August. During the first seven weeks of the current quarter ending 20th August, 159 deaths from scarlet fever were registered in London, while the corrected average number in the corresponding period of the ten years 1877-86 is 294. In the three succeeding weeks the registered deaths from this disease were 36, 39, and 53, the last two numbers being respectively 3 and 18 in excess of the corrected average. The annual death-rate from scarlet fever in London in the ten weeks ending Saturday, 10th inst., was 0·35 per 1000, corresponding with the mean rate from the same disease in the same period in

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the twenty-seven provincial towns. It may be noted, too, that in the week ending the 10th, when the scarlet fever rate in London had advanced to 0·35, it was exceeded in Sheffield, Manchester, Birkenhead, Oldham, and Bristol. As might naturally be expected, the scarlet fever mortality varies greatly in intensity in different parts of the metropolis. The annual rate in the last ten weeks, which was 0·35 in the whole of the metropolis, ranged in the five groups of registration districts from 0·18 in the north, to 0·26 in the west, 0·34 in the east, 0·38 in the central, and 0·52 in the south. Not only the highest death-rate, but the largest increase upon the low rates in 1886, occurred in the south group of registration districts. If we further differentiate this mortality in South London, we find that the rate exceeded 1 per 1000 in the two registration districts of St. Saviour and St. Olave, Southwark, and further that still higher rates prevailed in the sanitary districts of St. George, Southwark, Newington, Bermondsey and Rotherhithe. From the above-mentioned facts it may confidently be assumed that up to the present time the increase of deaths from scarlet fever has been in no way proportionate to the increase of isolated cases.

INOCULATED TUBERCLE.

DR. LESER of Halle records (*Fortschritte der Medicin*, No. 16) an interesting case of tubercular infection of a wound. He says that the older writers were more persuaded of the possibility of such inoculation than present-day pathologists are. Thus Valsalva and Morgagni were particular to warn against the dangers of such inoculation in the necropsy of phthisical subjects. He reminds us also that the death of Laennec from consumption was attributed by his contemporaries to a wound on the finger received some years previously at a post-mortem on a tubercular case. The revival of such doctrines of late years has doubtless been greatly stimulated by the discovery of the tubercle bacillus; and accordingly we again meet with records of cases, of which the most curious, perhaps, are those respecting the transmission of tuberculosis in the rite of circumcision. (Lindeman, Lehman, and Elsenberg.) Leser's case is briefly as follows: A female, aged fifty-four, came under treatment for a large swelling in the right pectoral region. It appears that, born of a healthy family, with no trace of tubercular taint in its members, she had three years previously received a cut on the ungual phalanx of the right thumb, which she had simply bound up and not treated further. The wound did not heal, and after a time suppurated and became very painful. The skin ulcerated, and at the end of a year a similar ulcer appeared on the contiguous forefinger. Some time afterwards a swelling appeared in the region of the right breast, and attained a large size before the patient sought advice. This swelling extended from the clavicle to the nipple, and proved to be a large subpectoral cold abscess, which Leser evacuated and drained. The pus had a "tubercular character," and the walls of the abscess were lined by tubercular granulations. The lining was scraped out, and a portion of the third rib, which was bare, was excised. The condition of the thumb and forefinger now attracted attention; the ungual phalanx of each was greatly swollen, the skin undermined and in places ulcerated, but the bone not involved. The diseased parts were treated by scraping and excision, and in a few weeks the parts had nearly healed. Microscopical examination revealed typical tubercles and bacilli in the granulation tissue, whilst further examination showed the presence of an enlarged gland on the inner side of the arm, also tubercular; it was also learned that a small abscess had previously formed in this situation. The case thus appeared to be one of tubercular inoculation of a wound of the thumb; secondary infection of the forefinger; then dissemination by the lymphatics, terminating in the formation of a large subpectoral abscess. Dr. Leser says that cases of similar tubercular infection are nearly always to be found in wounds which have been neglected or in chronic ulcers, as if it required that the tissues should be lowered in vitality in order to render them susceptible of infection. He concludes his paper by refuting arguments against the tubercular nature of lupus, and cites a case in which he considers the dependence of lupus upon tubercular infection to be undoubted.

THE TRADES UNION CONGRESS.

THE Trades Union delegates, who met for their twentieth annual Congress last week at Swansea, did not fail to touch on several questions relating to public health. Some of the delegates complained of the bad ventilation of factories, especially where a certain amount of dampness had to be maintained to prevent brittleness in the threads used for weaving or spinning. Others insisted that the number of inspectors was altogether insufficient, and related how, in their own experience, Factory Acts and Sanitary Acts were alike disregarded. A plumber proposed a resolution to the effect that persons appointed to the post of sanitary or nuisance inspector should have some practical experience and knowledge, whereas, in a particular locality one sanitary inspector was a grocer and the other a publican. From a sanitary point of view, the most important discussion was that which related to underground bakehouses. Mr. Jenkin, of Manchester, said that, though he had made bread for thirty-five years, he had seen an inspector only five times. Nearly all the work was done at night, and then the inspectors did not visit the bakehouses. Mr. Parnell, of London, pointed out that the old Act was preferable, for then the inspectors were under Government; while at present, being appointed by the local authority, they were not so free from unfair pressure. The condition of some bakeries, both in London and Manchester, were stated to be such that if publicly described people would be afraid to buy bread. A resolution was unanimously carried calling on the Government to prohibit the building of underground bakeries, and to obtain the registration, as to proper sanitary conditions, of all existing bakehouses. Further, the Government is called upon to appoint as inspectors men who are well versed in the tricks of trade, and who, when small boys are hid in flour vats, will not conclude that there is no juvenile labour employed. Indeed, at the Trades Union Congress, as in so many other directions, we find the same complaint as to the supineness of local authorities. It is not so much that law is wanting, as that its application is always too leniently enforced. The workmen, who are the principal persons to suffer, have done well to call public attention to these questions.

MODEL DWELLINGS.

AN interesting account has been written by Mr. H. E. Armstrong, medical officer of health of Newcastle-on-Tyne, of a model dwelling which has been erected in the Royal Jubilee Exhibition of that town. The dwelling, which is detached, is built with materials and appliances which have been presented by different exhibitors, and everything is evidently of a very complete and perfect character. The house has been planned by Mr. R. J. Leeson, and consists of four rooms on each floor, which with the offices are well arranged. We understand that the building will remain permanently after the Exhibition is over, and will serve as a type of all that is good in house architecture. There is no doubt that it will be found of considerable use to the corporation, who, it may be hoped, will be able to exhibit it for the purpose of stimulating the erection of better houses than at present exist. It would be well if every town had the same opportunity of educating its inhabitants.

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WOOLWICH AND SANDHURST.

THE Board of Visitors of the Royal Military Academy at Woolwich and the Royal Military College at Sandhurst appear determined to carry out, to the fullest extent the policy of suppressing all information respecting the health of the cadets in these two national institutions. In 1885 the reports of the medical officers, with returns—very meagre it is true—of the amount and nature of the sickness during the year, which had hitherto been published in the reports of the Board of Visitors, were omitted. In those for the past year no reference whatever is made to the subject as regards Sandhurst, and as to Woolwich there is only a recommendation respecting the provision of proper hospital accommodation in cases of infectious disease, and an observation on the absence of any suitable means of obtaining warm baths. There is no information whatever given as to the extent of sickness among the cadets or the diseases by which they have been affected. It is, no doubt, unpleasant to have public attention called to the evidence afforded by medical returns of the want of due care and regard to sanitary requirements in these important educational establishments, but the suppression of the returns removes a valuable check upon the remissness of those who are responsible for their efficient condition. The comments of the medical press upon the unsatisfactory state of health of the cadets, based upon the results shown in the medical returns, may be very disagreeable and displeasing to the military authorities and the Board of Visitors, but they have been made entirely in the interest of the cadets and their families. If there be nothing to conceal, no neglect to be overlooked, no petty false economy practised at the expense of the cadets' health, the Visitors will do well to restore to their reports, and even in a more complete form, the information which was formerly given. We would call the attention of the medical members of the House of Commons to this subject, in the hope that by a little judicious pressure in the next session the Secretary of State for War may be induced to direct that the requisite information be in future included in the reports.

THE GLANDERS BACILLUS.

DR. KRANZFELD gives (*Centralblatt f. Bacteriologie*, Bd. ii., No. 10) the results of his recent investigations upon glanders at the Odessa Bacteriological Institute. He first availed himself of material afforded by nodules removed ten hours after death from a case of acute human glanders. Cover-glass preparations of these nodules contained a large number of bacilli. Small portions from the centre of the nodule were introduced into the peritoneal cavity of two guinea-pigs. One of these animals presented marked infiltration at the seat of inoculation on the fourth day, and swelling of the left testis on the seventh day; it died on the fourteenth. A greyish ulcer with infiltrated margins occupied the seat of inoculation; the left testis was replaced by a caseous abscess, and the spleen contained numerous yellowish-grey nodules. The pus from these parts and the nodules of the spleen contained numerous bacilli, the ulcer yielding also various micrococci. Cultures on serum, agar-agar peptone, potato, and agar-agar peptone with glycerine were made. The growth of the bacilli on blood-serum and potatoes corresponded to the description given by Löffler. The glycerine agar-agar cultures were the best, whitish streaks appearing at the point of inoculation on the second day, reaching seven or eight millimetres in width by the sixth to the eighth day. The bacilli had the characteristic shape, with rounded ends, as described by Löffler. In the older cultures, some thicker, less regular rods, which stained badly, were thought to be involution forms of the bacilli. No spores were found, thus confirming Löffler's surmise that the bodies described by Weichselbaum as spores are due to the death of the bacillus. In a series of inoculations in guinea-pigs, carried through several generations, the characteristic disease of the testis, nodules in the spleen, and in some cases disease of the nose, were present. No other internal organ besides the spleen was found to be affected. A case is given where a diagnosis of glanders was made by bacteriology. Some nasal secretion from a horse thought to have glanders, but with no clinical facts in support, was sent to the Institute for examination. Guinea-pigs were inoculated with the material, and died in due course with the above lesions. Examination of the pus and of the splenic nodules showed the characteristic bacilli, which were also obtained by cultures. A post-mortem examination on the horse confirmed the diagnosis thus arrived at; it proved to be a well-marked case of pulmonary and nasal glanders.

CANNED SALMON.

A CORRESPONDENT draws our attention to the process of canning salmon for the British market as performed on the American Pacific Coast, which certainly appears to involve some risks against which the consumers of salmon are entitled to be warned. The operations are described in an article on the subject by our Transatlantic contemporary, the *American Grocer*, as follows:—

"The process of canning is very interesting and more intricate than one would suppose, beginning with the manufacture of the cans and ending with the packing in cases. The tops and bottoms are cut with great rapidity by dies, and the sides by a knife cutter. The sides are then rolled, six at a time, on a machine somewhat resembling a clothes wringer. They are then taken to the men who solder the seams, and from them to others who put on the bottoms with great dexterity and rapidity. A little piece of solder called a "float" is dropped into the can, and the hot iron is run inside, melting it and fastening on the bottom. There is also in use a soldering furnace and rimmer for fastening bottoms, similar to the one used for covers described later. The cans are now ready for use, after being carefully examined to see that they are perfect. We now go to where the canning begins..... The chunks [of salmon] are then taken to a number of choppers, who slice them lengthwise into a number of small pieces, when they are carried on trays to the fillers. These press the pieces into cans, filling them as compactly as possible. A Chinaman will fill 1000 cans in a day. The filled cans are then taken to the washing machines.....They then pass through the hands of boys, who set the tops on, and are taken to the crimper and soldering furnace. In this machine the edge of the cover is crimped, and the cans then roll across a brick furnace, the ends passing through a trough of melted solder, and continue down a wire tramway to the hands of the testers. The capacity of this machine is from 20,000 to 22,000 per day. The cans are then tested for imperfection by examination and immersion in hot water, and all not air-tight are taken to the solderers."

From this description of the cans it would seem that the bottom is attached to the side by an *internal* seam of solder. This would be unobjectionable if, after being manufactured, they were effectively cleansed before use. Indeed, it would in that case have its advantages. For the solder would protect from contact with the fluid contents the cut iron edge of tinned plate, which is, of course, apt to become oxidised and thus soluble to a greater or less extent. But it does not seem that this necessary cleansing is done, and it follows that some of the flux employed in soldering—presumably chloride of zinc—will be left to mix with the contents of the can. The same difficulty appears to arise in connexion with the operation of closing. For better expedition this is done by rolling the edge of the can through a bath of molten solder. The heating of the contents, which is inseparable

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from such a method, must, of course, give rise to an outflowing current of the contained air, accompanied probably by more or less steam, from the half-dried fish. It is not surprising, then, that a staff of testers is kept at work to examine as to the soundness of the joint, or that a large proportion of the cans—it is said 25 per cent.—fail to pass the test. Our difficulty rather is to understand how any can is effectively sealed in this way. But "practice makes perfect," and no doubt the exposure of the tin to the solder bath is for a very brief time only. The 25 per cent. of faulty cans are despatched to solderers, who will of course drench them with chloride of zinc again, some drops of which are sure in these circumstances to find their way into the interior; the more so because it must often happen that the can when it comes into the solderers' hands is cooling down, and that consequently a minute indraught of air will take place through the chinks left in the seams, tending thus to carry in any liquid that may be cast upon them. Upon the whole, then, it is easy to explain both the bad condition in which much of this preserved fish arrives upon our market, and the deleterious effects that are too often traceable to its consumption. The American methods appear, from all accounts, to be admirably expeditious; but, for our part, we should be better pleased with the result, though obtained at a somewhat greater cost in time, if its preparation were marked by more scrupulous attention to details and the use of more scientific processes.

CONTAMINATION OF AIR BY MANUFACTORIES.

IN an age when the size and population of our towns are increasing with great rapidity under the stimulus of commercial and manufacturing enterprise, whatever tends to promote the wholesomeness of those great hives of industry becomes a matter not merely of comfort, but of vital concern, to those who dwell in them. Great towns are, indeed, full of customs and pursuits which are avoidable causes of injury to the public health. If we examine the present conduct of trade with a candid mind, however sanguine, we cannot but find in the general conditions fostered by feverish competition, in the too common mismanagement of mealtimes, food, recreation, rest, and atmosphere, proof enough to fortify abundantly the serious indictment we have made. It needs, indeed, no protest, no proof even, from us to bring home the practical force of that remonstrance against the wholesale neglect of sanitary rule which is marked in the pale face of many town-bred workers. The anæmic stamp of countenance is due to a variety of unhealthy conditions. Not least important among these is a scarcity of oxygen in the surrounding air, and the presence of impurities due to respiration in confined spaces, to coal-burning on a large scale, to sewer gas, and to the volatile or suspended products of manufactures. This too-prevalent anæmia is the mark of lowered vitality, and the very frequent forerunner of more decided illness. If, therefore, its causes can by any means be counteracted, the use of these is clearly advisable. Not a little has been done already by means of household ventilation and systematic house drainage to purify the air we breathe. In another direction very little indeed has been accomplished, though measures of reform are not only most desirable, but are likely in many cases to become, if carried out, an actual source of income. We refer to the refuse produce emitted by manufactories and work-fields. Notwithstanding the circulation of fresh air which is constantly flowing over town and country, it must be allowed that there is in many places an excess of noxious matter in the atmosphere above what is compatible with healthy life. Coal dust, iron filings, clay from potteries, carbonic gases from brickfields, sulphurous gases, and hydrochloric acid from metal and chemical works, besides ammoniacal vapours, nitrous and nitric acids, arsenious and other metallic fumes, organic gaseous products of decay, are still freely cast forth into the surrounding air. Their influence in the atmosphere is often plainly perceptible by the senses, and, if not as plainly poisonous, has, without doubt, its share in that subtle impairment of vitality to which we have referred. The question relating to atmospheric contamination from this source and its treatment is a large one, and deserving of consideration alike by economists, sanitarians, and the general public. In certain cases it may even, as Professor Foerster of Berlin maintains, come within the province of the Legislature. We are sure, however, that it could, at all events partially, be settled without such interference if employers of labour were more alive than they are to the loss they incur under the present wasteful and injurious system.

CHOLERA INTELLIGENCE.

WE regret to find that cholera in Southern Italy has exhibited a further substantial increase in severity. In Sicily 36 deaths took place in the province of Palermo in the week ending the 12th inst.; in the province of Catania there were 121 cases and 66 deaths, 74 and 31 respectively taking place in the town of Troina; and in Messina 173 cases and 64 deaths took place in the three days Sept. 10th to the 12th. On the mainland 40 attacks are reported from Naples, 17 deaths having taken place in the three days ending the 11th inst.; 9 cases and 7 deaths are also reported from Aversa and Fatamaggiore in the province of Naples. Fresh attacks are further stated to have occurred at Frosinone, Caserta, Teano, and Capua, in connexion with the movements of troops from an infected locality; Berletta and also Reggio, in Calabria, are still infected, and it is stated that attacks have occurred at Cagliari. From Malta the returns, although incomplete, are more reassuring. In the five out of seven days, when details were received, there were 43 attacks and and 29 deaths up to the 12th; but the disease exhibits no fresh tendency to spread. The British garrison remains unaffected, and it is stated that in many cases the disease is of a mild type. If this latter statement be correct, it must mainly relate to cases not included in the official returns, for the rate of death to attack shown in those returns indicates considerable severity of attack.

THE ALCOHOL CONGRESS AT ZURICH.

THIS has been a highly successful gathering, the attendance of physicians and statesmen being exceptionally numerous, while the general public took a warm interest in the proceedings. The official report, when published, will be found to contain valuable discussions on "Alcohol as Food," a subject on which the Congress came to a unanimous conclusion, denying absolutely its claims to alimentary value. On "alcohol" as medicine very diverse opinions were announced, and the question was left open. Dr. Dock (a Swiss physician) gave interesting details on vegetarianism, which, he contended, supplied all legitimate requirements of the human subject; and Dr. Fovel, of Zürich, whose specialty is medico-psychology, enlarged on the connexion between alcohol and mental derangement, in the treatment of which he insisted on total abstinence as a primary condition of success. Valuable statistics were adduced by Dr. Lammers of Bremen, and Dr. Rochat of Geneva, on the good work achieved by Temperance Societies and by the Blue-Ribbon movement; while Pastor Krapp, in the absence of his friend M. Miquel, gave a most instructive history of the "Twelve Years' War" waged in Germany against alcoholism. The Temperance Society, headed by Dr. Lammers, numbered 10,000 members, and the pressure such unions could bring to bear on Governments in raising the tax on spirituous beverages and thus restricting their sale

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must, he anticipated, prove ere long effective. Meanwhile, the labouring poor were being more and more largely provided with people's halls and coffee-rooms, where intellectual and profitable recreation could be enjoyed without the temptation to indulge in the poisonous drinks so universally obtruded on them hitherto. Dr. Rindfleisch furnished gratifying proof of the efficacy of the Evangelical Total Abstinence Society, and showed that every creed had borne a hand in the work—not least the Jesuits, since the first establishment of their order.

THE ILFRACOMBE DISASTER.

IT is satisfactory to find that the inquiry by the coroner has been supplemented by one held at the instigation of the Board of Trade, which brings out in explanation of this shocking catastrophe some practical points, the observance of which may tend to prevent similar accidents. The report of the finding of the Court on which we write is probably not fully accurate, and is somewhat contradictory. But there are two or three important points on which it seems explicit. There was no reason why the vessel should have had so large a well in her centre. Life-buoys should be carried in some convenient form. It is suggested that the cushions of the seats might be made available as buoys. Thirdly, the Court found that the casualty was due to the main-sheet having been made fast, instead of being held in the captain's hand. We devoutly echo the hope of the Court that proper regulations may be made by some responsible authority for securing the observance of all the precautions recommended by the Court. Otherwise we shall only too surely hear of similar distressing accidents.

PREVALENCE OF SCARLET FEVER IN LONDON.

THE rapid increase in the number of scarlet fever cases under treatment in the Metropolitan Asylum Board hospitals has very reasonably attracted much public attention. The number of these cases, which had fallen in the middle of April to 368, slowly increased to 476 at the end of June, and has rapidly increased since that date to 1153 on Tuesday last, the 13th inst. It is evident that the value of these figures, even as an indication of the prevalence of this disease in London, depends in great measure upon the proportion which the cases treated in hospital bear to the total cases, and that they afford no indication of the mortality from the disease, which can alone be ascertained from the Registrar-General's returns. As regards the proportion of scarlet fever cases in London treated in hospital, it was pointed out in the Registrar-General's last Annual Summary that in 1878 only 7 per cent. of the deaths from scarlet fever were recorded in the Metropolitan Asylums Board and London Fever hospitals, while the percentage rose to 13·2 in 1883, 17·6 in 1884, 20·2 in 1885, and 22·7 in 1886. This steady increase in the proportion of London scarlet-fever cases treated in hospital has been regarded as having a probably intimate connexion with the marked decline in the metropolitan mortality from this disease in the last ten years. It is satisfactory, therefore, to find that a still larger proportion of the cases is at the present time being treated in hospital. In the ten weeks ending last Saturday more than 30 per cent. of the deaths from scarlet fever in London occurred in the Metropolitan Asylums and London Fever hospitals; in the various groups of registration districts this proportion of hospital-treated cases of scarlet-fever ranged from 20 per cent. in the north and 23 per cent in the east, to 32 in the central and south, and 41 in the west. If we accept the proportion of cases of scarlet fever treated in hospital as affording any test of the efficiency of local sanitary organisation, it is not without interest to note that in the sanitary districts of South London this proportion has ranged in the past ten weeks from 7 per cent. in Bermondsey to 44 per cent. in St. George's, Southwark. It is evident that the continued increase in the proportion of hospital-treated cases of scarlet fever in London causes the hospital returns to give a somewhat exaggerated impression of the prevalence of scarlet fever in the metropolis. Moreover, there is good ground for believing that the type of the disease, which has recently showed such rapidly increased prevalence, is exceptionally mild, and that therefore the deaths from scarlet fever have not increased at anything like the same rate as the cases admitted to hospital.

MEDICAL JURISPRUDENCE IN ITALY.

A HOLIDAY contributor writes: "As Italy is getting nearer and nearer the goal of her ambition, to be a first-class Mediterranean power, she becomes, *pari passu*, more and more sensible of her deficiencies, and is continually measuring herself, in this department and in that, with her European rivals, generally (to her credit be it spoken) with a frank confession of inferiority, which is the first step towards substantial improvement. I have been struck with this wholesome sign on many quite recent occasions, and not least, on that of the controversy now occupying the Neapolitan journals as to her degeneracy in the teaching and still more in the practice of legal medicine. In this department she led the van, as in so many others, at the Renaissance; now she talks of herself as having fallen far below the standard of Germany and France. For a parallel, indeed, to her self-depreciation in 'medecina legale' we must go back to the Scotland of sixty years since, so graphically described by Sir Robert Christison in his Autobiography. In none of her medical schools, save perhaps three, is medical jurisprudence taught in such a way as to subserve the cause of justice before the national tribunals. Nothing but didactic prælection is meted out to the young medico-jurist, except in Pavia, in Padua, and in Naples, where something like practical training is to be witnessed. Even in these cases, notably in that of Naples, the Government has contributed nothing; the individual energy of the professors has done all. In her numerous criminal trials in which skilled medical experience is appealed to, the counsel for the defence invariably secures far better representation than the public prosecutor, whose choice (so say the leading journals of Naples) is greatly hampered by the miserable *honoraria* at his disposal for the professional skill he invokes. Confusion, contradiction, defeat of justice, too often mark the initial stages of the process, and when the representative of the Crown is driven to calling in superior experts, it is often too late to go over again the bungled and misused *indicia*. Imagine, says a correspondent of the *Piccolo*, a case of deadly poisoning in which the diagnosis was made without the stomach being opened and examined at the necropsy! But this has occurred, and is a typical example of the perfunctory character of expert evidence in the criminal trials of Italy. Payment of professional opinion by the State is almost incredible, both as to system and as to shabbiness. It is regulated *a norma del domicilio*—that is, if the physician or surgeon who is called in resides in what we should call a county town (*capoluogo*), where there is a civil or correctional tribunal, his fee is higher than if his residence is in a commune not similarly provided. Distance and the number of visits he has to make are also elements in graduating his *honorarium*. Thus, for every visit or report he makes, if residing in a county town, he gets three lire (2*s.* 6*d.*); if the town he resides in be not such, he gets two lire (1*s.* 8*d.*). Post-mortem examinations are also paid *a norma del*

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domicilio, from six lire (5*s.*) to four lire (3*s.* 4*d.*) If the skilled expert is engaged more than four hours over an operation, he gets, in addition to the above, from two to three lire, *a norma del domicilio*, as before. The Italian Government, so say its critics, must raise the remuneration of its medico-legal officers to some equality with that accorded by the outside public, and concurrently it must do what private energy like that of Professor de Crecchio of Naples has done—endow the claims of legal medicine with the means of practical observation and research, so as to provide the student with opportunities of thorough training in his *métier*. Then, and not till then, will Italy resume her old place in legal medicine, and show herself worthy of her great physicians and jurists of the past—of Vico, of Romagnosi, of Beccaria, of Filangieri, and of Puccinotti."

REFLEXES IN NEWLY BORN CHILDREN.

DR. JULIUS FARAGÓ has published in the *Gyógyázat*, a Hungarian journal, some observations he has made in Professor Ebstein's clinic in Prague on the reflexes of newly born children. Advantage was taken of the lax state of the muscles of the lower extremities while the child was at the breast to test the patellar reflex. Altogether 117 infants under sixteen days old were examined. In all these the patellar reflex was present on both sides, but the strength of the jerk varied a good deal. In some cases there was merely a slight, short, sudden extension of the leg. In others the jerk was stronger and followed by a series of oscillations. Frequently a transient clonic contraction of the quadriceps was noticed. In some cases a slight contraction was observed in the quadriceps of the opposite leg. Dr. Faragó found that the knee reflex is stronger immediately after birth than during the second week. Premature and badly developed children, weighing less than 3000 grammes, have a weaker knee reflex than children born at term weighing more than 3000 grammes. The abdominal and eyelid reflexes were also noted. The cremaster reflex was present in all the forty-nine male children except nine, and in these the testicles were high or else hydrocele was present.

DUCKER PORTABLE HOSPITAL.

WE have had an opportunity of carefully inspecting, at the Wellington Barracks, a portable barrack constructed by the Ducker Portable Barrack Company at Brooklyn, N.Y., on the model of the one which gained the prize medal offered by H.M. the Empress of Germany. It is constructed in sections made of strong light wooden frames, covered outside and inside with a material called "leather-board," made of leather and jute. This is said to be fireproof, and is so strong as to be free from any risk of damage from accidental rough usage or intentional blows. The fact of there being about an inch of space between the outer and inner covering will tend greatly to prevent the heat or cold of the external air being so much felt as in ordinary wooden huts. The roof is made of the same material, and, like the walls, is double. The leather-board is waterproof, and the hut can therefore, when necessary, be thoroughly cleaned or disinfected by washing. Abundant means of ventilation are provided by a window between each bed, fitted, in addition to the glass sash, with a Venetian shutter, and by an arrangement, should it be deemed necessary, for leaving a space open along the ridge pole. At one end of the building is a small annexe for a stove, by which it may be sufficiently warmed, and at the other end a corresponding one for an earth-closet. The building we examined is adapted for twelve beds, but the Company make them of any size, from four beds upwards. The whole building can be quickly taken down and packed for removal on an ordinary waggon. It seems very well suited for use wherever a temporary quarter may be required, and might be advantageously employed as a hospital for infectious cases during an epidemic. The only defects which we noticed were the want of an ablution room, which could easily be added as an annexe, and used also as a bath-room, and the opening of the annexe for the earth-closet into the hut; it should at least be separated by a short ventilated passage. The building appears to possess all the qualities required to form a portable, useful quarter or hospital, easily put together, quickly taken to pieces, and safe from any serious damage in the transport. The cost of a twelve-bed hut, delivered in this country, is estimated at about £140.

A BELGIAN ON PROFESSIONAL OVERCROWDING.

A WRITER in *Le Scalpel* the chief Belgian provincial medical journal, has been endeavouring to suggest some satisfactory remedy for the yearly increasing overcrowding of the professions of medicine and pharmacy, each of which is not only far too full itself, but tends to jostle and compete with the other in an undignified manner, complaints and recriminations frequently making themselves heard in the various organs representing respectively medicine and pharmacy. "Legislation which would satisfy us," says the writer referred to, "might be summed up in a few words: 'Pharmacy for pharmacists, but medicine for doctors.'" Let the pharmacists have the sole right to sell medicines, and let drug shops be prohibited as both useless and dangerous: useless because pharmacists sell all the articles which druggists keep—at least those that are not readily obtained elsewhere; and dangerous because the druggist knows but little about poisons, to say nothing of the temptation under which he is to give medical advice to customers. Again, the writer desires that the privilege of keeping a pharmacy and dispensing their own medicines, which is now allowed to medical men in some parts of the country, should be abolished—not, of course, all at once, but gradually. In some poor and sparsely populated localities where there are no pharmacists, and where there is no living to be had for them, it is absolutely necessary for the doctors to dispense, as is the practice in this country; but in other places, where, since the permission to dispense was originally given, poor villages have developed into thriving little towns or important centres, there is not the same necessity for dispensing that formerly existed. Even here, however, it is admitted that it would be impracticable to make the change without long notice. A doctor would have to make his patients understand that he could not attend them for the same fees as when he dispensed, and, of course, charged for his medicines besides. There are many parts of the country where it would be impossible for both a doctor and a pharmacist to earn a living. If they attempted it, both would be in a wretched condition; and if the doctor should be driven away by want, the inhabitants would be left with only the pharmacist. The only solution of the difficulty is, of course, to allow the doctor to dispense, and in such cases the pharmacists have no real cause of complaint. Where hospitals are too small to keep up a dispensary under a pharmacist, the writer thinks that, except under special circumstances, the medical officers should not dispense, but that arrangements should be made with local pharmacists to do the necessary dispensing. He then discusses the question of free trade in pharmacy, and expresses himself in favour not merely of increased stringency in examinations, but of limiting the number of pharmacies, as in Germany. Limitation would, he thinks, serve to increase the scientific attainments of the pharmacists, and to diminish the temptation to sell drugs which are adulterated or of inferior quality. In reading

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articles such as this, which are common enough in continental medical journals, two things strike us forcibly: firstly, the universality of the cry of overcrowding; and, secondly, the widespread nature of the belief that legislative interference of one kind or another will help men who are now, either from faults of their own or from force of circumstances, unsuccessful in obtaining a really good livelihood by the exercise of their profession. Whatever may be the case in foreign countries, it is quite certain that no British Parliament would listen for a moment to any suggestion limiting the number of medical men or chemists further than by obliging all to reach a moderate standard of competency.

SEA-BATHING AT EBB TIDE.

BATHING on an unfamiliar coast is, in any condition of the tide, a risky proceeding. The play of currents is so uncertain that the best swimmer even will be wise to fortify himself with the opinions of those acquainted with the shore and its phenomena before committing himself to the tidal wave. For non-swimmers the precaution is a matter of the most elementary prudence. It is often supposed that safety from all such perils may be assured by the simple expedient of bathing at low tide. Then it is argued, if any current should be set up, its flow will be towards the shore, so that to a bather in difficulties it will be a help rather than a source of danger. Often enough this expectation will be justified by the event, but this is by no means a matter of course. Attention has recently been publicly drawn to the obvious fact that the sea shore does not, as a rule, always slope with a continuous declivity out to sea. It often happens that at some point a gentle elevation or undulation of the surface of the ground will offer a shallow space surrounded on every side by deeper water, and cut off, it may be, by a belt of sea deeper by a foot or two than that in which an unwary bather may be taking his pleasure. In these circumstances an inflowing tide is a very serious matter, unless the bather can swim well enough to cross the deep water. For by its gradual rising the dip of the ground intervening between himself and *terra firma* may be submerged to beyond his depth long before the surging of the water about him warns him to seek the shallower parts. In such a case he will be fairly caught, and he is very fortunate if at the moment of his need he can summon efficient help. It is foolhardy for any person to bathe at sea beyond the visible reach of aid, but upon those who are inexperienced in distance swimming the necessity of taking every possible precaution cannot be too strongly or too constantly enforced.

THE CHEMICAL TEST FOR KOCH'S BACILLUS.

THE diagnostic value of Koch's cholera bacillus having been considerably impaired by the proved existence of other micro-organisms of like morphological characters, the discovery by Pohl, Brieger, and others of a chemical reaction alleged to be peculiar to cultures of the comma bacillus was welcomed as an additional test of importance. This reaction consists in the development of a red colour (*cholera-roth*) on the addition of hydrochloric acid to the cultures, and, as Brieger has shown, the colour depends upon the presence of a ptomaine containing derivatives of indol. We now learn from the experiments of Ali-Cohen, of the Hygienic Institute of Groningen (*Fortschritte der Medicin*, No. 17), that the reaction is not peculiar to the comma bacillus, and that it may be obtained by the use of any mineral acid that contains the impurity of nitrous acid, for the pure acids do not produce it. The indol derivative is produced by Koch's bacillus somewhat more rapidly than it is by other morphologically identical forms; but then there are bacteria not morphologically allied to the comma bacillus which can produce this substance quite as readily. The discovery of the *cholera-roth* is thus shorn of its diagnostic value, and reliance must still be placed upon bacteriological methods for differentiating the cholera-organism.

THE LONDON WATER SUPPLY.

IN submitting to the Water Examiner appointed under the Metropolis Water Act, 1871, the results of their analyses of 182 samples of water collected by them during July last from the mains of the seven London water companies taking their supplies from the Thames and the Lea, Messrs. Crookes, Odling, and Tidy remark:—"The water supply of the past month was characterised by an appreciable diminution in the habitually small proportion of organic matter present. In the case of the companies taking their supply from the Thames, the mean amount of organic carbon was 0·146 part, and the maximum in any one sample 0·169 part, in 100,000 parts of the water, corresponding respectively to about one quarter of a grain, and to about three-tenths of a grain of organic matter per gallon. More marked even than the diminution in its proportion of organic matter was the increased degree of freedom of the water from other than a bluish tint of colour. The slight turbidity manifest occasionally for some months past in the East London Company's water was noticeable during the past month, and that to a very insignificant extent, in two samples only."

SCARLET FEVER AT WOLVERHAMPTON AND IN THE PROVINCES.

SCARLET FEVER is rapidly extending in Wolverhampton. Fifty cases have already occurred, and the disease is spreading amongst school children and others. In the local press a hope is expressed that with the cool weather a diminution of the epidemic may be expected. Unfortunately this is the reverse of what may be anticipated to occur. Scarlet fever generally tends to increase both in extent and fatality during the closing months of the year; and it is this contingency that the sanitary authority is most likely to have to face. Unfortunately scarlet fever epidemics are occurring in several parts of the provinces, and there are reasons for fearing that the marked diminution in the death-rate from this disease in England and Wales, which has been noticeable for some years past, has come to an end, and that with a large child population unprotected by former attacks a general recrudescence of the disease may be expected.

AN INJUDICIOUS JURYMAN.

SOME lawyers, careful only for the speedy transaction of business, have condemned as opposing an unnecessary obstacle to the course of justice the system of trial by jury. Some jurymen, on the other hand, have shown at times an undue sense of the dignity and responsibility of their office by the tenacity with which they have maintained, in season and out of season, their privilege of individual judgment. Of this number was one who officiated at an inquest held a few days ago on the body of a man who died suddenly of apoplexy. Having tried in vain to obtain from the medical witness in this case an answer to the question whether the death of the deceased was positively attributable to the paralytic seizure, or to the fact that he had previously had a fall, he commented in an excited manner on what he considered to be culpable ignorance on the part of the practitioner. We do not blame him for the inquiry. It was not an unnatural one, nor was it inappropriate to the purpose of the inquest. What we do condemn, as the coroner also did, is his pertinacious insistence that here doubt was inexcusable and tantamount to incapacity. Questions of this kind, it is true, are sometimes capable of

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more definite solution, but as often they are not so, and it certainly argues neither ignorance nor negligence in examination when, in the latter case, a medical man is unable to make a cut-and-dried statement assuming an impossible certainty. It seems very clear that had the obstructive member at this inquest observed a due regard for this fact, time would have been saved, needless friction avoided, and justice satisfied.

EXTENSIVE CONTRACTION OF THE LARGE VESSELS.

PROFESSOR C. WALLIS of Stockholm reports an interesting case of stricture or contraction of the large vessels. The patient was a girl of thirteen, who was admitted into hospital with chronic nephritis and hypertrophy of the heart. She died suddenly after having left the hospital, where she had been fairly well. She went home on foot, a walk of about twenty minutes. Before her death she suffered from violent choking sensations. At the post-mortem examination the heart was found to be enormously hypertrophied—as large, indeed, as that of a man. There were no valvular lesions, but there was a marked narrowing of almost the whole of the aorta and of the pulmonary vein; that of the aorta, which was the more marked of the two, was continued into its principal branches, and attained its greatest degree in the abdominal aorta, where a thrombus was found which entirely occluded the vessel. The narrowing was due to chronic arteritis affecting all the arteries to a variable extent. This arteritis consisted principally of cellular infiltration, but also partly in the formation of a firm cellular tissue. No calcareous deposits were found. Professor Wallis is not able to speak positively as to the cause of the affection, but he is disposed to consider it as probably of syphilitic origin on account of the amyloid degeneration which was present in the liver, for which no other cause, as tuberculosis or malaria, appeared to exist. It is, however, right to say that no confirmatory evidence of the existence of a specific taint could be made out

FIRE-PROOF FABRICS.

IT has long been known that all fabrics, even the most delicate gauzes and muslins, may be rendered uninflammable by chemical treatment. Of course they cannot be made incombustible, but they can easily be so prepared as to be incapable of bursting into flame. The chemical agents employed act by checking and modifying the destructive distillation which precedes what is properly known as inflammation. A familiar example is afforded by phosphorus. Although phosphorus is itself very inflammable, it is difficult to light wood or paper from its flame, because the solid phosphoric acid formed in the combustion coats and protects the article presented to it. Phosphorus burnt on paper chars but rarely ignites it. The chemicals most commonly used for the purpose are alum, borax, phosphate of soda, sal-ammoniac, and tungstate of soda. Alum acts injuriously on the fabrics, especially if coloured, but the others are commonly harmless, and most of them are cheap. Tungstate of soda is the best. Used singly, it is apt to become insoluble and to rub off, but this risk can be diminished by the addition of about 3 per cent. of phosphate of soda. After the ordinary washing, the goods should be immersed before wringing and drying in a solution containing 20 per cent. of tungstate with a proportionate quantity of phosphate. In view of the recent terrible disaster and of many preceding ones, it would surely not be too much to insist that all dresses, hangings, side scenes, and the like, worn or used on the stage, should be protected by this or by some other suitable material. Fires almost always begin on the stage or near it, and no one who has been behind the scenes before or during a performance can wonder at it. It is not too much to say that there is always an imminent risk of fire, and every cause which can lead to it should as far as possible be removed. Of course other reforms are necessary, especially means for the prevention of panic such as we insisted on last week—electric lighting, the fireproof curtain, the smoke exit, the fireman always ready with his hose, and greater facilities for escape. But if any or all of these were adopted and insisted on, it would still be most desirable that as many as possible of the articles which commonly lead to the disasters should be rendered fire-proof. It is matter for grave regret that the Government decided to take no action until next session of Parliament. It would doubtless have been impossible to pass a Bill, but a Royal Commission might and ought to have been appointed to consider and report on the best means of averting horrors which dismay the whole country. We all know how soon public interest in such matters subsides, and unless something is done at once it is greatly to be feared that the old and vicious system will be allowed to continue indefinitely.

HEALTH OF CALCUTTA.

THE return of the health officer of Calcutta for the second quarter of the year shows the deaths to have amounted to 2463, which exceeds the number in the same quarter of 1886 by 220, but is lower than in any other year of the decennium except 1880. The deaths from fever amounted to 679, and from cholera to 438. The death-rate of the quarter was in the annual ratio of 22·84 for Calcutta and 39·21 for the suburbs per 1000 of the population—a difference dependent, no doubt, in a great measure upon the very insanitary condition of the latter. We learn with much regret that the sanitary staff, which in November last, on the recommendation of the health officer, was organised for the systematic inspection of localities and premises, has been dismissed by the commissioners. We cannot but foresee that disastrous consequences are likely to occur from such a proceeding on the next outbreak of an epidemic of cholera. This miserable economy, if it deserve such a name, of keeping down the rates at the expense of the public health, shows how unfit the natives of Calcutta are for self-government.

CORTICAL BLEPHAROPTOSIS.

THE region of the angular gyrus, according to Grasset and Landouzy, contains a centre for the raising of the upper eyelid of the opposite eye, since crossed blepharoptosis has been observed as the result lesions of the pli courbe. M. Lemoine has discovered an old focus of softening in the left pli courbe of a man who during life suffered from mitral stenosis, and was attacked four years before his death with an apoplectiform seizure and sudden ptosis of the right eye. It is doubtful, however, whether there is any very special relation between this cortical visual region and movements of the upper eyelid, since ptosis has been found in many cases in which this region was not obviously involved.

A PROVIDENT HOSPITAL.

ACCORDING to the *Citizen*, it is proposed to convert the title of the Metropolitan Free Hospital into the "Metropolitan Provident Hospital." The working of the institution is to be limited to the radius of a mile from the hospital. The district is to be divided into some half-dozen sections, each with an office presided over by a secretary, who would receive the payments. The tariff of payments would be 4*d.* for each adult, 2*d.* for each child; accidents are to be treated free, and advice and medicines to be given to the members of the Society. This scheme does not excite our admiration. It will apparently turn a hospital into a great

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provident dispensary. We do not wonder that there is dissatisfaction among the working men with this scheme. It degrades a hospital for all needy sick into a provident dispensary with territorial and money limitations of the narrowest order. And it is not likely to please medical men, who do not need the competition of a hospital for the small pittances which the poor have to give in the shape of medical fees.

MEDICAL ARRANGEMENTS AT THE BELGIAN MANŒUVRES.

THERE have recently been some autumn manœuvres in Belgium, the military medical service being organised this year for the first time in connexion with the manœuvres. The surgeons, pharmacists, and other officers were furnished with a little book of instructions. In the field each army corps had four ambulance columns and four field hospitals, each of the latter comprising a pharmacy waggon, an administration waggon, and an ambulance waggon, with four surgeons, two pharmacists, forty-two men, and twenty-two horses, also a depôt of hospital furniture and reserve stores. When a division was engaged, it had eight surgeons and seventeen pupil surgeons at the front, five surgeons and four pupil surgeons at certain posts, with twelve *infirmiers*, also five surgeons at the dressing station with the ambulance column. The directions given to surgeons at the front under fire were: Hæmorrhage to be stopped by temporary expedients; limbs already nearly separated from the body by projectiles to be removed; a penetrating wound of the abdomen or thorax to be closed; a fractured limb to be fixed. No other operations to be performed under fire. Wounded who fall in a state of syncope not to be brought to. The bearers to assist enemies and friends alike, beginning with those most seriously hurt.

THE SANITARY STATE OF YORK.

THE maintained prevalence of typhoid fever in York is a matter of serious importance. With one exception, there was no single week from Jan. 1st to Aug. 27th of this year in which fresh attacks of this disease were not notified, and in the last week referred to the number was as high as 18. We learn from another part of Mr. North's report that careful inquiry is made into each case, and that much sanitary work and the removal of filth and foul and offensive accumulations are the result. But we have yet to learn that the Town Council have determined on the abolition of the system which allows the storage of large quantities of excreta and refuse near houses—a matter which is of paramount importance in view of the altogether unnecessary spread, from time to time, of typhoid fever in the city. The drainage question in Holgate is also pressing; but it has been "for the present deferred" until the whole question of the drainage of the entire city has been fully discussed and some decision arrived at.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Michael J. Dietl, formerly Professor of General and Experimental Pathology in the University of Innsbrück, from cardiac disease, which obliged him to give up his professorship some years ago. He died at Marienbad, and was only thirty-nine years of age.—Dr. Brehme, *Medicinalrath* of Weimar.—Dr. Friederich Reissner, *Obermedicinalrath* of Darmstadt, whose name is known in connexion with a method of preserving animal lymph.—Dr. Johannes Skalweit, of Hanover, for many years secretary to the Society of Analysts and editor of the *Repertorium für Analytischer Chemie*.—Dr. Schott, Professor of Pathological Anatomy in the University of Innsbrück, of heart disease and nephritis, at the age of fifty-seven.

CONGRESS AT AMSTERDAM.

THERE is to be a Congress for the discussion of Natural Science and Medicine at Amsterdam on the 30th of September and the 18th of October. There will be four sections—1. Physics and Chemistry, under the presidency of Professor Vandesande-Buckhuyzen. 2. Natural History and Biology; president, Professor T. W. Engelman. 3. Medicine; president, Professor Donders. 4. Geology and Geography; presidents, Professors Martin and Kan. This is to be essentially a Dutch Congress, but invitations have been sent to scientists and medical men belonging to the Flemish parts of Belgium. These have, it seems, up to the present time returned but little response to the invitation, only six Belgians having as yet expressed a desire to take part in the Congress, though no less than 500 Dutch members have already enrolled their names. Abstracts of the papers read will be published without delay.

MEDICAL REGISTRATION.

OUR advertising columns this week contain an announcement from the Registrar of the General Medical Council which we hope will not escape the notice of the profession generally. Much inconvenience has occasionally been experienced by the neglect to send to the Branch Registrar by whom the registration was originally effected notice of change of address, in order that such may be entered in the Register; or to reply to any letter of inquiry that may have been sent from the office. It should be remembered that failure on the part of a registered medical practitioner to comply with the requirements referred to involves the liability of having his name removed from the Register. Also notice should be sent to the same Branch Registrar of any additional qualification it is desired to append to a name on the Register.

DISINFECTANTS IN MADRID.

THE Madrid municipality has arranged to provide and to pay for disinfectants for employment in streets and houses when their advisers consider them necessary. This, as the leading Spanish medical journal points out, is a very unsatisfactory sanitary precaution, because these substances, to be of any real use, ought to be at hand at a moment's notice, which of course they will not be; but what is more important still, they cannot be of much service as long as cleanliness is so terribly neglected. It would have been much better had the municipal authorities set themselves earnestly about cleansing thoroughly all public places, and insisting on private persons using equally vigorous measures with regard to localities and houses under their control.

HABITUAL DRUNKARDS.

THE seventh report on the working of the Habitual Drunkards Act, passed in 1879, is now published. It is not a great record, for the Act itself was a poor, feeble piece of legislation, which assumes in habitual drunkards a power of resolution and a reserve of self-respect which are conspicuous by their obliteration. To show how ineffective the Act is, only seventy-three persons last year entered the five or six retreats created under the Act. It is gratifying to learn that in a large proportion of the cases actually treated good results have been obtained. The inspector, Mr. Hoffman, says he is "of opinion that very few are hopeless cases, if they will only give themselves time." The time requisite in most cases is twelve months. We agree with Mr. Hoffman that there is great hope for drunkards, even female drunkards, if law and society would give them fair play and a little help. But to expect them *voluntarily* to agree to part for twelve months from that which they morbidly and madly love is

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to be unpractical, and to embody such an expectation in a statute is to display the impotence of legislation. Habitual drunkards are now practically at liberty to go on to their own destruction and that of their families, whose life is often one of extreme misery.

SMALL-POX AT ROTHERHAM.

SMALL-POX has for some time past been prevalent in Sheffield, and it is now extending to adjoining townships. Rotherham is one of the places infected, and it appears also to be one of those districts where no proper arrangements have been made for the isolation of first attacks of infectious disease, and where, in consequence, such an emergency as a small-pox prevalence finds the proper guardians of the public health at a loss to know how to perform their duty. In this difficulty they have turned to the guardians of the poor, but this body has neither the means nor the legal right to undertake the duty of aiding them. It is sincerely to be hoped that no such emergency hospital will be devised as will prevent the erection of a proper hospital at a time when the requirements of the district can be thought out uninfluenced by panic, the result of previous failure to perform an obvious duty.

A RIVAL TO COCAINE?

AN alleged alkaloid named stenocarpine, which Dr. Claiborne of New York has extracted from the leaves of a yet unidentified tree having a close resemblance to acacia stenocarpia, is said to possess anæsthetic properties of so pronounced a kind as to make it not improbable that stenocarpine will prove a formidable rival to cocaine. From two to four drops of a 2 per cent. solution instilled into the conjunctival sac enabled various painful operations to be performed on the eye. This dose of the solution of the alkaloid caused complete anæsthesia of the cornea and conjunctiva, lasting twenty minutes. Like cocaine, stenocarpine is mydriatic and causes a lowering of the intra-ocular tension. The anæsthetic effect can also to obtained on the nasal mucous membrane.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—The two assistants in the first medical clinic having been promoted to professorships, the winter session will see two fresh aspirants for professorial honours in their places, Staff-Surgeon Dr. Renvers and Dr. Klemperer.

Catania.—Dr. Musumeci has been appointed *privat docent* of Medical Pathology.

Genoa.—Dr. Giura has been appointed *privat docent* of Descriptive Anatomy, and Dr. Bossi *privat docent* of Obstetrics and Gynæcology.

Innsbrück. — Dr. Moritz Loew, of Prague, has been appointed Extraordinary Professor of General and Experimental Pathology.

Leipzig.—Dr. W. Ostwald, of Riga, has been appointed Professor of Chemistry and Director of the second Chemical Institute.

Naples.—Dr. Paolis has been appointed *privat docent* of Obstetrics and Gynæcology.

Palermo.—Dr. Scimenni has been appointed *privat docent* of Ophthalmology.

Parma.—Dr. Pacinotti has been appointed *privat docent* of Clinical Surgery and Operations.

Pavia.—Dr. Orsi, Professor of Pathology and Clinical Medicine, who has been absent on account of ill-health, is about to resume his duties.

As we intimated last week to be a likely occurrence, the Emperor of Austria has conferred on M. Pasteur the decoration of the Iron Crown, which includes the title of Baron.

DR. G. F. BURDER, in a letter to the *Western Daily Press*, states that the drought experienced in England this summer has been paralleled in intensity only twice within the last thirty-five years—namely, in 1864 and 1870. In the former year the total rainfall from Jan. 1st to Aug. 29th was 12·172 in.; in the latter during the corresponding period it was 11·655 in.; whilst in the present year it was 12·813 in. Excluding the first two days of June and the last two of August, the rainfall amounted in those three summer months to but 2·385 in.

MILAN is about to erect a bronze statue to Dr. Agostino Bertani, Surgeon-in-Chief to Garibaldi's expeditionary corps in the Italian wars of independence. The sculptor (Vela, of the canton Ticino) has succeeded admirably, and his work will be unveiled with much ceremony on the anniversary of the defence of the city against the Austrians, known as "the five days."

AN original drama, entitled "Black Mail," written by Dr. G. H. R. Dabbs, was played at the Assembly Rooms, Shanklin, I. W., on the 1st inst., with considerable *éclat*. The principal character, "Squire Meredith," was sustained by the author. There are several good medical points in the play.

A WORK by Dr. Charles Mercier treating of the functions of the brain and nervous system, and intended to serve as an introduction to the scientific study of insanity, will shortly be issued by Messrs. Macmillan. It will contain an exposition of the new neurology, and an account of the constitution of mind from the evolutionary standpoint.

IN Aberdare valley the cases of enteric fever are very numerous, the number given last week being 211, with 13 deaths. Typhus has broken out at Dowlais, and is said to have been traced to a dirty, overcrowded dwelling, where rags were used for bedding.

DR. NATHANIEL ARCHER RANDOLPH, Professor of Hygiene in the University of Pennsylvania, met his death by drowning on August 21st. The deceased physician was joint editor with Dr. C. W. Dulles of the *Medical and Surgical Reporter*.

HEALTH OF THE ARMY.

No. I.

THE Army Medical Department Report for the year 1885 shows the average strength of the troops at home and abroad, exclusive of colonial corps, to have been 177,928 warrant officers, non-commissioned officers, and men. The admissions into hospital were in the proportion of 1131, the deaths of 11·12, the discharges by invaliding of 19·79, and the mean daily sick of 57·86 per 1000 of the strength. These ratios are all higher than in the preceding year, and the admissions and mean sick are also above the average of the last ten years. The increase has been general throughout the commands, only Canada, Bermuda, and Ceylon having shown a decrease in the admissions, and the West Indies, Mauritius, and Ceylon, in the deaths, compared with the proportion in 1884. The greatest increase in the death-rate occurred in Egypt, Malta, Cyprus, China, and Gibraltar.

In the United Kingdom, an average force of 87,105 furnished 877 admissions, 6·68 deaths, 21·61 discharges by invaliding, and 48·46 constantly non-effective from sickness per 1000 of strength. With the exception of the mean sick, these ratios are slightly above those of 1884, but the difference is not greater in any of them than might be accounted for by the ordinary fluctuations in limited numbers, and they may be considered as indicating a satisfactory state of

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health. There were 19 cases, with 3 deaths of small-pox; of these, 5 and 1 death occurred at Enniskillen; 4, with 2 deaths, at London and Hounslow; 3 at Colchester, believed to have been imported from London; and the remainder at different stations in England. There were 96 cases of scarlet fever admitted, of which 3 died; they occurred at stations widely spread over the country —London, Dublin, Fermoy, and Templemore furnishing the greatest number; the Channel Islands, Woolwich, and Aldershot were exempt from it. Of measles, 128 cases were returned, Woolwich and Dublin being the stations most affected. Enteric fever shows a considerable increase; the cases amounted to 146, and the deaths to 42, or 2 in 7 cases; the increase is stated to have been "chiefly due to the occurrence of cases in men recently returned from service in Egypt," but the details given in the report do not enable us to estimate to what extent this circumstance contributed. Chatham and the Channel Islands appear to have been the only military districts which were free from the disease. The only instances in which local insanitary conditions are reported as the cause were—of 1 case in Hyde Park Barracks, "believed to be dependent on a drain which had been opened"; of 3 cases at Pontefract, which "were possibly connected with the faulty condition of a sewer"; and of 1 at Chester, "attributable to faulty drainage." London had the greatest number of cases, amounting to 38, but with only 5 deaths. Of 8 cases of diphtheria, with 2 deaths, 4 occurred at Aldershot, with 1 death, "no doubt influenced by the nature of the soil and the (then) defective drainage of the South Camp, where most of the cases occurred. Improvements in the drainage system have since been effected." Syphilis continues to furnish the high ratio of admissions which followed the abolition of the Contagious Diseases Acts. It amounted in 1885 to 154 per 1000. "Considerable variations in the ratios of prevalence of syphilitic affections are observed in the different districts. Primary syphilis ranges from 189·8 per 1000 in the Dublin district to 51·2 per 1000 in the Cork district. Among the districts showing high rates of prevalence are the Channel Islands 175·7 per 1000, Aldershot 174·2, Home 172·6, and Chatham 135·8 per 1000; and among the districts having comparatively low rates of prevalence are the North British 94·6, the Western district 98·0, and the Southern district 99·5 per 1000.....Including gonorrhœa and its sequelæ, the ratio of admissions for all forms of venereal disease was 275·4 per 1000.....The rate of constant inefficiency from these affections was 19·34 per 1000....." Of 43 deaths returned under the class of general injuries, 34 were by drowning, of which 4 were suicidal and 30 accidental. The total number of suicides was 30, or double that of the previous year. The admissions into hospital from the different arms of the service ranged between 729 per 1000 from the Royal Engineers and 1149 from the Foot Guards; the deaths, between 2·36 in the Household Cavalry and 11·06 in the Royal Engineers; the discharges by invaliding, between 18·96 from the Infantry of the Line and 31·85 from the Foot Guards; and the mean daily sick, between 32 in the regimental depôts and 69 in the Foot Guards. The cause of the latter very high ratio appears to call for inquiry, no explanation of it being given in the report.

In an average strength of 3160 officers, the cases of illness amounted to 292 and the deaths to 7·60 per 1000. Three deaths out of a total of 24 were due to a shell explosion at Shoeburyness; diseases of the circulatory system were the most fatal, being the cause of 5 deaths, 2 from valvular disease of the heart and 3 from aneurysm.

The cases of sickness among the women were in the ratio of 377 and the deaths of 7·59 per 1000. Among the children, the cases were 449 and the deaths 25·57 per 1000. Twenty-eight cases of diphtheria were reported, of which 5 died; 17 of the cases and 1 death occurred at Aldershot.

The reports of the Principal Medical Officers of Districts show that a careful supervision of the sanitary condition of the various barracks has been exercised, and that defects, when pointed out, have been remedied as far as possible.

The average strength of the garrison of Gibraltar was 4383. The admissions into hospital from it were 1034 per 1000; the deaths 8·04; the invaliding 39·28; and the constantly sick 58·25. These ratios are all higher than those of the preceding year, and also above the decennial average. The excess in the admissions was chiefly due to syphilis and gonorrhœa, which were 71 per 1000 higher than in 1884, and there was also an increase in the cases of rheumatism; that of the deaths was from the occurrence of 2 fatal cases of cholera and 3 of enteritis, which bore a close resemblance to cholera, but of which Surgeon-Major Troup reports that the symptoms "simulated cholera, but the characteristic and diagnostic rice-water stools were absent. The origin was traced to the partaking of fish improperly prepared, to a mixture of grapes, alcoholic drinks, and excessive water drinking, with, in one case, sea-bathing subsequently." The cases of cholera could not be traced to any local cause. The disease was prevalent at the time in the neighbouring village of Linea, and cases had occurred among the civil population of Gibraltar. There were 25 admissions and 5 deaths by enteric fever, being in the ratio of 5·7 and 1·15 per 1000. The cases came from all barracks, and the disease could not be traced to any defects in the barracks or their vicinity, or in the water supply. The deaths from injuries amounted to 1·38 per 1000 of the strength, or nearly double the average proportion.

At Malta, in a strength of 4602, the admissions were in the ratio of 923, the deaths of 14·77, the invalided to England of 26·94, and the constantly sick of 59·11 per 1000. With the exception of the invalided, these are all higher than in 1884, and also above the decennial average. The increase in the admissions has been chiefly in fevers, and, to a considerably less extent, also in diseases of the digestive system and in gonorrhœa; in the deaths it has been in fevers and tubercular diseases. The 1st Devonshire Regiment furnished the highest ratio of admissions, which was attributed by the principal medical officer "to the inferior physique and great youth of the men, which rendered them quite unable to endure the unusual heat of the past summer"; it had, however, the lowest death-rate of all the corps which were in the island during the summer, except the Royal Artillery. The only other corps which had as low a death-rate was the 1st Battalion Gordon Highlanders, which did not arrive till Sept. 12th. The cases of enteric fever amounted to 20·3 per 1000, or exactly the same as in 1884; but the deaths were 5·22, as against 4·74. Of the cases, 14 with 6 deaths occurred at Valetta, and 74 with 15 deaths at Cottonera, but we are not informed of the relative strength of the troops in each. The Principal Medical Officer attributes the difference to "the improved water supply of Valetta, while that of Cottonera remains much the same as before." Of remittent fever 72 cases were admitted, of which 3 died; they were of the form known as Maltese fever. "Antipyrin in thirty-grain doses is mentioned as being most efficacious in reducing temperature and affording relief to the headache and restlessness so much complained of." Syphilis was slightly less prevalent than in 1884, but almost identical with the rate of the last six years. There were 40 cases of dysentery with 2 deaths, but they almost all occurred in soldiers recently returned from Egypt. None of the other diseases seem to require notice.

The Royal Malta Fencible Artillery, 353 strong, furnished 821 admissions, 2·83 deaths, 11·33 invalids, and 26·60 constantly sick per 1000 of strength. The admissions and mean sick are above the average of preceding years, chiefly from the prevalence of fever and rheumatism, but the deaths and invaliding are under the average. The numbers under observation are, however, too limited to justify any deductions.

The average strength of the troops at Cyprus was 852; the admissions into hospital were 1077, the deaths 21·13, the invalided to England 8·21, and the constantly sick 43·60 per 1000. Except the invalided, these ratios are all higher than in 1884, and are also above the average of the preceding six years. The increase in the sickness and mortality was due to the arrival in July of 3020 officers, non-commissioned officers, and men from Egypt, many of the men "being in a very sickly and debilitated condition from the hardships of the recent campaign at Suakin, and to enteric fever having broken out among them." They were encamped at Troodos; three battalions of Guards left for England on August 25th, and the remainder of the troops from Egypt on Nov. 14th. Enteric fever caused 51 admissions and 15 deaths, being in the annual ratio of 59·8 and 17·61 per 1000. The only other deaths during the year were 2 of aneurysm and 1 of dysentery.

The troops serving in the Dominion of Canada are all quartered at Halifax; their average strength during the year was 1273. The admissions into hospital amounted to 715, the deaths to 7·86, the invaliding to 26·71, and the mean daily sick to 41·0 per 1000. The admissions and mean sick were lower than in 1884, but, except the admissions, all the ratios were somewhat higher than the average of the pre-

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ceding ten years. Only one case of enteric fever occurred, which, however, terminated fatally. There was nothing noteworthy in the prevalence of the various classes of diseases. The quarters appear to be kept in a satisfactory sanitary condition.

The average strength of the garrison of Bermuda was 1335. The ratio of admissions into hospital was 494; of deaths 13·00, of invalided 23·83, and of constantly sick 28·04 per 1000. The deaths and invaliding were above, but the admissions and mean sick considerably under, the average. The reduction in the admissions was most marked in the diseases of the digestive and cutaneous systems and in local injuries. The excess of deaths was chiefly caused by enteric fever, and to a less extent by tubercular diseases. The admissions by enteric fever amounted to 20·9 and the deaths to 7·22 per 1000 of strength, the former being much lower and the latter a little higher than in 1884. Of the cases, 27 occurred at Prospect; the Principal Medical Officer was of opinion that their origin could be traced to milk supply, aerated drinks, and impure water furnished from outside military precincts, but the medical officer in charge at Prospect says that "sufficient evidence can be brought forward to produce a strong suspicion that the general insanitary state of the town of Hamilton is the cause, under favourable meteorological conditions." Of the prevalence of phthisis the Principal Medical Officer remarks that "phthisis does not seem indigenous in Bermuda, but if the disease is either inherited or imported, it develops with singular rapidity." The deaths from this disease amounted to 2·17, and the invaliding to 5·78 per 1000 of strength.

In the West Indies, the white troops consisted of two batteries of artillery, and the 1st Battalion, North Staffordshire Regiment, with detachments of Royal Engineers and garrison staff, divided between Jamaica, Barbadoes, and Trinidad. The average strength was 900, the admissions were 922, the deaths 7·77, the invalids 18·88, and the mean sick 43·08 per 1000. The admissions and mean sick were higher than in the preceding year, but the deaths and invaliding much lower, and they were likewise much under the average of preceding years. There were 3 cases and 2 deaths of enteric fever, 2 and a death at Jamaica, and the other fatal case at Barbadoes. Five cases of yellow fever, with 2 deaths, occurred in Jamaica; 4, including the two fatal cases, at Port Royal; and the other case at Newcastle. The disease is stated to have been epidemic during the last quarter of the year. On the occurrence of the 4 cases at Port Royal, 2 of which were men attending upon the first cases, the garrison was removed to a camp of isolation at Papine, and the progress of the disease was arrested. The case at Newcastle is stated not to have been contracted at that station. Syphilis and gonorrhœa were the chief causes of the increase in the admissions.

The average strength of the black troops was 1186; the admissions were 983, the deaths 15·17, the discharges by invaliding 22·76, and the mean sick 60·21 per 1000. Except the mean sick, these are all under the ratios of the last ten years, but the admissions and deaths are higher than in 1884. There was nothing in the distribution or occurrence of the diseases which seems to call for special notice. A reduction in the deaths by phthisis was counterbalanced by an increase in those by pneumonia. No cases of yellow fever occurred among the black troops.

In an average force of 422 black troops in West Africa the admissions were in the ratio of 1310, the deaths of 14·22, the invaliding of 59·24, and the mean sick of 69·03 per 1000. The admissions and deaths are under the average, though the former are rather higher than in 1884. Phthisis was, as usual, the cause of the greatest mortality. Three cases and one death of beri-beri were recorded.

At the Cape of Good Hope the average strength of the troops, including a detachment of 140 men at St. Helena, was 3939. The admissions were in the ratio of 881, the deaths of 8·89, the invaliding of 40·11, and the constantly sick, of 52·14 per 1000—all higher than in 1884. The increase in the admissions was chiefly from syphilis and gonorrhœa. There was also a moderate increase in paroxysmal fevers, due to the arrival of troops from Mauritius and Singapore. The greater prevalence of syphilis was most marked at Cape Town and Pietermaritzburg. Enteric fever was the cause of 7·4 admissions and 2·29 deaths per 1000 of strength. The greatest number of cases occurred at Pietermaritzburg, Cape Town, and Rorke's Drift. At Pietermaritzburg the disease was believed to have been caused by water which a detachment from Etshowe drank on the march. At Rorke's Drift it was probably also a consequence of contaminated water supply. At Cape Town three of the cases were believed to have been contracted at Kimberley or Barkly West, and four "in the poorer parts of the town where the disease is almost constantly present." At Rorke's Drift the removal of the troops to higher ground appears to have assisted in checking the disease. It is stated that throughout the colony at the military stations the dry-earth system of conservancy has been carried out with satisfactory results. The health of the detachment at St. Helena has been excellent.

The average strength of the troops on the Island of Mauritius was only 358. The admissions were in the proportion of 2508, the deaths of 16·76, the invalids sent home 39·10, and the constantly sick 82·43 per 1000 of strength. The admissions were higher, but all the other ratios lower, than in 1884. The admissions and mean sick were above, but the deaths and invaliding under, the average of the last ten years. The admissions by paroxysmal fevers continue very high, having amounted to 1478 per 1000, or nearly three-fifths of the whole. Of the 6 deaths which occurred, 2 were returned under the head of enteric and 3 of remittent fever, and 1 of dysentery. The accommodation at Curepipe was greatly increased, and the troops, with the exception of a small detachment, were removed from Port Louis. It is to be hoped that this change, combined with the improvements in the drainage at Curepipe, will result in a marked reduction in the prevalence of fever in the command. Two cases of enteric fever occurred—one at Port Louis and the other at Curepipe, both of which terminated fatally. "It is stated that they were of a typho-malarial character, and that it was impossible to trace their origin to any definite source."

In Ceylon the force averaged 809. The admissions were 1174, the deaths 9·89, the invalided home 29·66, and the mean daily sick 63·20 per 1000. These were all lower than in 1884, and also under the average of the preceding six years. Compared with the latter, there was a considerable increase in paroxysmal fevers, syphilis, and gonorrhœa, and in diseases of the cutaneous system, but a marked decrease in those of the respiratory, digestive, and absorbent systems, and in injuries. There was one fatal case of enteric fever; its origin could not be traced, but the disease is of frequent occurrence among the civil population throughout the island "owing to defective water supply." Four out of a total of seven deaths were caused by diseases of the digestive system, three of hepatitis and abscess of the liver, and one of enteritis. There were 6 cases of delirium tremens and 6 of alcoholic poisoning, being together in the ratio of 14·8 per 1000 of the strength, the direct result of intemperance. Steps are being taken to improve the water supply in the barracks at Colombo, and a grant of money has been sanctioned for the filling in of the moat, which is in a very unsatisfactory state.

The average strength of the troops in China and the Straits Settlements was 2188; the ratio of admissions was 1122, of deaths 11·43, of invalided 40·22, and of constantly sick 42·95 per 1000. Except the mean sick, these are somewhat above the average of the preceding six years. The force was nearly equally divided between Hong-Kong and the Straits Settlements; the admissions in the latter were considerably higher than at Hong-Kong, but the deaths less than half the ratio. Three cases of enteric fever with one death occurred at Singapore, and one case at Hong-Kong; those at Singapore are stated to have been contracted before arrival at the station. There were also three cases of typhus with one death at Tanglin, due, in the opinion of the medical officer in charge, "to overcrowding, which at that time existed in certain barracks and a temporary guard-room." Thirty-four cases of remittent fever with one death occurred at Hong-Kong; "it was supposed that the cause of the outbreak was the malarial exhalations from the rotten disintegrated granite of which the soil of Hong-Kong is composed," which had been freshly turned up around a newly erected fort. Cholera prevailed in an epidemic form among the troops at Hong-Kong from June 18th till July 19th. Nineteen cases occurred, of which 12 died, being in the ratio of 17·05 and 10·77 of the strength of the garrison. The troops were placed under canvas first at Kowloon, across the harbour, and subsequently moved to Stanley, where the last case occurred. The disease prevailed among the civil population also, but "the number of cases reported were comparatively few." The habits of the soldiers seem, as in Ceylon, to be very unsatisfactory, 26

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cases of alcoholic poisoning and 6 of delirium tremens having been admitted, being in the ratio of 14·6 per 1000 of the strength. There appears to be a want of sufficient barrack accommodation both at Hong-Kong and in the Straits Settlements, and the drainage of the rifle range at Tanglin is still reported to be quite inadequate, and to this is attributed much of the prevalence of ague among the troops.

THE AMERICAN EXHIBITION.

DURING the splendid weather we have enjoyed this year vast crowds of people have thronged to the American Exhibition. The pleasure that has rewarded the effort of a visit may, in some instances at least, have also conveyed a few useful suggestions. The Exhibition, it is true, is small, and does not contain many remarkable exhibits. The enterprise has certainly not received the support it merited at the hands of American manufacturers. There seemed, at first, to have existed some lack of confidence, which must now be the subject of very keen regret on the part of those who failed to respond. "Buffalo Bill," however, has proved a host in himself, and we cannot regard his entertainment as altogether devoid of any bearing on questions relating to health. On the contrary, the vigour and physical agility of the entire troop must stimulate the love of wholesome out-door exercises. Such exhibitions are, therefore, likely to help those who by every means seek to improve the strength and endurance of the people.

Within the building of the Exhibition itself one of the most striking features is the plentiful supply of temperance drinks. Evidently this is a great problem. How can we provide a drink that shall be really palatable and yet free from alcohol; that shall consist in the main of water, and yet shall not contain the germs of disease too often present in what is called potable water? Messrs. John Matthews of New York seem in all but one important particular to have solved this problem. They have a magnificent marble fountain, standing some thirty feet high, where iced carbonated beverages are served from an apparatus carefully made so as to be free from all base metals that might affect the water. This water, further, is distilled in a special engine-house just outside the main building, and then aerated with compressed carbonic acid gas. Thus the water is perfectly safe, the pure syrups added give it a very pleasant flavour, and the only fault to find is the high price. While fourpence is charged per glass this cannot become a popular temperance beverage. Should some temperance stimulant be required, these waters can be mixed with the acid phosphate liquid prepared by Professor E. N. Horsford, which has a great sale in America. This consists of a solution of phosphates of lime, magnesia, potash, and iron, with phosphoric acid.

Close to the soda-water fountain will be found the interesting exhibits of Messrs. Wm. R. Warner and Co., American chemists. They exhibit a preparation called "bromo-soda," each dose of which consists of twenty grains of bromide of potassium and one grain of caffeine, made up in effervescing granules. The same firm show a great variety of soluble coated pills and granules, that are elegantly prepared and conveniently packed into very small compass. Their "ingluvin" powder is at least a historical curiosity. From time immemorial the Chinese and the Caucasians have mixed the gizzards of fowls with a variety of dishes, and this has been considered as a wonderful remedy for indigestion. In China chicken gizzards are placed in hot water, reduced to pulp, and mixed with spices, a spoonful being given at mealtimes. Experiments have now shown that the gizzard contains a powerful nitrogenous radical that possesses the qualities of pepsine, and is easily retained on the stomach.

Among other exhibits we noticed an automatic dispensary. By dropping a penny into an aperture, a pill corresponding to the inscription can be withdrawn from the apparatus. Such a happy-go-lucky method of treating human ailments is likely to lend itself to some abuses and not a few accidents; and we must confess that, even in this age of steam and machinery, we are not yet quite prepared to give a licence or diploma to a cast-iron mechanical medicine man. Messrs. Seabury and Johnson show plasters for which they have acquired a wide reputation throughout the United States. Messrs. Frank Giles and Sons exhibit a patent felt paper which is very well adapted to packing medicine bottles so as to prevent their breaking, and only costs sixpence the square yard.

An American Exhibition naturally contains alimentary products, and these, as tending to reduce the price of food, are of assistance in maintaining the health of the poorer classes. Among this class of exhibits will be found the Fairbank Canning Company and the Armour Canning Company of Chicago. Close by, the Johnston Fluid Beef Company distributes beef-tea to all the visitors, and thus seeks to increase the popularity of its useful and nutritious extract. Perhaps among the food exhibits the most remarkable are those of Messrs. Gordon and Dilworth of New York. Apart from a most luxurious display of preserved fruits, we have some calf's-foot-jelly mixed with port or sherry. The glass jars are closed in a patent manner, and the opening is large enough to allow the jelly to be taken out with a spoon, so that it need not be melted as when in bottles. All the preserves are in glass, and this helps to keep the flavour; nor can any chemical action occur, as is sometimes the case with tinned fruits, &c. Finally, we should not omit to mention that in the grounds there is a medical station with a physician in attendance, and that the Exhibition also possesses several ambulances. Thus it will be seen that there are at least a few points of special interest to medical visitors, though these are not numerous.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Pwllheli, by Dr. PARSONS.—This is a small town on the coast of Carnarvonshire, closely and irregularly built, the undue crowding together of houses being partly due to natural configuration. There are sewers in the place, but many of the houses are not connected with them, and both sewage and other filth, such as slaughter-house refuse, fouls the harbour. Midden privies prevail, and cause the customary nuisance. There is a public water service, but some pumps remain which deliver suspicious contents. Diphtheria first showed itself in May, 1886, and between that date and the end of March, 1887, 30 cases occurred in 18 households, with 10 deaths. Nothing was ascertained as regards the origin and spread of the disease beyond the usual story of personal intercommunication, and the report terminates with ordinary recommendations of an administrative sort.

Diphtheria at Haslemere, by Dr. AIRY.—This well-known Surrey district is in the Hambledon Union, but diphtheria has extended beyond its bounds. Thus, in the Witley sub-district of that union 6 diphtheria deaths took place in 1885, 12 in 1886, and 1 in the first quarter of this year; in the Farnham sub-district of the Farnham Union the deaths for the corresponding periods were 10, 7, and 2 respectively; in the Petersfield sub-district of the Petersfield Union they were 17, 18, and none respectively; and in the Fernhurst sub-district of the Midhurst Union they were 5, 5, and 1 respectively. Thus, it came to pass that the outbreak was being dealt with by four different medical officers of health, amongst whom there was no concerted action. In and immediately about Haslemere some 70 cases and 18 deaths were known of, and one main factor in its dissemination was school intercourse, supplemented by the intercourse between the neighbouring houses of the sick. Incidents bearing on this view are recorded, and an account is given of faulty sanitary conditions prevailing in the district. But Dr. Airy is careful to add that, so far as he was able to ascertain, the outbreak did not show any marked dependence upon the insanitary conditions that came under notice.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kensington. — Dr. Dudfield's report, as usual, takes cognisance of a number of matters which interest his district, in so far as it forms part of the metropolis as a whole. A staunch supporter of the action taken by the Metropolitan

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Asylums Board, he regards the course adopted last year in perfecting the system of removing the sick direct from their homes to the hospital ships as having in large measure led to the diminution in the small-pox mortality; and he claims that the system in question was instituted upon his recommendation to the Asylums Board and to the Local Government Board. He also quotes the Registrar-General's statement to the effect that, whatever the cause of the failure of London to improve in its relation to small-pox to the same extent as the provinces, that cause came into operation long before the hospitals were opened. We doubt this, and we note that this conclusion is largely affected by the use which has been made of the mortality returns for the 1871 epidemic. Place these returns on one or other side of that dividing line and conclusions almost diametrically opposed to each other can be obtained. With regard to the present stage of the question of the spread of scarlatina Dr. Dudfield's criticisms of the report made by Professor Axe, and issued on the authority of Professor Brown, are worth reading. Other matters of general importance are dealt with in Dr. Dudfield's report, which forms a good *précis* of the progress made in matters relating to the general health of the metropolis. Reverting to Kensington itself, we find that with an estimated population of 173,500 the death-rate for 1886 was 15·9 per 1000, as opposed to 19·9 in the metropolis as a whole; and that the zymotic rate was 1·6, as opposed to 2·7 in the metropolis. A record is given of the action taken as to various matters affecting public health in the district; and as regards the pressing difficulty in dealing with the refuse collected in metropolitan districts, it is stated that a committee is considering the practicability of conveying it to the country for agricultural purposes. We shall be interested to learn the results of these deliberations in view of the public opposition to destructors.

Basford Rural District.—On a population of 49,148 there was during 1886 a death-rate of 18·7 in this district, this rate exhibiting an increase on that for 1885. The so-called zymotic diseases caused 108 deaths, of which 42 were from diarrhœa, 30 from whooping-cough, 17 from measles, and 10 from enteric fever. Each group of diseases is dealt with in the report, and its history is the more trustworthy because Dr. Boobbyer succeeds in getting a fair account of sickness returns by means of a voluntary notification. The prevalence of enteric fever shows some 25 per cent. reduction on the average of such occurrences during the previous ten years, and it is evident from the detailed record given that speedy and valuable action is taken to detect fresh attacks, and to deal with their causes. Amongst other work that has been carried out is the preparation of a code of bye-laws now ready for the consideration of the authority. Really good bye-laws are likely in course of time to have a most important influence on the future health of the people, and authorities would do well to give a sufficient amount of their time to a subject which at first sight appears dry and uninteresting. A new form of midden-privy is shown in a diagram. It exhibits such a vast improvement on the old-fashioned form in vogue in this district that its adoption could only effect improvement. But we do not like the capacity given to the structure, for it will favour too large an accumulation of excreta and refuse in localities which are getting populous, and the slanting slab intended to carry the excreta amongst the ashes fails, especially after recent cleansing of the receptacle, to ensure that complete mingling of contents which it is so important to obtain.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5784 births and 3333 deaths were registered during the week ending September 10th. The annual rate of mortality in these towns, which had steadily declined in the preceding four weeks from 23·7 to 18·9 per 1000, further fell last week to 18·8. During the first ten weeks of the current quarter the death-rate in these towns averaged 21·4 per 1000, and was 0·2 above the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 12·2 in Derby, 14·0 in Bristol, 14·1 in Norwich, and 15·6 in Huddersfield. The rates in the other towns ranged upwards to 25·2 in Manchester, 26·2 in Newcastle-upon-Tyne, 26·7 in Birkenhead, and 29·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined in the preceding six weeks from 1301 to 792, further fell last week to 768; they included 469 from diarrhœa, 95 from scarlet fever, 83 from whooping-cough, 57 from "fever" (principally enteric), 32 from measles, 28 from diphtheria, and only 4 from small-pox. These zymotic diseases caused the lowest death-rates last week in Huddersfield and Halifax, and the highest rates in Birkenhead, Sunderland, Wolverhampton, and Bolton. The greatest mortality from diarrhœa was recorded in Cardiff, Hull, Preston, Wolverhampton, and Bolton; from scarlet fever in Liverpool, London, Sheffield, Manchester, Birkenhead, Oldham, and Bristol; and from "fever" in Sunderland, Leicester, and Birkenhead Of the 28 deaths from diphtheria in the twenty-eight towns, 18 occurred in London, 3 in Birmingham, and 2 in Liverpool. Small-pox caused 3 deaths in Sheffield and 1 in Bristol, but not one in Greater London or in any of the twenty-five other large towns. Only 4 cases of small-pox were under treatment on Saturday last in the Metropolitan Asylum Board hospitals receiving cases of this disease, of which one was admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 178, 160, and 169 in the preceding three weeks, declined again last week to 160, and were 4 below the corrected average. The causes of 84, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Plymouth, Wolverhampton, Derby, and Cardiff. The largest proportions of uncertified deaths were recorded in Brighton, Sunderland, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·7 and 18·5 per 1000 in the preceding two weeks, rose again to 19·4 in the week ending September 10th; this rate was 0·6 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 16·2 in Paisley and 17·3 in Aberdeen and in Leith, to 21·1 in Dundee and 26·0 in Greenock. The 484 deaths in the eight towns last week showed an increase of 21 upon the number in the previous week, and included 45 which were referred to diarrhœa, 40 to whooping-cough, 11 to "fever" (typhus, enteric, or simple), 11 to scarlet fever, 5 to diphtheria, and not one either to small-pox or measles; in all, 112 deaths resulted from these principal zymotic diseases, against 111 and 102 in the preceding two weeks. These 112 deaths were equal to an annual rate of 4·5 per 1000, which exceeded by 0·2 the mean rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 53 and 39 in the previous two weeks, rose again last week to 45, of which 11 occurred in Glasgow, 11 in Edinburgh, 8 in Dundee, and 7 in Aberdeen. The 40 deaths from whooping-cough showed a further increase upon recent weekly numbers, and included 9 in Edinburgh, 9 in Greenock, 8 in Glasgow, and 7 in Dundee. The 11 deaths referred to "fever" were within one of the number in the previous week; 3 were returned in Glasgow, 3 in Edinburgh, and 2 in Paisley. The 11 fatal cases of scarlet fever also showed a decline; they included 5 in Dundee, 3 in Glasgow, and 2 in Perth. Of the 5 deaths referred to diarrhœa, 2 occurred in Glasgow and 2 in Greenock. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 73 and 71 in the preceding two weeks, declined last week to 66, and were 6 below the number returned in the corresponding week of last year. The causes of 60, or more than 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 29·3 and 37·5 per 1000 in the preceding two weeks, declined again to 27·9 in the week ending September 10th. During the first ten weeks of the current quarter the death-rate in the city averaged 30·1 per 1000, the mean rate during the same period being but 20·9 in London and 18·6 in Edinburgh. The 189 deaths in Dublin last week showed a decline of 65 from the number returned in the preceding week; they included 36 which were referred to diarrhœa, 17 to measles, 7 to "fever" (typhus, enteric, or simple),

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4 to scarlet fever, 3 to whooping-cough, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 78, 48, and 65 in the preceding three weeks, further rose again last week to 77; they were equal to an annual rate of 11·4 per 1000, the rate from the same diseases being but 3·3 in London and 4·8 in Edinburgh. The fatal cases of diarrhœa, which had been 39, 30, and 31 in the previous three weeks, rose again last week to 36. The deaths from measles, however, showed a decline of 6 from the number in the previous week. The 7 deaths from "fever" showed a further increase upon the numbers in recent weeks, while those from whooping-cough were less numerous. The deaths both of infants and of elderly persons showed a marked decline from the high numbers returned in the previous week. Six inquest cases and 2 deaths from violence were registered; and 53, or considerably more than one-fourth, of the deaths occurred in public institutions. The causes of 28, or nearly 15 per cent., of the deaths registered during the week were uncertified.

THE SERVICES.

Deputy Surgeon-General R. W. Clifton has been appointed Principal Medical Officer to the Curragh Brigade.

ARMY MEDICAL STAFF.—Surgeon Richard Charles Kirby Laffan has been seconded for service under the Egyptian Government.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major J. R. A. Douglas, 5th Battalion, the Royal Fusiliers (City of London Regiment), resigns his commission; also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

ARTILLERY VOLUNTEERS.—1st Glamorgan: Philip Rhys Griffiths, M.B., to be Acting Surgeon (dated Sept. 10th, 1887).

RIFLE VOLUNTEERS.—2nd Volunteer Battalion, the Worcestershire Regiment: William Leonard Braddon, M.B., to be Acting Surgeon (dated Sept. 10th, 1887).—1st Volunteer Battalion, the Northumberland Fusiliers: Acting Surgeon C. Farmer resigns his appointment (dated Sept. 10th, 1887).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Staff Surgeon James Robertson has been placed on the retired list of his rank (dated Sept. 2nd, 1887).

The following appointments have been made:—Surgeon Alfred E. Weightman, to the *Garnet* (dated Sept. 10th, 1887); Surgeon George T. Collingwood, to Chatham Hospital (dated Sept. 10th, 1887); and Surgeon James Crevie, to be Surgeon and Agent at Belhelvie (dated Aug. 31st, 1887).

Correspondence.

"Audi alteram partem."

THE TREATMENT OF PERFORATING ULCER.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the cases of perforating ulcer recorded by Mr. Bland Sutton and Mr. Pryce in THE LANCET of July 2nd, for I have continually to treat a number of cases of this troublesome complication in the Leper Asylum here. I must, however, comment on a point in treatment, which I am aware is not new, but which does not seem to be sufficiently recognised. I have before me notes of three cases in which I cut down upon and stretched the sciatic nerve for painful perforating ulcer. In the first case the ulcer healed and the pain vanished. In two months, however, it returned so severely that the patient begged for amputation. I then stretched the external popliteal and slit up a sinus in the sole, making a large T incision. Since that date (five months ago) he has made no complaint. The ulcer is not quite healed and seems inclined to remain stationary. In the second case the pain was relieved, the swelling of the foot diminished, and the ulcer lessened in size. In five months more the foot became very swollen and inflamed, the ulcer very painful, and dead bone was removed. He also begged for amputation. Instead of this, the foot was freely incised in various directions, and sloughs carefully removed as they formed. In a month the ulcer on the sole was nearly healed, the incisions were granulating well, and there was no pain except when he tried to walk on the foot. In the third case there was temporary relief; but the foot became gangrenous, and at the patient's own request the leg was amputated a month later. The posterior tibial nerve was greatly thickened, the fibres being separated by gelatinous-looking material. The stump was perfectly healed in two months more, and the patient was getting about with a wooden leg.

I could multiply examples, but these are enough for the present purpose. My experiences of nerve stretching are still accumulating, and are not yet ripe for publication; but this I feel justified in saying, as a result of observation so far, that amputation for perforating ulcer should never be thought of till nerve stretching and free incision of the ulcer have been thoroughly tried.

I am, Sirs, yours truly,

BHAVEN RAKE, M.D. Lond.,
Medical Superintendent of the Trinidad Leper Asylum.

August 13th, 1887.

PAIN AND ITS INTERPRETATION.

To the Editors of THE LANCET.

SIRS,—I have read with great interest the articles published in THE LANCET under the above heading. They have already called forth letters of protest, at which I am not surprised, containing as they do much that is debatable.

As a general proposition, it may safely be said that pain is of service to mankind. To this, I imagine, no one will demur. It is one of the solid foundations on which our treatment is based. Proofs of it are abundant. Take, for instance, an injured joint. A man gives his knee a violent wrench; the structures are severely strained; some of the ligaments are ruptured; and synovitis follows. The man has pain, which is increased on movement, and so instinctively the joint is kept fixed and is given rest. The surgeon fixes the knee on a splint, absolute rest is maintained, but still pain continues. At first the pain was useful, and amongst other things pointed out the treatment; but when rest is obtained, of what use is the pain?

In many and various other instances the utility of pain is clear; but to say, as was said by Mr. Gillies, that "pain comes at the right time," and "never comes where it can serve no good purpose," is palpably fallacious. Take the case of a woman with that truly terrible affliction, scirrhus of the mamma. It begins as an excessive epithelial growth, at first perhaps of only a very few cells. A small tumour is developed, and for weeks or months she may be completely unconscious of it. Now pain in her case, to be of good purpose, should be felt quite early in the course of the important change. What do we find? For months, may be, she is quite ignorant of the fact that she has within her the beginning of what will ultimately be her end. The tumour grows, neighbouring structures become contaminated, and pain comes on and persists, which by the exhaustion it induces hastens on the inevitable. In this stage, of what service is her pain? The diagnosis is made, the disease is too far advanced for operation, the patient knows that she is beyond the reach of surgery, and so, tortured with pain night and day, she waits, and prays for a speedy release. And yet the writer stoically says, "Pain is merciful."

Further on he says: "Pain is in direct proportion to the powers of repair—that is, to the probability of recovery." So it appears that the woman who is the most affected with cancer and suffers the most pain is more likely to recover when operated on than the one who has the small, initial, and painless cancerous tumour! Is this the teaching of modern surgery? Is this the practice of its disciples—the writer of the articles amongst them? The one fact that stands out clearly in the statistics of the operations for cancer is that the sooner the patient is rid of the tumour the better will be the prospect; and could we but diagnose the affection in its painless state, when it first becomes heterologous, and acted accordingly, the prognosis would be extremely favourable. This, unfortunately, we are unable to do.

The writer would have us believe "that the measure of pain which attends an injury or a disease is a prophecy in that same measure of recovery." If so, then the more acute and painful a pleuro-pneumonia, the more pain after a fractured rib the more pain after a ruptured bladder, the

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more acutely strangulated and powerful a hernia, the more excruciating the headache in meningitis, the greater are the prospects of recovery! Different temperaments do not enter into his calculations; it is one absolute rule—"the more pain, the more likely to recover." If he follows his own conclusion he will most assuredly be led into many a pitfall.

If pain be the unmixed blessing we are asked to believe it is, why do we in all cases endeavour to palliate it? Why does health suffer from its persistency? Why often when pain ceases does health improve? And why do we completely abolish it during the performance of operations? Pain is a universal human legacy. It is the penalty we pay for our high state of development. It is what generations of medical men in all climes have striven with all their strength and knowledge to lessen or to annul. We walk in their footsteps, but with more powerful weapons against the dread inheritance. Others will follow us, and so the warfare will ever continue.

I am, Sirs, yours faithfully,

E. R. WILLIAMS, M.R.C.S.

Richmond Gardens, Forest Gate, E., Sept. 12th, 1887.

To the Editors of THE LANCET.

SIRS,—Relative to your annotation "What is Pain?" and also to the articles on the "Interpretation of Disease," may one inquire if it is not as absurd to speak of the "purpose of pain" as it would be to talk about the *purpose* of hæmorrhage from a severed vessel? In the latter case the function—it may be called—of conveyance is interfered with and blood flows out and is lost, but no one talks about the *purpose* of loss of blood. It is perceptible to our senses just as much as pain is, and is additionally perceptible to sight, and no doubt serves as a warning to us to take measures to check it; but would anyone therefore speak of the *purpose of hæmorrhage* as "protective"? Yet you write—"the purpose of pain is doubtless protective." Hæmorrhage in general terms is a consequence—a sign—of failure, in greater or less degree, of a function of vascular tissue—viz., *conveyance*. So pain is a consequence, a sign of failure of function of nerve or other tissue; and, as a failure, as a defective performance, it has no more *purpose* than hæmorrhage or any other failure or deficiency has. "Purpose" is surely confined to normality, and when the natural conditions under which an organ or a tissue does its work are changed to the extent of causing, for example, hæmorrhage, or pain, or what not, is it not beside the question to talk of "purpose" in it all? All "purpose" was probably expended in providing for the normal working of parts. What "purpose" there may be in disease or its symptoms—e.g., pain, hæmorrhage, &c.—is due to the persistence to the survival of some elements of normality in function, and it is a mistake to speak of the "purpose" of what is really the *failure of purpose* and nothing more.

I am, Sirs, your obediently,

Sept. 1887. G. C. LIPPINCOTT, M.D., U.S. Navy.

To the Editors of THE LANCET.

SIRS,—It is in no contentious spirit I write you again on this most important question, but in the hope, as I have already expressed, that some good will come of it. Dr. Collins compels me to quote a sentance from my last paper: "*Now, let me say that there are serious exceptions—apparent exceptions—to this law of pain.*" I leave him to judge whether I meant to cover cancer by that. I made the expression general for a purpose, and that purpose has been served so far well. I hoped to get men of greater knowledge and experience than I can justly claim to give the fulness of detail that I so clearly saw was at this very point necessary. Towards that Dr. Collins in his two letters has contributed nothing. When I said I did not understand his explanation, I did so honestly fearing that there might be something more in his theory than I could then see—something that his words failed to convey with sufficient clearness. But now that Dr. Campbell has put the matter in a very simple effective expression I am quite ready to accept it, and that entirely in favour of my view of pain, not against it. But let me indicate that the method or process of the evolution of pain is a question at every point quite distinct from the purpose of pain. It is with the meaning, the motive of pain, that I am concerned, not with the process of its evolution. Mr. St. Clair Buxton looks at the matter from the same point of view as Dr. Collins; but that "pain stands out simply as an evidence of evolution" is what I cannot accept. Pain has some other and higher purpose than that.

I am not clear as to what Dr. Collins means in his reference to anæsthetics. The use of anæsthetics in surgical operations is clearly outside the question at issue. Their administration to suppress natural pain is not rarely a questionable proceeding; it is at best a temporary expedient. I think it was Lord Macaulay who said that the suppression of pain by opiates was like taking the warning rattle off the snake but leaving it in full possession of its fangs. I need not elucidate this truth to your readers; they are daily familiar with the fact. In the measure that we know the cause of pain and understand its meaning, I believe anæsthetics shall have more limited use.

There are several points in Dr. Campbell's excellent, thoughtful letter that I prefer not to deal with at present. If I am not mistaken, Dr. Campbell could put us much in his debt by answering his own questions. Would it be too much to ask him at convenience to do so?

I am, Sirs, your obedient servant,

Brockley, S.E. H. CAMERON GILLIES.

DEATH FROM CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—As it is important that a permanent record should be kept of all cases of death arising out of the administration of anæsthetics, I send you particulars of a death which recently occurred at the Chester General Infirmary—a short account of which has appeared in some of the daily papers.

On Aug. 16th last, a patient, W. L——, aged thirty, was admitted to the infirmary suffering from necrosis of a metacarpal bone, the result of an injury received five months previously. It being considered necessary that the piece of dead bone should be removed, Mr. Lees, house surgeon, on Aug. 18th, asked me to give chloroform for him whilst he performed the operation. The patient had no symptoms of cardiac disease, and both Mr. Lees and myself examined the pulse immediately before the operation, and found it regular and healthy. I administered the anæsthetic on lint, the patient coming very rapidly under its influence (less than three minutes being occupied in obtaining this result), and not more than two drachms of chloroform being used altogether. Mr. Lees commenced the operation, and in a few seconds it was noticed that the pulse became very feeble and flickering and the respiration shallow. Almost immediately after this both pulse and respiration stopped. Artificial respiration by Silvester's method was at once set up, hypodermic injections of ether given, nitrite of amyl sprinkled on lint placed over the nostrils, mustard applied to the heart, and an enema of brandy-and-water administered. Attempts to restore the patient were kept up for more than an hour, when the case was abandoned as hopeless. At the first symptoms of syncope, Dr. Stolterforth, one of the honorary physicians, was sent for, and was present while the efforts at resuscitation were being carried out.

A post-mortem examination was made on the following day by Mr. Lees. The right auricle was found very much distended with blood; all the valves of the heart were healthy, but its muscular substance was brown, and the walls thin and fatty (at the apex of the left ventricle the muscle was not more than one-eighth of an inch in thickness). Under the microscope many of the muscular fibres showed a central deposit of oily material. There were also some pleuritic adhesions.

At an adjourned inquest held on Aug. 26th, the coroner, after hearing the evidence, said "the jury could have little doubt that the deceased came by his death accidentally while under chloroform properly administered for the purposes of an operation. The state of the man's heart was not discoverable at the time of the operation, so not the slightest blame attached to the doctors." The jury expressed concurrence with the coroner and returned a verdict to that effect.

I am, Sirs, your obedient servant,

ALFRED MANN, M.B., C.M.,

Sept. 8th, 1887. Visiting Surgeon, Chester Infirmary.

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"UNUSUAL FORM OF SCIRRHUS OF THE BREAST."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 10th, a case is mentioned on p. 520 of an unusual form of scirrhus of the breast, in which Mr. Treves states that he has not seen an example in which a nodular disposition of the growth has been evident. I venture to think this form is by no means so rare as Mr. Treves imagines. I have seen three such, and in all the progress towards death was exceedingly rapid. In none of these cases were both breasts involved, but the skin over the second breast was in one case especially very markedly nodular, the nodules varying from the size of a small shot upwards. I am, Sirs, yours obediently,

Harley-street, W., Sept. 14th. W. BRUCE CLARKE.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NORTHERN ATTRACTIONS.

THE Newcastle Exhibition may now be said to be at its very best. Up to this, nearly one million and a half of visitors have passed in. The shortness of daylight is amply compensated by the brilliant electric lighting of the grounds. A course of scientific lectures has been commenced in the theatre of the building, and the following is included—"The Beginning of Life: the Germ Theory of Disease," by A. C. Monro, M.B., D.Sc., medical officer of health for South Shields and Jarrow. Any of your readers who can come to Newcastle for a day or so will be well rewarded for their journey, for, as well as the usual objects of interest to be found in all industrial and fine art exhibitions, the Newcastle display has specialities of its own, such as the Armstrong ordnance in all weights and stages, the machinery in connexion with mining, engineering, and hydraulic works, while the ship models of vessels for peace and war are admitted by competent judges to be, so far, unsurpassed. The show, too, of surgical instruments exhibited by Messrs. Brady and Martin, McQueen, and others of this city, is most complete, and indeed would be difficult to match. I shall, however, say little about these exhibits, as they should be seen by every medical visitor to the Exhibition. There is another attraction offered to visitors now by the opening a few days ago of a new line of railroad from Alnwick to Cornhill, a most interesting and historical part of the borders; and Northumberland is now accessible to the tourist. As this new line is not yet traced on the maps, and has not, I believe, found its way into any of the railway guides, a short sketch of the route may perhaps prove useful. The line in all is about thirty-six miles, running from Alnwick to Cornhill, a village about two miles from Coldstream on the Tweed, passing quite near Flodden Field, winding at Wooler round Cheviot, and passing Tankerville Castle. It has seven or eight stations, convenient to some of the best trouting streams in England; and, while writing of trout, I would advise all anglers to come at once, as the northern rivers are just now in perfection, and may be reached with great facility by this new line through Central Northumberland.

Newcastle-on-Tyne, September 13th.

DUBLIN.

(From our own Correspondent.)

REFORMATORY AND INDUSTRIAL SCHOOLS OF IRELAND.

FROM the twenty-fifth report of these institutions it appears that the admissions to reformatory schools in 1886 were 203, showing an increase of twenty-nine as compared with the previous year. Of the five deaths which occurred, three were from lung diseases, one from mesenteric disease, and one not classified. Of the 7099 children in industrial schools during the past year, seventy-nine deaths took place, of which forty-five were due to diseases of the lungs, six to fever, and two to scarlatina. The educational status of the inmates of industrial schools plainly evinces the deplorably illiterate condition of the class of children who are admitted year by year. No less than 61 per cent. of the children who were admitted in 1886 were quite illiterate; and the returns of previous years are likewise evidence that the normal educational status of children sent to these institutions yearly deteriorates. The inspector draws the attention of managers of reformatory and industrial schools to the importance of having a careful examination made of the arms of all children admitted to their schools to ascertain if they have been vaccinated in infancy, as it appears that a large proportion of the children present no traces of primary vaccination, and are unprotected against the danger of contracting small-pox. With regard to other infectious diseases which children are so liable to contract, the managers are advised to make arrangements for setting apart a small day-room and dormitory for the reception of recent admissions and their retention in these "observation wards" for a period of two weeks after admission. Many children are committed to industrial schools from the crowded tenement dwellings in large towns. Some of these may have recently suffered from infectious or contagious diseases, or may have been in contact with affected persons to such an extent as to become carriers of infection. The necessity for some arrangement of the kind recommended has been recently shown by a case in which a child admitted to a country industrial school communicated typhus fever to two Sisters of Mercy, both of whom died from the disease thus accidentally introduced.

A CENTENARIAN.

A man named Crooke died in Tipperary Workhouse last week at the advanced age of one hundred and six years. Until a month before his death the man is said never to have been sick a single day. He never wore a collar or cravat, but, in his own words, "gave his breast to the breeze, so that his lungs always had room to blow."

CORPORATION OF CORK PRESENTMENTS.

At a meeting of the Town Council held last week, the following presentments were passed—viz., Cork Fever Hospital, £500; North Infirmary, £350; South Infirmary, £350. The presentment for the District Lunatic Asylum, amounting to £2812 19*s.* 7*d.*, on a division was postponed, as a protest on account of the authorities not appointing as governors the members of the corporation selected for the office. As passing this presentment is mandatory on the corporation, the protest appears a rather insignificant method of retaliation.

Samuel Stuart, M.D., J.P., died at his residence at Donaghadee last week, aged seventy-three years.

Dublin, Sept. 13th.

BELFAST.

(From our own Correspondent.)

QUEEN'S COLLEGE.

FROM the report of the President (Dr. Porter) of the Queen's College, Belfast, for the session 1886–87, I learn that 110 students entered the College for the first time during the session, and the total number of students enrolled in each department during the session was as follows:—Arts, 170; medicine, 240; law, 22; engineering, 12; and as 21 of these attended in more than one faculty, the aggregate total of individuals enrolled was 423. In the Faculty of Arts 9 ladies attended, but owing to the College Charter they are not eligible for any awards. The President reports that not a single case of breach of discipline has come before the Council, and the reports of the deans of residence, which are appended, are most favourable. The success of Belfast students at the Royal University has been very great. At the annual meeting of the Royal University held last October, the Vice-Chancellor (Lord Emly) said: "This year at our first university, second university, and B.A. degree examinations, the total number of exhibitions awarded was sixty-five, and of these the students of Queen's College, Belfast, carried off no fewer than twenty-two, and they also won a large proportion of first-class honours." In competing for honours in the Royal University, the Belfast students are at a great disadvantage as

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compared with those educated in or near Dublin. All the honour examinations are conducted in Dublin, some of them after the close of the pass examinations, and this involves a larger expenditure of time and money than most young men from the north can afford; and hence students of great promise not unfrequently content themselves with a mere pass. The President reiterates what he said in his last report, that the time must surely soon come when it will be no longer necessary for so large a body of students as the Belfast Queen's College furnishes yearly to the University to go to Dublin for their examinations and degrees. They receive their education in Belfast under professors of acknowledged eminence, and, with the assistance of a staff of well-selected extern examiners, the President maintains that in the Queen's College they could conduct all the examinations with equal fairness, and with at least equal thoroughness. Belfast has now a population of 230,000. It is the commercial capital of Ireland and the capital of Ulster, which has a population of 1,700,000, being more than one-third of the entire population of Ireland and nearly one-half of that of Scotland. In Dublin there are two universities side by side, while in Scotland there are four. The President asks, Why should Belfast not be made the seat of a university for Ulster? The present arrangements for conducting university examinations and granting degrees are not satisfactory; they are not fair, Dr. Porter says, to the people of Belfast and the province of Ulster. The Royal University does not, and from its constitution cannot, supply the educational requirements of the people of the north of Ireland. There is, the President remarks, in Belfast an admirable nucleus for a university. There are 1500 students, *alumni* of the College; there is a large body of students, an efficient professorial staff, an excellent library and museums; and with a small expenditure of money the laboratories might be made fit for thorough practical training. What the College wants is independence, and freedom from an external control which is not helpful. The President points to the great success of Scotland as a nation as being due, in no small degree, to its universities; and in many respects Ulster resembles Scotland, and he asks Her Majesty, in this year of Jubilee, to grant to Queen's College, Belfast, a university charter, that it may be able more efficiently to promote the great object for which it was founded, "the better advancement of learning among all classes of Her Majesty's subjects in Ireland." There is no doubt that the Irish education question is far from being settled. The people of the north have not taken kindly to the Royal University, which is a mere examining board; and, as far as Ulster is concerned, the establishment of a university in Belfast would be most popular. The President refers to the success of the Belfast students at Oxford, Cambridge, the Middle Temple, London, as well as at the Royal University; and concludes his report with the address presented to the Queen on the occasion of her Jubilee by the President and professors of Queen's College.

Belfast, Sept. 13th.

Obituary.

JOHN SHEA, M.D.,

PHYSICIAN TO THE ROYAL BERKSHIRE HOSPITAL, AND MEDICAL OFFICER OF HEALTH TO THE BOROUGH OF READING.

IT is with sincere regret that we have to announce the death of Dr. Shea, of Reading, at the early age of forty-nine, on Tuesday the 6th inst., from an attack of apoplexy. He had felt a little unwell while at breakfast, and retired to his study to be quiet. His family shortly afterwards heard him call, and on entering the room, found him fallen forward from his chair unconscious. Several of his medical neighbours and colleagues at the hospital were soon in attendance, but their efforts were unavailing, and he died in a few hours from cerebral hæmorrhage.

Dr. John Shea was the son of Dr. John Shea of Blackfriars-road, who was one of the oldest practitioners in London, and died only a year or two ago, an octogenarian. Thus Dr. Shea, jun., the subject of this notice, inherited a tendency to longevity. His early death is an instance of the interference with this natural disposition by birth and residence through childhood and early life in London, in a district known to be among the least healthy. At a period when the present educational activity was commencing, Dr. Shea was afforded the advantage of a sound classical and mathematical education, and in due course took his degree in Arts at the London University. He became a member of the Royal College of Surgeons in 1858 and M.D. St. And. in 1861, and settled in general practice in Kennington, where he continued till 1870. A severe illness obliged him to relinquish practice in town, and seek a restoration of health in the country. He retired to Reading for this purpose, where many of his wife's relatives are influential bankers and brewers. The passing of the Public Health Act in 1872 created the office of medical officer of health, to which Dr. Shea was elected, as well as to that of the rural and urban sanitary districts of Wokingham. In due course he became physician to the Royal Berkshire Hospital. In discharging the duties of these offices and that of a consulting physician Dr. Shea passed the remainder of his life. It is not too much to say that his pure, noble, and unselfish nature endeared him to everyone with whom he was brought in contact. Among his professional brethren he was a universal favourite, for he had the happy gift of amalgamating discordant natures, and making his professional brethren friends who might otherwise be estranged. As one of the vice-presidents of the Pathological Society of Reading, he did much to promote its interests, and was mainly instrumental in bringing about the establishment of the new medical library and pathological museum in association with the hospital, which is the centre for professional reunion for the whole neighbourhood. The large numbers attending his funeral, though of a private nature and simple in form, bore testimony to the affection with which one was regarded whose animating principle through life was "to do justly, to love mercy, and to walk humbly with his God."

JAMES BARR MITCHELL, M.D., L.F.P.S.

DR. MITCHELL, who died somewhat suddenly on the 26th ult., was the son of Mr. Alexander Mitchell of the Apothecaries' Hall, Glasgow and was born in 1818. Educated at the High School and the University of Glasgow, he took his degrees in 1838, and completed his medical studies at Paris and at Padua. He made a special study of botany, a science he pursued under the friendly guidance of the late Sir W. Hooker, with whose family his own were on terms of intimacy. Between 1841 and 1846, Dr. Mitchell accompanied the late Earl Somers as private physician on several prolonged explorations in Syria, Egypt, Greece, and the remoter parts of Asia Minor; Sir H. A. Layard for a time forming one of the party, as did also Mr. J. Harrison Allan, whose beautiful "Pictorial Tour in the Mediterranean" illustrates some of the little known classical spots visited by the travellers. In 1845 he married the daughter of Mr. Archibald Robertson of Liverpool, a gentleman well known in the shipping world. For many years afterwards he resided partly in France and partly in England, devoting himself to various scientific pursuits. He introduced from France the process for manufacturing commercial albumen from the serum of blood, and was the first to make practical trial in England of the Arcachon system of oyster culture. In the introduction of Condy's fluid Dr. Mitchell took an active share, and his enthusiastic advocacy greatly promoted the popularising of that now well-known sanitary agent. In 1868 he was awarded the silver medal of the Naval Medical Congress at Havre for his paper on the Permanganates. Just before his death he was occupied with experiments to prove that salmon smolts could be advantageously reared in a limited salt-water area.

Dr. Mitchell was a member of the old Anthropological Society and of the Society of Biblical Archæology. He was a man of wide experience, deep reading, and much culture. The deceased gentleman leaves a wife and two sons to mourn a loss which will be sincerely shared by a wide circle of friends both at home and abroad.

DR. ERNST AUGUST MATTHIÄ.

THE "Romance of Medicine" has yet to find its author and scantiness of material will be the least of his difficulties. From "still life" to *la haute politique* there is enough to inspire a dozen novelists. Its characters are to be found where they are hardly to be suspected—even in retired little townships like Wülflingen, near Winterthur, in Switzerland,

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where on the 15th ult. died one of the last survivors of the ill-starred rising known as the "Frankfurter Attentat" of 1833.

Ernst August Matthiä was born at Frankfurt-on-the-Main in 1812, son of Dr. Friedrich Christian Matthiä, rector of the Gymnasium in that city. He was barely of age, and still at the literary period of professional study, when the Federal Diet by its severely restrictive press laws aroused to madness the younger and more advanced of the citizens. The *Burschenschaft* took an active initiative in resisting the oppressive enactments, and young Matthiä, with a band of other students, reinforced by a considerable following of peasants, conceived the daring plan of blowing up the Diet. On April 3rd, 1833, the attempt came off. The conspirators stormed the guard-house, and were proceeding to effect their purpose when the military attacked them in force, arrested some of the ringleaders, and put the main body to flight. Matthiä was not taken till the following evening. With nine comrades he was subjected to a tedious State process, and finally condemned to imprisonment for life in the House of Correction.

Sentence was passed on June 18th, 1836, and made public on October 19th. Appeal was lodged against it with the Ober-Appellations-Gericht at Lübeck, and while it was under consideration six out of the ten prisoners, with the connivance of the turnkeys, and also, it is said, of the police on guard, succeeded in escaping. Matthiä and a medical student named Fries (who afterwards settled down in practice at Siffach, in the canton of Basle, where he died full of professional honours) fled to Frankfurt and remained in hiding for five weeks, continually changing their quarters, and assisted by their friends in the press, who published announcements of their safe arrival in more than one foreign port. At last both of them, skilfully clad, wearing spectacles, and with complexion painted, drove in a handsome turn-out to Hoch-heim, where they passed the night; on the evening of the following day they crossed in a boat to Mainz, journeyed through Rhenish Hesse and Rhenish Bavaria to France, and finally found an asylum in Switzerland.

At Zürich Matthiä, now able to breathe freely, applied himself with characteristic energy to the study of medicine, and graduated with distinction at that school in 1839, after which he settled in practice at Wülflingen, near Winterthur. As a practitioner he was highly respected, not only by the cantonal population of his adoption, but by the numerous foreign sojourners (English and American included) in that picturesque neighbourhood, with its interesting records of Roman occupation and its memorials of Zwingli, Gessner, Pestalozzi, and Sulzar. In 1848 he and the remnant of his comrades were amnestied, and since that year he often visited his native town, where he was ever cordially welcomed. Having lived down his "compromised" youth in steady professional work and philanthropic citizenship, he contributed to one of the editions of Brockhaus's "Conversations-Lexicon," a plain narrative of the "Attentat" in which he bore a part. Three only of his fellow-conspirators survive him, one of them a physician in Germany and father of a distinguished professor in that country.

DR. FRANZ SCHOTT.

A STIRRING and eventful career has just been closed by the death of this well-known army physician at Stuttgart on the 30th ult. Only his early youth and his declining years were spent in his native land. He was born at Steinheim-on-the-Main in the paternal parsonage in 1820. His father, who became successively dean of Geislichen and Herrenberg, sent his son to the gymnasium at Ulm, and thereafter to Stuttgart, where his preliminary education was completed. Between 1837-41 he studied medicine at Tubingen, and in 1842 passed with much credit the State examination and graduated as Doctor in the same year. He repaired to Wurzburg, where he held the post of assistant physician; but academic and civic practice seemed to him to offer an inadequate outlet for his energies. He entered the Dutch Army Medical Service, having previously qualified by an honourable examination at the University of Utrecht, and after a brief visit to his parents he set out for Java by the then tedious and not over-attractive sailing route round the Cape of Good Hope. His first destination was to Sumatra, where the Dutch were carrying on a desultory war in the southern part of the island with the indigenous tribes, among whose savage characteristics cannibalism was not the least pronounced. For six years he saw a good deal of active service there as surgeon to various military detachments, and in 1848, when the tide of revolution was sweeping Germany, he passed his second State examination in Batavia. His next scene of activity was the islands of Borneo and the Celebes, where he was several times under fire, and where, —an even more dangerous experience than that of bush fighting—he encountered and lived through the epidemics which told so terribly on the Dutch arms. Thanks to indomitable pluck, backed by a splendid constitution, which won him the name of the "iron doctor," he continued to earn the most honourable mention in the despatches, when at length a sharp liver attack reminded him of the limits of his health, and constrained him to return home. This was in 1859. Two years thereafter he resumed service in the Army Military Department of the Dutch Indies, this time as directing physician of the first class, corresponding to the post of "General-Arzt," in a German army corps. In 1864, after twenty years' service of a peculiarly active kind, he was induced to retire on a pension, and returned to his native parts, settling down in Stuttgart. He was very Dutch in his ideas and sympathies, and possessed the citizenship of that country, whose usages, particularly in education and public life, he was seldom tired of dilating on, admiringly, to his compatriots. He never forgot, however, that he was a German by birth, and took an enthusiastic interest in all the movements which finally culminated in the proclamation of the Kaiser William as head of the German Empire at Versailles. These events, and the national development that flowed from them, gave peculiar interest to the last two decades of his life, and kept him at an intellectual fever heat, which impelled him to an energy of occupation far beyond his years. He had made himself a proficient in the minutest details of Dutch history—a subject on which he wrote a number of learned and original papers. His last years he devoted to an autobiography, for which those of his friends who were allowed to see it predict a cordial reception from the reading public, abounding as it does in most interesting sketches of the flora and fauna of the Dutch Indies and the Bornese Archipelago, to say nothing of the thrilling incidents of the numerous expeditions in which he bore so honourable a part.

Medical News.

ENTERIC FEVER AT CHESHUNT.—Many cases of enteric fever have occurred recently at Cheshunt, Herts, and three deaths are reported to have taken place. The local board are exerting themselves to check the epidemic.

ANTHRAX. — An outbreak of anthrax is reported to have occurred amongst a herd of dairy cows at Limington, near Yeovil. The disease has also been prevalent on several farms in Lancashire.

FROM Brunswick a rather severe outbreak of trichinosis is announced. Some 130 persons are now labouring under the malady, and in each case it was found that fresh pork or fresh sausage had been consumed.

BURY AND SUFFOLK HOSPITAL.—On the 8th inst., the two lower wards of this hospital, which have been undergoing improvements, were re-opened by Lady Alwyne Compton and the High Sheriff, in the presence of a large and influential assembly of friends of the charity.

A CAUTIOUS PREACHER.—During the prevalence of scarlet fever in Plainwell, Michigan (says *Sunday Words*), all the churches are closed. The Baptist pastor sends his sermon weekly in a printed sheet to all the members of his flock.

ATTEMPT TO POISON A REGIMENT. — The Allahabad correspondent of the *Daily Chronicle* reports an attempt on the part of some miscreant to poison, by means of arsenic put into a beer cask, the men of the Borderer's Regiment stationed at Fettergarh. Forty of the men were made ill by partaking of the beer, but recovered.

A LAZARETTO FOR THE CANARIES. — The Spanish papers say that plans are being submitted to the Government for the erection of a lazaretto in the Canary Islands, the want of which is becoming yearly more and more urgent, as the traffic between the south-west of Europe and America, and also the west coast of Africa, is increasing.

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TESTIMONIAL.—A few days ago Miss Ethel Manson, lately matron and superintendent of nursing at St. Bartholomew's Hospital, was presented by some of the members of the governing body and of the medical staff with a magnificent chest of table plate on the occasion of her resigning her post on account of her marriage with Dr. Bedford Fenwick.

OPHTHALMIA AT THE NORWOOD SCHOOLS. — The Lambeth Guardians have received a report of a satisfactory character with respect to the existence of ophthalmia at the Norwood School. The term for which Dr. Stevenson, the medical officer in charge of the ophthalmic cases, was appointed having expired, it was resolved to continue the appointment for another three months.

THE PECULIAR PEOPLE AGAIN.—Some dissatisfaction has been expressed by the inhabitants of Stanway, near Colchester, in consequence of the refusal by the coroner to hold an inquest on a girl, aged about sixteen, daughter of a member of the sect calling themselves the Peculiar People, who died without having the advantage of medical attendance. The reasons stated to have been given by the coroner for not holding an inquiry were that the girl was over sixteen years of age and did not desire the services of a medical man, and that she appeared to have received from her friends every attention in her illness. The "cause of death" was of course left blank in the certificate of burial.

THE Exhibition of Naval Architecture and Models, opened on Jubilee Day at Plymouth, the profit from which was intended to be devoted to augment the funds of the Royal Albert and the South Devon and East Cornwall Hospitals, seems to have proved, financially, a grievous failure. Instead of there being, as was expected, a goodly balance to hand over to the treasurers of the above-named charities, the promoters of the exhibition are some pounds out of pocket.

POLLUTION OF THE THAMES.—On Wednesday last, at Chertsey Petty Sessions, the Rural Sanitary Authority were summoned at the instance of the Thames Conservancy Board in respect of a pollution of the Thames by means of a drain discharging into the Bourne at a point about two miles from the junction of that river with the Thames. A full bench of magistrates convicted the defendant authority unanimously, the fine imposed being £50 and costs. This was the second conviction.

DONATIONS TO MEDICAL CHARITIES. — Miss E. J. Forster, part owner of South Hetton and Murton Collieries, has given £200 towards the cost of the Hartley wing of the Sunderland Infirmary. Mr. Stephenson Clark has given £50 towards the same object.—Mr. Henry Lewis, of Springfield House, Preston, has given £500 towards the endowment fund of the infirmary of the town.—The Earl of Stair has contributed £100 towards the fund for liquidating the debt on the Ayr County Hospital.

HOSPITAL SATURDAY FUND.—Sir E. H. Currie, speaking at a meeting at the London Hospital for the purpose of hearing the report of this year's efforts, said the total amount realised by the collections reached £12,000, a sum greatly in excess of that of any previous year. At Bolton the sum obtained in workshops and factories by a Saturday collection in aid of hospitals amounted to £1150. At Leamington the collection for a similar purpose reached £226 15s.

HEAT AND DROUGHT IN ODESSA.—The Odessa correspondent of the *Daily News* states that the heat there has been most distressing. There has been no rain. The hospitals, he says, are crowded and the death-rate has risen. There is a great dread of the importation of cholera by Mediterranean vessels, notwithstanding the quarantine regulations. The city sewers are neither disinfected nor flushed, and all the local conditions are unhappily only too favourable for the spread of a serious epidemic.

DEATH FROM BLOOD POISONING.—On the 3rd inst. Mr. Henry Wood, county coroner, held an inquest at Claxton on the body of a boy aged fifteen years, who died on the previous day. According to the evidence, deceased was suffering from a large boil on his arm, and he asked the foreman to cut off the top. He attempted to do this, it appears, with a rusty knife, and deceased also himself repeated the attempt several times. A verdict that deceased died from blood poisoning caused by opening the boil with a rusty knife was returned.

PAUPER LUNACY.—The charge on poor-rates for the care and maintenance of insane paupers has been steadily increasing of late years. The *Metropolitan* publishes the following statistics: In 1876 there were 55,515 lunatics chargeable to the poor-rates; by 1877 the number was 57,221; in 1878 it had increased to 58,942; in 1879 the number was 60,165; in 1880 it was 61,594; in 1881 it was 63,524; in 1882 there were 65,319 insane paupers; in 1884 there were 68,736; and in 1886 the number had risen to 70,820—an increase in the ten years of about 30 per cent.

SHEFFIELD GENERAL INFIRMARY.—On the 7th inst. the annual general meeting of the governors and friends of this charity was held. The report referred to the gratifying circumstance that the year's income showed an excess over expenditure of £1089 18*s.* 8*d.* The chairman, Mr. Alderman Brooksbank, stated that the Weekly Board had been able to effect an arrangement for an addition of two assistant physicians and two assistant surgeons to the medical staff. In future out-patients would be admitted, if necessary, every day in the week.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At a meeting held on the 9th inst., Dr. Tatham was elected to represent the Association on the Council of the Metropolitan Society in London. Mr. Francis Vacher made some observations on the quality of the milk sold to the public in Birkenhead. Examination of samples of milk obtained from each of the 130 retail dealers in the town having been submitted to analysis, it was found that, though the milk generally was of good quality, in 21 cases it was either impure or not entire.

SMALL-POX AT SHEFFIELD.—A resolution has been passed by the Sheffield Borough Hospital Committee to purchase some leasehold premises adjoining the hospital, consisting of about 420 yards of land and five dwelling houses, for the purposes of providing increased accommodation in view of the prevailing epidemic of small-pox. Another resolution has also been carried strongly recommending the Council to acquire from 20 to 40 acres of land on or near the Redmires-road, on which to erect buildings or a building as a permanent hospital for small-pox and other infectious diseases.

A NEW DEPARTURE IN FRIENDLY SOCIETY ADMINISTRATION.—A new departure has, we understand, just been taken by the Foresters, the largest Friendly Society in existence, which, if generally followed, will largely supplement hospital work throughout the country. The Midland Courts of the Society have erected and opened a self-supporting convalescent home at Clent, where members who have suffered a long term of sickness may be sent free of charge, and without any burden being placed on charitable funds or public money. The movement promises to be one of the most successful which the Foresters have undertaken.

MEDICAL NOTES IN PARLIAMENT.

The Coal Mines Regulation Bill.

IN the House of Lords, on the 9th inst., the Coal Mines Regulation Bill was read a third time, and passed; and in the Commons, on Monday, the Lords amendment to the Bill was considered and agreed to, after the utterance of vehement protestations on the part of several members, in the course of which Mr. C. Graham was named by the Speaker, and had to withdraw from the House.

Navy Estimates.

In the House of Commons, on the 8th inst., on the vote of £75,400 for medicine, medical stores, &c., Dr. Tanner said the drugs in the naval hospitals and on board the ships were of an inferior quality. He also complained that the buying of perishable drugs in large quantities led to great waste, and stated that he had seen a quantity of "German" quinine, which was an inferior quality of the drug, on board the *Devastation*. Lord C. Beresford assured the hon. member that they took the greatest possible care to get drugs and medicines of the very best quality. He would, however, make inquiries with reference to what had fallen from the hon. gentleman. The vote was then agreed to.

Hospital at Salford.

On the 10th inst., in answer to Mr. Maclure, Mr. Ritchie said: "The guardians of the Salford Union propose to sell six or seven acres of land adjoining their infirmary at Hope to the Town Council of Salford for the erection of an infectious hospital. Representations have been made to the Local Government Board in opposition to the scheme. In a speech delivered when the present infirmary was opened, the then chairman of the board of guardians appears to have stated that there was an understanding that the guardians would not erect an infectious hospital on the site, but I am informed that there is no resolution of the guardians on the subject. I have instructed the inspector of the district to attend a meeting of the guardians and confer with them as to the proposed sale."

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Vacant Grounds (Nuisance Prevention) Bill.

The second reading of this Bill, the object of which is to abate a nuisance in the shape of a fair held on the vacant ground adjoining Tottenham-court-road Chapel, was, on the motion of Mr. J. Rowlands, read a second time.

Coroners Bill.

On the motion for the second reading of this Bill, Mr. Conybeare commented on the arbitrary power possessed by coroners of excluding reporters from the court—a power which, he thought, ought not to be perpetuated.—The Attorney-General, however, replied that the question raised by the hon. member was foreign to the scope of the Bill, which was then read a second time. On Wednesday the Lords agreed to the amendments to the Bill made in the Lower House.

Trichinosis.

On Monday, Mr. C. Gray having adverted to the report that a large number of persons on the Continent were suffering from trichinosis from eating Hambro' bacon, and to the need of protective measures being taken on behalf of the inhabitants of the British Isles, the Secretary of the Board of Trade said no information of the matter had been received by the Board, and that the question relating to the importation of trichinous meat was one which came under the jurisdiction of the Customs.

Safety in Theatres.

In answer to Sir A. Borthwick, Mr. Matthews said the Government could not undertake at this period of the session to pass a Bill relating to securing the safety of the public in theatres. But he undertook that the Government would, at the earliest possible opportunity, offer practical suggestions to any theatrical manager who might think fit to adopt them, with a view to ensure safety in the practical details of the construction of such buildings.

Destitute Aliens.

On Tuesday, in answer to Captain Colomb, Mr. W. H. Smith said that Her Majesty's Government was fully alive to the importance of placing some restriction on the importation of destitute foreigners into this country, but there were many serious difficulties in the way of dealing with it, among them the right of asylum in this country. It would be unwise for him to say more than that the Government would give the matter their most serious consideration.

Births, Marriages, and Deaths.

BIRTHS.

CHARLES.—On the 8th inst., at Limehurst, Spring-grove, Isleworth, the wife of T. Edmondston Charles, M.D., F.R.C.P., Q.H.P., of a son.

MACKINNON.—On the 20th ult., at Bludaw, the wife of Francis Irvine MacKinnon, M.B., M.R.C.S. (Damascus), of a son.

MOORE.—On the 2nd inst., on board the P. and O. steamer *Parramatta*, from Aden, the wife of Surgeon R. R. H. Moore, Medical Staff, of a son, prematurely, stillborn. Indian papers please copy.

PERKINS.—On July 15th, at Patea, Taranaki, New Zealand, the wife of Alfred Temple Perkins, M.R.C.S.E., L.R.C.P. Ed., &c., of a daughter.

MARRIAGES.

DANIEL—NICHOLSON.—On the 7th inst., at Jesmond Church, Newcastle-on-Tyne, Frederic Edwin Daniel, Esq., M.R.C.S., L.R.C.P., L.M., of Brant Broughton, Lincs. (late of 32, North-road Durham), to Lucy, youngest daughter of the late Joshua Nicholson, Esq., of Newcastle-on-Tyne.

DAVIS—EATON.—On the 8th inst., at Sheffield, by special licence, Henry Davis, M.R.C.S., of Gower-street, London, eldest son of Dr. Henry P. Davis, of Upper Woburn-place, London, to Annie, eldest daughter of John Eaton, Esq., of Sharrow Bank, Sheffield.

HATTON—UDALL.—On the 3rd inst., at Remenham, George Stokes Hatton, M.D., of Newcastle-under-Lyme, Staffs, to Catherine Josephine, third surviving daughter of the late Thos. Udall, Esq., of Woodlands, Remenham, Berks.

WARD—ANDERSON.—On the 31st ult., at St. Mary's Church, Woolwich Lloyd Brereton Ward, Surgeon-Major, Army Medical Staff, to Fanny Louisa Kingsley, daughter of Col. Anderson, Commissariat and Transport Staff, Woolwich.

DEATHS.

BLOWER.—On the 30th ult., at Duke-place, Bedford, after an illness of twenty-eight years, William Blower, M.R.C.S., L.S.A., aged 84.

BROOKE.—On the 10th inst., at Milman-street, London, Charles Edward Brooke, M.R.C.S., of Oriel House, Scarborough, and of St. Bartholomew's Hospital, fourth son of the late William and Elizabeth Brooke, of Leeds, aged 30.

NORRY.—On the 7th inst., at Epsom, William Augustus Norry, M.B., M.R.C.S., aged 30.

PITCHER.—On Sept. 7th, 1886, at Southport, Arthur Henry Pitcher, L.S.A., eldest son of the late John Henry Pitcher, Proctor, of Doctors' Commons, in his 44th year. (Owing to a printer's error, the above announcement was inserted in our issue of last week "7th inst.," instead of Sept. 7th, 1886.)

ROGERS.—On the 2nd inst., at the Rowans, Woodside-park, North Finchley, Moses Rogers, J.P., late Deputy Inspector-General of Hospitals in India, aged 76.

SHEA.—On the 6th inst., at Reading, John Shea, M.D., aged 49.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARRON, HUNTER JACKSON, M.D., C.M.Ed., L.R.C.P.Lond., M.R.C.S., has been appointed Divisional Surgeon to the Metropolitan Police S or Hampstead Division, vice Hochee, resigned.

BRODRICK, H. EDWARD, M.B., M.R.C.S., L.S.A., late Resident Clinical Assistant, East London Hospital for Children and Women, has been appointed Assistant Surgeon to the Liverpool Dispensaries.

CARR, WILLIAM, M.B., L.R.C.S.Ed., has been appointed Medical Officer to H. M. General Prison, Barlinnie, Glasgow.

DAVIES, J. B., M.B., C.M.Edin., has been appointed Resident Medical Officer to the Denbighshire and Flintshire Infirmary, Denbigh, vice John T. H. Davies, M.D., M.R.C.S., resigned.

GREENE, H. BERTRAM, M.R.C.S., L.K.Q.C.P.I., has been appointed Surgeon in the Service of the Royal Mail Steam Packet Company.

LOUDON, MARCUS MOORE, M.D., M.Ch.R.U.I., L.M., K.Q.C.P.I., has been appointed Medical Officer for the Workhouse and No. 1 District, and Public Vaccinator of the Mere Union, Wilts, vice H. P. Long, resigned.

PARK, DAVID SCOTT, L.R.C.P., F.R.C.S.Ed., has been reappointed Medical Officer of Health for the Beverley Borough of the Houghton-le-Spring Sanitary District.

PARKER, ALBANY J. ETHERINGTON, L.R.C.P. Ed., M.R.C.S., has been reappointed Medical Officer of Health for the South District, Houghton-le-Spring.

PHILLIPS, EDWARD B., L.R.C.P. Ed., M.R.C.S., L.S.A., J.P., has been reappointed Medical Officer of Health for the Rochford Rural Sanitary Authority, Essex.

SMYTH, R. V. B., M.A., M.D., B.S., has been appointed Medical Officer and Public Vaccinator for the Third District of the Barnet Union, vice Penn, resigned.

SOUTHEY, A. J., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Slough Urban Sanitary District.

SPROULE, R., M.D., has been appointed Medical Officer to the Gainsbro' Medical Friendly Society, vice Udale, resigned.

TURNER, CLIFFORD W., M.R.C.S., has been elected Resident Medical Officer to the General Infirmary, Leeds, vice T. W. Griffith, M.B., C.M., resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BATH ROYAL UNITED HOSPITAL.—House-Surgeon. £60 per annum, with board and lodging.

BIRMINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Residence, board, and washing, but no salary.

CARDIFF CORPORATION.—Medical Officer of Health for the Urban and Port Sanitary Authorities. £100 per annum.

DEVON AND EXETER HOSPITAL.—House-Surgeon. Salary £120 per annum, increasing £10 a year until it reaches £150, with board and lodging.

EAST SUFFOLK HOSPITAL.—Honorary Physician.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge road, S.E.—Surgeon to out-patients.

FEMALE LOCK HOSPITAL, Harrow-road, W.—House-Surgeon. Salary £100 per annum, with board and lodging.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian-road, N.—Obstetric Physician.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. £50 per annum, with board and residence.

HORTON INFIRMARY, Banbury.—House-Surgeon and Dispenser. £60 per annum; with board and lodging.

LEAMINGTON AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION.—Resident Medical Officer. Salary £200, with midwifery fees.

LIVERPOOL NORTHERN HOSPITAL.—Resident House-Surgeon's Assistant. No salary, but hospital practice and certificate of attendance, together with board and lodging.

LONDON TEMPERANCE HOSPITAL.—Registrar and Chloroformist. £50 per annum, non-resident.

NEWCASTLE-UPON-TYNE ROYAL INFIRMARY.—Junior House-Physician. Also two House-Surgeons. Board, lodging, and washing.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—House-Surgeon. An honorarium of £70 per annum, with board and lodging.

ST. LUKE'S HOSPITAL.—Resident Clinical Assistant.

SHEFFIELD GENERAL INFIRMARY.—Two Assistant Physicians and two Assistant Surgeons.

TAUNTON UNION.—Medical Officer. Salary £75 per annum, with fees for midwifery of 10s. a case, and 2s. 6d. for lunatic returns.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser. Salary £90 per annum, with board, lodging, and attendance, and fees from pupils.

WESTRAY PAROCHIAL BOARD.—Medical Officer. Besides salary, a good general practice.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 15th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 9	30·26	S.W.	56	52	102	68	49	...	Overcast
,, 10	30·03	N.W.	58	56	115	66	55	·04	Cloudy
,, 11	29·98	N.W.	58	53	107	66	49	...	Cloudy
,, 12	29·76	W.	56	54	89	62	53	·03	Overcast
,, 13	29·80	N.W.	51	49	100	60	47	...	Cloudy
,, 14	29·92	W.	52	49	95	62	47	...	Overcast
,, 15	29·94	W.	55	51	106	62	50	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

"LEAVE HIS FEATHERS TO THE BIRD."

Mr. Punch, in his own way—and what an inimitable way it is, combining humanity with great wit and wisdom—has, in his current issue, another pathetic appeal to fashionable ladies to give, if possible, some thought to the cruelty entailed on some of the feathered tribe by the direction taken by their senseless love of extravagant adornment. Must these reiterated protests be for ever in vain?

* * * * * *

"Feathers deck the hat and bonnet,
Though the plumage seemeth fair,
Punch, whene'er he looks upon it,
Sees that slaughter in the air.
Many a fashion gives employment
Unto thousands needing bread;
This, to add to your enjoyment,
Means the dying and the dead.

Wear the hat, then, *sans* the feather,
English women, kind and true;
Birds enjoy the summer weather
And the sea as much as you.
There's the riband, silk, or jewel,
Fashion's whims are oft absurd;
This is execrably cruel;
Leave his feathers to the bird!"

A. E. Bendelack.—The statement should be accepted *cum grano*. The system referred to is as yet on its trial.

Mr. H. Francis.—Any surgeon would advise in the matter.

"SWEATING OF THE FEET."

To the Editors of THE LANCET.

SIRS,—Among the many remedies suggested for the cure of the above I do not see one which in my hands has always afforded relief. I mean the use of a foot-bath of nitro-hydrochloric acid. It need not be very strong, but just pleasantly acid. I am, Sirs, yours truly,

Sept. 13th, 1887. C. H., M.R.C.S.

THE INTERPRETATION OF PAIN.

A LETTER, having the Ulverston postmark, has arrived without name or address.

A Student should put his question to the Secretary of the Royal College of Surgeons.

THE STUDENTS' NUMBER: ADDENDA.

University of Cambridge.

THE following are the regulations for the examination in *Sanitary Science*:—An examination in so much of State medicine as is comprised in the functions of Officers of Health will be held in Cambridge on Tuesday, October 4th, and the three following days. Every candidate will be required to pay a fee of four guineas before admission to each part of the examination. Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a diploma testifying to his competent knowledge of what is required for the duties of a medical officer of health. All applications for information respecting this examination should be addressed to Dr. Anningson, Walt-ham-sal, Cambridge. Candidates who desire to present themselves for examination in October next must send in their applications, and transmit the fees, to the Rev. Dr. Luard, Registrary, University of Cambridge, on or before Sept. 28th. Cheques should be crossed "Mortlock and Co." No fees can in any case be returned. The applications of candidates, whose names have not been on the register three years, should be accompanied by a certificate of birth, or other proof of age.

Post-graduate Course.—A course of instruction in laryngology, rhinology, and allied departments of medicine, for the benefit of gentlemen who have completed their medical curricula, will be commenced on the 20th inst. by Dr. Hunter Mackenzie, at the Eye, Ear, and Throat Hospital, Cambridge-street, Edinburgh. The course will extend over six weeks, and the fee will be £2 2s.

H. F. P. (Ostend).—For the required purpose there is no better treatise than the "Traité d'Hygiène Publique et Privée" of Bouchardat (8vo, pp. 1100, Felix Alcan, Paris, 1887). It is based on etiology, and this edition (the third) has been enlarged with notices of contagious diseases, cholera, rabies, &c. It ranks with the dictionaries of Littré and Robin, Delcambre, and Duval and Lereboullet for that skill in systematising so honourably characteristic of the French.

Mr. G. E. FitzGerald might apply to the Secretary of the Brussels Medical Graduates' Association, Dr. Pocock, 20, Golborne-road, Upper Westbourne-park.

RIGHTS OF UNREGISTERED PRACTITIONERS TO PRACTISE AND SIGN DEATH CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—It appears from the following correspondence that it is lawful for unregistered medical practitioners to practise in this country with impunity, and sign death certificates, which are received by registrars and simply entered as uncertified without further action being taken against the person who signs the certificate. I have written to the Registrar-General respecting a case which has recently occurred in my district. As medical officer of health I received a return of deaths from the Registrar wherein one death was entered as due to dentition and bronchitis, and no medical man's name attached. On inquiry from the district registrar, he produced a death certificate signed by a person giving the titles "Physician and Surgeon U.S. America." This person's name is not on the Medical Register. On explaining this case to the Registrar-General, I received the enclosed reply.

I am, Sirs, yours faithfully,

Atherton, Aug. 30th, 1887. BENJ. MARSHALL, L.R.C.P., &c.

"General Register Office, Somerset House,
"London, 29th August, 1887.

"SIR,—I am directed by the Registrar-General to acknowledge the receipt of your letter of the 26th inst., and to inform you that registrars are instructed that whenever any certificate or written statement of the cause of death signed by an unregistered medical practitioner is produced to them by an informant they are to treat the statement as part of the particulars tendered by such informant, and not to insert in the column headed 'Cause of Death' in the Register the words 'certified by' and the name and qualifications of the medical man, as they do when a registered medical practitioner has certified the cause of death. It would seem that in the case you mention the registrar had acted in accordance with his instructions. I may add that the form of 'Medical Certificate of the Cause of Death' issued from this Department is intended solely for the use of *registered* medical practitioners, and should not be supplied to one who is not registered.—I am, Sir, your obedient servant,

"EDWARD WHITAKER, Chief Clerk.

"B. Marshall, Esq., L.R.C.P., &c., Medical Officer of Health,
Atherton, Manchester."

"A COURT PHYSICIAN BEHEADED."

THE *New York Medical Record* of Sept. 3rd prints the following:—"The Ameer of Afghanistan suffered not long ago from a boil on his neck, and sought relief at the hands of his court physician. The latter ordered some sort of a salve to bring the boil to a head. Unfortunately, the application caused the august patient considerable pain, and after a night of torture he sent for his physician and had him decapitated."

A. A. Turner should refer to the Charities Register and Digest, published by Longmans.

Miss M'Kenna.—We do not prescribe.

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A DAY IN THE COUNTRY.

THE lay press is now, as is usual at this season of the year, teeming with appeals from philanthropic institutes and individuals for funds to enable children in poor and squalid districts to enjoy for a few hours the pleasures and advantages of fresh air and rural scenery. It needs no words of ours to impress upon the benevolently disposed the immense benefit conferred on the class referred to by such outings. Those who are accustomed to the sight of green fields, and to the exhilarating effects of pure and bracing air, can only by an effort realise the delight experienced by young people, who for perhaps three hundred and sixty-four days in the year are deprived of such enjoyment, when the opportunity is afforded them of roaming in country lanes and plucking wild flowers along the hedgerows of smiling meadows.

F. W. D. Evelyn.—Unless there has been some recent change in the medical regulations of San Francisco, any medical graduate or diplomate from a British university or licensing corporation can practise there.

G. P. has not enclosed his card.

CLIMATE AS A THERAPEUTIC AGENT IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—I was rather surprised to read a letter in your issue of July 9th, 1887, recommending Aliwal North, Cape Colony, as a residential health resort for Europeans suffering from phthisis, supported, too, by the case of a clergyman who came out "to die," but returned home after twelve months' residence at this little town a "new man." Dr. Lindsay recommends "dry inland resorts," but Aliwal North through the greater portion of the year has a damp atmosphere. It is situated upon the banks of a large South African river, *alias* one of the large natural sewers. This river sometimes rises twenty or thirty feet in a few hours, and sinks again as quickly, leaving large or extensive muddy banks and muddy bottom, covered with all sorts of filth, which is exposed to a semi-tropical sun. The town is intersected with numerous open water furrows in almost every street, the water from the "hot spring" purges; the town is bounded upon two sides by a brackish, marshy plain, and on the opposite side by the Orange River. I think I have written sufficient to induce persons who are anxious to try South Africa to make further inquiries before incurring the expense of visiting Aliwal North, Cape Colony. My knowledge is gained by residence. After travelling over a large portion of South Africa, I have come to the conclusion that to "settle" anywhere, or in any town, village, or upon any farm—as Dr. Lindsay suggests—is a mistake; it is far better to move about, or, as the Boers say, "Treck! treck!" Of course, a pause here and there where special benefit is experienced is the only exception to this advice; but phthisical patients are generally obstinate and peculiar and rarely follow to the full the physician's instructions, and when in Africa they rush about to consult this medical man or that medical man, for the fame of each practitioner is ever upon the tongue of the people they meet, pouring into the ears the wonderful cures effected and the marvellous benefits to be gained by living here or there. Again, another drawback to South Africa is that every up-country resident is a physician or surgeon in his or her own way; these people are ever ready to prescribe root, herb, or other nostrum as a specific for the sufferer's disease; they generally have a long list of wonderful recoveries, to be shown to the unfortunate patient who is weak enough to submit to these "doctors." The climate of South Africa generally benefits phthisical cases on first arrival, and here and there are some good examples of permanent benefit; but, I repeat, to secure all the benefits this climate is capable of giving, you must travel, as a rule avoiding towns and villages; of course, using ordinary precautions against sudden changes in the weather; and travelling is very enjoyable even over African plains, and not expensive either.

I am, Sirs, yours truly,

South Africa, Aug. 11th. S. CARTWRIGHT-REED, M.D., F.R.C.P.Ed.

INFANTILE DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—In your issue of Sept. 3rd you refer to Dr. Vaughan's work on the production of the poison tyro-toxicon in milk and cheese, and as to its frequent cause of choleraic diarrhœa in children. I have noticed that, in the summer months particularly, choleraic diarrhœa in children is most benefited by antiseptic treatment, and is often cured by changing from fresh to condensed milk. I have had a very large number of cases recently, and on inquiry found that the milk was got from dairies where the cows were fed on what is known as "draff," which is the refuse of breweries. This "draff" is kept in barrels for several days, and often when given to the cows has undergone a second fermentation. I have recommended, with success, that the children be fed on milk procured from the country where no "draff" is used; failing this, on condensed milk. The improvement is always most marked, and generally in a few days, with other appropriate treatment, recovery is complete. Boiling the milk, of course, improves it, but yet a complete change to healthy milk is more reasonable. Dr. Vaughan suggests that no milk be used where choleraic diarrhœa occurs; but I think if the precaution be taken which I have suggested there can be little danger from the use of the child's natural food. I am, Sirs, yours faithfully,

Hawick, Sept. 10th, 1887. JOHN R. HAMILTON, M.D.

THE ALT-SCHERBITZ.

IN the *International Record of Charities and Correction* for August Dr. Frederick Peterson gives a short description of the above asylum, in which the treatment of the insane is conducted on the village or cottage plan. The institution is, as some of our readers are aware, situated a few miles from Leipzig, and is, in the opinion of the writer, cleaner and better appointed than Gheel. All the occupations common to other establishments of the kind are in vogue here. Farming is, of course, the chief employment. But there are blacksmith, shoe, and carpenter shops, and, not the least interesting feature, a brick-yard. The patients have not only made all their own brick and tiles, but they sell large quantities. There is a large theatre in a separate building, where dramatic entertainments, concerts, &c., are given, joined in by both sexes. A bowling-alley is, of course, to be found here, as in most German asylums. A swimming-bath has also been constructed. "The freedom of the patients is very great, and there is no depressing aspect about the colony at all—nothing to constantly remind outsiders and insiders of the usual coercive nature of such institutions. All of the villas, both for men and women, and all of the dormitories connected with the dairy, the laundry, the kitchen, the workshops, and all of the houses of the little hamlet, have unlocked doors and unguarded windows. There are no bars on any windows in the whole establishment."

A Union Medical Officer would not be justified in refusing to act upon the order of the relieving officer. He has the opportunity afterwards of laying the case before his board if he considers he ought not to have been called upon to treat it.

Questio.—The arrangement mentioned would be unsatisfactory and, in a legal sense, unsound. We could not advise it as a permanent one.

Mr. W. J. Merlin (Sutton).—Mr. J. Offord, 67, George-street, Baker-street, W.

Dr. J. W. Fraser (Liverpool).—If possible, next week.

G. S.—The problem cannot be said to have as yet received a solution.

CASE OF PLACENTA PRÆVIA.

To the Editors of THE LANCET.

SIRS,—The fact of the following case being the fifth of the kind which I have treated with satisfactory results may perhaps entitle me to ask for the favour of its insertion in your columns.

On Aug. 30th, I was called in to attend Mrs. R——, aged forty-four; four children. On arrival, I found slight hæmorrhage, no pain. The os was dilated to the circumference of a shilling. Her history showed that the last period of menstruation was on Jan. 2nd; nothing unusual was noticed until the latter end of June, when there was slight hæmorrhage; again in July severe flooding came on, and continued for three days, and on this day, Aug. 30th, hæmorrhage had continued more or less severe from 4 A.M. until they sent for me at 10 A.M. I saw the patient again at 4 P.M. Hæmorrhage and pains increasing. At 6 P.M. her condition continuing nearly the same, I plugged the vagina. At 8 P.M. labour pains having increased, I removed the plug, and gradually dilated the os by digital distension. At 9 P.M. I gave a drachm of fluid extract of ergot. The hæmorrhage was now severe; pains only slight; os dilatable to the extent of a crown piece. My colleague, Dr. Follows, calling in at this moment to see me, kindly administered chloroform. Passing my hand into the uterus by gradually insinuating my fingers betwixt the uterine wall and the placenta, I ruptured the membranes, and, passing my hand along its abdominal surface, seized the child's feet, and brought them without the pelvis. Labour was completed in about ten minutes. The child was alive. The ergot given at 9 o'clock produced rapid contraction, and the placenta was expelled without difficulty. The after hæmorrhage was only slight. Examination of the placenta showed it to have had a central attachment. Mother and child are now doing well. I am, Sirs, yours respectfully,

Liverpool, Sept. 13th, 1887. JOHN OLDERSHAW, L.K.Q.C.P.I.

THE CONSUMPTION OF TEA AND COFFEE.

ACCORDING to the recently published report of the Commissioners of Customs the consumption of coffee in the United Kingdom during the last ten years has been, on the whole, decreasing. In the year 1877 the quantity of coffee consumed reached 32,236,016 lb., but in 1886 the total amount had fallen to 31,608,304 lb. It is noteworthy, however, that the use of chicory has not declined in corresponding ratio. On the other hand, the consumption of tea has largely increased in the last decade. Thus, in 1877 the quantity of tea consumed amounted to 151,274,852 lb., whilst in 886 the total had risen to 178,900,891 lb.

Enquirer.—A paper on the subject appeared in THE LANCET of Nov. 20th 1886.

Ambulance might with advantage consult Roberts' Illustrated Lectures, 1st Edition, published by Lewis, Gower-street.

Dr. W. W. Skinner (Paris).—We are unable to promise the insertion of the paper.

H. M. P.—Fuller particulars of the case should be given.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Byrom Bramwell; Mr. Anderson Critchett; Dr. Braxton Hicks; Mr. Hart Robertson, London; Mr. W. Bruce Clarke, London; Mr. Oldershaw, Liverpool; Mr. F. W. Evelyn, Belfast; Mr. W. H. Brown, Leeds; Dr. C. M. Campbell, London; Mr. G. E. Moffatt, Gibraltar; Mr. Collis Barry, Netley; Mr. G. W. Hambleton, Manchester; Messrs. Ingram and Royle, London; Dr. A. Mann, Chester; Messrs. Chapman and Son, Holloway; Dr. B. F. Wells, Chicago; Messrs. Whittaker and Co., London; Mr. T. Christy, London; Mr. B. R. Williams, Forest Gate; Mr. E. H. Fenwick, London; Mr. E. D. McNicoll; Dr. Robert Kirk, Partick; Surgeon-Major A. B. R. Myers; Messrs. Laddon and Wilson, Birmingham; Mr. W. Young, Brixton; Messrs. Knight and Co., London; Mr. Browne, London; Mr. Ormond, Bath; Messrs. Boyd and Co., Belfast; Dr. G. C. Lippincott, Washington; Messrs. Cooke and Son, London; Dr. E. F. Willoughby, London; Messrs. Bremner and Co., London; Mr. M. C. Corner, London; Messrs. Evernett and Son, London; Mr. A. J. Propert; Mr. Fraser, Dublin; Messrs. Gurney and Jackson, London; Mr. Robinson, Leamington; Messrs. Christy and Co., London; Dr. J. R. Hamilton, Hawick; Mr. Supper, Quorndon; Dr. Maxwell, Woolwich; Mr. Baker, London; Mr. Barton, Hollington; Mr. Antoine, Paris; Mr. Lawrence, Pentrego; Mr. Ruch, Pontypool; Mr. Sladden, Dover; Mr. Burdett, London; Dr. Dobell, Bournemouth; Mr. Unsworth, Liverpool; Mr. Childe, Drighlington; Mr. Blackstone, Bradford; Mr. Dennis, Hartford, U.S.A.; Dr. Blodge, Mass., U.S.A.; Dr. Macdonald, Dorchester; Messrs. Smith and Son, Manchester; Dr. Mackenzie, Edinburgh; Mr. Bleasby, New York; Dr. Pierce, Liverpool; Mr. Macfadyen, Kingussie; Mr. Nance, Norwich; Mr. Mundy, Hampstead; Mr. Erval, Glasgow; Dr. Newry, Edinburgh; Mr. Willing, London; Mr. Townsend, Exeter; Mr. H. C. Gillies, Brockley; Mrs. Hitch, Hollington; Dr. Wagner, Plymouth; Mr. J. E. Jones, Bangor; Mr. C. F. Goode, Brighton; Dr. Adams, Bedford; C. H.; Greta; A Constant Subscriber; S. P., Bristol; X.; G. H. H., Canonbury; J. B.; M.B. Edin.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Skinner, Paris; Mr. Daniel, Newcastle-on-Tyne; Mr. Nicholas; Mr. Bates, New York; Mr. Olivier, Salisbury; Mr. Slapper, Chepstow; Messrs. Smith and Son, Birmingham; Mrs. Ellis, St. Leonards; Mr. Cooper, Great Broadley; Mr. Guest, Melsonby; Mr. Holloway; Dr. Buchanan, Glasgow; Mr. Ternan, Warrenpoint; Mr. Williams, Bridgend; Mr. Wheeler, Fakenham; Dr. Weller, Hammersmith; Mr. Gross, London; Mlle. Anet, Halesworth; Mr. Allsop, Shipley; Mr. Jones, Cardiff; Dr. May, Hanwell; Mr. Wormall, Manchester; Mrs. Grace, Brighton; Mr. Brash, Exeter; Mr. Cole, Bardsley; Messrs Porteous, Glasgow; Mrs. Mahony, Preston; Mr. Fyffe; Mr. Kenny, St. John's Park; Mr. Keeling, Birmingham; Mr. Saunders, London; Mr. Robinson, Leamington; Medicus, Reading; A. B. C.; Medicus, Hull; A. Z., Ipswich; Medicus, London; T. H. J.; M.D., Crewe; Lady Superintendent, Canterbury; Medicus, Forest-hill; W. H. K., Limehouse; Haste; X., Leicester; J. C. M., Taunton; M. C. D.; Lady Superintendent, Burton; Medicus, Pontypool; F.R.S.; Bee; Beta, Plymouth; M., Mitcheldean; G. C., Southsea; M. A. M. B.; Surgeon, Peckham; Cantab; R., Perrin; Surgeon, Halifax; E. B. H.; Fides, London; B.M.; Edward; H. B.; A. M.; C. X. F.; Yorks; Surgeon, Rhondda.

Advocate of India, Retford, Worksop, and Gainsburgh News, Temperance Caterer, L'Hotel de Ville, The Naturalists' Monthly, Liverpool Courier, Industries, La Semaine Médicale, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 20.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, September 21.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, September 23.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 24.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a key means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Clinical Lecture

ON A CASE OF

REMOVAL OF THE KIDNEY TOGETHER WITH BOTH OVARIES.

By FREDERICK TREVES, F.R.C.S.,

SURGEON TO AND LECTURER ON ANATOMY AT THE LONDON HOSPITAL.

GENTLEMEN,—I am drawing your attention to the case of a patient who is about to leave the hospital, not only on account of the clinical interest that surrounds the case, but also because it serves to illustrate certain points in the treatment of the subjects of abdominal operation.

The patient, a woman of twenty-six, was admitted in Jan. 1886, suffering from a tumour on the left side of the abdomen. She was thin and anæmic, and in bad health. She followed a somewhat laborious employment at a corset factory. She had been married for three years, but had never been pregnant. For six years she had suffered from profuse leucorrhœa. She was regular as regards menstruation, but at each period she experienced so much pain that she was compelled to rest for two or three days. She had been to more than one hospital about her pelvic troubles, but although she obtained some relief it was not long maintained. Two years ago she began to suffer from pain in the left side—a dull aching pain—that had persisted more or less ever since. A year ago she noticed a tumour in her left side. The swelling, she says, began "near the hip bone." It had grown slowly and steadily ever since.

This tumour, when it came to be examined, was evidently a tumour of the kidney. It was large; it reached from the ribs to the ilium; it extended to the right as far as the middle line; it was the seat of fluctuation. I should remind you that a renal tumour has the following characters:—1. It occupies the kidney region, filling up the loin between the last ribs and the iliac crest. (It should be noted that the hilus of the normal kidney lies about two inches from the middle line, and is opposite to the first lumbar spinous process.) 2. It is rounded everywhere; there is no sharp edge to be felt, and no notch, as in the spleen. 3. All is dull on percussion between the tumour and the spine, whereas in the case of a tumour of the spleen a resonant note can usually be brought out between the posterior margin of the mass and the spinous processes. 4. Unless the renal tumour is very large, it is possible to make clear its lower limits, and to demonstrate its freedom from connexion with the pelvic viscera. Its upper limits are not so readily made out. 5. The renal tumour, as a rule, does not descend on inspiration. 6. In front of it will be the colon. 7. If the tumour be innocent, it will not extend backwards, will not cause a protrusion of the loin. A cancer of the kidney may cause such a bulging in the lumbar region, and an abscess about the kidney will certainly have that character when it has attained to any dimensions.

In the case of this woman the tumour presented the general characters named. There were these special features, however: The lower extremity of the tumour could not be well defined. In the pelvis on the left side a rounded mass was to be felt on vaginal examination. It was soft and fixed, and it was not clear that it was quite separate from the abdominal tumour. This made one difficulty in the diagnosis. In the next place, the tumour was dull everywhere on percussion. There was no resonant bowel in front of it. The presence of the colon in front of a renal tumour is very usual, but it is not constant. When a certain disposition of the meso-colon exists, the bowel may lie entirely to the inner side of the mass. In the present patient I could feel crossing the front of the tumour from within outwards a movable cord, apparently about the width of the thumb. There was no difficulty in making it out. It felt solid, and was dull on percussion. It was the descending colon, empty and contracted. I have felt a precisely similar cord in another case of large renal tumour, and it proved on abdominal section to be the colon. I imagine that the nervous system of the intestine may have been disturbed by the tension of the bowel and mesentery, and so the tube retained in a contracted state. Neither in this case nor in the other named was the cord always to be felt, but there was never a tympanitic note in front of the tumour. In both patients the bowels acted very regularly.

No satisfactory diagnosis of the tumour was made before the operation. The fixed mass in the pelvis obscured the clinical picture. The abdominal tumour proved to be a very large hydronephrotic kidney, with scarcely any secreting tissue left; the pelvic growth was an adherent ovarian cyst. By hydronephrosis is meant a gross over-distension of the kidney by its own secretion. The trouble depends upon some mechanical obstruction to the escape of urine. The fault may be a congenital deformity of the renal hilus, the ureter, or the bladder. Most usually the obstruction is due to the pressure of a tumour on the ureter. Mr. Morris, in his most valuable work on the "Surgical Diseases of the Kidney," shows that by far the most common obstructing growth is a mass of pelvic cancer. In only four instances out of 142 examples of hydronephrosis collected by Mr. Morris was the obstructing cause an ovarian cyst. In the present case it is pretty clear that the ovarian tumour and the renal cyst stood in the relation of cause and effect.

There were two symptoms in the patient's case that pointed strongly to hydronephrosis. She stated that the tumour had at one time fluctuated in size, and that she occasionally passed large quantities of urine without apparent cause. These symptoms in hydronephrosis depend upon an occasional partial emptying of the distended cyst. During the time that the woman was under observation—about a month—the tumour never varied in size, nor did the amount of urine fluctuate beyond normal limits. Nothing abnormal was ever noticed in the urine. One other symptom, not uncommon in hydronephrosis, was absent—namely, frequent micturition. The tumour was irregularly rounded, was immovable, appeared to be of unequal density, gave a sense of fluctuation, and was not tender to the touch.

In the face of the doubts in the diagnosis, and the desirability that both the abdominal and pelvic tumours should be dealt with, I resolved to open the abdomen in the median line, in the region of the umbilicus. This I did on Feb. 2nd, 1886. I found the right kidney healthy and the peritoneum sound. The left renal region was occupied by a large hydronephrotic cyst. This was tapped, and then removed. The renal vessels and the ureter, having been clamped, were carefully and separately ligatured. The left ovary was the seat of a multilocular cyst the size of the fist. It was adherent to the left pelvic wall. The adhesions were readily divided, and the tumour was removed in the usual way. The right ovary was occupied by a similar multilocular cyst, the size of a hen's egg; it was free from adhesions, and was easily removed. The parietal wound was closed, and no drainage tube was employed. The patient has now recovered (after one vicissitude, to which I will allude), and is leaving the hospital, to all appearances, strong and well.

The operation in the present case must be regarded as quite exceptional so far as the kidney was concerned. The proper treatment of hydronephrosis is by lumbar nephrotomy. The cyst is exposed from the loin, is cut into and drained. If no kidney tissue is left, the resulting sinus may be induced to close, so far as my experience goes, by liberal injections of iodine. If any secreting tissue has survived, it may be removed by a subsequent operation at little risk, and the urinary fistula may thus be healed. The condition must be very rare in which abdominal incision would be required in hydronephrosis.

I might now mention a few of the circumstances that attend the opening of the abdomen. There is nothing special in the preparation of the patient, and there is no precaution required in ovariotomy that ought not to be taken in any other operation of any magnitude. The patient lies with his arms folded behind his back, and needs to be held by no kind of apparatus. All parts of the body are warmly covered; the lower limbs are enveloped with a small blanket, and are then packed, as it were, in a mackintosh. The ordinary mackintosh, with a hole, is used for the abdomen. Every trace of blanket or flannel should be covered up. In the gap between the thighs and the buttocks several sponges are packed, so that if any fluid runs down over the pubes it is at once absorbed. All the water used in the operation is carbolised; all the sponges are kept at a temperature of about 100° by the "sponge warmer." While the abdomen is actually open I use a carbolic spray. It is used partly at the dictate of a kind of surgical superstition and partly for this reason: the abdo-

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minal walls are flaccid, and after the removal of a tumour, and during the introduction or withdrawal of the hand or sponge, considerable volumes of air must enter the abdomen, and it is well that the air should be as pure as possible.

With regard to the actual incision, it must be remembered that there is no linea alba below the umbilicus. Unless the muscles are separated by distension the knife will open one or other rectus sheath. The abdomen should be opened by precise, clean cuts; a director is an abomination, and the practice of deepening the wound with the fingers belongs to the surgery of past ages. Before the intra-abdominal operation is commenced a large sponge is placed in Douglas' pouch, and left there until the abdomen is ready to be closed. In removing the kidney the inner layer of the mesocolon will have to be divided. In that layer the vessels to the bowel run, and are very easily wounded. This especially applies to the inferior mesenteric vessels on the left side. In this and like operations a Trouvé's electric lamp is very useful, and saves much vague groping about within the peritoneum. In the process of removal it is scarcely possible to avoid actually tearing the serous membrane that covers the kidney. The rent made need not be closed, and the peritoneum appears to fall easily together. When much blood or fluid has escaped into the peritoneal cavity during the operation, it is much more readily got rid of by really washing out the abdomen than by the laborious and possibly damaging process of sponging. The assistant holds up the flaccid parietes by means of the wound edges, and the surgeon then pours in many pints of slightly carbolised water at a temperature of 100°. In this water the intestines can be rinsed. The water is allowed to flow off until it runs clear. A simple arrangement of the mackintosh allows it to drain away. The pelvis is then sponged out. Finally, the patient is slowly and carefully raised almost into a sitting posture, and the fluid that has collected among the intestines and in the pockets about the loins can gravitate into the pelvis, from which it is removed by sponging. The last sponge introduced should come out dry and clean.

In adjusting the incision the edges should be kept tight and parallel with one another by means of large blunt hooks inserted at either extremity of the wound, and held tightly by an assistant. The incision is then made, an even cut, and parts that were in contact before the operation come in contact again after the sutures have been completed. By means of the hooks, also, the parietes are drawn away from the viscera during the process of suturing. Upon the intestines lies a very thin flat sponge. It absorbs the last drops of blood that may come from the wound during the application of the sutures. It is drawn out just before the last two sutures are tied, and is thus made to wipe the peritoneal aspect of the wound. The only dressing I ever employ is a single large sponge well dusted with iodoform and secured over the wound by a gauze bandage. Before the bandage is applied, an extensive packing of loose soft gauze is made around the sponge, which is thus retained in position. The sponge exercises pressure upon the part, absorbs any discharge, and soon becomes dry. The gauze fills up the abdominal hollow and the depressions about the groins. Over all is a flannel binder that is accurately shaped to the body and is held firmly down by two pieces of flannel that pass along the perineum and around the thighs, and have either of their ends secured to the binder. If these thigh pieces are properly applied, it is hardly possible to work the finger beneath the binder in the region of the pubes. The wound is thus well protected in the most dangerous quarter. The sponge is easily cleaned after use, and may be employed over and over again. The dressing therefore is not expensive. This dressing is not disturbed until the sixth day, when it is removed and all the sutures are taken out. The wound is then supported by harelip strapping. This strapping is especially prepared, is fenestrated, and cut into strips that interdigitate. It keeps the wound together, but at the same time does not prevent any discharge from escaping, and any portion of the strapping can be readjusted without disturbing the rest. The sponge is replaced by iodoform gauze.

The general after treatment requires no comment, and is founded upon the simplest principles of therapeutics. On the second day warm fluids appear more acceptable than ice. After the removal of the kidney the patient sometimes remains low and dull, and is troubled with a somewhat persistent vomiting. The urine will generally be found in such a case to be of high specific gravity—1025 to 1040; and the symptoms probably are of renal origin. Under the circumstances, the greatest relief is afforded by a hot-air bath. This can be administered as the patient lies in bed without disturbing her in the least. It promotes profuse perspiration, and its use has been attended—in the few cases in which I have employed it—with most satisfactory results.

In the present instance another complication occurred on the fifth day: the patient developed symptoms of peritonitis. She had been very restless after the operation, and very sick. During the removal of the cyst some of its contents escaped into the peritoneal cavity, and may have caused the trouble. The abdomen, however, had been well flushed out. There had been no carboluria. The abdomen became distended; there was much vomiting, and a considerable amount of pain. The peritonitis was evidently attended by effusion. I imagine that peritonitis with effusion and pleurisy with effusion are pathologically the same thing, and are likely to be met by the same plan of treatment. Had the patient had a pleuritic effusion the fluid would have been withdrawn, and there appeared to be no reason why the peritoneal fluid should not be dealt with in like manner. The wound was therefore allowed to open at the lower part, and a very considerable quantity of clear serous fluid escaped. The upper part of the incision was most carefully supported by strapping. The wound was very frequently dressed with iodoform gauze. The fluid continued to ooze out in diminishing quantity for three days; it then ceased. By this time the patient, who had been fed by the rectum and had taken large quantities of brandy and opium, was free from urgent symptoms. The bowels were opened by enema on the ninth day. The wound was healed entirely by the twenty-first day. Six months have now elapsed since the operation, and the patient is up and walking about.

One small point remains. There is a risk after abdominal operations of a ventral hernia forming at the seat of the wound. To prevent this a strong abdominal belt is sometimes ordered. Such a belt I have never allowed a patient to wear. The ventral hernia is due to a weakening of the abdominal parietes. That wall is composed of muscular and aponeurotic tissues, and its strength will depend upon the state of development of the muscles. Muscle can only be made strong by use. If a belt be worn, the responsibility of supporting the viscera is thrown, not upon the abdominal muscles, but upon the instrument. The muscles are not encouraged to act. They are in the same position as the biceps when the arm is carried in a sling—wasting from disuse. To prevent a ventral hernia the patient should not be allowed to get up too soon. A month in bed is not an unreasonable time. She should not get up until the wound is sound. She may wear a light flannel binder for a few weeks after she is about again, but at the end of that time she should discard supports of all kinds. I am speaking, of course, of an ordinary case. With an abdominal wall already much weakened, loaded with fat, and pendulous, a substantial support may be needed.

The patient has reported herself a year after the operation. She is in good health and in actual work. The scar is sound, and shows no symptom of yielding.

THERAPEUTICAL VALUE OF THE MORE RECENT ADDITIONS TO THE GENITO-URINARY PHARMACOPŒIA.[1]

BY E. HURRY FENWICK, F.R.C.S.,
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THREE years ago the Drug Committee of St. Peter's Hospital recast the Hospital Pharmacopœia. It would have been obviously unwise to have included any of the newer remedies without good evidence as to their real value. It would have been still more unwise to have rejected them altogether. I undertook, therefore, to investigate these "new drugs" systematically in the out-patient department, and to report subsequently upon them.[2] To make the inquiry thorough a large outlay of money would have been needed. This initial difficulty was overcome by the prompt generosity of Thos. Christy and Co., Lime-street, City. Those

[1] Abstract of two lectures delivered at St. Peter's Hospital.

[2] The histories of, and physiological experiments with, these drugs have been necessarily omitted.

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well-known drug importers placed at my command for three years an unlimited supply of the new remedies which have been advocated for the treatment of genito-urinary disease. The following few grains of wheat remain after much winnowing.

Kola (Sterculia acuminata). — A powerful stimulant; contains 2·3 per cent. of caffeine, also theobromine. In the form of chocolate I found this drug to be of great value in tertiary syphilis, where large doses of potassium iodide have to be administered. The cases of syphilis in which the chocolate was first tried were often of the worst and most neglected type, being drawn from the neighbourhood of the London Docks. Later work has proved its value in the well-fed. Patients were able to take doses of 30 gr. to 60 gr. of the iodide without inconvenience as long as the kola was administered with it. It is now prepared in the form of a paste—"kolatina"—like cocoa paste, as it is found more effective in the liquid form. From 1 dr. to 2 dr. makes a breakfastcupful; where this is inconvenient, the stick kola-chocolate is eaten. Dose, 1 dr. to 2 dr.

Salix Niger (Black Willow).—A sexual sedative of decided value; useful in ovarian hyperæsthesia, also in prostatorrhœa, spermatorrhœa, excessive seminal emissions, and enforced continence. In the latter disorders its action is good, but inferior to potassium bromide. This is, however, somewhat counterbalanced by its non-depressant qualities. Dose, ½ dr. to 1 dr. Finding it of value in those wearisome cases of urethral neuralgias following gonorrhœa, I began to substitute soda salicylate for it. I was impressed by the relief this latter afforded. In cases of urethral pain in the adult, I first eliminate stone, stricture, urethral granulations, and over-acid urine, and then prescribe soda salicylate (5 gr. to 8 gr.), with a gratifying result.

Lycopodium clavatum.—The tincture is of real value in frequent micturition, irritable bladder, and cystospasmus, where such is not dependent upon actual disease or foreign body. It has been found useful in spasmodic retention of children. Dose, 15 m. to 1 dr. Note: White lycopodium is an inferior substitute, but still of some value. Dose, ½ dr. to 1 dr., between bread-and-butter. Yellow lycopodium is useless.

Kava Kava (Piper methysticum).—This drug is of benefit in pyelitis, cystitis (acute or chronic), and urethritis. It is inferior to copaiba, and sandal oil, but much more pleasant to take. It is of value when the oils are not tolerated. The inflammation seems to be increased at first. Fluid extract, ½ dr. to 1 dr. on a full stomach.

Stigmata maidis (Corn Silk). — Difficult to obtain at certain seasons, but of great value in pyelitis and renal colic. One case is especially worthy of notice. A patient who had suffered from renal colic and pyelitis for seventeen years was admitted into the hospital for exploration of the kidney. The patient was so relieved with corn silk that he refused operative interference. It is also of value in chronic or subacute cystitis, but in my hands it has failed in acute cystitis. Note: The fresh infusion is the best; dose, a wineglassful. Failing this, use the extract; dose, ½ dr. to 1 dr.

Papaw, Papyotin, Papaine (Carica papaya).—Of marked benefit in syphilitic ulcers of the tongue and throat, especially when mixed with cocaine. The surface of the ulcers and the white patches (secondary syphilis) rapidly clean and begin to skin over. Lozenges have been made by Messrs. Christy, which are most useful (papaine, ⅛ gr.; cocaine, ¼ gr.; potass. bicarb., ¼ gr.). In a girl of seven with severe syphilis of the mouth (after direct inoculation) the ulceration had resisted all applications for eight or nine months, and the child had wasted considerably. A few of these lozenges produced a marked effect, the ulcers healed, and the child rapidly fattened. Mix papaine with a small quantity of glycerine and water, so as to form a thin paste, add a little bicarbonate of potash, and brush ulcers with the same thrice daily. Whatever its position may be, as a digestive ferment papaine is worthy of trial as a preventive and reducer (?) of renal calculi. Dose for renal stone, 1 gr. to 3 gr., or more, in pill or powder; to be taken with meals.

Piché (Fabiana imbricata). — Of undoubted value in lithiasis and renal stone. One patient obtained so much relief from the hæmaturia and pain that he obtained the plant direct from Peru every mail, and made the infusion himself. In my hands it has failed in chronic cystitis. Dose, fluid extract, ½ dr. to 1 dr; infusion, a wineglassful.

Cocaine.—The fresh work with this drug is to be brought before the Medical Society. Routine work: Lithotrity in the feeble was performed with a 4 per cent. solution; small stones in the adult with a 20 per cent. solution. Internal urethrotomy needs a solution of 20 per cent., and any vesico-urethral instrumentation one of from 4 to 20 per cent.

Naphthaline ($C_{10}H_8$).—A derivative of benzol and allied to phenol. Given with benefit in fetid urine. The micrococci speedily disappear, and the urine becomes sweet. The large doses recommended (15 gr.) are unnecessary, and produce vomiting and abdominal pain. Dose 3 gr., cautiously increased. Note: Urine of patients taking naphthaline smells of phenol, and may remain exposed for some days without change.

Pine or Spruce Extract (Abies excelsa).—Has a slight diuretic action, and relieves renal pain unconnected with calculus. It is of use also in a bath, and as a liniment in gonorrhœal rheumatism. It is a pleasant vehicle for drugs in pyelitis and cystitis. Has proved of benefit in gleet. Dose, 1 dr. in water.

Ulexine (Ulex Europæus).—"A more powerful diuretic than sparteine or preparations of sarothamnus scoparius" (Gerrard). This is to be employed with caution in stricture. One patient with stricture of old standing, after taking a pill containing ⅓ gr., had temporary suppression of urine, vomiting, and fever.

Strophanthus (Kombè). — I believe there is a distinct future before caffeine, digitaline, and strophanthus as adjuvants to operations upon the vesico-urethral tract. We have sometimes to deal with partial or complete temporary suppression, and sometimes with rigors after operative interference or even instrumentation. Caffeine seems indicated to avert the former; strophanthus the latter. Again, if we have reason to anticipate sudden flooding of the renal vessels and consequent urinary fever as the result of an operation, then digitaline, from its power of controlling the renal circulation, is indicated. Our treatment, however, on these lines must go *pari passu* with our oncometric knowledge of drugs which affect the kidney circulation or the abdominal blood pressure. I believe strophanthus has power, worthy of further investigation, in controlling rigors. I employed it on the theoretical grounds that it increases cardiac power and general blood pressure. Five in-patients suffering from violent rigors after instrumentation, were treated with the tincture in doses of 5 m. after catheterisation. In no instance were rigors induced.

Chaulmiugra Oil (Oleum gynocardiæ). — Of value as a liniment in gonorrhœal rheumatism, osteocopic pain of syphilis. Its power is increased if it is mixed with lanoline. It has great influence upon some forms of adenitis, also in secondary syphilis. Dose 5 m. to 10 m. on a full stomach.

Hydrastis Canadensis (Golden Seal).—Of some use as an astringent vesico-urethral injection, checking mucous discharge; worthy of trial in some forms of prostatic engorgement and enlargement. Dose, 10 m.

Damiana (Turnera aphrodisiaca).—Good in some cases of diminished sexual power, where such does not depend upon organic disease. Often of use in melancholia and depression, if of genito-urinary origin.

Caroba (Jacaranda tomentosa). — Of some value in secondary and tertiary stages of syphilis. Dose, 1 dr.

THE BERGEON TREATMENT OF CONSUMPTION.

BY OWEN PRITCHARD, M.D.

I ENCLOSE notes of two cases of phthisis treated in private practice by gaseous injections into the rectum, after the plan advocated by Dr. Bergeon. All the details of this treatment being so lucidly and minutely described by Dr. Burney Yeo in his lecture published in THE LANCET of April 16th, it would be an entire waste of time to enter into the particulars of it. I would only say that, having obtained the necessary apparatus, I endeavoured as nearly as possible to follow the directions so explicitly given by Dr. Yeo.

CASE 1.—Mrs. E——, aged sixty (her usual weight 10 st. 5 lb.), says that in July last year she began to lose strength, had a slight cough, her appetite became indifferent, and she noticed that she was losing flesh. After a fortnight at Hastings she was much improved, but on her return

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to London about the end of August she soon began to lose flesh again, and her cough became very troublesome, with a persistent sore throat. She attended the Throat Hospital until the end of December, gradually getting weaker. Becoming very uneasy, she tried one or two other institutions; but during January, February, March, and April she was still rapidly losing flesh, the cough was much more troublesome, the expectoration thicker and more profuse, and the night sweats exceedingly severe. In the beginning of June, when I first saw her, she weighed 8 st. 5 lb., having lost 2 st. from her usual weight in eight or nine months. She complained so much of the cough and night sweats that she declared she never could sleep more than half an hour at a time, and even this amount of sleep was much disturbed by frightful dreams, such as tumbling over cliffs, fancying herself fighting bulls or tigers, or assisting to put out fires, &c. On examination, her left lung was, as far as I was able to judge, normal, but the right was quite solid from apex to base, and a portion about midway between the nipple and axilla had actually broken down into a cavity. Her temperature varied from 101° to 103°. The expectoration was purulent, very copious, and full of bacilli. The first operation was performed on June 9th, and repeated each day from then until now. For the production of the sulphuretted hydrogen a solution of sodium sulphide and caustic soda similar to that advised by Dr. Yeo was used, and the sulphuretted hydrogen liberated by throwing in a small quantity of tartaric acid. Now, as is the case with nearly all the victims of consumption, one was not at all surprised to find this patient declaring herself much better at the end of the first week of a new treatment. She, however, knew exactly in what way she was better. Her cough, she said, was easier, and the expectoration somewhat diminished; the night sweats had almost ceased to trouble her; but, above all, her sleep had returned and the frightful dreams had gone, and she could now, she said, sleep for four hours right off, and then only wake up to cough and bring away the accumulated phlegm, and turn over and go to sleep again. Several weeks thus went on, the patient assuring herself and everybody around her that she was daily improving. She got up, she said, every morning refreshed after her beautiful night's sleep. Her temperature, however, still kept up, and the tubercle bacilli remained in the expectoration as numerous and robust as ever, but the amount of expectoration diminished, and for many weeks she continued to lose weight rapidly. Her temperature for some weeks past has been considerably lower, seldom over 100°, and she has in the last week or two actually gained a little in weight. A table of her weight with dates as taken is as follows:—June 9th, 8 st. 5 lb. 14 oz.; June 24th, 8 st. 3 lb. 8 oz.; July 12th, 8 st. 1 lb.; July 22nd, 8 st. 10 oz.; Aug. 4th, 7 st. 13 lb. 14 oz.; Aug. 15th, 8 st.; Aug. 22nd, 8 st. 1 lb. 8 oz.; Aug. 29th, 8 st. 3 lb. From the foregoing it will be seen that she was losing very rapidly at the beginning of her treatment, but her loss gradually became less marked, and for the last three weeks she has actually gained some pounds in weight.

CASE 2.—Mrs. T——, aged thirty-four. Last October she had a sharp attack of bronchitis, from which she has never quite recovered, a troublesome cough remaining through the winter. During the first four or five months of this year she had been getting thinner, her appetite being very bad and her night's rest greatly disturbed by the cough and the severe night sweats. When I saw her in the beginning of May she was considerably emaciated; temperature 99° to 100°; moist râles over both apices; right apex slightly dull on percussion; expectoration was abundant; breathing short and asthmatic; her face livid. On May 28th her weight was 8 st. 10 lb., when the first operation was performed, and continued daily until July 30th. After the first week her cough was much improved, and, the night sweats having disappeared entirely, she slept well, her breathing was quite free, and consequently the colour of her face was much healthier. But, like Mrs. E——, her great pride was that she slept so much better, being undisturbed by cough and night sweats. During the first four weeks of treatment she lost 3 lb. in weight, but during the last five weeks she gained 6 lb., and left town for Devonshire in the beginning of August, and I have just received information from her that from August 3rd to 19th she had gained another 3 lb.

These cases are, of course, at present incomplete, but they seem to me as far as they go to prove very distinctly that this treatment, even if it does not positively cure, very greatly retards the progress of the disease, and almost entirely removes its most trying symptoms.

Southwick-street, W.

CASE OF SUPPURATIVE PYLEPHLEBITIS AND ULCER OF THE VERMIFORM APPENDIX.

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JAS. D——, aged forty-eight years, was seen by me first on Dec. 22nd, 1886, in consultation with Dr. A. J. Fergusson. He had then been ill for about seven days. He was a man of exceptionally good physique, had never had any serious illness, had suffered twice from attacks of ague in Canada twenty years before, but, except that he had a somewhat irritable digestive system, his health had always been very good. His habits were temperate and regular. On Dec. 11th he had dined more freely than usual, and had been exposed a good deal on a cold and wet day. On the 14th he felt a good deal of pain in the abdomen, and was slightly sick. The weather at this time was unusually cold, and he believed he had taken a chill. On the 17th he began to have a series of shivering fits, "exactly like his ague attacks twenty years before," and recurring at regular intervals of about eleven hours. In about twenty-four or thirty-six hours jaundice set in. The bowels were freely opened, and the motions appeared at first normal in character.

When I saw the man on Dec. 22nd the jaundice was very deep. He was in a state of great mental and physical depression. Temperature 101·4°; pulse 96, fairly regular. He had had one attack of epistaxis, and there was a slight expectoration of mucus tinged with blood, not unlike the rusty sputum of pneumonia. The heart sounds were normal, and the lungs seemed to be quite healthy. The abdomen was distended with flatulence; there was no pain complained of in any region, but deep pressure over the region of the gall-bladder seemed to give rise to some discomfort. Owing to the flatulent distension the liver dulness was less than normal. The bowels were rather constipated, and the stools seen at this date were apparently quite devoid of bile. The urine was deeply tinged with bile pigment. On the 24th he was much weaker; the temperature in the evening reached 104° and he had had several attacks of extreme prostration, especially occurring in the early morning. During these attacks the pulse became intermittent and feeble. On the 25th he was distinctly delirious. The weakness was increasing, but the pulse remained regular—96 to 100. The stools contained no bile, and the urine was very deeply coloured with bile. On the 26th there was a very slight trace of bile in one stool. Jaundice continued intense. He was pretty constantly in a state of low muttering delirium, or sleeping uneasily by fits and starts. There was no vomiting. At 1.10 P.M. the pulse was 96; temperature 98·4°; respiration 36. The meteorism was more marked than before. On the 27th there was some vomiting after taking extra nourishment which had not been ordered, but otherwise his condition was unaltered. The feebleness and delirium became more marked, and on the 28th he passed into a state of coma and died in the evening.

A post-mortem examination was made two days later. The body was well nourished. The abdomen was distended by gas in the intestines. The liver was normal as to size, but, on cutting into it, was found to be studded with small points of purulent deposit. The portal vein and its radicles were filled with greyish pus, the points above noted being the vessels seen in transverse sections. The gall-bladder was nearly empty, and it and the gall-duct seemed normal. The intestines were congested in parts. In the stomach were a few small inflamed patches near the pyloric orifice, but, on tracing the intestine down to the cæcum, no ulceration could be found to account for the suppuration in the portal vein. Round the vermiform appendix, however, a wormy mass could be felt, and on removing this with the cæcum and vermiform appendix, it was found to consist of apparently a mass of congested or strangulated tissue. On opening the cæcum, no ulcer could be seen there; but on

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laying open the vermiform appendix, it was found to be ulcerated for about an inch from the entrance to the cæcum; the ulcer became continuous with the outside congested mass, which was composed mainly of inflamed veins. The mesenteric veins were not noticeably enlarged. Only these parts of the body were examined.

Remarks.—The post-mortem examination cleared up what had been a very doubtful case during life. The sequence of events seemed then plain enough. Some foreign matter—not detected post mortem—gave rise to an ulcer of the vermiform appendix; this was followed by a local phlebitis, and that again by phlebitis of the portal vein by embolism. All the radicles of the portal vein were more or less involved, but circulation through it was free enough, as there was no ascites or other sign of impeded portal circulation. The jaundice may have arisen from retention of bile elements in the blood, or bile may have been secreted as usual by the liver cells and immediately reabsorbed. The gall-bladder was empty, and little or no bile had found its way for some time into the intestine. Very little notice seems to have been taken of this condition by British writers. It is not mentioned at all in most of the various English works on medicine. In Quain's Dictionary there is a brief notice of the disease, and a passing reference to it in the article on Jaundice. I have not been able to find any cases reported in THE LANCET or the *British Medical Journal* of the last eight or nine years; and yet the condition cannot be very uncommon. There is an account of it in Frerichs' "Diseases of the Liver," derived from twenty-five reported cases. In Ziemssen there is a very large number of references given to cases of suppurative pylephlebitis, mostly from German sources, but partly also from English and French; and in Pepper's "Practical Medicine" the disease is spoken of as a common one. Concerning the diagnosis of the disease there seems to be a good deal of difference of opinion. Von Schueppel, writing in Ziemssen's Encyclopædia, says: "Some consider it a rare stroke of good fortune to recognise the disease; others maintain that nothing is simpler and easier than the diagnosis of suppurative pylephlebitis." Frerichs says that jaundice occurs in three-fourths of the cases of pylephlebitis. Dr. Bartholow, writing in Pepper's work, says that three-fourths of the cases are free from jaundice. The most important factors upon which the diagnosis should be based are stated by von Schueppel to be the following, or some of them. 1. The presence of an affection which we know may act as a starting point of pylephlebitis. 2. Pain at the epigastrium or any situation in which the pylephlebitis may start. 3. Rigors at irregular intervals, with high temperature, and *during the intermissions* abnormally high temperature. 4. Recent painful enlargement of the liver. 5. Considerable enlargement of the spleen. 6. Jaundice, with biliary diarrhœa. 7. Rapid emaciation and loss of power. 8. The occasional development of diffuse peritonitis and typhoid symptoms in the later stages of the disease. Comparing these diagnostic factors with the history of the case reported above, hardly any of them could be said to be present. There were no antecedent or existing symptoms pointing to the presence of any exciting cause of pylephlebitis. There was some diffuse pain all over the abdomen early in the disease, and tenderness on pressure about the portal fissure, but no local pain was complained of. The rigors occurred pretty regularly at first, then were replaced apparently by attacks of collapse, and the temperature was not abnormal in the interval. The liver was neither enlarged nor painful, nor could the spleen be traced owing to the flatulent distension of the intestines. The jaundice was not accompanied with biliary diarrhœa, there was little or no emaciation, and there was no peritonitis. In this case the symptoms which seemed most characteristic were the quick interference with the functions of the liver, the jaundice, the biliary toxæmia, and the ague-like rigors, occurring in a previously strong and healthy man, not exposed to any malarious or other poisonous agencies.

At the recent examination at Aldershot, at the end of the summer course, for medical officers of the army, on the subjects of Military Law, Bearer Column Organisation and Drill, the first, second, fourth, and sixth places in order of merit were assigned to Volunteer medical officers. The first place was taken by Surgeon W. Collingridge, M.D., 3rd (Woolwich) Division, Volunteer Medical Staff Corps; Surgeon J. Reece, of the London Division, being second.

REMARKS ON ALGIERS AND ITS CLIMATE.

BY T. D. SAVILL, M.D. LOND., M.R.C.P.

AT a time of year when so many people are planning on taking their annual holiday, in pursuit of either health or pleasure, it occurred to the writer that a few remarks on Algiers and its climate would be appropriate to the season, and acceptable to the readers of THE LANCET. The facts to be mentioned are based chiefly on information gained during the greater part of three winters which were spent in or near the town. But there are, perhaps, few things more difficult than to give a strictly true and impartial account of a health resort. The impressions of a place which each one forms so much depend on the kind of the season he encounters there, his comforts and immediate surroundings, and on his very mood of mind, that it is not surprising if two descriptions of the same place differ as widely as sunshine and shade. The only way to get at the approximate truth about a climate is by the examination of a series of accurate and carefully recorded meteorological observations extending over many years, combined with a careful study of the vegetation and physical aspects. There are some of the first-named records scattered through the numbers of the *Journal de Médecine et de Pharmacie d'Alger*, made by M. MacCarthy, the librarian of the Musée Bibliothèque, through whose kindness I have been able to procure them.

The town of Algiers is situated on the western side of a wide, shallow bay, and its general aspect is east-south-east. It is flanked on the west and north-west by hills of the Sahel range, which reach an elevation of 1000 to 1500 feet, and it is well protected on all sides except east and south-east. It may be mentioned, in passing, that the winds coming from these directions are generally mild. The north-west wind is the one to be dreaded, for it is fierce, cold, and wet. The town itself is built up the eastern side of one of the Sahel hills. The more modern part is situated along the sea coast; and the old town, with its narrow streets and white windowless houses, just as it was in the days when it was the home of the Barbary pirates, stretches tier above tier to the top of the hill, at the summit of which is the Kasbah or citadel. The beautiful suburb of Mustapha Supérieur, consisting of villas scattered along the wooded sides of little hills, and almost entirely appropriated by English visitors, lies to the south. The old part of the town retains its Oriental characters in a marked degree. The houses, which are always built round a central court, with no windows outside, and a flat roof, are packed close together, and the streets are so narrow as only to allow sufficient space for two pedestrians to pass.

The natives of both sexes also preserve their Arab garb, and until lately did not mix very freely with their conquerors, the French. The dress of the women out of doors consists of a long white shawl of delicate texture, covering the head and shoulders, gipsy fashion; a *yashmák*, concealing the lower half of the face; and loose white pantaloons, which cover their nether extremities to the ankle. The Arab is characterised by his olive-brown skin, black hair and eyes, fine physique (generally speaking), and a remarkably grave and dignified bearing. His dress is all white, and those who live in towns wear a turban of white linen, loose hooded cloak or *bournous*, beneath which their bare or white-stockinged legs appear, terminating in shoes of ordinary pattern. They are an interesting race, and it is difficult to account for the gradual dying out of a people that still present so fine a physique. In addition to natives, Maltese, and French, there is a large Jewish population, who still wear the ancient Jewish garb. Mixed altogether, these different costumes have a picturesque appearance, which is very striking to the eye of a stranger. And thus it happens that there are three distinct Sabbaths observed in the town: the Mohammedan on Friday, when the women repair to the cemeteries; the Jewish on Saturday, when quite half the shops in the town are shut; and the Christian Sunday. An interesting ceremony is conducted every Sunday at Nôtre Dame d'Afrique, situated on the highest hill near the town, where the burial service is read over the sea for all mariners who may have been drowned during the preceding week.

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There are several hotels in the town, but no one in pursuit of health or pleasure should stay there, for it is neither sanitary nor agreeable.

The vegetation around Algiers is very luxuriant, and leads one to expect a heavy annual rainfall. The hedgerows are formed of cactus or prickly pear, interspersed with the thick-leaved aloe, whose tall flower-stems stand up like sentinels. Palms of many varieties, and the broad-leaved banana tree, with its huge spiral bunches, flourish in the very precincts of the town. Roses bloom in January, and green peas are then in season. In the shaded nooks of Mustapha the maidenhair fern grows wild, and the mountains on the opposite side of the plane are covered with hardy lentiscus and olive trees. Between the hills along the shore, the plane of the Metidja extends for sixty miles from east to west. Here grapes, oranges, and lemons are cultivated with success. The latter are of much value as climatic indicators, for the blossom does not survive a single degree of frost. The eucalyptus tree does exceedingly well under the combined influences of high temperature and heavy rainfall. In the exhibition of native industries there is the trunk of a tree thirty feet long, which took, so it is stated, only three years to grow.

The soil on which Algiers is built is mainly gravel and chalk. In the Metidja and the planes generally of Algeria it is clay, and on the high table land it consists of loam. I have often heard it said by those who have been there, that the appearance and arrangement of this latter is very like the gold fields of Australia, and is very suggestive of gold. Earthquakes occur from time to time in the interior, but are never of great severity.

The climate of Algiers is essentially one for the winter months. From the middle of October to the middle or end of April is the most agreeable time to stay. The mosquitoes are troublesome until the former date, but for those who like moderately warm weather May is an exceedingly agreeable month. I have heard of consumptive invalids deriving great benefit by staying for two winter seasons and through the intervening summer, but the heat of July and August must be very trying. The following are the mean temperatures (reduced to the Fahrenheit scale) of the months throughout the year 1884, which, after an examination of the records, I selected as a sample:[1] January, 53·2°; February, 58·1°; March, 58·1°; April, 60·1°; May, 65·8°; June, 67·5°; July, 75·2°; August, 77·7°; September, 76·8°; October, 66·9°; November, 59·7°; December, 56·4°. The mean temperature of the six winter months of this year was 58·7°, that of the summer 70·5°. The average winter temperature (October to March), reckoned from the Government observations in the thirteen years 1865 to 1877, was 58·4° F. This is a temperature which will compare very favourably with most of the winter health resorts on the other side of the Mediterranean.

In all countries where clear atmospheres and cloudless skies prevail, the rapid radiation of heat from the earth immediately after the sun goes down gives rise to a sudden chilling of the air and to heavy dews; and since Algiers is no exception to this rule, invalids should avoid being out at this time, although I believe, from the observations which I made, that the fall of the mercury rarely exceeds 8° or 10° F.

There are no records of the number of hours of bright sunshine, but the amount of this is one of the most noticeable features of the climate. In the months of November and December, 1880, I counted forty-seven consecutive fine days. Rain fell during this time, but it came at night, and therefore did not hinder invalids from going out. In 1884 the number of days on which no rain at all fell was as follows—January, 20; February, 20; March, 14; April, 14; May, 26; June, 24; July, 28; August, 28; September, 20; October, 18; November, 9; December, 14. Total of six winter months, 95; total of six summer months, 140. Besides the days on which no rain fell, there were others when it fell at night, or for such a short time as not to prevent invalids from being out of doors. The rainfall of that year was 22·9 inches in winter and 7·4 inches in summer.[2] No doubt this is large as compared with some places. It is only what is to be expected from an examination of the vegetation. Two facts, however, should be remembered in relation to this—firstly, that it frequently rains in the night; and secondly, that the showers are mostly very heavy while they last. The percentage humidity during the year 1884 was as follows—January 73, February 66, March 72, April 65, May 69, June 70, July 71, August 71, September 71, October 70, November 76, December 75, saturation being represented by 100. The mean of the winter months was 72 per cent., and of the summer 69 per cent. For the sake of comparison it may be mentioned that the mean annual humidity recorded at the Greenwich Observatory is 87 per cent.

One may say, then, of the winter climate of Algiers that it is mild, equable, and of medium dryness; that there are usually a large number of fine days, and days on which the invalid can be out of doors; and that the proximity of the sea on the north imparts to it a bracing character, which is hardly to be expected after an examination of the rainfall and percentage humidity.

The class of disease for which Algiers is most suited is undoubtedly lung affections, and especially phthisis. It is not within the scope of this brief note to discuss the relative advantages of high, dry, mountain air, and such climates as the one now under consideration, in the treatment of pulmonary tuberculosis.[3] That this disease, when not too advanced, is capable of being arrested and ameliorated by residence under favourable conditions at Algiers there is ample testimony to show. Dr. Feuillet was deputed some years ago to make an official inquiry into the relative frequency of phthisis in Algeria compared with that in Europe, and in 1874 he published the results of his observations at considerable length.[4] The conclusion arrived at was that "deaths from phthisis in Algeria are but a fifth part as common in Algeria as in Europe." This was derived from figures which included cases occurring both amongst Europeans (many of which were imported) and amongst natives. His observations also revealed three facts, which he offers (p. 140) in explanation of the above statement: "1. That phthisis *originating* in Algeria is rare. 2. That the disease, especially when imported, is cured in its early stages, without medical intervention, by the sole action of the climate; and even if it be a little more advanced, it is still cured or ameliorated by the same means. 3. The chances of abolishing hereditary tuberculosis are almost certain when the children are placed under such favourable climatic conditions from infancy upwards."

Persons with other diseases of the lungs—chronic bronchitis, emphysema, and asthma—also derive marked benefit from passing the winter at Algiers; but they should not attempt the sea voyage when the heart is extensively deranged and weakened.

The climate of Algiers is not suitable to the treatment of rheumatism in any form; and I have never seen a case which derived the slightest benefit there. The hot baths at Hamman R'Irha, situated among the Lesser Atlas Mountains, sixty miles from Algiers, and which are described elsewhere,[5] are eminently suited to the treatment of this complaint. The rheumatic invalid should never allow himself to be tempted by the society and attractions of Algiers to pause for more than two days in his transit to the less gay but more favourable spot. Those who go into the interior should avoid valleys not well under cultivation, since a mild form of ague is sometimes incurred in such districts.

The clothing best adapted to this climate is that worn during an average English spring. Invalids should always be provided with flannel underclothing. The amusements consist of riding and driving out of doors, tennis on tufa courts, and society. There is a large number of English winter residents, and, thanks to the geniality of the English consul, Sir Robert Playfair, there is much pleasant social intercourse amongst them. Perhaps it is the sea voyage of thirty to thirty-six hours across the Mediterranean which deters the more fashionable pleasure seekers from frequenting Algiers, and causes them to halt at more easily accessible places like Nice and Cannes. It is not generally a disagreeable sea voyage, but the only way to shorten it is by crossing from Carthagena in Spain to Oran; but travelling by railway from the latter place to Algiers is a slow and wearisome journey, albeit through a country which is one of the granaries of the world.

Paddington Infirmary, W.

[1] M. Macarthy's observations made at the Musée Bibliothèque in the centre of the town.

[2] January, 2·45, February 1·34, March 3·49, April 3·1, May 1·31, June ·75, July ·03, August 0, September 2·21, October 4·48, November 4·85, and December 6·20 inches.

[3] Those who wish to study the question will find the merits of high, dry mountain air ably set forth by Dr. Hermann Weber in the Croonian Lectures of 1885.

[4] La Phthisie en Algerie d'après une Enquête Officiele par le Dr. Feuillet. 1874.

[5] St. Thomas's Hospital Reports, vols. xiii. and xiv.

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CASES OF BONE DISEASE AFTER SMALL-POX IN YOUNG CHILDREN.

BY ARTHUR NEVE, F.R.C.S.E., &c.

As far as I can judge from the limited statistics available, over 75 per cent. of the population of Kashmir die in childhood from small-pox. Some of the sequelæ, such as total or partial opacity of the cornea, or destruction of the eyeball, are daily seen in our consulting-room. These are also to be seen in England, but less familiar there are the acute bone and joint affections of which I append a few examples. Cases 2, 3, and 4 occurred during the spring of this year, and the first is published with them because it is probably almost unique:—

CASE 1. *Disease of both elbow and one wrist joint; simultaneous excisions; cure.*—J——, a boy, aged three, suffered from small-pox during September, 1885. He was seen at the Mission Hospital on November 5th. Both elbow joints and the right wrist were swollen and freely discharging pus. The abscesses had burst a month previously. The child appeared strong considering the abundance of the discharge. On the same day, with full Listerian precautions, I excised both elbow joints, and freely gouged the wrist, in which the mischief was centred in the lower epiphysis of the radius. The parts were dressed on the 6th, the 9th, and the 11th. On the 9th the left elbow was found completely healed, the skin over the right elbow ulcerating a little, and the wrist wound granulating rapidly, with scarcely any suppuration. On the 19th the wounds were healed. A small abscess in the right elbow burst on December 1st, and on the 10th the child left the hospital cured, with very good movement of the arms, and having picked up strength completely.

CASE 2. *Complete necrosis of ulna; resection; cure.*—S——, a child, aged one year and a half, had small-pox in February, 1887. A month later an abscess formed behind the elbow, which burst and discharged, at first abundantly, then less. On May 18th he fell, and bone protruded from the wound. On the same day he was brought to the hospital. His whole forearm was swollen and red, and from an aperture at the back a portion of dry smooth bone, apparently the olecranon, projected. Under chloroform this was seized with necrosis forceps, the skin opening slightly enlarged, and a few adhesions separated; the whole diaphysis of the ulna was then removed. An opening was made near the wrist through the skin and through a thin case of cartilage which completely surrounded the site of the shaft. The lower epiphysis was covered with soft granulations. The elbow joint appeared unaffected. A drainage tube was drawn through the tubular hollow and dressings applied. On May 28th the drain was removed, when the cavity rapidly closed with granulations, and the limb promised to be in no way impaired in its usefulness.

CASE 3. *Necrosis of scapula; resection; cure.*—A——, a well-nourished child, six months old, was brought to the hospital on April 22nd with a sinus in front of the left armpit, from which watery pus was discharging. An abscess had first formed some weeks previously after an attack of small-pox. The scapula was enlarged, and the sinus led towards it. Chloroform was at once administered, the sinus incised sufficiently to admit the finger, and another incision made at the lower angle of the scapula. The state of things was peculiar. The finger passed inside a distended shell of semi-ossified cartilage; some thin fragments of similar material were loose in the cavity or partially adherent to the walls; and some sharp spicules projected inwards from the spine and neck. With a gouge as much as possible was removed, leaving merely the spine and neck, with the thin shell. For the first few days the cavity was well syringed out; on the 27th the drainage tube was removed from the posterior opening, which had nearly closed. There was a good deal of reaction. By the end of April the whole cavity was filled and distended with granulations, from which there was a slight sero-purulent discharge. On May 12th the wounds were healed, except for slight oozing from the sinus in the axilla; but a slight erysipelatous rash appeared, which extended in an irregular manner for a day or two, disappearing from one part to begin in another. On May 16th the parents took the child home, considering it cured.

CASE 4. *Acute suppuration of shoulder joint; incision and drainage; cure.*—A thin, weakly boy, about six years old, was brought with a large fluctuating swelling over the shoulder. He was only recently convalescent from small-pox. The swelling was not very tense, painful, or red. It was of a fortnight's duration. On April 1st the abscess was opened by a free incision, and the shoulder joint, with which it communicated, well washed out with mercury lotion, and a drainage tube inserted. He did not remain in hospital, but was brought on four or five occasions to have the wound dressed. On about the seventh day the drainage tube was found to have come out; it was not replaced, and when last seen the wound was healed and the boy gaining flesh.

The foregoing are fairly typical examples of a class of cases common wherever vaccination is not practised. So common are they here that bleeding is universally practised by the native hakims during the later stages of small-pox, with the hope of preventing the formation of abscesses! This practice doubtless swells the mortality from a disease always so formidable. Diseases of bones or joints in very young children usually take a favourable course after operation; and if the child has not been otherwise weakened by starvation or bleeding, even when the disease is the result of small-pox, the prognosis is hopeful. In Case 1 three operations of a grave character were performed on the same individual simultaneously. Owing to the softness of the bones, which could be cut with a knife, the whole operation did not take more than half an hour. Post-small-pox abscesses are frequently multiple. In my opinion they should be opened simultaneously and as early as possible, in order to allow of the constitutional state becoming favourable to cure. In Case 2 the ulna came away entire, except the lower epiphysis. The upper epiphysis is at the extreme tip of the olecranon, and was not separated. The curious point is how the joint should have escaped participating in the inflammatory process. Whatever part the epiphyses may play in primary inflammatory processes (and this is as yet not very clear), they, as a rule, play a very important part in limiting necrosis to the diaphysis of bones, as Cases 2 and 3 illustrate—a fact of which surgeons should avail themselves in the pre-sequestral stages of necrosis. This, however, is a subject beyond the scope of the present paper. The other cases require no special comment.

Kashmir.

TWO CASES OF IDIOPATHIC INTRA-LARYNGEAL ABSCESS.

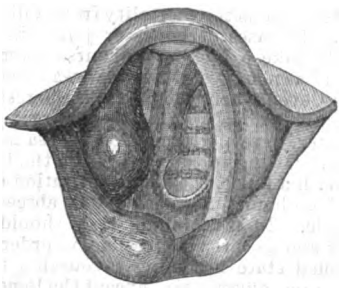
BY GREVILLE MACDONALD, M.D. LOND.

CASE I.—M. L——, a housemaid, single, aged forty, applied at the Throat Hospital on Aug. 27th, 1886, complaining of aphonia and odynphagia, which since their onset, eighteen months previously, had been steadily growing worse. There was a slight dry cough, complaints of a foreign body in the throat, and dyspnœa on ascending stairs. The laryngoscope revealed stenosis of the glottis, due to exaggerated congestion and œdema of the right vocal cord, chiefly subglottic, and of the inter-arytenoid fold. In this subglottic swelling, immediately beneath the cartilaginous glottis, was a spot of excavated ulceration, of which only the overhanging margin was visible. The left cord was congested and swollen, while the right was fixed in the cadaveric position. There was no marked change in the ventricular bands, but the aryteno-epiglottic fold of the right side was œdematous, and the arytenoid cartilage clubbed. The pharynx was anæmic, and presented three well-marked cicatrices on the posterior wall. There was no history of syphilis, although a sore throat of some weeks' duration was admitted as having occurred some fifteen years previously. The case was diagnosed as one of tertiary ulceration, upon which an attack of acute laryngitis had supervened. The localisation of the disease upon one side of the larynx pointed very strongly to some cause beyond simple catarrh. As the wards were closed for repairs, it was impossible to admit the patient. She was put upon ten-grain doses of iodide of potassium, and instructed to suck ice frequently and to inhale a weak alkaline spray every four hours. On Aug. 31st the patient's condition was much aggravated. Then respiration was stridulous, the supra-clavicular spaces receded during inspiration, and

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the complexion was slightly dusky. The laryngoscopic appearances are represented in Fig. 1. The subglottic swelling had greatly increased, but receded sharply at the site of the ulceration; the margin of the right cord had almost disappeared, and the œdema of the aryteno-epiglottic fold was intensified. But the most striking alteration was the enormous swelling of the right ventricular band, which on examination with a probe appeared to fluctuate. In this swelling an incision was made on the most prominent point with Mackenzie's laryngeal lancet. Yellow creamy pus immediately welled up. The relief to the breathing was almost instantaneous, although the stenosis appeared unaltered. On Sept. 3rd the œdema of the right cord had entirely disappeared, although there remained some subglottic thickening. The iodide was continued under the supposition that the abscess might be a broken-down gumma,

FIG. 1.

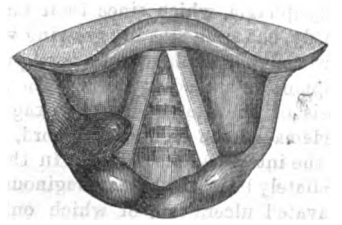


and the patient was ordered to use a weak astringent spray. From this time the improvement was continuous, and on Nov. 30th the laryngoscopic appearances, beyond a slight hyperæmia of the cords, were normal.

Little comment is called for on the above facts. The trouble being of such long duration the etiology was somewhat obscure. The abscess may possibly have been due to an acute inflammatory attack supervening upon a chronic laryngitis; if so, the chronic symptoms were remarkable in disappearing so completely during the short time the patient was under treatment.

CASE 2.—F. W——, married, aged thirty-eight, applied for relief on Jan. 4th, 1887, complaining of odynphagia, more marked on swallowing saliva than with food, a symptom which generally points to the larynx rather than the pharynx as the seat of pain. She had taken cold a week previously, since when the pain had been steadily increasing. The pharynx was normal in appearance. The laryngoscopic image is represented in Fig. 2. The whole of the right side

FIG. 2.



of the larynx was considerably congested; while, projecting inwards from the right aryteno-epiglottic fold, and resting apparently on the ventricular band, was a smooth, dull red, somewhat translucent swelling, partly concealing the vocal cord. To the probe it appeared soft and fluctuating. With the laryngeal lancet pus was evacuated, and the prominence collapsed. The pain on swallowing was immediately relieved. A benzoic acid inhalation was prescribed. At the patient's next visit, a week subsequently, all traces of the inflammatory mischief had disappeared.

This second case is quite of minor interest save from its rarity. Idiopathic laryngeal abscess is scarcely discussed by authors. Morell Mackenzie has collected thirteen cases. Of these six occurred at the root of the epiglottis, four involved the ventricular bands, and three the aryteno-epiglottic folds. Nine were opened, the remainder undergoing spontaneous rupture.

Queen Anne-street.

THE EXPERIMENTAL PRODUCTION OF CHEST TYPES IN MAN.[1]

BY G. W. HAMBLETON, L.K.Q.C.P.I., M.A.I.

WHILST engaged in research on another subject, my attention was drawn to the fact that the size and shape of the chest varied as I varied the conditions to which it was subject. I found this sequence of events was absolutely constant, and could be carried out within such wide limits that it appeared to me to prevent an insuperable objection to the present accepted theory of the inheritance of chest types.

Taking a well-marked example of the so-called inherited consumptive chest, I subjected it to conditions that tend to develop the lungs, till it corresponded in size and shape first with the town artisan, then with that of a man of the privileged class, and finally with that of a man of the best class of insurable lives in America. By subjecting that same chest to conditions that tend to reduce the breathing capacity, I brought it back through the same types to nearly that with which I commenced, and I have produced similar results on other chests within a period measured by months. At birth the average male child of all classes has the same type of chest, but at maturity he has that of the class to which he belongs. Here, too, we have one type of chest forming a series of types that have varied precisely as the conditions to which they have been subjected in those classes have varied. Further, there is evidence pointing to the same relationship between conditions of type, in which none has ventured to raise the question of inheritance. We have, on the one hand, the type of chest of those who use wind instruments, or who by their occupation require to greatly use their lungs; and, on the other, the type of those who spend their time in a stooping posture, or who compress their chests either by the instrument they use in their work or by a corset. And there is the same relationship between the size and shape of other parts of the body, and the conditions to which they are subject. We know that the head has been altered in shape by direct pressure; that the muscular and osteal systems change in size and shape according to the conditions to which they are subject; that the colour and thickness of the skin vary in like manner; that the difference between the foot of a Chinese lady and that of a woman who has never worn shoes depends upon their presence and absence respectively; that the difference between the hands and fingers of a pianist and those of a man accustomed to lift heavy weights is produced by their occupations; and that each histological element of the body is subject to the same law. Therefore I contend that the type of man after birth is solely produced by the conditions to which he is subject. Hence the formation of race by man's continuance under the same conditions and its subsequent divisions into sub-races and families by his migrations into new conditions and the minor differences therein. Hence also the difference between the same species of animals under the conditions of nature and of domestication; the difference between the same plants placed under different conditions; the difference between the products of seeds sown in different localities, and the return of man, animal, or plant to former types on being subjected to the conditions that produced that type.

This opens up a wide and most important field for our investigation. We have to ascertain what the conditions are that produce these changes in each part of man that together form a class or type. The difficulties in our way are not nearly so great as will at first sight appear. Great demonstrations are constantly taking place before our eyes of the relationship between conditions and types in those trades and occupations that are carried on around us. Let us ascertain exactly what they can teach us by investigation, and then we shall be able to compare the results with those that will be obtained in other countries. Truly, it will be a work of years, but it will give us a science of man. When we have ascertained what the conditions are that produce these differences in each part of man that together make a class or type, we shall be able to produce that class or type. Further, this investigation will also tell us what type of

[1] A paper read at the recent meeting of the British Association for the Advancement of Science.

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body is best suited for this or that trade or occupation, and for residence in this or that part of the world. Then we shall train men so that we shall no longer send them into occupations with types of body unfitted for the conditions of that occupation, and consequently we shall be spared the misery and loss of those numerous break-downs from unsuitability of type that are now daily brought before us.

Manchester.

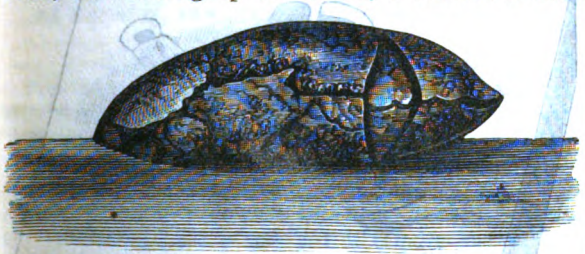
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMOVAL OF URETHRAL CALCULUS OF UNUSUAL SIZE.

BY WALTER HENRY BROWN,
ASSISTANT SURGEON, LEEDS GENERAL INFIRMARY.

THE patient, a man aged thirty-six years, married, and the father of two children, came to me complaining of pain and difficulty in micturition. The condition had existed for ten years past, but had greatly increased during the last three years. He brought with him a sample of his urine, which was alkaline, offensive, and contained much pus and albumen. He had been following his employment of insurance agent up to the time of my seeing him. On examination I found a large hard swelling on the under surface of the penis, extending from the glans backwards for a distance of about three inches. He told me that the swelling had existed for some years (he could not say how many), and had gradually got larger. The meatus was closed by warty growths, and I failed to pass even a fine probe. He further informed me that he now passed urine drop by drop. Suspecting calculus, I sent him home, and later in the day had him put under ether, when, after slitting up the meatus, I removed a stone



Actual size.

weighing 265 grains, and measuring two inches and a quarter in length, and two inches and a half in circumference at its widest part. Mr. H. A. Smith, one of the house surgeons of the Infirmary, kindly made for me the accompanying sketch, which gives a good idea of the shape and size of the stone. The after history is unimportant, the man making a rapid recovery and the urine clearing within a few days of the operation.

The points of interest which occur to me are:—1. The unusual size of the stone and its position; the recorded cases of large urethral calculi mention them as having been either in the perineum or scrotum. 2. The fact of the man being able to endure the presence of this large calculus in the urethra, of its being apparently no hindrance to sexual intercourse, and, until very recently, not sufficiently painful to compel him to seek relief.

ON THE ESSENTIAL NATURE OF CERTAIN DISEASES OF THE SKIN.

BY T. FREDERICK PEARSE, M.D., M.R.C.P. LOND.

MANY will agree that too much attention is often bestowed upon the clinical symptoms and morbid anatomy of certain diseases of the skin, while the exciting or determining cause is left practically unconsidered. We notice, for example, eczema arising under a variety of conditions—such as that of rheumatism, gout, and external irritation. Nevertheless, we are apt to label the appearance "eczema" and consider we have got a distinct pathological process. In one sense, perhaps, we may be said to have a particular type of structural change in the eczematous group and another distinct change in the psoriasis group, but my contention is that just as the word "dropsy" only conveys a very general meaning of a patient's condition, so the terms "eczema" and 'psoriasis" similarly designate but groups of symptoms without definite pathological indications. We recognise a gouty bronchitis, and ought to treat it as for gout, and not as an inflammatory affection. When we recognise the gouty eczema, there is too much tendency to treat the local condition, and not to pay sufficient regard to the gouty state upon which the local changes depend. To take another example. At one time the joint affections of acute rheumatism, though admitted as part of a general state, were thought to require combating by local treatment. Now, however, we have found that the joints themselves require no local treatment whatever, and that we relieve them by overcoming the rheumatic process upon which these and other symptoms depend. Those who are engaged in the study of diseases of the skin will have come across cases of eczema which remain unrelieved, or at any rate uncured, by any local application, but which rapidly recover by the internal administration of the salicylates of hydrogen or soda. In these cases we may have a local state exactly similar to all intents and purposes to that arising from gout or other causes, but there is a distinct pathological process which we know as rheumatism underlying it. I am quite confident that there are other cases, again, termed "eczema" which are dependent upon influences from the nervous centres. We recognise that a very large number of cases of eczema are associated with some kind or other of intestinal disturbance. Many of these we treat successfully, but there are others in which we do not get at the *fons et origo mali*, and which remain an opprobrium to our art. Much the same may be said of other groups besides the eczematous. We know the cause of many diseases of the skin, but what I wish to lay stress upon is that though the terms "eczematous," "lichenous," "herpetic," "furuncular," &c., applied to groups of symptoms, may be useful for instruction, they are absolutely misleading if considered as distinct pathological processes, requiring a special line of treatment for each. Just as we call a particular form of joint affection an "arthritis" and a collection of serum in the tissues "dropsy," so ought we to apply the term "eczema" merely to certain clinical appearances of the skin.

I am quite aware that there is nothing new in the above remarks to sanction them for public print, but my object in bringing them forward is to advocate a classification and nomenclature based upon the etiology of diseases of the skin, rather than upon groups of symptoms or morbid anatomical changes. At some future date I hope to be able to suggest a classification founded on these lines.

Manchester-square, W.

A CASE OF FRACTURE OF SKULL; TREPHINING; RECOVERY.

BY A. J. POPERT, M.R.C.S.

ON the afternoon of June 3rd, a young farm labourer, whilst "skylarking" with other lads in a stable, fell, and was kicked on the head by a horse and rendered unconscious. He was dragged out of the reach of the animal's hoofs, but remained insensible for about ten minutes, when he slowly regained consciousness, and was carried into the neighbouring farmhouse. I saw him about two hours after the accident. His condition was then as follows. He was conscious, suffering apparently from shock; very pale; temperature 97·5°; pulse 48; and he was bleeding from a ragged wound in the scalp about the region of the middle of the anterior border of the right parietal bone; there was no paralysis. An examination of the wound by the finger discovered a sharp edge of broken bone about half an inch long, with depression of neighbouring bone. My brother, Mr. Alfred Popert, who saw the patient with me, and who all through the case rendered me much assistance, agreed that the trephine was indicated, not so much with a view of raising the depressed bone as to remove the loose fragments and splinters which the concentrated localised nature of the blow rendered probable. Accordingly the patient was anæsthetised, the scalp wound enlarged, and the injured

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bone exposed. The depressed surface was less evident to the eye than to the finger, and, indeed, the whole extent of damaged external plate was comparatively trifling—a sixpenny piece would have covered it; but on raising the circular disc, loose fragments of the inner table were found in every direction round the wound. In all, twenty-three pieces were removed; some with extreme difficulty, for more than one piece was found too large for extraction through the trephine-hole, and had to be cut with bone forceps; and several sharp spiculæ had penetrated the dura mater and were sticking firmly in it. The scalp was sutured and the wound lightly dressed with dry lint. The patient, who bore the operation and somewhat prolonged administration of chloroform extremely well, was then carried home (about two miles) on an improvised stretcher, and put to bed in a dark room. His progress to recovery was uninterrupted, the treatment being low diet and quietude. In eleven days the scalp wound had almost entirely healed, with scarcely a trace of suppuration, and in fourteen days from the receipt of the injury the patient was up and convalescent; since then he has been an intelligent member of an ambulance class organised in his village. He wears a vulcanite plate as a protection over the scar; but the dense and strong cicatricial tissue which is rapidly forming will probably of itself soon afford all protection necessary for what the patient facetiously calls the "only soft spot in his head."

The interesting features in the case are (1) the very slight damage sustained by the external table of the skull when compared with the condition of the inner; the separated pieces of the latter weighed 130 gr., and covered a superficial area greater than that of a five-shilling piece; (2) the entire absence of symptoms of intra-cranial mischief, except the immediate insensibility due to concussion. The temperature never rose above 99°, though the dura mater was lacerated in several spots. The circumstances of the operation were somewhat unusual, the patient lying on a low and narrow settle fixed to the wall in a badly lighted farmhouse kitchen, and the only available nurse a gamekeeper. The case bears an interesting similarity in some particulars to one that came under my observation when house-surgeon at our local infirmary, and which I reported in THE LANCET at that time. In that case, which ended fatally, the blow was concentrated on one spot, having been administered by a lusty Irishwoman with the knobby end of a kitchen poker. There being no urgent brain symptoms, and not very distinct evidence of depression and comminution of bone, the expectant treatment was adopted, but the necropsy revealed abundant evidence of meningitis, cerebral abscess, and a depressed comminuted fracture with very sharp edges.

Southport.

ANTISEPTIC MIDWIFERY.

By AMBROSE E. L. CHARPENTIER, M.B.

IT is with much pleasure I see the increasing interest taken in the above subject, and notably Dr. W. A. Duncan's most instructive paper on the "Accidents of Parturition." As one practising antiseptic midwifery, I beg to offer one or two suggestions, chiefly as to the means of carrying it out in ordinary practice.

Though not presuming to write "as one having authority," I would submit that there should be some additions in the "antiseptic" midwifery bag. It should contain as usual: forceps, catheter with tubing, syringe with uterine tube, pocket case, elastic or linen bandages for "auto-infusion" in case of collapse from hæmorrhage, hypodermic syringe, stylet, minim measure, and, advantageously for the safety of the patient and one's own comfort, a small nail-brush in metal case. There should be spaces for at least nine bottles; the six would contain, as in ordinary use, chloroform or the A.C.E. mixture, ergot, ammonia, ether, opium, and iron. In the others there should be—(1) A solution of chloral hydrate, twenty grains of chloral in a drachm of syrup of ginger or orange. (2) Bichloride tampons, carbolic acid, or a solution of bichloride of mercury, made by dissolving 160 grains of the salt in four ounces of spirits of wine; one drachm of the solution in a pint of water forms the 1 in 2000 lotion. I find this solution superior to the tampons; it is always easily prepared, is less bulky and less expensive. (3) An ointment of bichloride and vaseline (1 in 500), which is conveniently carried in a wide-mouthed bottle.

As regards the actual work, there is but little more trouble and a great deal more satisfaction than in the old happy-go-lucky method. In the syringing, a china tooth-brush tray, or soap-dish (almost always to be found), answers well to catch the escaping fluid when held close to the nates, the patient lying on her side in the usual position. This is easily done without any elaborate or expensive apparatus.

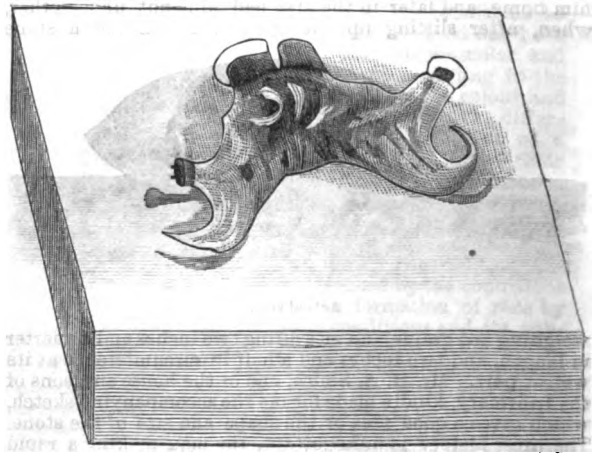
The universal practice of antiseptic midwifery cannot be too strongly insisted upon, and no trouble or anxiety on our part should be too great to prevent the horror of a case of septicæmia; and when we see by the mortality tables of puerperal women, as given in Kucher's excellent book on the Puerperal Diseases, that 10 to 18 per cent. of lying-in women die of puerperal diseases, and of these septicæmia claims 75 per cent., it is truly lamentable, and it should require no further incentive to urge us to make every effort to reduce such a terrible death-rate.

Uxbridge.

LODGMENT OF A TOOTH-PLATE IN THE GULLET FOR FIFTEEN MONTHS.

By HENRY E. BRIDGMAN, L.R.C.P.I.

AT 2 A.M. on April 17th, 1886, Thomas H——, aged twenty-eight, was brought to my surgery. He informed me that he had gone to bed, as was his habit, wearing a small plate, to which were attached four false teeth. He awoke, feeling the plate slipping into his throat, and he could, he said, still feel it at the top of his gullet. The patient was nervous and excited; he frequently retched, and expectorated blood-stained saliva; dyspnœa and dysphagia were marked. I examined the pharynx carefully with the finger, but failed to feel any foreign body. With a pair of throat forceps I seized something that I believed to be the plate, but on making an attempt to withdraw it, the dyspnœa increased, the patient struggled, and the forceps slipped. After several



fruitless attempts to seize the plate a second time, I desisted, and sent my patient to the Burton-on-Trent Infirmary. There probangs were passed into the stomach without meeting with any obstruction. The patient was watched for a few days, and then discharged, the dyspnœa and dysphagia having disappeared.

I saw the man a few weeks afterwards, when he was again suffering from dyspnœa, had a hard, frequent cough, and was expectorating copiously a tenacious mucus, tinged with blood. I continued to see him from time to time until Christmas, 1886. On July 25th, 1887, he presented himself again at my surgery, bringing with him the plate with false teeth attached, of which I enclose a sketch, saying that he had continued much in the same condition as when I had last seen him, being frequently unable to go to his work on account of cough and difficulty of breathing, until July 21st, when, being rather worse than usual, he felt, after a violent fit of retching, something in the back of his throat, when, by means of his thumb-nail, he hooked out the false teeth, which he brought with him and which he had lost just fifteen months since.

Burton-on-Trent.

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SEPARATION OF THE EPIPHYSIS OF THE SECOND METATARSAL BONE.

By JAMES MASON, L.R.C.P.ED.

THIS accident, though anatomically fairly likely to happen, as a matter of fact seldom takes place—at least I can find no written note concerning a case. On this account chiefly I think the following worthy of recording.

A girl, aged seventeen, came to me complaining of pain and swelling over the root of the second toe of the left foot. She stated that the "lump" had been there for some time; it occasionally disappeared when she put her foot in a certain position, but immediately she tried to walk it reappeared. I found on examination that it could be easily reduced, but it as readily returned to its old position when pressure was removed. The movement at the joint was perfect. Well-marked crepitus could be felt about a quarter of an inch behind the joint. The fragments were put in apposition and a pad applied. A strange feature is the patient having been able to walk about for so long a time. She could not remember having received any injury or twist, and considered it simply an "enlarged joint."

Kingston-road.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

TWO CASES OF DISEASE OF THE THYROID: ONE TREATED BY EXCISION, THE OTHER BY INJECTION OF IODINE; RECOVERY; REMARKS.

(Under the care of Mr. HENRY MORRIS)

FOR the report of these cases we are indebted to Mr. Roger Williams, surgical registrar:—

CASE 1. *Hypertrophic goitre; thyroidectomy; recovery.*—The patient, a moderately nourished, fair-complexioned, and cachectic-looking girl, aged fourteen, from Dorking, was admitted on June 27th, 1884, with a large swelling in the thyroid region. She complained of being subject to very severe attacks of dyspnœa and of difficulty in swallowing. At night she was often disturbed by dyspnœal attacks. There were no signs of Graves' disease. Both tonsils were somewhat enlarged, and the lymphatic glands of the neck were normal. The swelling on the right side of the neck was the size of a very large orange, and reached from just below the hyoid bone to the sternum; that on the left side was not larger than a Tangerine orange. These lateral enlargements were connected by a swelling over the front of the trachea in the region of the thyroid isthmus. The mass moved with the windpipe during deglutition. It felt elastic, lobulated, and circumscribed, but there was no sense of fluctuation. At the upper part of each lateral swelling a large pulsating artery could be seen and felt. She gave the following history. Four years ago a swelling was first noticed in the site of the present disease, chiefly on the right side. It had since steadily increased, but more rapidly of late. During the last year she had been subject to severe dyspnœal attacks, especially during the night and after making any exertion. For some months she had suffered from increasing difficulty in deglutition. Her previous health had been good, with the exception of an attack of bronchitis four years ago. Her mother and sister, when young, both suffered from thyroid enlargement, which at length subsided. The sister's was frequently painted with iodine. Father, aged fifty, healthy. The family (five in number) are all healthy except the patient.

The symptoms becoming aggravated after the patient had been in the hospital a few weeks, it was decided to excise the thyroid. This was done on July 12th in the following manner: The patient being anæsthetised, an incision through the skin and fascia was made in the median line of the front of the neck, from the pomum Adami to within a little of the top of the sternum. The thin fascial investment of the gland was kept intact. The right superior thyroid vessels were exposed by reflecting the structures overlying them, and were ligatured with their sheath just as they entered the thyroid. The fascial investment was then cut through and the gland enucleated, the vessels at each of the other angles being seized by forci-pressure forceps and divided in the course of the enucleation, not before it. The vessels were of great size, and there was considerable venous hæmorrhage, quickly controlled, immediately after ligaturing the first set of vessels. Great care was taken not to drag upon the larynx and trachea, and there was no dyspnœa or suffocative effect throughout the operation. The growth proved to be a hypertrophic goitre. The wound was dressed with lint steeped in terebene oil and carbolic gauze.

The evening after the operation the temperature went up to 102·2° F.; on the following morning it was 100·8°; subsequently it remained nearly normal. The recovery was very rapid. She left the hospital convalescent six weeks after the operation, free from any impairment of voice, respiration, or deglutition. She was seen by Mr. Morris in January, 1885, quite well, and better than she had been for a long time previous to the operation. In June of this year (1887) Mr. Horace Chaldecott, of Dorking, reported that he had seen her frequently about the neighbourhood, that she looked and was quite well, and that she certainly had no symptoms whatever of myxœdema.

CASE 2. *Hypertrophic goitre; repeated injection of tincture of iodine; recovery.*—Jessie O——, aged seventeen, a short, dull and heavy-looking girl, was admitted on Sept. 10th, 1884, with a simple hypertrophy of the thyroid. She first had difficulty in swallowing, and noticed a swelling in the thyroid gland ten months ago. It had been growing very fast just previously to admission. No other member of her family has bronchocele, and she knows of only one other person in the neighbourhood in which she lives (Bovey Tracey, North Devon) with a similar swelling to her own.

On admission there was a large and regular swelling of the thyroid gland. Each lobe was equally enlarged, was solid, but semi-elastic to the touch. The swelling reached almost down to the sternum, and the circumference of the neck at the most prominent part of the swelling was fourteen inches. When she swallowed, the tumour rose with the larynx. She had some pain in swallowing, and had not taken any solid food for three months. Her speech was very low and indistinct. She had occasionally some dyspnœa, generally worse at night. There was a little albumen in her urine. She had menstruated regularly since fourteen years of age. The treatment adopted was the injection into a different part of the goitre of fifteen minims of tincture of iodine every other day, from Sept. 18th up to Oct. 17th; after this, twenty minims every third day till she left the hospital on January 14th, 1885.

On April 23rd, 1885, Mr. Goodwyn, of Bovey Tracey, South Devon, wrote in regard to the patient: "She now suffers from no pain or difficulty in swallowing. Her goitre is decidedly diminished in size, hard, and non-pulsatile. The right lobe is somewhat bigger than the left. The circumference of the neck at the level of the seventh cervical vertebra, and over the most prominent part of the goitre, is twelve inches and a half. She is not obviously anæmic, but she had hæmic bruits over the base of the heart, and suffers from breathlessness on exertion. She seems to have brightened up mentally from her stay in London."

Remarks by Mr. MORRIS.—These two cases, which happened to come under observation within a few months of one another, illustrate the very different treatment required for different instances of the same form of bronchocele. Both of them were cases of simple hypertrophy, which is the form of goitre least prone to give rise to serious symptoms, and most amenable to improvement from internal and topical remedies; which sometimes contracts and becomes transformed into a firm fibrous or calcified fulness; or which may spontaneously and completely subside down to the dimensions of the normal thyroid. In both these cases the disease had reached a stage at which it had been for some time seriously affecting the health of the patients, and that, too, at an age when simple hypertrophy is not generally wont to be more than a disfigurement at most. In spite of treatment by their respective medical attendants, these young girls had continued to grow worse—to suffer increasingly from dyspnœa,

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dysphonia, and dysphagia; and one of them—she whose case is first recorded—had even her life threatened by the disease. Though the rate of growth in the second case was rapid, the fascial tissues of the neck had yielded sufficiently to prevent the occurrence of those very alarming symptoms which are commonly excited by acute hypertrophy of the gland. Indeed, though the change in the voice and the difficulty of swallowing solids were very marked, we had no immediate fear for the life of the girl, whilst the character of the tumour offered every inducement to try the injection treatment, which happily effected such a good result. That the improvement which followed the injection of iodine was really due to the treatment is proven, I think, by the rapidity with which the hardening and contraction of the gland followed the injections, and by the fact that these changes occurred exactly at the parts injected, and progressed therefrom. We thus cannot, I think, for these reasons, impute the result to any gradual and spontaneous transformation of the tumour from the simple or cystic to the fibrous form of the disease.

In the first case, the severe and frequent dyspnœa, not only on exertion but during rest and at night, the increasing difficulty in deglutition, the general feebleness of the patient, and, lastly, the aggravation of these symptoms during the three weeks she was under observation in the hospital, pointed to the necessity of early and efficient treatment, if her life was to be saved. The danger of these attacks of dyspnœa coming on suddenly, their fatality, and the disadvantages against which the surgeon has to contend when he has to operate on an emergency in the night, are well illustrated by Mr. Pitts in a record of three cases, in the Pathological Transactions, vol. xxxiii. p. 364. Moreover, the soft and elastic character of the swelling, together with the forcible pulsation of the feeding arteries and the evident large size of the vessels in the gland, seemed to exclude incisions, caustics, subcutaneous laceration, and the various injections; whilst our comparative ignorance of the value of electrolysis and galvano-puncture in this disease, the uncertainty and known dangers of setons, and the futility of the ligature of the thyroid arteries, left as the only alternatives excision of the isthmus and the removal of the whole thyroid. The latter was preferred as being absolutely certain in its immediate result, and because it was not contra-indicated by adhesions between the tumour and the great vessels of the neck, nor by extension of the growth downwards behind the sternum. The object in putting the case of thyroidectomy on record is because now, at the end of three years, the girl is in good health, and shows no sign whatever of any threatening of myxœdema, and because it adds another instance from which the committee of the Clinical Society, at present engaged on the subject, will draw their conclusions.

AYR COUNTY HOSPITAL.

HERNIOTOMY TWICE WITHIN THREE MONTHS.—NECROSIS OF RIB.—AMPUTATION OF ARM IN AN OLD MAN.—IMMENSE HYPERTROPHY OF HEART.

(Under the care of Dr. NAISMITH, F.R.C.S.E. (Exam.).

FOR the following notes we are indebted to Mr. F. G Clemow, M.B., C.M. Edin.

Strangulated umbilical hernia; two operations within three months.—Mrs. W——, aged forty-seven, housewife, an immensely stout woman, was admitted on May 26th, 1887. For fifteen years she had been the subject of an umbilical hernia. In February last it became strangulated, and was operated on in the Glasgow Royal Infirmary. After this it did not reappear till three days before admission, when it suddenly developed, and seems to have become rapidly strangulated, as vomiting and abdominal pain came on during the night. The vomiting continued at intervals, and was stercoraceous on the morning of admission. There was no motion of the bowels.

On admission there was a remarkable absence of pain, collapse, or anxiety. Temperature normal; pulse 93, and steady. Tongue soft, moist, and furred. In the position of the umbilicus was a tumour four inches and a half in its long—i.e., transverse—diameter, tense and elastic. The skin over it was red and thin, showing the V-shaped cicatrix of the former operation.

On the day after admission there was the same absence of urgent symptoms; but the hernia was still irreducible. Slight bilious vomiting, not fæcal.

On the following day, May 28th—i.e., the fifth day from the reappearance of the hernia,—stercoraceous vomiting with severe pain recommenced at 5 A.M., and at 11 A.M. Dr. Naismith operated. A single median incision was made, commencing on the abdomen above the tumour, and ending on the centre of the latter. The coverings were very thin. With some difficulty the constricting neck was divided at the upper part, with immediate relief of tension in the tumour. The sac was not opened. Owing to extensive adhesions the hernia could not be entirely reduced. Two hours later the bowels were moved, and again at 2.30 A.M. Vomiting ceased three hours after the operation.

Nourishment was given per rectum for two days, when digested food was retained by the stomach. The temperature never rose above 101·4°. The patient left the hospital on July 7th, having recovered without any interruption. A specially made belt, with cup-shaped shield, was procured for her.

Remarks by Dr. NAISMITH.—The history of this case shows that after the first operation in Glasgow the woman did not on recovery have recourse to the use of a truss or any supporting apparatus whatever. It is manifest that had the usual precaution been followed, a second operation would not, in all probability, have been rendered necessary. Before section, I need hardly add, the usual palliatives of opium, ice applications, and elevation of the lower half of the body received a fair trial.

Necrosis of rib; removal of a large sequestrum.—A. M——, aged twelve, for some years had had a sinus over the right fifth rib, with constant discharge; no cause could be assigned. A probe detected dead bone with an indistinct sensation of mobility. On May 19th, under chloroform, a small incision one inch long was made, and with dressing forceps a necrosed portion of rib five inches long was removed with slight manipulation. This sequestrum consisted of the inner surface of the rib, from which the outer surface had been more or less completely eroded. She remains in the hospital with a slowly healing sinus.

Remarks by Dr. NAISMITH.—This case was discharged cured, I believe, in the latter end of July, or more than two months subsequent to the operation. I would draw attention to the length of the necrosed portion of rib which was extracted.

Amputation of arm in a man of seventy-three.—T. N——, aged seventy-three years, was admitted on May 17th, 1887, with diseased elbow joint of five years' standing; the joint was quite disorganised with offensive discharge from two sinuses; there was considerable constitutional disturbance and great weakness, with evening rise of temperature. On May 20th the limb was removed through the middle of the upper arm by antero-posterior flaps; scarcely a drop of blood was lost. His recovery was remarkably rapid, the wound healing largely by first intention. The temperature returned to normal on the night of the operation, and only rose twice afterwards to 100°. He left the hospital on June 18th, with the wound almost healed, and his general health completely restored.

Immensely hypertrophied heart.—J. L——, aged twenty, was admitted with extreme symptoms and signs of mitral stenosis and incompetence, with great dilatation and hypertrophy. He died on July 5th. The heart was found to weigh twenty-four ounces and a half, the hypertrophy of the left ventricle being enormous. The mitral valve was excessively distorted and calcareous, extremely stenosed, and incompetent.

JULLUNDUR STATION HOSPITAL.

FATAL CASE OF EXTERNAL URETHROTOMY.

(Under the care of Surgeon-Major STEVENSON, M.S.)

J. F——, aged nineteen, a private in the Connaught Rangers, was admitted on Oct. 23rd, 1885, for stricture of the urethra. He had just arrived with a draft from England. The account he gave of himself was that six months previously he had fallen on a fender in his barrack room, striking his perineum on a sharp corner of the iron. Immediately after the accident he passed blood by the urethra. For this he was treated in hospital and had instruments passed. He was in hospital on board ship on the voyage out to India for stricture, but it is noted in his medical history sheet that no instrument could then be passed into the bladder.

On admission some attempts to pass an instrument through the stricture were made, but without success; and he was

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treated by rest in bed and hot baths in the hope of introducing a catheter into the bladder later on; but all subsequent efforts in this direction failed. When first seen the stream of urine was small, but continuous; soon, however, the contraction of the stricture became so extreme that urine passed only by drops, and later still there was the constant dribble from an over-distended bladder. The urine was of high specific gravity (1030), clear, acid, and free from albumen. Under these circumstances operative interference was imperative, and the following procedure was carried out on Nov. 19th. An incision, one inch and a half long, was made in the middle line of the perineum on to the point of a No. 10 leaden bougie which was being pressed against the front of the stricture. The lower end of this incision was within half an inch of the anus. On opening the urethra a fine leaden bougie was passed (replacing the larger one), and its point bent up at an acute angle (no Wheelhouse's hook being at hand) so as to hook up the urethra at the upper end of the wound. The cut edges of the urethra being held aside, attempts were made to pass the point of a fine probe-pointed director through the stricture, but, although perseveringly persisted in, failed of success. Under these circumstances the performance of Cock's operation of opening the urethra behind the stricture became necessary. This was accordingly done, and a No. 10 silver catheter passed into the bladder from the meatus. The urethra behind the stricture was found to have become enormously dilated. The wound was dusted with iodoform and covered with carbolised oil on lint, with a padding of absorbent carbolised cotton wool outside. The operation occupied about an hour, and at it, and in the decision to perform it, Surgeon-Major Stevenson was assisted by Surgeon Pink, M.S., and Surgeon Dyson, F.R.C.S.

On the evening of the day of operation the man seemed to be doing well; the bladder was being freely drained; there was no pain. Temperature 100·2°. On the morning of the next day the temperature had gone up to 103·0°, but the man appeared to be doing well; he had no pain; the urine was being passed freely through the incision. The catheter was removed, and the wound, which was looking healthy, re-dressed in the same manner. He had taken opium pill (one grain) and had slept fairly well. On the evening of the second day he felt comfortable; drainage free; some urine had passed by the meatus; no pain or tympanites, but the temperature was 104·0°; bowels opened once. During the night, at about 12 o'clock, he became restless and uneasy, but he had no pain. Later on symptoms of collapse suddenly set in; he became cold, blue on the surface, and pulseless, and the temperature went down to 97·0°. At 7 A.M. on the third day these symptoms were most marked, and stimulants and the external application of heat had no restorative effect. The patient died at 9 A.M., about forty-six hours after the operation, evidently of acute septicæmia. He had passed urine freely during the night. The wound looked sloughy and grey in colour, but this unhealthy appearance had come on quite recently.

At the necropsy, six hours after death, the left lung was found to be adherent at the upper lobe from recent pleuritis, and œdematous and congested at the apex; right lung much congested and œdematous; recent red pleuritis at the front of the middle lobe. Spleen red and friable. There were effusions into all the serous cavities, and the stomach, intestines, pericardium, and pleuræ showed patches of congestion and ecchymosis. The bladder was small and contracted, and its walls enormously hypertrophied and hard; they were quite an inch in thickness; its mucous membrane was in folds, and showed many spots of ecchymosis. At the neck of the bladder, on the floor of the urethra, was a small false passage, a band of mucous membrane stretching across the urethra, as though a loose fold had been hitched up on the point of a catheter or sound and been pierced. The urethra behind the stricture was dilated to about the size of a man's thumb. The kidneys appeared healthy, and the ureters were not at all dilated.

Remarks by Mr. STEVENSON.—Why should this case have developed septicæmia? All antiseptic precautions possible in the treatment of a wound in the immediate neighbourhood of the anus were strictly adhered to; iodoform, carbolised oil, and absorbent carbolic wool were used as dressings; the instruments used at the operation had been kept in a 1 in 20 carbolic lotion for an hour or more previously, as were also the sponges; and the parts operated on had been thoroughly purified. Must the case be entered under the heading lately referred to in THE LANCET, and put down as a "surgical mishap"? Or may the catheter be to blame? The one passed into the bladder had been for some time in a 1 in 20 carbolic lotion, and it was lubricated with carbolic oil, but a catheter is an instrument of which it is difficult to guarantee the purity in a Listerian sense.

Reviews and Notices of Books.

Elements of Physiological Psychology. By GEORGE T. LADD, Professor of Philosophy in Yale University. Pp. 696. London: Longmans, Green, and Co. 1887.

THE prospects of psychology have of late years greatly brightened, for the advances of anatomy and physiology which are now carefully studied by psychologists, are at length beginning to bear fruit. No doubt much knowledge in regard to the laws of thought, the sequence of ideas, and intellectual phenomena generally, may be obtained by introspection, but so long as philosophers were contented, like the spider, to spin their theories from their own bodies instead of appealing to experiment and observation, no progress could be expected. Their reasonings resembled an inverted cone wanting its proper base to stand upon. The very title of the book before us, written by one of the ablest teachers in one of the best colleges in America, shows it is now understood that the study of the phenomena of the mind may and ought to be approached only by those who have obtained a competent grasp of the material substratum through and by which such phenomena are exhibited, and that a knowledge of the chemistry, the physics, the anatomy and physiology of nervous tissue, is a necessary preliminary to elementary conceptions of its mode of working. The number of workers on these subjects and the value of the memoirs published have greatly increased in the course of the last few years, and the mass of material which has accumulated will best be appreciated by anyone who will take the trouble to turn to the pages of, amongst many others, the volumes of Pflüger's "Archives" and the volumes of Hoppe-Seyler's "Physiologische Chemie."

It is not surprising, then, to find in Prof. Ladd's treatise the first two parts embracing 584 pages, out of a total of 688, devoted entirely to an account of the structure and functions of the nervous system, that might take a place in any modern work on physiology, the last part only being occupied with the Nature of Mind. A great defect is, however, still observable in the mode in which psychology is cultivated—namely, the entire omission of the consideration of the faculties of the lower animals, and the mode in which mental attributes undergo evolution. Nature must be long and curiously questioned in this direction before clear answers can be given to many psychological questions. How can we expect to explain the action of the complex apparatus of man and the higher mammals when we are still ignorant of that of the lower fish and the humbler reptiles?

The most interesting section of the volume before us is that which deals with the nature of mind. Dr. Ladd reasonably insists upon the unsatisfactory character of the statement sometimes made that the phenomena of consciousness are the product of the brain, if by this is meant that thought and intelligence bear the same relation to this organ that the bile does to the liver. No doubt molecular changes occur in every act of thought; but in order to "hold that mental phenomena are related to the substance of the brain in the same way as that in which the nerve commotions or molecular changes are related to this same substance, we must identify mental phenomena with molecular changes." But it is at present "impossible to identify the two classes of phenomena as phenomena"; and he goes on to show that even if it be admitted that different sensations

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may hereafter be shown to be the result of the mode of motion of the waves of nervous excitation, yet that a collection of such sensations resulting from the excitations of the brain by no means constitute a real "thing." Each "thing" implies not simply a vast number of moving physical molecules on the kind and amount of whose motion the phenomena of conscious sensation are dependent, but a uniting energy and a unity in mind. 'Fifty million molecules, even when they are highly complex and unstable phosphorised compounds, gyrating in the most wonderful fashion with inconceivable rapidity, certainly do not constitute *one thing*. They do not by molecular constitution and activities even constitute a physical basis which is conceivable as a representation or correlate of one thing." It is not surprising to find that Professor Ladd holds strongly the opinion that the mind is a real entity, "a real being which can be acted upon by the brain, and which can act on the body through the brain." This, he thinks, is the only assumption that is compatible with all the facts of experience. The earlier chapter in which this difficult subject is handled is worthy of careful perusal.

In concluding this brief notice of Professor Ladd's work, we may observe that it affords evidence of wide reading, and that the facts he has gathered from many quarters are lucidly stated and brought very appropriately into relation with each other, and the whole treatise may be read with advantage by the side of Spencer's "Elements of Psychology." We may add that it is excellently printed, and when requisite for the illustration of the subject good woodcuts are introduced.

Notes on Anæsthetics; with an Appendix, Illustrative Cases, and Engravings of Anæsthetic Apparatus. By ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S. First Edition. London: Claudius Ash and Sons.

Guide to the Administration of Anæsthetics. By HENRY DAVIS, M.R.C.S. London: H. K. Lewis.

CURIOUSLY enough both these little volumes claim Mr. Woodhouse Braine as foster-father. Mr. Underwood disclaims any special knowledge of the matters with which he deals, protecting himself against adverse criticism by the avowal that he has committed his proofs to Mr. Braine. However skilled and well versed in anæsthetics a man may be, it is of course impossible to compress into fifty-two small heavily leaded pages the wide subject of artificial anæsthesia; yet Mr. Davis has attempted to do this, while Mr. Underwood has given us seventy pages, with another forty pages of appendix. Sins of omission in both books are too plentiful for us to enumerate, and so we will dismiss them with an expression of regret that works professing to be guides to one of the most important and responsible duties which a medical man can be called upon to perform, should pass into circulation with so meagre and wholly inadequate an account of artificial anæsthesia, its promotion, dangers, and difficulties. Mr. Underwood in his preface says he has "no fear that the following pages will be found to lack the wisdom that is born of experience, or to contain matter that is in any sense unpractical." Whether readers of the book will be able to take so hopeful a view of the case we very much doubt. Throughout we notice an absence of method in arrangement, as well as an entire want of any practical rules such as might serve to explain to a novice how he should set about giving an anæsthetic. Besides this looseness of compilation (for Mr. Underwood naïvely tells us he has only adopted the work of other writers without having any pronounced views of his own), there is an absolute inaccuracy in many of his statements—such, for example, as that chloroform is at present the anæsthetic most frequently employed for prolonged operations. The best chapter is that dealing with nitrous oxide, a matter with which Mr. Underwood as a dentist is presumably most acquainted. Mr. Braine's paper, read before the Medical Society in 1884, is largely under contribution for the chapter on ether, while directions concerning chloroforming are mainly taken from Sir Joseph Lister's papers published respectively in 1861, 1870, and 1882. Paul Bert's experiments are detailed, but no mention is made of the now universally recognised fallacies underlying the whole of his research. The teaching in this chapter is, we think, most dangerous, and is out of accord with our present knowledge. Thus, Mr. Underwood says: "The general result of all these experiments" (Bert's and Payrand's—whose method, by the way, was anticipated in this country) "from the days of Snow down to now seems to point to the fact that there is *little or no danger of cardiac syncope* during the careful administration of chloroform" (the italics are ours); "still there are dangers, for many deaths have been recorded." These dangers are said to be fright, shock, and overdosing. And the chapter concludes: "Chloroform is not specially dangerous unless given in too strong a dose." Surely the special danger lies in the fact that it is so easy to give an overdose! Clover, perhaps the most expert administrator of this country, met with deaths even when employing his method, whereby only a vapour below 4·5 per cent. was inhaled; and yet Mr. Underwood asks us to believe that chloroform only "becomes dangerous if the ordinary precautions laid down are neglected."

Mr. Davis undertakes more than the author of the "Notes," making mention not only of the three common anæsthetics, but devoting thirty-six lines to methylene, ethydene dichloride, and anæsthetic mixtures, and nine pages to cocaine. We cannot agree in the opinion expressed in favour of Ormsby's inhaler, as that instrument transgresses every canon of successful ether-giving. Dr. Ormsby certainly never intended, as stated by Mr. Davis, to improve Clover's inhaler—indeed reference to his original paper shows this. Mr. Davis's preference for Ormsby's inhaler may explain his curious statement that "children are readily asphyxiated by ether." We hope many children have not suffered this terrible death; certainly no record has, in our knowledge, been made of such an untoward result of etherisation. Mr. Underwood gives us to believe that chloroform kills by arresting respiration through paralysis of the arytæno-epiglottidean folds; Mr. Davis ignores such a possibility, and informs us that chloroform kills by syncope, although he admits "the respiration serves as an excellent guide to the patient's condition." Spasm of the glottis is said to be sometimes caused in nervous persons by their voluntarily holding their breath; this is not usually accepted, and we should regard such a theory as untenable. Turning to the practical side of anæsthetics, we are surprised to find Mr. Davis advocating the administration of nitrous oxide gas two or three times in succession—a practice which we believe other anæsthetists regard as harmful and likely to cause headache and malaise. We regret that the author of this little manual has not given himself a fair chance of penning, concisely if he will, yet adequately, the essentials of anæsthetic administration.

ACCIDENTS IN THE ALPS.—It is stated by a Swiss newspaper that this year's death roll in the Swiss Alps is an unusually heavy one. In the short space of not quite a month 22 tourists met with accidents, of whom 18 were killed. The accident on the Jungfrau (canton of Bern) involved the loss of six lives; that on the Falkniss (Granbündten) three. One life was lost in each case in the accidents on the Morteratsch glacier (Granbündten), Molesa (Waadt), Gantrist (Bern), Leissigergrat (Bern), Säutis (Appenzell), Kaisereck (Freiburg), Dent de Corjan (Waadt), Schächenthal (Uri), and Diablerets (Wallis). There were no guides among the 18 killed, and only too many persons made ascents without guides. The four injured persons were all tourists.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 24, 1887.

THE success of the Ninth International Medical Congress is a matter for thankfulness. The interruption of the series of Congresses would have been little less than a calamity and a disgrace for the profession in all nations. Any serious imperfection in the meeting, either as respects numbers or the character of the discussions, would have been but little less unfortunate. But the Congress has been held under most honourable auspices; the famous hospitality of the United States has been fully realised; and those who went great distances to attend the Congress have been amply rewarded, and will return to their various countries and duties with higher impressions of their calling and deeper convictions of its progress, both on its scientific and its medical side. We cannot but rejoice that our own country was well represented in many of the Sections; the names of many well-known English physicians and surgeons will have been noticed in the reports which were received by cable from our special correspondents at Washington. We confess that we read the report of the concluding proceedings of the Congress with the most pleasurable emotions, and not least the remarks of the English members. A break-down of the Congress in Washington would have been only a less acute pain to us than a break-down in London. And we accept the concluding speeches of our countrymen and of our *confrères* of Berlin and Paris, Dr. MARTIN and Dr. LANDOLT, and others, as proof that the Congress has been worthy of its predecessors, that it contained a larger gathering of foreign members than any of them, and that it is calculated to promote the advancement of our art. Those in the United States who have worked to this end, in spite of much discouragement, well deserve the gratitude which was accorded to them by formal resolution. We have purposely abstained in our allusions to the Congress from pointedly referring to the domestic differences among our brethren in the States, which threatened to seriously mar the success of the Congress, if not to prevent it altogether. Those who persevered in spite of all opposition, and who have carried through the Congress so successfully, may well be satisfied. They have done a great service to their country and to their profession in all countries. It is not necessary for us to say that they committed no faults and made no mistakes. Such praise is not for mortals in a world so full of "spilt saltpetre" as ours. But they have carried through the Congress, and we thank them. There is yet one other service they can do: in any official action that now devolves upon them, to strive to obliterate the last relics of discord, and to hand on the light of truth and charity, undimmed and unqualified, to those in Berlin on whom will now rest the burden of responsibility for the next Congress. They can well afford to be magnanimous, and to help to make the representation of the States at Berlin so complete as to bear no traces of recent divisions.

The scientific value of the addresses and papers read at the recent Congress cannot be estimated till we have seen them in full. On the whole, judging from abstracts of the papers and discussions, we are inclined to say that they have been practical rather than theoretical, and have had reference to useful rather than transcendental aspects of medicine. Neither, so far, have we met with much indication of original matter in the papers. But this is no dispraise. It was meet that in the most practical nation in the world papers and discussions should take a practical turn, and deal with questions at their practical point. No branch of medicine can be said to have been neglected, from that which deals with the brain to that which deals with the risks of decayed teeth, including, by the way, several instructive cases of pyæmia. The statistics of vaccination were much advanced in a paper by Dr. JOSEF KÖRÖSI, Director of Communal Statistics of Buda-Pesth (to which we hope to make more special reference), and other questions of Public Medicine were made subjects of interesting discussion. Every branch of medicine was well represented—notably the ophthalmic, the gynæcological, and the dermatological; so that we venture to forecast that the volumes of the Transaction Reports will have considerable practical importance.

THE Metropolitan Asylums Board, after sacrificing a week of valuable time, last Saturday reversed the unfortunate vote at which they arrived seven days previously, and they have now decided to open the Winchmore-hill hospital for the reception of the ever-increasing number of scarlet fever patients. By turning such places as laundries and linen stores into wards, and by decreasing the amount of cubic and floor space to which each patient is properly entitled, they have so far been able to receive all the sick sent to them, and we can only express a hope that the preparations at Winchmore-hill may be so rapidly pressed on that no block may occur in the working of the system which London has endeavoured to mature for the isolation of the infectious sick. Scarlet fever is still steadily on the increase in the metropolis, and there is no reason for believing that it will materially diminish until we are well into November, or even until the close of the year. The delay which the mischievous vote of Saturday the 10th inst. has brought about can only do harm, and already we learn that owing to it the usual tenders in connexion with the work of furnishing will have to be dispensed with; and thus the very attempt at economy, which was regarded as a foremost consideration by some of the opponents of reason, will in all probability now result in a necessary extravagance.

But even if all succeeds in connexion with the present epidemic, it will be a long time before London forgets the exhibition of unfitness for their posts which a large number of the members of the Asylums Board have exhibited. One of the greatest evils attending the sanitary administration of the metropolis has been the subdivision of authority; but, in a few respects, London had flattered itself that needless division had been got rid of, and the Metropolitan Asylums Board was looked upon as a body on which the metropolis as a whole was represented. Now we learn that it is possible for a majority of that Board to ignore the needs of the community on the occasion of an emergency such as Londoners are passing through, and so air their ideas

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of economy, as well as show their want of appreciation of the most elementary portions of the duties assigned to them. As we said last week, it is the Poor-law element that needs largely to be eliminated from a body which, whether those they isolate are in receipt of relief or not, has to perform some of the most important sanitary functions that could possibly be delegated to them. They have, it is true, in this instance cried *peccavi*, but the chairman having received a letter from the President of the Local Government Board which in official terms told him that the Asylums Board had failed in their duty, and expressed the opinion that that duty ought to be performed without further delay, makes a public statement to the effect that the central authority ought to have told them what their duty was at an earlier date. What this means it is difficult to say; but that it was a statement deliberately made is the more evident because it was also embodied in a written communication addressed to the President of the Local Government Board. The public will naturally ask what the Asylums Board is for, if, with a staff supplying their officers daily with evidence that their hospitals are filling to overflowing and that the demand for accommodation is still on the increase, they need to be told in advance by the central authority what their action should be under such circumstances. One reason alleged for the intervention of the Local Government Board is that it had medical advisers whose counsel was available at so important a juncture. This may be, but it is certain that the Asylums Board should have all the information as to their own institutions and work which the central authority are able to obtain, and it is evident that there is a complete misunderstanding between the two bodies as to which of them should be prepared to provide matured medical advice in respect of the general work of the isolation of infectious diseases in London. That such advice has all along been and is still lacking must be obvious to anyone who has followed the history of the Asylums Board in its dealings with small-pox. Now the Chairman tells us that his Board looks elsewhere than to its own resources in order to learn how to deal with an epidemic of scarlet fever, and his colleagues receive the statement with signs of approbation. The outlook is by no means promising.

THE Address on Fever delivered by Professor AUSTIN FLINT before the International Medical Congress comes opportunely at a time when attention is being more than ever attracted to this subject. There is, moreover, a wide contrast in the manner in which Dr. FLINT has dealt with the question and the line of argument adopted by Dr. MACALISTER in his recent Gulstonian Lectures. For, although basing his reasonings upon physiological grounds and facts upon which as a physiologist he has every title to be heard, there is hardly a single note throughout his address upon the aspect of pyrexia with which Dr. MACALISTER so fully and so ably dwelt. The reason for this silence upon the intricate subject of the relation of the nervous system to the production of normal and abnormal heat is perhaps not far to seek. Professor FLINT would be the last to ignore the importance of this aspect of the question, but he seems to have chosen to drive home certain practical lessons, rather than to venture upon the boundless field of theoretical speculation. In so deciding he has rendered no mean service, and has ensured to his address a wide attention on the part of the profession. He has nevertheless found it necessary for the continuity of his argument to make one assumption, which modern discovery goes far to justify. The essential fevers, he affirms to be due to a special cause—a micro-organism,—the operation of which ceases after the lapse of a certain time. This assumption has almost gone beyond the stage of a reasonable hypothesis; for not only have specific pathogenic microbes been detected in the blood and tissues of a great number of fever patients, but the known facts of contagion, of incubation, of the self-limited duration, and the immunity conferred by one attack against a second, which characterise so large a proportion of this class of diseases, are strictly in conformity with all that is as yet known of the properties and vital conditions of microbes. What, then, can be simpler than to assign the leading phenomena of the febrile state to the operation of the vital activities of these minute parasites? But when it is granted that these are the morbific agencies, we are still a long way from solving the next problem—namely, the mode in which they operate; and Professor FLINT did not venture to supply this link in the causation of the febrile process. Whether the poison they generate acts upon the heat-controlling centres in the nervous system, whether the presence of the microbes in the blood is more directly a cause of the tissue changes which are at the root of the increased production of heat, or whether they operate in some manner as yet unconsidered by the theorist, it is certain that we have not the knowledge requisite to supply this hiatus. Much has been done, notably by Dr. BURDON SANDERSON, and we have derived therefrom some facts as to the chemical changes which are in operation; but for all that, at the present time we must be content to accept the bare fact that fever, which is characterised by an excessive production of heat, is concomitantly marked by excessive tissue metabolism, with resulting inanition.

This practically was the position assumed by Prof. FLINT, and we owe much to him for so clearly bringing into relief the physiological phenomena which characterise the maintenance of animal heat and the pathological features of the febrile state. In doing so he introduced a novel, and at the same time a most important, point for consideration. From his own and other observations he clearly proved that in the normal process of nutrition, whereby the heat of the body is maintained, the formation of water is an essential factor. This is a point which has certainly been lost sight of. Attention has been concentrated upon the excretion of carbonic acid and urea as indicative of the oxidation of food and tissues; but the facts that the water daily excreted is in excess of that ingested, and that a large proportion of the hydrogen of the ingesta is by no means represented in the egesta, justify the conclusion of Professor FLINT that the oxidation of hydrogen is an important element in nutrition, and that, as regards the animal economy, water is to be placed in the same category as carbonic acid and urea. In muscular work, which is accompanied by increased heat and increased elimination of carbonic acid and urea, there is also increase in the discharge of water. But in fever the normal metabolism is

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deranged. There is excessive oxidation of tissue, which the food supply is insufficient to counterbalance, and consequently there is an increased excretion of carbonic acid and urea. The fatty tissue is consumed; the muscular tissue and gland cells degenerate; but with all this evidence of increased oxidation there is a diminished formation and suppression of discharge of water. This last-named circumstance is held to account for a great part of the phenomena of fever. For although in health the oxidation of hydrogen takes its share in the production of animal heat, yet the water thus produced is available for the equalisation of temperature by cutaneous transpiration. In fever the suppression of this product of oxidation is wanting. The pyrexia, says Professor FLINT, "is fed, so to speak, by the fatty and solid tissues of the body alone." The disturbance in the economy due to the lack of water heightens the fever, owing to the consequent suppression of the cutaneous functions, and increases the disintegrative processes. For "in simple inanition the tissues of the body are economised by the excessive formation of water and the increased prominence of this process in calorification."

The application of these facts to the rational treatment of fever was made by Professor FLINT in a manner which proved the harmony subsisting between physiological inquiry and practical medicine. He showed that in the treatment of fever the abstraction of heat by external cold is one of the most rational of procedures; for in fever we have as a fixed condition an increase of the process of calorification. By the application of cold to the surface we abstract the excess of heat, and thereby reduce the temperature of the body. The proof of its efficacy lies in the notable subsidence of the nervous derangements which are secondarily due to the heightened temperature. The administration of antipyretic drugs has a similar effect, but the explanation of their action is obscure. It is possible that they operate by restraining metabolism, but, after all, our use of them is largely empirical. One of the chief lines of treatment of fever is that indicated by GRAVES—suitable and sufficient alimentation. Hampered as we are in this respect by the enfeebled digestive powers, Professor FLINT thinks we may do more than we are in the habit of doing in the way of administering fatty and farinaceous foods, the great object of alimentation being to retard and repair the waste and degeneration of tissue, and also indirectly to save the tissues by furnishing material for oxidation. On this ground he argued strongly for the retention of alcohol in the fever diet, maintaining that its ready oxidation rendered it a most suitable food, whilst it at the same time supplied the water of which the body is so much in need. In this connexion he alluded to the probable normal production of alcohol in the body from sugar; and he further illustrated the point by a reference to diabetes, where, in spite of increased consumption of nitrogenous and fatty substances, there is wasting and a diminished temperature, because the sugar is perverted from its normal office in the economy and is discharged unchanged. Professor FLINT admits, and no one can gainsay it, that the administration of alcohol in fever has been abused; but he has, none the less, done good service in once more recalling us to the sense of its value, when judiciously given as a hydrocarbon which can be utilised without any undue strain on the digestive or assimilative powers.

A LETTER from Mr. ED. W. WILMOT, which appears in a contemporary under the above heading, first expresses the opinion that true cholera does not exist in Malta, and then gives certain information having important bearings on the question of quarantine. We do not propose here to discuss the correct name of a choleraic disease which, according to published returns, killed 177 persons out of less than 300 recorded attacks up to the middle of this month, but we would point out that, if these returns even approach trustworthiness, there is not much to choose between "this choleraic diarrhœa" of Malta and the true Asiatic disease. But the writer's other statements deserve more than a passing notice. He refers to the grave distress and poverty which prevail, and points out how the disease is limited to the Maltese labouring classes as opposed to the troops. The former class are suffering severely, and poverty with its depressing influences, together with insufficient and bad feeding, are but too well known to act as predisposing causes to the spread of cholera; the latter class are well fed, properly housed and cared for, and so far they have immunity. But why has so great a contrast arisen between the two classes? The letter supplies the answer. The real distress is due to want of work, caused by empty harbours and deserted quays. And why has business so largely come to a standstill? Because the various nations have, with but few exceptions, put Malta in quarantine. Now Malta has always taken a very prominent position as regards quarantine measures, enforcing them with severity against other countries suspected of having cholera. Her attachment to those measures has not prevented her from being attacked with cholera; and now she is learning the lesson that, apart from their failures, those measures induce the very conditions which tend to the spread of the disease against which they are aimed. Her apologist also pleads for the removal of the barrier which others have seen fit to set up around her, and urges that there is no reason for it. The examples of Italy and of France are quoted, and it is stated that "no quarantine is imposed on passengers from Malta either at Marseilles, Naples, or on the Franco-Italian Railway frontier." But the truth is that Italy, and in some degree France, are progressive nations on this subject. They have had bitter experiences of the utter uselessness of quarantine restrictions; and Italy, having first abandoned land quarantine, has this year abandoned quarantine by sea; whereas France has given up her trust in quarantine by land, and would now not even impose sea quarantine against Malta. The lesson is, we trust, being learned, though slowly, that it is to the adoption of sanitary measures, and not to the imposition of quarantine restrictions, that Europe must trust for the prevention of cholera; and it is to be hoped that next time a rumour of cholera appears in the Mediterranean, Malta will imitate the example which is now being set to her at Marseilles and at Naples, and that, instead of issuing placards warning people away from her ports, she will so organise her sanitary arrangements that any imported infection can be properly dealt with without its finding on shore the conditions favourable to its development and spread.

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Malta has all along been a great barrier in the eyes of Europe generally to the abandonment of useless and vexatious quarantine restrictions, for those who would induce other nations to follow the English lines of cholera prevention have often been reminded of the proceedings taken by this little English Mediterranean colony. We believe that, in so far as these antiquated measures are concerned, the colony is self-governing, and hence we must await the time when those responsible for her internal government shall have learned, by such experiences as her population is now going through, whether to trust as heretofore to the old-fashioned restrictions or to adopt true measures of sanitary prevention.

Annotations.

"Ne quid nimis."

LONG SITTINGS OF THE COMMONS.

IT is, we believe, understood that some endeavour will be made at the commencement of the next session of Parliament to procure such additions to the Standing Orders as shall be effectual for the prevention of that wanton and ruinous waste of time and strength which has in recent years taken the form of prolonged sittings, as a piece of tactics used by the Opposition in the House of Commons. The postponement of the adjournment is no doubt not only an obstructive, but a very destructive policy. The Closure is scarcely of a nature to admit of its extensive use. If this summary ending of a debate were adequately employed, it would be held to be abused, and speedily fall into discredit, with the result of its abandonment by successive Parliaments. What is wanted is probably a fixed limit to the sittings of the House, something like the rule that obtains on Wednesdays, but without the penalty of dropping Orders. It would be absurd to provide the Opposition with a power of talking out measures wholesale. To outsiders it would seem that one of two methods might be adopted—either to order that the House should stand adjourned every day at 1 or 2 o'clock A.M., or to make the Closure an automatic rule coming into force at a definite period of each debate, unless the Opposition could show the strength now required to enforce the closure. Perhaps this last suggested procedure would be the simplest, as it would cast on the party of delay the onus of showing a numerical strength sufficient to entitle it to prolong a discussion beyond reasonable limits. It has been suggested that the time to be occupied by speeches should be limited, but there are difficulties in the way of any such plan as this which it would be extremely difficult to overcome. From the health point of view—that from which we, of course, mainly regard the question,—it is imperative that effective measures should be devised. Very grave mischief is being done to members of all parties by the prodigal waste of strength caused by long sittings. Not only are Ministers, who must needs work at their offices or in departmental business nearly all day notwithstanding the fact that they are kept up at night, exhausted, but the strain is very great on all members of the House of Commons, and especially on the professional men and merchants who now constitute a considerable proportion of the Lower House of Parliament. The effects of these long sittings are beginning to show themselves in the impaired health of members generally, and the time cannot be far distant when a heavy mortality will begin to be apparent, the inevitable penalty of an abuse of physical as well as mental powers which nature will not tolerate. The atmosphere of the House is bad, and each session it is becoming worse. If the present system of reckless strain on the vital strength of our law-makers is not quickly reformed there will be a catastrophe, which too late must recall the House to reason.

TREATMENT OF CASES OF BITES BY RABID ANIMALS.

THE report, drawn up by Mr. V. Richards of Goalundo, and forwarded to the Inspector-General of Civil Hospitals, Bengal, concerning cases of animal bite treated by potassic permanganate at the various dispensaries in Bengal contains matter of an interesting nature, but of little practical value. We are glad that the tone in which the report is written does not partake of any bitterness against the Pasteurian method of treatment of animal or rather rabid bites, and we feel also that the conclusion at which both its author and the Inspector-General arrived, to the effect that the method of treatment should have a further trial, will commend itself to the heads of the Municipal Government of Bengal. M. Pasteur is said to have treated 48 individuals supposed to have been bitten by rabid wolves, and of this number about 14 per cent. are said to have died, and it is curious that the mortality percentage of cases in which the bite was inflicted by rabid jackals treated by the potassic permanganate method, as gathered from Mr. Richards' returns, was practically the same. There is nothing novel in the permanganate method of treating wounds inflicted by rabid animals; and seeing the object of the treatment is to destroy the virus *in situ*, it may well be doubted whether, after the lapse of some little time, it would be possible, in the case of the rabies poison, to completely destroy even the virus which remained about the wound; and although the poison is considered to remain at the site of introduction, it is questionable whether this view is strictly correct.

IRISH VITAL STATISTICS FOR 1886.

WITH commendable promptitude the Registrar-General for Ireland has just issued his twenty-third annual report, dealing with the vital statistics of Ireland for last year. The corresponding report for England and Wales will certainly not be in the hands of the public much before the close of the year; and it is scarcely three months since the Registrar-General for Scotland issued his annual report for 1884! Due credit is therefore due to the Registrar-General for Ireland for having found the means to issue his annual report within eight months of the close of the year to which it relates. We must confess, however, to some disappointment at the contents of the report proper, which occupies twenty-nine pages; of these, fifteen are devoted to meteorology, and but eleven to the discussion of the vital statistics of the year. The abnormal condition and age distribution of the Irish population invest the vital statistics of that country with exceptional interest, and it is disappointing to find that the report just issued affords no ready means for judging of the effects of these disturbing influences upon the vital statistics of the country. For instance, we are told that the birth-rate in Ireland in 1886 was equal to 23·3 per 1000 of the estimated population, and that it was 1·4 below the mean rate that prevailed in the ten preceding years. It should be remembered, however, that the birth-rate in England and Wales in 1886 was 32·4 per 1000, or 9·1 higher than the rate in Ireland; and it would not be without interest to have some light thrown upon this wide variation between the birth-rates of the two countries. It appears that the estimated population of Ireland in the middle of 1886 was 388,046 less than it was in the middle of 1876, and it is obvious that this decrease, caused chiefly by emigration, consisting mainly of young adults, must seriously affect the reproductive capacity of the Irish people. In order to correct for this elimination of young

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adults from the Irish population, let us calculate the English and Irish birth-rate in 1886 upon the estimated number of women aged from fifteen to forty-five years in each country. Calculated in this way, the births registered in England in 1886 were equal to 141 per 1000 women of these ages, while the proportion in Ireland was 104 per 1000. Even these corrected figures must, however, still understate the true fecundity of the Irish population: (1) because it has been assumed that the *proportion* of women aged from fifteen to forty-five years in Ireland in 1886 was the same as in 1881, notwithstanding the continued large annual proportion of emigration; (2) because the proportion of married women at these ages is probably larger in England than in Ireland; (3) because the proportion of illegitimate births is much larger in England than in Ireland; and (4) because it is probable that in Ireland a far larger proportion of births still escape registration than is the case in England. These are some of the reasons which detract from the value of the mere birth-rate to population in Ireland for the purposes of comparison with the birth-rates in other parts of the United Kingdom, where the age distribution of the population is so different. Similar difficulties stand in the way of accepting the gross death-rate in Ireland as an entirely trustworthy measure, for comparative purposes, of the true mortality of the population of Ireland.

WORKING-CLASS BIRTH-RATES.

THE social and political importance of the birth-rate among the working classes, and its effect upon all population and vital statistics, invests with undoubted value all trustworthy information on the subject. The recently issued report of the medical officer of health upon the sanitary condition of St. Giles's in 1886 contains some information bearing, among other things, upon the varying birth-rate in different parts of this sanitary district, which has deservedly given rise to some comment. The district of St. Giles includes, besides the parish of St. Giles-in-the-fields, the parish of St. George, Bloomsbury, and is divided into three registration sub-districts—St. George, Bloomsbury, St. Giles South, and St. Giles North. The report in question states the birth-rate in these three sub-districts to be 21·9, 43·5, and 19·7 per 1000 respectively. These wide variations are thus explained by the medical officer. In Bloomsbury the low birth-rate is due to the large proportion of domestic servants included in the population housed in the squares and broad residential streets around the British Museum. In St. Giles North the low rate is, not so conclusively, attributed to loss of population through clearances for new streets—meaning, we presume, that the population of the sub-district is over-estimated. With regard to the high rate, 43·5, in St. Giles South, it is said to be due to the number of children born in the Peabody Buildings and the British Lying-in Hospital. As this part of the sub-district also shows an abnormally high death-rate, these facts have suggested the question whether it is a "necessary condition of human life that the weakest and worst members of the species should reproduce themselves most rapidly"? Now it is not a fact that what are known as "slums" have generally high birth-rates, although nearly all blocks of *improved* dwellings for the working classes show abnormally high birth-rates. If the birth figures for St. Giles South are looked at a little more closely they will be found to be misleading. If due correction (for which the report gives the necessary figures) be made for the births in the Peabody Buildings in Wild-street, and in the Lying-in Hospital, the birth-rate in the rest of St. Giles South is reduced from 43·5 to 31·7, which is 0·5 below the average for the whole of London. It is stated in this report that the birth-rate in the two blocks of Peabody Buildings situated in Great Wild-street and in Little Coram-street was 43·8 and 53·6 per 1000 respectively in 1886, and the last annual report issued by the trustees of the Peabody Donation Fund shows that the birth-rate among the rather more than twenty thousand persons housed in these improved dwellings last year averaged 42·4 per 1000, or more than 10 per 1000 above the general London rate. It should, however, be borne in mind that these, as well as most other, blocks of improved industrial dwellings are almost exclusively inhabited by married couples, in the prime of life, belonging to the better paid of the artisan class, among whom the birth-rate is bound to be high. Most of the unmarried young women of this class are in domestic service, large numbers of the single men live in common lodging-houses, and most of those past work or out of work are either packed away in the "slums" or are in workhouses. It is therefore most misleading to accept the birth-rates in improved dwellings as the birth-rates of the working classes. The working classes, compared with the upper and professional classes, undoubtedly marry young, and therefore would probably yield a higher birth-rate; but there is reason to doubt whether the birth-rate of the whole weekly-wage-earning class is much higher than that of the shop-keeping and lower middle class. It is much to be regretted, however, that no thoroughly satisfactory statistics on this subject exist, as it is one on which doubtful conclusions are frequently drawn from very insufficient data.

MEDICAL CERTIFICATES.

THE giving of a medical certificate, though one of the simplest of the duties that fall to the lot of the medical practitioner, is also often one of the most thankless. An illustration of this has just been brought to our notice. Mr. J. G. Fitch, who is one of Her Majesty's chief inspectors of education specially detailed to the examination of training colleges for female teachers, declares: "It is the complaint of the medical officers of the colleges that this testimony is often very untrustworthy [i.e., testimony to the health of candidates for admission to the training colleges] and that they are compelled to protect themselves by much further examination, even when the certificates given by local medical practitioners have been of the most positive and unqualified kind." We have no means whatever of knowing what foundation of fact there is for this complaint. However that may be, the accusation is not of such a kind as ought to be made in general terms. But it is more than likely that, having once been made, this remark will be repeated from time to time. It is well, therefore, that the attention of our readers all over the country should be drawn to it, and that some hint should be afforded to them of the construction the Training College authorities incline to put upon a candidate's certificate of health. Upon this point Mr. Fitch writes: "Since by the conditions of arts. 130-132 the grants paid to training colleges are in a large measure determined by the number of young persons who successfully complete their two years' training, and who afterwards serve for a satisfactory period of probation and obtain their certificate, it becomes the interest of the authorities of those institutions to receive only those students who are likely to complete their course with credit. The most careful inquiries are made, therefore, respecting their character, previous career, and social surroundings; and, considering that the young people are about to enter a laborious profession, special testimony is required respecting their health." We think that a guess may be hazarded here as to the real cause of the misunderstanding which the Chief Inspector reveals. It is easy to understand that the practitioner to whom a girl applies for a certificate of health preparatory to admission to a training college has questions of infection and freedom from incapacitating

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maladies in his eye rather than the pecuniary interests of the colleges, and that nothing on such an occasion is further from his thoughts than to examine as if he were passing a lad into the army or a candidate for an assurance company. And we are bound to add that it is his duty to hold an even balance between the colleges and the candidates, and carefully to shut out from his view considerations of the sort upon which the training colleges would seem to insist. It would be monstrous if a capable woman, or man either, could be debarred from choosing the profession of a teacher merely because somebody else promises to earn a training school a larger grant.

SCLEROSIS OF THE HEART.

ACCORDING to Huchard the causes of sclerosis of the arteries of the heart may be divided into three groups: the first being due to intoxications, or rather toxæmia, by alcohol, tobacco, malaria, and lead; the second group is formed of causes such as the diathetic states of arthritism, gout, and syphilis; whilst the last group, and one to which exception may with at least some reason be taken, is composed of causes such as physical, moral, and intellectual over-pressure. The sclerosed heart may be either hypertrophied or dilated, but most often dilatation and hypertrophy are associated. Modifications of the form and size of the heart are the direct consequences of the initial vascular lesion, and not of the ensuing sclerosis. The common lesion is obliterating arteritis of the small coronary vessels, and it takes place slowly, so as to allow of time for compensating hypertrophy and for sclerotic lesions to develop. If the arteritis is of more rapid progress, dilatation of the heart and alterations of the heart-muscle fibres are the preponderant changes. Three histological varieties of cardiac sclerosis may be differentiated, following Weber: (1) perivascular sclerosis due to the propagation of inflammation; (2) the dystrophic sclerosis from regional ischæmia; and (3) mixed sclerosis. The changes in the muscle fibres are but imperfectly known. Two of the principal alterations are simple atrophy and the vitreous degeneration of Zenker. Nosographically, cardiac sclerosis is one of the anatomical expressions of arterio-sclerosis of the heart. Weber regards arterio-sclerosis as the outcome of certain etiological conditions, amongst which must be ranged heredity, certain hygienic habits, and various chronic intoxications.

MEDICAL EXAMINATION OF MISSIONARIES.

AT no time is the need of due medical examination and sanitary supervision more urgently needed than when troops, especially young troops, are being sent abroad to some tropical climate where ague, dysentery, and other serious diseases are endemic. Missionary societies, which are constantly sending out young men and women, who have frequently passed a large part of their lives in study or in sedentary occupation, to more or less unhealthy climates, are not, as a rule, as careful as they should be with regard to weeding out unsuitable constitutions by strict and careful medical examination, nor do they generally supply the young missionary with medical or sanitary regulations to guide him in his work. He is, it is true, usually sent to an older missionary, from whom he receives many valuable hints; and if there should happen to be, as is only too rarely the case, a brother medical missionary in the station, he ought to be at no loss for guidance. Nevertheless, it not unfrequently happens that a young missionary is left alone in an isolated and unhealthy place, and if his zeal (which is usually considerable) is not tempered by discretion the consequences to his health may be serious. A young missionary has lately succumbed to an attack of fever (due at first to a wetting) on the West coast of Africa, and a good deal of discussion has been taking place in the organs of the religious denomination with which he was connected with regard to the question of whether anyone was to blame. It is thought by some that his general condition was such as ought to have precluded his being allowed to go to such a climate. Whether he was or was not medically examined before being sent out, his death may well serve as a caution to those who have the duty—honorary, it may be, but perhaps all the more responsible on that account—of deciding as to the fitness of missionary candidates for tropical climates, to weigh the circumstances very carefully, and to keep their minds entirely free from the bias natural to those who take an interest in missions, but which ought not to be allowed for a moment to interfere with the opinion dictated by purely scientific considerations. The truer and more scientific the opinion given, the less will the missionary work suffer.

THE EXETER CATASTROPHE.

THE jury empanelled to inquire into the circumstances connected with the disastrous fire at the Exeter Theatre, by which over 180 persons lost their lives on the 5th inst., have returned a verdict of "Accidental death." In riders appended to their verdict they expressed opinions to the following effect:—(1) That the magistrates are much to blame, and deserve censure for not having completed their inspection of the theatre, and for suffering themselves to be misled by the architect in the matter of the exit from the gallery to the second circle. (2) That it is a matter for regret that the Town Council's bye-laws do not allow of their efficient control over public buildings. (3) That it is deplorable that the architect, having been engaged as a specialist, should have produced such a building with so many structural defects. (4) That the architect failed in his duty in not providing a second exit for the gallery. (5) That legislation bearing upon the inspection and remodelling of means of exit, and the stage-working arrangements of all theatres, and the prevention of fires therein, should receive the earliest attention of Parliament. (6) That some effectual plan of excluding fire and smoke from the stage and other portions of the building should be adopted by the fixing of a water screen or other apparatus. (7) That the chief constable should be empowered to make inspection at all times of all parts of the building, without notice to the directors or to managers, and that he should make such inspection at least once every month when the theatre is open, and thereupon transmit a report of his inspection to the Town Council, and state whether all fire hydrants, ventilating apparatus, &c., are in perfect working order. (8) That before a magistrate's licence is granted for any public building, such building shall be thrown open, with all its approaches, entrances, and exits, to the inspection, under police supervision, of all householders in the borough for a week after its final completion.

LEICESTER AND VACCINATION.

Mr. J. T. BIGGS, in a letter to a contemporary, makes merry over the 100,000 persons in Leicester who are unprotected by vaccination from small-pox in defiance alike of the law and of common sense. What is especially gratifying to Mr. Biggs is that the contagion of this prejudice has spread to the more educated, or at least the wealthier, classes in Leicester. So that, whereas in ten years public vaccinations in comparison with births have decreased to the extent of 75 per cent., the decrease in private vaccinations is as much as 97 per cent. We are not inclined at this moment to disturb the peace and self-complacency of those persons who have allowed themselves and their children to get into such a state of exposure. We only wish at present to point out the inaccuracy of Mr. Biggs, whose statement will entirely mislead the public,

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especially in one sentence, where he avers that in the last nine years there have been twenty-four importations of small-pox, the whole of which have been absolutely stamped out *by sanitary measures alone*. Mr. Biggs here implies that isolation, cleanliness, and disinfection have given the people of Leicester their immunity from the disease. We know this to be incorrect, and Mr. Biggs ought to know it too. Leicester is saved from the spread of small-pox when it occurs *by vaccination* just as all other towns are saved, and but for this much-abused operation the population of Leicester would soon be in a state of panic. When an importation of small-pox occurs in Leicester, the case or cases are visited by the sanitary authorities, the sanitary inspector, and medical officer of health, who to a man are vaccinated or revaccinated. The case is then forcibly removed to a small-pox hospital, all nurses and officials of which are revaccinated, unless they happen to have taken the clumsy Leicester method of protection by taking the small-pox. Not only so. Leicester authorities proceed to revaccinate every individual in the house in which the hideous disease has occurred, or who has in any way been exposed to the case. It is this cordon of vaccinated and revaccinated persons that saves Leicester. Without this all the boasted sanitary police arrangements would be mocked. If Mr. Biggs doubts this, let him ask the medical officers of the corporation of Leicester. If he thinks this cordon a delusion, let him get an unvaccinated staff of officials to receive the next importation of the disease he so underrates. If he agrees with us that Leicester's unvaccinated thousands are saved by the vaccinated few, he is ungrateful in not stating the fact.

THE DIGESTIVE FERMENTS.

IN an interesting communication to the *Pharmaceutical Journal* of August 20th, Mr. Schweitzer of Kansas City, U.S.A., states his adherence to the following conclusions: Pancreatine or pepsine (or the pig's stomach and pancreas) acts with perfect ease and freedom in presence of each other. When digested together they do not destroy each other, nor do they lessen each other's digestive activity in whatever proportion they may be digested. Long-continued exposure to heat and moisture injures their original activity. Digested in alkaline or acid solutions the injury is increased. Pancreatine when digested for some hours in an acid solution becomes permanently injured or destroyed, and pepsine when digested in an alkaline solution for some hours is also permanently destroyed. But a state of acidity (*sic*), such as the healthy natural secretion of the salivary glands, of the stomach, or of the pancreas presents, is not sufficient to interfere with any of their digestive functions.

TREE PLANTING AND DRAINAGE.

IT is not merely an æsthetic fancy, but equally a prudent regard for the health of the community, which has led civic authorities to plant with bordering trees many of the greater thoroughfares in towns and cities. By this arrangement the advantages of a purer air and of shade in warm weather are gained for the townsman, besides the implied increase of space and the amenity conferred by thus practically transporting a strip of country into town. It is one of the happiest features in the development of cities now so rapid, that in their outer and growing zone the hard lines of road, wall, and railing are interrupted at frequent intervals by spots of green sward and by the luxuriant foliage of climbing shrub and spreading tree. In so far we have learnt the lesson of experience, and, in thus preserving round our homes a healthy atmosphere and some degree of rustic beauty, are wiser for ourselves than the crowded cities of a former generation. Still, we are not always duly careful even in our wisdom, as the sequel shows. This very custom of tree planting in streets is open to a danger fortunately not common, but still grave enough to counteract, where it exists, the best effects of rural surroundings. It has happened repeatedly, as we are reminded by the letter of a recent writer on this subject, that the roots of trees in their growth have sought out the crevices of drain pipes adjacent, and penetrating these, have grown with such vigour on the nourishment which they found there as completely to choke the pipes and prevent the exit of sewage. We have here, of course, no argument against the continuance of the boulevard system, but certainly a caution, enjoining first the more perfect adaptation of drain segments, and secondly a kind of care not always observed in the relative arrangement of wayside shrubs and trees.

CHOLERA INTELLIGENCE.

LAST week we referred to the considerable extension of cholera at Messina, in Sicily. Since then there have been in the seven days ending the 19th instant no less than 665 fresh attacks and 265 deaths in the province generally, the greater part being apparently in the city itself. If the truth were known, it would doubtless transpire that the disease was prevalent in Messina before the date at which it was suddenly announced that the city was so gravely invaded; as it is, the epidemic is steadily maintained in the province, and on two occasions during the week under consideration the mortality has either reached or exceeded 50 a day. In Palermo a daily mortality varying from 3 to 10 is still continuing. No regular returns are received from other parts of Sicily, but the disease still prevails in different parts of the island, and whilst Messina is attacked to the extreme east, Trapani also suffers at its western extremity. On the mainland, the principal seat of the disease is in and about Naples, the deaths in the province of that name amounting to some 10 to 20 a day. Pozzuoli, Castellamare, and other places in the Gulf of Naples are especially mentioned as being still attacked. To the extreme south, Reggio, in Calabria, remains a seat of the epidemic; and it is rumoured that cases occur daily in Rome. There is, however, difficulty in ascertaining how far the attacks in the capital are cholera proper, or cases of severe diarrhœa, such as are met with in many large centres of population at this time of the year. In Malta, whilst cholera remains fatally prevalent, the disease shows no further signs of extension, and it seems still limited to the more destitute amongst the natives of the island.

MEDICAL EDUCATION FOR THE CHINESE.

DR. WYKEHAM MYERS is to be congratulated on the success that has attended his labours in educating Chinese youths in medicine. The movement is as yet quite in its infancy, but it has attracted a good deal of attention amongst both Europeans and natives in China, as it is hoped that from a very small beginning a great scheme of medical education for China will ultimately spring up. It has been found impossible as yet to give a really satisfactory medical education through the medium of the Chinese language, and so only students who have had a good Western education are accepted. Dr. Myers teaches in English. For the first of the two professional examinations, anatomy, elementary surgery, physiology, and chemistry are required. Great difficulty is experienced in teaching anatomy owing to the prejudices of the Chinese regarding dissection. It appears, however, that by means of models and plates the students have really contrived to learn their anatomy in a satisfactory way. Two examining boards have been established, in Hong-Kong and Shanghai respectively. Two students passed the primary examination in Hong-Kong last year, and one has

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just passed in Shanghai. This young gentleman, Mr. Goh Kit Moh, was presented with his certificate at an important public meeting in Shanghai. Next year the two others who passed their primary in Hong-Kong last year will come up for their final examination in Shanghai, it being a rule that each student must pass his two examinations before different boards.

MARIANO SEMMOLA.

THE Italian papers are congratulating the distinguished Neapolitan physician on the *bella figura* he made at the Ninth International Medical Congress, all the more that his "record," as they point out, was already a brilliant one, on which it was difficult to improve. In 1883 his monograph on Bright's Disease, read before the French Academy of Medicine, evoked from that body a signal mark of approval and admiration. At the Congresses of Brussels, Amsterdam, London, and Rome, to say nothing of many other academic meetings in Italy and abroad, he never failed to contribute able and original matter to the proceedings. At the Sanitary Congress held in 1884 at Vienna he represented the Italian Government—represented it, moreover, so successfully that Max von Pettenkofer referred to him, in military phrase, as "my brilliant companion in arms." From Berlin he received gratifying attestations of the ability with which he spoke for the Italian view of debated points in medical theory and practice. His compatriots, not less proud of him as a benevolent citizen than as a learned and skilled physician, dwell on his indefatigable and fearless self-abnegation in the terrible explosion of cholera at Naples in 1884. Among his most cherished possessions is a portrait, in oil, of Louis Kossuth, "the Hungarian Garibaldi," as the Italians call him, a gift enhanced in worth for him by the following inscription, which stands engraven below it:—

Illustre Dottore Semmola,
Senatore del Regno,
che, profondo scrutatore
delle leggi del organismo umano,
coll' arte sublime
all' ottuagenario ridonò forze e salute
ricordo e pegno di riconoscenza
da
Luigi Kossuth.

(To the illustrious Dr. Semmola, Senator of the Kingdom, a profound investigator of the laws of the human organism, who, in the exercise of his noble profession, re-endowed the octogenarian with health and vigour, this picture is presented, as a memorial and pledge of gratitude, by Louis Kossuth.)

SEWAGE SLUDGE AS MANURE.

IT is satisfactory to hear of any successful agricultural experiments with sewage sludge. Our contemporary, the *Metropolitan*, reports that Mr. Joseph Jessop, of Pembury, near Tunbridge Wells, has obtained good results with pressed sewage sludge from Crossness. Mr. Jessop selected a poor sandy soil upon rock, and treated portions of it with sewage cake, farmyard manure, and artificial manures respectively. We are not told what quantity of each was used, or the relative weights of the crops obtained, which is unfortunate, for evidence upon these points would have been valuable. But good crops were obtained with the sludge, and Mr. Jessop is evidently satisfied, as he has already ordered 200 tons more of the material. The Metropolitan Board of Works are prepared to supply the pressed sludge gratuitously to all farmers who wish for it, and are willing to pay the carriage. We sincerely hope the experiment will succeed, for it is lamentable that so large a quantity of food-supply element should be wasted. It must, however, be remembered that repeated attempts of the same kind have been made ere this, and that the results have not on the whole been satisfactory. Pressed sewage sludge is by no means destitute of manurial value, but it is a weak manure, and cannot, as a rule, stand much cost of carriage. If used as a substitute for other fertilisers, it must be used in considerable quantity, and it is not suitable for all soils. The Metropolitan Board of Works, by their obstinate adherence to the present sewage outfalls on the Thames, have reduced themselves to the necessity of adopting the very worst system for the disposal of their sludge, and are actually arranging to take it in steamers down to the sea. If they can succeed in giving away any considerable portion something will be gained, although even then their sewage system will remain a disgrace to the metropolis. Fortunately the disgrace is so palpable that it cannot much longer be tolerated.

PLAY OF FEATURES AND MOVEMENTS OF LIMBS IN SICK CHILDREN.

ONE of the errors of too much specialisation is the tendency that exists in the specialist to believe that his own department more than any other is a fertile field for pathognomonic symptoms and signs of great diagnostic value. It is true that in some respects the diagnosis of disease in children is a more difficult matter than diagnosis in adults, but the difference is not nearly so great as some specialists would have us believe. The play of the features and the movements of the limbs are of considerable diagnostic significance in children and infants, but these signs cannot be said to be of no value in the adult, and it may be questioned whether their significance is very different in the two classes of patients. Soltmann has written anew, in the *Jahrbuch für Kinderheilkunde*, Bd. xxvi., p. 2, on the characteristic movements of infants suffering from various diseases, and his conclusions are very much the same as those usually recognised; at the same time it must be remembered that none of the positions given for various diseases are invariable. We demur to the general statement that in simple and tubercular meningitis there is a fixed expression as of deep thought which is quite characteristic; and we do so partly because such fixed expressions are frequently absent, though sometimes obvious enough, and partly from the difficulty which must have occurred to everyone to recognise "fixed expressions as of deep thought," though we admit that an immobility of the features is frequently present. Such statements as the following (in writing of meningitis) are, in our opinion, not warranted in the present state of knowledge: "When the optic chiasm is pressed upon, the eyes are rotated upward, the head is thrown backward, and the countenance expresses astonishment."

OVERCROWDING IN RAILWAY CARRIAGES.

So much is done in these days to secure the comfort of travellers by railway that one is hardly prepared to find that the primary necessity of sufficient accommodation still remains to a large extent a vain desire. No doubt there is something to be said for the embarrassment of companies like those in the metropolitan district when they find themselves on some periodic holiday overwhelmed by the uncertain rush of a multitude of sight-seers. The most perfect arrangements are not beyond the possibility of confusion. We are certain, however, that more might be done than is done to arrest that headlong assault on railway trains, without distinction of carriage or number of occupants, of which everyone has had some experience at times of general rejoicing. A more substantial reserve of third-class carriages available for holiday requirements is one chief desideratum. Another is a more frequent service, and in this direction the companies have certainly done something. Lastly, we would propose that, in order to infuse a little more energy into the direction of affairs on the

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platform, the force of porters be augmented for the time being, either with additional help of the same kind or with that of specially enlisted non-official helpers. The forcible intrusion of persons often in the dirtiest condition among the occupants of first and second class carriages, who have purchased the comparative comfort in which they choose to travel, is a matter of serious public inconvenience. The company of these intruders is not only objectionable on æsthetic grounds, but it is equally undesirable on sanitary principles. Overcrowding is thoroughly unwholesome in itself. It is doubly so in the circumstances we have pictured, since the possible transference of infection and another *contagium vivum* of parasitic nature is no mere shadow of imagination when one's companions have come from the slums of a great city. In their own interest, and with the best intentions, we commend this subject to the notice and earnest consideration of railway directors everywhere.

MR. CHADWICK ON SCARLET FEVER PREVENTION.

THE veteran sanitarian, Mr. Edwin Chadwick, C.B., will have done good by his recent letter to the Association of Sanitary Inspectors if his accounts of the efficacy of cleanliness of person and surroundings lead to more regard to these important matters. But it is a pity that diseases having little or nothing in common, special and general rates of disease and of death, and such matters, are all mixed up together, and that the absence of scarlatina, whooping-cough, &c., should be attributed to a multitude of causes, as clean air, the removal of putrid sewage, clean bed linen, warmth, manual exercise, &c. A reader who knows how varying are the predisposing and exciting causes of the different contagia gets a little confused before he reaches the end of the letter; but all will hope that some good in the direction of increased cleanliness everywhere and under all circumstances may ensue as the result of the publication of the document.

THE ISOLATION OF INFECTIOUS PAUPERS.

AT Warrington the question whether the Town Council ought to receive paupers into their infectious hospital has been raised from time to time, and the guardians consider themselves aggrieved by the refusal of the Corporation to undertake this duty. Legally, we believe the Corporation can do precisely as they choose in the matter; but, on the other hand, there is no duty imposed on the guardians of the poor to act as an isolation authority and to deal with a pauper infectious case in such a way as to protect the public health; indeed, instances have occurred in which guardians have distinctly told sanitary authorities that, whilst they are prepared to do their duty in providing infectious cases with proper care and nursing, they decline altogether to remove them from their homes and to isolate them in the interests of the public. The Public Health Act defines the sanitary authority as the proper body to provide means of isolation for cases of dangerous infectious disorders, and it draws no distinction in this respect between paupers and non-paupers. Some day we expect every sanitary authority will be so desirous to prevent the spread of infection in their respective districts that they will not trouble to inquire, in a case of small-pox or fever, what is the social standing of the sick person. But at present this view is not very generally taken, and whilst some sanitary authorities look to the guardians to repay the cost of such pauper infectious cases in their sanitary districts as call for removal to hospital, others altogether decline to receive paupers. Even this latter course can be justified under existing arrangements, for many sanitary authorities have not sufficient accommodation to classify their patients according to their social status as well as according to disease. And no one will doubt that in many instances excellent work done by sanitary authorities would be materially hindered and checked unless such classification could be made in the case of paupers.

DEATH OF RICHARD QUAIN, F.R.C.S. ENG., F.R.S.

WE have to announce the death of Richard Quain, F.R.C.S., F.R.S., Surgeon Extraordinary to the Queen, which took place at his residence, 32, Cavendish-square, on Thursday, Sept. 15th. He was buried on Wednesday last at the Marylebone Cemetery, Finchley. The funeral service was conducted by his old friend, the Rev. J. D. Stewart, M.A. Amongst the mourners were General Mairis, the Hon. G. and L. Brodrick, Rev. P. Smith, Mr. Le Gros Clark, F.R.C.S., Dr. Rayner, General Cockburn, Messrs. Needham, Dickinson, Lawrence, and Walker. Next week we propose to give some account of the late Mr. Quain's professional work.

AN EXPERIMENT IN EARLY RISING.

AN interesting experiment is on foot in Lincolnshire, where, in the Wesleyan Day School at Hatcliffe, a summer time-table has been arranged, upon the plan of commencing school at 8 o'clock in the morning, and finally dismissing the children at 1.30. The result, so far, is reported as follows:—

"This school is situated in a purely agricultural district, and up to the beginning of 1885 the attendance during the summer months was very unsatisfactory. The work of the Third, Fourth, Fifth, and Sixth Standards was almost suspended from the 1st of May to the end of September, owing to absent children. It was almost impossible to reach a high standard of attainments. By the suggestion of Her Majesty's inspector, a summer time-table was tried in 1885. The school commenced at 8 o'clock, and finally was dismissed at 1.30, the meetings being 8 to 10.30 and 11.15 to 1.30. The average attendance increased from fifty-seven to sixty-three. The scheme has been tried again this year, and the average has risen to seventy, with the same number (eighty) on the books. Owing to the increased attendance, work has been continuous, and the pressure of the winter months has been relieved. Teachers and scholars worked much better in the cool early hours of the day. The health of the children greatly improved, and the result of the year's continuous work is the excellent merit grant."

The plan certainly deserves to succeed, and if its success should be sufficiently pronounced to stimulate imitation, so much the better. Late hours are to such an extent a necessity of adult life and urban conditions that we cannot hope to see any great change for the better in this respect in society at large; but it is important on the score of health and vigour, both of body and mind, that our children should become habituated to work in the early hours of the day.

ETHER INHALATION IN TETANUS NEONATORUM

DR. DEGHILAGE, of Mons in Belgium, having a case of trismus neonatorum, and having repeatedly given chloral and ether per rectum without producing any effect, the child rapidly becoming worse and seeming in imminent danger of death by asphyxia, determined to administer ether by inhalation. In addition to this, artificial respiration was employed from time to time by means of a tube inserted into the nostrils. Some pieces of Rigollot's mustard leaves were also applied to the chest. The child was laid on its side, according to a suggestion made by Marion Sims. The result of this treatment was that in a few hours the little patient's condition had improved to a very marked degree. The next day profuse perspiration occurred and the spasms entirely ceased. Shortly after this the child was convalescent.

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A LEAP FROM THE CLIFTON BRIDGE.

AN inquest was held on Aug. 8th before Mr. Harwood, touching the death of a man aged thirty, who was killed by leaping from the Clifton Suspension Bridge. The case is interesting in that a post-mortem examination was made and the injuries carefully described. According to the evidence of Mr. G. E. Lloyd, the death occurred from shock. There was extensive bruising over the right side of the chest and over the left clavicle. The fourth, fifth, sixth, and seventh ribs on the left side were broken; and also the fourth rib on the right side. Both lungs were lacerated. All the cavities of the heart were empty. The liver and spleen were ruptured. The fracture of the ribs was due no doubt to the impact of the body against the water, for an eye-witness deposed that deceased when about sixty feet from the water turned over and fell upon his back, and the depth of the river is such that it seems improbable the body, falling flat, would reach the bottom. We commend the action of the coroner in directing an official inquiry, as it is said, "in the interests of the medical profession."

BERI-BERI AND BACTERIA.

A DUTCH observer whose remarks on beri-beri were noticed in a recent issue of THE LANCET, Dr. Pekelharing of Batavia, now announces that he has succeeded in cultivating the micrococcus of beri-beri. From his cultures he infected seven rabbits and four dogs, of which six rabbits and two dogs died in a longer or shorter period with symptoms of paralysis of various groups of muscles, especially of those of the posterior extremities and of respiration. On examination extensive nerve degeneration was found. In some cases the animals were infected by the injection of cultures obtained from the blood of beri-beri patients, and in others by a mixture of the bacteria existing in the air of a barrack where the disease had occurred.

DEATH, IN HARNESS, OF A CENTENARIAN PHYSICIAN.

DR. NEKLEWITSCH, of Loske in Poland, has lately died at the age of 109 years, having a quarter of an hour before his death seen and prescribed for a patient. Sixteen years ago he had a paralytic stroke, affecting both his feet, so that he has since that time been obliged to confine his professional advice to the consulting-room.

A COMPENSATION CASE.

UNDER the above heading we drew attention in our issue of the 10th inst. to the refusal of the St. Thomas rural sanitary authority to grant compensation under Section 121 of the Public Health Act for bedding and clothing destroyed in a case of alleged cholera at Newton-Poppleford. The Local Government Board, having been communicated with, have advised that the authority are not, under the circumstances reported, enabled to apply their funds in recouping the friends of the deceased. This is doubtless a correct legal view of the case, for the section requires that the local authority should "direct" the destruction of such articles as may be compensated for; and in this case neither they nor, so far as we can learn, either of their officers had to do with the destruction in question. Another time it would be advisable that the proper officers of the sanitary authority should be at once communicated with, and if a medical opinion is handed in to any such officer to the effect that the destruction of clothing or bedding is needed in the interests of the public health, it is highly probable that action would at once follow. Anyhow, all responsibility would then lie with the authority of the district in which the occurrence took place.

GOVERNMENT INQUIRY INTO THE SANITARY CONDITION OF BETHNAL GREEN.

WE understand that the Home Secretary has appointed Mr. D. Cubitt Nichols and Mr. Shirley F. Murphy to hold an inquiry into the sanitary condition of Bethnal Green, and that the proceedings are to commence at the Vestry Hall on Wednesday, October 12th, 1887, at 11 o'clock. The inquiry is the result of an appeal from the Mansion House Council on the Dwellings of the People.

ST. MARY'S HOSPITAL.

THE arrangements for the accommodation of students of the St. Mary's Hospital Residential College, at 33 and 35, Westbourne-terrace, have been extended. A large room is furnished as a general library, and additional studies are provided on each floor. Special tutorial classes will, we learn, be organised at the commencement of the winter session, by the warders, Dr. Walter Pearce and Mr. A. Pearson Luff.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Elias José Pediosa, Professor of Anatomy and Physiology in Bahia; Dr. Chastinet, editor of the *Gazeta Medica da Bahia;* and Dr. Don Juan Alvarado Gomez, director of the Ophthalmic Institute of Salamanca and editor of the *Correo Medico Castellano.*

TYPHOID FEVER AT DOWLAIS.

THE typhus epidemic at Dowlais is causing considerable anxiety to the sanitary authorities. There appears to have been a hitch in the nursing arrangements in the Fever Hospital—one of the nurses having contracted the disease soon after commencing her duties, and another having been overcome by panic and run away. Assistance had ultimately to be obtained from London. Later intelligence is to the effect that two of the nurses have succumbed to the disease, and that a report of the outbreak is being prepared at the request of the Local Government Board.

SOME of the members of Council of Hong-Kong are working hard at a Public Health Bill, which they hope to persuade the Government to adopt. The Chinese, fortunately, seem alive to the importance of the subject, and are actively assisting in working out the details of the Bill.

A VIENNA medical journal states that the vacation courses which have this year for the first time been organised have not been so great a success as could have been wished, a few of the classes only having been well attended, and these chiefly by foreign medical men.

WE are asked to state that Sir William MacCormac, in consequence of domestic bereavement, will be unable to take the chair at the Old Students' Dinner at St. Thomas's Hospital on October 1st, as announced in our advertising columns.

COURT SURGEON DITTMER, of Berlin, has just celebrated the fiftieth anniversary of his admission to the profession, which he obtained by the now obsolete diploma of *wundarzt* surgeon. The last of these diplomas was conferred in 1848.

DR. NEUSSER, who went to Bulgaria as body physician to Prince Ferdinand, has returned to his old appointment in Vienna—that of assistant in Prof. v. Bamberger's clinic.

THE Harveian Oration will be delivered by Dr. Stone at the Royal College of Physicians on Tuesday, October 18th, at 4 P.M.

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THE SOCIAL ASPECTS OF THE INTERNATIONAL MEDICAL CONGRESS.

NOTWITHSTANDING that the City of Washington is, like most other cities, liable to suffer an annual desertion by the most influential part of its population during the early autumn, the ninth meeting of the International Medical Congress has been one of the most successful of its kind. We shall not err in saying that as a social undertaking merely, without regard to its professional aspect, this transatlantic gathering holds a place not second in importance to anything of a similar character that has happened, or is likely soon to happen, on that or this side of the dividing ocean. As an assemblage of medical practitioners and teachers in medicine met together with a common purpose of comparing and correcting the results of observation and invention, of devising new plans for future investigation, and of applying new modes of treatment in the art of healing, its significance is equally remarkable. With the single exception of London, no European capital has attracted so many representatives of medicine and surgery since the international movement first originated. Successful in point of numbers, the conference has not been less successful in possessing in more than one particular a thoroughly representative quality. It has been in the widest sense international. Almost every civilised people, besides races which might by courtesy be included in the same category, have contributed towards its membership. The four continents have given of the skill which is available for the treatment of disease in their civil practice, the military and naval services have subscribed each its quota of men and of material for discussion. Again, as regards the subject matter, it is almost superfluous to point out the illustrative diversities of study by which the sum of medicine can be viewed as through so many windows, and to state that each of these has received its full share of recognition in the working programme of the Congress. Last, but not least, the whole business and pleasure of this meeting have been administered throughout with a cordial good fellowship truly representative of that spirit of hospitality which happily characterises the American people and annually admits to the privileges of free citizenship strangers out of every country without distinction. President Cleveland and his assessors in the work of Government have been foremost in showing attention to the American practitioners and their guests. Not only have they taken an active part in the extra professional work of the Congress, but it is through their influence that Government buildings have been on several occasions available for social gatherings of the members. We are happy to recall the fact that in so doing they have but revived the precedents afforded by the conduct of other States, but we appreciate no less on that account the warmth of their generous consideration. Nor must we forget to offer an equal tribute of esteem to the American medical press, and to those citizens of Washington who distinguished themselves by affording a similarly handsome hospitality.

There are certain definite advantages connected with such conferences as that which is just over, and these may well occupy our attention during the remainder of the space at our disposal. Some, perhaps, may question their utility on the ground that an exchange of views is, in matters of mere knowledge, as easily possible by ordinary channels of publication. This argument we need not now stop to discuss. The advantages to which we have alluded are only in part such as can be attained by means of the printing press. We may discuss them, as they affect medical men themselves, the general public in their relation to practitioners, and, lastly, entire nations. To a member of the class first mentioned the atmosphere of free discussion is helpful in several ways. In it he is able freely to communicate and compare ideas, and to question directly the exponents of theories or methods in which he is interested—no small benefit in a profession like our own, in which demonstration is everything for purposes of instruction. He is better able also, in concert with others, to arrange plans for combined action with regard to a given subject. Take, for example, the system of collective investigation as applied to disease. Whatever may be the total results of that mode of research, it cannot be denied that there is truth in the remark made by Dr. Nathan S. Davis, the president at the late Congress, that in order to explain many of the phenomena of disease the intelligence of well-informed general practitioners is required, and that the plan of conjoined investigation, with the assistance of the check imposed by a central and critical authority, is calculated to utilise this intelligence. It is probable, however, that no greater good is conferred on the individual worker by association with his fellows than the stimulus to friendly and wholesome rivalry. Labouring alone and striving through repeated failures to explain the unknown, he may find himself often unduly sobered by the shadow of the uncertainties which confront him. United with others who share his experience, but arrive at last in the open light of certainty, he is fortified by hope, and, carried forward by an invigorated confidence, reaches in time the desired end of his efforts. The success of others has an infection about it, and it is well, therefore, to place oneself within its influence. Let us, too, before we leave this subject, remind ourselves how greatly the recreation and good fellowship with which the leisure intervals of all such meetings abound can refresh both mind and body, and we will no longer doubt that in this respect they have their value. But the non-professional public also profit in illness by the congresses of their advisers, and this directly. They are thus enabled, we may say, to make friends with the medical fraternity, and to know them better as a class. They are in a measure taken into confidence, so to speak, and through newspaper reports can follow with understanding no insignificant part of such debates as do not require much technical training for their apprehension. The public well-being is benefited by the reception of such filtered knowledge, provided this does not engender a spirit of presumptuous self-confidence, and this it will not do in the mind of any sensible reader. The consequences of this better understanding of general principles is to make the person instructed a more intelligent patient in illness, to engender a generally better acquaintance between the invalid and his adviser, and to aid the formation of a true estimate of the value of medical service. Furthermore, those who may have noted in the diversity and disparity of qualifications, in varieties of treatment, and in the jealousies of individuals which at times disturb the current of professional unity, only so many evidences of disagreement, have in meetings such as that which has just ended overwhelming proof that the body of medicine remains, notwithstanding, substantially one whole. Mr. Bayard, Secretary of State, in his opening address, dilated on the benefits of international intercourse, and rejoiced that there is among men of all nations a sense of brotherhood which is tending more and more to assimilate them in spite of the distinctions imposed by geographical separation. He viewed the Congress in its unprofessional aspect as an expression of this feeling; and such, indeed, it was. It is not certainly to be expected that meetings of this kind, however universal in their membership, however influential, will rapidly remove the barriers of racial difference, fortified by national interests and the political forces by which these are naturally and justly supported; but there is good hope, notwithstanding, that they will gradually effect at least a salutary modification of that difference. Men cannot meet together to consider measures of sanitary precaution and means of cure which are applicable in every quarter of the globe without in some degree losing sight of their narrow personality, even their nationality, in grasping as they firmly can the real and wider, if less definite, consciousness of a common good for all, which they may peacefully strive after and peacefully enjoy. It is our happiness to reflect that in the early dawn of that still shadowy peace the profession whose function is the relief of pain in mind and body has been well committed to the work of reconciliation. Such and other truly civilising efforts may encourage us in the conviction that He who through all hindrances and apparent contradictions seeks the final good of the world He has created, will one day guide mankind into that state which one of our own countrymen has foreseen and prefigured in words of classic beauty and prophetic force—wherein

> "The war-drum throbb'd no longer, and the battle-flags were furl'd,
> In the Parliament of Man, the Federation of the World."

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HEALTH OF THE ARMY.

No. II.

THE strength of European troops in India during the year averaged 57,165; the admissions into hospital were 1522; the deaths, including those of invalids on the passage home, 15·18; the invalids sent home, 22·79; and the constantly sick 70·58 per 1000. With the exception of the invalided to England, these ratios are all higher than in 1884, and the admissions and mean sick are above the average of the last ten years. The distribution of the sickness and mortality in the three Presidencies were as follows:—

—	Average annual strength.	Ratio per 1000.			
		Admitted.	Died.	Invalided home.	Constantly sick.
Bengal	35,101	1649	13·61	20·34	73·17
Madras	10,414	1162	9·79	24·10	65·87
Bombay	11,650	1460	24·72	29·01	67·00

This summary shows Madras to have been the most healthy of the Presidencies; and, although Bengal furnished the highest proportion of admissions and mean sick, Bombay had much the highest death-rate—results which accord with those of 1884. In Bengal the admissions corresponded very closely with those of the preceding year, but were considerably above the average of the decennial period, the excess being chiefly in syphilis, gonorrhœa, and injuries, while there was a decrease in fevers and in diseases of the digestive system. The deaths were slightly higher than in 1884, but above 5½ per 1000 under the average of the last six years, the reduction being chiefly in cholera and in diseases of the digestive and nervous systems. The admissions into hospital in the different military divisions ranged between 2422 in the Meerut and 1258 in the Rawal Pindi. The highest ratio at any station was 4156 per 1000 at Delhi, and the lowest 1015 at Ranikhet. The death-rate was highest in the Meerut division, amounting to 17·33, but was nearly the same in the Allahabad, and it was lowest in the Rohilcund division, being only 9·45 per 1000. The highest ratio at any station was 41·78 at Muttra; at Jhansi no death occurred, and at fifteen stations it was under 1 per cent. The admissions by eruptive fevers were greatly above the average, owing to the prevalence of dengue at Lucknow, Umballa, Calcutta, and Fyzabad; there were altogether 726 cases, but no deaths. Enteric fever was the cause of 486 admissions and 142 deaths, being in the ratio of 13·8 and 4·05 per 1000 respectively. The stations at which it was most prevalent were Allahabad and Cawnpore in the Allahabad division, Lucknow, Sitapur, and Fyzabad in Oudh, Morar in Gwalior, Meerut and Muttra in Meerut, Meean Meer in Lahore, Rawul Pindi, and Cherat in the Peshawur division. Only 1 case occurred among troops on the march, and 2 in the camps of exercise. The disease was most prevalent in the third quarter of the year. Lucknow was the station which furnished the greatest number of cases, there having been 55 admissions, but with only 10 deaths. The medical officer in charge states that "in no instance could the disease be traced to insanitation, or to faults in connexion with food or water." At Morar there were 30 cases and 11 deaths; "It was not possible to assign any cause for the disease; no sanitary defects of any importance were observed, the milk and water supplies were carefully attended to, and the prevalence of the disease, in the opinion of the medical officer, could only be attributed to climatic causes and to individual susceptibility." At Cherat defective latrine arrangements were considered to have been in some degree a cause of the disease, and at Sitapur an insanitary condition of one of the barracks was assigned. At most of the stations, however, it was found impossible to determine anything definite on the subject. The cases occurred mostly, though not exclusively, among young soldiers with a short period of residence in India. Paroxysmal fevers were the cause of nearly one-third of all the admissions into hospital, but were not of a very fatal character. The troops were remarkably free from Cholera during the year, only 61 cases having been admitted; but of these 37 died. It was pretty widely spread, but the greatest number of cases at any one station was 7 at Lucknow, and of deaths, 5 at Fortress Gwalior. Thirty-six of the cases and 22 deaths occurred in the third quarter of the year. It is not stated what precautions were taken on the appearance of the disease at any of the stations except Allahabad, where after the occurrence of 5 cases "the troops marched out and the disease ceased." There was a considerable increase in the cases of syphilis, especially in the Rawal Pindi, Allahabad, and Presidency circles; the only divisions in which there was a decrease were Saugor and Gwalior. There was also an increase of gonorrhœa, most marked in Peshawar and Saugor. Under diseases of the nervous system 80 cases of sunstroke were admitted, with 26 deaths, and there were 3 fatal cases of hydrophobia, 2 at Dum Dum in men who had been bitten by the same dog, and 1 at Umballa. Dysentery and diarrhœa gave rise to 81 admissions and 0·37 deaths, and hepatic disease to 21 admissions and 0·88 deaths per 1000 of the strength, the admissions being somewhat under, and the deaths about half, the average of the preceding six years. Under the head of poisons, 324 admissions and 7 deaths were recorded from the direct effects of intemperance, being in the ratio of 9·3 and 0·20 per 1000; the only other case was one of opium poisoning, which recovered. The deaths from injuries were in the proportion of 1·36 per 1000, which closely approximates the average.

The sickness and mortality in the different arms of the service in the Bengal command were as follows:—Cavalry, 1962 admissions, 17·01 deaths, and 83·1 constantly sick per 1000 of strength; artillery, 1751, 10·67, and 79·90; infantry, 1635, 12·52, and 71·05 per 1000. The cavalry therefore seem the most unhealthy, the artillery have the lowest death-rate, and the infantry the least amount of inefficiency from sickness. The distribution of the mortality and invaliding in the different grades is shown in a table in the appendix to have been—death-rate of officers 11·27, non-commissioned officers 18·47, privates 14·35; and the invaliding of officers 50·30, non-commissioned officers 18·23, privates 19·72. It is very probable that the lower death-rate of the officers may, to some extent at least, be due to the greater facilities afforded them for invaliding, while the higher rate of non-commissioned officers as compared with privates may be a result of their more advanced age. The mortality of the women during the year was 13·29, and of the children 53·04 per 1000. Convulsions were the most frequent cause of death among the latter, having given rise to upwards of one-fifth of the whole. There were only 2 deaths by cholera among the women, and the same number among the children.

The only serious complaints of sanitary defects appear to be one of the impure water supply at Dum Dum, and another of the very unsatisfactory construction and insanitary condition of the Sanatorium at Cherat. Recommendations on both of these points have been made, which it is trusted may be carried out with beneficial results.

In Madras there was an increase in all the ratios except invaliding compared with those of 1884, but they were all under the average except the constantly sick, which shows an increase of above 5 per 1000. The admissions in the different military circles ranged between 995 in the Belgaum and western district and 1228 in Burmah, the highest ratio at any station, omitting the depots, being 1461 at Toungoo. The deaths were from 2·91 in the Nagpore circle to 12·66 in Burmah, and the mean sick from 54·26 in the Nagpore to 86·35 per 1000 in the eastern district. There was a decrease in fevers compared with 1884, and they were considerably under the average of the last six years. The Nagpore force furnished much the highest proportion of cases, owing to the prevalence of paroxysmal fevers, but it had the lowest death-rate from this class. There were 73 cases and 23 deaths of enteric fever, being in the ratio of 7·0 and 2·21 per 1000. Secunderabad was the station at which it prevailed most, there having been 29 cases and 10 deaths; Bangalore had 18 cases with 1 death, and Bellary 8 cases and 2 deaths. At Secunderabad no insanitary condition could be traced in the barracks, and the disease is believed to have been "contracted in some of the villages situated close outside cantonments, which are generally in a filthy condition." At none of the stations could the origin of the disease be traced to any definite cause except at Calicut, where it was believed to be an impure condition of the water-supply. A case at Cannanore and one at Toungoo were attributed to "bad water drunk on the march." Of cholera, only

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6 cases and 2 deaths occurred, 4 with a death at Secunderabad, 1 fatal case at Kamptee, and one which recovered at Toungoo. Venereal diseases were considerably above the average, the highest ratio being 411 in the Bangalore circle and the lowest 217 in Burmah.

The sickness and mortality by arms of the service were—in the cavalry, 1140 admissions, 6·76 deaths, and 58·56 constantly sick per 1000 of strength; in the artillery, 1181, 9·11, and 65·13; and in the infantry, 1155, 8·46, and 63·24. The cavalry, therefore, were, in all these particulars, the most healthy and the artillery the most unhealthy. The deaths and invaliding in the different grades were as follows:—Officers, 7·71 deaths, 51·41 invalided; non-commissioned officers, 18·47 and 41·76; and privates, 7·66 and 20·61 per 1000 of strength. As was the case in Bengal, the death-rate of the non-commissioned officers was much higher than of the privates, and the invaliding of officers much above that of the other grades; the death-rate of officers and privates corresponds very closely. The mortality of the women was 13·33, or almost identical with Bengal; that of the children was 31·87 per 1000; there was one fatal case of cholera in each class.

In Bombay the admissions, deaths, and mean sick were higher, but the invaliding slightly lower, than in 1884; the deaths and mean sick were greatly in excess of the average. The highest ratio of admissions (2206) was at Quetta and the lowest (1071) in the Presidency circle. The deaths ranged from 85·23 at Quetta to 10·90 in the Poona circle; the lowest death-rate was at Ahmednagar, where it only amounted to 2·18 per 1000. The excessive sick-rate at Quetta was due to paroxysmal fevers, and the death-rate to cholera and dysentery. Enteric fever was the cause of 88 admissions and 30 deaths, being in the ratio of 7·6 and 2·57 per 1000 of strength. Kurachi was the station at which the greatest number of cases (19 with 4 deaths) occurred; Deesa and Quetta had each 14 cases and 4 deaths, Nasirabad 10 cases and 4 deaths, Poona 8 with 5 deaths, and Belgaum 7 with 4 deaths. At none of the stations could the disease be traced to any insanitary conditions in or near the barracks, or to the water supply. "The disease is said to be endemic in the city of Kurachi, and is in great measure due to the cesspool system in vogue there." Paroxysmal fevers were the cause of the highest ratio of admissions into hospital, amounting to 450 per 1000 of strength. Quetta was the station at which they were most prevalent, the ratio being as high as 1178, and the deaths 4·32. The Presidency circle had the lowest ratio. Of cholera there were 131 admissions and 85 deaths, being in the ratio of 11·2 and 7·30 per 1000. There were no cases in the Poona circle; the only station in the command at which it prevailed to any extent was Quetta, where there were 103 cases with 67 deaths in an average strength of 1619 men, or 63·62 and 41·38 per 1000. There were 14 cases and 8 deaths among troops on the march. The first case in the Quetta Valley was on June 3rd in the 1st Oxford Light Infantry, and the last case occurred in October. Notwithstanding numerous removals, the disease continued in this regiment until it finally quitted the valley. The death-rate of the corps during the eight months it was in the Quetta Valley was 129·54 per 1000, but the information is not given in sufficient detail to enable us to state the proportion due to cholera and to fever or other diseases respectively. The death-rate of the other infantry regiment at Quetta, the 1st North Lancashire, for the year, was 56·78 per 1000, while that of the Royal Artillery was 41·01 per 1000. Diseases of the digestive system were the cause of a high death-rate (5·06 per 1000), though the admissions were under the average of the preceding six years. The excessive prevalence and mortality chiefly took place in Quetta, where the cases amounted to 311 and the deaths to 19·76 per 1000 of strength, the latter mostly from dysentery. The admissions from the direct effects of intemperance—delirium tremens and alcoholic poisoning—were in the proportion of 9·56, and the deaths of 0·60 per 1000.

The relative sickness and mortality in the different arms were: in cavalry, 1221 admissions, 6·71 deaths, and 65·9 mean sick; artillery, 1446, 16·46, and 65·5; and infantry, 1690, 26·85, and 72·6 per 1000; so that, as in Madras, the cavalry were the most healthy. The excessively high rates in the infantry were the result of the large number employed in the Quetta Valley; and the low death-rate of the cavalry may be accounted for by their not having been stationed in that pestilential district. The deaths and invaliding of the different grades in the Bombay command were: deaths of officers 16·44, non-commissioned officers 31·59, privates 22·87 per 1000; invalided—officers 68·5, non-commissioned officers 43·8, privates 26·7. The same feature therefore is observed, as in other Presidencies, in the high rate of deaths of non-commissioned officers, and the much lower rate, but with a high one of invaliding, among the officers. The death-rate of the women was 12·82 per 1000, which corresponds very closely with that of Bengal and of Madras; and of the children it was 53·40, the same as Bengal, but considerably higher than Madras.

The report on the health of the troops in Egypt includes those quartered in Lower Egypt for the year—the Frontier Field Force from Aug. 1st to Nov. 25th, and the garrison of Suakim from May 15th to the end of the year. The details of the Frontier Field Force and the troops at Suakim in the earlier months were given in the department volume for last year. The average strength of the force was 9593, the admissions were in the ratio of 1522, the deaths 28·98, and the mean sick 80·23 per 1000. The incidence of sickness and mortality was much greater in the small force at Suakim than in the other two divisions. Enteric fever was the cause of 497 admissions and 136 deaths in the whole force, or in the ratio of 51·8 and 14·18 per 1000 of strength, the latter amounting to half the death-rate of the command. The highest proportion of cases and deaths by this disease occurred amongst the troops at Suakim, and the next in the Frontier Field Force; of the cases in Lower Egypt, many were believed to have been contracted at Suakim or on the Nile expedition. The disease is stated to be endemic along the whole Nile Valley. At Suakim "there is no evidence connecting the occurrence of enteric fever with contamination of the water supply or food"; but in Lower Egypt "the insanitary condition of the towns is so bad that it is not surprising that men suffer severely from this disease, notwithstanding that every precaution is taken in barracks." It is noteworthy that the men confined in the military prison enjoyed a marked exemption from enteric fever, only one case having occurred in an average of over 60 prisoners. Paroxysmal fevers occurred almost entirely among the troops in Lower Egypt, and especially in the 2nd Battalion, Sussex Regiment stationed at Suez. "It happens that the camp at Suez is very low-lying, water being obtainable only two feet from the surface, and the whole of the land in the country is wet on account of irrigation and percolation from the fresh-water canal which passes close by. The inhabitants of Suez suffer from these fevers every autumn. There is practically no malarious disease in the other stations in Lower Egypt"; but as regards Suakim, "there can be no doubt that the station is, as might be expected from the condition of the soil and drainage, distinctly malarious." Syphilis and gonorrhœa were a cause of great inefficiency in Lower Egypt, the admissions having amounted to 370, and the constantly non-effective to 23·35 per 1000. They were much less prevalent in the other two portions of the force. Sunstroke and exhaustion from heat gave rise to a very large number of admissions and deaths at Suakim, the former having amounted to 60, with 15 deaths, and the latter to 216. "The Principal Medical Officer remarks that the insufficient protection from the intense heat of the sun during the hotter months afforded by tents, was probably to a considerable extent accountable for this; but he thinks that the excessively high temperature in conjunction with the moisture and the stillness of the air would probably, however, with the best possible accommodation be largely productive of these conditions." No cases of cholera occurred during the year. Diseases of the digestive system furnished the highest ratio of admissions, and also, with the exception of fevers, of deaths, the most prevalent diseases being diarrhœa, dysentery, dyspepsia, hepatic affections, and tonsillitis; dysentery was the most fatal. There was a death from poison, caused by chloroform which was being administered for the performance of an operation.

The following extract from the report of the sanitary officer sufficiently accounts for the very high ratios of sickness and mortality among the troops quartered at Suakim. "The ground in the neighbourhood of the town is extremely polluted. Owing to the very slight elevation of the land, only a few feet above the sea level, there is no outfall for drainage, and the long neglect of sanitary precautions by the natives has led to the soil becoming saturated with filth of various kinds. The water in the harbour rises and falls at irregular intervals, the variation in its level being apparently dependent on the direction of the wind. The low-lying land to the west is thus frequently inundated, and on the subsidence of the

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sea presents an extensive surface of organic decomposition. Under the same circumstances the sloping coral reefs to the south, alternately covered and exposed to the sun, emit offensive organic effluvia." To this must be added the intense heat and the inadequate protection afforded to the troops by tents.

In an average strength of 344 officers the admissions were 1235, the deaths 26·16, and the invalided 238 per 1000, "the latter being greatly increased by the effects of the Suakim and Nile campaigns."

From the table showing the sickness and mortality by corps, we find that the admissions were, in the cavalry 1909, artillery and engineers 1547, infantry regiments 1523, departmental corps and staff 1214 per 1000; and the deaths were 45·45, 38·97, 24·80, and 47·62 in the arms respectively. The departmental corps and staff, therefore, had the lowest ratio of admissions and the highest of deaths, while the proportion of both was higher in the cavalry than in the ordnance and infantry.

HYGIENE IN THE SCHOOL ROOM.

GREAT as has been the advance made in recent times in a general appreciation of the value of preventive medicine, there still exists widespread ignorance and consequent apathy on many points of vital importance to the community at large. Nowhere is this more conspicuous than in the school room, where, notwithstanding the lively interest which the work of education awakens at the present time, insalubrious conditions exist sometimes to a positively shocking extent.

These reflections are suggested by the general tone of the recently issued Education Report. "It is time to attempt some further progress lest we go back," is the language of one of the chief inspectors, and it not inaptly expresses the general drift of comment. This would be highly satisfactory and very laudable if the solid facts of the case justified such a rose-coloured view of the nature of our actual achievements. But we strongly suspect that we are much nearer the beginning than the end of our task, and that the directions in which improvement must be sought are sufficiently obvious to call for energetic effort without the somewhat artificial stimulus of a dread lest we should lose the ground already gained. To school managers throughout the country, and especially to the central department, which, by its elaborate organisation, exerts an enormous influence on the national education, we commend a few points well fitted and well worthy to tax their endeavours for some time to come.

WARMING AND VENTILATION.

To these two closely connected and most important features of school-room hygiene the references throughout the report are extremely few and meagre. But such as they are, they show conclusively that the prevailing condition is highly unsatisfactory. "It is still," writes one inspector, speaking particularly of the north of England, "quite a common thing at visits without notice to find the air of schools, especially in the class rooms, unwholesomely close." The evil, however, is by no means confined to the north. Even more emphatic is the testimony of the chief inspector for the Welsh division. "The ventilation of schools," he says, "is seldom good"; and he casts the blame partly on the appliances supplied, but in part also upon the teachers, who often fail, in his view, to turn such appliances as they have to good account. As to the latter part of this complaint, there ought to be no difficulty whatever in finding a remedy for the mischief complained of. A due appreciation of the importance of the point on the part of inspectors and managers would soon arouse teachers to a sense of their duty, and the judicious distribution of a few thermometers would not only give a business importance to the regulation of temperature, but would also enable visitors to exercise a much more effective supervision than is at present possible. It is easy to understand that when the inspector thinks a room over-heated, or unequally warmed, or at too low a temperature, or insufficiently supplied with fresh air, the teacher may entertain an opposite opinion, and as the teacher is always in command, while the visitor's authority is very transitory, it is the teacher's view which must generally prevail. On this footing it will be a hopeless task to attempt effecting improvements; but much might be done by the simple expedient to which we have alluded. Thermometers will not, indeed, disclose all that it is worth while to know respecting even the warming of an apartment. But two instruments, suitably placed, so as fairly to exhibit the extremes of temperature to which occupants of any room are exposed, will always be a valuable addition to its furniture, and, seeing that thermometers are inexpensive, we think that these should be an indispensable part of the equipment of every school room.

Even in the matter of stoves, although the difficulty looks more serious, the appearance is greatly worse than the reality. The obstacle to improvement in this respect is, of course, the financial one. But that is in a large degree imaginary, for an inefficient stove is a most wasteful contrivance. The cost of substituting something better may be recovered many times over in the consequent saving of fuel. No doubt in many places there are buildings in use for school purposes so incorrigibly bad that nothing short of reconstruction would suffice to make them reasonably fit for occupation. In such a case the renovation must no doubt be a work of time. But where it is only a question of replacing an open grate, or making, at a small outlay, some improvement in the heating apparatus, we think that the central authorities might usefully bring pressure to bear upon reluctant managers, for not only would the hygienic conditions of the school be improved, but also, in most cases, a considerable and more than commensurate saving in the cost of fuel would be effected. A little assistance to the local imagination in grasping a fact like this is often the best service that the central authority can render. How much this whole subject needs bringing forcibly to the attention of school managers is well illustrated by the case of the Eccleston School Board. The members of this Board, with the most commendable zeal, take upon themselves the duty of inspecting the schools under their management. On these occasions the visitor is provided with a schedule of questions directing his attention to the various points which he is expected to observe, and these questions with his answers he files after the visit. Of this plan it is impossible to speak too highly, and of the schedule itself it may be said that it has evidently been drawn up with great care, and is in many respects an excellent production. But although it travels over the field of hygiene, and puts such questions as "Does the heating apparatus act efficiently?" there is no reference at all to the temperature or ventilation of the school or class rooms. "If these things are done in a green tree, what shall be done in the dry?"

APPLIANCES.

Another point to which the majority of the inspectors do not seem to be keenly alive is the defective nature of the appliances with which most of our schools are fitted. Desks are made unsuitable both in size and shape. Windows are rendered needlessly hideous with ground glass, and sometimes so situated that it is impossible to obtain an incident ray from the proper angle for writing by. These points are so well put in Mr. Blakiston's report that we gladly avail ourselves of his statement of them:—

"At a properly constructed desk, the lower edge of which overlaps the seat from one to two inches, at a height sufficient to allow the forearms to rest horizontally, and where a rail attached to the back of a broad and hollowed seat supports the loins, writing may be done for an hour or more at a stretch without any sense of discomfort, or any injury to eyesight or spine, if an upright position of the body be maintained, and if the writer keep his elbows by his sides and his pencil or pen pointed to his right shoulder. Unfortunately many thousands of our schools are supplied with desks made with utter disregard to the comfort and health of the scholars. The seats, flat rails some six inches broad and without back rests, are fixed so far from the desk for ease of ingress and egress, that in writing the children sprawl on the desks with elbows out, bodies forming an angle of 45° with the bench, twisted spines and contorted shoulders, the head often resting on the left arm, both eyes too near to the paper, and the left eye nearer than the right. Very often the height of the benches suggests that they have been supplied for the comfort of adults on Sundays and in evening meetings, to the consequent discomfort of the children, whose legs dangle restless during the week-day sittings. In planning schools it is of great importance that light should be duly admitted on the left shoulders of the children. If the light come from the south, blinds should be so arranged as to be drawn *upward*, so as to exclude the dazzling rays from the eyes, but not to darken the upper air of the room. Non-transparent glass, the use of which throughout spoils many a good school room, should be used only in the lower panes, and that only where a school can be overlooked from without. Where it has been found impossible to rearrange desks so as to have the light from the left, the insertion of fixed skylights on the northern slope has in hundreds of cases made it possible to secure the best light and to carry on school work that had been before impracticable in dark hours."

Elsewhere another inspector writes—not, surely, without reason: "I think the subject of desks and their position in the school demands serious attention."

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INFECTIOUS DISEASE.

It might be supposed that if there is one branch of school hygiene which is universally understood, and about which there is an absolute consensus of opinion, that point is the treatment of epidemic disease. Yet such is the prevalent supineness in relation to this matter that we find an assistant inspector, Mr. Myers, in the course of some very interesting and valuable remarks on the waste involved in school epidemics, pleading for the simplest and most obvious precautions against infection. "I am not," he writes, "pressing for any specific enactment on the matter. I think, indeed, that school boards and school attendance committees should require (and perhaps in some cases pay for) a medical certificate of non-infectiousness before a child who has been ill in this way returns to school." We quite agree with him, and trust that, without waiting for Parliament to move, the Education Committee will take steps to bring this elementary lesson home to the local authorities all the country over. It is appalling to think how unrebuked carelessness in a matter such as this may daily promote disease; how vast the number may be of children needlessly exposed for lack of the simplest precautions to peril of their lives; and how large an aggregate of sickness and death may be traceable to such easily preventable causes. Upon the whole, then, there is plenty of work for the department at present, if only in the development of school-room hygiene. Alexander may spare his tears, for a whole world still awaits conquest at his hands.

SANITARY INSTITUTE OF GREAT BRITAIN.

THE Annual Congress of members of the Sanitary Institute of Great Britain was opened at Bolton on the 20th inst., under the presidency of Lord Basing.

The first item in the day's proceedings was a reception by the Mayor, Mr. Alderman Fletcher, at the Town Hall, where they were afterwards entertained to luncheon. An exhibition of sanitary appliances and apparatus which is held in connexion with the meeting of the Congress was afterwards opened by the Mayor in the Drill Hall, and subsequently the members visited a number of public buildings and other places of interest in the town. The first general meeting was held in the Albert Hall in the evening, which was largely attended.

Lord Basing, in his address, briefly reviewed the history of the statutory and other steps which had been taken of late years in relation to sanitary science, dwelling especially upon the work of the Royal Sanitary Commission. After analysing the work done during the last few years by the Local Government Board, Lord Basing recapitulated some of the amendments which have been proposed to the Public Health Act, 1875, and stated that he felt bound, as the final result of his experience, such as it had been, to say that, having regard to the comparative novelty, to the difficulty and obscurity of the subject, to the dislike of control, and to the great expense attending works of sewerage and water supply—still more, when we remember the disinclination of Parliament to turn aside from the more stirring and generally interesting matters which make or mar the fortunes of Governments and parties, he felt more than satisfied, on looking back over a period of thirty years, to find that so much has been really accomplished. At this moment his apprehension undoubtedly was that in the anxiety to escape the irksomeness of detail, and in the hurry to establish local government generally on a wider and more popular basis, mischief may unwittingly be done through misappreciation of the difficulties under which that which now exists has been built up, and of the great risk which may be run if such central control as is really still required were to be hastily surrendered. Lord Basing concluded his address by quoting the illustrations of progress which had been given by Mr. Edwin Chadwick.

After the delivery of the address, a cordial vote of thanks was passed to the President, and the meeting adjourned.

At the meeting of the Congress on the 21st inst., the address to Section 1, on "Sanitary Science and Preventive Medicine," was read by J. Russell Reynolds, M.D., F.R.S., Emeritus Professor of Medicine in University College, London. He observed that the causes of disease with which preventive medicine has to deal are so numerous and so various that it was first of all necessary to arrange and classify them in some logical order. This he attempted to do, pointing out that the devices that must be employed to prevent the development of further progress of inherited disease are as manifold as the affections themselves. On this head he remarked—first, there is no disease that has yet been shown to be always hereditary in its origin, so that when we meet with insanity or phthisis in an individual we are not at once to conclude that it was "inherited" because a parent had been epileptic or a grandparent had died of consumption. A large proportion of hereditary diseases can be traced to no hereditary source in particular individuals. Therefore we must allow that in a large number of cases where the possibility of inheritance is patent a certain number may have developed the disease *de novo*. Secondly, with regard to many, the anti-hygienic conditions and habits which have led to disease in ancestors may be persistent as cherished heirlooms and be effective for mischief now. Especially is this the case in respect of the large group of diseases of the nervous system. There is much more than the mere physical contamination by descent in the etiologic conditions of a boy or girl who may be brought up in constant association with an idle, self-indulgent, hypochondriacal, or drunken father; and it is quite impossible to over-estimate the dire misfortune to a girl of being educated by an hysterical mother. No high powers of the microscope are needed to discover the *modus operandi* of the *materies morbi* of the contagion of bad example. If there are occasional examples of hereditary "nervousness" or simple epilepsy, there are also of tubercle, scrofula, Bright's disease, and others, about which it may be truly said "the whole head is sick, the whole heart is faint, and there is no soundness in it." Yet even in extreme cases preventive medicine has its work to do. The condition of ill-health most frequently met with in hereditary diseases of the nervous system is one of undue liability to disturbances given in any one of the antecedents of a particular individual, either insanity, epilepsy, hysteria, tendency to excesses, great nervousness, or what not. The outcome may be any one of the maladies mentioned, not being at all necessarily a reproduction of the initial disease. It is by bearing this fact in mind that the physician will see the necessity of being armed at all points. It is not enough to avoid or counteract the tendency to convulsions in the first dentition and the second or third; but chorea, hysteria, wilfulness, tricky ways, cruelty, and deceit must be borne in mind. No routine practice will be useful; it is often worse than useless. In some subsequent observations on sexual difference, Dr. Reynolds said it is worthy of note that it is not the highest qualities of man that young women imitate, but rather, on the one hand, the roughness of the youth, his bravado and uncouth language, or, on the other, the lackadaisical, *nil admirari* tone of the pedant and the fop. With it may be an occasional dash into imitation of excessive learning and the habits of the ascetic or recluse. The men who mock women's ways also mock their foibles, not their strength, and lisp and sigh or groan out their unsatisfied longings in vapid admiration of sentimental nonsense, whether it be in poetry, music, or painting, and find out something "quite too lovely" in a line, a strain, or a daub that no sensible man would care to hear or see again. The great source of disease, said Dr. Reynolds, against which preventive medicine has shown its strongest powers, and with which it now wages war the most vigorously and incessantly, is the introduction of noxious matter, either with food, by the air we breathe, or by direct inoculation. Further on in his address he added that in this part of the nineteenth century we come into contact with excess of work—mental, moral, and physical—on almost every hand. Mental work is not excessive if the appetite be good and the sleep sound.

On the motion of Lord Basing, seconded by Dr. Carpenter, a vote of thanks was given to Dr. Reynolds.

Mr. Sergeant, medical officer of health for Bolton, followed with an address describing a decade of sanitary improvement in the town, showing a decreased death-rate, the erection of a fever hospital, the establishment of disinfection work and sewage works; and he specially dwelt on the Corporation powers for the compulsory notification of disease, of which he spoke highly. In the case of small-pox, the disease, he said, could be kept in almost perfect check, and scarlet fever restrained, and there was less danger of the disease being spread by children attending school.—

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Mr. North, medical officer of health (York), bore testimony to the benefit which had accrued to York from the adoption of compulsory notification of disease. Without it they could not have discovered the source of a grave outbreak of typhoid fever, due to infected milk.—Professor Corfield also supported the system, and pointed out the fact that the death-rate from zymotic diseases in Bolton had fallen from 20·2 to 16·2. He advocated the closing of schools to prevent the spread of measles.—Mr. E. C. Robins and Dr. Carpenter spoke in favour of the water-carriage system in preference to the pail system for the removal of sewage, and the latter added that for thirty years he had advocated the notification of infectious diseases; but he contended that the notification should be made by the medical man to the occupier, and not to the medical officer direct.—Dr. Tatham (Salford) having added his testimony to the advantages of the notification of diseases, Dr. Macfie (Bolton), whilst admitting that the majority of Bolton practitioners differed from him, agreed with Dr. Carpenter, and held that though the law was enforced as it was, in Bolton cases were kept secret.—Mr. Sergeant having replied, a vote of thanks was passed to him.

Dr. Livy, J.P., Bolton, read a paper on the "History and Progress of Public Health." Dr. Alfred Carpenter contributed one on "Our Pioneers," referring especially to Dr. Parkes and Dr. Farr; and Mr. D. M'Keown (Manchester) one on the "Prevention of Blindness," which recommended a Governmental instruction of people by cards, distributed by the registration officers, giving advice as to the treatment of infants' eyes.—After the reading of the latter paper the Congress rose.

In the evening a conversazione was given in the Albert Hall by the Mayor, Alderman Fletcher, to which 750 invitations were issued.

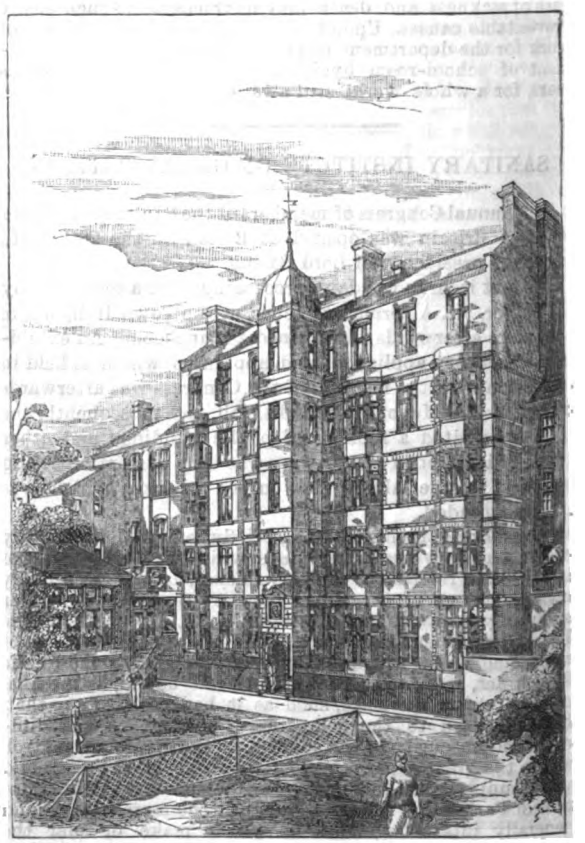
THE CONGRESS OF GERMAN PHYSICIANS AND NATURALISTS AT WIESBADEN.

THE most interesting feature of this—the sixtieth—assemblage of the medical and physical *savants* of Germany is the Exhibition of Scientific Apparatus in the great hall of the Government Buildings. At 10 A.M. on the 15th inst., Dr. Ludwig Dreyfuss delivered the opening address on the aim and character of the Exhibition. In convenient space and in comprehensive *ensemble* the collection places on view the achievements of the last few years in the apparatus and appliances for research in physics and in natural history, for instruction in these departments, and for the tuition and practice of the healing art in its great branches of medicine, surgery, and public hygiene. It enables the members of the Congress to become practically cognisant of the newest and highest improvements in the working tools of their several specialties, to compare them with those hitherto in use, and to suggest still further modifications in the direction of increased efficiency. A hearty vote of thanks to the liberal exhibitors concluded the address, coupled with a special compliment to the representatives of the Berlin committee, Geheimrath Bardeleben and Dr. Lassar, for their effective co-operation. The Exhibition was thereafter consigned to the Congress, in whose behalf Professor Fresenius expressed the gratitude of the members, and dwelt on the signal utility of the collection as an earnest of still higher achievements in the same field. No fewer than 491 scientific instrument makers have contributed the choicest specimens of their handiwork, which occupy several spacious rooms. Of the members already assembled there are over 200, and an elegantly got up publication in connexion with the Congress contains two treatises of more than local interest: the "Water Supply of Wiesbaden," scientifically handled by the director of the works and the "Canalisation of Wiesbaden," by the engineer, Herr Brix—also comprehensive and instructive. Chemical Analysis is represented by Professor Fresenius, and Bacteriology by Dr. F. Hueppe.

INDIAN LADY DOCTORS AND THEIR FEES.—Complaints are finding vent in India on the question of the amount of fees demanded by the lady practitioners amongst the native population. Says the *Lahore Tribune*: "People in India are willing to pay two rupees for a visit, but cannot give more, except on the occasion of a first call, and the natives think that, as Lady Dufferin's Institute is aided by subscriptions, the doctresses ought to be moderate."

THE NEW RESIDENTIAL COLLEGE AND SCHOOL BUILDING AT THE MIDDLESEX HOSPITAL.

ON a site of ground, having a frontage in Cleveland-street on the one side and overlooking the garden at the rear of the hospital on the other, has been erected this year a building designed and constructed expressly for the purpose of affording to medical students a comfortable college home in close proximity to their work. The garden frontage, which forms the principal elevation, consists of a red brick building, six storeys in height and relieved by bay windows, constructed of buff-coloured terra-cotta, giving the building a very bright and cheerful appearance. The style of architecture is an adaptation of late Elizabethan mullioned and transomed windows, with classic mouldings. The College is calculated to contain about thirty students, each of whom is provided with an apartment shut off from the main corridor by double doors. This apartment comprises a sitting



room, well lighted and comfortably furnished; the sleeping accommodation is in the same room, divided off by a curtain and having a separate window. In addition, there is on the ground floor a fine large dining hall, a large common reading and recreation room, and a good-sized study.

The sanitary arrangements are all contained in a tower running the whole height of the building, thus being separated from the main block by a passage freely ventilated on either side. Students residing in the College will pay so much rent for their rooms, and be provided with meals in hall at a tariff which is very moderate, or they can arrange for terms, including board. A Warden will reside in the College, and one of his chief duties will be to assist the students in their work in the evenings. The domestic arrangements are under the management of a resident steward.

The College has been erected by the friends and supporters of the hospital and medical school, and we heartily wish the scheme all the success which its enterprise deserves. Every effort appears to us to have been made to give the student

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a healthy home, with all reasonable comfort; and the many advantages which he must possess in residing practically on the hospital premises must be obvious to everyone. He will be free to enjoy the companionship of his fellows, or, if he desires, he can completely shut himself up in the quiet and privacy of his own room; whilst his proximity to the hospital will afford him opportunities of visiting the wards, and of gaining experience from the emergency practice, which those living at a distance away cannot possibly enjoy. The rules and regulations of the College, we are glad to find, are such as to secure the social advantages of a college life without irksome restraint.

Adjoining the College a very important and extensive addition has been made to the medical school buildings. The new building consists of four storeys. In the basement are a large luncheon room and excellent lavatories; on the ground floor is a students' reading room, a lecture theatre, the dean's room, and a cloak room. From the vestibule a staircase leads on the first floor to a spacious, lofty, and well-proportioned library, which occupies nearly the entire area of the new buildings. Above this the whole of the upper floor is devoted to a physiological and pathological laboratory and class room; this room is lighted from both sides by wide lofty windows, and is specially constructed and fitted up with a view to microscopical work. The only approach to the school buildings has hitherto been through the hospital and across the garden, but in future the entrance to the school will be in Cleveland-street.

The room hitherto used as a physiological laboratory will now be the Practical Surgery Class Room, and the old library will contain the Materia Medica Museum, and serve as an additional class room.

The whole of these buildings have been erected by Messrs. Holland and Hannen, from designs prepared by Mr. Keith D. Young, architect to the hospital.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5626 births and 3186 deaths were registered during the week ending September 17th. The annual rate of mortality in these towns, which had steadily declined in the preceding five weeks from 23·7 to 18·8, further fell last week to 18·0. During the first eleven weeks of the current quarter the death-rate in these towns averaged 21·1 per 1000, and corresponded with the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 15·0 in Derby, 15·6 in Huddersfield, 15·7 in London, and 16·8 in Bristol. The rates in the other towns ranged upwards to 24·4 in Halifax, 25·8 in Manchester, 26·0 in Salford, and 27·0 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined in the preceding seven weeks from 1301 to 768, further fell last week to 624; they included 294 from diarrhœa, 116 from scarlet fever, 84 from whooping-cough, 48 from "fever" (principally enteric), 37 from diphtheria, 34 from measles, and 11 from small-pox. These zymotic diseases caused the lowest death-rates last week in Huddersfield and Leicester, and the highest rates in Preston, Salford, and Bolton. The greatest mortality from diarrhœa was recorded in Wolverhampton, Salford, and Bolton; from scarlet fever in London, Salford, Oldham, Bristol, Bolton, Manchester, Birkenhead, and Preston; from measles in Blackburn, and from "fever" in Salford. Of the 37 deaths from diphtheria in the twenty-eight towns, 20 occurred in London, 3 in Manchester, 2 in Brighton, 2 in Portsmouth, 2 in Norwich, 2 in Oldham, and 2 in Leeds. Small-pox caused 9 deaths in Sheffield 1 in Liverpool, and 1 in Cardiff, but not one in Greater London or in any of the twenty-four other large towns. Only 5 cases of small-pox were under treatment on Saturday last in the Metropolitan Asylums Board hospitals receiving cases of this disease; while the number of cases of scarlet fever in these hospitals had increased to 1035. The deaths referred to diseases of the respiratory organs in London, which had been 169 and 160 in the preceding two weeks, further fell last week to 142, and were 42 below the corrected average. The causes of 68, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Newcastle-upon-Tyne, Portsmouth, and in nine other smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Sheffield, Oldham, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·5 and 19·4 per 1000 in the preceding two weeks, declined again to 18·7 in the week ending September 17th; this rate was 0·7 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 12·0 and 13·7 in Aberdeen and Greenock, to 25·2 in Leith and 26·5 in Paisley. The 467 deaths in the eight towns last week showed a decline of 17 from the number in the previous week, and included 55 which were referred to diarrhœa, 19 to whooping-cough, 17 to scarlet fever, 11 to "fever" (typhus, enteric, or simple), 3 to diphtheria, 1 to small-pox, and not one to measles; in all, 106 deaths resulted from these principal zymotic diseases, against 102 and 112 in the preceding two weeks. These 106 deaths were equal to an annual rate of 4·2 per 1000, which exceeded by 0·7 the mean rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 53, 39, and 45 in the previous three weeks, further rose last week to 55, of which 13 occurred in Glasgow, 10 in Dundee, 10 in Leith, and 9 in Edinburgh. The 19 deaths from whooping-cough showed a marked decline from the numbers in recent weeks, and included 4 in Glasgow, 3 in Edinburgh, 3 in Greenock, and 3 in Leith. The 17 fatal cases of scarlet fever, on the other hand, exceeded the number in the previous week by 6; 6 occurred in Glasgow, 6 in Dundee, and 2 in Edinburgh. The 11 deaths referred to "fever" corresponded with the number in the previous week, and included 5 in Glasgow and 4 in Paisley. Two of the three fatal cases of diphtheria were returned in Dundee; and the death classed to small-pox was said to be a fatal case of chicken-pox in Edinburgh. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 73, 71, and 66 in the preceding three weeks, rose last week to 77, and exceeded the number returned in the corresponding week of last year by 12. The causes of 68, or nearly 15 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 37·5 and 27·9 per 1000 in the preceding two weeks, rose again to 34·3 in the week ending September 17th. During the first eleven weeks of the current quarter the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 20·5 in London and 18·4 in Edinburgh. The 232 deaths in Dublin last week showed an increase of 43 upon the number returned in the preceding week; they included 35 which were referred to diarrhœa, 8 to measles, 2 to "fever" (typhus, enteric, or simple), 3 to whooping-cough, 2 to scarlet fever, 2 to diphtheria, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had been 48, 65, and 77 in the preceding three weeks, declined again last week to 52; they were equal to an annual rate of 7·7 per 1000, the rate from the same diseases being but 3·0 in London and in Edinburgh. The fatal cases of diarrhœa, which had been 30, 31, and 36 in the previous three weeks, were last week 35. The deaths from measles, "fever," and scarlet fever showed a considerable decline from the numbers in recent weeks. The 2 deaths referred to diphtheria were the first recorded in the city since the beginning of August. The deaths of infants considerably exceeded the numbers registered in the previous week. Six inquest cases and 4 deaths from violence were registered; and 75, or nearly one-third, of the deaths occurred in public institutions. The causes of 29, or nearly 13 per cent., of the deaths registered during the week were not certified.

ABERDEEN ROYAL INFIRMARY.—A fresh appeal for subscriptions towards carrying out the scheme of reconstruction or extension of the infirmary has been issued by the House Committee. By the former appeal, for the raising of the sum of £30,000, £24,886 has been realised.

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Correspondence.

"Audi alteram partem."

"RAPID DILATATION OF THE CERVIX UTERI."

To the Editors of THE LANCET.

SIRS,—Having read with much interest in THE LANCET of Sept. 10th a paper by Dr. Lewers advocating "rapid dilatation of the cervix uteri," I wish to add my testimony in confirmation of his belief in the safety and advantages of the method, and of its superiority over the older one of dilatation by tents. For many years I have adopted the method, and with increasing frequency and confidence, in cases of uterine hæmorrhage, menorrhagia, and dysmenorrhœa, and more recently, combined with scraping, in cases of erosion of the os and cervix uteri, and have been collecting data for a paper which I hope ere long to publish.

The satisfactory use of rapid dilatation is very much a question of details, and those which I have adopted are very much on the same lines with those described by Dr. Lewers, and are—(1) ether; (2) lithotomy position; (3) fixation of os uteri by two pairs of vulsellum forceps of special form, with short teeth and catch; (4) dilatation by Dr. Matthews Duncan's sounds, followed, if more dilatation be necessary, by Hegar's sounds; (5) thorough application to the uterine cavity of pure melted carbolic acid, due precautions being taken against scalding the vagina; and (6) introduction into the vagina of special iodoform pessaries, which dissolve slowly, instead of melting rapidly, the formula of which was given to me by Dr. Champneys.

I am, Sirs, yours faithfully,

Leeds, Sept. 1887. T. PRIDGIN TEALE.

PAIN AND ITS INTERPRETATION.

To the Editors of THE LANCET.

SIRS,—In response to Mr. Gillies' last letter, I may venture to suggest that the subjects of "pleasure" and "pain" might well be considered together. The two stand out in bold contrast, not only as to the nature of the sensation, but as regards the bodily state which they accompany. For all will agree that, in the main, pleasure signifies health, and pain, disease. The pleasures and pains I am more particularly referring to are those of the grosser kind—such as the pleasures of eating and bodily health, and the pains of physical hurt. Let us suppose the vital changes to be proceeding healthily; myriads of impulses pass up from the skin, viscera, and muscles, and, striking upon the sensorium, yield that vague and ill-defined, but none the less glorious, feeling of well-being. How very little will disturb all this. An undigested meal, the fine sting of a gnat, nay, even "a wandering hair," may soon cast us from our high pinnacle of pleasure, plunging us into an abyss of utter misery.

Now, the natural tendency of pleasure is to cause us to persist in the healthful act which causes it, and of pain to desist from the hurtful cause. The two therefore are strictly utilitarian. The mode in which they effect these good results is interesting. It is partly involuntary and partly voluntary. Concerning the first, Bain's law of self-conservation runs thus: "States of pleasure are concomitant with an increase, and states of pain with an abatement, of some or all of the vital functions." A pleasurable feeling therefore tends, by a hurrying on of the vital processes, to a continuance of the act which causes it, as when a child sucking at the breast is led by the relish of the milk to apply itself with increased vigour to the securing of it; while, on the other hand, a painful feeling, by depressing the vital processes, leads to a discontinuance of the pain-producing act, such as the chewing of an unpalatable food. In such cases pleasure and pain work out the desired result more or less automatically. As the will grows, however, the pursuit of pleasure and the avoidance of pain become more and more a matter of volition. But it is not only the grosser organic pains which urge us to action; there are pleasures and pains of a far more refined order—such as the pleasures of fine art, poetry, affection, learning; and the pains of anger, disappointment, dread or remorse. Thus, there are two opposing series of mental forces—the one urging us *to do*, the other bidding us *not do*. It is, in fact, these pleasures and pains, either actual or remembered, which constitute our motives to action. How far *they* manage *us*, or *we them* is a matter of speculation, but I imagine they have it a good deal their own way.

I say pain and pleasure are utilitarian, for the one leads to the avoidance of harm and the other to the pursuit of good. What should we do without them? If pain did not attend evil, we should for ever be rushing into destruction; and did pleasure not accompany good, we should never seek after it, unless indirectly by the avoidance of harm. Let us, for instance, assume an individual incapable alike of the pangs of hunger and the delights of eating—would he not be rather apt to neglect this very necessary process? In short, without the capacity for pleasure and pain there would be no impulse to action one way or the other. Hence, the two have been necessary factors in the evolution of mind. The existence of an intellectual being having no capacity for pleasure and pain is conceivable, but the evolution of such a being quite inconceivable. Possibly a higher complex reflex organism might evolve, but one endowed with intellect *never*. Indeed, as regards the existence of such reflex organisms, I have never been able to shake off the lingering belief that many of the invertebrates are devoid of even the crudest sensation. Although the facts, therefore, plainly prove that pleasure and pain have both a tremendous purpose, yet a writer in your columns gravely affirms of one of them that it is purposeless.

Concerning the evolution of pleasure and pain, how has it so happily come about that pleasure attends healthful action and pain the reverse? Let us assume the existence of a crude sense in a lowly organism. At this early stage there is no differentiation into a sense of pleasure and pain, the mental world being, as Spencer might say, *homogeneous*: but soon the homogeneous passes into the heterogeneous—there is a dim discernment of pleasure and pain—for I imagine this differentiation must have occurred before the differentiation into the special senses. Now I see no reason why pleasure should have originated on the side of health, and pain on that of disease. It might, for aught we know, have been the reverse. Be this as it may, the principle of natural selection would very soon couple health with pleasure and a disturbance of it with pain, seeing that the opposite state of things would lead to extinction. Undoubtedly pleasures have thus grown. Take a single instance—the pleasures of love,—and see how marvellously they are adapted to the propagation of the race. It is manifest that natural selection has secured this, but is this process the sole factor in the evolution of pleasure and pain? Herbert Spencer, in the second volume of his Biology, points out that natural selection cannot account for a large part of organic evolution; for instance, the æsthetic sense cannot have developed thus. It has grown by cultivation through many generations—that is, by *use*; and, indeed, Darwin, in his later editions, acknowledged that he had not attributed sufficient importance to the "use and disuse of parts." There can be little doubt that not only the æsthetic pleasure, but pleasure in general has thus been very largely added to. The capacity for pain, however, cannot well be strengthened by *cultivation*; but I think we may lay it down as a rule, be the explanation what it may, that individuals who have the greatest capacity for pleasure—I ought perhaps to say the higher pleasures, such as the pleasures of poetry or music—are, at the same time, most sensitive to pain. Certainly, different individuals feel pain in different degrees, and this raises the interesting question: Have we any right to say that some can bear pain better than others, for how do we know that the seemingly better toleration of the pain may not be due to a lesser feeling of it? When pain attains a certain pitch, I imagine that it is unbearable for anyone and everyone. If a man by great force of will brings himself to bear what would be to others unbearable, is it not rather because by his very effort the pain is diminished? We have no right to say that the Fakir, who plunges a hook into his flesh and thereby suspends himself to the branch of a tree while a fire burns beneath, can bear pain better than others. I have heard a man solemnly avow that he derived the keenest pleasure from the operation of the dentist, such as the scraping and filing of teeth. If one did not know this little weakness of his,

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one might fancy that he displayed the most heroic courage by the calmness of his demeanour while under the dentist's hands.

One word more. I have said that pleasure and pain are utilitarian; but just as pain has its imperfections, so has pleasure, but of these I will say nothing.

I am, Sirs, yours faithfully,

Guilford-street, Sept. 19th, 1887. HARRY CAMPBELL, M.D.

To the Editors of THE LANCET.

SIRS,—As a firm believer in the theory of evolution, I am not likely to dispute the main propositions of Drs. Collins and Campbell in recent numbers of THE LANCET. Still, it appears to me that some aspects of the problem of pain which are worthy of attention have been forgotten in the discussion. Pain, like all disease, may be regarded as a consequence of a failure of correspondence with the conditions of life. Whether the balance is restored by changes in the conditions or in the organism itself depends on many circumstances, and need not now be discussed. All early symptoms are in a sense warnings against later morbid states due to the same causes; and in many cases pain acts as a very effective warning. Where it occurs too late to warn the individual it still has a powerful influence for good upon the community. The web of modern civilisation is becoming so complex that the misfortune of one is more and more the concern of all, and society, as a whole, has to bear many of the penalties of individual blundering or transgression. This tends to increase the sympathy of the whole for the sufferers, and in a community where intelligence is increasing provides a powerful motive for the investigation of disease. Many diseases are due to conditions only removable by united action, and it is therefore a distinct advantage to widen the basis of retribution. Probably far less attention would have been paid to the physiology of parturition had the process been a painless one, although in this instance there are several other reasons for believing the pain to be useful. It is the painfulness quite as much as the fatal nature of cancer and hydrophobia which has excited attention and brought us to the threshold of new methods of treatment—at all events as respects one of these dread scourges of humanity. In conclusion, it appears to me that pain must be regarded as only one of many evidences that there is something amiss—something to be rectified; and, looked at in this light, it will seldom fail to be indirectly useful. Of the purely moral benefits of pain I will say nothing, but merely add that if pain be supposed to sweeten the character, so will its relief.

I am, Sirs, yours faithfully,

F. RUFFNACHT WALTERS, M.D. Lond.

Finsbury-circus, Sept. 17th, 1887.

To the Editors of THE LANCET.

SIRS,—Will you allow me to make a few remarks—the last as far as I am concerned—on the subject of pain and its interpretation?

I think the bulk of your readers will agree with me that Mr. Gillies has failed to make any converts to his creed. At any rate, he has fought his battle single-handed, for no champion—unless we except Dr. Hayman—has come forward in support of his views. Mr. Gillies, without denying the truths of evolution, "is of the same opinion still." What he cannot accept is that "pain stands out simply as an evidence of evolution." What *we* cannot accept is that "pain has some other and higher purpose than that." This is very much the position from which we started! Mr. Gillies says: "It is with the meaning, the motive of pain, that I am concerned, not with the process of its evolution." Surely the one should be dependent on the other. We do not admit any special meaning or motive. We see in pain the expression of a high degree of sensibility in the nervous system; and we believe the nervous system has attained its present high degree of sensibility by reason of long and steady development—evolution, in fact. But Mr. Gillies will not concern himself with evolution. He is content to take pain as he finds it, where evolution has brought it, and seek a *motive* in it without considering the nature of its existence—its *raison d'être*—at all. Is it not manifestly unlikely, to say the least, that a nervous system sufficiently developed to receive and convey a high measure of pleasurable sensation should be incapable, under other conditions, of also receiving and conveying an equally high measure of *all* sensations, pleasurable or otherwise? "Sauce for goose is sauce for gander." I can thus see a reason for the existence of pain, but no motive or purpose.

I am, Sirs, yours truly,

A. ST. CLAIR BUXTON, F.R.C.S.

Orchard-street, Portman-square, W., Sept. 20th, 1887.

PROTECTIVE POWER OF VACCINATION.

To the Editors of THE LANCET.

SIRS,—In your number of the 10th inst., Dr. Wm. Squire says that the experience of our late epidemics of small-pox suffices to upset the theories that vaccination performed within four days of the infection of small-pox would be in time to prevent the development of the latter, and that if vaccination could proceed to the stage of areola it would be in time. Marson stated it as his opinion, founded I presume on experience, however it was to be accounted for, that, "suppose an unvaccinated person to inhale the germ of variola on Monday, if he be vaccinated as late as the following Wednesday the vaccination will be in time to prevent small-pox being developed; if it be put off until Thursday, the small-pox will appear, but it will be modified; if the vaccination be delayed until Friday, it will be of no use, it will not have had time to reach the stage of areola, the index of safety, before the illness of small-pox begins." Again, so late as July 3rd, 1886, we read in THE LANCET: "A Russian medical student (M. Gubert), by repeating the vaccination on three successive days, was able to produce matured vesicles in four or five days. This rapid saturation of the organism with the vaccine virus enabled M. Gubert to arrest the development of the disease in twenty-seven persons in whom, he states, he was quite certain that the small-pox was incubating, while in twelve others the disease was so modified as to be considered only varioloid. All the experiments were carried out with calf lymph." May I ask, Where is the record of the experience to which Dr. Squire refers to be found?

I am, Sirs, yours faithfully,

HUGH THOMSON, M.D.

Lansdowne-crescent, Glasgow, Sept. 19th, 1887.

SCARLATINA OR SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—A very widely spread belief in the minds of the working classes that scarlatina allows of the above classification is, I feel convinced, a powerful factor in the spread of this dangerous disease. Few who have treated the affection amongst the class I refer to have failed to observe the effect produced by the word chosen. If without thought the medical man pronounces the patient to have "scarlatina," a contented and relieved expression of countenance is at once observed, and is, in almost nine cases out of ten, followed by the remark, "I was afraid it was 'the fever,'" meaning scarlet fever. If the latter word is used a very different effect is produced. The full danger appears to be realised, but the diagnosis is doubted if the patient does not appear very ill. I feel sure that much harm results from this state of ignorance amongst the majority, and does much to render useless the efforts made to check this disease during an outbreak. "Scarlatina" is looked on as so trivial an affection that precautions of all kinds are too often ignored. Children are apt to be sent to school, allowed to mix with their brothers and sisters, and others permitted to frequent the infected houses. It is simply useless for the individual medical man to try to explain that there is no difference between scarlatina and scarlet fever. I believe, however, that much good may be obtained if this fact were stated on the notices posted throughout the districts inhabited by the class who entertain the dangerous views I describe.

I am, Sirs, yours faithfully,

Battersea Park, Sept. 19th, 1887. W. CARY JEFFRIES.

AT an inquest held last week at Bedworth, North Warwickshire, on the body of Charles Herbert Ford, L.R.C.S.I., who died after taking three drachms of a solution of morphia, representing eighteen grains of the drug, the jury found that the deceased destroyed himself while of unsound mind.

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LIVERPOOL.

(From our own Correspondent.)

THE GYMNASIUM.

THE importance of due attention being paid to physical development in children of both sexes, as well as in young men and women in whom it has been previously neglected, is now generally admitted. It follows, therefore, that one or more well-organised gymnasia are becoming necessary features in every large community. Liverpool has long recognised this fact. More than thirty years ago the late M. Hugenin had his gymnasium near the Exchange, conveniently situated for men of business who could slip away from desk and counter for a half-hour's gymnastics, the value of which to men whose daily avocations involved stooping over desks and confinement in close offices could not be over-estimated. Later on this old gymnasium was found quite inadequate to meet the accommodation required, and by the energy of the late Mr. Hulley, aided by numerous influential friends, the present gymnasium was erected. It is now under the superintendence of Mr. Alexander, under whose able management it has been very successful. He has recently published a small work entitled "Modern Gymnastic Exercises (Elementary)," which will be found well worthy of perusal. As he truly observes in it, "Making poor stunted forms strong healthy physiques, discontented men bright and happy beings, is good service indeed." The most valuable exercises of all are the classes of dumb-bells, Indian clubs, and bar-bells, with musical accompaniments. These bring into play all the muscles of the body, and change puny delicate lads into strong active young men.

WORK DONE BY THE SCAVENGING STAFF.

Some idea of the enormous work thrown upon the local scavenging staff may be judged by the following details. In an average year 7000 middens and a quarter of a million dry ashpits are emptied. Nearly 18,000 loads of refuse collected by citizens, and more than 100,000 loads of refuse swept up by the scavengers from the streets, courts, and passages of the city, are removed by "bell-cart."

EMPTYING ASHPITS AND DIARRHŒA.

Although in Liverpool, as in other large cities, modern progress has changed most of the old "privies" into water-closets, dry ashpits are still required for the purposes of receiving animal or vegetable refuse. There is no doubt that burning is the best mode of disposing of the latter, but unfortunately the average kitchen ranges, both ancient and modern, are not constructed with this view. It becomes necessary, therefore, that these dry ashpits containing vegetable refuse should be emptied at reasonably frequent intervals, the alternative meaning an obvious source of danger in the proximity to any dwelling of any decaying animal or vegetable matter. At the same time, frequent removal in hot weather is to be deprecated, especially if there be reason to believe that this is a cause of diarrhœa as has been suggested. The subject is under consideration.

NARROW ESCAPE OF FIREMEN.

The superintendent of the local fire brigade, with one inspector and four firemen, had a narrow escape at a fire which occurred on board the steamer *Scholer*, while in one of the docks. When the men descended into the fore-peak of the steamer, where it was believed the fire existed, they were at once overcome by noxious gases or chemical fumes, supposed to be caused by the combustion of some portion of the cargo, which consisted of cotton and other goods. They were hauled up in an unconscious condition, but speedily recovered by proper treatment, except one fireman, who had to be removed to the Royal Southern Hospital, where he soon recovered. Superintendent McWilliam, who has had many years' experience of fires, and is accustomed to the densest smoke, stated that he had never experienced anything so peculiarly overpowering on any previous occasion.

DEATHS FROM HYDROPHOBIA.

An inquest has been held by the borough coroner on the body of a boy eight years of age, who died on the 17th inst. in the Royal Infirmary from hydrophobia. The case was seen by Drs. Glynn and Davidson as well as Dr. Hugh R. Jones, the house physician, who gave evidence at the inquest. It appears from the evidence that the boy was bitten on July 30th by a dog at the back of the house occupied by the deceased's father. The dog was a sheep dog, and the boy's hand was bitten through. His mother stated that it bled profusely, and that she took him at once to a surgeon, who dressed the hand. The boy apparently recovered from the injury, but on the 13th inst., while walking with his father, he complained of pain in the affected hand, and that it went right up his arm. As he became delirious that evening, a doctor was called, and he was taken to the Royal Infirmary, where he remained till his death. All the symptoms of hydrophobia were well marked, and the post-mortem examination confirmed this. The same dog bit a lady, a Mrs. Atkinson, who most courageously went to the rescue of the boy; she has undergone the Pasteur treatment, and so far successfully.

A second victim to the same dog above alluded to has just died. This was a boy nine years old, the son of a widow residing in Wavertree, a township distant three miles from Liverpool. This boy was bitten on July 30th in the calf of the left leg, five distinct marks being subsequently found. He was at once taken to a chemist's, where the wounds were cauterised, the bites healing very rapidly. On the 17th inst. he first complained of feeling unwell, wished to lie in bed, and refused liquids. On the next day (Sunday) he was much worse, and on Monday Dr. Wearing of Wavertree was called in. The little fellow became delirious, and in the afternoon of the 20th he died. A large number of wandering dogs are annually seized by the police, and if not claimed or sold are destroyed, but, in spite of this, there are still many loose dogs in the streets.

Liverpool, Sept. 21st.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

HEALTH OF SUNDERLAND.

MR. A. E. HARRIS, the medical officer for the borough, has issued his report on the Sanitary Condition of Sunderland for 1886. The document is a long one, too much so to analyse in these notes; but upon the whole it is most interesting and instructive, as showing the result of vigorous sanitary measures upon the health of the people of Sunderland: indeed it is not too much to say that since THE LANCET's report in 1884 a sanitary revolution has been effected in the Wearside borough. The death-rate for 1886 was 19·4 per 1000, the nearest approach to which was 20·8 in 1880. The average death-rate for the previous ten years was 23·5. The decreased mortality, Mr. Harris shows, is not confined to any one group of ages, but is general to all groups except one—viz., those between fifteen and twenty-five years of age. The greatest decrease occurs among children under five years of age, of which there is a falling off of 390 deaths. Mr. Harris very clearly and forcibly shows that the age distribution of Sunderland tends to a low mortality. Its configuration is favourable, its water supply unexcelled, its sewerage system good, and finally, he says, the Health Committee have done and are still anxious to do all in their power to promote the health of the borough, so that, as a result, the decline in miasmatic or "filth" diseases is the most noticeable and most gratifying feature in Mr. Harris's returns. With regard to the care exercised as to food inspection, he mentions that no less than 77,000 herrings were seized as unsound. He is, however, far from being fully satisfied, but looks forwards to a reduction of the annual death-rate to about 16 per 1000, which he thinks should be about the normal figures. Be this as it may, he is to be congratulated on the success achieved so far under circumstances which might have led a less resolute medical officer of health to despair.

DRUNK OR DYING.

An unfortunate mistake occurred at Middlesborough last week, when an elderly and well-dressed female became insensible in a tram-car. The conductor removed her and set her on a door step, from which she was afterwards removed in a barrow to the police station. Dr. Longbotham, on seeing her, very properly ordered her removal to the workhouse, where she remained unconscious for a few hours, and died.

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SCARLET FEVER IN NEWCASTLE.

The return of infectious diseases notified by practitioners in Newcastle to the medical officer of health during the fortnight ending Sept. 10th shows the unusually large total of 116 cases. No district appears to be free, but it is worst at the extremes of the city east and west. Enteric fever is also shown to be rife. The heavy rains which have set in here since the commencement of September have caused a marked fall in the previously high temperature.

TYNEMOUTH WATER SUPPLY.

Many will be pleased to see that the Town Council of Tynemouth are about to take steps to bring a supply of proper drinking water to the place. The defective quality of the water at Tynemouth has been the means of preventing this favourite health resort from receiving anything like the number of visitors who would otherwise gladly go there, for the convenience of Tynemouth to our great northern towns and its natural attractiveness give it a position not easily surpassed.

A DACOIT'S HAIR.

One of the Royal Welsh Fusiliers, who returned to Newcastle the other day from Burmah, where he has been engaged with the Dacoits, has brought home a curiosity in the shape of the long hair cut from one of the robbers who was shot on the river Moo. It is jet black, and its extreme length is sixty-seven inches.

Newcastle-on-Tyne, Sept. 21st.

EDINBURGH.

(From our Correspondent.)

POST-GRADUATE COURSES.

THE second session of Post-Graduate Lectures will commence on Monday, Sept. 26th, and will be continued for three weeks. Since the inauguration of these lectures last year, there has been a considerable development both in the subjects included and in the amount of instruction to be given in the various branches. The unexpected success with which last year's effort was attended has encouraged the committee to make much more extensive preparation for the present season. Every branch of medical education is to be represented. In Dental Diseases, six demonstrations showing most recent advances in the practice of dentistry have been arranged by the lecturers of the Edinburgh Dental School. Diseases of Children are to be treated in four clinical demonstrations at the Sick Children's Hospital by the physicians to that institution. Obstetrics and Gynæcology are to be treated by Professor Simpson, Drs. Croom, Hart, and Barbour in a series of daily demonstrations at the Royal Infirmary. The Throat and Ear are to be dealt with by Dr. Duncanson, Dr. McBride, and Dr. Mackenzie Johnston, in a series of special lectures and clinical demonstrations. Dr. Argyll Robertson, Mr. Berry, and Mr. George Mackay will hold courses of clinical instruction in Eye Diseases. Dermatology and Syphilis are to be treated by Dr. Allan Jamieson and Dr. MacGillivray respectively, both theoretically and clinically. At the Royal Infirmary, the medical out-patient department is to be largely put into requisition, the assistant physicians, Drs. Smart, James, and Byrom Bramwell, having each a special series of clinical demonstrations, in addition to lectures on important points in practical medicine. General Medical Diseases have eight lectures allotted to them. These will be delivered in the infirmary by the physicians and the University Professors of Clinical Medicine, and they will be illustrated by clinical cases at present in the hospital. In the Surgical department a similar course of five lectures on General Surgical Diseases will be conducted by the surgeons to the infirmary and the University Professors of Surgery and Clinical Surgery. Mr. Cathcart, assistant surgeon to the infirmary, is to contribute a course of demonstrations on Artificial Limbs and on the taking of casts. In Pathology an extensive course of instruction in Practical Bacteriology is arranged under the charge of Drs. Woodhead and Edington. Mr. Bruce will give seven demonstrations on the Pathology of the Brain and Spinal Cord, and Mr. Macdonald Brown two demonstrations on Bone in its relations to Disease. Mental Diseases are to be dealt with by Drs. Clouston and Batty Tuke; and Medical Police by Dr. Littlejohn, medical officer of health for the City of Edinburgh. Regional Anatomy is to be extensively dealt with by Drs. Symington and Macdonald Brown, whose courses of demonstrations will cover all the more important regions of the body. Dr. Murdoch Brown will demonstrate microscopically the Parasites of Man and Urinary Deposits. Dr. Craig is to give a series of lectures on New Remedies and Dr. Felkin on Climatology. Vaccination will be taught clinically by Drs. Husband and Buist. For those attending the course, each day will be very fully occupied if they attempt to avail themselves of even a part of the curriculum; it is now sufficiently expanded to allow of a considerable amount of specialisation on their part, since each subject is in itself dealt with in a variety of ways, and so extensively as to convey an advanced knowledge of its present aspect. Tickets for the whole course can be obtained at a cost of two guineas from either of the secretaries, Dr. Claud Muirhead and Professor Chiene, Charlotte-square, Edinburgh.

Edinburgh, Sept. 20th.

DUBLIN.

(From our own Correspondent.)

QUEEN'S COLLEGE, GALWAY.

THE President, in his report for the past session, states that he feels satisfaction in the reflection that the College can justly claim to have given an impulse to educational progress throughout the country, and more especially to have conferred substantial benefits on the youth of a remote and outlying province. The change in the position and relations of the Queen's Colleges has in nowise affected the duties and the tasks of the teaching body of the College. While the collegiate discipline of lectures and instruction in common is not relaxed, the College has recognised facts as it has found them, and has adapted its curriculum to meet the rules and requirements of the Royal University of Ireland. And it may be hoped, the President adds, that the thoroughness of the intellectual training which the collegiate system ensures will exhibit results that will ultimately secure for it even higher appreciation, and enable it to keep pace with the growing educational demands of the country and the time. The students in attendance during the session 1886-87 numbered 103, of whom 45 were in the Faculty of Medicine, the total showing an increase of nine as compared with the previous return. The library and museums are in a satisfactory condition, while large additions have been made to the Natural History Museum, which is now in a perfect state of efficiency for teaching purposes. The apparatus for the illustration of the principles of natural philosophy, and the collections specially devoted to the studies of the medical profession, are worthy of particular notice. The rapid development of medical science, especially in the biological department, demands constant enlargement and improvement of the scientific apparatus necessary for the purposes of instruction; and it is satisfactory to learn that the provisions for the study of practical physiology and histology are commensurate with the growth and importance of these sciences.

ROYAL UNIVERSITY OF IRELAND.

Dr. Knight, Lecturer on the Practice of Medicine in the Ledwich School of Medicine, will be a candidate for a Fellowship in the department of Medicine, the election for which by the Senate will take place next month. On the same occasion Mr. C. H. Robinson, also connected with the Ledwich School, will be a candidate for an examinership in Materia Medica. In mentioning these candidatures, it may be noted as remarkable that the Ledwich School (which has about the same number of students enrolled on its book as the University of Dublin) is the only medical institution in Ireland which has not a single teacher connected with the Royal University, either as a senator, fellow, or examiner. On the other hand, Trinity College has sixteen senators, four fellows, and two examiners; and the Catholic University three senators, ten fellows, and six examiners. The Senate will, at the end of October, elect a curator, to take care of all the University collection, museum, laboratories, &c., and who shall also be

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competent to act as an examiner in some one of the experimental or natural sciences. Candidates must apply to the secretaries of the University on or before Oct. 1st.

THE EPIDEMIC OF MEASLES IN DUBLIN.

The measles epidemic, which has been prevalent in Dublin for some months, shows little signs of abatement, and up to the present the deaths have been numerous. For example, taking the thirteen weeks ending Sept. 10th, I learn that 299 persons succumbed to the disease; and as the epidemic exists in various parts of the country, the total mortality must be considerable.

BOYLE UNION.

The Boyle Guardians, in a sudden fit of economy, recently determined to give notice to their apothecary to resign, intending that their medical officers should compound the necessary medicines, thereby saving the salary of the apothecary. However, the guardians, when they came to ask the medical staff, met with a distinct refusal, as they very naturally declined to undertake additional duties which they had not contracted to perform. In this dilemma the guardians sought the aid of the Local Government Board, and requested them to sanction the proposed abolition of the office of apothecary to the workhouse and of Boyle dispensary district, in consequence of the state of the union finances, and because some adjoining unions did not possess an apothecary. The Board, however, refused on these insufficient grounds, and Dr. Todd, their inspector (to whom they referred the matter), was of opinion that it would be contrary to the interests of the sick poor to carry out the proposal. A notice of motion has been given that the clerk should again write to the medical officers, and that, should they refuse to compound medicines, they be requested to resign, and that a new election be held to fill the vacancies. The medical staff would, of course, be very foolish to adopt such a suggestion; they ought to be perfectly aware that the guardians, dare not remove them more especially as the sanction of the Local Government Board to the removal of the office of apothecary to the workhouse and dispensary district has been withheld.

Conjoint examinations for the diplomas of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Ireland will be held at the end of October or beginning of November.

Dr. Laurence Kerrigan has been elected coroner for the county of Westmeath without opposition.

Dublin, Sept. 20th.

PARIS.

(From a Correspondent.)

THE SWEATING SICKNESS.

IN the course of a long report, read at a recent meeting of the Academy of Medicine, upon the recent epidemic of sweating sickness in the central departments of France, Dr. Brouardel stated that he had made a diagnosis of the epidemic, which would prevent it being mistaken for measles in future, the eruption on the skin being much more rapid, appearing upon the second day after the premonitory symptoms have set in, while when the patient is recovering the peeling of the skin is very much more like that attending scarlet fever. Moreover, the children, who are more subject to it than grown persons, perspire very profusely, and appear to be suffering from intense oppression on the chest. There is, however, much in common between the two complaints, as the parents of children who have had measles have themselves afterwards been seized with the sweating sickness. Dr. Brouardel explains that for some reason or other the neighbourhood of Poitiers has always been very subject to it. This year it has been particularly severe, for out of 13,000 inhabitants in the district of Montmorellon 1700 were attacked, and the average rate of mortality was 12 per cent., though in some villages it reached as much as 33 per cent. Curiously enough, while in some villages twenty children were attacked to one adult, in other places more adults than children were seized with the disease. It is evidently contagious, for upon one farm fourteen people out of nineteen were seized, but there is no evidence to show that it is propagated by the water or any other liquid. It is communicated like measles or scarlatina, and the period of incubation never exceeds twenty-four hours. Dr. Brouardel, in order to check the propagation of the disease, organised, with the assistance of the house surgeons in some of the Paris hospitals, a special medical service for disinfecting the clothes and cottages in the district, the chief feature in which was the formation of a relief convoy, comprising a hand engine and apparatus for steaming clothes, bedding, &c. The epidemic has now quite disappeared.

TYPHOID FEVER IN PARIS.

There is another typhoid epidemic in Paris, due, it is alleged, to the substitution, during the recent long spell of hot dry weather, of the Seine for spring water in many quarters of Paris. On Sept. 1st there were 353 typhoid-stricken patients in the hospitals. There are now 509. The number of those who are treated in their homes is said to be very great.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major John Stannard McAdam, to be Brigade Surgeon, vice A. S. K. Prescott, retired (dated July 26th, 1887).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Robert George Bird has been placed on the retired list of his rank (dated Sept. 9th, 1887).

ARTILLERY VOLUNTEER CORPS.—2nd Volunteer (Dorsetshire) Brigade, Southern Division, Royal Artillery: Acting Surgeon P. W. G. Nunn resigns his appointment (dated Sept. 17th, 1887).

RIFLE VOLUNTEER CORPS.—1st Clackmannan and Kinross: Acting Surgeon P. Rough, M.B., resigns his appointment (dated Sept. 17th, 1887).—1st Volunteer Battalion, the Northumberland Fusiliers: Lieutenant J. P. Elliot to be appointed Acting Surgeon (dated Sept. 17th, 1887).—1st Volunteer Battalion, the Prince of Wales's (North Staffordshire Regiment): Charles Henry Phillips, Gent., to be Acting Surgeon (dated Sept. 17th, 1887).

Obituary.

WILLIAM BLOWER, M.R.C.S., L.S.A.

THE late William Blower was born at Yardley-Hastings, Northamptonshire, on Oct. 19th, 1802. His marked abilities and love of study led his parents to choose for him the profession of medicine, and to this end he was placed with the late Mr. Aspray, of Olney, Bucks. In due time he went to London, and studied at Guy's, Webb-street, and St. Thomas's. He took his L.S.A. in 1824; and two years later, an opening presenting itself at Bedford, he settled there in practice at the age of twenty-four. After thirty years of laborious practice, with constantly increasing engagements, when fast rising in public estimation and becoming a consultant in difficult cases, especially of diseases of women, his tall and noble form was suddenly laid low with paraplegia, which in three days became complete, and, in spite of all that skill could do, the paralysis continued unrelieved. Although thus permanently confined to his couch, removed from all active life, and at times suffering much from severe attacks of pain and depression, his active and well-stored mind, aided by an exceptional memory, found abundant occupation in study, reading, and writing. His seclusion was relieved by the visits of his old friends and several former pupils, who much enjoyed a chat with him, and to hear his mature experience on scientific, medical, and other subjects. For many months his friends had noticed a gradual failure of strength, but he continued to rally from slight ailments until Thursday, the 25th ult., when attacks of lancinating pains, with restless nights and signs of failure of the heart's action, excited fears, but too soon realised, that life was ebbing out; and the heart gently ceased to beat on Aug. 30th. His faculties remained unclouded to the last. The illness just exceeded twenty-eight years. He was

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within two months of completing his eighty-fifth year. He married rather late in life, and leaves a widow, but no children.

In sanitary matters Mr. Blower took a deep interest, and the subject of epidemics was his constant study. His experiences of the cholera epidemics in Bedford in 1832 and 1849, and of several severe outbreaks of continued fever in the town and neighbourhood, furnished him with a wealth of illustration now happily wanting to many others equally busily engaged in practice. He contributed valuable papers on these and other subjects to the medical journals, chiefly during his illness, when he occasionally wrote in the local papers on matters of public interest, sometimes anonymously. He took a prominent part in local politics, was a member of the corporation and of the Harpur Charity Board, and in 1853 was elected mayor. The Literary and Scientific Institution and General Library had in him one of its little band of founders. His fondness for natural history, and especially botany, incited the same love in others, and had no little to do with the formation of the Beds Natural History Society, to which during his illness he communicated some interesting papers. He was an earnest and critical Biblical student, reserved in his bearing; but those who knew him intimately recognised the sincerity of his Christian faith, so exemplified by the unmurmuring fortitude with which he bore an unusually protracted and trying affliction. He was firm in his convictions, had strong insight, a genial manner, and a disposition very unselfish and self-sacrificing. He was ever a most kind and sympathising friend to the poor, who shared equally with others his helping hand. All who knew him deeply mourn the loss of a true and valued friend.

DR. F. RICCO.

THIS eminent Neapolitan physician and alienist died on the 2nd inst., in circumstances peculiarly distressing. For the last few weeks he had been relieving his onerous duties in Naples as director of the Ospedale della Pace by running down by train to Salerno, whence, after the reinvigorating sea bath, he returned in the evening to town. He had entered the last up train shortly after 5 P.M. seemingly in good health and spirits, but at the next station after Salerno he was found by the guard dead in a first-class carriage. Every care procurable in the little town of Cava dei Tirreni (the station in question) was bestowed on him, but death, presumably from heart failure, had supervened long before he had got so far on his home journey. He was carried to the Mater Domini Hospital in Naples, whence, on the 4th, he was followed to the grave by a long train of mourners, including the Duke di San Donato, all the Neapolitan deputies and civic dignitaries then in the city, the leading medical men (professors and practitioners), and many working-men's societies, each with its special banner.

Federico Ricco, in addition to his work as director of the Ospedale della Pace, in which, it may be mentioned, he established a *clinica pædiatrica*, had also laboured much and effectively in the institution of the great inter-provincial lunatic asylum at Nocera. He had also conceived the project of erecting a special asylum for criminal lunatics, a *manicomio-carcere*; but its realisation, though actively favoured by many distinguished names in penal legislation, he had to postpone.

He was a frequent and able contributor to the literature of the profession, especially to the clinical side of medico-psychology, and the fame he thus acquired led to his admission as honorary fellow into many societies in Italy and abroad. His courtesy and his intelligence will long be gratefully remembered by all who had the privilege of accompanying him over the hospitals under his care.

He is survived by his wife, the only sister of Signor Nicotera, Minister of the Interior in the first Depretis Cabinet.

PAOLO MACCHIAVELLI.

ONE by one the physicians and surgeons whose distinction has been earned in the campaigns fought out for Italian unity are passing away. The last to swell "the majority" is the Commendatore Paolo Macchiavelli, who, in the medico-military parlance of Italy, filled the post of major-general on the army medical staff.

He was born at Sarzana, on the Riviera Ponente, on Dec. 9th, 1825. Trained for the medical profession, the revolution of 1848 found him, with many other ardent youths, eager to join its ranks; and so in that year he served as quarter-master in the column of Genoese volunteers formed under the Provisional Government of Lombardy. In 1859, the war of independence, in which King Victor Emanuel, allied with the Emperor Napoleon, took the field against Austria, drew him once more into active campaigning, and he became surgeon to the regiment of *cacciatori* (chasseurs) in the army of the Emilia. Next year he entered the Royal service as *medico divisionale* (surgeon of division), from which position he was promoted through all the successive stages, till, on November 30th last, he was appointed major-general on the medical staff, and on the same day president of the Commission of Military Hygiene.

For his services in the campaigns of 1848, 1859, and 1866, he was honourably mentioned, not only as a medical officer, but as a combatant under fire—services which, among other distinctions, procured him the orders of the Crown of Italy and of the Saints Maurice and Lazarus. "He was," says a professional compatriot, "a man of high culture and of unswerving probity: austere, indeed, but scrupulously just. He had made himself proficient in many departments of medicine; while in surgery, his special field, he possessed singular skill as an operator. Military hygiene was his favourite study, and he had earned in it a reputation which extended far beyond the Italian frontier.

His death was sudden. Passing through Genoa on his way to headquarters in Rome, he went on the 12th inst. to the public baths in the Piazza Cavour, and there, at noon, he was seized with cerebral hæmorrhage, and never afterwards regained consciousness. He leaves a widow and daughter to mourn an exemplary husband and father.

Medical News.

SOCIETY OF APOTHECARIES.—The results of the examination in Arts qualifying for registration as medical student, held in the hall of the Society on the 2nd and 3rd inst., have just been published. There were 181 candidates, and from the pass list it appears that thirty-six were placed in the second class, and eighty-two were certified as having passed in some subjects, but not in all. The next examination will be held on the 2nd and 3rd of December.

AT an estimated cost of £2723, the Bradford Town Council has decided to make additions to its fever hospital.

GREAT NORTHERN CENTRAL HOSPITAL.—An amateur theatrical performance for the benefit of the funds of the above charity was held on the lawn of Fairseat, Sir Sydney Waterlow's house at Highgate, on Saturday last.

THE GRESHAM LECTURES ON PHYSIC.—Dr. Symes Thompson commences his annual lectures at Gresham College on October 4th, and the course will be continued on the three following days.

GLASGOW ROYAL AND WESTERN INFIRMARIES.—For the benefit of these infirmaries a sum of £170 10*s.* was realised by the gate money drawn at the Children's Jubilee Fête held on Glasgow Green on the 10th inst. To this amount a sum of £30 was added by Mr. Walter Wilson, promoter of the entertainment—£100 5*s.* being thus received by each of the two institutions.

DONATIONS TO MEDICAL CHARITIES.—Mrs. Adcock of Erdington has given £1250 to be devoted to the maintenance, in the Jaffray Suburban Hospital, Birmingham, of a bed in memory of her husband and of her brother.—In addition to the contribution to the funds of the Ayr County Hospital by the Earl of Stair mentioned in our last, the sum of £1389 towards the same object has been collected by the Hon. Mrs. Vernon.

VOLUNTEER MEDICAL STAFF CORPS IN EDINBURGH.—During the last few months members of the St. Andrew's Ambulance Association have been drilling weekly in the Edinburgh Corn Exchange with the object of forming a lay company of the Volunteer Medical Staff Corps. At a recent meeting it was resolved to memorialise the Government to obtain the necessary official sanction, and to bring the matter under the notice of the Secretary of State for Scotland, the Lord Advocate, and the members of Parliament for the city.

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DROWNING OF A SHIP'S SURGEON.—On the 11th inst. a body, identified at the subsequent inquest as that of Mr. James Oakley, L.R.C.S.I., was washed ashore at Millom. The deceased was surgeon to the mail steamer *Calabar*, sailing between Liverpool and Cape Coast Castle. The circumstances attending the casualty seem obscure, as the vessel appears not to have been wrecked. The coroner's jury returned the verdict of "Found drowned."

DENTISTRY IN GLASGOW.—The dental students of Glasgow have met to protest against the amount of unqualified dental practice being carried on in the city. A petition was drawn up appealing to the West of Scotland branch of the British Dental Association for protection against men who, without right or title, are practising dentistry, to the detriment of those who have spent both time and money to qualify themselves for the duties of their profession.

THE BIRTH-RATE IN FRANCE.—The French population returns for 1886 have just been issued. The births exceeded the deaths by 52,560, the smallest excess known of late years. In 1881 the excess was 108,000; in 1882, 97,000; in 1883, 96,000; in 1884, 78,000; and in 1885, 85,000. The divorces, which for the second time figure in the returns, were 2942 in 1886, against 4277 in 1885. Paris furnished 650 of them, whereas Hautes Alpes and Lozère had none, and Cantal, Savoie, and Vienne had only one each.

MEASLES AT HANWELL.—On the 19th inst., at the ordinary fortnightly meeting of the managers of the Central London School District, the clerk reported that the medical superintendent of the Hanwell Schools advised the sending of no more children from the City of London or St. Saviour's Workhouses at present, in consequence of the outbreak of measles at the schools. It was eventually, however, determined to send the children to the schools, but to prevent their intercourse with the other children already there.

MIDDLESBOROUGH TRADES COUNCIL HOSPITAL DEMONSTRATION.—A few days since the annual Trades Council Hospital Demonstration was held in the Theatre Royal, Middlesborough, the Mayor (Mr. Hinton) presiding. Addresses were delivered by Mr. Isaac Wilson, M.P., and other gentlemen. The theatre was crowded in every part, the representatives of the several trades having paraded the chief streets of the town accompanied by several bands of music. The collection in aid of the North Riding Infirmary and Cottage Hospital amounted to £12 15*s.* 7½*d.*

INTERNATIONAL SHORTHAND CONGRESS. — Many of our readers are no doubt sufficiently interested in rapid methods of handwriting to welcome the announcement that the International Shorthand Congress will assemble on Monday next, in the theatre of the Geological Museum, Jermyn-street. The meetings will be continued during the whole of next week. On the 26th, at 8 P.M., the inaugural address will be delivered by Lord Rosebery. On Wednesday, the 28th, at the same hour, a bust of Mr. Isaac Pitman, who may be said to be the father of the modern system of shorthand, will be presented to his family.

EFFECT OF QUININE ON UTERINE HÆMORRHAGE.—The new Brazilian journal, *Boletim Geral de Medicina e Cirurgia*, publishes a paper by Dr. Deocleciano Ramos on the Effect of Quinine on Uterine Hæmorrhage. He cites two cases of patients who suffered, it is true, from malaria, in whom a very few full doses—fifteen grains—of quinine served to check, and indeed to cure, violent and intractable uterine hæmorrhage. In one case iron and ergotin had been given internally, and cold injections administered, without much effect, but a single dose of quinine produced a considerable diminution in the amount of blood lost, and a second similar dose completely arrested the discharge, which did not return.

CHARTERHOUSE SCIENCE AND ART SCHOOLS AND LITERARY INSTITUTE.—The winter session of this, one of the largest science and art schools in the United Kingdom, will commence on Oct. 1st, under the presidency of the Rev. Henry Swann, M.A. Instruction of a practical character is given in most of the sciences at a very nominal fee. Day classes will also be held to prepare candidates for the London matriculation, the clerical, medical (including dental), legal, and other examinations. Students who aim at becoming proficient in chemistry (organic and inorganic) have the opportunity of working in a well-fitted laboratory, capable of accommodating sixty students. Aspirants of university honours can at a small expense be assisted in their studies. Classes for matriculation, Latin, Greek, French, German, music, and shorthand are taught by well-qualified teachers. Full particulars of the classes may be obtained from C. Smith, organising secretary.

SUICIDE IN PRUSSIA.—The following record of suicides is contained in a recent number of the *Statistischen Correspondenz*:—In the kingdom of Prussia during the year 1885 there were 6028 cases of suicide, as compared with 5900 cases in 1884, and 6171 in 1883; so that while there had been a decrease from 1883 to 1884 of 271 persons, or 4·39 per cent., the sum had risen from 1884 to 1885 by 128 cases, or 2·56 per cent. The suicides of the year 1885 are divided into 4811 men and 1257 women. In 4928 cases the motive for suicide was known, and is catalogued as follows:—1582 cases from insanity, 766 grief, 659 vice, 611 weariness of life, 477 physical suffering, 435 remorse, shame, &c. Most of these suicides—namely, 3632—ended their lives by hanging. The rest are divided thus: Drowning, 1150; shooting, 636; poison, 245; cutting the throat, 123; jumping from a height, 81; under railway trains, 71; opening a vein, 48; &c. Suicide was relatively most frequent above middle age, for 21·3 per 100,000 persons were from twenty to thirty years of age; 28·1 from thirty to forty; 39·1 from forty to fifty; 52·7 from fifty to sixty; 59·7 from sixty-six to seventy; 53·7 from seventy to eighty; and 55·2 above eighty years of age.

Births, Marriages, and Deaths.

BIRTHS.

CARTER.—On the 17th inst., at Belmont, Shipley, the wife of D'Arcy B. Carter, M.R.C.S., L.R.C.P., of a daughter.

CHEPMELL.—On the 11th inst., at Forrest-road, Edinburgh, the wife of Chas. Chepmell, L.R.C.P.Ed., of a daughter.

GLYNN.—On the 15th inst., at Rodney-street, Liverpool, the wife of T. R. Glynn, M.D., of a daughter.

HEDGES.—On the 15th inst., at Rutland House, Leighton Buzzard, the wife of J. A. Hedges, M.R.C.S., L.S.A., of a son.

MULLIS.—On the 29th ult., at Boyson-road, Walworth, S.E., the wife of George William Mullis, L.R.C.P.Lond., M.R.C.S., L.S.A., of a daughter.

PRIESTLEY.—On the 19th inst., the wife of R. C. Priestley, M.A., M.B., of Upper Berkeley-street, of a son.

ROBSON.—On the 10th inst., at 20, South-street, Durham, the wife of E. Sheddon Robson, M.R.C.S.E., of a daughter.

MARRIAGES.

ADAMS—JOYCE.—On the 13th inst., at St. Thomas's Church, Ryde, by the Rev. S. W. Stevens, Charles Edward Adams, M.B., B. Sc. Lond., M.R.C.S.Eng., of Buckhurst-hill, Essex, to Fanny, fifth daughter of Edwin Joyce, of Ryde, I. W.

ARNISON—HOLDING.—On the 20th inst., at St. Jude's, Southsea, by the Vicar, the Rev. J. S. Blake, M.A., William Christopher Arnison, M.D., of Newcastle-on-Tyne, to Kate, youngest daughter of the late Richard Holding, of Southsea.

BUSH—ROBERTSON.—On the 20th inst., at the Parish Church, Weston-super-Mare, by the Rev. F. Andrews, Rector of Kinnersley, Herefordshire, assisted by the Rev. H. Gibbs, Rector of Hutton, Somersetshire, J. Paul Bush, M.R.C.S., fifth son of the late Major Robert Bush, of Clifton, Bristol, to Laura Annie, eldest daughter of the late John (Quartus) Robertson, Esq., of Cororooke Colac, Victoria.

DELEVINGNE—YOUNGER.—On the 17th inst., at St. George-the-Martyr, Queen-square, Bloomsbury, by the Rev. H. B. C. Delevingne, cousin to the bridegroom, Henry Ferdinand Delevingne, of Kronberg, Stoke Newington-common, to Constance, elder daughter of the late Edward Younger, of 117, Leadenhall-street, E.C., and Holly Mount, Blackheath-hill.

JONES—ROBY.—On the 21st inst., at St. Michael's-in-the-Hamlet, by the Rev. Canon Burbidge, Henry Jones, Surgeon, of Upper Warwick-street, Liverpool, to Mary, youngest daughter of the late John Roby, of Rainhill.

SHIRLEY—VERE-WALWYN.—On the 15th inst., at St. Mark's, Bath, by the Rev. E. J. Wemyss-Whittaker, Matthew Bernard Shirley, L.R.C.P., M.R.C.S., of Grove House, Batley, only son of Matthew Shirley, Physician and Surgeon, Beeston-hill, Leeds, to Frances Harriette (Dollie), Vere-Walwyn, youngest daughter of the late F. A. Vere-Walwyn, Esq., of Greenheys, Manchester.

DEATHS.

ILOTT.—On the 18th inst., at Bromley, Kent, Edward Ilott, F.R.C.S., aged 60.

KILLERY.—On the 19th inst., at York-place, Portman-square, St. John Killery, M.D., Brigade-Surgeon, Medical Staff, aged 51.

QUAIN.—On the 15th inst., at Cavendish-square, W., Richard Quain, F.R.C.S., F.R.S., Surgeon Extraordinary to H.M. the Queen, aged 87.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ATKINSON, ROBERT, M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Rishworth Urban Sanitary District, vice Britton, whose appointment is about to expire.

BOND, FRED. FIELDING, M.D.Ed., has been appointed Medical Officer of Health for the Rastrick Urban Sanitary District, Yorkshire, vice Britton, whose appointment is about to expire.

EMMERSON, JOHN BOLTON, M.D.Dur., M.R.C.S., has been appointed Medical Officer for the Biggleswade District of the Biggleswade Union, vice Stevens.

EVANS, WILLIAM, L.R.C.P. Ed., M.R.C.S., has been reappointed Medical Officer of Health for the Anglesey Rural, Holyhead Rural, and the Beaumaris Urban Sanitary Districts.

HINDLE, FRANCIS JOSEPH, L.R.C.P. Ed., L.F.P.S. Glas., has been appointed (*pro tem.*) Medical Officer for the Leake District of the Loughborough Union.

HIRST, ALFRED, M.R.C.P.Ed., has been reappointed Medical Officer of Health for the Prestwich Urban Sanitary District.

HOOPER, ALFRED, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for No. 2 Division of the Burton-on-Trent Rural Sanitary District.

JOHNS, WILLIAM STEPHEN, L.R.C.P., L.R.C.S.Ed., has been reappointed Medical Officer of Health for the March Urban Sanitary District.

KARKEEK, PAUL QUICK, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the St. Mary Church and Torquay Urban Sanitary Districts.

OWEN, ARTHUR D., M.R.C.S., L.S.A., has been appointed Assistant House-Surgeon to the Royal Portsmouth Hospital, vice J. O'Conor, M.D., B.Ch., promoted.

PARRY, THOMAS WILLIAM, L.R.C.P. Ed., M.R.C.S., L.S.A., has been appointed Medical Officer for the Ferndale District of the Pontypridd Union.

PAXTON, JOHN, jun., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Berwick Rural Sanitary District, vice MacKay, resigned.

SYMONS, JOHN, M.D. St. And., L.R.C.P. Lond., has been reappointed Medical Officer of Health for No. 1 Division of the Burton-on-Trent Rural Sanitary District.

THOMPSON, ABRAM, M.D. St. And., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Ulverston Rural Sanitary District.

WILSON, ALEXANDER, M.R.C.S., L.R.C.P.Lond., has been appointed Administrator of Anæsthetics to the Victoria Dental Hospital, Manchester.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester-street, S.W.—Physician. House-Surgeon. Stipend £30 per annum, with board and lodging.—Dispenser. Stipend £40 per annum.

BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Resident Clinical Assistant.

CARDIFF CORPORATION.—Medical Officer of Health for the Urban and Port Sanitary Authorities. £400 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Surgeon to out-patients.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. £50 per annum, with board and residence.

HORTON INFIRMARY, Banbury.—House-Surgeon and Dispenser. £60 per annum, with board and lodging.

LIVERPOOL NORTHERN HOSPITAL.—Resident House-Surgeon's Assistant. No salary, but hospital practice and certificate of attendance, together with board and lodging.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer of the Convalescent Home at Cheadle. Remuneration £150 per annum, with board and residence.

NEWCASTLE-UPON-TYNE ROYAL INFIRMARY.—Junior House-Physician. Also two House-Surgeons. Board, lodging, and washing.

NOTTINGHAM BOROUGH ASYLUM.—Assistant Medical Officer. Salary at the rate of £120 per annum, with apartments, board, and washing.

SOUTH STONEHAM UNION.—Medical Officer of Health. Salary £200 per annum.

WESTRAY PAROCHIAL BOARD.—Medical Officer. Besides salary, a good general practice.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 22nd, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 16	30·11	W.	57	53	105	66	51	·14	Cloudy
,, 17	30·11	S.W.	58	57	75	59	55	·32	Raining
,, 18	30·35	N.E.	55	51	100	63	49	·25	Cloudy
,, 19	30·50	N.E.	54	51	90	62	50	...	Cloudy
,, 20	30·34	N.E.	57	53	94	66	51	...	Hazy
,, 21	30·35	E.	54	52	87	60	52	...	Cloudy
,, 22	30·31	E.	56	52	100	65	52	...	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

FREE PUBLIC LIBRARIES.

IN the opinion of many thoughtful people the increased and increasing facilities for the spread of national education have rendered the establishment of a free public library in every large centre of population almost a necessity. We are glad therefore to see that the residents of St. Pancras are bestirring themselves to obtain this boon for themselves and their fellow-parishioners. An appeal has been issued for £30,000 to found two principal libraries, with six or eight lending branches, and not less than 50,000 books, for the parish. Of this sum £5000 have already been received or promised.

Bangor.—The diet table forwarded us is certainly capable of considerable improvement. It is too monotonous, and there is an insufficiency of vegetable food. Besides, when meat is given only once a day, it should never be in a re-cooked form, as hashes, &c. We would suggest the following:—Breakfast: Tea, coffee, and cocoa on alternate days, with cold meat and bacon alternately. Dinner: Hot roast joint of beef and mutton on five days, boiled beef and mutton two days, with always potatoes and green vegetables; farinaceous and fruit puddings alternately. Tea: Bread-and-butter and bread-and-jam alternately. Supper: Bread and cheese and oatmeal porridge on alternate nights.

F. A. G.—If the puerperium be normal, the polypus may be safely removed at the end of the month, with antiseptic precautions. Earlier removal would be unadvisable.

X. Y.—We fear we shall be unable to find room for the paper.

OBSCURE FEBRILE SYMPTOMS.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any of my *confrères* would kindly assist me in the diagnosis and treatment of the following case.

A. B——, aged forty-three, a strong, healthy man, had a partial sunstroke in Canada about six years ago, and about the same time an attack of typhoid. Some six months after he first noticed that an attack of fever came on every day at 4 P.M., and lasted till bedtime. No cold, hot, or sweating stage, but a burning sensation in his feet and hands, and the heels and toes became a bright red. After some months it commenced in the face and head, which became hot and flushed. He complains of nausea and a feeling of "sinking at the stomach," with much depression. The nausea is relieved by eating. He has lost 2st. in weight. These are the only symptoms. There are no physical signs of disease anywhere. Appetite good, and digestion seemingly not in fault. The fever will suddenly leave him for a couple of weeks and as suddenly return, without any apparent cause. Quinine, arsenic, liver and digestive aids, have all been tried. Is the sunstroke or the typhoid to blame, or is the original cause of the typhoid still at work?—I am, Sirs, yours faithfully,

Sept. 20th, 1887. PUZZLED.

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NATURAL REPAIR AFTER INJURY.

A VERY interesting case of this kind has (says the *Naturalists' Monthly*) been recorded by Dr. R. W. Shufeldt. A raven had its upper bill shot off in front of the nostrils. The mutilation, however, was repaired by fresh growth of the bone, followed by the horny covering of the bill, so that the bird has a very respectable stump for its use.

Mr. T. L. Biemans, M.A.—If our correspondent will take the trouble to look again at the article quoted, he will see that there is no incompatibility between the statement there made and his own. The University of Brussels publicly advertises that its medical degree is merely a scientific title. The M.D. of Berlin stands on the same footing. The degrees of Ghent, Vienna, Paris, and London, on the other hand, are of themselves licences to practise. Louvain being a free or non-State University, its degree *per se* does not constitute a licence; but we understand that a Louvain M.D. has no difficulty in obtaining the licence.

Cemetery Chaplain.—We agree entirely with the remarks of our correspondent. It is most unhealthy for dead bodies to be kept for a long time in private houses; nor ought it to be allowed, seeing that no good can come of such practice. The medical officers of health should combine to get sanctioned by usage what is allowed by law. The subject is a difficult one, however, being beset with the objections connected with the "rights of the individual."

CONSULTING SURGEONS AND THEIR PRIVATE HOSPITALS.

To the Editors of THE LANCET.

SIRS,—I am a country practitioner, and have an extensive practice. It has fallen to my lot to treat nearly every form of surgical emergency, for which kind of practice I have felt myself fully cut out, having been a house surgeon in a large hospital and having filled various responsible hospital appointments. For some time past, I, along with many of my professional brethren, have had a deep-rooted grievance, inasmuch as frequently our patients, having been sent to consult surgeons in a large centre of population at no very great distance, have not again returned to our care. The fact being that without our consent, they have been advised to go into the said surgeons' private hospital, for, in some cases, quite trifling operations. The class of patients sent to surgeons for consultation is generally quite able and willing to pay for treatment at home, when we country surgeons would at all events receive some compensation in fees for the after treatment of our cases, for which I maintain that the majority of us are fully qualified. Instead of this we are deprived by these so-called consultants (who, by the way, are nearly all general practitioners) of the very cases in which we have a particular interest. I may mention one case which has occurred to me quite recently.

I recommended a gentleman to consult Mr.——. He did so, and was advised to go into Mr. ——'s private hospital without any reference whatever to me. My patient, however, came and informed me of the occurrence, and asked my advice. I advised him to stop at home for his operation, which he did, and I had the great satisfaction of calling in another surgeon who has no hospital, and who operated most successfully on my patient, who is now again following his usual vocations.

I must tell you that for some years past it has been my custom, on learning that a surgeon had a hospital, to discourage my patients as much as possible from consulting him, and I believe it has been my lot during the past few years to divert some scores, if not hundreds, of guineas from the pockets of those who I regard as being anything but the friends of us country practitioners.

I feel certain that the foregoing remarks will meet with a response in the breasts of very many who have suffered from what I cannot but regard as the undue greed of some who ought to have every sympathy with those who have to struggle to keep their heads above water as much as

Yours truly,

Sept. 19th, 1887. A COUNTRY SURGEON.

B.P.C. UNOFFICIAL FORMULARY.

To the Editors of THE LANCET.

SIRS,—In noticing an "advance copy" of the above in an annotation in your issue of the 10th inst., p. 536, objection is taken to the apparently cabalistic letters, "B.P.C.," which indicate the authority by whom it is issued—the British Pharmaceutical Conference, the initials of which are suggested to be used by prescribers of the formulæ as definitely indicating the preparations intended. In his conception of the idea of the formulary the letters B.P.C. were recommended by the President (Mr. Thos. Greenish) at the Birmingham meeting of the Conference last year.

I am, Sirs, your obedient servant,

WM. MARTINDALE,
Chairman of the Formulary Committee.

New Cavendish-street, W., Sept. 17th, 1887.

THE RED ANT.

To the Editors of THE LANCET.

SIRS,—I shall feel glad if any of your correspondents can give me any suggestions as to the destruction of red ants infesting parts of a dwelling-house, especially the kitchen. They are harmless, but very unpleasant.

I am, Sirs, yours obediently,

Sept. 17th, 1887. S. S.

OBSTETRICS IN MINNESOTA.

OTTER TAIL, one of the frontier counties of Minnesota (according to the *Journal of the American Medical Association*), bids fair to rival the Rotunda Hospital or the Allgemeine Krankenhaus of Vienna as a resort for aspirants for obstetrical advantages and greatness. Dr. T. G. Hutton, of Fergus Falls, writes that there are now in that county living quadruplets one week old, living triplets eight months old, living twins born of a sixteen-year-old mother, and a child twelve months old whose mother is now only fourteen years and a half old.

Mr. C. W. Steenberg.—It is usual for the police officer in charge of the case to ascertain if a witness detained in hospital is in a fit state to give evidence. We think a house-surgeon should not withhold the information from the police. It is a mere hearsay statement, and is not admissible in evidence, and is only meant for the guidance of the court in directing a remand.

L.S.A. — Intimation should have been given immediately after the change of residence had been made. See last week's LANCET, p. 587.

GENERAL HOSPITALS AND THE CLUB SYSTEM.

To the Editors of THE LANCET.

SIRS,—Permit me in the interest of the profession to publish the following instances that have lately occurred in my practice, proving the gross abuse of our hospitals and the evil of the club system.

A few days ago a lady called on me to ask my advice respecting sending two of her children, boys, into hospital for a trivial operation that would, if necessary, have been done equally well at home, either by a surgeon or even the family medical attendant. She had, I found in conversation, already sent one of her children into a local hospital not far from her residence (which, by-the-bye, is in one of the very best neighbourhoods of London, and the house rated at £250). This child, I understood, was suffering from chorea and neurotic symptoms that were, in my opinion, likely to be increased by the isolation from home rather than benefited by residence in hospital. When I expressed my surprise, she said, "My husband has subscribed very liberally to the hospital," that she had already availed herself of the charity, and I know that he had given nearly £100 last year, as well as a good annual subscription to the hospital whose aid she was thinking of procuring. This lady's object in seeking hospital treatment was that "it saved trouble at home," and she and her husband believed in the skill of hospital treatment. They had lived much abroad. I might add I know her husband to be a most liberally minded man, and was privately told that one successful year he gave as much as £500 to charitable objects.

Last autumn I attended a well-to-do warehouseman, a member of the Manchester Unity, suffering from a severe attack of psoriasis and eczema all over his body. He was living in a good neighbourhood and paying £30 or £90 a year for his house and corner-shop. He, in a grateful moment, gave me a guinea, saying, "I will give you another by-and-bye. I don't want you to attend me for the club." I thanked him, replying I would credit him with the guinea and send him a bill when well. "Oh," he said, "I don't give it as a right, and should object to be charged." "But," I replied, "you, in your position as a good tradesman, would be above being attended as a club member for 1*d.* per week." He argued, "Oh! but I shall recommend you, and will in future have you to attend my wife and family." When well, I sent him my bill, a very moderate one, and crediting him with the honorarium, and reminded him that he had expressed a wish that he did not want me to attend him with only the payment the club gave. I need hardly say he has taken no notice of my bill, and I have not seen him since, and have no doubt that I have by sending him an account made a well-meaning friend an enemy.

I enclose a note from the secretary of the lodge, who has been instructed to inform me that "all members are equally entitled to the services of the lodge surgeon;" the member to whom the secretary referred is living in a house of £40 a year, and is in a wholesale house, probably earning £200 a year or more.

The development of education, and especially the School Board, has caused quite a different class of men to join these benefit societies, especially intended only for the wage-earning class; and it appears as if, with the superior position they enjoy, but few of them have the *esprit de corps* or honourable feeling that would render them above receiving their medical and surgical skill at such a rate that must starve the profession or ultimately render only the inferior section willing to accept the useful post of surgeon to their respective lodges and to give them willing and laudable service.

I am, Sirs, your obedient servant,

Sept. 19th, 1887. FREDK. H. ALDERSON, M.D.

P.S.—I am now attending a clerk in one of the best-known private banks, who is a paying member of this lodge; but I am happy to add I have no doubt he will pay me the usual fees.

A WARNING.

DR. A. ROSS PATERSON writes to ask permission to warn medical practitioners requiring a locum tenens against a man describing himself as "Mahomet Yusif Ali Khan," and also by a not uncommon English surname with the addendum L.R.C.P.

Mr. E. T. Thring (Sydney).—Attention has been repeatedly called to the matter in our columns.

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THE POLYGRAPH.

We have received a specimen of an ingenious instrument having the above name. It is, in fact, a scientific toy, by means of which a young person with a little ingenuity may produce drawings of much beauty. It would, we should imagine, be a welcome addition to the resources of the Kindergarten. It may be obtained of G. Delgado, 35, Queen Victoria-street, E.C.

Mr. Curnham Corner.—1. As the death was believed to be due in some way to the accident, an inquest was necessary. But our correspondent ought not to have made the post-mortem examination without an order; for in such cases the body is technically in possession of the coroner.—2. We are of opinion that a post-mortem examination was desirable.—3. Our correspondent cannot recover a fee for making a post-mortem examination not ordered by the coroner, but he can for giving medical evidence. If his fee for the latter is refused, he should apply to the Home Secretary.

Philalethes.—There is not, as far as we are aware, any ground for supposing that the medical legislation of foreign countries has been prompted by a wish to retaliate on this country for what our correspondent styles the "arbitrary Act" of 1858.

Dr. F. Borel.—If the paper be forwarded, it shall have attention.

SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you could find space for the insertion of the following in THE LANCET.

That "wise fowl, experience," teaches many things; and it is astonishing how much interest it is possible for the student of science to take in a physiological experiment when the subject is one's own *corpus vili*, the operator being nature. But in spite of the personal temporary discomfort, if it results in an increased knowledge of the means to mitigate suffering in one's fellow-creatures, this must be considered ample compensation. I presume much speciality work has its origin in personal suffering. If it were possible for the medical specialist to go through the pains of pregnancy and labour, should we have a new set of obstetrics, I wonder?

I have recently had an opportunity of studying the phenomena of *mal de mer* in my own person, and my experience has led me to the conclusion that the main factor in its production is the presence of bile in the stomach. This gives rise to a peculiar burning sensation in the epigastrium before the actual onset of vomiting, and disappears immediately after. I have never heard this sensation spoken of before; but on making inquiries among my fellow-sufferers, I found they all recognised the feeling. One gentleman who did not know what sea-sickness was told me that once he went down into the saloon to look after a relative and seeing so many ill there, he suddenly experienced this epigastric burning, which swiftly impelled him to seek the deck. The tossing of the vessel, the rolling of the waves, and the unceasing monotonous movement of all the surroundings, affording no rest for the eye, together with the momentary expectation of being ill, must have a powerfully exhausting effect upon the nervous system, and there is no cause for surprise under these circumstances that the pyloric sphincter should relax and allow of regurgitation of bile. I see no reason why we should deny to the pyloric sphincter what we accede to those of the anus and bladder. In addition to the nausea a kind of vertigo is produced by the unaccustomed blending of sea and sky, which is, however, instantaneously relieved by vomiting; and this I hold to be an objection to Dr. Gowers' theory that sea-sickness is due to oscillation in the fluid of the semicircular canals. Even if, however, this suggestion be an approximately true cause, as regards treatment we are left very much where we were before. A pad in the epigastrium might be serviceable, with an opposing one in the back; and if a mild galvanic current could be passed between the two, a beneficial result would be expected. Strychnia would probably be valuable. By pursuing this or some similar course we should, at any rate, be doing something more than merely treating symptoms.

I am, Sirs, yours truly,

Sept. 20th, 1887. J. RUSSELL HARRIS, M.D.

SALICYLATE OF SODA.

To the Editors of THE LANCET.

SIRS,—I shall feel much obliged if you or any of your readers would advise me in the following.

Is salicylate of soda supposed to be a good line of treatment in rheumatic fever? Is it contra-indicated when any cardiac mischief is present? Does it ever produce sudden death?

I am, Sirs, yours faithfully,

September, 1887. M.D.

*** Certainly. There is no method more universally employed at present. The salicylate would only be contra-indicated if there were evidence of cardiac degeneration. One or two cases have been recorded in which sudden death was attributed to the use of the drug—e.g., Goodhart, Clin. Soc. Trans., vol. xiii. But such cases are, of course, very difficult of proof.—ED. L.

STUDENTS' NUMBER: ADDENDA ET CORRIGENDA.

THE following information should, in our issue of the 3rd inst., have appeared respecting *St. Mary's Hospital*:—There are seven resident medical officers, three house-physicians, three house-surgeons, and an obstetric officer. All live free of expense in the hospital, and are appointed for six months. Clinical lectures on special selected subjects are given by the physicians and surgeons at 4 P.M. on Fridays in the winter and summer sessions. Medical practitioners are invited to attend these lectures. Special classes are held for the Preliminary Scientific Intermediate M.B. and Final M.B. Examinations of the University of London, and for the Examinations for the Fellowship of the Royal College of Surgeons. *Fees:* For attendance on lectures required by the regulations of the Conjoint Board of the Royal Colleges of Physicians and Surgeons of England to be attended in a medical school, and on hospital practice for the term specified in the same regulations, £100, paid in one sum on entering the school; or £105 paid in instalments of £40 each at the commencement of the first and of the second years of study, and of £25 at the commencement of the third year. Fee for unlimited attendance on the hospital practice and on all lectures and demonstrations given in the school, £120, paid on entering the school; or £126 in instalments of £45 at the commencement of the first year of study, and £40 each at the commencement of the first and second years. Students who have kept a portion of the course of medical study at the Universities of Oxford, or Cambridge, or elsewhere, are admitted as perpetual pupils, at a proportionate reduction, or on payment of twenty-five guineas for each year of attendance at the school. For further particulars, application should be made to the Dean, Mr. G. P. Field, or to the Sub-Dean, Dr. Phillips.

A Constant Subscriber.—The Medical Council has not the power or the means to prosecute every impudent impostor. It has authority only over medical men on the Register, and this only in a very restricted sense. The best thing unqualified assistants can do is to get qualified. Where this is impracticable on the score of age or for other reasons, the Medical Council is not likely to interfere with them if they do not engage to act independently of their principals and to take charge of branch practices.

Mr. W. Hardy.—We must refer our correspondent to our Students' Number, published on Sept. 3rd.

C.—No, a fee cannot be claimed under the circumstances.

HEADACHE DUE TO ERRORS OF REFRACTION.

To the Editors of THE LANCET.

SIRS,—To the cases of headache due to errors of refraction related by Mr. T. H. Bickerton in THE LANCET of Aug. 13th allow me to add the following.

A nun, aged thirty-eight, consulted me in December, 1881, and stated that she had entered the convent at the age of eighteen, and was set to work upon embroideries, at which she soon became very skilful, and did a great deal of fine work. When a school-girl she was accounted "dull," and had occasional attacks of headache. These attacks became gradually more frequent and severe after entering the convent. At the time of my seeing her she would arise in the morning feeling perfectly well; but by noon she would have a "bursting" headache, and by evening would be compelled to take to her bed, and would vomit and be nauseated for several hours. On Sundays and holidays—days on which she used her eyes but little—she was free from discomfort of any kind. Examining the eyes, they were found to be hypermetropic, and suitable glasses (+16) were ordered. Since wearing the glasses she has remained absolutely free from cerebral and gastric symptoms. No examination of the eye had ever been made by any of the numerous physicians she had consulted during twenty years. I am, Sirs, yours respectfully,

Chicago, Aug. 25th, 1887. EDWARD F. WELLS, M.D.

PAIN IN THE HEELS.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any of your readers could suggest the cause or treatment of the following.

A middle-aged man, seemingly in good bodily health, is crippled in walking by pain in the heels. Twelve months ago he first experienced pain in the sole of one heel, and lately it has attacked the other. The pain is brought on by walking. I can discover no local cause. The patient has always suffered from a weak circulation and indigestion, but for the last few years he has had no attacks of indigestion. Hoping to receive suggestions which will enable me to relieve the patient,

Believe me, Sirs, yours obediently,

Sept. 13th, 1887. G. P.

EXCESSIVE SALIVATION.

To the Editors of THE LANCET.

SIRS,—Can any of your readers suggest treatment for a lady about four months pregnant who suffers from excessive activity of the salivary glands, usually saturating about a dozen pocket-handkerchiefs daily, as she finds if she swallows the saliva it produces vomiting.

I remain, Sirs, yours truly.

Sept. 20th, 1887. R.C.S.

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COMMUNICATIONS, LETTERS, &c., have been received from — Mr. T. Pridgin Teale, Leeds; Dr. Dickinson, London; Dr. W. A. Mackay, Huelva; Dr. F. Borel, London; Mr. Popert, Southport; Mr. Spencer Watson, London; Dr. R. M. Ralph, Burton-on-Trent; Messrs. A. and J. Shaw; Dr. A. G. Auld, Wick; Dr. Myrtle, Harrogate; Dr. Harry Campbell, London; Mr. D. J. Stewart; Mr. Weller, Hammersmith; Mr. G. Michelmore, Tiverton; Mr. J. Carter; Messrs. Everett and Son, London; Dr. A. J. Birmingham, Kingstown; Messrs. Boulton and Paul, Norwich; Mr. C. B. Keetley, London; Miss Bartlett, Stoke Newington; Mr. S. F. Harvey, London; Mr. F. W. Gibbon, Tyne Dock; Dr. A. W. Hughes, Flint; Dr. Pallin, Sidmouth; Mr. Cary Jeffries, London; Mr. H. B. Clarke, London; Mr. R. B. Warren, Moss Vale, N.S.W.; Dr. T. Oliver, Newcastle-on-Tyne; Messrs. Pocock and Co., Vauxhall; Mr. Godfrey, Balham; Mr. G. B. Moss; Dr. Castle, New York; Dr. H. Thomson, Glasgow; Mr. G. P. Field, London; Mr. C. J. Thompson, London; Dr. Russell Harris, London; Messrs. T. Christie, London; Dr. Skinner, Paris; Dr. J. M. Hunt, Liverpool; Dr. W. H. Day, London; Mr. A. J. Harvey, London; Dr. A. R. Paterson; Mr. J. Mason, London; Mr. F. S. Barber, Bradford; Dr. T. F. Pedley, Rangoon; Mr. R. J. H. Scott, Bath; Dr. Maunsell, Jamaica; Dr. Fritsche, Warsaw; Dr. F. E. Walters, London; Mr. Wilmer, Bow; Mr. H. C. Burdett, London; Dr. Imlach, Liverpool; Mr. Tate, Birmingham; Mr. Saunders, Manchester; Mr. Hick, Woking; Dr. Macdonald, Dorchester; Mr. Abertheny, Brixton; Mr. Cowan, Glasgow; Mr. Sladden, Dover; Mr. Brewer, Ilfracombe; Dr. Thomas, Llanfair; Mr. Maw, Bradford; Messrs. Livingstone, Edinburgh; Messrs. Hedgcock and Co., Camberwell; Sunder Pandurang, Bombay; Messrs. Short and Co., Grantham; Mr. Sterling, [illegible]; Mr. Petter, Yeovil; Dr. Wise, Maloja; Mr. Sheldon, London; Mr. [illegible]itken, Penarth; Rev. A. Tooth, Croydon; Mr. Younger, Hanwell; Mr. Gurner, London; Mr. Powell, Nottingham; Mr. Wormald, Manchester; Mr. Dickson, Kempton; Mr. Charpentier; Dr. Gemmell; Messrs. Rocke and Co., London; A Country Surgeon; M.D., Cheltenham; Rector, Worcester; P., Chichester; M.R.C.S.; F. A. G.; R. T. H.; S. S.; Puzzled; J. C.; M.D.; Philalethes; S. K. E.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Smith, Cheltenham; Rev. J. D'Orsey, London; Mr. Gross; Messrs. Keith and Co., Edinburgh; Mr. Buckland, London; Mr. Strickland, South Kensington; Mrs. Smith, Stratford-on-Avon; Messrs. Campbell and Co., Glasgow; Mr. Wixley, Oldham; Mr. Keogh, Dublin; Messrs. Lee and Martin, Birmingham; Mr. Sime, Ecclesfield; Mr. Mason, West Kensington; Mr. Keeling, Birmingham; Mr. Nance; Messrs. Battle and Co., Paris; Mr. Anderson, Erith; Dr. Wilson; Dr. Adam, West Malling; Mr. Kesterton, London; Mr. Evans, Oswestry; Mr. Harris, Redland; Mr. Barker, Bristol; Mrs. Townsend, Chester; Dr. Lincing, London; Mr. Boys, St. Albans; Miss Tomlinson, Sandown; Dr. Yna, London; Mr. King, Southampton; Mr. Roberts, London; Mr. Carter, Shipley; Mr. Hornibrook, London; Dr. Humphreys; Mr. Gravatt, London; Mr. Mather, Rainhill; Mr. Mullis, Walworth; Dr. Duncan, Newcastle-on-Tyne; Mr. Hunt, Biggleswade; J. H. O., London; N. Z.; Iatros; F.R.C.S., London; A. E.; Ambrose; F. P. H., South Hayling; Coachman, Mile-end; Rance; A. Z.; Alpha, Tunbridge Wells; Medicus, Highbury; E. S. B. P., Newport; Carlo; Medicus, Pontypool; Alpha, London; M.D., Birmingham; L.S.A., Nottingham; A. B., Southport; M.B., C.M., London; G., Derby; Secretary, London; Medicus, Forfar; Chemicus, Nodbury; P. H.; Homer; P., Leamington; B. B., Lyndhurst; W. W., Darlaston; Malar; R. J. H., Finsbury-park; Gamma, Hurdsley; C. W., Portsmouth; Medicus, Northampton; W. B., Bonchurch; Surgeon, Penygraig; S. M. J.

Colonial Standard, The Argosy, Semaine Médicale, Sydney Morning Herald, Advocate of India, Weekly Times and Echo, Yorkshire Gazette, Windsor and Eton Gazette, Huddersfield Echo, Australian Public Opinion, Hampshire Telegraph, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 27.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Dr. H. E. Armstrong: General History, Principles, and Methods of Hygiene.

Wednesday, September 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, September 30.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Ventilation, Measurement of Cubic Space, &c.

Saturday, October 1.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Front Page... ... ... per Line		0	1 0
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LETTERS, *each with enclosure*, are also acknowledged from—Mr. Mather, Rainhill; Mr. Aitken, Penarth; Mrs. Reynard; Messrs. Wright and Co., London; Dr. Warburton, Wiesbaden; Mr. Hedges, Leighton Buzzard; Mr. Hicks, Woking; Mr. Mackay, Huela; Messrs. Robinson and Son, Chesterfield; Mr. Barrett, Chichester; Mr. Robinson, Sedbergh; Dr. Gallelly, Skeltham; Mr. Gutch, Poolie; Mr. Sterling, Bath; Miss Godfrey, Clapton; Dr. Hanna; Mr. Steadman, Leighton Buzzard; Mr. Huggins, Malvern; Dr. Dobbell, London; Miss Thorp, Farringdon; Mr. Wormald, Manchester; Dr. Crowther, Eastbourne; Miss Gitto, Bournemouth; Miss Annett, Ainsworth; Dr. Girdlestone, Bayl; Mr. Bridgman, Burton-on-Trent; Messrs. Henderson and Co., Edinburgh; Mr. McCormac, Brighton; Mr. Anderson, Nottingham; Miss Boss, Nottingham; Mr. Briggs, Hull; Mr. Brigham, Paignton; Mr. Ward, London; Mr. Thomas, Nantymoel; Mr. White, Forfar; Mr. Oswald, Clapham; Mr. Biggs, Cambridge; Mr. Coutts, Aberdeen; Mr. Brown, Leeds; Dr. Millar, Southbridge; Mr. Smith, London; D. R.; R.; H. Y. N.; A. C. D.; Medicus, Edinburgh; Secretary, Manchester; G. N.; M.R.C.S., Wigan; M.D., Crewe; Lady Superintendent, Cambridge; X., Birmingham; H.; Hygiene, Stoke Newington; L.R.C.P., Tredegar; Medicus, Southsea; X., Bamber Bridge; Medicus, Leamington; Medicus, Runcorn; J. W. D.; Lady Superintendent, Sidcup; Medicus, Helmsley; M.B.; G. J. A., Sheffield; Medicus, Liverpool; C. J. S.; R. P.; Q.; G. R.; X. N., London; Chirurgus; Cantab.; Permanency, Hull; Markus, South Kensington; A. B.; Fides, Feltham; M. D. N., Halifax; M. F., Southport; B. B.; Matron; Gamma, Huntley; Perimeter; Medicus, Hull; D. D.

Windsor and Eton Gazette, Hampshire Telegraph, Kilmarnock Herald, Midland Times, Liverpool Courier, Cassell's Saturday Journal, &c., have been received.

Medical Diary for the ensuing Week.

Monday, October 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, October 4.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Dr. Louis Parkes: Water Supply, Drinking Water, Pollution of Water.

Wednesday, October 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Mr. Arbuthnot Lane: What are the Chief Factors which Determine the Differences which exist in the Forms of the Male and Female Pelves?—Dr. Matthews Duncan: On Tonic Uterine Contraction without Completeness of Retraction.—Dr. John Phillips: A case of Pregnancy complicated by Secondary Hepatic Cancer.

Thursday, October 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, October 7.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Prof. H. Robinson: Drainage Construction.

Saturday, October 8.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—As illustrating the manner in which inquests are held and medical evidence given in this part of the country, I wish to direct the attention of your readers to the notes of two cases of mine which have occurred within the last eighteen months.

A little over a year ago I was called in to examine a man who was said to have cut his throat. On arriving with the policeman and examining the body I found that the man had in the first place cut his throat, and, finding his attempt at suicide ineffectual, had then immersed his head in a pool of water. I remarked to his daughter, who was standing near, that none of the important vessels of the neck were severed, and therefore that death was caused by drowning. In this case no post-mortem examination was ordered, and at the inquest the only medical evidence was given by the police constable who accompanied me, and who simply repeated what I had said to the daughter of the dead man in his (the policeman's) hearing.

In the second case the patient, a miner, was injured at his work by a fall of rock and ore on Sept. 8th. He was placed in a cart and carried home. I was in attendance on his arrival. He had sustained a fracture of the clavicle in its outer third, fracture of several ribs, with laceration of the pleura and the lung substance, which was evident by the coarse crepitation audible over the whole of the chest wall and expectoration of blood. He gradually sank and died on Sept. 11th. In this case, as in the former, no post-mortem examination was ordered, and the medical evidence was given by a miner, who said that the man died from the injuries received, and that these injuries were the collar-bone and ribs broken.

If medical men are to be treated as I have been in the above cases, I think it is about time the matter were brought under the notice of the proper authorities. I am, Sirs, yours faithfully,

Dalton-in-Furness, Sept. 26th, 1887. A. GRAY, M.B.

"EXCESSIVE SALIVATION."

To the Editors of THE LANCET.

SIRS,—In your issue of Sept. 24th "M.R.C.S." requests advice in a case of excessive activity of the salivary glands occurring in a lady four months pregnant. Were the case one of salivation unconnected with the puerperal condition he would find the use of chlorate of potassium in thirty-grain doses three times daily quite sufficient to restore the secretory equilibrium; for chlorate of potassium is a powerful regulator of the functions of the conglomerate glands, at one time repressing excessive secretion, at another restoring it to its normal condition when below par. The irregularity in the present instance is evidently due, however, to reflex disorder proceeding from ovarian or uterine irritation and concomitant glandular sympathy, just as the lacteal secretion is itself the outcome of distant organic change. I have not any doubt that the application of a small blister, say 3 in. by 1 in., over the fourth and fifth dorsal vertebræ for eight hours will as rapidly dispose of the salivary trouble as it puts an end to the reflex vomiting and the neuralgic toothache incident to the period of gestation.

I am, Sirs, faithfully yours,

Belfast, Sept. 26th, 1887. ALEXANDER HARKIN, M.D., F.R.C.S.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent, "M.R.C.S.," I beg permission to offer the following remarks.

Excessive salivation depends on digestive disturbance, or on exalted action from reflex irritation of salivary glands. Many different conditions may be held as causative; many different remedies have been advised. If the case is still continuing as before I advise the hypodermic injection of the solution of sulphate of atropia into the region of one or both submaxillary glands. Atropia has been experimentally proved to abolish the action of the chorda tympani on the salivary secretion. In practice good results almost always attend its use. From ·01 to ·025 of a grain of the salt may be given. But the simplest plan is to begin by injection of two minims of the four grain to one ounce solution, which will equal one-hundred-and-twentieth of a grain; this may be gradually increased to four minims, equal to one-sixtieth or more. In some cases a combination of a minim or two of the hypodermic solution of morphia will permit greater tolerance of the atropia, and aid the cure. Other remedies, all more or less useful, are, calomel, gr. ½, with gr. ½ to gr. 1 each of extract of belladonna and nux vomica; hydrarg. perchlorid. or biniodid., gr. $\frac{1}{16}$ to gr. ¼, with combination of sulphate or tartrate of iron or ferrum redactum; tincture of belladonna, gutt. 15 to 20, with potas. or sodium iodide, gr. 3 to gr. 5. But iodide must not be continued over ten days continuously. Pilocarpine has been found useful in one-twelfth-grain doses; so has ext. viburn. prunif. in gutt. 15 to gutt. 30 ter die. When the cause is more glandular reflex than gastric free doses of the bromides of potassium, ammonium, and sodium are beneficial. When the stomach is irritable the dyspepsia must be treated; bismuth with carbonate of potassium will suit one case, while another will be suited by nitro-hydrochloric or phosphoric acid. Diet is important; a few cases do best with strictly animal diet, with little or no fluid. In others peptonised milk and bland farinaceous food answer best. Iron should always be given; four grains of sulphate or tartrate, with an equal quantity of phosphate of lime, vini ferri, in drachm doses, thrice daily. Mouth washes are of little service; when carious teeth keep up glandular irritation, washes of chloralum, chloral, or boracic acid are best. One or two recent American drugs promise to be serviceable; of these, aletris formosa, in form of aletris cordial, mixed with three times the quantity of water; hazeline, half an ounce in eight ounces of water; extract. pinus canadensis, an ounce to eight or ten ounces of water, are worthy of trial. Use every two hours. In the event of no improvement from any combination of these, rectal alimentation for a day or two, and pushing the hypodermic use of atropine, with or without morphia, will probably succeed, but strength must be kept up.—I am, Sirs, yours obediently,

Beaufort-gardens, S.W., Sept. 26th, 1887. LEITH NAPIER, M.D.

"INFANTILE DIARRHŒA."

To the Editors of THE LANCET.

SIR,—The concluding portion of Dr. Hamilton's letter anent infantile diarrhœa and a milk diet contains the key as to the cause of so much illness referable to milk, and a hint as to what is, I believe, the proper and natural remedy. He says, "Dr. Vaughan suggests that no milk be used where choleraic diarrhœa occurs; but I think if the precaution be taken which I have suggested there can be little danger from the use of the child's natural food." My experience is the same as his. Brewers grains or, as he terms it, "draff" either ought not to be given as food to cows or the storage of it on the cowkeepers' premises ought to be closely supervised. It may not be generally known to the public that these grains in a very few days ferment and putrefy and that cows will eat it in that state. Can that be wholesome? An experienced farmer assures me that if horses are fed on these grains they sicken and die. In the winter months—I know it to be the case—cows are kept herded together day after day, week after week, in their stalls, in semi-darkness, and highly fed on forcing food, including grains; no exercise whatever. Can it be supposed that they can keep their health, or that a feverish or sick cow is not often milked with the rest, possibly in ignorance, during the darkness of winter mornings and dull days? One of the first of my suggestions in the treatment of infantile diarrhœa is, Cease the milk, unless I happen to know it is from a dairy where no grains are admitted. It is to the feeding and health of cows we should look, equally with milk analyses and water adulterations. There are farms where cows get proper food, air, and exercise; and the milk of these must be more wholesome than that from the yards where crowding together, no exercise, and grains are the rule.—I am, Sirs, yours faithfully,

OWEN COLEMAN, M.D.

Surbiton, Sept. 22nd, 1887. Medical Officer of Health.

"PAIN IN THE HEELS."

To the Editors of THE LANCET.

SIRS,—If "G. P." were to suggest to his patient to lower the height of the heels of his boots, and lengthen them so that they reach further under the instep, I think relief would be obtained. It should also be made clear that the length of the boot as a whole is sufficient for the man. The spring introduced by some makers might in addition prove a help to the case. Buttoned would be better than elastic-sided boots.

I am, Sirs, your obedient servant,

LEWIS W. MARSHALL, M.D.,

Sept. 26th, 1887. Surgeon, Children's Hospital, Nottingham.

To the Editors of THE LANCET.

SIRS,—I venture to suggest as a probable cause of the pain to which "G. P." refers, rheumatic inflammation of the sheath of the nerve trunk passing into the sole of the foot. I may mention that a few months since I had two cases which at first presented similar symptoms to those which he describes, both heels being affected. After some time, however, the pain in one case extended upwards in both limbs, presenting the ordinary symptoms of sciatica, in the other case only one limb was so affected. Both cases were completely cured by the administration of the iodide and bicarbonate of potassium.

I am, Sirs, yours faithfully,

London, Sept. 28th, 1887. B. HOSFORD, M.A., M.D.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "G. P.," may find that the skin of the sole of his patient's heel is thick, hard, and dry, with a tendency to peel off, and he may further find that where this hard skin joins the softer skin of the side of the foot there is a line of dull redness, from which the sweat is very freely secreted. Walking is always a cause of pain under these conditions. I have seen several cases to which this description would apply. They have all been much relieved by using the following liniment:—℞. Lin. belladon., glycer. ac. boracis, aqua, p.æ.

I am, Sirs, obediently yours,

Sept. 26th, 1887. H. P.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Guyer Hunter, London; Dr. Russell Reynolds, London; Dr. Suckling, Birmingham; Dr. Harkin, Belfast; Dr. Savage, London; Dr. Cameron, Gillies, Brockley; Mr. F. S. Barber, Bradford; Dr. Tyrrell Brooks, Oxford; Dr. Dowdeswell, London; Mr. Mortimer, Portsmouth; Dr. L. Napier, London; Mr. A. E. Reade, London; Dr. N. Kerr, London; Dr. Bell Taylor, Nottingham; Mr. S. Poynter, Hove; Mr. Reginald Harrison, Liverpool; Dr. W. Fraser, Ashburton; Messrs. Condy and Mitchell, London; Dr. W. Robertson, Newcastle-on-Tyne; Mr. Shirley

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LEICESTER AND SMALL-POX.

Mr. J. T. Biggs.—It is a very roundabout way for Mr. Biggs to put questions to the medical officer of health of his own town through the columns of THE LANCET. We shall cheerfully insert any letter from Mr. Biggs which invalidates our commissioner's statements; but we want to bring him to the confession of actual facts. He has said that the immunity from small-pox enjoyed by Leicester is due absolutely to sanitary measures—i.e., as distinguished from vaccination. Our commissioner avers that the sanitary authorities are themselves revaccinated, and revaccinate all persons who have been in contact with imported cases of small-pox. We call on Mr. Biggs either to accept this statement or to disprove it. The last report of the medical officer of health of Leicester illustrates the practice followed. A case of small-pox in 1886 was introduced from Sheffield or Nottingham. "The usual prompt measures were adopted; the patient was removed to the small-pox wards, and two other persons who had been in contact with him were subjected to fourteen days' quarantine, and were revaccinated, both of whom escaped the disease; the room he had occupied was thoroughly disinfected, and the bedding he had slept on destroyed. No other case occurred." The police arrangements are admirable; but our contention is that, apart from the revaccination of exposed persons, the disease would be indefinitely conveyed. And yet Mr. Biggs has thought it fair to omit the mention of vaccination as an element in the immunity of Leicester.

A. G. C.—Several suggested remedies for sea-sickness, ice among the number, are no doubt useful in certain cases; but one of universal efficacy has yet to be found.

Finem respice.—The subject has, we think, been sufficiently threshed out.

SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the letter of Dr. J. Russell Harris on sea-sickness in your issue of the 24th inst., but can scarcely agree with the views of that gentleman regarding its pathology. Basing his opinion on the solitary experience of his own case, Dr. Harris seems to think that the phenomena of *mal de mer* are due to the presence of bile in the stomach, the result of relaxation of the pyloric sphincter from nervous exhaustion. As medical officer of one of the largest steamships crossing the Atlantic, I have had ample opportunity of studying this affection, and have come to the following conclusions as to its pathology:—1. That the primary cause is the motion of the ship, the contents of the stomach being shaken about, in consequence of which the food acts as a foreign body, or irritant to the gastric mucous membrane. Emesis follows, being the result of reflex action. 2. That the head symptoms are secondary, and are probably due to cerebral anæmia. 3. That the continuance of nausea, after the contents of the stomach have been rejected, is due to gastric irritation, which is proved by the fact that it can be almost invariably relieved by the application of a mustard leaf or any mild counter-irritant over the epigastrium. Except in people of a "bilious temperament," or in those who are habitually constipated, I have rarely noticed the presence of bile in the vomited matter. My experience goes to show that sea-sickness is aggravated by the following complications in the order of their frequency: chronic dyspepsia, habitual constipation, pregnancy, and previous debility from any cause. It is far more prevalent in the female than in the male sex, the ratio being about 12 to 1. It rarely occurs in children under five years of age, which I suppose may be accounted for by the fact that up to that time they are as a rule carefully fed, and their stomachs are in good order. People who are in the advanced stages of phthisis seldom suffer, and then only slightly.

With regard to treatment, I have come to the conclusion that there is no specific for sea-sickness, and that such powerful medicines as nitrite of amyl, cocaine, strychnine, &c., so far from being of service, may be positively harmful. The plan I generally adopt is as follows: If I see the patient early—i.e., before emesis has set in,—I begin the treatment with an emetic of hot water, or sea water, which I find to be the most effectual. If the case is complicated with constipation, I give usually a simple enema, as cathartics given by the mouth are never retained. Then the patient is placed in the recumbent posture with the head low, and ordered a draught containing a drachm of solution of bismuth, half a drachm of aromatic spirit of ammonia, with a minim of chloroform and ipecacuanha wine in each dose, to be repeated every two hours, with plenty of ice to suck. I think it undesirable for the patient to have liquids or food in any quantity for the first twenty-four hours, unless there are signs of exhaustion, when teaspoonfuls of concentrated beef-tea and calf's-foot-jelly, with a little *dry* champagne, are required at frequent intervals. In many cases, but especially in those complicated by pregnancy, I have found "ingluvin" in grain doses every two hours extremely successful. The head symptoms can generally be relieved by the bromides of sodium and ammonium, the potassium salt being too depressing. A firm belt with a pad in the epigastrium will sometimes act as a preventive. At best the treatment of sea-sickness is most unsatisfactory, owing to the anxiety of the friends of the patient to hasten the cure by administering some "infallible specific" which they have found successful in their own case on a previous occasion.

I am, Sirs, yours faithfully,

P. S. DONNELLAN
(Surgeon, S.S. *City of Rome*).

Liverpool, Sept. 26th, 1887.

RELATIONS OF MEDICAL OFFICERS OF HEALTH TO GENERAL PRACTITIONERS.

C. E. P.—Our correspondent, we think, somewhat misapprehends the duties of medical practitioners and medical officers of health as to cases of scarlet fever, &c. He was right in reporting the cases to the health officer, but the latter has no "authority" to have cases removed to the hospital apart from that which the sanitary body may delegate to him; and even this is absolutely limited to cases having "improper lodging and accommodation"—a term which has been held to apply to the welfare of the patient, and not to protection against infection. In such a case as is reported, and in which the parents objected to removal to hospital, the medical officer of health is helpless, except to caution against illegal exposure of infected persons or things and to order disinfection of premises and clothing as soon as the disease is over. If a desquamating child was out on errands an attempt should have been made to secure conviction under section 126 of the Public Health Act; and if the parents had been duly cautioned, the exposure could doubtless have been held to be "wilful"—a necessary condition to conviction. In the second case referred to, there was an additional duty to perform; for since the house-hold children going to school, the health authority should, under the Education Code, have given notice to the school managers that they must exclude scholars from the infected house. But our correspondent does not say that this was not done, or that disinfection is not adopted on the termination of a case of scarlet fever in the town.

Philadelphian.—The reply received by our correspondent from the Council office two months ago will apply to the present time.

R. T. W.—If the gentleman named is a certifying teacher by appointment, his certificate holds good; but not otherwise.

Mr. Wm. Robertson.—We can only suggest that our correspondent should abide by the advice of his solicitors.

Dr. T. W. Mills.—We regret we are unable to insert the communication.

Mr. William Fraser.—The preparation is known to us only by name.

Cyrus.—Such advertisement is not commendable.

THE USE OF MIDDENS IN NOTTINGHAM.

To the Editors of THE LANCET.

SIRS,—In the notice of my report for 1886 in your issue for Sept. 17th you say that you cannot altogether approve of my design for a midden-privy which it contains. I wish to point out that this design was intended only to meet the requirements of certain parts in my own district and others similarly constituted. In a large and sparsely inhabited agricultural and colliery area, with scanty means of scavenging, some form of middenstead must usually be adopted, and we may often have to consider ourselves fortunate in securing watertightness (of both roof and basin) with limited capacity and superficialness to ground surface in such a structure. The slate slab beneath the seat in my plan, to which you refer, is fixed at an angle of 120° with the horizontal floor, to throw dejecta backwards and prevent accumulation directly under the seat. The whole of the latter is made to hinge against the wall to which it is attached, and thus afford additional facility (to that of the door in the midden wall) for cleansing the interior or introducing dry earth, cinders, &c. Any further mechanism than this for securing the admixture of ashes and excreta and necessitating the intelligent co-operation of the persons whose interests are most concerned is generally out of the question. The trough or basin of concrete, lined with blue brick in Portland cement, must in most cases be of sufficient capacity to contain without overfilling at least one month's accumulation of the solid household refuse and dejecta of, say, eight adult persons (such space in this district is about thirty-six cubic feet). In cases where the coal used is hard, earthy, and extremely cheap, as with us, the amount of ash produced is enormous, and proportional space must be provided for its reception. I have endeavoured in advocating the adoption of this design to secure a practicable reform. I have, as Solon said of his laws, not given the best that could be devised, but the best that under existing circumstances could be received.—I am, Sirs, yours faithfully,

PHILIP BOOBBYER.

Nottingham, Sept. 21st, 1887.

*** We are glad that Dr. Boobbyer does not disagree with our view that his design does not in all respects fulfil the principles that should, as a rule, be aimed at. It will effect improvement; but still the chief objection to the slate slab is that it gets plastered with excreta, and these, being detained on the slab, do not mix properly with the ashes, &c. The best method, in our opinion, is to have no privy-pit beyond the space beneath the seat, and by means of a rising seat to arrange for the regular deposit of ashes &c. on the excreta day by day.—ED. L.

THE CLIMATE OF TORQUAY.

To the Editors of THE LANCET.

SIRS,—By this post I beg to send you a specimen of almond [enclosed] grown upon a tree in the public gardens here without shelter or protection of any kind since the tree was planted three years ago. It appears to me to be one of the best proofs of a mild climate that could possibly be given.

I am, Sirs, yours truly,

JOSEPH HALL, Surveyor.

Torquay, Sept. 27th, 1887.

COMMUNICATIONS, LETTERS, &c., have been received from — Mr. T. Pridgin Teale, Leeds; Dr. Dickinson, London; Dr. W. A. Mackay, Huelva; Dr. F. Borel, London; Mr. Popert, Southport; Mr. Spencer Watson, London; Dr. R. M. Ralph, Burton-on-Trent; Messrs. A. and J. Shaw; Dr. A. G. Auld, Wick; Dr. Myrtle, Harrogate; Dr. Harry Campbell, London; Mr. D. J. Stewart; Mr. Weller, Hammersmith; Mr. G. Michelmore, Tiverton; Mr. J. Carter; Messrs. Everett and Son, London; Dr. A. J. Birmingham, Kingstown; Messrs. Boulton and Paul, Norwich; Mr. C. B. Keetley, London; Miss Bartlett, Stoke Newington; Mr. S. F. Harvey, London; Mr. F. W. Gibbon, Tyne Dock; Dr. A. W. Hughes, Flint; Dr. Pullin, Sidmouth; Mr. Cary Jeffries, London; Mr. H. B. Clarke, London; Mr. R. B. Warren, Moss Vale, N.S.W.; Dr. T. Oliver, Newcastle-on-Tyne; Messrs. Pocock and Co., Vauxhall; Mr. Godfrey, Balham; Mr. G. B. Moss; Dr. Castle, New York; Dr. H. Thomson, Glasgow; Mr. G. P. Field, London; Mr. C. J. Thompson, London; Dr. Russell Harris, London; Messrs. T. Christie, London; Dr. Skinner, Paris; Dr. J. M. Hunt, Liverpool; Dr. W. H. Day, London; Mr. A. J. Harvey, London; Dr. A. R. Paterson; Mr. J. Mason, London; Mr. F. S. Barber, Bradford; Dr. T. F. Pedley, Rangeon; Mr. R. J. H. Scott, Bath; Dr. Maunsell, Jamaica; Dr. Fritsche, Warsaw; Dr. F. R. Walters, London; Mr. Wilmer, Bow; Mr. H. C. Burdett, London; Dr. Imlach, Liverpool; Mr. Tate, Birmingham; Mr. Saunders, Manchester; Mr. Hick, Woking; Dr. Macdonald, Dorchester; Mr. Abertheny, Brixton; Mr. Cowan, Glasgow; Mr. Sladden, Dover; Mr. Brewer, Ilfracombe; Dr. Thomas, Llanfair; Mr. Maw, Bradford; Messrs. Livingstone, Edinburgh; Messrs. Hedgcock and Co., Camberwell; Sunder Pandurang, Bombay; Messrs. Short and Co., Grantham; Mr. Sterling, [illegible]; Mr. Petter, Yeovil; Dr. Wise, Maloja; Mr. Sheldon, London; [illegible] Aitken, Penarth; Rev. A. Tooth, Croydon; Mr. Younger, Hanwell; Mr. Gurner, London; Mr. Powell, Nottingham; Mr. Wormald, Manchester; Mr. Dickson, Kempton; Mr. Charpentier; Dr. Gemmell; Messrs. Rooke and Co., London; A Country Surgeon; M.D., Cheltenham; Rector, Worcester; P., Chichester; M.R.C.S.; F. A. G.; R. T. H.; S. S.; Puzzled; J. C.; M.D.; Philalethes; S. K. E.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Smith, Cheltenham; Rev. J. D'Orsey, London; Mr. Gross; Messrs. Keith and Co., Edinburgh; Mr. Buckland, London; Mr. Strickland, South Kensington; Mrs. Smith, Stratford-on-Avon; Messrs. Campbell and Co., Glasgow; Mr. Wixley, Oldham; Mr. Keogh, Dublin; Messrs. Lee and Martin, Birmingham; Mr. Sime, Ecclesfield; Mr. Mason, West Kensington; Mr. Keeling, Birmingham; Mr. Nance; Messrs. Battle and Co., Paris; Mr. Anderson, Erith; Dr. Wilson; Dr. Adam, West Malling; Mr. Kesterton, London; Mr. Evans, Oswestry; Mr. Harris, Redland; Mr. Barker, Bristol; Mrs. Townsend, Chester; Dr. Lincing, London; Mr. Boys, St. Albans; Miss Tomlinson, Sandown; Dr. Yna, London; Mr. King, Southampton; Mr. Roberts, London; Mr. Carter, Shipley; Mr. Hornibrook, London; Dr. Humphreys; Mr. Gravatt, London; Mr. Mather, Rainhill; Mr. Mullis, Walworth; Dr. Duncan, Newcastle-on-Tyne; Mr. Hunt, Biggleswade; J. B. O., London; N. Z.; Iatros; F.R.C.S., London; A. E.; Ambrose; F. P. H., South Hayling; Coachman, Mile-end; Rance; A. Z.; Alpha, Tunbridge Wells; Medicus, Highbury; E. S. B. P., Newport; Carlo; Medicus, Pontypool; Alpha, London; M.D., Birmingham; L.S.A., Nottingham; A. B., Southport; M.B., C.M., London; G., Derby; Secretary, London; Medicus, Forfar; Chemicus, Nodbury; P. H.; Homer; P., Leamington; B. B., Lyndhurst; W. W., Darlaston; Malar; R. J. H., Finsbury-park; Gamma, Hurdsley; C. W., Portsmouth; Medicus, Northampton; W. B., Bonchurch; Surgeon, Penygraig; S. M. J.

Colonial Standard, The Argosy, Semaine Médicale, Sydney Morning Herald, Advocate of India, Weekly Times and Echo, Yorkshire Gazette, Windsor and Eton Gazette, Huddersfield Echo, Australian Public Opinion, Hampshire Telegraph, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 27.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour.
Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Dr. H. E. Armstrong: General History, Principles, and Methods of Hygiene.

Wednesday, September 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, September 30.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Ventilation, Measurement of Cubic Space, &c.

Saturday, October 1.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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LETTERS, *each with enclosure*, are also acknowledged from—Mr. Mather, Rainhill; Mr. Aitken, Penarth; Mrs. Reynard; Messrs. Wright and Co., London; Dr. Warburton, Wiesbaden; Mr. Hedges, Leighton Buzzard; Mr. Hicks, Woking; Mr. Mackay, Huela; Messrs. Robinson and Son, Chesterfield; Mr. Barrett, Chichester; Mr. Robinson, Sedbergh; Dr. Gallelly, Skeltham; Mr. Gutch, Poole; Mr. Sterling, Bath; Miss Godfrey, Clapton; Dr. Hanna; Mr. Steadman, Leighton Buzzard; Mr. Huggins, Malvern; Dr. Dobbell, London; Miss Thorp, Farringdon; Mr. Wormald, Manchester; Dr. Crowther, Eastbourne; Miss Gitto, Bournemouth; Miss Annett, Ainsworth; Dr. Girdlestone, Rhyl; Mr. Bridgman, Burton-on-Trent; Messrs. Henderson and Co., Edinburgh; Mr. McCormac, Brighton; Mr. Anderson, Nottingham; Miss Boss, Nottingham; Mr. Briggs, Hull; Mr. Brigham, Paignton; Mr. Ward, London; Mr. Thomas, Nantymoel; Mr. White, Forfar; Mr. Oswald, Clapham; Mr. Biggs, Cambridge; Mr. Coutts, Aberdeen; Mr. Brown, Leeds; Dr. Millar, Southbridge; Mr. Smith, London; D. E.; R.; H. Y. N.; A. C. D.; Medicus, Edinburgh; Secretary, Manchester; G. N.; M.R.C.S., Wigan; M.D., Crewe; Lady Superintendent, Cambridge; X., Birmingham; H.; Hygiene, Stoke Newington; L.R.C.P., Tredegar; Medicus, Southsea; X., Bamber Bridge; Medicus, Leamington; Medicus, Runcorn; J. W. D.; Lady Superintendent, Sidcup; Medicus, Helmsley; M.B.; G. J. A., Sheffield; Medicus, Liverpool; C. J. S.; R. P.; Q.; G. R.; X. N., London; Chirurgus; Cantab.; Permanency, Hull; Markus, South Kensington; A. B.; Fides, Feltham; M. D. N., Halifax; M. F., Southport; H. B.; Matron; Gamma, Huntley; Perimeter; Medicus, Hull; D. D.

Windsor and Eton Gazette, Hampshire Telegraph, Kilmarnock Herald, Midland Times, Liverpool Courier, Cassell's Saturday Journal, &c., have been received.

Medical Diary for the ensuing Week.

Monday, October 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, October 4.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Dr. Louis Parkes: Water Supply, Drinking Water, Pollution of Water.

Wednesday, October 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Mr. Arbuthnot Lane: What are the Chief Factors which Determine the Differences which exist in the Forms of the Male and Female Pelves?—Dr. Matthews Duncan: On Tonic Uterine Contraction without Completeness of Retraction.—Dr. John Phillips: A case of Pregnancy complicated by Secondary Hepatic Cancer.

Thursday, October 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, October 7.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Prof. H. Robinson: Drainage Construction.

Saturday, October 8.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—As illustrating the manner in which inquests are held and medical evidence given in this part of the country, I wish to direct the attention of your readers to the notes of two cases of mine which have occurred within the last eighteen months.

A little over a year ago I was called in to examine a man who was said to have cut his throat. On arriving with the policeman and examining the body I found that the man had in the first place cut his throat, and, finding his attempt at suicide ineffectual, had then immersed his head in a pool of water. I remarked to his daughter, who was standing near, that none of the important vessels of the neck were severed, and therefore that death was caused by drowning. In this case no post-mortem examination was ordered, and at the inquest the only medical evidence was given by the police constable who accompanied me, and who simply repeated what I had said to the daughter of the dead man in his (the policeman's) hearing.

In the second case the patient, a miner, was injured at his work by a fall of rock and ore on Sept. 8th. He was placed in a cart and carried home. I was in attendance on his arrival. He had sustained a fracture of the clavicle in its outer third, fracture of several ribs, with laceration of the pleura and the lung substance, which was evident by the coarse crepitation audible over the whole of the chest wall and expectoration of blood. He gradually sank and died on Sept. 11th. In this case, as in the former, no post-mortem examination was ordered, and the medical evidence was given by a miner, who said that the man died from the injuries received, and that these injuries were the collar-bone and ribs broken.

If medical men are to be treated as I have been in the above cases, I think it is about time the matter were brought under the notice of the proper authorities. I am, Sirs, yours faithfully,

Dalton-in-Furness, Sept. 26th, 1887. A. GRAY, M.B.

"EXCESSIVE SALIVATION."

To the Editors of THE LANCET.

SIRS,—In your issue of Sept. 24th "M.R.C.S." requests advice in a case of excessive activity of the salivary glands occurring in a lady four months pregnant. Were the case one of salivation unconnected with the puerperal condition he would find the use of chlorate of potassium in thirty-grain doses three times daily quite sufficient to restore the secretory equilibrium; for chlorate of potassium is a powerful regulator of the functions of the conglomerate glands, at one time repressing excessive secretion, at another restoring it to its normal condition when below par. The irregularity in the present instance is evidently due, however, to reflex disorder proceeding from ovarian or uterine irritation and concomitant glandular sympathy, just as the lacteal secretion is itself the outcome of distant organic change. I have not any doubt that the application of a small blister, say 3 in. by 1 in., over the fourth and fifth dorsal vertebræ for eight hours will as rapidly dispose of the salivary trouble as it puts an end to the reflex vomiting and the neuralgic toothache incident to the period of gestation.

I am, Sirs, faithfully yours,

Belfast, Sept. 26th, 1887. ALEXANDER HARKIN, M.D., F.R.C.S.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent, "M.R.C.S.," I beg permission to offer the following remarks.

Excessive salivation depends on digestive disturbance, or on exalted action from reflex irritation of salivary glands. Many different conditions may be held as causative; many different remedies have been advised. If the case is still continuing as before I advise the hypodermic injection of the solution of sulphate of atropia into the region of one or both submaxillary glands. Atropia has been experimentally proved to abolish the action of the chorda tympani on the salivary secretion. In practice good results almost always attend its use. From ·01 to ·025 of a grain of the salt may be given. But the simplest plan is to begin by injection of two minims of the four grain to one ounce solution, which will equal one-hundred-and-twentieth of a grain; this may be gradually increased to four minims, equal to one-sixtieth or more. In some cases a combination of a minim or two of the hypodermic solution of morphia will permit greater tolerance of the atropia, and aid the cure. Other remedies, all more or less useful, are, calomel, gr. ½, with gr. ½ to gr. 1 each of extract of belladonna and nux vomica; hydrarg. perchlorid. or biniodid., gr. $\frac{1}{16}$ to gr. ⅛, with combination of sulphate or tartrate of iron or ferrum redactum; tincture of belladonna, gutt. 15 to 20, with potas. or sodium iodide, gr. 3 to gr. 5. But iodide must not be continued over ten days continuously. Pilocarpine has been found useful in one-twelfth-grain doses; so has ext. viburn. prunif. in gutt. 15 to gutt. 30 ter die. When the cause is more glandular reflex than gastric free doses of the bromides of potassium, ammonium, and sodium are beneficial. When the stomach is irritable the dyspepsia must be treated; bismuth with carbonate of potassium will suit one case, while another will be suited by nitro-hydrochloric or phosphoric acid. Diet is important; a few cases do best with strictly animal diet, with little or no fluid. In others peptonised milk and bland farinaceous food answer best. Iron should always be given; four grains of sulphate or tartrate, with an equal quantity of phosphate of lime, vini ferri, in drachm doses, thrice daily. Mouth washes are of little service; when carious teeth keep up glandular irritation, washes of chloralum, chloral, or boracic acid are best. One or two recent American drugs promise to be serviceable; of these, aletris formosa, in form of aletris cordial, mixed with three times the quantity of water; hazeline, half an ounce in eight ounces of water; extract. pinus canadensis, an ounce to eight or ten ounces of water, are worthy of trial. Use every two hours. In the event of no improvement from any combination of these, rectal alimentation for a day or two, and pushing the hypodermic use of atropine, with or without morphia, will probably succeed, but strength must be kept up.—I am, Sirs, yours obediently,

Beaufort-gardens, S.W., Sept. 26th, 1887. LEITH NAPIER, M.D.

"INFANTILE DIARRHŒA."

To the Editors of THE LANCET.

SIR,—The concluding portion of Dr. Hamilton's letter anent infantile diarrhœa and a milk diet contains the key as to the cause of so much illness referable to milk, and a hint as to what is, I believe, the proper and natural remedy. He says, "Dr. Vaughan suggests that no milk be used where cholerale diarrhœa occurs; but I think if the precaution be taken which I have suggested there can be little danger from the use of the child's natural food." My experience is the same as his. Brewers grains or, as he terms it, "draff" either ought not to be given as food to cows or the storage of it on the cowkeepers' premises ought to be closely supervised. It may not be generally known to the public that these grains in a very few days ferment and putrefy and that cows will eat it in that state. Can that be wholesome? An experienced farmer assures me that if horses are fed on these grains they sicken and die. In the winter months—I know it to be the case—cows are kept herded together day after day, week after week, in their stalls, in semi-darkness, and highly fed on forcing food, including grains; no exercise whatever. Can it be supposed that they can keep their health, or that a feverish or sick cow is not often milked with the rest, possibly in ignorance, during the darkness of winter mornings and dull days? One of the first of my suggestions in the treatment of infantile diarrhœa is, Cease the milk, unless I happen to know it is from a dairy where no grains are admitted. It is to the feeding and health of cows we should look, equally with milk analyses and water adulterations. There are farms where cows get proper food, air, and exercise; and the milk of these must be more wholesome than that from the yards where crowding together, no exercise, and grains are the rule.—I am, Sirs, yours faithfully,

OWEN COLEMAN, M.D.

Surbiton, Sept. 22nd, 1887. Medical Officer of Health.

"PAIN IN THE HEELS."

To the Editors of THE LANCET.

SIRS,—If "G. P." were to suggest to his patient to lower the height of the heels of his boots, and lengthen them so that they reach further under the instep, I think relief would be obtained. It should also be made clear that the length of the boot as a whole is sufficient for the man. The spring introduced by some makers might in addition prove a help to the case. Buttoned would be better than elastic-sided boots.

I am, Sirs, your obedient servant,

LEWIS W. MARSHALL, M.D.,

Sept. 26th, 1887. Surgeon, Children's Hospital, Nottingham.

To the Editors of THE LANCET.

SIRS,—I venture to suggest as a probable cause of the pain to which "G. P." refers, rheumatic inflammation of the sheath of the nerve trunk passing into the sole of the foot. I may mention that a few months since I had two cases which at first presented similar symptoms to those which he describes, both heels being affected. After some time, however, the pain in one case extended upwards in both limbs, presenting the ordinary symptoms of sciatica, in the other case only one limb was so affected. Both cases were completely cured by the administration of the iodide and bicarbonate of potassium.

I am, Sirs, yours faithfully,

London, Sept. 28th, 1887. B. HOSFORD, M.A., M.D.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "G. P.," may find that the skin of the sole of his patient's heel is thick, hard, and dry, with a tendency to peel off, and he may further find that where this hard skin joins the softer skin of the side of the foot there is a line of dull redness, from which the sweat is very freely secreted. Walking is always a cause of pain under these conditions. I have seen several cases to which this description would apply. They have all been much relieved by using the following liniment:—℞. Lin. belladon., glycer. ac. boracis, aqua, p.æ.

I am, Sirs, obediently yours,

Sept. 26th, 1887. H. P.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Guyer Hunter, London; Dr. Russell Reynolds, London; Dr. Suckling, Birmingham; Dr. Harkin, Belfast; Dr. Savage, London; Dr. Cameron Gillies, Brockley; Mr. F. S. Barber, Bradford; Dr. Tyrrell Brooks, Oxford; Dr. Dowdeswell, London; Mr. Mortimer, Portsmouth; Dr. L. Napier, London; Mr. A. B. Reade, London; Dr. N. Kerr, London; Dr. Bell Taylor, Nottingham; Mr. S. Poynter, Hove; Mr. Reginald Harrison, Liverpool; Dr. W. Fraser, Ashburton; Messrs. Condy and Mitchell, London; Dr. W. Robertson, Newcastle-on-Tyne; Mr. Shirley

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LEICESTER AND SMALL-POX.

Mr. J. T. Biggs.—It is a very roundabout way for Mr. Biggs to put questions to the medical officer of health of his own town through the columns of THE LANCET. We shall cheerfully insert any letter from Mr. Biggs which invalidates our commissioner's statements; but we want to bring him to the confession of actual facts. He has said that the immunity from small-pox enjoyed by Leicester is due absolutely to sanitary measures—i.e., as distinguished from vaccination. Our commissioner avers that the sanitary authorities are themselves revaccinated, and revaccinate all persons who have been in contact with imported cases of small-pox. We call on Mr. Biggs either to accept this statement or to disprove it. The last report of the medical officer of health of Leicester illustrates the practice followed. A case of small-pox in 1886 was introduced from Sheffield or Nottingham. "The usual prompt measures were adopted; the patient was removed to the small-pox wards, and two other persons who had been in contact with him were subjected to fourteen days' quarantine, and were revaccinated, both of whom escaped the disease; the room he had occupied was thoroughly disinfected, and the bedding he had slept on destroyed. No other case occurred." The police arrangements are admirable; but our contention is that, apart from the revaccination of exposed persons, the disease would be indefinitely conveyed. And yet Mr. Biggs has thought it fair to omit the mention of vaccination as an element in the immunity of Leicester.

A. G. C.—Several suggested remedies for sea-sickness, ice among the number, are no doubt useful in certain cases; but one of universal efficacy has yet to be found.

Finem respice.—The subject has, we think, been sufficiently threshed out.

SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the letter of Dr. J. Russell Harris on sea-sickness in your issue of the 24th inst., but can scarcely agree with the views of that gentleman regarding its pathology. Basing his opinion on the solitary experience of his own case, Dr. Harris seems to think that the phenomena of *mal de mer* are due to the presence of bile in the stomach, the result of relaxation of the pyloric sphincter from nervous exhaustion. As medical officer of one of the largest steamships crossing the Atlantic, I have had ample opportunity of studying this affection, and have come to the following conclusions as to its pathology:—1. That the primary cause is the motion of the ship, the contents of the stomach being shaken about, in consequence of which the food acts as a foreign body, or irritant to the gastric mucous membrane. Emesis follows, being the result of reflex action. 2. That the head symptoms are secondary, and are probably due to cerebral anæmia. 3. That the continuance of nausea, after the contents of the stomach have been rejected, is due to gastric irritation, which is proved by the fact that it can be almost invariably relieved by the application of a mustard leaf or any mild counter-irritant over the epigastrium. Except in people of a "bilious temperament," or in those who are habitually constipated, I have rarely noticed the presence of bile in the vomited matter. My experience goes to show that sea-sickness is aggravated by the following complications in the order of their frequency: chronic dyspepsia, habitual constipation, pregnancy, and previous debility from any cause. It is far more prevalent in the female than in the male sex, the ratio being about 12 to 1. It rarely occurs in children under five years of age, which I suppose may be accounted for by the fact that up to that time they are as a rule carefully fed, and their stomachs are in good order. People who are in the advanced stages of phthisis seldom suffer, and then only slightly.

With regard to treatment, I have come to the conclusion that there is no specific for sea-sickness, and that such powerful medicines as nitrite of amyl, cocaine, strychnine, &c., so far from being of service, may be positively harmful. The plan I generally adopt is as follows: If I see the patient early—i.e., before emesis has set in,—I begin the treatment with an emetic of hot water, or sea water, which I find to be the most effectual. If the case is complicated with constipation, I give usually a simple enema, as cathartics given by the mouth are never retained. Then the patient is placed in the recumbent posture with the head low, and ordered a draught containing a drachm of solution of bismuth, half a drachm of aromatic spirit of ammonia, with a minim of chloroform and ipecacuanha wine in each dose, to be repeated every two hours, with plenty of ice to suck. I think it undesirable for the patient to have liquids or food in any quantity for the first twenty-four hours, unless there are signs of exhaustion, when teaspoonfuls of concentrated beef-tea and calf's-foot-jelly, with a little *dry* champagne, are required at frequent intervals. In many cases, but especially in those complicated by pregnancy, I have found "ingluvin" in grain doses every two hours extremely successful. The head symptoms can generally be relieved by the bromides of sodium and ammonium, the potassium salt being too depressing. A firm belt with a pad in the epigastrium will sometimes act as a preventive. At best the treatment of sea-sickness is most unsatisfactory, owing to the anxiety of the friends of the patient to hasten the cure by administering some "infallible specific" which they have found successful in their own case on a previous occasion.

I am, Sirs, yours faithfully,

P. S. DONNELLAN
(Surgeon, S.S. *City of Rome*).

Liverpool, Sept. 26th, 1887.

RELATIONS OF MEDICAL OFFICERS OF HEALTH TO GENERAL PRACTITIONERS.

C. E. P.—Our correspondent, we think, somewhat misapprehends the duties of medical practitioners and medical officers of health as to cases of scarlet fever, &c. He was right in reporting the cases to the health officer, but the latter has no "authority" to have cases removed to the hospital apart from that which the sanitary body may delegate to him; and even this is absolutely limited to cases having "improper lodging and accommodation"—a term which has been held to apply to the welfare of the patient, and not to protection against infection. In such a case as is reported, and in which the parents objected to removal to hospital, the medical officer of health is helpless, except to caution against illegal exposure of infected persons or things and to order disinfection of premises and clothing as soon as the disease is over. If a desquamating child was out on errands an attempt should have been made to secure conviction under section 126 of the Public Health Act; and if the parents had been duly cautioned, the exposure could doubtless have been held to be "wilful"—a necessary condition to conviction. In the second case referred to, there was an additional duty to perform; for since the house-held children going to school, the health authority should, under the Education Code, have given notice to the school managers that they must exclude scholars from the infected house. But our correspondent does not say that this was not done, or that disinfection is not adopted on the termination of a case of scarlet fever in the town.

Philadelphian.—The reply received by our correspondent from the Council office two months ago will apply to the present time.

R. T. W.—If the gentleman named is a certifying teacher by appointment, his certificate holds good; but not otherwise.

Mr. Wm. Robertson.—We can only suggest that our correspondent should abide by the advice of his solicitors.

Dr. T. W. Mills.—We regret we are unable to insert the communication.

Mr. William Fraser.—The preparation is known to us only by name.

Cyrus.—Such advertisement is not commendable.

THE USE OF MIDDENS IN NOTTINGHAM.

To the Editors of THE LANCET.

SIRS,—In the notice of my report for 1886 in your issue for Sept. 17th you say that you cannot altogether approve of my design for a midden-privy which it contains. I wish to point out that this design was intended only to meet the requirements of certain parts in my own district and others similarly constituted. In a large and sparsely inhabited agricultural and colliery area, with scanty means of scavenging, some form of middenstead must usually be adopted, and we may often have to consider ourselves fortunate in securing watertightness (of both roof and basin) with limited capacity and superficialness to ground surface in such a structure. The slate slab beneath the seat in my plan, to which you refer, is fixed at an angle of 120° with the horizontal floor, to throw dejecta backwards and prevent accumulation directly under the seat. The whole of the latter is made to hinge against the wall to which it is attached, and thus afford additional facility (to that of the door in the midden wall) for cleansing the interior or introducing dry earth, cinders, &c. Any further mechanism than this for securing the admixture of ashes and excreta and necessitating the intelligent co-operation of the persons whose interests are most concerned is generally out of the question. The trough or basin of concrete, lined with blue brick in Portland cement, must in most cases be of sufficient capacity to contain without overfilling at least one month's accumulation of the solid household refuse and dejecta of, say, eight adult persons (such space in this district is about thirty-six cubic feet). In cases where the coal used is hard, earthy, and extremely cheap, as with us, the amount of ash produced is enormous, and proportional space must be provided for its reception. I have endeavoured in advocating the adoption of this design to secure a practicable reform. I have, as Solon said of his laws, not given the best that could be devised, but the best that under existing circumstances could be received.—I am, Sirs, yours faithfully,

PHILIP BOOBBYER.

Nottingham, Sept. 21st, 1887.

*** We are glad that Dr. Boobbyer does not disagree with our view that his design does not in all respects fulfil the principles that should, as a rule, be aimed at. It will effect improvement; but still the chief objection to the slate slab is that it gets plastered with excreta, and these, being detained on the slab, do not mix properly with the ashes, &c. The best method, in our opinion, is to have no privy-pit beyond the space beneath the seat, and by means of a rising seat to arrange for the regular deposit of ashes &c. on the excreta day by day.—ED. L.

THE CLIMATE OF TORQUAY.

To the Editors of THE LANCET.

SIRS,—By this post I beg to send you a specimen of almond [enclosed] grown upon a tree in the public gardens here without shelter or protection of any kind since the tree was planted three years ago. It appears to me to be one of the best proofs of a mild climate that could possibly be given.

I am, Sirs, yours truly,

JOSEPH HALL, Surveyor.

Torquay, Sept. 27th, 1887.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Clinical Assistant.

EASTERN DISPENSARY OF BATH.—Medical Officer. Salary £100 per annum for the first year, and afterwards to be raised to £120 if satisfaction be given to the committee. Furnished apartments, with coals, gas, and domestic attendance, are provided.

FULHAM UNION.—District Medical Officer. Salary at the rate of £40 per annum, in addition to the authorised extra fees allowed for midwifery cases, fractures, &c.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer of the Convalescent Home at Cheadle. Remuneration £150 per annum, with board and residence.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer. Board and residence in the hospital.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant. Board, lodging, and washing, but no salary.

ROYAL BERKS HOSPITAL, Reading.—Physician.

ROYAL LONDON OPHTHALMIC HOSPITAL, Blomfield-street, Moorfields, E.C.—Junior House-Surgeon. Salary £50 per annum, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

CLARE.—On August 30th, at Sutton's Pasture, Vere, Jamaica, the wife of Henry L. Clare, M.B., District Medical Officer, of a daughter.

DUKE.—On the 21st ult., at Gibraltar, the wife of Surgeon-Major Alex. W. Duke, Medical Staff, of a son,

HEDGES.—On the 15th ult., at Rutland House, Leighton Buzzard, the wife of J. A. Hedges, M.R.C.S., L.S.A., of a son.

MILLAR.—On the 22nd ult., at Sowerby-bridge, Yorks, the wife of James Millar, M.D., of a son.

PAGE.—On the 24th ult., at Old Market-street, Bristol, the wife of George Shepley Page, L.R.C.P.Ed., L.R.C.S., of a son.

WELSFORD.—On the 23rd ult., at Chaucer's House, Woodstock, the wife of G. F. Welsford, M.B., of a son.

MARRIAGES.

CROWTHER—BROOK.—On the 21st ult., at All Saints' Church, Halifax, by the Rev. J. H. Warneford, M.A., Vicar, assisted by the Rev. J. S. Lawson, M.A., LL.D., Vicar of St. George's, Barnsley, and the Rev. J. H. Williams, Curate, George Dobson Crowther, L.R.C.P.Ed., L.R.C.S., L.S.A. Lond., of Halifax, eldest son of Thomas Crowther, M.D., of Luddenden, to Edith Emily, elder daughter of Cyrus Brook, Esq., of Salterville, Halifax.

HARTLEY—BRIGGS.—On the 24th ult., at the Presbyterian Church, Hull, by the Rev. J. G. Train, George T. Hartley, L.R.C.P., L.R.C.S., L.S.A., of Spring Bank, Hull, youngest son of the late Joshua Hartley, Esq., of Stottfield House, Castleford, to Lizzie, only daughter of George J. Briggs, Esq., M.R.C.S., of Spring Bank, Hull.

JONES—HUGHES.—On the 21st ult., at the Buckhurst-hill Congregational Church, Philip William Jones, M.D., to Sarah Ann, daughter of William Hughes, Esq., of Buckhurst-hill, Essex, and Victoria-park, London.

KNOWLES—RYLANDS.—On the 22nd ult., at Christ Church, Ardsley, by the Vicar, the Rev. N. J. Lloyd Kane, M.A., Henry Knowles, L.R.C.P. Lond., of St. George's-place, Barnsley, to Malinda, the youngest daughter of the late B. Rylands, Esq., of Hunningley Villa, Ardsley, near Barnsley.

NOAD—GREEN.—On the 22nd ult., at Tavistock, Ernest Noad, M.R.C.S., L.R.C.P.Edin., to Laurie, eldest daughter of the late Rev. E. A. Green.

DEATHS.

BUSTIN.—On August 28th at Hetton-le-Hole, co. Durham, John Bustin, M.R.C.S.Eng., aged 76.

FERRIANI.—On the 24th ult., at Reggio Emilia, Italia, Alessandro Ferriani, M.D., late of Gower-street, Bedford-square, London, aged 66.

GAYE.—On the 24th ult., at Newton Abbot, Devon, Wm. Gaye, L.S.A., formerly of Minehead, Somerset, aged 93.

HAYES.—On the 18th ult., at Llandudno, John Hayes, L.S.A., L.R.C.P.Ed., of Manor House, Tittensor, Staffordshire, aged 62.

JACKSON.—On the 24th ult., at Oxford, Robert Jackson, M.D., formerly Fellow of New College, Oxford, aged 76.

OGSTON.—On the 25th ult., at 13, Albyn-terrace, Aberdeen, Francis Ogston, M.D., Emeritus Professor of Medical Jurisprudence in the University of Aberdeen. Friends will kindly accept this (the only) intimation.

PRIDHAM.—On the 28th ult., at Paignton, S. Devon, Lucy Charlotte, beloved wife of Charles Pridham, F.R.C.S., M.R.C.P.Ed., of Kensington and Paignton.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, September 29th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 23	30·41	E.	55	51	72	61	49	...	Overcast
,, 24	30·43	N.E.	53	51	64	55	49	...	Overcast
,, 25	30·32	N.E.	50	46	82	62	43	...	Fine
,, 26	29·85	S.W.	57	55	72	60	50	...	Overcast
,, 27	29·43	W.	54	51	100	64	50	·12	Cloudy
,, 28	29·23	W.	45	44	96	56	44	...	Hazy
,, 29	29·38	W.	46	43	...	...	42	...	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

SEA-SICKNESS: A SUGGESTION.

A GENTLEMAN signing himself "Corset," in a letter to us, strongly recommends the wearing of a pair of stays for sea-sickness. He alleges them to be not only comfortable but a "complete cure," and this not alone on his own experience of five years, but that of many of his friends. We do not venture to do more than give publicity to this suggestion, which, by the way, is not a new one. We had thought that "the better half of society," which is distinguished by wearing stays, were quite as much afflicted with sea-sickness as the stay-less half. But our correspondent would doubtless attribute this to too large a dose of his remedy, for though he eulogises, like a lady, the comfort of stays, he denounces "tightlacing."

G. A.—An honorary surgeon to a hospital cannot claim a fee for attendance upon any of his hospital patients, and the case in point forms no exception to the rule. We hope that under the circumstances the patient will make a handsome acknowledgment of the good offices of the hospital and its honorary staff.

Mr. S. Poynter.—We do not see how we can deal with a matter which is confessedly *sub judice*.

ULEXINE.

To the Editors of THE LANCET.

SIRS,—In your last issue Mr. B. H. Fenwick draws attention to the above alkaloid recently isolated by me from the seeds of the furze, gorse, or whin, mentioning that $\frac{1}{10}$ gr. in pill gave rise to suppression of urine, vomiting, and fever. Some recent experiments, however, which no doubt will be published in due course, have a tendency to show that $\frac{1}{10}$ gr. is too large a dose, giving rise in some cases to some of the symptoms described. On the other hand, $\frac{1}{20}$ gr. to $\frac{1}{15}$ gr. has so far proved an efficient diuretic as to maintain for several days an unabated effect. Might I suggest to Mr. Fenwick that he in future employ the drug in solution, not as pills. A carefully made solution is uniform in all its parts, whereas a pill is but a mechanical mixture, and however carefully made cannot for accuracy of division compare with a solution. At this hospital a solution is employed containing $\frac{1}{15}$ gr. or $\frac{1}{20}$ gr. in a fluid drachm of water. Mr. T. Christy has prepared a fluid extract of the seed. As this preparation represents the full activity of the seed, it may possibly have a different action from that of ulexine, so is well worth a trial. Recently I was informed that the furze has long been used in Scotland as a domestic diuretic remedy. Perhaps some of your readers could give authentic information on the point.

I remain, Sirs, yours truly,

A. W. GERRARD,
Pharmaceutical Chemist, F.C.S.

North London or University College Hospital, Sept. 27th, 1887.

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Mechanics—Prize: C. A. Clark; certificate, C. P. Phillips. Metallurgy—Prize: W. Rushton; certificate, T. S. Minett. Dental Surgery—Prize: T. S. Minett; certificates, A. S. Jones and S. D. Timms. Operative Dental Surgery—Prize: T. S. Minett; certificate, W. Rushton. Dental Materia Medica—Prize: W. Rushton; certificate, A. S. Jones. Students' Society Prize: A. S. Jones.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Summer Session, 1886.—First-year Students—S. G. Toller, College Prize, £15, and certificate; A. F. Stabb, College Prize, £10, and certificate; C. R. Box, A. C. Lankester, T. A. Dukes, E. T. Whitehead, E. Jobbins, H. S. Cooper, and E. B. Ware, certificates. Second-year Students—T. P. Cowen, College Prize, £15, and certificate; H. G. Turney, College Prize, £10, and certificate; F. E. Forward, certificate. Third-year Students—C. H. Eccles, College Prize, £15, and certificate; H. B. Luard, College Prize, £10, and certificate; E. Hobhouse, F. Fawssett, T. A. Durrant, and R. J. Langley, certificates. Winter Session, 1886-87: Entrance Science Scholarships—C. P. Lovell, scholarship, £100, and certificate; M. C. Clutterbuck, scholarship, £60, and certificate. First-year Students—H. Burden, the William Tite Scholarship, £30, and certificate; A. King, College Prize, £20, and certificate; E. T. Whitehead, College Prize, £10, and certificate; W. F. Umney, T. H. Kellock, J. E. F. André, H. S. Cooper, L. G. Scudamore, W. S. Griffith, W. R. Thurnam, D. F. Shearer, and J. R. Harper, certificates. Second-year Students—A. F. Stabb, the Musgrove Scholarship, 40 guineas, and certificate; A. C. Lankester, College Prize, £20, and certificate; and S. G. Toller, College Prize, £10, and certificate (equal); T. A. Dukes, C. R. Box, A. J. Swallow, and A. Wentworth Jones, certificates. Third-year Students—F. C. Abbott, second tenure of the Peacock Scholarship, with College Prize, £20, and certificate; T. P. Cowen, College Prize, £15, and certificate; H. G. Turney, College Prize, £10, and certificate; W. H. L. Copeland and E. A. Roberts, certificates. Prosectors—T. A. Dukes, A. C. Lankester, A. F. Stabb, A. J. Swallow, S. G. Toller, and E. E. Ware, certificates. Assistants in Physiological Laboratory—F. C. Abbott, W. H. L. Copeland, H. Gervis, C. J. Martin, and H. G. Turney, certificates. Grainger Testimonial Prize, £20—F. G. Parsons. Practical Medicine.—The Mead Medal—W. W. Ord; special mention and certificates, E. Hobhouse, H. B. Luard, and F. M. House. Surgery and Surgical Anatomy—F. Fawssett, the Cheselden Medal; R. V. Solly, H. H. Heffernan, and R. J. Langley, special mention and certificates. Resident Accoucheurs—J. S. Hutton, C. Yeoman, A. E. Godfrey, and H. J. Macevoy, certificates. House-Physicians—F. D. Crowdy, A. A. Brockatt, C. S. Evans, S. W. Wheaton, A. B. Godfrey (non-resident), and A. J. H. Montague (non-resident), certificates. Assistant House-Physicians—C. S. Evans, H. Cameron Kidd, W. H. C. Staveley, and H. P. Hawkins, certificates. House-Surgeons—E. S. Gooddy, F. E. Nichol, E. D. Ritchie, J. S. Hutton, and W. H. C Staveley, certificates. Assistant House-Surgeons—F. E. Nichol, C. S. Evans, W. H. C. Staveley, S. H. Jones, K. Totsuka, J. H. Tonking, and E. C. Stabb, certificates. For general proficiency and good conduct—F. Fawssett, the Treasurer's Gold Medal.

UNIVERSITY COLLEGE.—Entrance Exhibitions: £100, W. A. Savage; £60, H. Tilley; £40, W. M. Stevens. Atkinson Morley Scholarship, £45 per annum for three years: H. P. Dean. Atchison Scholarship, £60 per annum for two years: G. E. Rennie. Bruce Medal: G. E. Rennie. Cluff Prize, £15: G. B. M. White. Winter Session—Surgery: Gold medal, G. E. Rennie; first silver, W. P. May; second silver, R. F. Gill. Second class: J. H. Gould, L. Harris-Liston, F. Savery. Third class: S. Bullivant, P. J. Le Riche. Physiology: Senior Class Gold Medal, S. H. Snell; silver medal, L. E. Hill; certificates, 3* T. L. Pennell, 4* (equal) G. F. Blacker, E. R. C. Earle, 6* C. D. Marshall. Second class: S. H. Bates, T. W. Hinds, H. H. Horden, H. B. Kitchin, R. E. S. Krohn, W. B. Marshall, F. L. Orr. Third class: E. W. Diver, A. J. Heath, H. M. Morphew, R. L. S. Nuthall, E. S. Passmore. Junior class: Silver medal, W. M. Stevens; certificates, 2* H. Tilley, 3* (equal) D. Drew, E. Newlyn Smith, 5* J. E. Ramsay, 6* A. Griffith, 7* C. B. T. Musgrave, 8* (equal) H. J. Curtis, T. J. Wood. Second class: F. G. Bushnell, A. J. Chambers, P. Evans, R. F. J. Gill, J. G. Hewitson, T. H. Ionides, W. B. Morton, J. E. Paul, A. C. Stevenson, C. B. Turner, L. Williams, G. E. M. Wood. Third class: W. F. Chambers, P. J. Duffy, W. H. J. Huthwaite, A. A. Liveridge, G. E. Newby, E. Ringrose, C. J. Weichert Anatomy: Senior Class Gold Medal: G. E. Blacker; first silver, T. L. Pennell; second silver, L. E. Hill. Second class: H. H. Horden. Third class: A. J. Heath, H. B. Kitchin, F. L. Orr. Junior class—Silver medal: A. Griffith; certificates, 2* equal, A. J. Chambers, Douglas Drew, 4* W. B. Morton, 5* equal, R. F. I. Gill, E. Newlyn Smith, H. Tilley, L. Williams. Second class: R. J. H. Allen, F. G. Bushnell, R. E. S. Krohn, C. B. Turner, G. E. M. Wood. Third class: W. F. Chambers, H. J. Curtis; G. E. Newby. Medicine—Gold medal: J. O. Tunstall; first silver, G. W. Sutherland; second silver, equal G. B. M. White, R. F. Gill; certificate, 5* E. P. Daniell. Second class: C. J. Weekes. Third class: W. Gordon, G. R. Murray. Practical Surgery—Erichsen Prize: F. Savery, certificate, 2* H. P. Dean. Second class: R. F. Gill, G. H. Lang, W. P. May. Third class: H. E. L. Canney, H. Dane, E. B. Hastings. Practical Chemistry—Gold medal: C. C. Chidell; first silver, B. L. Abrahams; second silver, H. Lazareck. Third class: H. W. Armstead, B. L. Moore, J. T. Norman, G. A. Watson, F. W. Wesley. Pathological Anatomy—Tuke Medal: G. E. Rennie. Clinical Medicine—Senior class:—Fellowes Medals: Gold, C. W. Jecks; silver, H. P. Dean; certificates, 3* equal, W. P. May, G. E. Rennie, J. O. Tunstall, 6 C. J. Weekes, 7 E. B. Hastings, 8 equal E. P. Daniell, A. M. Sully, 10 B. M. Lewis, 11 P. K. O'Brien, 12 T. W. P. Lawrence. Junior Class—Fellowes Silver Medals: Equal, G. R. Murray, W. B. Ransom; certificates, 3* J. E. Dyer, 4* G. W. Sutherland, 5* G. B. M. White, 6* R. W. Boyce, 7* E. O. Turner, 8* C. S. Dowdell, 9* H. M. Evans, 10* M. G. Foster, 11* equal B. M. H. Rogers, H. Sharman, 13* Ernest Wills, 14* D. Wright, 15* W. Gordon, 16* J. W. Higginson. Second class—H. Davis, J. P. Parkinson. Clinical Dental Surgery—Prize, W. P. May; silver medal, C. J. Weekes; certificate, 3* J. O. Tunstall. Second class—G. E. Rennie. Third class—H. Dane, R. F. Gill, F. Savery. Summer Session—Medical Jurisprudence: Gold medal, E. Deanesly. Chemistry—Gold medal, S. E. Linder; silver medal, M. L. Agarwala. Second class—B. L. Abrahams, J. C. E. Lawson, A. E. Reynolds. Third class—W. A. Perry, E. Thompson. Practical Chemistry—Senior class: Gold medal: S. B. Mitra; first silver, H. Caiger; second silver, J. Yeomans. Second class—J. B. Ramsay, A. J. Waring. Third class—H. H. Horden, H. B. Kitchin, E. S. Passmore, M. E. Paul. Materia Medica and Therapeutics—Gold medal, T. L. Pennell; silver medals (equal), G. F. Blacker, H. Caiger; certificate, 4* H. B. Kitchin. Second class—S. H. Bates, W. B. Morton, J. E. Paul. Third class—A. Stanley Jones, E. L. N. Pridmore, A. E. Reynolds. Midwifery—Senior class: Gold medal, E. Deanesly. Second class—E. P. Daniell. Junior class: Silver medals, equal, H. M. Fernando, G. W. Sutherland; certificates, 3* J. O. W. Barratt, 4* E. O. Turner. Second class: A. E. Reynolds. Third class: J. L. Firth. Pathological Anatomy—Pilliter Exhibition of £30, R. W. Boyce; silver medal, G. W. Sutherland; certificates, 3* J. P. Parkinson, 4* H. M. Fernando. Second class: Henry Sharman. Histology and Practical Histology—Gold medal, H. Tilley; silver medal, D. Drew. Second class: F. G. Bushnell, J. E. Ramsay. Third class: E. N. Smith, A. C. Stevenson. Ophthalmic Medicine and Surgery—Silver medal, J. O. Tunstall; certificates, 2* equal, H. M. Fernando, C. J. Weekes. Hygiene—Silver medal and prize, Walter Venias. Second class: J. O. W. Barratt, W. G. Earle, J. H. Garrett. Clinical Medicine—Fellowes Medals: Gold, C. H. Clayton; first silver, H. E. L. Canney; second silver, H. E. Belcher; certificates, 4* equal, Harold Dane, W. C. Carter. Second class: E. Deanesly, R. F. Gill, J. E. Gould, E. B. Randal. Junior class: Fellowes Silver Medal, W. W. Tate; certificates, 2* H. M. Fernando, 3* J. L. Firth. Second class: H. W. Elphick, A. B. Kingsford, L. W. Powell, E. H. Strong. Third class: E. Wilkinson. (* Obtained number of marks qualifying for a prize.)

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—Entrance Scholarships—W. H. Gossage, £30; A. W. Harrison, £40; E. Cullinan (summer), £40. Treasurer's Prize for first winter subjects, value ten guineas—A. W. Harrison; A. T. Coleman, *proxime accessit*. President's Prize for second year subjects, value 20 guineas—H. J. Pritchard; E. C. Osborn, *proxime accessit*. Chadwick Prize, value 20 guineas—H. B. Brackenbury. Clinical Medicine Prize—W. Powell. Clinical Surgery Prize—W. Powell. Winter Session.—Class prizes and certificates.—Anatomy: Senior class, E. J. Pritchard, G. W. Simpson, *S. P. Matthews, *A. B. Vase (*equal), G. A. S. Bell, E. C. Osborn, and L. Lewis; junior class, H. C. C. De Renzi, A. W. Harrison, and A. T. Coleman. Physiology—Senior class, E. J. Pritchard, P. M. Yearsley, E. C. Osborn L. Lewis, and A. B. Vise; junior class, A. W. Harrison, A. T. Coleman, and H. C. C. De Renzi. Histology—Senior class, E. C. Osborn, E. J. Pritchard, *G. W. Simpson, *A. B. Vise (*equal), S. P. Matthews, *L. Lewis, *H. B. A. Pearson, *P. M. Yearsley (*equal). Chemistry—Senior class, A. W. Harrison, prize; C. L. Lake, A. T. Coleman. Medicine—Senior class, C. S. Vines, prize; H. J. Forster. Surgery—Senior class, F. B. Betts, prize. Summer Session: Class Prizes and Certificates: Histology—A. T. Coleman, prize; A. W. Harrison, certificate. Practical Chemistry—J. B. Byles, prize; E. C. MacLeod, E. Cullinan, C. L. Lake, and R. H. Reynolds, certificates. Pathology—F. B. Betts and W. Powell, equal, prize. Materia Medica—E. Cullinan, prize; H. C. C. De Renzi, R. H. Reynolds, C. L. Lake, W. E. Passmore, J. B. Byles, and H. C. Harper, certificates. Midwifery—F. B. Betts, prize; W. Powell, certificate. Forensic Medicine and Toxicology—A. W. Harrison, prize.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ATKIN, CHARLES, F.R.C.S., L.R.C.P.Lond., has been appointed Assistant-Surgeon to the Sheffield General Infirmary.

ATKINSON, J. MITFORD, M.B.Lond., Medical Officer to No. 3 District, St. Mary Abbott's, Kensington, has been appointed Medical Superintendent of the Civil Hospital, Hong Kong.

FORT, THOMAS, L.R.C.P., M.R.C.S., has been appointed Honorary Surgeon to the Oldham Infirmary, vice G. Thomson, M.D., resigned.

FULLER, ANDREW, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Bugbrooke District of the Northampton Union.

HERSCHELL, GEORGE, M.D.Lond., has been appointed Physician to the West-end Hospital for Paralysis and Epilepsy and Nervous Diseases.

LONGFORD, HENRY, L.K.Q.C.P.I., L.R.C.S.I., has been reappointed Medical Officer for the Sutton District of the Thirsk Union.

LYON, THOMAS GLOVER, M.A., M.D.Cantab., has been appointed Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

MACAULAY, THOMAS, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Market Harborough Rural Sanitary District.

MC CRACKEN, JOHN, M.B., C.M.Glas., has been reappointed Medical Officer for the Kilburn District of the Thirsk Union.

MACFARLANE, A. W., M.D., F.R.C.P.Ed., has been appointed Honorary Consulting Physician to the Kilmarnock Infirmary, on resigning his appointment as Physician.

MICKLE, GEORGE, M.A., M.B., C.M.Aber., has been reappointed Medical Officer for the Pickhill District of the Thirsk Union.

MUSPRATT, C. DRUMMOND, F.R.C.S.Eng., has been appointed Assistant to the Medical Superintendent at the Champion-hill Infirmary of the St. Saviour's Union.

PARK, DAVID SCOTT, L.R.C.P.Ed., F.R.C.S.Ed., has been reappointed Medical Officer of Health for the North Division of the Houghton-le-Spring Rural Sanitary District.

PARKER, ALBANY JOHN ETHERINGTON, L.R.C.P.Ed., M.R.C.S., has been reappointed Medical Officer of Health for the South Division of the Houghton-le-Spring Rural Sanitary District.

SYMES, WILLIAM SANDHAM, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Honorary Surgeon to the Chesterfield Hospital, vice Macdougall, deceased.

THOMPSON, MAITLAND, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Blankney District of the Sleaford Union.

TWREDY, CHARLES, M.R.C.S., has been reappointed Medical Officer for the Knayton District of the Thirsk Union.

WINSLOW, L. FORBES, M.B., LL.M.Camb., D.C.L Oxon., M.R.C.P.Lond., has been appointed Physician to the West-end Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy.

IMPROVED WATER SUPPLY FOR HOLBORN. — In compliance with the request of Mr. S. Gibbon, medical officer to the Holborn Board of Works, the directors of the New River Water Company have decided in future to give a constant supply of water to the following crowded parts of the district—viz., to that portion of St. Sepulchre's, Middlesex, which is bounded by a line drawn along the centre of St. John-street, down Charterhouse-street, and then along Farringdon-road to the boundary of Clerkenwell parish; and to those portions of the liberty of Saffron-hill and of St. Andrew's Eastern, which lie between Clerkenwell-road, Gray's Inn-road, and the boundary of St. Pancras and Clerkenwell parishes. The former comprises the numerous and crowded courts that lead out of Cowcross-street, Benjamin-street, and Peter's-lane; the latter the densely populated Italian quarter around Eyre-street-hill.

PRIZES AND SCHOLARSHIPS IN THE METROPOLITAN MEDICAL SCHOLS.

The following is a list of the prizes, &c., awarded for the sessions 1886-87:—

ST. BARTHOLOMEW'S HOSPITAL COLLEGE.—Lawrence Scholarship and Gold Medal—W. H. Hamer. Brackenbury Medical Scholarship—C. P. Cresch and G. L. Turnbull. Brackenbury Surgical Scholarship—W. Balgarnie. Senior Scholarship in Anatomy, Physiology, and Chemistry—C. H. Roberts. Open Scholarships in Science—E. Lloyd Jones, H. J. Waring. Preliminary Scientific Exhibition—W. E. Sargant, C. H. Langford. Jeaffreson Exhibition—F. Mangan. Kirkes Scholarship and Gold Medal—F. E. Gibbens. Bentley Medical Prize—F. W. Andrewes. Bentley Surgical Prize—Robert Bird. Hichens Prize—E. N. Reichardt. Wix Prize—J. G. Ogle. Harvey Prize—W. M'A. Eccles, prize; 2, H. M. Bowman; 3, R. C. Bailey, A. J. Edge; 5, W. K. Hughes; 6, C. K. Bowes; 7, E. V. Hugo. Practical Anatomy, Junior—Treasurer's Prize, J. F. Nall; Lecturer's Prize (extra), A. Quennell; 3, H. J. Waring; 4, R. Brown; 5, E. R. Bastard; 6, A. G. Gane, F. C. Withers; 8, C. A, Coventon; 9, F. Mangan, J. O. Harvey; 11, J. P. Wightman. Practical Anatomy, Senior—Foster Prize, C. R. Stevens; 2, R. C. Bailey; 3, G. G. Giffard; 4, T. J. C. Keats, W. K. Hughes; 6, W. M'A. Eccles. Shuter Scholarship—A. E. Nustall, B.A.

CHARING-CROSS HOSPITAL SCHOOL OF MEDICINE.—Llewellyn Scholarship, certificate, and £25, P. J. Duncan. Golding Scholarship, certificate, and £10, Charles Gibbs. Governors' Clinical Gold Medal, P. J. Duncan. The Pereira Prize, certificate, and £5, F. Grange. Senior Anatomy—Silver medal, R. Craig Ackland; certificates, J. H. Badcock, S. N. Scott, and P. H. A. Taylor, equal. Junior Anatomy—Bronze medal, D. J. Jones; certificates, J. Mountford and J. B. Williams, equal. Senior Physiology—Silver medal, Charles Gibbs; certificates, J. H. Badcock, S. N. Scott, M. Dobbs, R. Craig Ackland, and J. F. Colyer. Junior Physiology—Bronze medal, D. C. Johnston; certificates, A. R. Colyer, J. Mountford, R. H. Collins, J. B. Williams, H. S. Baker, L. Fletcher, H. J. F. Badcock, and W. S. Mercer. Practical Physiology—Silver medal, A. H. Smith; certificates, J. H. Badcock, S. N. Scott, A. T. Collum, and F. H. A. Taylor. Chemistry—Silver medal, J. B. Williams; certificates, D. J. Jones, D. C. Johnston, J. Newton, J. Mountford, and F. C. Porter. Practical Chemistry—Silver medal, A. H. Smith; certificates, M. Dobbs, T. Constant, and F. H. A. Taylor, equal, and A. T. Collum. Medicine—Silver medal, F. Grange; certificates, P. J. Duncan and A. T. Ilott, equal. Practical Medicine—Silver medal, P. J. Duncan; certificates, F. Grange, A. T. Ilott, B. F. Jackson, and H. Parham. Surgery—Silver medal, P. J. Duncan; certificates, F. Grange, A. T. Ilott, and H. Parham. Minor Surgery—Bronze medal, H. E. Oldfield; certificates, H. A. Baker, E. W. M. Higgs, and W. A. Stephenson. Practical Surgery, a minor surgery operating case — A. H. Walker. Botany—Silver medal, F. H. A. Taylor; certificates, T. A. Goard and D. C. Johnston. Materia Medica—Silver medal, M. Dobbs; certificates, P. W. J. Webb, F. B. Reilly, and W. J. Bebb. Midwifery—Silver medal, A. T. Ilott; certificate, A. E. Baker. Forensic Medicine—Silver medal, G. Barton; certificates, B. F. Jackson, S. N. Scott, and A. T. Ilott. Pathology—Silver medal, A. T. Ilott. Dental Surgery—First prize, certificate, and £6 6s., A. W. Frost; second prize, certificate, and £1 4s., C. R. Morley; certificate, A. H. Smith.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—The Brackenbury Prize in Medicine and the William Brown Exhibition of £10 per annum, for three years, Ernest C. Cronier Lancaster; the Brackenbury Prize in Surgery, and the Treasurer's Prize, Frederick William Parker; the Thompson Medal, Arthur Henry Ward; Sir Benjamin Brodie's Clinical Prize in Surgery, not awarded; the Acland Clinical Prize in Medicine, not awarded; the Henry Charles Johnson Memorial Prize in Anatomy, Henry Smith Barkworth.

GUY'S HOSPITAL MEDICAL SCHOOL.—Treasurer's Gold Medal for Clinical Medicine—Theodore Fisher. Treasurer's Gold Medal for Clinical Surgery—Arthur Henry Williams. Gurney-Hoare Prize for Clinical Study—Sidney Washer and Robert Capes (equal). Beaney Prize for Pathology—Theodore Fisher. Mackenzie-Bacon Prize for Ophthalmoscopy — Thomas Halliwell. Mackenzie-Bacon Prize for nervous diseases—Ernest Henry Starling, Michael Harris Prize for Anatomy—Frederick Hall. Fourth-year students—Arthur Edward Poolman, first prize, £25; Walter Fisher, second prize, £10. Third year students—Alfred Parkin, first prize, £25; Robert Devereux Mothersole, second prize, £10. Second-year students—Frederick William Hall, £17 10s., and John Fawcett, £17 10s., equal. First-year students—John Henry Bryant, first prize, £50; Bertram Whewell Hogarth, second prize, £25; Arthur Stanley Wohlmann and William Gusterson Rogers, certificates. Open Scholarship in Arts—Frederic Hewlett Brown and George Marlow Pratt, equal. Open Scholarship in Science—Bertram Whewell Hogarth.

KING'S COLLEGE. — Winter Session: Jelf Medal—Owen le Mare Theobalds. Warneford Scholarship—Class 2, Thomas Boswell Beach. Anatomy—H. Lumbert Lack, prize; Hugh James Playfair, certificate. Comparative Anatomy—William Robert Smith, prize; Thomas Grigor Brodie, certificate. Physiology—Henry Stephen Saviffer, prize; Algernon Wilson Lyons, certificate. Chemistry—H. Lambert Lack, prize; Algernon Wilson Lyons, certificate. Medicine—Owen le Mare Theobalds, prize; Jeremiah Penny, certificate. Clinical Medicine—Thomas Boswell Beach, prize. Surgery—George Lenthal Cheatle, prize; Howard Percy Ward, Owen le Mare Theobalds, and Jeremiah Penny, certificates. Clinical Surgery—Jeremiah Penny, prize. Summer Session: Practical Physiology, not awarded. Practical Chemistry—Thomas Grigor Brodie, prize; Robert Francis Chance and Arthur Robert Savell, certificates. Botany—A. R. Savell, qualified for prize; A. Fadelle, prize; Arthur Whitfield, certificate. Tanner Prize—H. P. Ward. Practical Biology—W. R. Smith, prize. Pathological Anatomy—Owen le Mare Theobalds, prize; R. T. Hewlett, certificate. Forensic Medicine—T. B. Beach, prize; John William Brodie-Innes, certificate. Obstetric Medicine—B. H. Andrew, prize; A. H. Cheatle, certificate. Materia Medica—L. V. Cargill, prize; H. S. Sandifer and T. L. Lack, certificates.

LONDON HOSPITAL MEDICAL COLLEGE.—Entrance Science Scholarships for proficiency in the subjects required for the preliminary scientific M.B. examination at the University of London—£60 scholarship, W. H. Sturge. £40 scholarship, A. H. Smith. Buxton Scholarships for proficiency in the subjects required for the preliminary examinations—£30 scholarship, K. M. Mackenzie; £20 scholarship, P. A. Green. Clinical Medicine—£20 scholarship, given jointly by the House Committee and the Medical Council, C. R. Killick; certificate, B. Walker. Clinical Surgery—£20 scholarship, given jointly by the House Committee and the Medical Council, E. O. Ashe; certificates, O. M. Jones, B. Walker. Clinical Obstetrics—£20 scholarship, given jointly by the House Committee and the Medical Council, J. H. B. Jarvis; certificate, E. O. Ashe. Duckworth Nelson Prize—B. Walker; certificate, O. M. Jones. Letheby Prize, for proficiency in Chemistry, £30—H. E. Skyrme; certificate, J. N. Collins. Anatomy, Physiology, and Chemistry, £25 scholarship given by the Medical Council—D. Brown; certificate and £15 honorarium, B. J. Hicks; certificate and £10 honorarium, S. H. Raynes. Anatomy and Physiology, £20 scholarship given by the Medical Council—F. J. W. Porter and W. H. Sturge (equal), scholarship divided. Dressers' prizes for zeal, efficiency, and knowledge of minor surgery, given by the House Committee—£15 prizes, S. H. Raynes and R. W. Woodall; £10 prize, G. F. Oldham.

LONDON SCHOOL OF DENTAL SURGERY.—Saunders Scholar, J. H. Badcock; prize given by Messrs. Ash and Son, J. H. Badcock. Winter Session—Metallurgy: First prize, J. H. Badcock; second prize, F. Lonnon; certificates, A. W. Frost, C. R. Morley, B. Saul. Mechanical Dentistry: First prize, G. Seymour; second prize, R. H. Bates; certificates, H. A. Washbourn, A. W. Frost, C. R. Morley. Summer Session: Dental Surgery: First prize, J. H. Badcock; second prize, C. R. Morley; certificates, J. F. Colyer, R. H. Bates, H. A. Washbourn, W. H. Dolamore, F. A. Harsant. Dental Anatomy: First prize, J. H. Badcock; second prize, W. H. Dolamore; certificates, J. F. Colyer, F. A. Harsant, R. H. Bates, H. A. Washbourn, C. R. Morley. Operating Prize: First prize, G. Seymour; second prize, R. A. Colyer; certificates, C. R. Morley and H. Picton. Students' Society's Prize, awarded for paper on Dental Anæsthetics, A. T. Croucher.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Summer Session, 1886. Second year.—Midwifery, prize, F. W. Lewitt; certificate, W. S. Sharpe. Medical Jurisprudence, prize, F. W. Lewitt and P. J. Kingston (equal); certificates, W. F. Sharpe, G. Watson, and J. Griffith. First year.—Materia Medica, prize, R. H. Cole and H. A. Caley (equal); certificates, G. A. Simmons and T. Atwood. Botany—prize, V. W. Low and H. F. Mantell (equal); certificate, R. H. Cole. Practical Chemistry—prize, H. Tibbits and J. C. Wood (equal); certificates, R. D. Cox, B. J. Finch, and H. L. Hatch. Histology—first prize, G. A. Simmons; second prize, H. A. Caley; certificates, R. H. Cole, A. E. Shaw, W. T. Atwood, and W. Stocker. Winter Session, 1886–87. Third year.—Medicine, prize not awarded; certificate, F. W. Lewitt. Surgery—prize, P. J. Kingston; certificate, F. W. Lewitt. Practical Surgery—prize, F. W. Lewitt; certificates, G. C. Davis, G. Watson, W. S. Sharpe, and P. J. Kingston. Pathology—no award. Third and fourth years.—Clinical Medicine—prize, not awarded; certificates, J. T. Bays and F. W. Lewitt. Clinical Surgery—prize, J. T. Bays; certificates, G. C. Davis, F. W. Lewitt, W. S. Sharpe. Prizes in Ophthalmology of £10 10s. each—H. C. Barr and G. C. Davis. Pathology Scholarships—J. T. Bays and N. C. Ridley. Second year.—Anatomy, prize, H. A. Cayley; certificates, R. H. Cole and W. Stocker. Physiology—prize, H. A. Cayley and R. H. Cole (equal); certificate, T. Atwood. First year.—Anatomy, prize, L. Rogers; certificates, G. Winter and H. L. Hatch. Physiology—prize, G. Winter and A. W. Herbert; certificates, F. G. Harvey, L. Rogers, F. Harris, A. Thorne, and A. K. Barrett. Chemistry—prize, L. Rogers and G. Winter (equal); certificate, L. E. Parkhurst.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Broderip Scholarships for the best examination at the bedside and in the post-mortem room: First, W. H. Vickery; second, E. E. Lewis. Governor's Prize: J. Gordon. Hetley Prize: J. A. Hutton. Exhibition in Anatomy: First year, E. C. Long. Lyell Medal: J. K. Couch. Entrance Scholarships: First, A. Lawson; second, E. Rock. Exhibition: H. B. Prynne. Prizes—Medicine, J. Gordon. Surgery: G. Colborne and B. H. Deare (equal). Practical Medicine and Therapeutics: A. E. Watson. Practical Surgery: J. K. Couch. Practical Midwifery: R. F. Thomas. Anatomy: H. A. Daniel. Physiology: J. K. Clarke. Chemistry: F. Harsant. Dissections: J. K. Clarke. Pathological Anatomy: J. K. Clarke. Midwifery: J. E. Hancock. Forensic Medicine: G. Colborne. Materia Medica: C. W. Crasweller. Practical Chemistry: W. A. Hampton. Practical Physiology: C. E. Soulby. Psychological Medicine: G. Colborne. Certificates of Honour (in order of merit): Medicine, E. E. Lewis, J. A. Hutton, and R. F. Thomas (equal). Surgery: J. Gordon, H. C. Fox. Practical Medicine and Therapeutics: H. C. Fox and A. J. Hutton (equal). Practical Surgery: J. A. Hutton, G. Colborne, B. H. Deare. Practical Midwifery: G. Colborne, H. Daniel. Anatomy: J. K. Clarke, J. E. Hancock, E. G. Cameron, and E. E. Norton (equal). Physiology: H. A. Daniel, J. E. Hancock. Chemistry: H. V. Prynne, E. Jones, S. D. Timms. Pathological Anatomy: J. Gordon. Midwifery: J. K. Clarke H. Daniel, C. H. Fazan. Forensic Medicine: J. W. Gill, C. E. Bennett. Materia Medica: G. D. E. Jones and Evan Jones (equal), and S. C. Smith. Practical Chemistry: H. V. Prynne and A. Lawson (equal), G. W. Barber and E. A. Rock (equal), C. W. Crasweller and Evan Jones (equal), H. E. Pittway, D. Phillips, C. E. Soulby, S. D. Timms, and A. B. Williams (equal). Practical Physiology: W. H. Gibson.

NATIONAL DENTAL HOSPITAL COLLEGE.—Rymer Medal: T. S. Minett. Dental Anatomy—Prize: T. S. Minett; certificate, W. Rushton. Dental

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(Mr. J. Marshall rearranging that portion descriptive of the arteries from Quain's own work upon the arteries), subsequently of Mr. Ellis, and more recently of Allen Thomson, Schäfer, and Thane, is familiar to all students reading for the higher qualifications. Mr. Quain's elaborate treatise on the "Anatomy of the Arteries of the Human Body, with its Applications to Pathology and Operative Surgery," with folio plates drawn from actual dissections by Joseph Maclise, F.R.C.S., will ever rank as a classical work. In addition Mr. Quain was the author of "The Diseases of the Rectum"; "Illustrations of a peculiar Bleeding Tumour of the Rectum"; and also of several minor works and pamphlets on the professional cabals and scientific questions of the day. The late Sir John Quain, the well-known judge, was his younger brother, and it is reported left him a considerable fortune.

In 1861 Mr. Quain married Viscountess Middleton, who died in November last. For years, with the exception of last year, he had passed the winter months in the south of France. In conversation he entered very fully and clearly into the subject under discussion, usually expressing his opinions in the terse and trenchant manner in which he had lectured more than forty years ago. Every word seemed to be thoroughly weighed, and the same kind of over-caution in not committing himself to more than he wished was remarkable. He was naturally intensely reserved, and he made but few friends. In his early professional life he frequently attributed wrong motives to colleagues and others, or misunderstood them, owing to his firm conviction that he took the right and just view of a question, and to his not being able to see that anyone else could honestly entertain a different view. He firmly defended those whom he thought unjustly attacked. On the other hand, he could never see anything good in an individual to whom he had taken a dislike, but then he always believed the dislike to be well founded. Of late years, however, the asperities of his character were materially smoothed down.

His death, which occurred at his residence in Cavendish-square, at the ripe old age of eighty-seven, was due to cystitis, arising, it was believed, from the presence of a stone in the bladder, but he would not allow Sir Henry Thompson to sound him. Sir Henry, it may be mentioned, had some ten years previously successfully crushed a small stone which was then affecting Mr. Quain's health. In his illness he was also attended by Sir William Jenner, Sir James Paget, Mr. Marshall, Dr. Hare, and Dr. Douglas Powell. The funeral took place on the 21st ult. at the Marylebone Cemetery, Finchley, the service being conducted by the Rev. J. D. Stewart, M.A., in the presence of many of the old friends of the deceased surgeon, as we stated last week.

Medical News.

THE annual church parade of friendly societies on behalf of the Exeter and Torbay hospitals took place at Brixham on the 25th ult.

IT has been decided to hold the annual meeting of the members of the Hull Sanitary Association on the 19th inst.

THE Hospital Saturday movement was adopted in Salisbury for the first time on the 24th ult. The collection realised about £40.

THE foundation stone of the Ashburton and Buckfastleigh Cottage Hospital was laid on the 19th ult. by the president, Mr. Bastard. The estimated cost of the new building is £1240.

THE annual house-to-house collection in aid of the Lincoln County Hospital was made in Lincoln on the 24th ult. The sum realised was £114, as compared with £124 last year, and £134 in 1885.

PRESENTATION.—On the 20th ult., Dr. Alexander William Macfarlane was, on the occasion of his leaving Kilmarnock for the south of England, entertained at dinner, and presented with a silver-gilt dessert service, a Buhl clock, and a diamond pendant for Mrs. Macfarlane, as a mark of the high esteem in which he is held by the inhabitants of Kilmarnock and district.

THE Jews of Birmingham have arranged to have a special service on Hospital Sunday, instead of on the preceding Saturday, as heretofore, "so that they may join with their Christian brethren in making the collection on that day."

BEQUEST.—At the weekly meeting of the Board of St. Mary's Hospital, Quay-street, Manchester, on the 20th September, a communication was received from the executors under the will of the late Mr. Elkanah Armitage, intimating a bequest to the hospital of £250 free of legacy duty.

AT an inquest on the 22nd ult. on the body of a man who had died at the Bristol General Hospital the jury returned a verdict of death from fatty degeneration of the heart, accelerated by chloroform being administered before an intended operation, and exonerated the medical attendants from all blame.

THE DORSET COUNTY HOSPITAL.—For some time past considerable difficulties have been experienced by the governors of this institution in the matter of the strained relations between the house surgeon and the matron. The difficulty appears to have arisen owing to the duties and positions of both officers being not clearly defined in the rules, and a committee has been appointed for the purpose of thoroughly revising them.

CENTENARIANS. — An inmate of the Swansea Workhouse, a Mrs. Jones, reached her 105th year on Sept. 24th.—An inmate of Bromley Infirmary, a Mrs. Waller, is now 107 years old. She possesses all her faculties, and when she was ninety years of age was accustomed to turn a mangle for a living.—The death was recorded on the 28th ult. of Mr. Thomas James, an old and respected inhabitant of Abercarne, at the age of 100 years. Mr. James was in possession of all his faculties to within a few days of his death.

THE RED CROSS CONFERENCE.—At the meeting, on the 23rd ult., of this conference, which has been held at Carlsruhe, a resolution was adopted requesting the States and associations which have adhered to the Geneva Convention to carry out the antiseptic treatment of the wounded as soon as they have been removed from the line of battle. It was further decided to thank the various Governments and railway companies for the gratuitous transportation of provisions for the benefit of the wounded, and to express a wish for the generalisation of those facilities.

THE WASTE OF FISH.—A correspondent of a contemporary calls attention to the enormous waste of fish which occurs throughout the year, and wonders whether it is absolutely unavoidable, and whether no means are practicable for bringing it while yet wholesome within reach of our starving poor in the East-end and elsewhere. It may be mentioned that the cost of sending a ton of goods from London to India *vid* the Suez Canal per steamer (a distance of about 7500 miles) is 10*s.* to 12*s.*, while the railway charge on a ton of fish from St. Ives, Cornwall, to London (a distance of 320 miles) amounts to from £4 to £7.

BURIAL REFORM.—Lord Basing, the President of the Sanitary Institute of Great Britain, has received the following letter from the secretary of the Church of England Burial Reform Association: "Your lordship's attention and that of the Sanitary Institute is respectfully invited to the fact that in many places the dead are imperfectly buried in strong, durable coffins in vaults, or in already crowded graves, each of which methods of disposing of the dead, by generating poisonous gases, is a source of danger to the living. The Burial Reform Association therefore earnestly ask your co-operation in their efforts to bring back the nation to the adoption of the mode of burial unmistakably indicated in the burial service—viz., timely burial in the soil, with as little as possible intervening to prevent the air from gaining access to the body through the earth above and exercising its purifying and disintegrating action. Your attention is also called to the resolution passed by the council at a recent meeting: 'The time has come when a united effort ought to be made to put a stop, as far as possible, to the dangerous and utterly indefensible practice of storing up, near great populations, vast accumulations of human remains in every stage of arrested and prolonged decay.'"

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dropping in. True, there is the shadow of cholera hovering near, and even the undoubted importation of sporadic cases into the city, but these have remained sporadic merely, and the efforts put forth by the superintendents and staff of the several hospitals, and above all by the assessor of the Health Bureau (Dr. G. Bastianelli), quite explain the reassuring returns of the last fortnight. The Manicomio, or lunatic asylum of the Santo Spirito, in Trastevere, was, strangely enough, the scene of the graver "casi sospetti"; and the absence on sick leave of its able director (Dr. Fiordispini) awoke uneasy anticipations as to the progress the malady, if unchecked, might make. Fortunately, the vice-director (Dr. Solivetti), whom his principal had left in charge, showed a skill and an energy quite equal to the emergency; the cases were promptly treated and isolated, with the result that fourteen days have now elapsed, and there is not the faintest symptom of cholera or even cholerine in the whole extensive "stabilimento." The Marchese Gravina, Prefect of Rome, paid a long and searching visit to the asylum, and expressed his satisfaction with the state in which he found it, as well as with the precautions that had been taken; and within the last day or two a commission of inquiry, acting on his instructions, repeated the visit with not less reassuring results. Nothing, moreover, can exceed the promptitude with which Dr. Bastianelli makes himself cognisant of cases having even a remote resemblance to cholerine. The telephone, by his express orders, is in constant activity between the various sanitary stations and the central office, and, in the almost exaggerated scrupulosity of his reporters, diarrhœas which have no choleraic character whatever are announced at his office, and only ascertained in their reality by an immediate and sometimes prolonged investigation on the spot. By the time that cholera has fairly disappeared for the winter, he fully expects to be congratulated on the demonstration that Rome, in von Pettenkofer's phrase, is exempt, so far as cholera is concerned, from the *genius epidemicus*, an exemption in former years manifested by her freedom from the malady in spite of the influx of thousands of refugees from the cholera-infected Neapolitan Riviera; while he may also succeed in confirming Tommasi-Crudeli's doctrine, that since the great cholera invasion of fifty years ago, in which Rome had her full share, there has been a progressive reduction of receptivity as regards the disease, each visit showing a smaller number of victims as well as a milder *ensemble* of symptoms, till the expectation may almost be justified that, like the pestilences of antiquity and the epidemics of the middle ages, it may ere long perish for want of pabulum.

Obituary.

RICHARD QUAIN, F.R.C.S, F.R.S.

MR. RICHARD QUAIN, whose death on the 15th ult. we announced in our last issue, was born at Fermoy, county Cork, in 1800, his father being a retired gentleman living upon a small estate which he farmed. The subject of our notice obtained his elementary education at a private school in the neighbourhood of his native town, and commenced his professional career by serving an apprenticeship in Ireland. At the expiration of his indentures he came to London and studied at the Windmill-street and Aldersgate Schools of Medicine, establishments which at that time enjoyed a well-deserved reputation. His elder brother, Jones Quain, was a lecturer at the latter school. After completing his courses of lectures at these schools Richard Quain proceeded about the year 1825 to Paris, where he attended the lectures of Mr. Richard Bennett, a private lecturer on anatomy, an Irishman and a friend of his father, and after a time was chosen by Mr. Bennett to assist him in the dissecting room. In 1828, when the University of London, now University College, was founded, Mr. Bennett was appointed Demonstrator of Anatomy in the new institution; and Mr. Quain, who in the same year became a Member of the Royal College of Surgeons of England, accompanied his patron to England, and acted as his assistant, in conjunction with Mr. Benjamin Phillips, in the discharge of his new duties. In 1830 Mr. Bennett died, and Mr. Quain became Senior Demonstrator of Anatomy, Sir Charles Bell being Professor of Anatomy and Physiology. Subsequently Sir Charles Bell severed his connexion with the College, and in 1832 Mr. Quain was appointed Professor of Anatomy, his eldest brother, Dr. Jones Quain, being brought from the Aldersgate School to fill the post of Professor of Physiology. The late Sir Erasmus Wilson acted as Prosector to Dr. Jones Quain, and Messrs. Morton and G. Viner Ellis as Demonstrators to Mr. Richard Quain. Mr. Morton retired from this position on being appointed assistant surgeon to the hospital, and soon afterwards died; but Mr. Ellis still survives, enjoying the pleasures of country life in Gloucestershire. In 1834 Mr. Quain was appointed assistant surgeon to the North London Hospital (by which name University College Hospital was then generally known); Mr. Samuel Cooper and Mr. Liston were the surgeons, the former being Professor of Surgery and senior surgeon, and the latter being Professor of Clinical Surgery. The good policy of Lord Brougham (the President) and the Council of the College in inviting Liston from Edinburgh to become surgeon in the new hospital was soon evident by the large class of students who were attracted to the institution. At the date of Liston's arrival in London there were stormy times at University College, the professors and lecturers being divided into two factions, provoking earnest rivalry, and in some cases bitter animosity. The pages of THE LANCET at that time, more than half a century ago, were frequently occupied by accounts of these dissensions, Richard Quain taking an active part on one side, and his brother Jones Quain occupying an equally conspicuous position on the opposite side. Shortly after Liston's arrival in London, the fame of Dr. Sharpey, at that time an extra-mural teacher of Physiology in Edinburgh (Mr. Syme lecturing on Anatomy), having reached London, Mr. Quain paid a visit to the northern capital and attended Dr. Sharpey's lectures *incognito* for the purpose of ascertaining whether the reports of his excellence were correct. The result of this visit was speedily seen in Dr. Sharpey's appointment, on the retirement of Dr. Jones Quain from the chair of Physiology, to that vacant post; and we doubt if any of the older medical schools could show such an array of distinguished teachers as at that time adorned the school in Gower-street. It may be mentioned that Professor Grant occupied the chair of Comparative Anatomy, Professor Graham that of Chemistry, and Dr. Elliotson that of Medicine.

In 1843 Mr. Quain was nominated in the first list of Fellows of the Royal College of Surgeons under the new Charter, and in 1850 he was appointed full surgeon to the hospital. On his retirement from this position in 1866 he was made Emeritus Professor of Clinical Surgery. In 1854 he was elected a member of the Council of the Royal College of Surgeons, in 1865 a member of the Court of Examiners, and in 1868 he was appointed President. In 1869 Mr. Quain delivered the Hunterian Oration, the subject of his address being "On some Defects in General Education." He represented the College in the General Medical Council from July 14th, 1870, to June 14th, 1876, when he resigned. He occupied the position of an auditor of the English Branch Council, and was a member of the Finance Committee from 1875 to 1876. He took considerable interest in the question of the Visitation of Examinations, was a member of a committee on this subject, and proposed (unsuccessfully) in 1873 a resolution, which was afterwards adopted, that some of the visitors might be persons not members of the Council. He was a member in 1875 of a committee that considered the question of the admission of women to the profession. Some years ago Mr. Quain was appointed Surgeon-Extraordinary to the Queen.

Richard Quain, although not eloquent, was a good lecturer, his concise and clear method being very impressive, his capacity being more fully recognised in the lecture room than in the hospital wards, where, as was perhaps natural, the majority of operations fell to the share of Liston. The difference in the characters of the two fellow professors—Sharpey and Richard Quain—was well known to the students who attended their lectures by their respective habitual interjections while lecturing. Sharpey used often to say, "You see, gentlemen, in a manner, so to say, the phenomena," &c.; while Mr. Quain's favourite expression was, "The fact is, gentlemen," &c. He improved greatly the work of his brother, Jones Quain, on Anatomy, which, under the combined editorship of Mr. Quain and Dr. Sharpey

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scopes. When touched they rise automatically to the ceiling, and discover the microscopes, free from dust and adjusted for immediate use. Every kind of incubator, steriliser, and culture apparatus for bacterial research is to be found in these rooms, and from the amount of material present it would appear that more than one research is already in progress. In the whole premises there is accommodation for about a score of workers, who will be received into the institute free of charge, having also the ordinary laboratory requisites supplied to them gratis. It is stated that already over a dozen applicants have entered claims for the advantages so generously offered, which shows how actual a *raison d'être* the laboratory possesses, and how powerful an influence it is likely to have in realising the intention of its founders.

THE CITY FEVER HOSPITAL.

Arrangements were made several months ago by which medical students were admitted to the Fever Hospital, which is under municipal management, for the study of infectious diseases. It is now complained that the class for whom the concession was made are not in the least availing themselves of these opportunities. This may be largely true, and if it is so, the reason is not far to seek. The students have so many compulsory subjects, that they can hardly find space in their crowded curricula for a subject upon which they are not examined clinically, of which a few days' reading at home gives them a sufficient grasp for examination purposes, and which in itself has the disadvantage of personal risk. In the old days this was the main risk attaching, in the estimation of the public, to "walking the hospitals"; and students whose attention is attracted by the publicity the question has now gained in Edinburgh will doubtless be reminded that, in the days preceding the isolation and systematic separate treatment of fever cases, their predecessors ran this risk cheerfully and as a matter of course.

POST-GRADUATE LECTURES.

The post-graduate course of lectures is proving no less a success this year than it did in 1886. About 100 medical men from all parts of the country and from abroad are taking part in the courses, and evincing approval of the extended scale on which they are this year conducted.

Edinburgh, Sept. 27th.

DUBLIN.

(*From our own Correspondent.*)

QUEEN'S COLLEGE, CORK: ANNUAL REPORT.

THE President in his recent report alludes to the anarchy which pervades the whole educational system in this country. There are no longer any grammar schools; they have all become colleges. These colleges are curious, combining the functions of all the educational institutions, from a "Kindergarten" or infant school to a university college, inclusive. The result of this singular state of things, viewed from a statisticial point of view, is remarkable. The President believes there are more schools for "higher education" (university colleges, colleges, collegiate and university schools, collegiate schools, &c.) in Ireland, with a population somewhat over five millions, than in Germany, with more than forty millions of inhabitants. The Act of Parliament founding the Royal University of Ireland having opened its examinations, honours, and prizes to men and women alike, the College Council decided that the time had come to extend to women the full benefits of collegiate education, so as to enable those who desired to obtain University degrees to get the necessary teaching for the purpose. Five ladies entered, all of whom were matriculated students of the Royal University. They worked assiduously during the session, and all succeeded in passing the recent University examinations of their standing, three obtaining honours. Nothing has yet been done to enlarge the teaching staff at the College as proposed in the last two reports, but it is hoped that it will shortly be carried out. The President trusts also that the clinical teaching in the Cork hospitals will be reorganised, so as to combine the undoubtedly rich material for teaching which exists in Cork, and enable the College students to take full advantage of it.

SANITARY STATE OF NAAS.

Dr. Smyth, medical officer of Naas Union, has drawn the attention of the guardians to the insanitary condition of this thickly populated town. It contains about 521 houses, of which 98 have privies of the dangerous cesspit type, and 388 have no privies at all or any attempt at sanitary accommodation.

The salary attached to the curatorship of the Royal University has been fixed at £300 per annum, with an annual increase up to £400.

Dublin, Sept. 27th.

ROME.

(*From our own Correspondent.*)

THE wave of winter travel is now setting towards the Mediterranean, and Rome—thanks to the impending jubilee of Pope Leo XIII.—will receive more than her usual proportion of visitors. This increase in her foreign population (the English-speaking contingent alone has of late years averaged 30,000 during the season) makes her health a matter of supreme importance; but before touching on it, permit me to refer to a work just issued by her highest medical authority, Dr. James Moleschott, who, although of Teutonic parentage, has, now these thirty years, made Italy his home, having originally come to Turin at the instance of Count Cavour.

"Der Kreislauf des Lebens" (The Gyration of Life) is its title, and the edition just out is the fifth, recast up to date, in every department. When it first appeared (1852) it was a controversial treatise—a series of replies to Liebig's "Letters on Chemistry." Liebig was then at the zenith of his fame. His "Organic Chemistry in its Application to Agriculture and Physiology" and his "Letters on Chemistry" had made him accepted as an almost final authority, not only in academic circles, but in every factory and model farm in Europe. Young Moleschott, then *docent* in physiology and anthropology at Heidelberg, was also earning a name for himself as an investigator and expositor; and his "Physiologie der Nahrungsmittel," his "Physiologie des Stoffwechsels," his "Lehre der Nahrungsmittel," and, still more, his official prælections, had already attracted much attention in high places by their bold and trenchant criticism of scientific orthodoxy. Liebig was his main object of attack, and when he pronounced many of the great man's positions to be untenable, and even prejudicial to science, he drew down on himself the displeasure of the Government, and received the broadest of hints that his persistence in the line he had taken would be visited by the withdrawal of permission to teach in public. Moleschott took the hint very quietly, and went to Switzerland, having, however, bequeathed to Germany a controversy which did not cease till Liebig's too great authority had been reduced to juster and more salutary limits. Such was the origin of "Der Kreislauf des Lebens"; but what ground has not science covered between the first edition and the last! The Darwinian hypothesis, the discoveries and inventions in physics and chemistry, the newer physiology with its doctrine of nutrition revolutionised by Voit—all these "births of Time," as Bacon words it, find clear and telling exposition in these two volumes, of which the chapter on "Kraft und Stoff" (force and matter) would of itself suffice to fix its author's reputation as an original investigator and teacher. It more than justifies Cavour's sagacity in bringing Moleschott from Zurich to Turin to revive the languishing Piedmontese school, and it explains the signal advance made by Roman medicine during its author's ten years' professoriate at the Sapienza. The practitioners and health officers trained under such auspices cannot fail to render the city a much safer resort for the stranger, and, even in presence of an epidemic, to inspire a confidence not hitherto enjoyed within its gates.

As I write, the latest announcements from the statistical bureau represent the sanitary condition of Rome as maintaining the satisfactory position it has hitherto held compared with that of other European capitals. "Le condizioni sanitarie son buone assai," said to me a well-known practitioner this morning; and the weather with its delightful autumnal crispness, the water-supply abundant and pure to a degree that makes it the envy of all other cities, the activity of the "nettezza pubblica" and of the divisional health officers, all combine to give assurance of a safe as well as pleasant residence to the arrivals now

on the first day there was certainly more play than work. As usual at these sanitary congresses, the most insanitary conditions prevailed at the places of meeting. The want of ventilation was most apparent, the heat being very oppressive; and it is a question whether it would not be possible, at future congresses, to preach a little more by example, and provide properly ventilated rooms for the meetings.

Among the English present may be noted Sir Spencer Wells, Sir Douglas Galton, Dr. Cameron, M.P. (Glasgow), Professor Humphry (Cambridge), Professor Frankland, Professor Corfield (London), Dr. C. E. Rickard (Birmingham), Dr. Russell (medical officer of health, Glasgow), Mr. Shirley Murphy (London), Mr. Adolphe Smith (London).

On Tuesday morning the work of the Congress began in earnest. The different sections were crowded; many delegates were not able to obtain seats. The discussions proceeded in a very orderly manner, but some rather serious misunderstandings have already arisen through the confusion of tongues. A very important discussion, in which Professor Virchow and Professor Brouardel held different opinions on the dangers often present in drinking water, was brought to an unsatisfactory and premature close by the above cause. Next week it may be possible to disentangle the confused mass of speeches already delivered, and reproduce some of the more important arguments. For the moment it may be said, in conclusion, that the principal fault of the Congress is its overflowing success. The number of members now amounts to 2500; perhaps the figure of 3000 will be reached before the close of the proceedings.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE HOSPITAL SUNDAY FUND.

THE annual meeting of the Hospital Sunday Fund was held to-day, and the balance-sheet presented shows the full amount of the subscriptions and collections last year to have been £4044 11*s.* 1*d.* The balance carried from the previous year, with the interest added, makes a total of £404 0*s.* 10*d.* The expenses amounted to £307 12*s.* 8*d.*, and there was distributed to the various medical charities in all forms a sum of £3831 9*s.*, leaving a balance to be carried forward of £264 19*s.* 2*d.* The funds realised last year reached the largest total of any previous one, except 1883, which overtopped it by £81; but the church collections were slightly larger last year than in 1883, and reached the largest amount hitherto received. The workmen's collections, though not reaching the amount of 1883, realised, next to that year, the largest sum ever received. Altogether the report and the future prospects of the fund are highly satisfactory.

MEASLES IN NEWCASTLE.

The medical officer of health, Mr. H. E. Armstrong, has presented a report to the Sanitary Committee of the Corporation giving his reasons for recommending that measles should be included in the diseases to be notified by medical practitioners. He says it is the only disease which was severely fatal during last spring, and it is the only one not notified. He gives a table of the mortality from measles for the last seven years in Newcastle, which shows that in 1885 alone it caused 359 deaths, while in the first half of the present year (1887) the mortality has been 164.

MATCH-POISONING CASES.

The "match-poisoning craze," as it has been termed, still goes on in Newcastle. Several cass have been admitted to the infirmary since my last note on the subject, and they have for the most part recovered; but a fatal case took place there last week, when a married woman aged forty-nine succumbed to the effects of the poison. It appeared from the evidence given before the coroner that, after an unsuccessful attempt to destroy herself by hanging, she confessed to having dissolved the contents of six boxes of matches in a jug of water. She swallowed this and the usual symptoms of poisoning by phosphorus set in, causing her death in eight days, and after great suffering. It is sad to think that this poor woman committed suicide through being "back in her rent" and unable to obtain employment.

Newcastle-on-Tyne, Sept. 27th.

EDINBURGH.

(From our own Correspondent.)

THE NEW EXPERIMENTAL LABORATORIES.

I HAVE had frequent occasion to mention the laudable effort of the Royal College of Physicians of Edinburgh in the direction of increasing the facilities for experimental research in the Edinburgh School; and now that this effort is approaching a happy issue a few words are needed to describe the exact channel in which it has been directed. The idea originally conceived by some of the senior Fellows of the College, and more definitely formulated by an acting committee appointed for the purpose, was to construct a well-equipped centre at which any scientific question bearing on medicine might be practically worked out with as little inconvenience and delay for those engaged as could be obtained by the thorough organisation and efficient superintendence of the various departments of the institution. These desiderata have been obtained by a liberal expenditure of money and the appointment of a scientific man of recognised position to the post of superintendent. Dr. Woodhead has already obtained wide recognition as a valued worker in biology and pathology by his numerous contributions to medical literature; and he has now further emphasised his ability by the thorough manner in which he has superintended the difficult task of laboratory construction and equipment. Although the laboratory premises were not intrinsically well adapted to receive a school of experimenters, nor, in fact, particularly attractive buildings, yet their favourable position in close proximity to the infirmary and other centres of professional activity, and the satisfactory terms on which they could for a time be acquired, rendered their selection both necessary and politic. The site belongs to the managers of the Royal Infirmary, whose intention it is ultimately to replace the present old buildings by a commodious home for nurses; but until the time of that reconstruction they are glad to lease the premises for the useful purpose they now subserve. Although the exterior still retains the evidences of a century's wear and tear, a wonderful transformation has of late taken place within the buildings. Under the renovating influence of fresh paint, and the brightening effects produced by new fittings and the presence of well-kept scientific apparatus, the dingy old house has been converted into a series of light and airy laboratories, where there is every opportunity for carrying on scientific research. At a recent visit my attention was particularly attracted by the admirable equipment of the physiological experiment room. A water motor with extensive shaftings and couplings supplies power to recording apparatus in every part of the spacious chamber, so that a number of experiments can be performed simultaneously without danger of mutual inconvenience to the experimenters. In one part of the room stands a solid shaft of stone, passing through the floor, and founded on a firm basis of cement and stone, such as that employed for mounting equatorial telescopes. This massive shaft is to support a galvanometer, which is thus entirely isolated from the vibrations of the building in which it is placed. At one end of the room is the apparatus for carrying on artificial respiration, in thorough working order, and a good example of the workmanship turned out by the Cambridge Scientific Apparatus Society. Numerous glazed cupboards display a large assortment of recording drums, tambours, and the usual paraphernalia of such laboratories. In this department there is room for five or six physiologists to carry on their work without any overcrowding. A with chemistry room is in an advanced stage of preparation, stone counters, elaborate shelving, combustion chambers, and a number of ingenious fittings that will render work easy for the four experimentalists who can be accommodated here. An automatic still supplies this and the other departments with a perennial flow of distilled water. A separate balance room adjoins the chemical laboratory. One room is set apart for pathology and anatomy, in which is a collection of the most approved forms of microtomes and injecting apparatus. A special room is devoted to physiological chemistry, and two spacious well-lit rooms, each with two large dormer windows, are reserved for bacteriology and histology. The fittings in these rooms are convenient, and in some instances remarkably ingenious. In particular, I noticed the bell shades for covering the micro-

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in sincerely thanking the president of your organisation committee, who has just addressed such kind words to me, I beg of you all to be assured that I consider it a pleasure and an honour to act as president of the Sixth International Congress for Hygiene and Demography. Man is the most precious capital of the State and of society in general. Every individual life represents a certain value. To preserve this as intact as possible to its furthest limit is not only a command of humanity, but also the duty of every community in its own interest. Whatever means may be at our disposal to protect our own individual welfare, left to ourselves we are powerless in face of the general injurious influences with which nature surrounds us on all sides. Here only common action can be of any avail, and this great task is undertaken by hygiene, supported by demography. It is hygiene based on a scientific basis which enables legislation to obtain practical results on the extensive field of health administration. Looking over the papers which will be read at this Congress, we recognise with astonishment that the science of which you, gentlemen, are such devoted disciples comprises every phase of social life—the dwelling-house and the school, production and war, the city and the village, trade and industry. The truly international importance of hygiene is also proved by the fact that so many illustrious representatives of all nations and countries are taking part in to-day's proceedings. I feel the greatest satisfaction, gentlemen, in welcoming you in this town, which is a centre of active scientific work and earnest research. In the name of His Imperial and Royal Apostolic Majesty, my most gracious master, I hereby declare the Sixth International Congress for Hygiene and Demography open."

Professor von Gruber, secretary of the Congress, spoke at length in German, but gave the conclusions of his speech in French. The Congress had departed a little from its original programme so as to allow Professors Brouardel and Pettenkofer an opportunity of delivering their addresses in the presence of the Crown Prince. In organising the Congress, the difficulty of the diverse languages had been in part overcome by publishing the opening papers in more than one tongue; for these papers they had appealed to distinguished specialists of all nations; and, thanks to the generous support given, the Congress possessed undoubtedly a truly international—indeed, a universal—character. The local committees in all countries had nobly helped the work; but more particularly were thanks due to the local committees of Buda-Pesth, of Berlin, of Paris and its Society of Public Medicine and Professional Hygiene, and of Belgium, and Holland. The programme of our labours, continued the Professor, has given us a day of rest, and we will profit by this to visit the institutions, old and new, of the capital. It will then be found that Vienna has many establishments built with a view to preserving the public health. The Municipality of Vienna would receive the members of the Congress at the Town Hall in the afternoon, and the Emperor himself had eagerly availed himself of the opportunity to show the interest his Majesty takes in the young science by conferring on the members of the Congress the high honour of a Court reception.

After a few words from Dr. Köhler, the Reichsgesundheitsammt of Berlin, Professor Brouardel of Paris was called upon to read the first paper, on the Propagation of Typhoid Fever. Speaking with the easy flow of language which distinguishes the eminent Professor, he tendered his homage to the Crown Prince, whom he was most pleased to see in the presidential chair. Sanitary science was not merely a subject of theoretic discourse. It must be followed by acts, and the Crown Prince was possessed of the power to act. His works also on science showed that he was further endowed with the knowledge which would enable him to know how to act. Professor Brouardel, though highly gratified, was not surprised at the excellent reception accorded to the Congress. Vienna for centuries was renowned for its hospitality to men of thought and study. Many had found in Vienna a second home. He would now seek to show what science had done; and, as an illustration, he selected typhoid instead of cholera, for in the long run it was the most fatal of the two diseases. At Geneva the International Congress was still undecided. Some said that typhoid arose from the fermentation of organic matter; others that a specific germ alone sufficed, without any decomposition of organic matter. The Congress could not agree whether the fever was contagious or only spread by water or the absorption, as food, of some other contaminated substance. In 1884 an effort was made to utilise the current of the Rhone as a motive power. A lock was constructed, and this caused some of the drinking water [illegible] to flow backwards towards the mouth of a sewer. [illegible] months previously this sewer received the dejections of two or three isolated cases of typhoid fever. In a few days after the contamination of the water supply a terrible epidemic broke out in Geneva, and there were no less than 500 cases. Last year at Clermont Ferrand and Mont Ferrand there were 300 cases of typhoid due to water contamination, while such places as Chamavière and Royat, though close by, escaped, their water being derived from a different source. In Paris, whenever the supply of the pure water from the Vannes or the Dhuys fell short, and the waters of the Seine, the Ourcq, or the Marne were used instead, the hospitals were filled with patients suffering from typhoid fever, precisely three weeks after such alteration in the character of the water supply. Studying the question from the bacteriological point of view, Dr. Brouardel showed that the multiplicity of microbes rendered this investigation very difficult. After five years it was found that a few drops of carbolic acid in a culture broth had the property of killing all these microbes with the exception of the special microbe of typhoid fever. This latter developed so slowly that it escaped the action of the acid. In the examination of the waters the same process was used; and now it was possible to say definitely that such or such a substance contained the real germ of typhoid. At the same time he was not prepared to say that typhoid could never arise merely from foul air. In a family of nine, living on identically the same food, a son alone contracted typhoid fever. It was found that under his room window there was an open soil pipe. In another family precisely the same incident occurred, and this among his own patients, and quite recently. Nevertheless water was the more general cause of the disease. He concluded by urging that it was more easy to cover water than to protect open rivers or canals from contamination. Water ought to be brought to the large towns in pipes or closed aqueducts. If we thus protected the health of the great centres, the rural districts would also largely benefit, as their epidemics were very often imported from towns. Dr. Brouardel concluded amid cordial applause.

Herr von Pettenkofer then read the second paper, on the Teaching of Hygiene in the Public Schools and Universities. Practical hygiene was the precursor of scientific hygiene. A rough conception of the agreeable and the disagreeable had in the first instance guided humanity. From this premiss scientific hygiene had developed. Practical hygiene is as old as humanity itself. What Englishmen call "comfort" is based on hygienic law. In the seventh century, when London had not a million inhabitants, the mean mortality was 42 per 1000 per annum; while now, with a population of 4,000,000, it is less than 21 per 1000. This sprang from the due observance of the British maxim that cleanliness is next to godliness. The professor then discussed at length the financial economy realised by the preservation of public health. In war even, disease more than the enemies' bullets killed the greater number of soldiers. But the Crimean war was particularly fruitful in showing how hygiene could and must be introduced into the army medical schools. Other States are now following the English example. In the Franco-German war the result of this teaching could already be perceived. Thus the whole loss of the German army was 40,881: killed in battle 28,282, accidents 346, and disease 12,282. In the Crimean war the French lost a third of their whole army, 95,000 men. Only 20,000 out of this number were killed, while 75,000 died from disease. Many further and most conclusive tables were given setting forth the saving of life and money that had rewarded the spread of education, and a better knowledge of the influence of air, water, and soil on the public health. He urged the necessity of establishing special schools for experiments, as on experiment alone could the laws of hygiene be established.

After this speech, which had been warmly received, the meeting broke up, and some of the prominent members of the Congress were introduced to the Crown Prince.

On Tuesday the reception given by the municipality at the magnificent Town Hall of Vienna was a most brilliant success. The Town Hall was effectively illuminated, a sumptuous repast with many Viennese delicacies was provided by the municipality, and an excellent band played in the large hall. Later in the evening a more social entertainment (*Kneipabend*) was organised, consisting of a simple supper, with music, choruses, and solo songs. Thus

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practitioner; that it induces the relatives of the sick, knowing what will follow upon notification, to hesitate to call in timely medical assistance, and to conceal the existence of infectious disease, and thus to do an injury to the patient in the first instance, and in the second to contribute to the unsuspected extension of infection throughout the community. That the medical profession in Bolton therefore emphatically condemn compulsory notification by the medical practitioner as being contrary to the public advantage."

I am, Sirs, yours &c.,

Bolton, Sept. 24th, 1887. NORMAN MCLIESH, M.A., M.B.

HUGHES *v.* LANGMORE.

To the Editors of THE LANCET.

SIRS,—May I ask to be allowed space in your columns to thank briefly, but heartily, those members of the profession—over a hundred in number, and many of them strangers to me—who have so kindly relieved me of about two-thirds of the heavy expense to which I became liable in consequence of the action brought against me by a patient whom I had been compelled, and as the verdict of the jury showed, not without reason, to certify as insane. Although one would rather not throw away £80 or £90 in defending an action of this kind, still that is within the amount (£100) which I was told from the first the case would cost me, and the loss of which I had come to look upon as inevitable. The actual cost (£250) was, I must confess, an exceedingly unpleasant addition to the trouble and worry I had already undergone, and I am very grateful to the friends and fellow practitioners by whose kind assistance it has been so largely reduced. I am, Sirs, yours gratefully,

J. WREFORD LANGMORE.

Oxford-terrace, Hyde-park, Sept. 26th, 1887.

VOLUNTEER MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Will you allow us, through the medium of your journal, to call the attention of Volunteer medical officers to the circular letter and form of membership which were recently forwarded to them, and to ask them to fill the membership form up and forward it to us without delay. The appeal of the Council has been remarkably successful, and we are happy to say the success of the movement is now fully assured, but the Council are very anxious to secure the co-operation of as many Volunteer medical officers as possible, and they feel that possibly their letter may have been mislaid in the case of some who were absent from home. The Council have it in contemplation to invite the President, H.R.H. the Prince of Wales, to preside at the first meeting of the Volunteer medical officers mess, and we are expressly requested to invite any Volunteer surgeon to apply to the office for any information he may require, and in every way to avail himself of the privilege now offered by the Association.

We are, Sirs, yours faithfully,

JAMES CANTLIE, ALFRED LINGARD, } Hon. Secs.

26, King William-street, Strand, W.C., Sept. 28th, 1887.

THE SIXTH INTERNATIONAL CONGRESS OF HYGIENE.

(From our Special Correspondent.)

IT is impossible to avoid the impression on reaching Vienna that the Congress is in some danger of being paralysed by its own extraordinary success. Never before has such a gathering been so well supported. No less than 2400 persons have paid their subscription of the ten florins each and enrolled themselves as members of the Congress. Nor is it mere abstract support; the majority are present in person, and it has been no easy matter to house so vast a throng. This difficulty is now overcome. Some of the delegates have been compelled to content themselves with very humble quarters, but this trifling inconvenience has to be endured on such occasions. What is more serious is the management of the Congress itself. In this respect it is to be feared a mistake has been committed. Though reports have been printed, introducing no less than twenty-two subjects for discussion, the Congress will be divided into only three sections. Nor is this all. The Sections will not meet on Monday, and Thursday will be given up entirely to an excursion to the mountains, which are the source of the Vienna water supply. There are, therefore, only four days given to more than 2200 people to discuss twenty-two subjects. Evidently many a delegate will have to return home with his speech unspoken.

Before the opening of the Congress—that is to say, on Sunday evening—the festivities which this town is organising on a lavish scale already commenced. Several hundred delegates assembled in the best rooms of the Horticultural Society, situated in the Park ring, which is the boulevard of Vienna. A sumptuous supper was provided, including some Danubian fish, which was highly appreciated. There were no speeches, as the evening was intended as an opportunity for renewing old acquaintances and making new ones. Already rumours are floating about as to the place to be selected for the next Congress. The Russian delegates are authorised to invite the Congress to St. Petersburg; but this is considered a long and expensive journey, to say nothing of the prospect of Siberia if some of the delegates speak too freely. The Society of the British Medical Officers of Health and the British Sanitary Institute have agreed to invite the Congress to London. Assuredly this is only right, and England should before now have taken the initiative. Unfortunately, the British Government affords no assistance whatever. The pettiest countries of Europe, as well as all the great Powers, have their official delegates present at this Congress; but the few Englishmen who are here come on their own account, at their own expense, or as the representatives of societies that are the outcome of private endeavour and receive no support from the State. Certainly this is felt keenly by our continental colleagues; and many express wonder that England, which has done so much for the health of its own people, should in no wise have contributed to spread the knowledge of sanitary science in other countries. The fact that England is at last moving and will invite the Congress to meet in London will be taken as an awakening, and is sure to meet with much approval. But there is a third and still more likely proposal—that is, to hold the Congress in Paris during the great exhibition of 1889. Everyone will then desire to be in Paris; and frequenters of these congresses will remember the great success of the second International Congress of Hygiene which met in Paris precisely under similar circumstances—that is, during the Universal Exhibition of 1878. It is doubtful also if the English would, in the main, care in any way to mar the great rejoicings which are organised to celebrate the centenary of the advent of freedom in France.

At 10 o'clock on Monday morning the beautiful hall of the Friends of Music was already thronged by delegates in the body of the building, and by a fashionable and elegant crowd of ladies and gentlemen in the gallery. On the platform the brilliant uniforms of Austrian officers, and the rich decorations and ribbons that decorated the breasts of the foreign official delegates made up an impressive picture. With military punctuality the Crown Prince Rudolph marched up to the platform amid the "hochs" of the assembly, and the proceedings immediately commenced.

Dr. Ernest Ludwig, Professor of Chemistry at the Vienna University, advanced to the side of the platform, and, bowing to the Prince, explained that from all parts of the civilised world men of science had gathered in Vienna. The Governments of nearly all the great Powers and the municipalities of many celebrated towns had their official representative standing close around the Prince. Never before had such a large and distinguished number of delegates met together to advocate the cause of sanitary science. This was a proof that the importance of hygiene was more widely recognised. Such progress was natural, for thus science would dispel most of the social evils from which we suffer. It was a promising feature of our modern civilisation to see so many nations working harmoniously together in the advancement of their common interests. Then, after describing the general scope of the meeting, Professor Ludwig declared that all was ready, and that they were only waiting for the Crown Prince to open the Congress.

The Imperial Prince at once rose and said: "Gentlemen

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which may suffice to explain why a self-limited morbid action excited by a germ should end, but not why the product of such activity should protect against a recurrence. Should it point to the possibility of counteracting a poison already received? Such view is stated in the most able and valuable report of the Hydrophobia Commission to be both novel and wanting proof. I agree with the report except as to the estimate of death to bites; a much smaller proportion than that adopted by the eminent members of the commission recommends itself to me. But the report is in accord with the popular voice—"Victrix causa Diis placuit, sed victa Catoni." I am, Sirs, yours truly,

Sept. 26th, 1887. WILLIAM SQUIRE, M.D.

TREATMENT OF CANCER BY THE ADMINISTRATION OF LIME.

To the Editors of THE LANCET.

SIRS,—Since the appearance in THE LANCET (May 7th, vol. i. 1887, page 927) of the communication therein inserted relative to the administration of lime as a proposed cure for cancer, in which the powder obtained from oyster shells was recommended, I have received numerous letters from medical men and others asking me for more detailed information on the subject. It has occurred to me that I could not more readily supply this information than by requesting the favour of you to publish the following observations. Instead of carrying out to the letter the advice recommended of obtaining the carbonate of lime from oyster shells by baking them in an oven, which is not only a troublesome process, but at certain seasons of the year difficult, when oysters are out of season, I advise (what is analogous to it) the oyster preparation of the London Pharmacopœia. Six grains of this may be taken twice or three times a day in a wineglassful of milk or other fluid, such as tea.

With reference to the application of an ointment containing lime mixed with perfectly fresh butter devoid of salt to an open cancer, I find that the smell of the butter is objectionable, and when cream has been substituted the objection to it is that it so hardens the lime that it is difficult to remove it from the sores. Instead, therefore, of using either one or the other of these, I recommend the following ointment:—Creta preparata, three drachms; ol. amygdal., two drachms; the lime to be intimately mixed with the oil, and then to be added two ounces of lanoline; this to be applied twice a day spread on lint. Should the smell of this ointment prove disagreeable, it may be counteracted by adding three or four drops either of essence of bergamot or oil of geranium. I find that the employment of lime for the purpose of curing cancer does not prohibit the use of other drugs that the patient may require. I am, Sirs, yours obediently,

P. HOOD, M.D.

Seymour-street, Portman-square, Sept. 1887.

SEWERS IN INDIA.

To the Editors of THE LANCET.

SIRS,—Sanitarians owe a debt of gratitude to Dr. Vivian Poore for his able *exposé* of the dangers of horizontal cesspools. In India vast sums of money have during the past few years been expended in introducing systems of sewerage into Calcutta, Bombay, and Lahore. Now, two equally, in my opinion, disastrous schemes are being put forward for Karachi and Hyderabad, Sinde; and Allahabad, Lucknow, and Agra keep nibbling at them like specious baits. As a consequence of the Calcutta sewerage, epidemics of enteric fever have been notoriously prevalent during recent years, and the cholera last November was the most severe that has occurred in any year since the introduction of an incompletely distributed water supply in 1870. As regards this cholera, it must, however, be remembered that tanks and other objectionable sources of drinking water in and about groups of huts *(bustis)* in the town and suburbs have not been completely eliminated, as Dr. Simpson's report on the localised outbreak on the ship *Ardenclutha* shows. The water supply is consequently still very defective. An extraordinary and fatal fallacy is disseminated by engineers in India, to the effect that in no country is the problem of sewer ventilation so simple, because the outside air being warmer than the air inside houses, there is little fear of sewer air being drawn into houses, as in England. I believe the truth is that in no country is the problem so difficult a one. In the hot weather, when the air is often perfectly stagnant for many hours, or even days, there is no perflation, the highly heated external air (thermometer, minimum in shade 115°, maximum 170°) is much lighter than the cooler sewer air, forced out by flushing and other means through the sewer "ventilating" shafts. Consequently sewer air, not diffused into the upper strata of the atmosphere and blown away by the wind as in England, falls as a disease-bearing shower towards the ground, and by its gravity occupies the lower or respiratory stratum under seven feet from the ground, poisoning the air breathed by the unfortunate tax-payer.

In the town of Mirzapur (N.W.P.) there were old sewers, not even supplied with ample flushing apparatus to force out the sewer gas into the narrow streets and alleys, yet on a hot still day the effluvium as one passes along the streets in the evening is sickening in the extreme. Forcing out foul gases, which must be rapidly generated in a hot climate, by flushing would only make things worse. The only perfect remedy is to fill up the sewers and to take to the Goux or some other similar pail system. The fact that impure air expired at a temperature of 100° F. (as also sewer air from underground sewers) is cooler than the surrounding and superjacent air in a barrack at night, when the temperature of the building is 106° or more, to my mind offers a full, simple, and sufficient explanation of the fact that heat-stroke often attacks people in bed at night. When in the horizontal position only the four feet of air nearest the floor are practically available for respiratory purposes. Hence the great importance of ample superficial space (150 sq. ft. as a minimum) compared with cubic space.

The issue of your report on the Manchester pail system, Aug. 6th, p. 280, is most opportune. As an avowed opponent of sewers, I earnestly recommend all interested in sanitation in India to study Dr. Poore's lecture and the Manchester report.—I am, Sirs, yours faithfully,

SHIRLEY DEAKIN, M.S., S.Sc. Cert. Camb.,
Surgeon-Major.

THE COMPULSORY NOTIFICATION OF DISEASE.

To the Editors of THE LANCET.

SIRS,—Speaking of an Act for the compulsory notification of infectious disease, Lord Basing says, "I am happy to state that such an Act is in force in Bolton and works well." His lordship has been founding his remarks on *ex parte* statements. It must have struck anyone acquainted with the town that very few of the local medical men have taken part in the proceedings. The acts and sayings of such a Congress as that now sitting in Bolton will probably have great weight in Parliamentary circles, and may even be made the basis of subsequent legislation. For this reason the medical men of Bolton are unwilling that misleading statements should go abroad to the effect that they acquiesce in the Act for the compulsory notification of disease by medical men. They do not object to compulsory notification by the householders, but they do think that it is a gross injustice to place the responsibility of notification coupled with a heavy pecuniary fine upon them. The medical men of Bolton do not think the Act "works well"; they think it causes friction all round. With a view to express their feelings a meeting was recently held, which was attended by half the medical men of the town, and I am sure that I am within the mark when I say that the result of that meeting will be endorsed by 90 per cent. of the remainder. The meeting deemed it courteous first to send a copy of the resolution to the secretary of the Sanitary Institute, in order that that body might afford to the medical men of Bolton some special opportunity of speaking for themselves. The meeting appointed a committee to watch the matter, and authorised it, if no notice was taken of the resolution, to take steps to bring the resolution before the public. No reply having been received to their communication, the committee have instructed me to publish the resolution in the local papers and in the medical journals. I subjoin the terms of the resolution.

Resolved:—"That the medical practitioners in Bolton are of opinion that compulsory notification by the practitioners disturbs the confidential relations between patient and

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diseases in the twenty-eight towns, which had declined in the preceding eight weeks from 1301 to 624, further fell last week to 440; they included 185 from diarrhœa, 72 from scarlet fever, 61 from whooping-cough, 54 from "fever" (principally enteric), 35 from diphtheria, 29 from measles, and only 4 from small-pox. These zymotic diseases caused the lowest death-rates last week in Bolton, Huddersfield, and Halifax; and the highest rates in Manchester, Hull, Blackburn, and Salford. The greatest mortality from diarrhœa was recorded in Blackburn, Salford, and Hull; from scarlet fever in Manchester, Blackburn, Bristol, and Birkenhead; from measles in Oldham; from whooping-cough in Nottingham; and from "fever" in Brighton, Salford, Portsmouth, and Nottingham. Of the 35 deaths from diphtheria in the twenty-eight towns, 21 occurred in London, 3 in Oldham, 2 in Birmingham, 2 in Liverpool, and 2 in Manchester. Small-pox caused 4 deaths in Sheffield, but not one in Greater London or in any of the twenty-six other large towns. Only 4 cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease; whereas the number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 1481. The deaths referred to diseases of the respiratory organs in London, which had been 169, 160, and 142 in the preceding three weeks, rose again last week to 160, but were 41 below the corrected average. The causes of 56, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Birmingham, Leeds, Salford, Leicester, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Hull, Cardiff, and Portsmouth.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4 and 18·7 per 1000 in the preceding two weeks, further declined in the week ending September 24th to 18·3; this rate exceeded, however, by 2·1 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 9·7 and 12·2 in Perth and Leith, to 25·4 in Greenock and 25·6 in Paisley. The 457 deaths in the eight towns last week showed a further decline of 10 from the numbers in the previous two weeks, and included 28 which were referred to diarrhœa, 22 to whooping-cough, 11 to "fever" (typhus, enteric, or simple), 11 to scarlet fever, 5 to diphtheria, 1 to measles, and not one to small-pox; in all, 78 deaths resulted from these principal zymotic diseases, against 112 and 106 in the preceding two weeks. These 78 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·6 the mean rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 39, 45, and 55 in the previous three weeks, declined last week to 28, of which 10 occurred in Glasgow and 7 in Dundee. The 22 deaths from whooping-cough showed an increase of 3 upon the number in the previous week, and included 7 in Dundee, 4 in Glasgow, 4 in Edinburgh, and 4 in Greenock. The 11 deaths referred to "fever" corresponded with the number in the previous week; 6 were returned in Glasgow and 5 in Paisley. The fatal cases of scarlet fever, which had been 11 and 17 in the preceding two weeks, declined again last week to 11, of which 5 occurred in Glasgow and 5 in Dundee. Three of the five deaths from diphtheria were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 71, 66, and 77 in the preceding three weeks, declined again last week to 62, and were 3 below the number returned in the corresponding week of last year. The causes of 58, or nearly 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 27·9 and 34·3 per 1000 in the preceding two weeks, declined again to 30·6 in the week ending September 24th. During the first twelve weeks of the current quarter the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 20·0 in London and 18·3 in Edinburgh. The 207 deaths in Dublin last week showed a decline of 25 from the number returned in the preceding week; they included 37 which were referred to diarrhœa, 8 to measles, 4 to scarlet fever, 1 to "fever" (typhus, enteric, or simple), 1 to diphtheria, 1 to whooping-cough, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had been 77 and 52 in the preceding three weeks, were again last week 52; they were equal to an annual rate of 7·7 per 1000, the rate from the same diseases being but 2·1 in London and 1·6 in Edinburgh. The fatal cases of diarrhœa, which had been 36 and 35 in the previous two weeks, rose last week to 37, and exceeded the number in any week since the middle of August. The deaths from scarlet fever showed an increase of 2, while those from measles corresponded with the number in the previous week. The deaths of infants showed a marked decline from recent weekly numbers, while those of elderly persons had slightly increased. Two inquest cases and 2 deaths from violence were registered; and 53, or more than a quarter, of the deaths occurred in public institutions. The causes of 35, or nearly 17 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

THE Greenwich Hospital Pension of £50 a year for Fleet and Staff Surgeons, R.N., vacant by the death of Deputy Inspector-General James Vaughan, has been awarded to Deputy Inspector-General George Moore, M.D.

WAR OFFICE. — Army Medical Staff: Surgeon-Major Edmund Farrington Boult, half pay, is granted retired pay, with the honorary rank of Brigade Surgeon (dated Sept. 24th, 1887); Surgeon-Major Frederick William Lloyd Hodder, M.B., to be granted retired pay, with the honorary rank of Brigade Surgeon (dated Oct. 1st, 1887).

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon R. C. Widdicombe, to the *Prince Albert* (dated Sept. 11th, 1887); Surgeon William Prior, to the *Sphinx*; Surgeon John Menary, to the *Neptune*; Surgeon Alexander W. M'Leod, to Haslar Hospital; and Surgeon James A. Vassey, to the *Duncan* (dated Sept. 26th, 1887).

Correspondence.

"Audi alteram partem."

PROTECTIVE POWER OF VACCINATION.

To the Editors of THE LANCET.

SIRS,—The experience your correspondent, Dr. Hugh Thomson, questions is recorded in the reports of the London Asylums Board's hospitals. In one case of mistaken diagnosis received into a small-pox ward, vaccination on entry failed to ward off an attack. There are several instances in the earlier reports of nurses having contracted small-pox when vaccinated at the time of entry upon their duties, not one when the vaccination preceded the engagement. Many cases of this kind escape record. During the past London epidemic a tramp reached Ampthill Workhouse with bad small-pox; an inmate told off to attend upon the sick man was at once vaccinated, but took small-pox in a severe form. Cases of concurrent variola and vaccinia are not rare; one such has appeared recently.

Though I enjoyed the advantage of intimate converse with the late Mr. Marson, I am unable to say which of the two theories mentioned he favoured. I know that he trusted to neither of them in practice, and never received anyone for duty in small-pox wards immediately upon vaccination, but waited for the result to be evident, and even advanced to the stage of areola, before engaging servant or nurse. Men of genius like Marson and Pasteur, with large experience in a special subject, require a theory as an aid in further work or a goal or object first. Marson's use of his theory was to favour the practice of vaccinating all those in any house or room where small-pox happened. The frequent success of this practice may be urged in support of a view I do not share. It is a good illustration of that for which I contend—viz., how frequently those exposed to infection escape. The masterly researches of M. Pasteur into zymotic processes have inclined him to adopt a new theory, one

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Supervision of Cowsheds, Dairies, and Milkshops," and by Mr. E. W. Hope on "Localised Outbreaks of Typhus Fever and Infantile Diarrhœa."

The Conference then concluded.

THE CONGRESS OF GERMAN PHYSICIANS AND NATURALISTS AT WEISBADEN.

Of all the addresses delivered at this gathering, which closed on the 22nd ult., Professor Virchow's proved the most memorable, and its publication will be awaited with much interest in the scientific world. Its subject was "Transformismus." Its tenour may be inferred from the following brief indications. The law of heredity, in spite of all reservations, must be admitted to be universally shared by all beings endowed with life—a law on which, beyond doubt, depends the continued existence of the living world. But science will always yearn to know how life, as a whole, has originated, though attempts to satisfy this longing through the dogma of the eternity of the living world have hitherto invariably broken down. There remain only the dogma of creation and the dogma of self-production (*Urzeugung*). Neither of these can be an object of research, for never yet has a living being, or even only a living element, been found of which it could be said, "This is the first of its kind." Professor Virchow proceeded to show that from whatever point the question is approached it invariably eludes the grasp. He announced himself as the friend, not the opponent, of transformism—as having at all times approached the "immortal Darwin" not aggressively, but amicably. He has always, however, observed a practical distinction between the friend and the follower. As a friend he could welcome and support a scientific hypothesis even before it has established its truth by facts; but until these are forthcoming and conclusive he could never fall into the ranks as a follower. Whoever, he said, can teach us how to grow a "Spaltpilz" out of a "Schimmel-pilz" will have achieved more than all the heralds of the genealogical tree of man.

Among the other papers of most interest to the physician were those of Dr. Meiner of Dresden on the Influence of the Atmospheric Temperature on Infantile Diarrhœa; of Herr Wollmar, an apothecary (also of Dresden), on the Rational Disinfection of Latrines; of Dr. Poehl of St. Petersburg, on the Chemical Properties of Water and their Relation to the Life-activity of Micro-organisms; of Dr. Gerlach of Biebrich, on Peptones; of Dr. Bockhardt of Wiesbaden, on a New Preparation for furnishing a Stable Nidus for the Culture of Micro-organisms; and of Dr. Lender of Berlin, on Medical Climatology considered in Relation to the Treatment of Malaria (an admirable bit of exposition). Professor W. Detmer's paper on Plant Life and Plant Respiration was among the most esteemed of the non-medical contributions. Before the Congress rose Cologne was approved as its next place of meeting, when Professor Virchow's suggestions as to certain fundamental alterations in the statutes will be discussed. Heidelberg was proposed for the Congress of 1889, but this was left open to change.

BRITISH MEDICAL BENEVOLENT FUND.

The first monthly meeting of the committee of this Fund after the vacation was held on Tuesday last, and a long list of cases, the accumulation of two months, was submitted. They numbered twenty-four, eight being first applications, and were disposed of as follows:—Grants of from £5 to £18 were made to eighteen applicants; one had died, aged eighty, since her application was received; five were postponed for further information or informality; and one application was refused. In one instance the sum of £10 was offered by the committee on condition that a subscription of £50 was raised on behalf of a member of the profession, aged seventy-one, and hopelessly paralysed. A sum of £200 in all was voted, and the balance at the disposal of the committee entirely used up. Such a position for so useful a charity is very deplorable, and the committee venture to appeal to those members of the profession who possess the means to assist them by sending subscriptions at once to the treasurer or any of the officers of the Fund, by whom they will be most thankfully acknowledged. The later months of the year are always the worst for getting in subscriptions, and the committee find that the cases which come before them at that time are generally worse in character, to add to the additional reason for more liberal grants in the winter season. As a rule, the committee order the grants to be paid in monthly instalments, thus spreading the benefit of the assistance over as long a period as possible, and ensuring the utmost value for the donations of subscribers. During this year 110 applicants have already been relieved by the donation department at a cost of £1533.

ROYAL SOCIETY.

At a recent meeting of the Society, Mr. Victor Horsley, communicated a paper by Mr. G. F. Dowdeswell, M.A., on Rabies, of which the following is an abstract:—

In this investigation conducted in the laboratory of the Brown Institution, commenced early in 1885 during the outbreak of rabies in London, the first experiments, made by subcutaneous inoculations with the saliva of rabid street dogs, all failed to produce infection. Subsequently, adopting the methods described by M. Pasteur, Mr. Dowdeswell found—1. That the virus of rabies and hydrophobia resides in the cerebro-spinal substance and in the peripheral nerves, and is not confined to the salivary glands, as hitherto supposed. 2. That by inoculation of this substance upon the brain of another animal by trephining, infection follows much more quickly and certainly than by subcutaneous inoculation. 3. That rabies, however produced, in both dogs and rabbits, is essentially a paralytic affection, the same disease in both animals, and that there is no constant distinction between the so-termed "dumb" and "furious" rabies. 4. That the initial virulence of street rabies is usually increased, and becomes remarkably constant, by passing through a series of rabbits. 5. That the activity of the virus is shown by the duration of the incubation period, to which it is inversely proportionate. 6. That the tissues of an infected animal do not themselves become infective till towards the end of the incubation period. 7. That of a large number of drugs that were tried, both germicides and those acting specifically upon the cerebro-spinal system, none materially modify the action of the virus in the rabbit. 8. That by a series of subcutaneous inoculations with virus treated by the methods of M. Pasteur, immunity, even against subsequent infection, cannot be conferred upon the rabbit; and that the extreme and unexpected constitutional refractoriness of the dog to infection with rabies by any method of inoculation—as the author found it in the limited number of experiments he had been able to perform with this animal—renders it extremely difficult to determine the effect of such remedial or prophylactic measures in it; and that it is by the statistics of the treatment alone that their effect with man can be decided; but that, judging from the results of the experiments of others, the principle of the method as affirmed by M. Pasteur appears to be established, though unquestionably the "rapid" or "intensive" treatment, as Mr. Dowdeswell had found, is liable to produce infection.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5706 births and 2872 deaths were registered during the week ending September 24th. The annual rate of mortality in these towns, which had steadily declined in the preceding six weeks from 23·7 to 18·0, further fell last week to 16·2, and was lower than the rate in any week since the end of September, 1885. During the first twelve weeks of the current quarter the death-rate in these towns averaged 20·7 per 1000, and was 0·3 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 10·0 in Derby, 10·7 in Bolton, 13·5 in Nottingham, 13·8 in Leicester, and 14·4 in London. The rates in the other towns ranged upwards to 20·9 in Newcastle-upon-Tyne, 22·5 in Sunderland, 23·5 in Manchester, and 26·4 in Blackburn. The deaths referred to the principal zymotic

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A POST-GRADUATE course of lectures will commence at Charing-cross Hospital on Friday, Oct. 7th, at 3 30 P.M., when the opening lecture will be delivered in the Board-room of the hospital by Dr. Julius Pollock, the senior physician, the subject being "Rheumatism." The lectures will, we are informed, be eminently practical and illustrated by cases in the wards, the staff of the hospital will assist in the clinical demonstrations, and the instruments, appliances, &c., necessary for illustration at each lecture will be on the table for the inspection of the class. All qualified practitioners may join, and the day and hour (Friday, at 3.30 P.M.) seem to be chosen as the most convenient to medical men in general practice.

IN the approaching winter session Dr. Mercier will deliver at the Westminster Hospital Medical School a course of lectures on Neurology and Alienism. The course, which will be post-graduate in character, will include a review of the general functions of the nervous system, setting forth the nature and varieties of coördination, inhibition, &c., an account of the manner in which conduct is affected by the action of the higher nerve centres, and a description of the ways in which the mind may become disordered. The lectures will take place at 4 o'clock on Friday afternoons from October to Christmas.

FRANCIS OGSTON, LL.D. Aber., M.D. Edin., late Emeritus Professor of Medical Jurisprudence in the Aberdeen University, died on the night of Sept. 25th. He was eighty-five years of age, and retired from his professional duties some four years ago. In addition to his important "Lectures on Medical Jurisprudence," he was the author of numerous papers in medical journals, both English and German.

A MEETING of divisional surgeons of the Metropolitan Police was held on Thursday last at 429, Strand, Mr. T. Bond in the chair, to take steps to found a "Police Surgeons' Association." A further meeting will be held in November, to receive a report of the provisional committee, and to discuss the formation of rules, &c.

STAFF-SURGEON PEARSON, R.N., M.D., who, having been taken very ill, was recently landed at Gibraltar by the corvette *Thalia*, died on Saturday, September 24th.

MR. CASSAL has resigned his appointment as Demonstrator in the Hygienic Laboratory of University College, London.

IT is now denied that Dr. Neusser has given up his appointment with Prince Ferdinand of Bulgaria.

SANITARY INSTITUTE OF GREAT BRITAIN.

AT the sitting of this Conference on the 22nd ult, the address to Section II. (Engineering and Architecture) was read by Professor T. Hayter Lewis, F.R.I.B.A., who took for his theme the extension of our great cities and the erection of new ones, his object being to ensure that such requirements as were now considered to be necessary for their healthful occupation might be provided for at the outset.

A paper was afterwards read on the "Fouling of Streams" by Major Flower, sanitary engineer to the Lea Conservancy Board.

Other papers were read—by Mr. J. J. Bradshaw on "The Sanitary Condition of Cotton Factories"; by Mr. S. H. Merry on "The Water Supply of Villages"; and by Mr. R. Sutcliffe on "Artesian Wells and Water Supply."

A conference of medical officers of health was also held during the morning.

Lord Basing, in a brief opening address, said the conduct of public health was rapidly passing from the central office to the localities, and it was through the effective intervention of medical officers that rapid progress in the cause which they had at heart became probable.

Professor Corfield, President of the Conference, then took the chair.

A paper on "Death Causes and their Classification" was read by Mr. Vacher of Birkenhead, in which he urged that in every case of death the cause of it should be medically certificated. In the discussion which ensued, Lord Basing, Dr. Carpenter, Mr. North, Dr. Sykes, Dr. Tatham, Mr. Armstrong, and others took part. Dr. Carpenter said the question of coroners' courts should be dealt with in the Local Government Bill which was to be brought before the country. He was prepared to support a proposal that the coroner should have at his command the services of a thoroughly educated medical practitioner as assessor. He thought it would be greatly to the interest of science to get a very much more simple nomenclature of disease than that issued by the Royal College of Physicians. Dr. Sykes advocated more accurate certification in order to get better classification. The following resolution was afterwards unanimously adopted: "That in the opinion of this meeting it is desirable that the medical officer of health should act in the capacity of assessor to the coroner in all cases of death in which there has been no medical attendant, or none from whom a certificate of death can be obtained; and that in such capacity it should be the duty of the medical officer of health to make full inquiry into all cases of suspicious or uncertified death."

Papers were also contributed by Dr. Kenyon, of Chester, on "The Provision for Infectious Patients in Rural Districts," and by Dr. Stopford Taylor, of Liverpool, on "The Liverpool Port Sanitary Authority and its Work." The Conference then adjourned.

On the 23rd ult. two Sections sat. Papers were read in Section II. (Engineering and Architecture) by Mr. R. E. Middleton, M.I.C.E., on "House Drainage"; by Mr. J. Honeyman, F.R.I.B.A., on "The Proper Size of House Drains, and the use and misuse of Traps"; by Mr. J. Corbett, on "Health, Comfort, and Economy in Cottage Construction"; and by Messrs. H. Fletcher, D. J. R. Duncan, and O. D. Orvis, on "Smoke Abatement." In Section III. (Chemistry, Meteorology, and Geology), the papers for discussion were: "The Application of Bacteriology to Questions relating to Water Supply," by P. Frankland, Ph.D., F.C.S.; on "Water Analysis," by Louis Parkes, M.D.; on "The Sources of Hygienic Significance of the Impurities of the Air of Buildings and Sewers," by J. S. Haldane, M.A., M.D.; on "Underground Water Supplies," by C. E. De Rance, A.I C.E.; on "River Pollution in Lancashire," by J. Collins, F.C.S.; and "The Sanitation of Dwelling-houses, &c," by G. Selkirk Jones, L.S.A.

Dr. August Dupré, the President of the Chemistry and Geology Section, in an address to a general meeting of the members, said sanitary science was practically, as far as modern times were concerned, the growth of the last fifty years, and surely no advance in any science or industry had done more to help on the welfare of the people than the advance in sanitary science. He would content himself with two subjects of sanitary science on which he could claim some special knowledge—water and sewage, the two most important subjects on which the chemist could aid the sanitarian. He advocated the collection of water standards from various neighbourhoods as tests of purity or otherwise. On the question of sewage he expressed the belief that the water carriage of sewage was more or less a mistake, but they were committed to it and had to make the best of it. Every authority that had to deal with sewage should give up the idea of making a profit out of it. Unless the sewage was burned, he believed the ultimate destruction of that sewage was due to living organisms, and they must do nothing to hinder the action of those organisms, but do all they could to help them. It would be quite impossible to disinfect any matter when once it had got into the sewers, and anything done in that line was a deception. He should like the treatment of the sewage to commence earlier than was usually the case—namely, in the sewers themselves.

The Conference of Medical Officers of Health was continued during the day, under the presidency of Dr. Tatham, of Salford. A resolution was passed urging upon the Council of the Institute the desirability of rendering the Conference a permanent feature of the annual congress of the Institute.

Papers were read by Dr. John F. J. Sykes on "The

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uniformity be desired, a panel on the opposite side may be furnished and fitted for a coal-scuttle. The plan adopted by Messrs. Young and Moss seems to us feasible and practicable. When, however, a "ventilator" is ordered, it must always be borne in mind that an "outlet" is only half that is necessary. If inventors wish their apparatus to succeed, they must insist on properly placed inlets also. If this be not done, in proportion as the outlet is efficient so will the cold air come whistling under doors and through cracks and keyholes, and the use of one or other device for the "exclusion of draught" will be the inevitable result.

DR BELL ON ADULTERATION IN 1886.

LAST year only forty-five cases of disputed analysis were referred to Somerset House. In twenty-four of these cases the reports of the public analyst were confirmed, while in the remaining twenty-one they were condemned as inaccurate. The result must be regarded as satisfactory. Even under the loose system at present prevalent, an enormous number of samples are analysed every year; the work is miserably ill-paid, and some of the analysts are not properly trained chemists. Considering that an appeal can be obtained in every case, it is significant that so few vendors should have ventured to ask for it. Some of the convicted traders are perhaps too poor to risk the expense, but there can be no doubt that in the great majority of cases the verdicts are correct, and the punishments not only not excessive but very inadequate. We do not doubt the substantial accuracy of the Somerset House analyses. Dr. Bell and his colleague are skilful and impartial chemists, and as every case submitted to them is the subject of dispute they no doubt use all possible care. Public analysts object chiefly to the revision of milk analyses, urging with some reason that the analysis of a stale sample cannot be as trustworthy as that of the same sample while fresh. The Somerset House chemists make a correction for the change produced by putrefaction, and properly give the benefit of any real doubt to the accused party, but it cannot be said that the method is perfectly satisfactory. The difference is commonly very small, and we do not see how the difficulty can be avoided without limiting the power of appeal, which would be unfair to the vendor. What is really wanted is a new Act, in which offences shall be more accurately specified, and a more stringent method of repression used.

SMALL-POX AT SHEFFIELD.

THE Sheffield Corporation have, in view of the extension of small-pox, and apparently so as to secure additional beds for acute cases in their infectious hospital, taken a convalescent home at Totley Gardens, and as the result a writ is about to be issued to restrain them in their proceedings. Difficulties will more and more arise as to the isolation of small-pox in our large towns and cities, and it may come to pass that the people who wish to protect themselves against that infection will, after all, have to fall back upon vaccination. But Sheffield is a borough which adjoins a wide expanse of open country, and a small-pox hospital could probably be placed where it would be at some distance from any such centre as that in which the other fevers have been successfully treated.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific medical men are announced:—Dr. Caspary, director of the Botanic Garden and Professor of Botany at Königsberg; Dr. Jacques Lachaise, Professor of Anatomy and Physiology in the Poitiers Medical School.

DERMATOSES FROM EMOTION.

THAT dermatoses may apparently be excited by neuroses is well known, but the fact that mere emotional excitement may develop skin lesions is not admitted in many quarters. Leloir, in writing on this subject in the *Journal de Méd. et de Chir. de Bruxelles* of July 20th, gives the following characteristics of the emotional dermatoses: rapid onset after the moral shock, and, should the dermatosis not immediately succeed the shock, a series of nervous troubles, such as pruritus and neuralgia, precedes the cutaneous eruption; the progress is rapid, and the lesion soon attains its maximum development; the dermatosis is always superficial, scarcely ever involving the deeper part of the skin, and being chiefly of the vaso-motor, catarrhal, or pigmentary sort. Excessive pruritus is a feature of these dermatoses; their duration is relatively short, and they are especially to be observed in females.

VACCINATION AND SMALL-POX IN LEICESTER.

DR. CORY, in a letter to *The Times*, reproduces a large part of our annotation last week on the above subject, and of our Special Commissioner's report last year, showing the importance attached by the sanitary authorities in Leicester to vaccination and revaccination, all allusion to which was omitted in the account lately given by Mr. Biggs of the immunity of Leicester. Dr. Cory ends by prophesying that the Leicester method of employing vaccination will infallibly break down "when small-pox equipped in epidemic array visits Leicester." He is doubtless right, but the point of our Commissioner's contention is that the control of slight importations of the disease is due to the use of vaccination.

UNIVERSITY COLLEGE FACULTY OF MEDICINE.

THE annual dinner which is to take place on Monday next at the Freemasons' Tavern, under the presidency of Sir Henry Thompson, will, we are told, fully equal the preceding dinners in its character of a pleasant *réunion* of old friends. Many tickets have already been distributed to men of all periods by the honorary secretaries, Mr. Pollard, Dr. Poore, and Mr. Stonham.

FIRES IN THEATRES.

AT a meeting of City Justices, held at Liverpool on Sept. 28th, it was resolved that a Committee of Justices be appointed to inspect the theatres in the city, and report to the bench before the licences are renewed for next year, and that they be empowered to call in professional aid if deemed necessary.

DR. DAVID M'KEOWN of Manchester, writing to a contemporary with reference to the railway accident which recently occurred near Doncaster, expresses the opinion that no investigation which fails to elicit answers to the following questions can be satisfactory or complete:—(1) What is the state of vision (both as regards acuteness and colour perception) of the persons in charge of the colliding train? (2) What was it when these persons were last tested, and when were such examinations made? (3) What is the practice of the Manchester, Sheffield, and Lincolnshire Railway Company in regard to periodical testing? By whom is this work done? and what is the minimum of the company's requirements in regard to acuteness of vision and colour perception?

DR. BRUCE has been appointed by a committee of the Metropolitan Asylums Board Medical Superintendent of the Northern Hospital, which has been opened by the Board for the reception of patients suffering from scarlet fever.

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ance of excitement were to be advised, with bromides, and even occasional small doses of opium. The existence of a heart bruit at the apex or base in most cases was averred by Dr. Ernest Goodman and others, but was not thought essential by Dr. James Collins. Dr. Wood saw little good in looking to anything but the high temperature and its remedies—cold water and the hypodermic action of antifebrin. Dr. Stern objected to a temperature of 111° being considered as necessarily fatal. Dr. Austin Flint had had recovery after 111°, and Dr. J. M. Costa said that several of his cases reached 110°; they recovered by kneading with ice and irrigation of the body with iced water. Dr. Lloyd, of Her Majesty's navy, increased our vivid horrors of the Red Sea by saying that 90 per cent. of the deaths in the navy occur in that sea and in men addicted to liquor. Altogether, the result of the discussion is to raise our hope of antipyrexial measures in such cases, and to impress us with the importance of attention to good selection of drugs and instruments for hypodermic use.

MR. NETTLESHIP ON THE OPHTHALMIA OF PARISH SCHOOLS.

MR. NETTLESHIP'S report on the ophthalmia of Norwood Schools, the disease having been very prevalent, is a valuable document for all guardians responsible for such schools to consider. All medical men will agree that such schools have a power of generating chronic granular ophthalmic disease, which is the most serious factor in such outbreaks of acute ophthalmia as that which has led the guardians to seek Mr. Nettleship's advice. He shows the power of the schools to produce this disease in a striking way. Of 111 cases of decided granular lids, only 6 are new comers; the other 105 have been in the schools for more than a year. General approval, on the whole, is expressed of the arrangements of the school. But it may be assumed that the very existence of chronic ophthalmia in 66 per cent. of the children of a school shows something defective in hygienic conditions. Mr. Nettleship considers that the exciting causes of the recent outbreak were attacks of whooping-cough and measles, which occurred in the spring of 1886. But to these exciting causes must be added certain contributory causes, particularly the permanent presence of a large number of cases with chronic disease of the eyelids, rendering them peculiarly liable to serious mischief when exposed to the causes of acute ophthalmia. Another chief evil in such schools is the insufficiency of arrangements for isolation. His recommendations are—(1) the imposition of longer isolation; (2) more personal medical supervision for the detection of chronic disease not felt by the patient or noticed by ordinary attendants; and (3) the persevering skilful local treatment of each case The disease is an opprobrium of parish schools, and yet there can be little doubt that if Mr. Nettleship's views are carried out in letter and spirit, it might ere long be exterminated.

SCARLET FEVER IN FULHAM.

ACCORDING to a special report by Mr. Francis Egan, seventy-six cases of scarlet fever came under notice in the northern district of the parish of Fulham in the first half of this year, and owing to complaints as to milk infection attention was paid to this subject. In the end two cases of scarlatina were discovered at one of the country farms supplying a suspected dairy, but they were not antecedent to attacks in Fulham amongst consumers of the milk in question. The report concludes that the Fulham epidemic was only part of the metropolitan one generally. It is stated that the disease has tended to spread more amongst the well-to-do than amongst the poor, and it is implied that this may be due to the greater readiness with which the poor accept isolation in hospital. Exhaustive inquiry into the causes of the origin of the outbreak was apparently not possible.

THE GOVERNMENT OF INDIA AND THE DRINK QUESTION.

THE grave charges of Archdeacon Farrar and others against the Government of India of favouring the use of intoxicants for the sake of increasing the revenue are warmly refuted by Mr. Cust, late Member of Her Majesty's Indian Civil Service, who held the highest revenue posts in the Punjaub and north-west provinces under Lord Lawrence, and who bases his letter (to *The Times*) on a despatch from the Government of India, on the system of licences for the distillation and sale of spirituous liquors in force in the various provinces of India, signed by Lord Dufferin, Sir F. S. Roberts, and five other members of the Supreme Council. It is maintained that the high taxation is meant to discourage the consumption of the baneful drinks, and that this has always been, and is now, the policy of the great and good statesmen who have ruled India.

THE VOMITING CENTRE.

PROFESSOR TUMAS, who has been making a series of researches on the subject of vomiting, which are published in several recent numbers of Professor Botkin's journal, the *Ejenedélnaya Klinichestcaya Gazeta*, finds that in dogs and cats section of the medulla at the level of the fourth ventricle does not prevent the induction of vomiting by hypodermic injections of apomorphia. By touching different parts of the medulla with a weak solution of apomorphia, so as to induce vomiting, he was able to localise with tolerable precision the situation and extent of the vomiting centre, which he says lies in a space about 5 mm. in length by 2 mm. in breadth, before and behind the calamus, and in the deeper layers of the medulla. He believes that the absence of vomiting which is observed in ruminants, rodents, and some other classes of animals, is due to the absence in them of a vomiting centre, or to the very rudimentary condition in which it exists. In a rabbit in which he tried in every way to induce vomiting, no signs of gastric movement of that nature could be detected.

DRINKING METHYLATED SPIRITS IN EDINBURGH.

THE Relieving Committee of St. Cuthbert's Parochial Board have under their consideration a statement that numbers of cases become chargeable to the parish from the effects of drinking methylated spirits. As the whole matter has been referred to the chairman's committee, we shall await its report. But there seems some reason to believe that methylated spirits are taken, mixed sometimes with ordinary whisky and sometimes with naphtha, and even a little oil of vitriol, and water. According to one witness this was the composition of shebeen whisky.

NEW METHOD OF VENTILATION.

A PLAN for ventilating a room, which is, we think, sound in principle, has been invented by Messrs. Young and Moss. The ordinary fireplace is used to create a draught. The outlet from the room is close to the ceiling; from this point a tube descends, making a bend at the floor level, and reaching the exit at the commencement of the chimney. Between the floor bend and the exit is a cylindrical air chamber, which is said to efficiently prevent any back current into the room. The apparatus can be fitted to any ordinary fireplace, and in the drawing furnished is shown in connexion with the well-known "country parson's" grate. The ventilator is concealed by an ornamental panel, and, if

M. Thiriar examined a large number of arms in the dead-house when he was in charge of the post-mortems, and found this anomaly present in 12 per cent. of the cases. However, he has always succeeded in arresting hæmorrhage in wounds of the palmar arches, even when the tissues were suppurating, by a modification of Sir J. Simpson's plan of acupressure. He uses needles curved to a semicircle, and, passing them under the artery, brings the edges of the wound together and occludes the vessel by the application of a twisted suture, which there is no need to draw very tightly. He summarises his advice thus:—1. Direct ligature. If impossible—2. Twisted suture and acupressure. If unsuccessful—3. Ligature of humeral in the middle, if the collateral circulation has not had time to develop; above the profunda if it has. 4. Employment of compression, direct or indirect, forced flexion, forcipressure, styptics, &c., only as temporary expedients.

CANON JELF ON THE PREVENTION OF CONTAGIOUS DISEASE.

CANON JELF has recently been endeavouring to get some provision made for the cases of contagious diseases, which have increased to an appalling extent in Chatham and Rochester since the suspension of the C. D. Acts. He first wrote to the guardians suggesting that they should build a hospital for the accommodation of such cases, but they told him that they had no power to do so, their duty being merely to relieve cases of destitution. He has since arranged to write to the Home Secretary, laying the facts before him, and suggesting that it should be made a misdemeanour for a woman who has voluntarily entered a workhouse or infirmary with venereal disease to leave without a medical certificate that she is cured. The guardians expressed their readiness to support Canon Jelf in every way possible. The chairman remarked that they had already done what they could, not only by deputation, but by bringing to bear the influence of their members of Parliament, putting the case as strongly as possible, and pointing out that when a militia regiment was there sixteen women left the workhouse wards, but that no satisfactory reply had been received.

THE DRAWBACKS OF THE ANNUAL HOLIDAY.

THE "going away" and the "coming back" are full of risks to the annual holiday maker. He works steadily during the intervals between his vacations, and encounters special perils of *change* when he breaks off one mode of life to take to another. Wholly apart from the evils attendant on monotonous work and holiday-making respectively, there is the interruption of one rhythm and habit and the assumption of another. Those who have worked with their brains for ten months out of the twelve doubtless enjoy, and are, as a rule, benefited by, the substitution of muscle work for brain work for a spell of two months, but unless the change be well managed there are obvious risks consequent upon the suddenness of the call made on disused faculties. There is wisdom in a very gradual exercise of the muscular, the respiratory, and the cardiac apparatus in "recreations" when these particular parts of the organism have been long resting, and may possibly have fallen into a condition of imperfect nutrition. When, this being forgotten, ministers of State and members of Parliament, professional men, and 'brain-workers" generally, rush off to the moors and the mountains, it is not surprising that they occasionally find hearts, lungs, and limbs not strong enough for the new task suddenly thrust upon them. There is no mystery about the deaths, and "accidents," and "exhaustions," which are so common at the commencement of the annual vacation. The like is true of the resumption of ordinary work. Even though it be good policy and healthful to allow those parts of the organism which have laboured incessantly during ten months of the year to rest during two, it should not be forgotten that there is danger in too abruptly calling upon these resting faculties to recommence their ordinary activity. Those persons are wise who begin their holiday quietly and resume their avocations gradually. Better shorten the respite by a day or two, that the process of getting again into harness may be effected in a leisurely way, than rush home and back to work so hurriedly that half the good of the rest enjoyed is sacrificed by its too rude and tumultuous ending.

LORD ROSEBERY ON SHORTHAND WRITING.

THE Congress of Shorthand Writers, which is just over, and which commemorates at once the virtual tercentenary of the first known publication on this subject, the work of Dr. Timothy Bright, and the jubilee of the Pitman system, was opened by Lord Rosebery with an address as instructive as it was eloquent. After deprecating with pathetic humour as a responsible politician the merciless exactitude of Parliamentary reporters, he admitted and impressed the fact that the future of shorthand writing as an aid in the speedy transaction of business was far too little appreciated, and compared our own position in this respect with the more favourable condition of the American people. There certainly is no doubt as to the general truth of these observations, and the more widely we extend the meaning of the word business the greater practical force do they acquire. Besides the class of professional reporters, clerks and secretaries would, there is no doubt, find it profitable to master the details of the phonetic method. The possession of an art of so great utility might in these days of earnest competition—nay, probably would, other things being equal—decide the question of selection between rival candidates for an appointment. For rapid medical note-taking an acquaintance with shorthand would be equally valuable, and medical students might cultivate it with advantage. In their case, however, it must be presupposed that they will be content to preserve their notes of lectures in this abbreviated form, otherwise the work of transcribing would occupy too much of the limited time at their disposal. It is not necessary that we should discuss at greater length the many and manifest applications of this useful modification of written language, which must by this time have more than justified the best expectations of its originator as "an arte of shorte, swifte, and secrete writing by character."

SUNSTROKE AND THE WASHINGTON CONGRESS.

THE discussion on Sunstroke at the International Medical Congress was a good illustration of the general character of the work, and brought out many points of vital interest. The author of the paper (Dr. John Anderson) alluded to the part played by alcohol in the production of the disease, not only by its direct action on the brain but through the glands, and its influence in the heat-regulating function of the skin. He inveighed against the use of alcohol, and stated that the best drink for soldiers on the march was cold tea flavoured with lime juice. In grave cases his treatment is thus summarised: Strip the patient, recline the body, fan, douche, clean out the bowels with enemata, and give hypodermically the hydrobromate of quinine. He insisted on the necessity of the solution being clear, and the salt perfectly dissolved. He thought the quinine acted on the cardiac ganglia. Dr. Marston endorsed the views of the paper, and observed that irritation from the hypodermic injection could be obviated by the use of a pure solution and clean instruments. He made important remarks on the sequelæ of sunstroke—timidity, insomnia, dreams, excruciating headache, and even paroxysmal attacks of mania,—for which colder climates, sea voyages, and avoid-

claimed the same and paid all reasonable expenses incurred by reason of such detention." Under this Act hundreds of dogs are annually removed to the pinfold, detained there for three days, and, if not claimed sent to the Home for Lost Dogs. Here they are kept till they are sold or destroyed. Captain Nott Bower, the head constable, has issued a notice directing that dogs must be under control in the streets of the city—that is, held by a chain or string,—and that all stray dogs will be taken possession of by the police. The same dog which bit the two boys who died (one in the Royal Infirmary, the other at Wavertree) and the lady, Mrs. Atkinson, who has undergone the Pasteur treatment, also bit other persons, one of them being a lady under the care of Dr. Oldershaw, who has written to a daily paper protesting against the sensational and exaggerated reports in the papers, which are calculated to prejudice considerably any cases which present hopeful symptoms. Moreover, to keep these papers or the matters contained in them from the patients is next to impossible, and if it were, there are still plenty of "Job's comforters" willing to impart bad news. There are great differences in persons bitten by the same dog, differences of constitution, of degree of injury, and of promptitude of treatment, and it is to be hoped that no more fatal cases will occur.

CHOLERA INTELLIGENCE.

THE news of cholera in Sicily relates this week only to Messina and Palermo. In the former place the ravages of the disease are still very severe, no less than 881 cases and 387 cholera deaths having been recorded in the seven days ending September 26th. In Palermo the mortality, though still maintained, is by no means so great; here the deaths returned have amounted to 22, but the record is evidently somewhat incomplete. From the mainland of Italy cholera news comes only from Naples, where, according to the last return, 22 deaths occurred in four days; but a subsequent report, referring to the various places round the bay and in the province of Naples, is to the effect that within the last few days a marked improvement has set in. From Malta intelligence has also become intermittent, but it would appear that on an average some 5 deaths a day are still occurring there. From Naples as a centre cholera has now made its way over to the American continent, by means of a French vessel, the *Alesia*, which arrived at New York from Naples and Marseilles on September 23rd. There were then eight cases of cholera on board, but no reference to fatal attacks is made until the 25th, when two "additional" deaths were announced. On her arrival the *Alesia* was ordered into quarantine for a period of at least a week, and it is since then that the two deaths referred to, as also the spread of the disease to another steerage passenger, have taken place. No details of the methods adopted as to quarantine at New York are as yet to hand, except in so far as fumigation of the vessel was concerned, a process which we assume involved the landing of the passengers and crew.

CATCHING TRAINS.

THE Turks, who have a saying "Hurry is the devil," are not far wrong, particularly when the haste is to catch a train. All violent or strenuous effort is bad. When the organism has once attained its full measure of development, it seldom feeds—physiologically—beyond the requirements of its daily average life and work, and it is henceforth good chiefly as a "going concern." The margin of reserve strength at call for emergencies is seldom a large one, and those persons are ill advised who make a great demand too suddenly. It matters little what the demand may be, or on what part it is made. The policy of putting forth any great unaccustomed effort, whether of mind or body (to use a popular form of expression), after maturity, is unsound. Whether the fact that we generally begin to go down the hill of life soon after we reach its summit, instead of lingering on the higher plane, is accounted for by our habits of modern conventional life, may be doubtful, but the fact admits of no question. Practically the total length of life depends principally on the management of the middle age. The secret of longevity is, probably, skill in so economising the reserve of vital energy as to make it last out an unusual period. Most of the aged folk we know have lived pretty equably—which is a different thing from tranquilly—after the attainment of years of maturity. They may have worried and worked hard before, but they steadily maintained the habit—whatever that might be—which was formed at the turning point of middle age, between the ages forty and sixty. This done, the prolongation of life was chiefly due to an avoidance of special *efforts*. Occasionally the whole life consists in a series of efforts, and yet it lasts long; but then the "organised habit" of nutrition has been that necessary for a wide range of special calls on the reserves. If a man has been catching trains all his life in youth and from adolescence, he may continue to do so with impunity; but to begin this feat in mature age is suicidal, because the margin of strength held in reserve does not justify the special demand or respond to the call.

THIRIAR ON WOUNDS OF THE PALMAR ARCHES.

DR. THIRIAR, taking as his text the case of a man who had been unsuccessfully treated both by a pharmacist and a surgeon for a wound in the hand, which when he was brought into hospital was both bleeding and suppurating, gave recently an instructive clinical lecture to the Brussels students on the management of wounds of the palmar arches. He pointed out that there is, from a clinical point of view, a distinction to be drawn between these and other wounds of the palm which implicate only the collateral branches, a distinction which is not clearly stated in surgical works which students read. The latter class of wounds present no difficulty, and the hæmorrhage from them can be easily arrested. Not so, however, with the wounds of the palmar arches. Here, of course, the obvious indication is to search for the two ends and tie them. In consequence, however, of the tendency of the artery to retract, it is frequently impossible to find these ends without an amount of dissection which is undesirable. Perchloride of iron and other styptics hardly ever succeed, and they are to be avoided on account of the effect they produce on the surrounding tissues. The actual cautery is somewhat better if not too highly heated, but even this very frequently fails. Even if success results, it is usually only temporary, for the muscular coat of the artery is apt, as Dolbeau pointed out, to relax after a time, and permit hæmorrhage to break out afresh, in spite of any clots which may have formed. Similarly direct compression is seldom permanently successful. Compression of the ulnar and radial, forced flexion, and forced extension may be used as temporary expedients, for example, on the field of battle. Vanzetti's method of keeping the lips of the wound widely apart by means of hooks and that of forcipressure is not satisfactory, and Dr. Thiriar recommends that no time should be lost in trying cones of charpie and starch, elastic balls or sponges. The safest and best plan is to ligature in the wound if possible; if not, above it. In recent cases it can usually be done in the wound. Where it is necessary to tie higher up, it is of no use to tie the ulnar and radial; and if the wound is not very recent, and there has been time for a considerable amount of collateral circulation to have developed, even the brachial must be tied above the profunda. It is necessary to remember that the axillary artery sometimes gives off two brachial branches as high as the axilla itself.

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right leg, producing a burn of the second degree. It had then passed down to the foot where the burn was of the first degree, and the strip of skin affected much narrower than above. The hat, coat, and trowsers were injured—as if torn—all along the course of the current, but they were not burnt in any part. The patient was treated with sedatives and some clysters, and in sixteen days was perfectly well. Dr. Hidalgo supposes that the pneumogastric was affected by the shock, which paralysed the respiration, and subsequently the heart's action, similarly to the behaviour of an overdose of chloroform. The indication, therefore, was to re-establish the respiration, and this was admirably fulfilled by the cold affusion, which fortunately was administered quickly, before the paralysis of the heart had become absolute.

ISOLATION OF FEVERS IN NORTH BIERLEY.

UNDER the arrangements by which the Bradford Fever Hospital has been transferred to the Bradford Corporation, a sum of £4000 has been handed over to the authorities in the North Bierley Union for the purpose of providing means of isolation for the several infectious fevers, and a preliminary meeting has been held to decide whether one central hospital or several minor institutions would best meet the requirements of the several districts. One single hospital has in many instances very distinct advantages over multiple ones, involving as it does one instead of numerous sites, administrative buildings, and other requirements. But, for success, the districts uniting in the erection of a single hospital should be so placed that the building can be easily reached from every portion of the area they include, and anything like undue aggregation of the sick should be avoided. In this instance we read of places having together over 120,000 inhabitants, and since these are scattered over a considerable area, we certainly incline to the notion which was brought before the meeting in the form of an amendment, that at least four separate hospitals, and not one only, should be provided. The worst of this, the more appropriate arrangement, is that each of these four hospitals would have to serve combinations varying from 20,000 to 35,000 a-piece, and it is certain that £1000 would not suffice for the needs of each of the districts referred to. Probably the most equitable arrangement would be for the sanitary districts included in the union to apply to be formed, under a Provisional Order, into a united hospital district; and then the hospital authority which was elected could utilise the money which has been handed to them in providing hospital accommodation at a point where it is most needed, borrowing money on the security of the rates of the combined area for the erection of other hospitals in the more outlying places as the need for them becomes apparent.

A SUGGESTION FOR MARKET GARDENERS.

THE dietetic value of fruit and vegetables is now as firmly established in rational theory as it has been from time immemorial recognised by the habit of mankind. Experience has taught both civilised and savage races that without the palatable and wholesome addition of vegetable food in due proportion, blood is no longer a purely vitalising and nourishing fluid, but a source of diseases traceable to faulty nutrition. Fortunately, there is hardly any part of the habitable earth where such food in some form is not obtainable, and certainly, whatever lack there may be in some quarters, there is none apparent in the markets of the metropolis. This remark, however, necessarily does not apply to every season, nor does it indicate that the produce of the native shires is fully represented on the stalls of dealers. In winter a dearth of fresh vegetables and of fruit is inevitable, while in the face of cheap and abundant importations from abroad, and of the relatively heavy dues charged by railway companies in this country, local farmers have not those facilities which are desirable in sending to the central market. We therefore observe with satisfaction that a beginning of better things has been inaugurated by some enterprising producers in Kent, and that for some time past vegetables, fruits, and preserves, cheap and of good quality, have come regularly to London by river from that county. The experiment having so far proved a success, we are informed that pickles, jams, and preserved green vegetables in large quantities may be expected to follow from the same source, and that even in winter such fare as cabbage and green peas will not be unknown on the dining-table. The example thus set by one county will not, we trust, fail to awake in others that spirit of imitation which will be its own best omen of success.

HYDROPHOBIA IN LIVERPOOL.

THE fact that three deaths from hydrophobia have occurred within a week in and near Liverpool is sufficient to demand more than passing notice. Two of these were alluded to in the letter of our Liverpool correspondent in last week's LANCET, and the third formed the subject of an inquest held by Mr. Husband, deputy coroner for South-West Lancashire, on the 26th ult., who observed that he had within the past few weeks held inquests on hydrophobia cases at Leigh Lowton Junction, and Wavertree, in addition to the present one. From the evidence adduced it appears that the deceased was a gardener, aged twenty-nine, and of remarkably fine physique. On the 25th ult. the employer of the deceased returned from the Continent, and got a scratch on the hand from the dog which bit the deceased, in consequence of which he told the deceased to be very careful and not go near it. On the following day the deceased went to him and showed him a wound on his arm. He had put his hands to the bars of the kennel and patted the dog; the latter seemed so friendly that he allowed it to go free, and then the dog bit him on the right arm. He was not at all a nervous man—rather the reverse. He went to Dr. Gorst of Huyton, who cauterised the wound, but recently all the usual symptoms of hydrophobia appeared, and the deceased died in great agony on the 23rd ult. It is noteworthy that both at this inquest and the previous one at Wavertree the deputy coroner dispensed with medical evidence, lay witnesses only being examined. Considering the fearful nature of this disease, and the efforts which are being made by scientific and other workers to discover its cure or its prophylactic, it does appear most important that in every well-marked case there should not only be medical evidence but a careful post-mortem examination, the spinal cord being the subject of special microscopic and other inquiry. It is also important that the dog should not be destroyed unless this is absolutely necessary, but should be removed to a place of safety and kept under the careful observation of a skilled veterinary surgeon. In this case the dog, a valuable stag hound, stated to be worth £50, was destroyed. The deputy coroner urged the importance of all dogs being kept under proper control for the next three months, observing that it was perfectly useless to issue orders in one district, while in another the dogs were allowed to wander about loose. If there were combined action the disease might be stamped out. It is satisfactory to observe that no fewer than fifty-four persons were summoned before the county magistrates for allowing their dogs to be at large within the townships of West Derby, Toxteth Park, and Garston; fines and costs amounting in the aggregate to £33 15s. were imposed. In the city of Liverpool the following general Act is always in force: "The police may take possession of any dog found in any street and not under the control of any person, and may detain such dog until the owner has

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instances has experience verified the truth of these remarks experience not only of success but of failure. How many nervous children have passed through an active and useful lifetime in virtue of that very necessity for exertion which at first seemed a cruel hardship, and how many others have missed their purpose through that indulgent leisure which wrapped them in themselves, it would indeed be difficult to say. We may safely assert that any considerable number of life histories would furnish not a few examples of either event It is, however, a happy as well as an instructive fact that the morally tonic system in the management of such cases is taking the place of a more sympathetic and expectant method. We do not say this in order to advocate the application of any harsh and sudden hardening process to a timid nature, or the exclusion of judicious gentleness in training, but merely to advise the employment in education, where tone is feeble, of tonic measures. If there is in any family a history of nervous disease in certain members, and a probability that the morbid type has been perpetuated and is expressed in a wayward or passionate temper, in timidity, in languor, or any other of the protean features of the neurotic constitution, it does not follow that whims must be yielded to, exercise discouraged, and school-work forbidden. It is rather by the exercise of a wise firmness free from irritation, of moderate discipline, mental as well bodily, and, not least, by association with other healthier minds, that the atonic or loosely coupled faculties must be strengthened and taught to work with regularity.

THE PRACTICE OF MEDICINE AND SURGERY IN NEW SOUTH WALES.

It is natural, not to say essential, for every civilised community to consider the recognition which it will give to the profession of medicine. The nations which most pride themselves on their freedom are not able to ignore this question, neither are our colonies. They may at first give themselves little trouble about it. But it soon transpires that society and the individuals composing it have an immense interest in the creation of a body of men specially educated to deal with disease, and in the punishment of all fraudulent representations of the possession of such education. The Legislative Council of New South Wales in March last appointed a select committee to inquire into the state and operation of the laws for the regulation of the practice of medicine and surgery in that colony. They have not yet completed their work, but they have issued an interim report showing much need for legislation to prevent the public being misled by quacks and pretenders of all sorts, who with bogus degrees and false or fantastic titles deceive the unwary. One unqualified medical practitioner was examined, and threw a vivid light on the way in which some so-called diplomas are obtained. He possessed a diploma from the Edinburgh (!) University, Chicago, U.S. He did not attend to be examined. But he wrote a treatise on Venereal Disease and sent it on "along with the fees." After an examination through the post he obtained the diploma of Doctor of Medicine! He had appealed to have this diploma registered, but mercifully had been refused. He has been (as might have been anticipated) convicted of distributing obscene literature. Another witness stated that there are 1000 registered practitioners in New South Wales, and that 100 are registered annually in Sydney. This gives a proportion of practitioners to population about twice as large as that in Great Britain. A homœopathic physician stated that he had no diploma beyond being registered in the London Homœopathic Directory—certainly a very infinitesimal qualification. But this gentleman's claims were respectable compared with those of others. The herbalists are a very numerous host. One, in particular, did all his diagnosis in a state of clairvoyance, getting 10s. before the commencement of the process. The evidence of Mr. Andrew Honison, M.B., secretary for ten years to the Medical Board of New South Wales, disclosed the risks of a state of the law highly favourable to audacious scoundrels of all sorts, with forged or bogus diplomas, making it difficult to refuse them registration and impossible to remove them when once registered. If some legislation is not attempted after this inquiry, we pity the inhabitants of Sydney, especially the poorer sort, who are evidently surrounded by men who play on their ignorance and their fears. Mockery in any matter is hard to bear, but in the hours of disease and danger to have a forger or a knave come to one in the garb of a State recognised and registered doctor is a public evil of the worst kind. One of the witnesses stated that only a statutory declaration of identity was required from persons holding foreign qualifications, and that a person once placed on the register by the Medical Board could not be removed. One witness stated that he had been employed by a firm who traded as a Remedy Company, and extorted money by playing on the fears of patients. Any person may practise and may call himself anything he pleases. An unqualified person may be called as a medical witness by a coroner. One witness mentioned that a coroner was an unqualified practitioner, and sat in judgment on one of his own fatal cases! We cannot doubt that a committee which has exposed such a loose and dangerous state of the law will not consider its work done until it has urgently recommended legislation for requiring more strict evidence of regular medical education and examination, and making penal the use of titles and designations which defraud the public and grossly injure respectable medical men.

COLD AFFUSION IN APPARENT DEATH FROM LIGHTNING.

Dr. Hidalgo of Mexico brought before the Academy of Medicine of that city, at a recent meeting, the case of a man who was struck by lightning, and was at first thought to be dead, but who, after having had, at the suggestion of a passer-by, a large quantity of cold water thrown over him, began to show signs of vitality. He did not at first receive any medical treatment, so that the early history of the case had to be obtained from the relatives. After being brought home, water was still poured over him until he spoke for the first time, saying he was cold, and begging that this treatment might be stopped. He was then put to bed. During the night he did not sleep, but kept talking in a delirious manner, and complaining of pain, especially in the head. When asked what was the matter, he said at one time that he had something the matter with his chest, and at another that he had rheumatism all over, but he made no reference to the lightning. Dr. Hidalgo saw him the next day and found him in a semi-comatose state. The pulse was 75, full and compressible, the temperature normal, the respiration rather rapid. He was so deaf that he could only be made to open his eyes by shouting close to his ear. The pupils were contracted. He complained of pain all over, but especially in the head and arms. He had passed three badly smelling liquid stools during the night. He was neither hungry nor thirsty. The electric spark had entered the upper part of the right parietal region just behind the auricle. The scalp was burned over a surface of about 4 by 5 centimetres, and a spot of dried blood was seen on the upper part of the auricle. The right side of the neck was reddened as by a burn of the first degree; below this, as far as the umbilicus, the effects were equal to those of a burn of the second degree, of the width of about 15 centimetres at most, but very irregular in its dimensions. The electric fluid had passed down the inner aspect of the

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but there is no evidence of its propagation by water or other ingesta. The period of incubation is remarkably short, never exceeding twenty-four hours. M. Brouardel, in order to check the spread of the epidemic, organised, with the assistance of the house-surgeons of some of the Parisian hospitals, a special medical service for disinfecting the clothes and cottages in the affected areas; and the chief feature of this organisation was the formation of a relief convoy, comprising a hand engine and apparatus for steaming the clothes, bedding, and other furniture. The epidemic has now practically subsided.

THE DURATION OF SCARLET FEVER INFECTION.

COMMENTS have more than once been made as to the length of time during which scarlet fever patients are retained in the hospitals of the Metropolitan Asylums Board, but they have mostly emanated from persons ignorant of the disease. Every medical practitioner knows the danger of the desquamating stage; but it may be a question whether the danger which attaches to a patient necessarily lasts as long as the process of desquamation does. An ordinary patient has finished desquamating and is regarded as free from infection in about six weeks from the date of the eruption, but there are occasions when longer isolation is needed, and it has often been held that even the firm skin from the heels and soles of the feet must have become thoroughly detached before a patient can leave the hospital with safety to others. These are the cases that mostly call for unusually long detentions, and Mr. Corner, medical officer of health for Poplar, apparently has such a case in view when he publicly calls attention to the fact that a patient sent in to one of the metropolitan hospitals by him was detained over nine weeks. He at the same time calls attention to the common belief that infection continues so long as the outer skin has not wholly desquamated, a matter which he regards as an open question. Proof one way or the other is at present difficult, and so long as this is the case the authorities of fever hospitals are right in taking the safer course of the two. We may, indeed, be certain that, with the grave pressure for beds which the Asylums Board are now experiencing, they are not likely to detain patients longer than their medical advisers deem to be really necessary in the interests of both the public and the patients.

THE CRIMEA AS A HEALTH RESORT.

DR. F. WEBER, in an article published in the *St. Petersburger Medicinische Wochenschrift* gives an account of the different seasons in the health resorts on the southern shore of the Crimea. The climate of this region presents many attractions. There is a particularly large number of fine days, a long summer and a mild winter. It is, however, subject to numerous winds, which make it necessary that invalids should choose a dwelling which is well built, so that they may be protected from the inclemency of the weather on the days when they cannot get out. The portion of the Crimea which Dr. Weber writes of is a strip of land two or three miles in breadth, lying between the southern shore and the Jaila Mountains, which are some 5000 feet high. He divides the year into four cure seasons: the spring, or kefir; the summer, or koumiss; the autumn, or grape; and the winter. In April and May koumiss is not so good as it becomes later on, when the cattle are able to get better fodder; kefir and milk can, however, be had to perfection, and hydropathic and mineral water treatment can be carried on. Kefir and koumiss have been manufactured on scientific principles by medical men, but these gentlemen have never been able to make them so well as the Tartars and Greeks who trade in them. The summer is of course the chief season for baths of all kinds. Jalta itself is too hot to be agreeable, and even its regular inhabitants seek higher and cooler ground. This is the great time for koumiss; autumn is the chief season in the Crimea, especially for Jalta, which is generally filled to overflowing. The grapes are said to be particularly suitable for the grape cure. Until within the last few years everyone left Jalta and the rest of the south of the Crimea in the winter, but lately arrangements have been made for taking advantage of the superiority of the winter climate over that of most parts of Russia by constructing hotels and *pensions* suitable for winter visitors. Since the catastrophe in the Riviera a good many people have felt disinclined to go there, and although Jalta can hardly claim to equal Nice as a winter health resort, it is found to afford a very fair substitute for it in the case of persons with pulmonary affections who cannot manage a very long journey. Up to Christmas (Jan. 6th) koumiss can be depended on. After that time, however, it is not to be recommended. Dr. Weber states that meat powder thickly spread on bread-and-butter is largely and successfully used as nourishment for patients after the koumiss has to be given up. He finds that patients with hectic lung troubles who come to the Crimea early in the season—say before the middle of October—derive much more benefit from their stay than those who arrive in January or February, as the former have time to become acclimatised before the severe weather sets in.

TOILERS TO THE LAST.

THERE is nothing more pathetic than the dogged resolution of unvanquished poverty fighting beneath a weight of years the unremitting battle of life. Full of meaning in this view are the following figures relating to the licensing work of the Metropolitan Police:—

Class.	No. licensed.	Over 60 years of age and under 70.	Over 70 years of age and under 80.	Over 80 years of age.
Hackney drivers ...	14,852	850	117	3
Stage drivers	4,853	112	13	1
Conductors	6,615	25	—	—

A community numbering in all more than 1100 individuals, every one stricken in years, and all actively engaged in attendance upon the public vehicles of the metropolis! It is an interesting and a notable fact that, in a body of 20,000 men, four octogenarians should be found capable in eye and hand of navigating the crowded thoroughfares of London; but it is more interesting and more notable still that the public should hear of this battalion of veterans, not in the dithyrambs of political or philanthropic oratory, but through the medium of a sympathetic reference to them in the annual report of the Chief Commissioner of Police.

THE PREVENTION OF NERVOUS DISEASE.

WE are indebted to Dr. Russell Reynolds for a simple but scientific exposition of the power of preventive medicine as applied to the treatment of nervous conditions which are liable to give rise to allied forms of actual disease. The drift of his observations at the Bolton Congress of the Sanitary Institute was as follows:—Prior occurrence does not establish heredity, but even where predisposition exists, disease characteristic of a constitutional type may arise *de novo* through mismanagement of the individual affected. It is also to be remembered that expected nervous diseases can often be prevented, if the system in which they arise, instead of being pampered into illness, is refreshed by good food and discipline, and so developed to the level of its normal health. In how many

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some effect on calculi already formed, as well as on the "calculous diathesis." He remembers being struck with the appearance of a stone—he does not say of what kind—which he saw removed from a young man's bladder, and which, though hard in some parts, was so friable in others that it could be broken down with the fingers. On questioning the patient, it was found that he had for some time taken ceterach by the advice of an old native medicine man, and that while he was doing so he had remarked that he passed more urine, and that it contained gravel. The pain, however, did not diminish, and so he lost faith in the treatment and gave it up. It is to be remarked that the use of ceterach in urinary calculi is by no means new. Dr. Pereira does not explain what relationship he supposes to exist between the "calculous diathesis" which leads to urinary calculi and that which produces gall-stones, or why a remedy which is useful in one case should be prescribed in the other; still his facts, such as they are, are worth noting, and they seem to have interested the members of the Mexican Academy of Medicine, before whom they were brought, and who had the opportunity of examining the various gall-stones and gravelly matter passed with the fæces, as well as the partly friable vesical calculus, upon which Dr. Pereira's suggestions were in part based.

THE REPORT OF THE HOWARD ASSOCIATION.

THE Howard Association have just issued their annual report on the present state of prisons and reformatories and the means best adapted for the prevention and punishment of crime. Some of the observations on the boarding-out system as employed for the arrest of juvenile pauperism and crime are well worthy of consideration. The committee of the Association claim for this system a marked advantage over that of the reformatory and industrial school, inasmuch as it secures, as far as possible, the separation of children of this class from their earlier and hurtful surroundings, their release from the frequent hardships of life in a public institution, removal of the doubtful benefit of mutual intercourse, isolation in case of illness, and a free allowance of fresh air and healthy exercise. The ultimate aim of this movement is the emigration of these children to a British colony, and the advantages detailed above are certainly conducive rather than otherwise to the successful attainment of that object. With reference to the prevalence of disease, we note that the report mentions ophthalmia as having been particularly common in one industrial school, and the treatment as directed rather by energy than skill. The cost per child of maintenance on the boarding-out system is considerably less than on any other. The preference accorded to it by the Association is thus on various grounds a rational one. On other matters connected with crime and prison management the report affords details of some importance. The close connexion between criminality and drunkenness is not for the first time exposed, and the influence of the temperance movement in lessening the number of punishable offences is acknowledged and strongly advocated. So-called "working men's institutes" are treated with equally vigorous reprobation, and are shown to be in many instances merely public-houses of an unusually degraded character. The salutary effect of the teaching of lady visitors in prisons is commented on. Their peculiar fitness to instruct and advise prisoners of their own sex, it is truly said, is such as no chaplain can pretend to. In referring to the murder penalty, a justifiable regret is expressed in the report that the action of law with regard to its infliction is far from regular, and cannot fail to excite an earnest desire for some clearer legal definition than is now available, of the nature of the crime for which it is the sole expiation.

THE EPIDEMIC OF MILIARY SWEAT RASH IN FRANCE.

IN many of the central departments of France an epidemic of a rather curious character has prevailed during the early part of the present year. Under the title of "L'Epidémie de Suette Miliare du Poitou," M. Brouardel has contributed to the Académie de Médecine the results of the elaborate investigations made by the Commission charged with the examination of the epidemic. It appears that on March 16th of the present year there appeared during an epidemic of measles a case of "suette miliare" in a young man aged eighteen, living at Sillarde, in the canton of Lussac-les-Châteaux; this case appears to have been the first link in a long chain of cases which were not confined to the district first affected, but appeared also in neighbouring departments. The symptoms of the disease were usually preceded by ill-defined prodromata, such as feverishness, weakness of the legs, and general malaise, followed the next night by copious sweating. The nervous symptoms were continued feelings of suffocation, sometimes increased into paroxysms, a sense of epigastric constriction, palpitations, agitation, and delirium. Cramps and contracture of muscles were also observed. The tongue was furred and the bowels constipated. In the first stage cough is habitual, and epistaxis generally abundant. The second period commences with the appearance of the eruption, which presents two chief features: first, a miliary papule, transformed later into a vesicle, which finally discharges; and, secondly, a polymorphous erythema, which may be arranged under three forms—a red rash, a measles-like eruption, and a purpura. The measles-like rash first appears, and is followed by the scarlatinal and purpuric characters. Sometimes the eruption remains rubeoliform, or it may commence as a scarlatinal rash. The face is the first to show the eruption, thence it spreads to the neck, trunk, upper limbs, and finally to the legs. The veil of the palate is often speckled with red. The forearm and dorsal surface of the hands are also seats of election for the papules. The legs are often less affected than the rest of the body. What is known as the "suette blanche" is composed of papules which remain hard and opaque. Frequently the eruption comes out in successive crops, which do not exceed two or three in number. This mode of evolution must not be mistaken for relapses of the malady. The eruption disappears completely and rapidly, but occasionally the purpuric spots remain a long time. During the eruptive period the fever is less intense, and the stomach derangement and the feeling of malaise are less pronounced. The constipation continues, and the stools have an offensive odour. The urine is scanty and sometimes suppressed. Very copious melæna has been noted. The evolution of the disease is completed by a desquamation of the skin, which occurs locally and in large flakes, especially about the fingers and palms of the hand. The desquamation supervenes soon after the appearance of the skin rash, and may even accompany the latter; it may begin on the face at the same time that the eruption is breaking out on the legs. The malady, in reality, terminates when the eruption commences to pale. Convalescence is characterised chiefly by its slowness, and this may be equally the case with slight as with severe degrees of the affection. The disease differs from measles in the circumstance that the rash appears on the second day after the premonitory symptoms set in, and also in the marked desquamation. Children are more liable to the disease than adults. The perspiration is profuse. The epidemic has been particularly severe this last year, for of 13,000 inhabitants in the district of Montmorellon 1700 were attacked, and the average mortality was 12 per cent., though in some villages it reached as much as 33 per cent. It is contagious,

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reported is induced by exposure and what is commonly called "chill," it is a longer period than one would *a priori* be prepared to expect. Another striking feature of the report is the contrast which it exhibits between the causes of incapacity and the causes of death. Some differences—even some contrasts—one would anticipate, For instance, no one will feel any surprise that rheumatism, which is responsible for only one death out of seventy-four, should be a source of incapacity in 15 per cent. of the cases of invalided officers. But it is rather noteworthy that injuries, which come next to rheumatism as the causes of incapacity in twenty-nine cases, or 13 per cent. of the whole number, should not be chargeable with a single death if two cases, the one of accidental drowning and the other of suicide, be disregarded. It looks as if the British criminal had a wholesome dread of taking life, even when at his times of violence he is most dangerous to viscus and limb. It looks, moreover, as if he had a curious proficiency in the art of inflicting bodily damage on his fellow-creatures, whom he is cunning enough to disable, without killing them.

INFANT MORTALITY IN ENGLAND AND IN FRANCE.

THE Conseil Supérieur de Statistique in France has recently issued its bulletin for the session of 1886, from which it appears that the subject of infant mortality came under the discussion of a sub-committee during the year, and papers on the subject by M. Lafrabrègue and by M. Bertillon were submitted to the committee and discussed. The paper of M. Lafrabrègue contains a statement with regard to infant mortality in England, which is as remarkable for its inaccuracy as it is for the misconception it displays as to the system of registration in this country. M. Lafrabrègue's paper gives a table comparing the proportion of deaths under one year to living births in seventeen European States. This table is based, it should be said, upon the international figures for the years 1865–83, published in the Italian Report on Vital Statistics for 1884. The table shows that in these European States the deaths of infants under one to a thousand living births ranged in these years from 105 in Norway and 122 in Scotland, to 308 in Bavaria and 313 in Wurtemberg. The figures for England and France stand at 149 and 166 respectively. M. Lafrabrègue remarks: "According to these figures infantile mortality in England and in Scotland is lower than in France, *but this is not the case.*" Fortunately this statistician proceeds to explain his ground for making so dogmatic an assertion. It is explained, as is well known, that the law in France insists upon the "inscription" of all births within three days of their occurrence, and that all children who die previously to the inscription of their birth are recorded as still-born; in England, however, we are told that fifteen days are allowed for registration of deaths, and as no record is made of still-births, it follows that those children dying within fifteen days of birth are not recorded either in the birth or death register, hence the low rate of infant mortality shown by English statistics! Similar statements have before now been made by French statisticians impugning the accuracy of English statistics of infant mortality, but M. Lafrabrègue has exceeded his predecessors both in the breadth of his assertion and in the inaccuracy of his statement. Even if we admit that the English registration system is defective, both for the non-registration of still-births and for allowing so long an interval for the registration of births, the law enacts that information concerning deaths should be given within five (not fifteen) days; and the law is imperative, imposing penalties for non-compliance, that *all* births and deaths shall be registered, even if the infant should only once have breathed. The English law is at any rate free from the statistical defect of the French law, which records infants as still-born that may have lived three days. It is quite possible, and indeed probable, that a small number of births in England, in spite of the compulsory law, escape registration; but the effect of this would certainly be to overstate the rate of infant mortality, and may for the present purpose be disregarded. It is also possible that the deaths of a few infants may, in spite of heavy penalties for non-registration and also for representing a live-born child to be still-born, escape registration; but the following figures afford the most conclusive refutation to M. Lafrabrègue's assertion that the deaths of infants dying under the age of fifteen days are not registered in England. Of forty thousand deaths of children aged under one year, registered in England and Wales, in various urban and rural districts in 1874-78, more than 20 per cent. were of infants under the age of two weeks; 13 per cent. were of infants aged less than three days, and 8 per cent. of infants aged less than one day. It would therefore appear that, as no less than 13 per cent. of the registered deaths of infants under one year of age in England occur in the first three days of life, few of which would be recorded as deaths under the French system, there is more than a probability that the comparison of English and French official statistics understates the real excess of infant mortality in France, rather than considerably overstates it, as M. Lafrabrègue so confidently asserts.

TREATMENT OF GALL-STONES.

DR. SAMUEL MORALES PEREIRA, of Puebla, Mexico, gives an account in a Mexican medical journal of a case of "Biliary calculus diathesis" with enlargement of the gall-bladder, in which he found a decoction of a well-known fern, *Asplenium ceterach*, or *doradilla*, as it is called in Spanish, of great value. The patient was a gentleman of good general constitution, who had suffered for a long time from pain of a more or less periodical character in the hepatic region. His digestion and his temper were considerably affected. He had applied to a number of medical men, but had never derived any benefit from their treatment. On examination, the right hypochondrium was found to measure six centimetres more than the left, the region of the gall-bladder being distinctly enlarged and tender to the touch. The hepatic dulness in the axillary line was of normal breadth, but it extended five or six centimetres beyond the normal in a downward direction in the mammary line. On changing the patient's position no alteration in the situation of this abnormal dulness could be detected. The patient, on being asked, said that his urine deposited a red sediment, and that he had at times passed calculi with his stools. Dr. Pereira, having had experience of the good effects of ceterach in gravel and urinary calculus, and believing that it exerts an influence in "calculous diathesis," decided to employ it in this case. A decoction of half a drachm of the plant in five ounces of water was ordered four times a day. During the first twenty days no effect was observed. By the end of another twenty days the symptoms of mental irritability had disappeared, and the pain in the hepatic region had very greatly diminished. In fifteen days more the tumour in the region of the gall-bladder had become much less perceptible. The patient had been kept on milk and broth, which he did not at all like. He had passed three gall-stones and some gravelly matter with his stools there having been some severe hepatic pain. After this the patient continued to improve, though it was not easy to convince him that he was doing so. The amount of ceterach was diminished, and capsules of taurin prescribed, belladonna frictions being also applied to the hepatic region. He passed a succession of gall-stones, and the whole of the abnormal physical signs as well as the subjective symptoms passed away. Dr. Pereira hazards a suggestion that ceterach may have

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It seems more than probable that the least trustworthy portions of the return relate to two points on which information was more especially desired, and which would have been undoubtedly valuable if trustworthy—namely, the extent to which the working classes are unemployed, and the nature and amount of assistance received when out of work. It would evidently be useless to base any conclusions on these branches of the subject upon the untested statements of the working men themselves, who, with visions of State aid in prospect, would naturally be tempted to strengthen their claim for assistance. Therefore, while Dr. OGLE'S report undoubtedly contains much interesting statistical material, it is difficult to say in what direction it contains information that can be made practically useful.

If we turn to Mr. BOOTH'S paper upon the condition of the population in the Tower Hamlets, which division includes the five unions of Whitechapel, St. George's-in-the-East, Stepney, Mile-end, and Poplar, we find that he has attempted, in accordance with a scale of his own, to divide the population into three classes, and calculates that 65 per cent. are above the line of poverty, 22 per cent. are on the line, and 13 per cent. are below the line, including the lowest classes, with the casual and very poor. Should Mr. BOOTH be able to extend his inquiry over other parts of London, applying the same system of classification, the value of his information will be much increased; but to be able to turn such information to practical account we need to go deeper, and further behind the scenes, than seems possible in any such inquiries as those instituted by the President of the Local Government Board or by Mr. BOOTH. There is comparatively little use in knowing, even accurately, the extent and amount of real and grinding poverty that exists among us, unless we can derive from that knowledge some means for controlling its amount and lessening the consequent suffering. Mr. BOOTH, speaking of his "lowest class," which fortunately constitutes only 1½ per cent. of the population of the Tower Hamlets, describes the life of these people as "mostly a savage life with occasional vicissitudes of extreme hardship and occasional excess." The "casual and very poor" is a larger class, making up his 13 per cent. who fall below the line of real poverty. What we really want to know is so much of the history of this class as will teach us the real cause of their distress. They doubtlessly consist in unknown proportions of those born in the class who have never had a chance of rising out of it, and of those who may be called the failures and the drift from all the classes above them. Society owes to the former some kind of reparation, but how are we to help the latter? If, however, we can find the way to ascertain more definitely the true causes of the poverty and degradation of the lowest classes, we shall, at any rate, be in a better position to attempt the removal of this blot upon our boasted civilisation.

WE are asked by Sir W. Guyer Hunter, M.P., to state that a recent announcement in an evening contemporary, to the effect that he would shortly receive a Government appointment abroad and would resign his seat in Parliament, is totally without foundation.

THE preparatory Medical School in Toulouse is to be advanced to the rank of a medical and pharmaceutical school *de plein exercice*.

Annotations.

"Ne quid nimis."

THE SCARLET FEVER EPIDEMIC AND THE ASYLUMS BOARD.

THE prevalence of scarlet fever in the metropolis still continues, and has undergone a further increase, as many as seventy-two fresh patients having been received into the Asylums Board hospitals in a single period of twenty-four hours. But by dint of considerable energy, two of the admirable pavilions at Winchmore Hill were ready for the reception of convalescents early this week, and this gave the managers more room for acute attacks in their other hospitals. Two more are now ready; efforts will be made to prepare more accommodation at Winchmore Hill, and by this means it is hoped that the emergency may be met. How far this will be the case yet remains to be seen, but unless an earlier abatement of the epidemic takes place than has been usual in former autumnal outbreaks, hospital accommodation in London will before long be put to a very severe strain. At the last meeting of the managers the various arrangements that had been made were announced, and a matter was then brought before the meeting that shows a real difficulty in the relations between the Local Government Board and the managers. Preparations have to be made to meet any future small-pox epidemic, and the managers desired to build hospital blocks on the plateau of their site at Darenth. This, it appears, the central authority have all along objected to, and they required that the buildings should be placed in the valley part of the estate. For eight or nine months matters have been so strained that everything has been at a standstill, and in the end the managers called in the services of Mr. Rogers Field, M. Inst. C.E., who has, on grounds which involve both medical and engineering points, altogether condemned the valley site. On the receipt of this report, but, as the letter said, "in deference to the wishes of the managers," the central authority now altogether give in, and Sir Edwin Galsworthy, with good reason, complained bitterly that the managers had thus had their preparations put off until winter was approaching. This incident makes it more than ever difficult to understand where the Asylums Board ought to turn for skilled counsel in their work; and it certainly is more than strange that the central body, with a staff of some eighteen engineer and medical inspectors, could not, until an outside adviser was called in by the managers, possess themselves of the information which they should have had before they opposed the managers, and which could easily have been obtained by them some nine months ago. Obviously there is a vacancy which someone is called upon to occupy, and this is probably the explanation of the statement in Dr. Dudfield's last report to the Kensington Vestry, to the effect that in the last small-pox emergency the Local Government Board and the Asylums Board followed the advice that he had given them. But whoever has the responsibility of being adviser to the Government should receive the emoluments properly attaching to the post.

HEALTH OF THE METROPOLITAN POLICE.

FROM the report of the Chief Surgeon upon the Metropolitan Police it appears that the cases of sickness occurring during the year 1886 in a force of 13,257 men have numbered 6974, giving a proportion of 52 per cent. The daily loss of efficiency to the force through sickness averages 3·7 per cent., so that apparently the average duration of sick leave in an individual case is about six-and-twenty days. This would seem to imply a considerable proportion of severe attacks, and seeing that a very large part of the sickness

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affected part; but we may ask whether, had the staphylococcus not been inoculated, the bone-marrow or the cardiac valve would have become the seat of virulent inflammation. Of course the soil is one element, but the seed is quite as essential; and we imagine that although we speak of a specific disease being due to a germ, we imply that the body is apt to receive that germ. We must therefore confess to some disappointment in Professor SEMMOLA'S counsel that we should study the physical and chemical conditions of the blood and tissues, which would be a far harder task than the determination of specific bacteria. Nor can we see that the knowledge of the one factor is of any use without the knowledge of the other. We admit that there is a future before therapeutics in respect to modifications of the soil more hopeful than in actively germicidal methods; but why, then, decry the study of bacteriology and paint in such dark colours its baneful effect on pathology, when, after all, its teachings are furnishing the very motive for such profounder knowledge of the workings of the body which is so much desired? If Professor SEMMOLA intended to damp the ardour of bacteriologists he will have failed in his object, for we can see in his address nothing but an encouragement to them to further investigation.

ALIKE from the standpoint of politician, statist, or philanthropist, the condition of the working classes is a subject teeming with interest, and of vast importance to the nation's welfare. It is eminently satisfactory, therefore, to welcome any honest endeavour to throw light on this complex question. Whatever opinion may be held as to the value of a large proportion of the figures now set before the public as the result of the recent inquiry into the condition of the working-class population in certain typical districts of London, the recognition by the Government of the importance of the subject, implied by the inquiry, is a good sign of the times.

The object of this inquiry, carried out under the direction of the President of the Local Government Board, was primarily to test the actual condition of the working classes as to birth-place, civil condition, housing, employment, and means of subsistence when out of work. No material difference of opinion exists as to the value of such information if trustworthy, but few of those who read Dr. OGLE'S report to Mr. RITCHIE upon the results of the inquiry will be inclined to think that the inherent defects in the statistical material collected have been too firmly insisted upon.

When Mr. CHARLES BOOTH, a few months since, read before the Royal Statistical Society his elaborate paper on the Condition of the People in the Tower Hamlets, objection was, in some quarters, made to his figures because his information was in the main derived from the School Board visitors, who, it is more than probable, would often be systematically misinformed on many points bearing, even indirectly, upon the ability of the working classes to pay school fees. These objections to Mr. BOOTH'S information, however, apply with even increased force to the figures in the report now officially published, which were supplied by the working men themselves. Mr. RITCHIE'S inquiry was undertaken at the end of March last, and the idea of submitting the long list of questions to the working men was, at any rate, not a happy one. The men, not unnaturally hoping that the information might be made the basis of State aid, could scarcely be expected to resist the temptation of understating their resources and overstating their misfortunes. Dr. OGLE points out, however, that apparent incongruity in the figures must not too hastily be attributed to wilful misstatement. If you ask a skilled artisan who is temporarily engaged as an unskilled labourer whether he is out of work, it need cause little surprise if he answers in the affirmative, although the tabulation of such information must necessarily be misleading. Similar contradictions are involved in the return of 214 men actually in work, and yet tabulated as permanently disabled; this probably signifies that the workman is physically unequal to follow his ordinary occupation, although he is able to perform some other and probably lighter form of labour. While admitting, however, the probability of "considerable misstatement" on many of the points concerning which information was sought, the tabulated results obtained for the several occupational groups are not without value for comparative purposes, since there is no reason to believe that the tendency to inaccuracy was greater in one occupation than another.

The inquiry embraced nearly 30,000 working men living in St. George's-in-the-East, and in parts of Hackney, Deptford, and Battersea. If account be taken of the wives children, and other relatives residing with these working men, the population dealt with exceeds 125,000. Perhaps the most striking fact brought out by the return is the small proportion of the foreign element among the working men dealt with. The mean proportion of workmen born abroad is only 5 per cent., and in only six of the occupational groups does the proportion exceed 9 per cent.; these groups are sugar bakers, tailors, cigar and tobacco workers, furriers (with skin dressers, &c.), bakers, and bootmakers. If these occupations be excluded, the proportion of foreigners falls to 2 per cent. These returns, it is fairly said, "scarcely support the current belief that foreign labour is largely supplanting native labour in London." Neither do they support the general impression that at times of depression the condition of the London labourer is affected by the large amount of provincial immigration. No less than 97 per cent of the working men stated that they had lived in London more than a year, and even of the foreigners 94 per cent. had lived over a year in London.

If we can trust the figures bearing upon the housing of these working men and their families, it is satisfactory to find that 59 per cent. were returned as living in three rooms or more, 21 per cent. in two rooms, and only 17 per cent. in single rooms. It is to be feared, however, that these figures are somewhat invalidated by the lodger complication, which by the form of the return could not be fully taken into account. A similar disturbing element affects the return of weekly rent; but it may be stated that the average weekly rent returned by the whole of the working men was 6*s.* 2*d*, while the average weekly earnings was 24*s.* 7*d.*; thus the proportion of earnings spent in rent was 25 per cent. The variations in rent, earnings, and room accommodation in the various occupational groups is not without interest, and, as suggested by Dr. OGLE, their relative proportions are more trustworthy than the figures for any individual group.

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the public and the profession have been abundantly provided with doubting criticisms as to whether there is, after all, any true relation between bovine disease and scarlatina in the human subject, and the result has been a demand for further scientific investigation by the Government departments dealing with the prevention of human and animal diseases. Lord BASING would amend the sanitary laws, because there is "no finality in legislation." The proceedings of the Sanitary Institute have well shown that we are yet a long way off the time when finality will be reached as regards the saving of life from preventable diseases, and it would be a national disgrace if, for mere financial reasons, any check were placed upon the development of scientific research in this direction. By all means get rid of centralisation as regards mere administrative interference by the Local Government Board in matters that have primarily a local concern, and that can properly be dealt with by local medical and other advisers; but there is no such demand on the part either of the public or of the profession, as Lord BASING'S presidential address would imply, for any restriction as to researches by the central authority on matters affecting public health in its widest sense.

No better illustration of the scope there is in medicine for divergent opinions could be afforded than the fact that a subject which formed the main topic of discourse at the Congresses of London and Copenhagen should have been dealt with at Washington, in one of the general addresses, in an antagonistic spirit. Bacteriology, and the promise it holds out for prophylaxis, have been a chosen theme by many writers and speakers on medical subjects for some years past; and perhaps it is only right that opportunity should be given for the declaration of opposite views. Professor SEMMOLA undertook this task at Washington. His address was eloquent, and abounded in wise and witty sayings. It was based upon the requirements of the logical methods of science, and its aim was to decry the pursuit of bacteriology, which he likened to the "systems" that in olden time dominated the medical world. The comparison was, to be sure, hardly a just one, for the ancient systems were reared on theoretical reasonings, and the application of bacteriology to pathology is grounded on observation. Nevertheless, Professor SEMMOLA thinks we are being led astray, and are following blindly a path which can only lead to disaster and discomfiture. It may, then, be worth while to follow his argument in order to ascertain how far his conclusions are worthy of acceptance, and to what extent his warnings should be regarded.

That the aim of the physician is the cure of disease, and that the true test of medical progress is the great or small number of patients rescued from death, are propositions which may be taken for granted. It is true also that the methods of investigating medical problems differ from those formerly employed. Observation has replaced introspection, and the study of the phenomena of life in natural and morbid conditions forms the groundwork of modern medicine. This is the experimental method which Professor SEMMOLA rightly holds up to admiration, with its three components of (1) observation, (2) the formation of hypotheses, and (3) their verification. But owing to the diversity and complexity of the problems involved, and the ill-judged haste with which discoveries are declared, the actual progress towards the ultimate aim—that of assuring medicine a position among the exact sciences—is very halting and slow. Medicine, said Professor SEMMOLA, like other sciences, is not concerned with the discovery of the first cause; it seeks only to determine the physical or chemical conditions in which phenomena are manifested, in order that these may be controlled at will. These phenomena are the functional disturbances or symptoms of sickness. Their physical and chemical conditions are the natural causes of sickness; and the physician's aim is to artificially modify these conditions in disease so as to reproduce normal states, and to bring about a return to normal functions. Now, all this may be true, but it confines the application of the experimental method within the limits of the animal organism, the derangement of which constitutes disease. Professor SEMMOLA holds that it must be confined within this orbit, that outside of it we encounter only empiricism and ignorance, and therefore it is that he believes the prevalent pursuit of bacteriology, in its endeavour to introduce biological facts to the explanation of disease, is erroneous. He equally arraigns cellular pathology, condemning it also because its attractiveness has led to a disregard of the proper course to pursue in investigating disease.

Bacteriology, he tells us, is but a revival of an old doctrine of interpenetrating germs, and he wonders at the lack of caution possessed by those who are daily publishing their discoveries of new germs, and attempting thereby to revolutionise pathology. "Every clinician finds it indispensable to open at the side of his hospital ward a laboratory for bacterial culture. On one side of the hospital is a room for the cultivation of bacteria, and on the other is a room for patients, and the expenses of the first are often greater than the allowance of food for the second." Such sarcasm is hardly merited. It is no doubt true that many premature discoveries have been made, and that inoculation for the cure of diseases has been advocated with irrational enthusiasm, based on the results of experimental research with bacterial cultures and the knowledge of the conditions of bacterial life. But the method of inquiry should not be condemned for the over-zeal of some of its followers. In spite of the luxuriant crop of observations upon pathogenic bacteria, the subject is yet in its infancy, and its future is probably much more fruitful than can be at present conceived. We can only arrive at truth by devious ways. There is no wide and open path towards it; its approach is beset by the pitfalls of false generalisation. Nevertheless, the labours of the bacteriologist ought not to be discouraged. Any additional light which can be thrown upon the nature of disease through his observations should be welcomed. Professor SEMMOLA, however, has done some service in pointing out a danger attending the pursuit of bacteriology as a special study—viz., that too much attention may be given to the morbid germ and too little to the nature of the soil in which it is implanted and where it flourishes. Because a microbe is discovered in a disease, it does not follow, he said, that it is the cause of the disease rather than its effect. In osteomyelitis or endocarditis the soil must be prepared by injury before the microbes can attack the

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cause summaries published of it have incorrectly conveyed the views of the author as to the influence of hereditary taint. The presidency of Lord BASING, who, as Mr. SCLATER-BOOTH, held office as President of the Local Government Board, gave especial importance to this year's gathering, and he took occasion in his inaugural address to take stock of the present position of State Medicine, and to review its progress since the date of the Royal Sanitary Commission of 1869–71. The progress, he explained, had been great, and he admitted that it was largely due to the activity, knowledge, and intelligence of the "able body" of "medical experts" by whom the Minister of Health was surrounded. Their advice, he said, "is constantly needed and eagerly sought" by local authorities, whereas their published labours have formed text-books and scientific treatises which have been of "service to the world at large," and have been accepted as "finally authoritative." All this appears at first sight to be matter for satisfaction, but Lord BASING proceeded to hint that the relation between the medical profession as a whole and the medical experts in question should now be reversed. Apparently he feared that if things remained as they hitherto have been, and still are, more public money might be devoted to the promotion of public health; for, referring to the health department of the State and the public, he would have induced his hearers to believe that they represented "two powerful currents of sentiment and opinion running counter to each other," and that a continuance of the present state of affairs would involve "more public expenditure." Hence he demanded "how long the medical profession were to be satisfied to sit at the feet of Gamaliel in Whitehall"; and, reminding his audience that local officials had now been appointed to carry out the system of State medicine, he asked to what extent the profession would continue "to accept without question the inquiries and reports produced at the public charge" by the medical inspectors of the central authority. He then went on to urge more trust in local organisations than in a central bureau.

We so entirely agree with Lord BASING as to the desirability of extending the principle of local self-government as regards almost all the matters dealt with by the Local Government Board, that we regret the strong financial ring that marred his utterances. Both in matters relating to health and to pauperism far more trust in local authorities and local officers, and far less central interference, are needed; but we cannot understand why a central organisation which has, according to Lord BASING, hitherto done work which has been of value to local officers, and indeed to the whole world, should not go on doing similar work, and, providing that work be of the same character as heretofore, retaining the confidence which he says it has secured up to the present date. We have more than once called attention to the needless way in which central inspectors are occasionally used to investigate conditions and diseases that have no more than a local interest; but the fault lies largely with the local authorities, who clamour for so-called "independent" inquiries, and if these are not at once granted they move someone in the House of Commons to bring pressure upon the central authority to do work which their own medical officers of health are quite capable of doing themselves. The truth is that a body of local experts is being gradually created throughout the country, who should receive such confidence from their local authorities that there would be no need to run for help to a central body wherever an emergency takes place. But it is altogether another matter with the subjects that Lord BASING had in view. He evidently aims at preventing extension of work which, though it may produce "scientific treatises" which admittedly go forth as authoritative to the most distant parts of a world-wide empire, tends to involve "more public expenditure." Now, it is precisely this class of work that can alone be done by a central authority, and if ever there was a period when the continuance and development of such work were wanted it is the present time. What would have been the present state of the metropolis as regards small-pox had it not been for the proof which these "experts" exhibited that our small-pox hospitals, largely erected under the Poor-law system which Mr. SCLATER BOOTH superintended, were spreading disease all around them? And only a month or two ago information from the same source opened up a new prospect for the prevention of scarlet fever, which it is believed by many to have been traced back to disease in the cow. The profession and the public alike have a right to demand that such matters should be sifted to the bottom, and it is clearly the duty of the Government to do this. In fact, many of the most important advances in public health have been facilitated by investigations, not limited to single sanitary areas, but extending over the whole kingdom; and these inquiries, though they can only be properly carried out by the co-operation and aid of local medical officers of health, cannot be brought to a successful issue by anyone whose jurisdiction is limited within the bounds of a certain sanitary area.

The proceedings of the Sanitary Institute themselves gave a pretty clear indication of the general feeling in this respect. Dr. ALFRED CARPENTER, dealing with the question of "public expenditure," showed what enormous results had already been brought about at a very small cost, and then pointed out that whilst millions were spent on life-destroying agencies, something less than £2000 a year were voted for scientific research in connexion with the prevention of disease; and other members brought before Congress subjects which have been largely illustrated and advanced by the scientific work which is carried on by the department over which Lord BASING once presided. This was notably the case in Dr. PARKES' admirable paper on Water Analysis, in which he showed, in continuation of the labours of the medical department of the Local Government Board, what is the true value of a chemical analysis in the case of waters which are regarded as having been potent to produce disease. And, on the matter of the acceptance without question by the medical profession of the views of Whitehall experts, the Institute itself, again, can show amongst its list of members many who would never be a party to the mere blind acceptance of the views of any person who had not so dealt with his facts as necessarily to carry conviction. The views as to the diffusion of infection from small-pox hospitals were at first subjected to able criticism from local officers of health and others, and their criticisms had the desirable effect of leading to renewed investigations and the production of further proof by the central authority. At the present moment, moreover,

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THE LANCET.

LONDON. SATURDAY, OCTOBER 1, 1887.

IT is doubtless possible to obtain a knowledge of any branch of science or art by steady application and persistent endeavour without the aid of oral instruction, but unless there is to be a prodigious waste of strength and time, there must, particularly in the case of applied science, be teaching, and, therefore, teachers. Both are necessary in a very practical sense in the study of medicine. So much of the knowledge to be gained consists in doing the right thing in the right way—in a word, *expertness*—that if the medical student were to set about the attainment of his object without the assistance of instructors, he would need to possess almost all the energy and qualifications of a discoverer; and only those who were thus specially gifted could hope to succeed. It follows that very much must depend on the quality of the teaching and the skill of the teacher. We sometimes doubt whether this is adequately realised. It would seem to be supposed that if only a certain amount of information is served out to students—as a ship's cook serves out the rations of a crew,—it is their own fault if they do not digest, assimilate, and derive intellectual nourishment from, the food supplied. May we be permitted to suggest that something at least may depend on the cooking. Not a little of the junk and biscuit with which the student of medicine is regaled requires to be carefully prepared, and would be all the better for a little careful cookery and decent serving; and he has a right to expect knowledge and dexterity on the part of his teacher, and something more than the rude hacking of joints and ladling out of soup with which he is too commonly served. It is not, perhaps, to be expected that the lecturer at a school of medicine should be an orator, or his delivery equal to that of a popular speaker, but it is unreasonable to suppose that young men, not wholly ignorant of the ways of lecturers in other branches of knowledge, can be interested or even contented with dreary drone and confused discourse. A very little effort on the part of any man of ordinary ability would enable him to master the difficulties of a clear and fairly animated style of address to his classes. The truth is that this matter of delivery is scarcely even thought about. Lecturers are not chosen for their skill as oral teachers, nor do they bestow any pains on this particular phase of their discharge of professional duty. It suffices them to know their subjects, and to rehearse in the lecture-room so much of their knowledge as may be required by the curriculum. This done, the student must take his chance of being instructed; and as regards his preference for a good style of delivery, that is not to be thought of. Now we contend that those who reason thus fail in their performance of the important task entrusted to them.

A chair in any branch of medicine ought to be deemed a post of distinction and usefulness, for which special fitness is demanded, and upon which both skill and energy should be bestowed. It is not enough to give utterance to good matter; the utterance ought to be worthy of the material to be communicated. It is not true that "good wine needs no bush." There never was a more senseless saw than that. If the wine be good there ought to be a great deal of bush, and it should be hung out conspicuously, so that those who must needs buy wine may be enabled to procure the best. Those who have had the privilege of "sitting under" lecturers who really knew how to lecture, and did not consider an audience of intelligent young men unworthy of their consideration, look back with pleasure through life on the fact that they gained a good deal of information with especial ease; while those who have not been so happily placed cannot but resent the neglect of which they were the victims. It is impossible to acquit the medical lecturers, as a class, of blame in this matter. There is no reason why a lecture on any subject in medicine, surgery, physiology, anatomy, pathology, chemistry, or what not, should be dry and irritating, instead of entertaining and attractive; and we will go the length of saying, without a moment's hesitation, that when a lecture does not charm the intelligent student it must be because the lecturer has failed in his performance. Students of science do not want to be amused, and there is scarcely, we think, a more grave mistake than the attempt to enliven a discourse on any serious subject with so-called pleasantries that offend good taste, and provoke a smile rather in contempt of the speaker than in homage of his wit; but, with perfect dignity, befitting the matter, the manner of an address may be easily made interesting in place of being dreary.

In short, lecturers in medical schools ought to be good speakers, with voices that do not jar on the ear—and no voice need offend if it be properly managed,—pleasing manners of speech, and the skill that consists in the knowledge of a spoken language, and power to use it properly. Elocution is a necessity of the function of oral teaching. The student is not *taught* when badly chosen words are either drawled in his hearing or hurled at him. If teachers would only give heed to the fact that teaching implies communicating knowledge to the student, not simply placing it within his reach, and would give time and attention to the acquisition of an agreeable style of delivery, they would not only do better work, but reap their reward in that popularity with their classes which establishes a bond of union between the teacher and the taught, that neither time nor distance ever completely severs in after-life. The student who enjoys his lectures as an intellectual treat, and feels that he is taking in knowledge in a time-and-trouble-saving way, will not quickly forget the boon or its giver when he becomes a practitioner, and it will rarely happen that the revered teacher is not also the natural referee in moments of difficulty for the pleasantly and successfully taught.

THE meeting of the Sanitary Institute of Great Britain at Bolton must be regarded as a substantial success. It will have tended to a more widespread interest in the important subject of public health; it has led to the preparation and publication of a number of very valuable papers, and some of the discussions on these have been marked by considerable learning. One of these papers—namely, that on Preventive Medicine by Dr. RUSSELL REYNOLDS—we publish to-day, and we would the more call attention to it be-

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numerical method, and is orderly in his arrangement of facts. There is no attempt to discuss any of the problems of surgery, but merely to state the results of surgical experience. We learn in the preface that the book has been written for the student "when first entering on the study" of surgery. For such readers it is, in our opinion, singularly ill adapted. Put into such hands the book would be nothing more or less than a "cram." Such men want a clear discussion of the great principles of surgical pathology and therapeutics, and not a synopsis. The true use of this book is for men at the end of their student career, when, having firmly grasped surgical principles, they want to freshen their memories on the details of surgical injuries and diseases. Such men will find it a very useful help. We have noticed a few errors which have escaped Mr. Walsham's critical eye, but for a book of the kind the whole is done so well that we hardly like to refer to them.

A Handbook of Diseases of the Skin, with especial reference to Diagnosis and Treatment. By ROBERT LIVEING, A.M. and M.D. Cantab., F.R.C.P. Lond., &c. Fifth Edition, Revised and Enlarged. London: Longmans, Green, and Co. 1887.

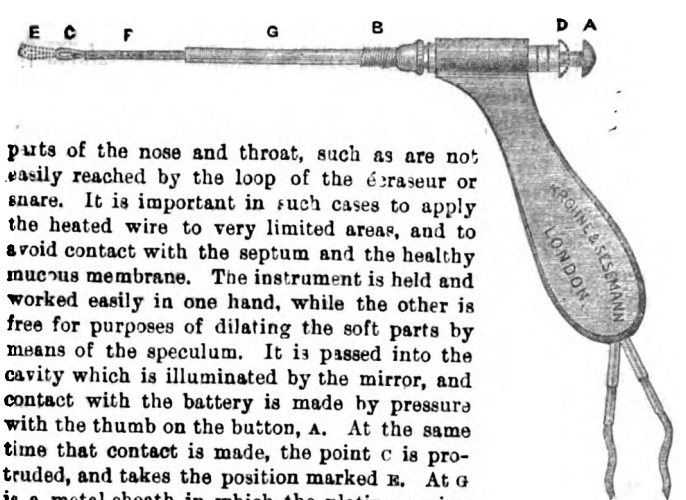
DR. LIVEING'S little Handbook has deservedly found favour in the eyes of the profession, alike from the reputation and experience of the author, his excellent teaching, the clear, easy style in which the work is written, and the judgment and discrimination with which the matter is selected and arranged. In welcoming another edition, we may content ourselves with pointing out that the author has successfully striven to ensure that there should be no falling off in merit. Many articles have been rewritten; the whole book bears marks of careful revision; separate articles have been added on Nomenclature, Classification, and Medicinal Eruptions, and a number of new ones introduced on some important diseases. We have read the new edition with much pleasure.

New Inventions.

A NEW GALVANIC CAUTERY INSTRUMENT,

FOR USE IN NARROW CAVITIES, AND ESPECIALLY FOR THE TREATMENT OF INTRA-NASAL GROWTHS.

THE instrument delineated in the woodcut was designed by me for the application of the cautery to the deeper parts of the nose and throat, such as are not easily reached by the loop of the écraseur or snare. It is important in such cases to apply the heated wire to very limited areas, and to avoid contact with the septum and the healthy mucous membrane. The instrument is held and worked easily in one hand, while the other is free for purposes of dilating the soft parts by means of the speculum. It is passed into the cavity which is illuminated by the mirror, and contact with the battery is made by pressure with the thumb on the button, A. At the same time that contact is made, the point C is protruded, and takes the position marked E. At G is a metal sheath in which the platinum wire, F, is made to advance or recede. As soon as the cautery has acted sufficiently, pressure is removed from the button, A, when the point E again recedes to its position, C, and at the same time, contact being cut off, the wire speedily becomes cool, and the instrument can then be removed without danger of cauterising the healthy parts. It is sometimes desirable to cover the part of the instrument between B and C with a quill, and thus still further protect the parts (the end of the quill at C being open either laterally or terminally, and thus allowing the heated point to protrude and recede within a non-conducting channel). This instrument can be used with a three or four cell bichromate battery. When used after the application of cocaine to the nostrils there is seldom any bleeding, but if bleeding occurs the instrument must be withdrawn, and only again used after the blood has ceased to flow. When the cavity operated on is wide, a shield in the form of an ivory tube can be screwed on to the metal at B, but in narrower cavities a crowquill slipped over this part acts very well, and forms a very good means of protecting the mucous membrane from being scorched. This apparatus is made by Messrs. Krohne and Sesemann. I have found it very efficient, more especially for the treatment of polypus nasi after the bulk of the growths has been removed by the snare or galvanic écraseur.

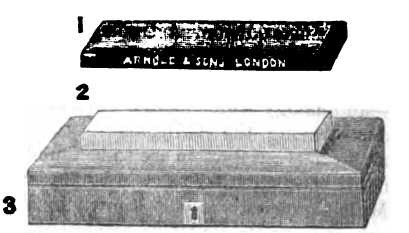


W. SPENCER WATSON.

AN IMPROVED FORM OF DISSECTING CASE.

IT has often occurred to me that the usual form of dissecting case is scarcely as practical as it might be. I have therefore suggested some alterations and additions to Messrs. Arnold and Sons, of West Smithfield, who have carried out all my suggestions. They are as follows:—

1. The substitution of four for the six knives generally furnished. Of these four, three are made much smaller than usual, the ordinary pattern being too large for fine dissections until worn down. 2. The spring in the forceps is made specially weak, as otherwise the fingers soon get cramped and fatigued. 3. An extra pair of hooks is supplied, for with a single pair it is impossible to get counter-tension. Moreover, as hooks are easily borrowed, a small ivory indicator is affixed to the connecting ring for identification. 4. To prevent the bore of the blowpipe from becoming blocked a clearance plug is provided, which fits the tube and is kept inside until the former is wanted. 5. A small fine pair of scissors replaces the two large pairs generally supplied. 6. A card of ligature catgut occupies a small pocket inside the lid. 7. A good oilstone is fixed on the outside of the lid of the case, protected by a wooden cover. This enables the dissector to keep his knives in order without moving from his seat or having to procure a stone. By the subtraction of the two knives and extra pair of scissors, the price remains the same or nearly the same as in the old form.



G. LINDSAY JOHNSON, M.B., F.R.C.S.

Stratford-place, W.

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Reviews and Notices of Books.

A Treatise on the Theory and Practice of Medicine. By JOHN SYER BRISTOWE, M.D. Lond., LL.D. Edin., F.R.S. Sixth Edition. London: Smith, Elder, and Co. 1887.

WHEN a text-book has gone through so many editions as this one, it has passed beyond the pale of criticism. Its excellence and its value have received the Hall mark of the approbation of students and teachers alike. All that can be reasonably demanded of the author who has thus earned the reward of much patient labour is that he take care to keep his work abreast with the progress of science. And Dr. Bristowe is the last who would allow his teaching to fall behind, so that no new edition of his book—which has now been before the world for rather more than ten years—appears without some emendations and additions. The present edition differs from its forerunner in containing a concise account of Pasteur's preventive treatment of hydrophobia, of which he says: "It is scarcely now open to doubt that Pasteur has discovered a method of inoculating with attenuated or modified virus by which not only unprotected animals may be rendered insusceptible of hydrophobia, but such as are already in the incubation stage may have the progress of their malady permanently arrested." The chapter on Skin Diseases has been amended, and we all know that Dr. Bristowe is an authority in that branch of medicine. The subject of Recurrent Palpitation, first described by the late Dr. Cotton, is introduced and faithfully depicted. It is noteworthy that in severe cases this functional derangement of the heart may lead to all the mechanical effects of organic disease, being itself doubtless the initiation of structural change in the heart wall. Raynaud's Disease is another subject which has been much studied of late years, and the student will be glad to find so clear and faithful a description of its phenomena as is contained in this edition. Actinomycosis and mycetoma are described in the same section, the author pointing out the close resemblance that exists between these two parasitic affections—an analogy which cannot fail to strike the reader as accurate. Among the additions to the section upon Diseases of the Nervous System are to be found articles upon multiple neuritis, congenital tabes dorsalis, and Thomsen's disease. Multiple neuritis is best known in alcoholic paralysis; but there is, as Dr. Bristowe points out, an idiopathic form of the affection; and he also attributes the nerve symptoms of beri-beri and of diphtheritic paralysis to the same lesion. In point of fact, everything goes to show that toxic and toxæmic affections of the nervous system involve the peripheral rather than the central organs; and the category of instances in which multiple neuritis occurs is constantly increasing. It would seem as if neurologists, having wellnigh differentiated all the types of central lesions, were now exploring the peripheral system. It is unnecessary to dwell at length upon the main features of Dr. Bristowe's work. It is acknowledged to be remarkable for its accuracy and fidelity to clinical and pathological facts. As a minor point in which some improvement could be made, we might indicate some of the woodcuts illustrative of the histology of new growths. Those, for instance, representing tubercle and gumma are by no means up to our present knowledge of the minute structures of these formations, and we fail to see any advantage in reproducing Virchow's well-known diagram of a tubercle, which is certainly too ideal to be of practical utility.

The Prevention of Consumption. By C. CANDLER, Melbourne. London: Kegan Paul, Trench, and Co. 1887.

IT has been often pointed out that Koch's discovery of the tubercle bacillus has modified our conceptions of pulmonary phthisis, but it has also been difficult to harmonise the new doctrine with numerous well-established facts in the etiology and history of the disease. Mr. Candler has undertaken this task by submitting Koch's views to searching criticism, and proffering a new theory regarding the relation between the bacillus and mankind. He has done this in an interesting and attractive manner, with the main object of explaining the most rational way for preventing the development and spread of consumption. The key-note to his argument is to be found in his rejection of the hypothesis that the bacillus tuberculosis is a pure parasite, without vitality except at blood heat. For this view he substitutes the doctrine that the bacillus is a freely growing organism, which flourishes under certain conditions outside the body, and that its implantation in the human subject is a matter of accident rather than an essential condition for its maintenance. He believes that the botanical side of the matter has been inadequately considered, and that in consequence an erroneous view of the true nature of the bacillus has gained ground. In other words, he would rank tuberculosis with the malarial group of diseases rather than with the strictly parasitic; and he thus bridges over the difficulties that arise in our conception of the nature of this disease when we are confronted with the questions of heredity, environment, and soil, which have so long been accepted as playing a considerable part in its etiology. Given, he would say, certain favourable external conditions, and the bacillus will flourish, so that those individuals who are subjected to the same conditions are liable to become attacked by it. According to him, the chief of such conditions is the absence of sunlight, the influence of which upon the vitality of bacterial organisms was first made known by Downes and Blunt. The reason why tuberculosis is inherited and clings to family stocks is, on this view, to be found in the living of the same family in the same abode; and he draws a disheartening picture of the family country house, with its darkened rooms, especially the sleeping rooms, as powerful influences in determining the prevalence of phthisis. It follows, then, that the most appropriate means for preventing the spread of consumption lies in the free admission of light and air into dwelling-houses; and, in the case of those with inherited taint, their removal from the baneful surroundings in which they were brought up. It is needless to point out that these principles have been advocated for a long time by physicians, and by none more strenuously of late than Dr. Weber in his Croonian Lectures. Our author, too, has adopted very largely the views respecting the nature of phthisis which were enunciated a few years back by Dr. Andrew, also at the College of Physicians. There is no doubt a good deal to be said for them, but Mr. Candler is, like all enthusiasts, somewhat too hopeful of the good effects of the adoption of his plan of "sun-prevention." And, unfortunately, in the present day the realisation of his plan is absolutely impossible in our overgrown cities. Still, he has done good service in directing attention to the hygienic importance of the sun's rays, and has presented a thoughtful essay upon a great problem, which we trust may be widely read.

Surgery: its Theory and Practice. By WILLIAM JOHNSON WALSHAM, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital; Surgeon in charge of the Orthopædic Department and Demonstrator of Practical Surgery at St. Bartholomew's Hospital; Surgeon to the Metropolitan Free Hospital; Examiner in Surgery to the Society of Apothecaries. With 236 illustrations. London: J. and A. Churchill. 1887.

THIS is one of Messrs. Churchill's "Students' Guide Series," and is not intended to displace any of the larger Manuals of Surgery. It is, rather, a brief epitome of surgery, and as such is very good. Mr. Walsham writes clearly and concisely. He freely avails himself of the aid of the

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She had given birth to her sixth child while on the way to the hospital; and when she arrived under the care of the police, about forty minutes later, the placenta had also been expelled and the uterus was small and well contracted. It was impossible to obtain any details regarding the labour. The patient was, however, in a very weak condition, pulseless and cold, and vomiting occasionally a small quantity of mucus and clear yellowish fluid with a spirituous odour. Some whisky had been given to the patient before her admission.

Hot bottles were at once applied to the feet; a hypodermic injection of sulphuric ether (ten minims) given; and also, by the mouth, spirit of sulphuric ether and aromatic spirit of ammonia. To allay the vomiting a mustard poultice was applied to the epigastrium, and spirit of chloroform and compound tincture of cardamoms given internally. The vomiting soon ceased, and the patient's strength rapidly improved. Stimulants given by the mouth were continued during the day in decreasing doses. Beef-tea and gruel were given as food. Twelve hours later the patient was feeling and appearing much better.

During the following two days (May 23rd and 24th) the treatment of the patient did not differ from that of the others in the wards, and she appeared to be doing well. On May 25th the patient was noticed in the morning to be perspiring very freely, but as other patients were also perspiring more freely than usual, and the day was very close, no special attention was paid to the fact.

May 26th (fifth day).—At 4 A.M. the attention of the night nurse was drawn to the patient by something unusual in her expression. On inquiry if anything was the matter, she gave a negative answer, but her articulation was clearly defective. Previously to this, no unusual symptom, convulsions or otherwise, had been observed. The house-surgeon was immediately called, and on seeing the patient noticed that she had a dull, vacant expression. She put out her tongue in answer to a request that she would do so, but would not speak at all. No signs of paralysis were observable except those of defective articulation and the involuntary passage of urine. The heart was examined, but nothing abnormal detected.—9.30 A.M.: Patient now answers questions, but it is difficult to understand what she says on account of defective articulation. The muscles of the left side of the face are noticed to contract when the patient attempts to smile, but those of the right side remain uncontracted except the orbicularis palpebrarum. The tongue on protrusion is now pushed to the right side. The pupils are equal, and both react slightly to both light and accommodation. The power of both arms, as tested by asking the patient to grasp the observer's hands, is not normal; they seem to be equally weak. The power of the legs is also rather diminished. The temperature has at no time since delivery been abnormally high. The heart has again been examined, and no abnormality detected.—11.30 A.M.: The paralysis of the muscles of the right side of the face is now less marked. Patient seen by Dr. Sloan, who ordered that the child should be weaned at once, and that food of a more stimulating sort than that usually allowed in the wards should be given—beef-tea, soup, gruel, milk, and eggs.

27th.—Patient slept very well last night. There is to-day some control over the passage of the urine. The power of articulation is much the same as yesterday. In pronouncing her name (maiden) she says "Ididy Dada." The right arm and leg are to-day decidedly weaker than the left corresponding limbs; the latter are stronger than yesterday. The urine was examined; there was no albumen. The lochia are this morning absent, and the temperature a little raised, being about 100° F. The heart was once more examined, but no abnormal sounds heard. The pulse being rather weak, Dr. Sloan ordered five minims of tincture of digitalis and five grains of carbonate of ammonia, to be given every three hours; also that the patient should have cream of tartar water as a drink.

28th.—Temperature 100°; pulse 93. The lochial discharges have reappeared since last night; at midnight the napkin was saturated with a bright-red and slightly fetid discharge. A warm antiseptic vaginal douche was ordered to be used every four hours. Patient takes her food well and sleeps well. The bowels have not acted since the seizure two days ago, and an enema was therefore ordered. The bladder is now under control. Articulation is rather better, but not the power of the arms, and the tongue on protrusion is still much deviated from the middle line.—4 P.M. (note by Dr. Sloan): Pulse 120; temperature 101·8°. The uvula is drawn slightly to the left side. In pronouncing her name the patient now says, "Idiby Dath." The grasp is stronger in the right hand than yesterday. During the effort of grasping with the hands the face is drawn slightly to the right side. The breasts are firm and tender, but not enlarged. Only a clear fluid exudes on pressure. No milk has been drawn during the last forty-eight hours. The abdomen is somewhat full, but there is no tenderness; the uterus cannot be felt with moderate pressure.—7.30 P.M.: The lochia are no longer fetid. Since the enema was given the bowels have twice acted copiously.

29th.—Pulse 120; temperature 100° F. Patient slept well last night, and continues to take her food well. The arms are decidedly stronger. She was ordered by Dr. Sloan a tablespoonful of the following mixture every four hours: Carbonate of ammonia, one drachm; tincture of nux vomica, thirty-six minims; tincture of cinchona, three drachms; tincture of orange, three drachms; water to six ounces. The previous mixture was stopped.

30th.—There is decided improvement in the power of the affected muscles, and in the distinctness of articulation. Temperature normal.

June 3rd.—The patient continues to improve. The above mixture was stopped, and the following ordered, since she continues anæmic: sixty-four minims of liquor arsenicalis, sixty-four grains of citrate of iron and ammonia, and infusion of calumba to four ounces; two teaspoonfuls thrice daily after food.

7th.—Patient now names herself quite distinctly, "Elizabeth Alston." The paralysis of the right side of the face is still perceptible, although not at all well marked. The tongue is less pale. There is no difference in the grasp of the two hands as regards power. Patient rose last night for the first time. There is in walking no dragging of the right leg to be noticed.

8th.—Patient rose again this morning, and after doing so felt rather fatigued.

11th.—The paralysis of the right side of the face is but slightly marked, and improvement continues. The heart has been again examined several times, by Professor Leishman among others, and no abnormality of the cardiac sounds discovered.

13th (twenty-third day since delivery).—The paralysis has entirely disappeared, and the articulation is perfect. There is no abnormal cardiac sound to be heard even after the patient has exerted herself. She was dismissed to-day.

Remarks by Dr. SLOAN.—It may be impossible to decide with certainty whether this was a case of apoplexy or of embolism of the left middle cerebral artery, but the following are reasons for deciding in favour of embolism. There was no convulsion and no unconsciousness; the patient is young, and there is no evidence of disease of the kidneys or of the arteries; the hemiplegia was gradually developed, was never complete, and it speedily passed off; the circulation was sluggish, and the blood, on account of the puerperal state, was in a condition to coagulate readily. Query: Why is embolism on the left side of the heart, without cardiac disease, so uncommon in the puerperal condition, and puerperal embolism on the right side so far from uncommon? If this is, as seems most probable, a real case of cerebral embolism in the puerperal state without cardiac valvular disease, it is, so far as can be ascertained, the first case of the sort reported. The treatment consisted of cardiac tonics and alkalies.

THE NEW CORONERS ACT.—The Coroners Act, 1887, which has just been issued, makes several alterations in the law affecting coroners throughout England, the Act not applying to Scotland or Ireland. "Viewing the body" is still to be part of the procedure at inquests, the new measure explicitly stating, "the coroner and the jury shall, at the first sitting of the inquest, view the body." Attention has been given by the Legislature to the manner in which coroners are to be elected. Electors are not now qualified to vote at such elections unless they take an oath at the polling booth, declaring they are freeholders, and possess land in the county in which they vote. The oath for swearing coroners' jurymen having varied in different counties, the statute provides a standard form of oath to be administered. The extent to which a juror may be fined has been raised from 40*s.* to £5. By the operations of the new statute about thirty-three Acts of Parliament, many of them of a quaint nature, dating as far back as Edward III., have been wholly or in part repealed.

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during the night; profuse sweats; œdema of abdominal walls; tympanites; some ascites.

24th.—The patient was placed under an anæsthetic, and an oblique incision made through the abdominal walls, about three inches in length, parallel to, and an inch and a half below, the cartilages of the lower ribs, and dividing the rectus abdominis. The peritoneum was firmly adherent. A trocar was then inserted, and was followed by an escape of pus. A grooved director having been passed in, the abscess cavity was laid freely open. Sixteen ounces of pus, thick, grumous, but not offensive, poured out. The cavity was very irregular in outline, though its walls were smooth; in size it was about that of a cricket ball. Two drainage tubes, fastened side by side, were fixed by means of a silk suture, and the wound dressed antiseptically.

25th.—The patient passed a good night, but had some pain. Temperature 97·8° in the morning; pulse 102°. She had vomited twice during the night. Legs very œdematous. The wound was dressed, pus pouring out on removal of previous dressing. Urine: sp. gr. 1022; acid, with the faintest trace of albumen.

27th.—Wound dressed; discharge still profuse; wound looking healthy; abdomen tympanitic; legs still œdematous. Temperature normal; pulse 96. Complained of a little pain in the right side.

May 5th.—The general condition had improved; there was still a copious discharge of pus, but the cavity and orifice of the wound had contracted very much. The tympanitis had subsided and the œdema of legs was much less. The patient slept and took nourishment well. Temperature normal; pulse 96. From this date the patient gradually improved and made a perfect recovery.

Remarks by Mr. HARRIS.—This case of a large solitary abscess of the liver is interesting, more especially because of the obscurity of its origin. The idea of a "tropical" abscess may be at once dismissed, the only foreign part in which the patient had resided being Boulogne, and she had never had dysentery or any disease of the rectum. A question which perhaps is worthy of consideration is that of gummata, undergoing softening, becoming fused together, and thus forming one large abscess. It is true the patient had had what to all appearances was a gumma on the lower extremity, but this had healed under treatment, and it seems highly improbable that whilst the good effects of potassium iodide were manifesting themselves in one part of the body gummata should form and eventually break down in another. It is not likely that any local cause, such as an impacted gall-stone, could give rise to such a result without pain and without jaundice; it is far more probable that the abscess was due to the suppuration of some pre-existing though undiscovered cyst, such as a hydatid, although no cysts were visible in the fluid which escaped, and it is to be regretted that the fluid was not examined microscopically. With reference to the treatment, it would probably have been better not to have allowed so long an interval to elapse between the establishment of the presence of pus by the aspirator and the incision into the abscess cavity. Against any advantage gained by a more perfect consolidation of the layers of the peritoneum must be noted the further destruction of tissue and the greater accumulation of pus which took place during that time, and it seems probable that had the œdema and redness of the abdominal walls been taken as an indication that the peritoneum was adherent her recovery might have been accelerated. The œdema of the legs was probably due to pressure on the inferior vena cava by the inflamed liver tissue.

WINDSOR STATION HOSPITAL.

FRACTURE OF THE FIFTH CERVICAL VERTEBRA, WITH COMPRESSION OF THE SPINAL CORD; DURATION OF LIFE TEN MONTHS.

(Under the care of Surgeon-Major MYERS.)

PRIVATE S——, Grenadier Guards, a very strong man, aged twenty-three, weight 14 st., was admitted on July 3rd, 1886. He stated that whilst bathing in the Thames, near Windsor, he dived head foremost into shallow water (two feet), and was taken out almost immediately by some comrades, who noticed that his legs were completely paralysed, and he was at once conveyed to the hospital. When seen shortly afterwards, he was lying on his back, perfectly conscious, but devoid of sensation and motion in the lower part of the trunk and legs. Slight sensation was present to about the lower angle of the scapula, and there was some power of movement in both arms at the shoulder; respiration was entirely diaphragmatic; pulse slow and strong; the patient complained of no pain excepting at the back of the neck in the region of the fifth and sixth cervical vertebræ, and chiefly on the left side. He stated that while lying under water he knew he was quite paralysed, but held his breath, hoping that assistance might be sent him. Careful notes of the case have been taken by Surgeons Alexander, Sheldrake, and Carte, of the Brigade of Guards, but as its great interest rests on the unusual prolongation of life, a few comments only are needed.

Some days after admission the arms became motionless, excepting a slight power to raise the elbow from the side, and remained flexed. The sensation returned in the right arm, but it soon became apparent in the left arm as low as the elbow, and extending over the anterior surface of the radial half of the forearm, and at a later period in the tips of the thumb and first and second fingers. Over and above the shoulders there was marked hyperæsthesia. For many weeks bedsores were well kept in check, though continually threatening, but in course of time they formed in numerous places, especially along the under surface of the right leg, and even on the toes, where no pressure occurred. At a later stage the integument of the back became completely undermined and converted into a large sac, containing very offensive pus. This sac, by irrigation twice daily with disinfectants through the sacral bedsore, completely disappeared; and a short time prior to death the bedsores of the right leg had healed, and others over the scapulæ, elbows, and hips had nearly done so, and even the deep sacral bedsore had greatly contracted. Cystitis set in at an early stage, hastened probably by an acute attack of gonorrhœa, from which the patient was suffering on admission. This was completely arrested for a time by frequent irrigations with different disinfectants. Two months after admission the patient stated he could feel the flow of water from the irrigator into the bladder, and this regained some power, the urine being occasionally expelled with force, though unconsciously to the man. After some months slight reflex action of the leg muscles could be obtained by the galvanic battery and by tickling the soles of the feet, and tended to increase to the last. Latterly he began to raise both elbows to the level of his head, and flex the left arm sufficiently to enable him to touch his face with his fingers, but he could not bring the arms back to his side. Rotation of the head became quite free and painless, and considerable pressure could be borne over the seat of fracture without causing discomfort. The temperature rose irregularly till the evening of Aug. 16th, when it reached 103·2°; after that date it gradually became normal or subnormal, and, excepting occasional short and sudden rises, remained so until the last week. The action of the bowels from first to last remained involuntary. About the middle of April, 1887, his appetite, which had been surprisingly good, began to fail, the urine became fetid, vomiting set in, the bedsores began rapidly to reappear, and on April 28th urine ceased to enter the bladder. Vomiting then became incessant, and on May 2nd the patient died.

At the post-mortem examination the cervical vertebræ were removed. The kidneys were completely disorganised, the right one being almost entirely converted into one fetid abscess. The ureters were much dilated and thickened, and deeply stained. The bladder was also much hypertrophied and stained, and contained only a little fetid pus. There was nothing special to remark about the thoracic organs. The brain was not examined.

The following is a report of a sectional examination of the cervical vertebræ made by Dr. Silcock:—"The body of the fifth cervical vertebra has been crushed and somewhat displaced backwards, giving rise to a projection in the spinal canal. Opposite this projection the spinal cord is almost completely disorganised, evidently by the pressure exercised upon it."

GLASGOW MATERNITY HOSPITAL.

A CASE OF HEMIPLEGIA DURING THE PUERPERIUM.

(Under the care of Dr. SAMUEL SLOAN.)

THE following notes were communicated by Ernest Roberton, M.B. Edin., in-door house surgeon of the hospital, in a paper read before the Glasgow Obstetrical and Gynæcological Society.

Mrs. D——, aged thirty, was admitted on May 22nd, 1887.

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occasion divided into two parts—viz., first about two ounces, being that passed at the commencement of micturition, and secondly the remainder. On every occasion that the urine was examined for six consecutive days it appeared to the naked eye to be normal; the only appreciable difference between the two portions was that the second part deposited a much larger proportion of mucus than the first. Microscopically, a few stray red corpuscles were seen, and these occurred far more frequently in the second part of the urine. On the first occasion, finding a small shred which was passed at the end of micturition, I placed it on a slide, and found that it was a small slough in which were embedded two ova of the bilharzia, and on every subsequent occasion I was able to find at least one or two ova, though the urine remained quite clear and pale. My evidence was given accordingly, and on this and other evidence the prisoner was convicted and dealt with.

Another observation of mine comes under this heading. At a necropsy performed for a coroner's jury, I reserved portions of the viscera for microscopic examination. The subject was a native; the case one of general disseminated tuberculosis; and it is possible that any appearance due to the presence of the bilharzia was masked by the tubercular ulceration of the mucous surfaces. On examining some of the sections of lung, I found groups of two or three ova embedded in the interstitial fibrous tissue. These ova varied in length from 0·95 to 0·12 mm.; and though not furnished with any very distinct spine, they corresponded exactly with those figured by Kartulis[3] as the ova of bilharzia occurring in the liver and kidney; and if they were really such, my observation is not unique, for Birch-Hirschfeld has seen the ova in the lung in sections prepared by Dr. Schieff Bey of Alexandria.[4] As, however, I have found them in the lung only, I have provisionally labeled the slides "Bilharzia (?)," for it is possible that future observations may show that the Distoma Ringeri also occurs on the Gold Coast.

Accra, Gold Coast.

CASE OF INVERSION OF THE UTERUS, WITH COMPLETE PROLAPSE.

By F. S. BARBER, L.R.C.P. LOND., M.R.C.S.

MRS. L——, multipara came under my care during the third month of pregnancy, complaining of inability to pass urine, together with a swelling at the vulva. On examination, I found the uterus large, prolapsed, and wedged at the orifice of the vagina. The prolapse was rectified, and the bladder relieved by the catheter. Afterwards I introduced an ordinary Hodge's pessary; this gave great relief, and prevented any further recurrence. She wore the pessary for a month or more, and was then able to dispense with its support. In June labour commenced, and was attended by my assistant, who found on his arrival that the passages were relaxed and dilated, together with a normal presentation. After a few powerful pains the birth of the fœtus was accomplished, but was immediately followed by a prolonged and very severe pain and bearing-down, which caused the whole uterus to become inverted and extruded through the vulva, with the placenta still adherent to the fundus. The patient became faint, the pulse almost imperceptible, and the body covered with a clammy sweat. I was immediately sent for, and arrived within a few minutes. Needless to say I was somewhat alarmed at the state of affairs, and proceeded at once to diagnose the cause. On placing my hand on the abdomen, I could detect no contracted uterus; but on examining the mass (which was literally in the bed), I made out an inverted uterus with the placenta still attached. I tried to reduce it through the vulva as it was, and partly succeeded, but was unable to reduce the inversion without first detaching the placenta; this I did, and, although the hæmorrhage was very profuse, I was able to replace it in a few seconds, but not without having to try twice. The general condition of the patient was most serious. She was insensible, pulseless, and the extremities cold. After lowering the head and applying heat to the extremities, she was able to drink some brandy-and-water, to which I added liq. ergotæ (one drachm). By degrees she gradually recovered consciousness, and was able to recognise friends. During this time I had kept my hand upon the uterus, and was pleased to feel it contract under my pressure; the hæmorrhage ceased, and the present danger seemed, as it proved to be, past. The after attendance on the case varied but little from ordinary cases, save that I was more anxious, and consequently more attentive. The uterus as well as vagina were syringed with weak Condy's fluid, and opium and quinine prescribed for ten days.

Remarks.—In the treatment of this case I had occasion to resort to two methods of reduction—viz., (1) by pressure of the closed hand direct to the fundus; and (2) by the pressure applied by the fingers at the sides of the mass—that is, on the lateral portion (in both cases I had my hand externally to support the abdominal wall); and it was with the latter method that I was successful. The hæmorrhage was hardly as profuse as a number of gaping sinuses would lead one to fear, but I should imagine a condition of semi-strangulation existed.

Bradford.

[3] Virchow's Archiv, vol. xcix.
[4] Lehrbuch der Allgemeinen Pathologie, Bd. i., S. 215.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

PADDINGTON INFIRMARY.

ABSCESS OF LIVER; OPERATION; RECOVERY; REMARKS.

(Under the care of Mr. H. ELWIN HARRIS, B.A., assistant medical superintendent.)

A LARGE single abscess of the liver is so uncommon when not of the variety known as "tropical" that this case is of much interest. The remarks appended to the record are important; it is possible, however, that it may have been of pyæmic origin from the acuteness of its onset and the presence of a possible source in the sore on the leg, but the hepatic abscesses in that disease are usually multiple, and the satisfactory progress after operation negatives this view.

A. G——, aged forty-nine, unmarried, a cook, was admitted on Feb. 5th, 1887, suffering from a red, tender, fluctuating swelling on the inner aspect of the right leg, about three inches above the malleolus; she had had a slight injury to the leg before admission, but had noticed the swelling previously to that. An incision was made and a large slough discovered at the base, the edges of the incision being much undermined; the whole appearance was very suggestive of a gumma. Some sloughing of the tissues followed, but it began steadily to heal under ten-grain doses of iodide of potassium administered three times a day over a period of a month.

On April 8th, about 5 P.M., the patient complained of feeling very cold, and shivered. The temperature was found to be 104° and the pulse 120. This was followed by profuse perspiration, but she complained of no pain. The ulcer had now nearly healed, and there was nothing in its appearance which would suggest any explanation of the symptoms. On examination, there was tenderness on pressure over the hepatic region, but there was no enlargement either of the liver or spleen. Fifteen grains of sulphate of quinine were administered internally, and poultices of linseed and opium applied to the hepatic region.

April 13th.—Increased tenderness on pressure over the liver, the dulness of which extended to four inches below the level of the costal arch in the nipple line. No jaundice. The temperature had assumed a hectic type, rising to about 102° in the evening and falling to normal in the morning. Twelve leeches were applied over the hepatic region, and a pill of quinine and opium given every four hours. The ulcer of the leg had now quite healed.

17th.—Œdema and redness of the abdominal walls were present over the enlarged liver, and the aspirator inserted at this point drew off twelve ounces of thick fetid pus. The patient was much collapsed after the aspiration. Temperature 96°; skin cold and clammy. She complained of no pain, however, excepting on movement or pressure.

21st.—The patient complained of pain in the abdomen

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vessels were caught up in time to stop free bleeding; they were tied with catgut; the oozing of blood was controlled. A large drainage tube was put in the whole length of the wound, and the edges of the wound were united by carbolised silk sutures. A Gamgee pad, oakum, and over this a bandage, were applied, and the patient was put to bed. As this man would have suffered had his opium been stopped, he was allowed to take enough to satisfy his cravings.—July 7th: The patient had a fairly comfortable night's rest, has no trouble in passing his urine.—July 8th: Has pain and fever. On the third day there was a good deal of swelling: the lower end of the wound looked unhealthy, and there was a sero-purulent discharge. Temperature 103°. The drainage tube was removed, the stitches at the lower end of the wound were cut to allow a free opening for discharge, and the wound was syringed out with 10 per cent. iodoform in glycerine. The patient complained of pain in both thighs near the pubes, no sign of any local trouble could be found there. On the sixth day he began to improve; though he gained ground slowly, there was no further cause for anxiety.—Aug. 2nd: The wound is healed, except a small sinus in the track of the drainage tube. The patient has had perfect control over his urine all the time, and is much pleased at the relief from pain which has been afforded him by the operation.

Remarks.—My patient is fifty-nine years old, and he is prematurely feeble from his opium habit. He is entirely relieved of the pain from which he formerly suffered, and has a good chance of freedom from the disease for the remainder of his life. Mr. Pearce Gould's operation has now been performed often enough to show that it is the operation most likely to prevent a recurrence of the disease. It is one that any surgeon can perform, and the hæmorrhage is easily controlled. The one point where this case differs from the operation, as performed by other surgeons, is the making of a new urethra prior to the removal of the penis. In performing a severe operation on an old man enfeebled by disease, it was a distinct gain to have no danger of any trouble about the urethra. The patient made a good recovery, and I hope that other surgeons will give this method of performing the operation a fair trial.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF RETRO-ŒSOPHAGEAL ABSCESS.

By J. THEODORE RICHARDS, M.B., B.Sc.,
HOUSE SURGEON, WIRRAL CHILDREN'S HOSPITAL, BIRKENHEAD.

THE following case, which may be compared with one published in THE LANCET of Jan. 1st, 1887, p. 17, was communicated (by the permission of Mr. Knox) to the Birkenhead Medical Society last winter.

J. R——, aged three years, was admitted with Pott's curvature in the upper dorsal region of the spine. The last three months he had been unable to walk without supporting himself by the hands. The child held the head stiffly, inclined to the left side; complained of pain on any movement of the head, and on pressure over the spinal projection. The breathing was accompanied by a stridulous, husky sound, both in inspiration and expiration, and there was a loud, brassy, short cough. His father stated that he had noticed this character of the breathing for some months. The tonsils and pharynx were red and rather swollen. In the evening after admission the respiratory difficulty was more apparent; there was considerable recession of the lower part of the chest with inspiration; the stridor appeared to be partly nasal and partly laryngeal. There were no physical signs of disease in the chest. The child took food well, and the father stated that he had always done so. For the first four days that he was under observation the stridor varied somewhat from time to time. It was never great, and was almost absent when the child was undisturbed; it was sometimes more marked with inspiration, at other times with expiration. The respirations were 30 per minute. The inspiratory recession at the base of the chest continued in varying degree. There was never any hoarseness in crying or speaking, the voice being unaffected. The child swallowed both liquids and solids freely, without any sign of difficulty. No prominence could be detected at either side of the neck. There was no lividity of the lips or nails, and the temperature was about 100°F. On the sixth day after admission, with a rise of temperature, signs of pneumonia were developed, and the child rapidly became worse, with more cough and dyspnœa and the general aspect of broncho-pneumonia, which caused death two days later.

Necropsy.—The body was well nourished. Both lungs were adherent to the chest wall and diaphragm, and their lobes to each other; the lower lobe of the left lung was consolidated. There were numerous caseating and calcareous glands around the trachea. Behind the œsophagus, and closely adherent to it, was a soft fluctuating tumour, oval in shape, larger than a horse-chestnut, in front of the vertebral column, and connected with it. The œsophagus was with difficulty separated from the front of the sac, having been compressed between it and the trachea. The situation of the abscess was fully an inch below the level of the larynx; it projected slightly to the left of the vertebræ, and a smaller sac passed from it to the right. The walls were thick and well defined, and when incised about half an ounce of thick white pus escaped. Forming the back of the abscess sac the bodies of the seventh cervical and first dorsal vertebræ were found to be almost destroyed, and the front of the bodies of the following two dorsal vertebræ was also carious.

Remarks.—The abscess in this case was due to one of the common causes of retro-pharyngeal abscess—viz, disease of the vertebræ,—but was rare in its situation low down behind the œsophagus, and consequently out of reach from the mouth for diagnosis or treatment. As in the case reported by Dr. Turner (*loc. cit. supra*), due to another cause, there was a complete absence of dysphagia, which is usually a prominent symptom of abscess at the back of the pharynx, although the œsophagus was pressed upon, and through it the trachea, sufficiently to cause signs of obstruction to the respiration. This, however, had lasted for weeks without becoming urgent, and death was due to the attack of pneumonia. A tracheotomy wound would have been a little above the level of the abscess.

BILHARZIA HÆMATOBIUM IN WEST AFRICA.

By C. H. EYLES, L.R.C.P. & S. EDIN.,
ASSISTANT SURGEON, GOLD COAST COLONY.

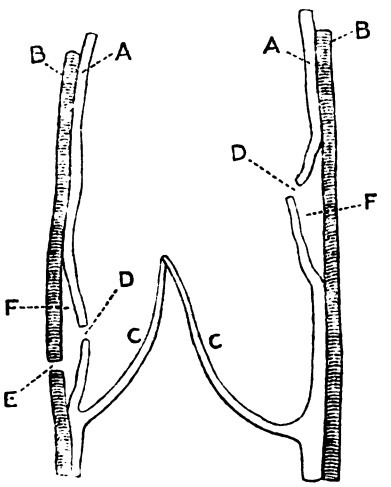
THOUGH hæmaturia is not uncommon among the natives of the Gold Coast, there have been no observations, so far as I am aware, connecting this condition with the presence of the Bilharzia hæmatobium; and further, though the parasite is common enough in the north and south of Africa, Hirsch appears to doubt its being the cause of the endemic hæmaturia of the more central parts of that continent, and suggests Filaria sanguinis hominis.[1] Up to the present I have found the ova of the bilharzia in the urine of four cases of hæmaturia on the Gold Coast. One case was that of a European, who had become infected in Egypt in 1882; the others occurred at Axim amongst natives of the coast.[2] Of these latter, two came under notice in the ordinary course as patients, and the third furnished a neat case in medical jurisprudence.

In the case of Regina *v.* Bernasko, tried at the Supreme Court of the Gold Coast Colony, the prisoner was charged with "sending letters threatening to accuse of crime with intent to extort money." His account was that whilst resisting an attempt made by one E. H. to commit an indecent assault on him, he (E. H.) seized him by the penis and wrenched the organ, as a consequence of which he had been passing blood per urethram for three consecutive days; and both in his letters and in Court he appealed to medical evidence to corroborate his statement. Accordingly I was asked to examine the prisoner, and report on his case. Five days had elapsed since the alleged assault, and there were no signs of injury about the penis; there was no urethral discharge, and a No. 10 catheter passed in freely without obstruction. I decided, however, to examine the urine; and in order to determine whether or not any inflammatory products had their origin in the urethra, the urine was on each

[1] Handbuch der Historisch-geographischen Pathologie, Bd. ii., S. 206.
[2] My colleague, Mr. R. A. Freeman, has also found the ova in the urine of two cases in natives of the coast at Accra.

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heart to be invested by blood clot. A small opening just sufficient to admit a probe was found in the posterior wall of the aorta at its junction with the left ventricle, and almost touching the point of attachment of one of the semilunar valves. On opening the aorta along the anterior aspect, the inner coat was seen to have been ruptured in a transverse direction; the rupture was abrupt, and ran almost completely round the aorta, the ends being separated by a quarter of an inch of apparently healthy inner coat. The inner coat was stripped off the muscular coat for about a fifth of an inch both upwards and downwards, and the space was occupied by a blood clot. The small opening already described in the outer coat and middle coat was situated nearer the ventricle than the primary rupture in the inner coat. No areas of fatty degeneration could be detected. The kidneys were filled with cysts, and an attempt was made to obtain a specimen of the urine, but



DIAGRAMMATIC SECTION OF THE AORTA.
A A, Elastic coat. B B, Muscular and areolar coat. C C, Semilunar valves. D D, Primary transverse rupture in the inner coat. E, Secondary rupture in the outer and middle coats. F F, Small dissecting aneurysm.

the bladder was empty. The other organs were apparently healthy. The valves of the heart were normal. (See diagram.)

Remarks.—This case may, I suppose, be classed as one of remote sequela of typhoid; the immediate sequela being the condition of the kidneys. No albumen was detected in the urine during the fever eleven months previously, but the urine was not again examined during convalescence. The history of the case and the appearance of the lesion leads to the belief that the ruptures in the coats occurred on two separate occasions, there being an interval of four days, during which a dissecting aneurysm began to form. The friends inform me that she had not been in good health since her attack of typhoid, and they also assure me that she was undergoing no greater exertion than a slow walk when the fatal rupture occurred. The patient did not mention any cause for the first attack of pain on the Monday.

F. E——, aged fifty-nine, male. The man had suffered for some months from occasional but slight pain in the cardiac region, the pain radiating into the arms. He had noticed lately that he became easily "out of breath." On the morning of death (Sunday), while in the watercloset, he was heard to vomit, and on coming out said he felt faint and would go up and lie down on his bed. An hour afterwards he was found there dead.

Necropsy.—The pericardium was distended with bloody serum, and the heart was invested by a blood clot. After great difficulty a very small valvular opening, running upwards and inwards, was found in the anterior wall of the left ventricle. The opening would only admit a small probe. The muscular substance was pale and very soft. Under the microscope the striation was faint, and there were numerous fat-globules. The mitral and tricuspid valves were normal. The aortic valves were atheromatous, and the coronary arteries had undergone extensive calcareous degeneration. The other organs were apparently healthy.

Remarks.—As in the preceding case, the slightness of the exertion at the time of the fatal rupture was remarkable, though, I believe, not unusual. Had an attempt been made shortly before death I hardly see how a diagnosis of acute idiopathic pericarditis could have been avoided. Since the occurrence of these cases it has been a question in my own mind whether many of the cases of acute idiopathic pericarditis which are recorded might not have been in reality instances of spontaneous rupture. This patient was a man of moderate habits except as regards tobacco. Though a keen man of business, he could not be termed of active habits.

South Hampstead.

REPORT OF A CASE OF AMPUTATION OF THE PENIS FOR EPITHELIOMA.

BY H. W. BOONE, M.D.,
SURGEON TO THE AMERICAN CHURCH MISSION, ST. LUKE'S HOSPITAL, SHANGHAI, CHINA.

T. K. E——, age fifty-nine, farmer, was admitted to the hospital on May 24th, 1886, with an epithelioma of the penis. Has had good health, with the exception that he has constipation alternately with slight attacks of diarrhœa. Has smoked opium for nearly eighteen years, and this accounts for his bowel trouble. His parents lived to a good age. No history of any cancer trouble in his family. Rather more than three years ago he first noticed a small sore on the prepuce. This has spread until the prepuce and the greater portion of the glans have been destroyed. The disease extends down the organ towards the root of the penis. He passes his urine freely, but requests an operation to relieve the pain from which he suffers. He has a hydrocele of the left testis. There are no enlarged glands in the groin, and no evidence that the disease has involved any other parts. He is rather thin and feeble, presenting the appearance common to old opium smokers.

On consultation with my colleague, Dr. Jamieson, I proposed to make a free incision in the scrotum, dissect out the urethra and corpus spongiosum, carry my incision well down in the perineum, slit up the urethra and fasten it to the lower angle of the wound, then detach the corpora cavernosa from their attachments and remove them entirely by the use of a periosteal elevator; this operation, as reported by Mr. Pearce Gould in THE LANCET, May 20th, 1882, seeming to me the only way to remove the diseased parts in such a manner as to prevent a return of the disease. Dr. Jamieson concurred with me, only suggesting that the new urethra should be made at the operation, the parts allowed to heal, and then a second operation be performed for the removal of the penis. To this I assented. A few days were spent in trying to improve the condition of the patient. On June 7th, after the parts had been thoroughly cleansed with soap and water and a 5 per cent. solution of carbolic acid, the patient was placed under the influence of chloroform, a catheter passed into the bladder, and the corpus spongiosum dissected out just at the posterior margin of the scrotum, silk threads were passed through it, and I then divided the corpus spongiosum and dissected it well backwards. The urethra was split on its lower side, and four sutures put in to keep it in its new place at the lower end of the incision. A few vessels were tied in two places and cut between; there was some oozing of blood, which was controlled. A drainage tube was put in and the wound sewed up with a continuous catgut suture. A Gamgee pad was applied over the wound, finely picked oakum, full of tar, over this, and a bandage. The wound pursued a healthy course and healed entirely in sixteen days.

On June 26th the patient had an attack of diarrhœa after eating a quantity of unripe fruit. A few days were spent in getting over the effects of this attack. On July 6th the patient had his pubes shaved and the parts fully cleaned and disinfected. He was put under the influence of chloroform, his legs being supported by Clover's crutch. An incision was made passing round both sides of the penis along the raphé of the scrotum, and then deep down in the perineum; the penis was put on the stretch, and the suspensory ligament cut through. With a periosteal elevator the crura were peeled from their attachments, and the left testis and the hydrocele were removed. As the patient only consented to the operation on the condition that the right testis should not be removed, it was left in place. Some

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but she recovered completely, and remained well until about two years ago, when she began to complain of headache, and frequently vomited, especially in the morning. For the past nine months, she has been weak in the right arm and leg, and for the last three months she has suffered almost constantly from severe headache, always localised in the forehead, above the right eye. For a month previously to her admission, it had been noticed that she was unable to move her eyes outwards, either on the left or right sides, and that the left pupil was larger than the right. For a fortnight before admission the patient had been unable to read, the letters appearing dim and blurred, and there was double vision. From the first she has had tremor in the right arm on exertion. Vertigo had been present some time, together with a staggering gait, there being a tendency to fall forwards.

On admission it was found that the grasp of the right hand was much more feeble than that of the left, and that the right leg was also weak. When she elevated her upper lip the mouth was drawn to the right side, and the left conjunctival reflex was lost. She could not close the left eye, and there was evidently peripheral facial paralysis on the left side. The tongue, when protruded, was deflected slightly towards the right side. There was no deafness or loss of taste or smell. It was found that intense neuro-retinitis was present on both sides. Nystagmus was observed when the patient looked in any direction so as to strain the ocular muscles, but there was no nystagmus when the ocular muscles were at rest. She could move her eyes freely in an upward or downward direction, but the movement outwards was much restricted on the left side, and quite lost on the right. The knee jerk was diminished on both sides, but the right was most affected. The gait was staggering, the stagger being towards the left side. The muscles of the left side of the face responded feebly to the faradic current, and with the galvanic current A.C.C. exceeded C.C.C.; on the right side of the face the electrical reactions were normal. The symptoms shortly were headache, vomiting, double optic neuritis, nystagmus, peripheral facial paralysis on the left side, slight hemiplegia on the right side, diplopia, vertigo, staggering to the left, and inability to rotate the eyeballs outwards. The diagnosis of encephalic tumour was rendered certain by the symptoms just enumerated, and the staggering gait pointed to the cerebellum as being the seat of the growth. The left facial nerve was evidently compressed by the growth, as were also the sixth nerves. A growth in the left lobe of the cerebellum by growing downwards and forwards might easily compress the left facial nerve and the sixth nerves, and by compressing the left half of the pons would cause right hemiplegia. It was thought, therefore, that there could be little doubt that the growth occupied the left lobe of the cerebellum. As to the nature of the tumour, the absence of any family history of syphilis or scrofula rendered it probable that the tumour was a glioma. While in the hospital the patient vomited several times, but otherwise her condition remained stationary. There was no fever and no albuminuria, but the urine contained earthy phosphates in excess.

After the diagnosis and prognosis had been communicated to the mother, she inquired whether any operation could be undertaken for the removal of the tumour; and though the danger, and probably fatal result, were duly impressed upon her, she preferred that her child should have the chance of its successful removal. I accordingly transferred the case to the care of my colleague, Mr. Jordan Lloyd, who supplies me with the following notes of the operation.

Operation.—The head had been shaved two days previously, washed thoroughly, and covered with lint soaked in carbolic lotion. A quarter of an hour before the operation one-sixth of a grain of morphia was injected under the skin. A curved incision convex downwards was made from the occipital protuberance almost to the base of the mastoid process on the left side. Flap with pericranium raised upwards, and muscles separated from under surface of occipital bone downwards. Two one-inch trephine discs were removed from the occiput; the pin of the trephine being applied on each occasion on a line drawn from the occipital protuberance to the tip of the mastoid process, thus ensuring the openings being below the lateral sinus. The angles of the bone between the trephine were then cut away with bone pliers, and after all bleeding had been arrested, a crucial incision was made through the dura mater throughout the length and breadth of the osseous opening. The cerebellum bulged into the wound at once, and its surface appeared darker in colour than was natural. No hardness could be felt with the finger; an incision therefore was made into the brain substance. The bleeding which followed was very free. A finger introduced into this wound recognised "softness" in all directions. Part of the cerebellar substance was cut away, and after the bleeding ceased the dura mater was stitched with catgut and the flaps with silver wire. A small drainage tube was introduced through the scalp only at the most dependent part. The wound was covered with boracic acid and dressed with glycerine, boracic, and absorbent wool. After the operation the patient was collapsed and unconscious; she became conscious twelve hours afterwards, and spoke rationally. She remained, however, in a collapsed condition, and died about forty-eight hours after the operation.

At the necropsy the cerebrum was found to be healthy. The left lobe of the cerebellum was enlarged and hollowed out in the centre, the cavity being occupied by recent blood clot. The anterior and under portion of the lobe was found bulging and pressing on the left facial nerve. On section the cavity was found to be surrounded by soft vascular tissue of a pinkish colour. The new growth had evidently occupied nearly the whole of the left lobe, and had invaded the middle lobe also. Dr. Hogben kindly cut some sections of the growth, which under the microscope showed the structure of a glioma.

In this case the new growth infiltrated the whole of the left lobe and a considerable portion of the middle lobe of the cerebellum, and its surgical removal was an impossibility. I suspected that the tumour was a large one, but had no idea that it was so extensive and infiltrated. Three cases of operation for removal of cerebellar tumour have been recorded. In THE LANCET for April 16th, 1887, Mr. Bennett May recorded the case of a boy under my care from whose cerebellum he removed a tubercular tumour, the boy dying from shock. The operation undoubtedly in this case was deferred too long, and it is probable that the boy would have recovered had the operation been performed three months earlier, for the growth was small and was easily removed without causing much damage to the cerebellum. In the *British Medical Journal* of April 23rd, 1887, Mr. Victor Horsley publishes a list of ten cases of operation upon the brain. One of these operations was for cerebellar tumour; the patient had been in bed a year, and the operation was performed as a *dernier ressort*. The patient died nineteen hours after operation from shock. There is evidently a much greater danger of death from shock in operations on the cerebellum, as we should expect from its proximity to the medulla. I consider that the only chance of success lies in the early performance of the operation—and, taking into consideration the hopeless nature of such cases when left to themselves, the operation seems justifiable.

CASES OF SPONTANEOUS RUPTURE OF THE AORTA AND HEART.

BY W. COODE ADAMS, M.B. LOND.

M. J——, a female, aged twenty-three years, of healthy parentage and family history. The patient had had typhoid eleven months before. On Monday, May 6th, she was brought home with the history that she had had an attack of pain in the cardiac region, and had become faint. She was faint on arrival, but did not complain of any particular pain. She was kept in bed for the next two days, and on the third was allowed to get up; on the fourth, being apparently well, she was allowed to go out with her sister. After walking for about twenty minutes she was seized with violent pain over the region of the heart, and immediately became faint. Her sister conveyed her quickly home, and she arrived in the same condition as on the first occasion. She was seen almost at once by her medical attendant, Dr. McMunn, who failed to detect any murmur or other cardiac physical sign. She continued faint and semi-conscious till next morning, when I was asked to meet Dr. McMunn, but she died before my arrival.

Necropsy.—On opening the thorax, the pericardium was found to be largely distended with bloody serum, and the

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the left side so as to avoid the anal growth, as well as to include some of the surrounding healthy integument. The finger, with the occasional aid of a probe-pointed scissors, was sufficient to separate the bowel from its surrounding attachments, the process being attended by some hæmorrhage, three or four vessels requiring the ligature; the rest was controlled by sponge pressure. The bowel being well drawn down by a vulsellum, first one portion and then the other of the divided cancerous mass was brought within easier reach by the finger. The écraseur wire was then passed over each successively, the loop being made to include the coats of the bowel below, and the whole disease, with a good margin of apparently healthy tissue around it, was gradually detached. About two-thirds of the circumference of the bowel down to the anus were thus removed, about one-third of healthy tissue remaining. The propriety of leaving any portion of the circumference of the bowel remaining, even when apparently free from disease, has been called into question. In a recent case where an inch of the bowel anteriorly, being found free from disease, was allowed to remain, the operator afterwards expressed regret at having done so—although up to the time of the report (more than three and a half months) the patient's condition was satisfactory,—remarking that "to do excision at all, I believe it should be done completely and the whole calibre of the bowel removed, and to this course I see Volkmann assents." Notwithstanding such high authority, I cannot but think such a rule too sweeping, and that it would be more advisable to preserve as much healthy tissue as may be practicable after giving an ample margin for removal with the disease; and experience so far, although necessarily limited, appears to justify this. Where the portion of apparently healthy tissue is small, say an inch or less, the more prudent and safe course would undoubtedly be to excise the whole calibre, taking the chance of future inconveniences. No lateral incisions through the coats of the bowel, previously to the application of the écraseur, were made, these being, in fact, effected by that instrument at the same time that the disease was separated. The wound was carefully examined all round, and some small nodules of fatty tissue, which appeared somewhat harder than the rest, were cut away. The parts were sponged with a solution of chloride of zinc—an application, I believe, recommended many years ago by Mr. Campbell De Morgan, with a view to the destruction of diseased germs after removal of cancerous tumours, and sponge wrung out with Condy's lotion applied, and supported with a T bandage. No stitches to connect the mucous membrane with the integument were used, this expedient being now, for sufficient reasons, properly discarded. The effect of the ether having passed away, the patient soon recovered from the shock of the operation, and already felt the comfort of the relief afforded. My acknowledgments are due to Messrs. Eben. Davies and Fry for their kind and efficient assistance, and to Dr. Rawlings for his perfect administration of the anæsthetic. As this operation, although now justified in properly selected cases, is still to some extent upon its trial, I have thought it advisable to enter more into detail than I otherwise should have done. I have deviated in one respect from the course usually pursued and recommended. I found that when the bowel was thoroughly separated from the surrounding tissues, and the diseased mass well exposed, I could without much difficulty include within the loop of the écraseur each portion of it, together with a fair margin of healthy tissue, without making separate longitudinal incisions on each side, as already described. This had certainly the advantage of shortening the operation and (if a cutting instrument were used) diminishing the hæmorrhage, though the removal of the disease may not perhaps in this way appear so neatly accomplished as when longitudinal incisions are made, and the disease separated by a transverse section. It has, however, answered in this case exceedingly well in every respect. The sponge having been removed, carbolised oil on lint was lightly applied, and an opiate pill given at bedtime. The parts were afterwards washed with weak carbolic lotion, and Condy's fluid injections employed after suppuration was established.

With the exception of slight cystitis following retention of urine, and some hæmorrhage on the sixth and again on the ninth day—probably connected with separation of the ligatures,—the subsequent progress of the case was altogether most satisfactory. The temperature was moderate throughout, reaching its highest degree (101·9°) on Nov. 20th, becoming normal on the 27th, and rising to between 99° and 100° for a few days afterwards. From Dec. 8th to 11th, there was a little rise associated with a slight erysipelatous blush around the wound, which, however, soon subsided. Some hard fæcal lumps were passed on Nov. 26th, and after a mild aperient good relief was obtained on the 31st. The bowels acted with fair regularity after that time, a little assistance, mechanical and medicinal, being sometimes required. There was an occasional involuntary discharge of a small quantity of liquid fæces, but after a short time this inconvenience ceased, and the control over the bowel became complete, and has continued so ever since. On Dec. 18th, the patient sat up, came down stairs on the 25th, and took walking exercise on Jan. 1st. Since that period her progress in all respects has been uniformly favourable, the bowels acting regularly and without the least inconvenience, the control, as I have said, continuing perfect. She describes herself as feeling better than she has done for some years; the sense of uneasiness and distress experienced during that period and the acute suffering for several months before the operation having entirely ceased.

On May 30th—that is, six months and a half after the operation—I made a careful examination of the patient. Upon a superficial inspection the only indication of any operation is a smooth, scarcely perceptible cicatrix. A short distance above the natural situation of the anus is a circular aperture, formed by slightly yielding cicatricial tissue, just large enough to allow by gentle pressure the passage of the fore-finger, which was grasped apparently by a slight sphincter action. There was not the least sensation of morbid induration or growth in any part, and the bowel above felt throughout soft and perfectly healthy. The patient's general health and strength keep exceedingly good, and, as I have already mentioned, she suffers no inconvenience whatever. To estimate the value of the operation, even at this period of time, we have only to compare her present condition and prospects with what they would inevitably have been if the disease had been allowed to take its course. To refer further to the contrast is needless.

The following quotations are sufficiently representative of the views held with regard to this treatment a few years ago by our most eminent surgeons: "The treatment to be adopted for malignant disease of the rectum can offer no other service, unfortunately, than that of palliating the disease, assuaging pain, and prolonging the duration of life." "Some surgeons were, a few years since, in the habit of performing excision of the lower part of the rectum when affected with cancer; but this proceeding must be looked upon as both barbarous and unscientific, and it is now, happily, exploded from the catalogue of surgical operations." (Holmes' System, 1st ed.) In place of the last paragraph, it is stated in the last (3rd) edition, 1883, that the operation is "one surrounded with so much danger and difficulty that it is only in rare instances, when the disease is limited to the lower two inches of the bowel, that the surgeon is justified in performing it." "The recommendation to excise the cancerous mass, as made by Lisfranc and other French surgeons, is contrary to every principle of good surgery; as it is impossible to extirpate the whole of the disease, without either laying open the peritoneal cavity or destroying the patient by the profuse hæmorrhage, which could scarcely be arrested." (Erichsen, 6th ed., 1872.) In the last edition, 1884, however, the operation is spoken of as one "that in well-selected cases, and taken early, holds out a fair prospect of prolonged relief or even cure." "Palliative measures are alone practicable. That such a procedure [excision of the cancerous mass] is justifiable may well be doubted." (Gant, 2nd ed., 1878.) And so on with other recognised authorities.

CASE OF CEREBELLAR TUMOUR; OPERATION; DEATH FROM SHOCK.

By C. W. SUCKLING, M.D. LOND., M.R.C.P.,
PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

E. C——, a girl, aged twelve, was admitted into the Queen's Hospital on March 28th of this year complaining of headache and dimness of vision. The family history was a neurotic one, one of the mother's brothers having had fits, and the father's uncle and father having had "strokes." There was no family history of phthisis or struma. The patient suffered from scarlet fever when three years of age,

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orbital arch was much depressed, but not perforated by the tumour as I had anticipated. Having stopped the bleeding completely, I now united the wound by first intention, leaving in the cavity occupied by the tumour a drainage tube, which descended to the left nasal fossa through the opening made on the ethmoid by a prolongation of the neoplasm; then I closed the nasal cavity with an iodoform tampon. The operation lasted about an hour. The patient bore the chloroform very well, showing only the weakness following the use of an anæsthetic and attendant upon loss of blood. On the third day she had fairly recovered, and the wound was healing without suppuration. The drainage worked well, a large quantity of serum tinged with blood flowing through it. On the fourth day, however, the patient was overtaken by sudden prostration, was inclined to sleep, exceedingly disinclined to talk, and complained of mental confusion. I then discovered that the drain had stopped during the night, so I at once removed the tampon, replacing it, however, further down the nasal cavity. The effect was good; the serous fluid began to drip again. Not satisfied with this, I applied a gum-elastic "pump" to the external opening, and drew off about thirty grammes of liquid. The flow was thus re-established, and continued all the following day and night. On the renewal of the flow the alarming symptoms disappeared as if by magic. On the seventh day I removed the stitches and the drainage tube, and on the fifteenth day the patient returned to her home, doing very well. She had lost that sensation of vacuity around her person which made her uncertain in her movements, but had not regained her memory or the sense of smell.

Three months after I presented my patient to the Chirurgical Society at its meeting in Perugia in 1884. She was in a happy frame of mind, and willingly related her experience. She stated that now all her faculties and moral conditions were normal, and that she had even regained her sense of smell. This greatly surprised me, for I felt sure that I had destroyed the left olfactory in removing the tumour, which had destroyed the cribriform lamina of the ethmoid. Upon experimenting, however, with aromatic substances, we found that she could only smell with the right, and that the left was totally insensible, its olfactory having been destroyed either by the pressure of the tumour or by the operation itself. The part of the bone which had been removed was now partially reproduced, the cavity in the region of the operation had disappeared, and the eye had regained almost entirely its normal position. The tumour, under the microscope, presented a multiform fibrocellular structure of sarcoma.

It is now four years since that operation was performed, and my patient is in perfect health. My diagnosis and the operation, apparently so hazardous at the time, are therefore justified by the result. And, though such operations have generally failed, the success of mine should secure proper consideration at the hand of modern surgery.

The progress of experimental pathology and of studies of cerebral localisation every day now smooths our way to the diagnosis of cerebral diseases, so that the cranial cavity may in future justly enter into the dominion of surgery. The frontal and parietal regions can now be successfully attacked by the scalpel of the surgeon, and many affections of the meninges become trophies of rational surgery.

Rome.

CANCER OF THE RECTUM; EXCISION; RECOVERY.

BY GEORGE PADLEY, L.R.C.P. LOND., &c.,
CONSULTING PHYSICIAN TO THE SWANSEA HOSPITAL.

IN relation to an operation so strongly and universally condemned as that of removal of cancerous disease of the rectum by excision has been by our highest surgical authorities until a few years since, and only quite recently recognised as an admissible procedure, every addition—especially, perhaps, on the side of success—becomes important as a contribution to the statistics bearing upon the subject. With this view I send the following case, in which up to this time—more than ten months after the operation—the success has been perfect in all respects.

In the middle of August, 1886, I attended Mrs. W—— in her confinement. She was forty-seven years of age, had one child six years previously, and had not been again pregnant until the present occasion. She complained during the later period of her pregnancy of piles and of a soft swelling, which proved to be a large mass of varicose veins in the right labium. Gentle laxatives and an abdominal belt gave some relief to these, as well as to the bearing-down pressure of which she also complained. The labour, which occurred at full time, passed off satisfactorily, a large child was born, and she made a good recovery. Early in October I was asked to prescribe for "piles," of which she again complained. Some relief was afforded by treatment, but towards the end of the month her husband called to tell me that the so-called piles were again very bad, and that she had suffered very acutely during and after defecation, with occasional slight puriform discharge. From his description I inferred that she must be suffering from some ulceration of the rectum, and I arranged to visit her for the purpose of an examination. On making this I found a tumour like a pile about the size of a small filbert projecting from the anus towards its left side. On further exposing this, there appeared a jagged malignant-looking ulceration running down its centre. On passing my finger into the rectum, I discovered, extending upwards from the protrusion at the anus, and about an inch from its margin, a hard cancerous mass, with a central jagged ulceration, having raised, indurated, and everted edges, continuous with that at the anus, and extending nearly its whole length. The size of this tumour, which projected considerably into the calibre of the bowel, was about three by two and a half inches; it occupied about one-half the circumference of the bowel and somewhat to the left side posteriorly. I could just get the point of my finger fairly above its upper margin, beyond which, and surrounding the mass, the mucous membrane and subjacent structures appeared to be free from disease, excepting where it extended from its lower margin and became continuous with that portion which projected from the anus—the mass itself being freely movable over the tissues surrounding and external to the bowel. The patient had complained for years of undefinable uneasiness in the lower part of the back, with occasional passing of a little blood, but without pain in defecation. This became more marked during the earlier months of pregnancy, though not especially complained of, and continued up to the period of parturition. Since that period the symptoms became aggravated, with tenesmus and the other symptoms before referred to, which were attributed to piles. She appeared in other respects in good health; stout, but somewhat flabby in texture; of a highly nervous temperament, though otherwise strong; and her constitution presented no indication of being affected by the malady. The sacral and coccygeal glands were unaffected. There was a small, not hard, inguinal nodule in the right groin, which appeared to be quite unconnected with the rectal disease, and to be innocent in character, the glandular system elsewhere being free. Her family history was also exceedingly good. It therefore appeared to me a promising case for excision, and I communicated my opinion to the patient's husband and friends, who, with herself, left the matter entirely in my hands. Before, however, finally deciding upon it, I expressed a desire to have a consultation, and Mr. Ebenezer Davies kindly saw the case with me, and concurred in my opinion. During the period I have referred to, I may mention that the pain was much mitigated and her general condition improved by gentle laxatives and tonics, and by iodoform applied to the ulcer at and a little above the anus.

The operation was performed on Nov. 18th. The bowels having been well cleared, ether administered, and the patient secured in the lithotomy position, the left forefinger was introduced into the rectum, its tip reaching above the diseased mass, and brought into contact with the point of the coccyx. A curved sharp-pointed bistoury was then carefully guided by the finger to this point, thrust through the coats of the bowel, and made to emerge through the integuments in the middle line behind the anus. The intermediate tissues, including the diseased mass itself, were then cut through by one sweep of the knife (Denonvilliers' incision)—a preliminary step in the operation which has so largely contributed to its practicability and success, though its importance has not yet received on all hands adequate recognition. The nates being well separated, two curved incisions were then made, one on either side of the anus, together including about two-thirds the circumference of the bowel, the knife being carried well into the ischio-rectal space. The curve was made wider on

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ease, cleanliness, and safety of administration more than compensate for their slightly retarded action. They are specially valuable in the treatment of those phenomenal children who have an invincible repugnance for medicine in any form, and who manage to spit it out or vomit it up, notwithstanding all sorts of threats and caresses. Medicated suppositories will in these cases relieve the parents as well as the patient, and make the doctor's life more bearable. The main indication for rectal medication in cutaneous as well as other diseases is inability of the stomach to receive or retain the medicine needed to restore health. As this is the only criterion, it is obvious that it would be impossible to enumerate the affections of the skin in which rectal medication would be valuable and those in which it would be useless. Every case must be judged in accordance with its own requirements.

If the symptoms present are such as are usually antagonised or removed by the systematic action of a certain drug, and the gastric mucous membrane is so disordered that that drug is immediately rejected by vomiting, our duty is to endeavour to procure its absorption in another manner, rather than to discard it and search for another remedy.

In many cases of syphiloderma mercury will not be tolerated by the stomach, and the patient's habits or business affairs are such that inunctions, hypodermatic injections, or fumigations cannot be employed. In these cases I have repeatedly witnessed the disappearance of the eruption and the recovery of the patient from the employment twice a day of suppositories containing half a grain of calomel or a quarter of a grain of the protiodide of mercury. Infantile syphilis may be effectually treated in the same way, reducing the quantity of calomel to one-twelfth of a grain, and the protiodide to the one-twentieth or the one-hundredth part of a grain. The bichloride or any of the other preparations of mercury may be substituted in appropriate doses.

Scrofuloderma is almost invariably benefited by cod-liver oil, but patients are occasionally met with who are unable to take it in any form. In two mild cases of this disease under my care recently, in which this idiosyncrasy was extreme, I effected complete cures by the employment of rectal enemata of one ounce of cod-liver oil every night, continued for five weeks in one case and in the other for two months.

Erythema multiforme and erythema nodosum, when due to malaria, are usually accompanied by so much gastric irritability that even water is vomited as soon as it reaches the stomach. Twenty grains of quinine, made into a suppository and inserted in the rectum, will relieve all the symptoms in a few hours.

Urticaria nodosum, a somewhat similar affection, will promptly yield to the same treatment. Urticaria simplex, due to the presence of fermentative or irritating material in the gastro-intestinal canal, can be more speedily relieved by the rectal injection of an ounce of castor oil and an ounce of glycerine than by any other method.

Erythema intertrigo, when produced by the irritation of diarrhœal discharges, can frequently be removed almost immediately by the use of a single suppository containing a small quantity of opium combined with from five to twenty grains of a vegetable astringent like geranium or hamamelis.

Pruritus ani is often due to an œdematous condition of the tissues around the anus. In this event antipruritic lotions and ointments can be of only temporary utility, and occasionally aggravate, instead of alleviating, the patient's sufferings. A suppository containing ten grains of powdered geranium or ten grains of quercus alba will dissipate the œdema and banish the itching. Pruritus vulvæ and general pruritus are occasionally traceable to disorder of the anal nerves, and can then be almost magically relieved by the employment of suppositories composed of half a grain of opium and half a grain of extract of belladonna, or half a grain of opium and five grains of chloral; ten grains of quinine and half a grain of extract of cannabis indica is also useful. Arsenic and antimony are of incalculable benefit in many cases of psoriasis, but they frequently disorder the stomach so much that their administration is suspended before the eruption is removed, and some less potent but less irritating remedies substituted. My experience has convinced me that to discontinue their use under such circumstances is an error. They can be given with advantage in the form of suppositories. Care must be taken, however, to have them evenly divided throughout the mass, and to employ at least one-twentieth of a grain of arsenious acid or arsenite of sodium in each suppository, one to be used from one to five times a day.

Iodide of potassium is of great service in many cases of subacute and chronic eczema, but its peculiar recurrent taste and the additional eruption which is occasionally developed by it limit its employment; if it be given in small doses in the form of suppositories these unpleasant drawbacks will be rarely observed. There are some cases of obstinate eczema in which rectal enemata of cod-liver oil will be more successful than any other remedy. Ichthyosis may be signally palliated by the same method. Many other cutaneous affections might be mentioned in which rectal medication will prove valuable, but I prefer to limit my remarks to those in which I have realised its value by practical experience.

Philadelphia.

CONTRIBUTION TO ENDOCRANIAL SURGERY.[1]

BY F. DURANTE,
PROFESSOR OF SURGERY.

IN May, 1884, C. B——, a woman, thirty-five years of age and a native of Narni, came under my care. Her general appearance was good; she seemed well nourished, although not of a very robust constitution. Externally, she showed no abnormality, except as to her left eye, which appeared somewhat low and drawn outwardly, otherwise the movement as well as the functions of the globe were normal. This deformity had manifested itself only within the three months previous to her visit to me. For a year or more however, she had entirely lost her sense of smell, her memory had become impaired, particularly as to remembering names, and she experienced a peculiar sensation of vacuity which caused her to feel uncertain in her movements. Motion, sense of touch, and sensibility to heat and pain remained natural. From her husband I learnt that she had somewhat changed in disposition; that from being generally happy and bright, she had become sad, melancholic, and taciturn, although she did not seem to brood over the state of her health. The senses of hearing and taste, and the functions of the chylopoietic viscera were perfect; also nothing abnormal was found on a close examination of the nasal and pharyngeal regions. The course of the disease, the loss of memory and of the sense of smell, and the objective and subjective state of the patient led me to believe in the presence of a tumour within the cranium, the pressure of which affected the anterior lobe of the brain and paralysed or destroyed the olfactory nerve. Moreover, the displacement of the globe of the eye led me to believe also that the tumour had penetrated the superior arch of the orbital cavity. Such being my diagnosis, I now proposed to the patient an operation that would remove the offending object, explaining to her the gravity of the operation without reserve. She was brave, and she consented.

To reach the tumour it was necessary to make a large opening in the left frontal bone; so with an incision commencing from the inner angle of the left orbit upwards nearly to the hair line as far as the temporal region, I raised all the soft tissue from the bone in a flap. The bone being exposed, with a sharp scalpel and hammer I removed a large portion of it, commencing at the superior orbital margin, inferiorly, and found that the internal parietes of the frontal sinus had been forced outwardly. The dura mater being now exposed, I examined it, and found that it had been perforated by the tumour just opposite the frontal eminence. With great care I now began to scoop out the tumour. As soon as a considerable portion of the tumour was removed, I detected that it did not adhere beyond the internal surface of the dura mater, and that therefore its enucleation was comparatively easy; and then removed it and carried with it all the adherent portions of the dura mater. The hæmorrhage was slight and easily controlled by the hæmostatic, a tampon treated with sublimate. The tumour was lobular, of the size of an apple, and weighed seventy grammes. It occupied the anterior fossa at the base of the left cranium, extending to the right and upon the cribriform lamina, which it destroyed. Posteriorly it extended to the glenoid tubercles before the sella turcica. The left anterior cerebral lobe was greatly atrophied; the

[1] Paper read in the Surgical Section of the International Medical Congress held at Washington, U.S.A., September, 1887.

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together with much fibroid growth, into a funnel, of which the axis would give passage only to the point of the little finger. The curtains, or what represented them, were stiffened, though not to absolute rigidity; they could be made to close perfectly; it appeared that they must have done so towards the end of ventricular contraction, but that their closure must have been delayed by their stiffness was equally evident. The tricuspid valve was thickened after the manner of the mitral, but not to the same extent. The aortic valves were slightly thickened, and on them were a few minute vegetations; there appeared to be nothing which could interfere with their action. The pulmonary valves were natural. The left ventricle was dilated and thin, the right dilated and thickened. The left auricle was greatly thickened, not greatly dilated.

Some cases which illustrate the point in question together with another are to be found later on. So far, I think, I have shown that there are reasons to believe that the so-called presystolic murmur is systolic and regurgitant; that though correctly regarded as a sign of a contracted mitral valve, it is equally a sign that the valve so altered has not lost the power of closure.

The court of the last appeal is pathological. The question to be asked—one to which the experience of the future, if not of the past, will return a conclusive reply—is this: Is the so-called presystolic murmur, with its concluding snap, or what sounds like one, ever made by a mitral valve which cannot close either in whole or part with the closing ventricle? Can this murmur exist with an absolutely rigid, permanently patent, orifice? I have seen no instance, but my experience is not infinite. If this can be shown to be possible, then much that I have said requires modification.

I may add a word about the "presystolic murmur" which, in orthodox phraseology, "runs into the systolic." Though the terminal snap is the chief characteristic of the murmur in question, yet its intensity, its rumbling tune, and its earliness in the systole are also characteristic. Thus the murmur may possibly be recognised, though the snap be wanting or be only imperfectly developed. If the view I am advocating be correct, this must happen whenever the mitral orifice is so contracted as to give to the regurgitant murmur the special characters which belong to the so-called presystolic, while the valve is incapable of closing, or closes only incompletely, so that the murmur goes on unstopped to the end of the systole. In this case we should have an early murmur of the "presystolic" character continued into a late one, possibly not distinguishable from the common mitral regurgitant, both actually systolic and regurgitant, not strictly two murmurs but one, though the beginning might be a little different from the end. I have shown, or tried to show, it to be impossible that a true presystolic or mitral direct murmur should "run into" or be continuous with a mitral regurgitant; how, then, are we to explain the fusion, when "the presystolic runs into the systolic," but on the supposition that both are regurgitant, or rather that there is but one which begins early and ends late—"linked sweetness long drawn out"?

(To be concluded.)

RECTAL ALIMENTATION AND MEDICATION IN DISEASES OF THE SKIN.[1]

By J. V. SHOEMAKER, A.M., M.D.

THE power of the rectal mucous membrane to absorb substances placed in contact with it is but little inferior to that of any other portion of the gastro-intestinal canal. Moderate quantities of milk, eggs, gruel, blood, beef-tea, and all the nutritious broths are absorbed by the rectum almost as quickly as by the stomach. Ether and other volatile agents produce their characteristic effects immediately after their introduction into the rectum. Solutions of morphia, atropia, aconitia, quinia, and hyoscyamina are taken up as rapidly, and strychnina and nicotine more rapidly, by it than by the stomach.

As a general rule all substances in solution are speedily absorbed by the rectum, unless they are so irritative in character as to produce muscular contraction, which will only cease upon their expulsion. Solids, [illegible] substances in powder or in the form of [illegible] taken up more slowly, but eventually [illegible] administered in the usual manner, [illegible] with the fæces before absorption is complete. The absorbent properties of the rectum are frequently availed of in the treatment of gastric irritability, ulcer of the stomach, and carcinoma of various portions of the alimentary tract. By giving the stomach absolute rest, and nourishing and medicating the patient by the rectum, the duration of acute attacks is lessened, life in many cases saved, and in others prolonged for months. The same methods which yield such gratifying results in these diseases may also be employed with decided benefit in many cutaneous affections.

In epithelioma of the lips and tongue, after excision has been performed, patients are usually fed through a rubber tube; but notwithstanding the greatest care on the part of the patient and nurse, the movement of the muscles in swallowing conveys more or less irritation to the edges of the wound, and may in some cases stimulate the morbid process to renewed activity. It would be much better in such cases to place the oral muscles at complete rest and nourish the patient by the rectum until the wound is completely healed. The same method should be adopted for several days after cauterising or scraping lupus spots on the lips or in the mouth.

In stubborn cases of infantile eczema, in which the little patient, while retaining all the food it takes, and presenting no symptoms of gastro-intestinal disorder, yet does not increase in weight, immediate improvement will often follow the administration of one ounce of milk by enema four times a day. In these cases, which may be termed examples of infantile apepsia, the skin affection is clearly the result of insufficient nutrition.

Obstinate cases of pemphigus and impetigo in children of all ages are frequently due to the same cause, and are promptly relieved as soon as supplementary rectal nutrition compensates for deficient gastric assimilation.

There is an intractable form of recurrent acne observed in young girls and delicate boys, which on inquiry will be found to be closely associated with stomachic debility. When their appetite is good and digestion perfect the eruption disappears; but after a time, without apparent cause, their appetite lessens, the sight or smell of food produces a feeling of nausea, and if they force themselves to eat as much as formerly, they vomit it soon afterwards. They become pallid and weak, and the eruption, usually consisting of from one to a dozen papules, reappears. Investigation fails to disclose the portion of the digestive system at fault. The tongue remains clean, the bowels are normal, and all the bodily functions, except those eating and assimilating, are performed as usual. The routine treatment for these patients consists of iron, strychnine, the mineral acids, and the various bitter tonics, and it usually terminates in success in from two to six months. Many of them could be cured in from two to four weeks by combining the rectal administration of milk, malt extract, and beef juice with the internal medication previously referred to.

A general rule which may be safely followed in the treatment of all diseases, whether of the skin or any other organ or portion of the body, is: Whenever the system manifests evidence of insufficient nutrition, supplement stomachic assimilation by the administration of nutritious enemata. The only exception to this rule is when the rectum is unable, either from irritability or disease, to retain the enema long enough for absorption to occur. Care should be taken in the preparation of nutritious enemata to ensure their retention. If too large, they will overdistend the rectum and produce vigorous contractions, ending in expulsion. If too cold or too hot, the same result will also occur. They should be lukewarm, and not exceed four ounces for an adult and one ounce and a half for a child. They ought not to be given oftener than once every four hours, or they may induce an irritable condition of the mucous membrane. The advice of some authors to empty the rectum of fæcal matter by an ordinary injection before giving an enema intended for absorption is ludicrous. Every surgeon knows that the rectum, as was pointed out by O'Byrne forty years ago, is normally an empty pouch until defecation begins.

RECTAL MEDICATION.

In cutaneous diseases suppositories are the most convenient form of medicating the system by the rectum. They are absorbed more slowly than solutions, but their

[1] Read before the Section of Dermatology and Syphilis at the Ninth International Medical Congress, held at Washington, U.S.A., Sept. 1887.

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I have not received much help from the cardiograph, in the use of which, however, I must confess want of skill. I have found myself better able by simpler means to time the impulse and determine its relation to murmurs. As an improvement, or rather a refinement, on the pin and cork, I had made, with Mr. Hawksley's help, a simple long light lever, one end of which is in relation to a wedge in the intercostal space, while the other is free to oscillate with a magnified movement; but I will not describe this apparatus in detail, as I have not found any constant advantage with it as compared with the pin and cork. The more complicated machine is less ready to respond to a very weak impulse, though with a fair impulse it gives a longer movement. I need not say more about it than that the indications it gives correspond with those obtained by other methods, and show that the murmur and the movement of the ventricle begin at the same time.

On this showing the murmur is systolic, and it may be added that the thrill which sometimes accompanies the murmur is so too. A systolic mitral murmur is regurgitant; this, therefore, is the character of the murmur in question. But it has certain peculiarities. The ordinary or old-fashioned mitral regurgitant murmur simply takes the place of the whole first sound, and lasts to its end. The murmur which is in question replaces the early part of the first sound, and then finishes with a snap (to use Dr. Ormerod's phrase), which, though it does not much resemble a normal first sound, represents it, since it stands in its place. We now approach what I take to be the key of the position: Why is the first sound, thus altered, shortened and sharpened into a snap? Why does this altered first sound follow the murmur, while the ventricular contraction, as I have shown, accompanies it? The view I submit, as one founded on the careful putting together of clinical and post-mortem observation is this: The mitral orifice in these cases is always constricted, but the valve nevertheless allows of regurgitation during the first part of the systole, while it is able to close as the systole proceeds, so as to stop regurgitation towards the end of that movement. The mitral valve is often converted into a mere stiff funnel of fibrous tissue with a button-hole at the bottom. The stiff and slow-moving curtains—if curtains they can still be called—necessarily allow of regurgitation for a time, but with the advancing contraction of the ventricle they come together, late rather than never, and with their closure make the short sharp sound which replaces the normal systolic sound and gives the distinguishing note to this ill-omened harmony.

The essential factors of the so-called presystolic murmur are therefore mitral regurgitation, succeeded by mitral closure. The regurgitation begins where the ventricle is at its widest, the chordæ tendineæ at their furthest stretch, and the valve in its most open phase. If regurgitation ever takes place, it must be now. But the regurgitation terminates, and that abruptly. As the ventricle narrows, the chordæ tendineæ slacken, the blood continues to press on the ventricular aspect of the valve, the transformed flaps, rigid as they are, get together, the murmur is at an end, and the modified systolic sound is produced. The delay in the closure of the valve shows it to be abnormally stiff; the fact of its closure, notwithstanding the stiffness, is an indication that the orifice is small enough to be closed with the reduced amount of movement which the stiffened valve can accomplish. Thus this sequence of murmur and sound is diagnostic of mitral constriction, though the murmur is actually not one of obstruction, but regurgitation. In support of the view I have presented I might adduce much pathological evidence, to the effect that when the so-called presystolic murmur has been heard during life, after death it has been found, first, that the mitral orifice was contracted, and, secondly, that the valve was capable of closure. To this statement I have come across no exception. I may relate in brief, from my experience at St. George's Hospital, a few instances, to which it would be easy to add, in support of the proposition I have advanced.

Charles W——, aged thirty-nine, died while under my care on May 22nd, 1886, of heart disease. In the absence of my own notes, I quote from those of the medical registrar. "A presystolic murmur of short duration was heard over the apex with a duplicated second sound." With regard to the post-mortem condition of the heart I found on my own observation. The mitral flaps were greatly thickened with fibroid material; they were not shortened, but were adherent to each other at their sides, so as to convert the valve into a tube or funnel, of which the lower opening was of about the size of the button-hole of a coat, and would just admit the little finger. On the inner aspect of this tube at its auricular end was a good deal of rough atheroma, but towards the ventricle it was fairly flexible, and with a little lateral pressure closed with apparent completeness.

Sarah C——, aged sixty-eight, admitted on Oct. 6th, 1886. Heart irregular. At apex short, rather intense murmur, which would commonly be called presystolic. The first sound was abbreviated and sharpened. The murmur was placed in the first part of the systole, as estimated by the impulse, the altered first sound occupying its latter part and forming its conclusion. A double aortic murmur had been noted by the medical registrar in addition to the mitral, but was not heard by me at the time the preceding note was taken. My purpose is only with the mitral murmur, which was characteristically of the "presystolic" kind. Shortly after these observations were made the patient died. The curtains of the mitral valve were excessively thickened with fibroid structure, in which were embedded nodules of a bony consistence. The orifice was narrowed so as to admit only the end of the thumb. The valve flaps could be brought together, though with difficulty. It was apparent that regurgitation must have taken place in the early part of the systole, while at the later part it was probably arrested. There must also have been auriculo-ventricular obstruction, though not to an extreme extent. The aortic cusps were thickened and contained calcareous matter; they were apparently incompetent.

Thomas R——, aged twenty-six, was admitted under my care with heart disease on Oct. 11th, 1886, and died on the 23rd. There was a loud so-called presystolic murmur at the apex, now without thrill, though a thrill had been perceptible on a previous admission two months before. The murmur was long, intense, and very characteristic of its kind. It was immediately succeeded by a sharp short sound not unlike the second sound, but actually a modification of the first; this was followed by a normal second sound. The heart's sound was at times very rapid and irregular, two or more beats corresponding to one of the pulse. On one occasion 136 beats of the heart and 56 of the pulse were counted in the same minute. The mitral orifice was much contracted, and the valve transformed by old fibroid thickening. The narrowing was not so extreme as is sometimes seen, the aperture admitting the ends of two fingers and measuring about one inch by half an inch. The inside of this channel was comparatively smooth, so that there was no great suggestion of an auriculo-ventricular murmur. It was obvious that regurgitation must have taken place during the systole of the ventricles, and possible that towards the end of the systole the valve may have closed.

Emma W——, aged thirty-seven, was admitted on Jan. 30th, 1887. She had had rheumatic fever three times; first when eleven years old. She had hæmoptysis a month before admission. When taken in, her general symptoms were those of mitral disease with broncho-pneumonia, from which she died on Feb. 22nd. In the early part of her case there was a suspicion of an apex murmur, which by Feb. 16th had developed into a well-marked so-called presystolic. The heart was rapid, and though there was a hint of a diastolic murmur as well, this could not be recognised with certainty. After death the mitral flaps were found to be enormously thickened with fibroid tissue, and united laterally, so that they converted the valve into a funnel, the opening at the bottom of which was a mere slit like a button-hole, about large enough to admit a cedar pencil. A little lateral pressure with the finger sufficed to close this aperture, so that it did not seem possible to doubt that, though the closure of the valve must have been delayed by its stiffness, it was accomplished with the advancing contraction of the ventricle. The aortic valves were slightly thickened, but seemed fairly efficient. The tricuspid and pulmonary valves were practically natural. The left ventricle was small, the right much hypertrophied. There was a little recent lymph in the pericardium.

Charlotte T——, aged twenty-four, was admitted on March 25th, 1887, with recent hemiplegia, the result, as was thought, of embolism. A well-marked so-called presystolic murmur was always audible at the apex. There was now no thrill, but it was said that there had been one at an earlier date when the woman was an out-patient. The cerebral symptoms became aggravated, and she died on April 3rd. The mitral valve, of which the flaps were adherent to each other at the sides, was transformed by this

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Dr. Ormerod was a "product of the theoretical imagination." He asked Dr. Ormerod whether he could be quite certain that he had ever heard such a murmur, a certainty which had not presented itself to Dr. Gairdner during at least a dozen years, in which he "had been accustomed to recognise the auricular systolic murmur as that of mitral obstruction." That mitral obstruction was to be recognised by the murmur thus described became apparent to everyone, and Dr. Gairdner's position became that of orthodox medicine; but there are minds to which orthodoxy is not binding—to some it is even distasteful—and in the year 1872 the late Dr. Barclay[5] of St. George's Hospital published a critical examination of the received view, which appears to me to be conclusive, perhaps because his opinions almost exactly correspond with my own. Dr. Barclay maintained that the so-called presystolic murmur was really systolic, and that, though indicative of a contracted mitral orifice, it was regurgitant. He believed the murmur to occur at the beginning of the systolic contraction of the ventricle, which was naturally soundless. He drew attention to the absence of valves in connexion with the pulmonary veins, pointed out that with no means of closing the outlet backwards the auricle could exert but little power in driving the blood forwards, and maintained that it was "scarcely possible that one of the loudest and roughest murmurs ever heard in cardiac disease should be produced by the contraction of the auricle." The murmur was produced, in his view, by the action of the ventricle driving the blood backwards through a contracted and thickened valve, the closure of which was delayed by its rigidity, but which nevertheless shut at last, stopping the murmur with the sharp click which resulted from the shutting, and representing the first sound.

Against Dr. Barclay Dr. Balfour[6] argued that, though the veins which feed the auricle have no valves, the valves in the pulmonary artery, nevertheless, suffice to stay the backward current and allow the whole force of the auricle to be exerted forwards. But between the auricle and the pulmonary valves lie all the channels of the pulmonary circulation, furnishing, not a rigid cavity to be compared, as Dr. Balfour compares it, to a Bramah press, but a very elastic and distensible one, the blood within which must form at best but a yielding backstand. Dr. Balfour further argues that the pulmonary veins, as they approach the auricle, are capable of closure by the increasing strength of their own circular fibres, and as they enter it by the arrangement of the auricular fibres about their mouths. But allowing fully for these hindrances to the backward course of the blood from the auricle, they cannot convert this thin-walled chamber into a ventricle, or, as it appears to me, give to an auricular systolic murmur such force and intensity as belong to the murmur known as presystolic.

I believe Dr. Barclay to have been correct in the views I have quoted. I have indeed myself arrived independently at the same conclusions; but they were not generally received; and when after his death his labours were reviewed, according to custom, by the President of the Medical and Chirurgical Society,[7] this contention of Dr. Barclay's was rewarded by the negative praise of doing him credit by the courage it displayed, and was made use of to point a moral concerning intellectual cowardice—a fault from which Dr. Barclay was held to be exempt.

The articles of belief which I propose to take into question are these: The murmur is produced by the passage of the blood from the auricle to the ventricle; it belongs to the auricular not the ventricular systole, which latter it precedes but does not accompany. I shall attempt to show, on the other hand, that the murmur belongs to the systole of the ventricle; that it is systolic, not presystolic; and that it is due to mitral regurgitation, though this process is modified in a way which was foreshadowed by Dr. Barclay, and which I shall hope to make more clear. At the outset it must strike everyone as surprising that this murmur, so loud, intense, and definite, should be produced, or mainly produced, by so feeble a cause as the contraction of the auricle. It is true that the auricular contraction may be assisted in moving the blood by the expansile or suction action of the ventricle, but this also must be a feeble force compared with the contractile power of this muscular chamber. The tone and character of the murmur, therefore, are more suggestive of an origin in ventricular than in auricular contraction.

Next, this so-called presystolic murmur is described as "running up to the systole," as being united to the systolic sound without separation, and as being inseparately blended with the systolic murmur, should there be one. Let us see now what this implies in the case of this double mitral murmur. The two have become one. The presystolic and the systolic are so joined together that no man can put them asunder, or say where one begins and the other ends. But the two are distinct in their nature, though made at or about the same place. They are made by the blood going different ways to and fro through the mitral orifice. Is it possible that this should be so, and yet no halt or break of rhythm be perceptible? I should as soon expect the upstroke and the downstroke of a steam engine to blend together into a continuous harmony. Is there not always an interruption distinguishable to the ear between inspiration and expiration? Let a person blow into a tube, and then draw the air back; he cannot do it so quickly but that an interruption in the sound marks the change of direction. To come nearer to the point; when there are two murmurs at the aortic valve, systolic and diastolic, though one may follow the other as quickly as a change in the direction of the blood can be accomplished, can we not detect an interval, or at least a lack of continuity, between them? Hence I maintain that if there be double mitral disease, obstructive and regurgitant, the murmurs which arise must be separable; however close, they cannot be continuous; yet this they must be if the present theory of the presystolic murmur be right.

It is necessary to insist upon the meaning of the word *systole* and the essential distinction between systolic movement and systolic sound. The word *systole* means contraction, not noise. The contraction produces the noise. If, as we commonly believe, the cause precedes the effect, the contraction must come first. But, apart from the mere logical distinction, which may be too fine to grasp, it may be that the sound is not developed until a tangible interval has elapsed from the beginning of the contraction—until it has done something, whatever that may be, which is the immediate cause of the sound. I shall try to show that this is so in these cases. If anyone is contented to call the murmur in question presystolic because it precedes the systolic *sound*, I have nothing to say against his belief; but if it is to be so called as implying that it precedes the systolic *action*, then I am at issue with him. I have satisfied myself and confirmed my conclusion upon many patients that the so-called presystolic murmur does not precede the impulse of the heart, but begins with it; in strictness, it is systolic, not presystolic. It requires practice and opportunity to make sure of this observation, but I have convinced myself of its correctness. It is less easy to make two senses work together in exact consent than to make successive observations with one. It is easier to say that one sound succeeds another sound than to be sure of the exact time of a sound with regard to a tactile or visual impression. Thus it is not so easy as it might at first appear to place in their exact relations the impulse and the sounds of the heart. If touch is to be our guide, the best plan is to place the fingers and the end of the stethoscope as close together as may be, where both the murmur and the impulse can be appreciated. I need not insist that the radial pulse, and to a less extent the carotid pulse, are misleading as indications of the beginning of the ventricular contraction, since they both occur after it. The fingers upon the apex pressed in between the ribs supply the best tactile sign of the commencement of the systole; while a guide, which is sometimes more decisive, may be found in the movement of pins as presented to the eye. This is no novelty in cardiac diagnosis. A piece of cork should be cut so that its lower part presents a blunt wedge, which may be pressed into the intercostal space over the apex, while the top left flat is held down with crossed strips of diachylon plaster tightly stuck to the adjacent skin. Through the plaster into the cork is inserted a long pin—a light shawl pin, with a conspicuous but not heavy head, serves. If the things are successfully fixed, the movement of the ventricle will be made apparent by that of the pin, a short oscillation of which will begin with the systolic impulse. If now the observer will place his double stethoscope where the so-called presystolic murmur can be distinguished, and watch the pin while he listens, he will, if his observation corresponds with mine, recognise the first movement of the pin at the beginning or in the early part of the murmur. By this showing the murmur does not precede but begins with the systolic movement, and is not presystolic but systolic.

[5] THE LANCET, vol. i. 1872, pp. 283, 353, 394. [6] Ibid, p. 714.
[7] President's Address, by Dr. G. Johnson, 1885.

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organs are damaged, and well is it for the man who has the physician for his friend to help him how to arrange his life.

The effects of sudden moral shock are known almost as well as those of physical concussion; but the long-continued wear and tear of a life, distracted by a conflict of emotions, is often unsuspected or unrecognised until it is too late.

Hysteria, melancholia, paralysis agitans, a confusion of ideas and purposes when any attempt is made to use them—what I have called a mental and moral chorea—through incapacity of mind, and loss of all decision and precision of thought, are the most common events; but with this there often comes as well some strange moral perversion, taking the form of extreme melancholia and self-accusation most frequently, but occasionally running into another still more lamentable state—viz., that of general paralysis of the insane.

The only excess of physical exertion to which I will allude now is that of such kind as shall embarrass the heart and nervous system. There are no physical exertions which in themselves are necessarily detrimental to the heart. Rowing, riding, walking, running, climbing, in reasonable moderation or only occasional excess, are beneficial, and highly so; but when the amount of necessary exertion is compressed into a deficient amount of time, then it becomes mischievous. The heart has its own special relationships to time, and if these are seriously or persistently disturbed both functions and structure suffer. An exertion which quickens the pulse and respiration may be harmless if within certain bounds; but if the eyes become prominent, the face flushed, the lips livid, and the extremities cold and dusky, the danger-point is reached. The line is an easy one to draw, but a difficult one to keep. Yet I am sure it is not out of our power to help. Many cases of heart strain may be greatly relieved by rest, and it is by violent, rather than continued, over-exertion that the brain becomes gravely affected. But too prolonged or too extreme an amount of physical exercise has its victims suffering from weakened arms and legs, and other evidences of spinal exhaustion. The fatigue of excessive muscular exertion upon the nervous system is seen in loss of sleep and appetite on a small scale; but its effect upon armies on the march has been seen in an increased frequency and severity of traumatic tetanus and other affections, partly induced by worry, defective food and clothing, and often by accompanying depression. Epilepsy, chorea, paralysis, and the like I have often found to date from physical fatigue, and to have their recurrences almost invariably traceable to the same cause occasionally brought into play.

That which we denote "preventive medicine" when applied to individuals, becomes general "sanitary science" when we have to deal with masses; and it is only by a careful scrutiny of all the *causes* of disease that we can render that science as efficient as it ought to be. It has sometimes happened that researches in one direction, and for the attainment of one end, have been unexpectedly the means of throwing much valuable light upon cognate or outlying matters—such, for example, as the relation, almost accidentally discovered, between the drying of the soil in sundry towns and the diminution of phthisis; but in the main it has been by earnest, planned, and persistent industry that the great achievements of science have been possible.

Life is lengthened, its existence rendered less painful and more hopeful, and its ailments so much reduced by what has been already accomplished, that—given what is wanted in time and in freedom of research—there seem to be scarcely any limits to the good that we may predict for future generations. Diseases, our enemies, one after another may be diminished, rendered harmless, or stamped out of existence. The adaptation of man to his environment may be so greatly improved, his frame so fitted to resist not only disease but natural decay, that its pains and weakness may disappear and be remembered only in the history of evolution, and thus its inevitable end may be without either suffering or fear. The moral nature may be so attuned to its highest faith, and so free from fret, sorrow, or remorse, that death will be welcomed as was birth, for the last "enemy" that shall be destroyed is death; destroyed—i.e., by being no longer our enemy but our friend.

AT the Guildhall Police-court, on the 22nd ult., a Trowbridge butcher was fined £10 and £3 3s. costs for sending to the market the carcase of a cow which was unfit for human food.

Remarks ON THE PRESYSTOLIC MURMUR, FALSELY SO CALLED.

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THE title of this paper will be an indication not only of its purport, but of the hardihood of the writer in daring to take into question one of the accepted canons of cardiac medicine. In so doing I am mindful of the consensus of opinion against me, and ask a hearing only after having long held the views I am about to express, and having often reconsidered and tested them.

The present theory of the presystolic murmur appears to have been introduced, together with the name, by M. Fauvel,[1] in the year 1843. M. Fauvel attributes the use of the term to M. Gendrin, but though M. Gendrin uses the words *prediastolic* and *perisystolic*, I cannot discover the word *presystolic* in his book, and I observe that Dr. Balfour has been equally unsuccessful in this respect. But, however originated, this theory owes its place in the medicine of to-day, with its almost universal acceptance, chiefly to the great authority of Dr. Gairdner of Glasgow. The view of Dr. Gairdner and of general acceptance is this: At the apex of the heart there is an intense rough, often rumbling murmur, which immediately precedes the first sound; in common phrase, it "runs up to the systole," the sound of which follows it without an interval. The systolic sound which follows the murmur thus inseparably is abbreviated and sharpened so as to resemble the second sound, from which it is distinct. This murmur, together with the altered first sound, is represented by the letters *R-r-r-p* or *V-o-o-t*; this murmur, together with the first and second sounds, makes a dactyl, — ⏑ ⏑; whereas the normal action of the heart is a trochee, — ⏑. A superficial thrill or vibration often accompanies the murmur, presenting itself at the same time and more or less in the same place.

So far there is, I believe, no difference of opinion; but I now enter upon ground which I regard as debatable. The murmur is held to precede the systolic movement as well as the systolic sound; it is held to occur during the expansion, not the contraction, of the ventricle, and to be produced by the passage of the blood out of the auricle into the ventricle through a narrowed mitral orifice. The murmur in this aspect belongs to the auricular systole not the ventricular; the force behind it, by which chiefly the sound and the vibration are developed, is the contractile power of the auricle. Some of these propositions I am about to dispute, but there is no possibility of doubting the practical outcome. The murmur which has been thus described as presystolic is pathognomonic of mitral stenosis. If the theory is to be judged only by the correctness of the diagnosis which follows from it, it must be correct. But a sum has been known to prove, notwithstanding, that errors have crept into the working of it. "His conduct still right with his argument wrong" may be a clinical as well as a social experience.

The view of the so-called presystolic murmur of which Dr. Gairdner was the exponent,[2] however generally allowed, was taken into question by some. The late Dr. Ormerod,[3] in the year 1864, disputed the auricular systolic character of this murmur on the ground that the auricular contraction was too weak and brief to cause so loud a sound, which he held rather to be due to the contraction of the ventricle, and to be regurgitant. At the same time he pointed out the difference in character between the "direct mitral murmur, such as is generally admitted to be of this nature," and the murmur under consideration. Dr. Gairdner,[4] in reply, "hesitated to affirm" what he nevertheless decidedly suggested, that the "direct mitral murmur" referred to by

[1] Mémoire sur les Signes Stéthoscopiques du Rétrécissement de l'Orifice Auriculo-ventriculaire gauche du Cœur. A. Fauvel: Archives Générales de Médecine, series 4, vol. i. 1843.

[2] Clinical Medicine. 1862, p. 745.

[3] Medical Times and Gazette, vol. ii. 1864, p. 154.

[4] Ibid., p. 193.

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uprooted by iron or food, or fresh air, or any other means save that of light; and we do well in prescribing this early in the anæmia of night-working men. The exposure to excess of light may be mischievous to the eye in many ways, but the prevention of such trouble is obvious—viz., the avoidance of such exposure. But the great majority of cases of "insolation" are to be traced to the co-operation, with exposure to light, of excessive heat, bad air in tents, and barracks, unfit clothing, and irregularity of habits, together with over-exertion and early neglect of symptoms.

(*c*) Electrical disturbances of health, such as occur in electric and magnetic storms afford much interesting matter for examination, but they are of comparatively rare occurrence, and are often susceptible of explanation by mental and moral rather than physical conditions.

(*d*) There is, however, another, very common source of discomfort and disease increasing year by year in this restless age: I mean that of physical concussion of the body as a whole, or of its parts. "Accidents" show us what violent concussion may effect in one moment; but daily life points out a more serious danger than accident can do. A great amount of shaking and knocking about may be borne by some with impunity, but there are hundreds, nay, even thousands, who are now steadily, slowly, but surely damaging themselves by constant travelling, and especially by railway. Such travelling is often accompanied by hard work, much worry, and exposure to the changes of temperature, which make up what we are pleased to consider as, and call, "our climate." But beside and above all these, the mere recurrence of shaking or "shock" is observable enough. The most prominent effects are irritability of temper, restless fatigue, want of power of application, defective memory, want of confidence, and want of judgment, with insomnia or uneasy sleep, and depression of spirits. The jar of frequently stopping suburban trains is more commonly and quite as seriously damaging as are the occupations which lead men to travel many hundreds of miles per week. Crying children, who will not be rested by a gentle rhythmic movement, may be shaken to something like sleep by a vigorous nurse; and so may the busy man who, paper in hand, jumps into a first-class carriage at the end of a day of work and worry, and is concussed into a sort of coma by six to seven minutes of the train. In the early stages of such troubles some modification of the daily mode of transit may be of service; but when the discomforts have gone to the point of destroying sleep, appetite, and relish for work, nothing but an absolute cessation of the travelling is of the smallest [illegible]

B. The next great group of causes of disease may be put under the one head of modified expenditure as compared with income. There must be in health an outgoing of both material and of energy; and disease is actually present, lurking near, or very easily brought in when arrest of excretion is present.

1. The excretion of *material* is as essential as its introduction. (*a*) Arrest of "excretion" introduces "local" troubles, which tell back and limit "secretion," and this latter limitation becomes at once a "general" or "constitutional" disease. Retained cutaneous excreta produce acne and miliaria; arrested secretion may be followed by pleurodynia, sciatica, local paralysis, pleuritis, or any other inflammation. So with the urinary organs. Arrest of excretion affects the bladder and the kidneys by a backward action, but the non-action of the kidneys places life in imminent peril from toxæmia of most urgent sort. So with the bowels,—habit, laziness, shyness, or what not, may lead to hernia or apoplexy by the straining they induce; but more frequently hæmorrhoids, accumulations of fæcal matter, and their consequences, are the immediate result; but if the intestinal *secretion* be either arrested or misdirected, then grave constitutional disturbance is present or at hand. The same principles hold good with regard to all the systems of the body. The physician has to guide with regard to "excretion"; but common sense about matters that are mere "pathological pap" to himself he will find absolutely wanting, and its dictates quite unappreciable by otherwise well-informed and capable men and women, as well as by boys and girls. Want of attention to "excretion" may be long concealed, but a suppressed "secretion" at once places the patient in the doctor's hands. General medicine may do much for both, but its true *rôle* is in prevention.

But (*b*) evacuations may be excessive, and these of either blood itself, or of other fluids containing it, or its main elements in large proportion. It is enough to mention the drain of hæmorrhoids or of menorrhagia, the exhaustion of chronic diarrhœa, diuresis, or diaphoresis, and leucorrhœa, to indicate the directions in which preventive medicine may do its best, only again emphasising the common fact that these things have often to be looked for to be discovered, and then some considerable discount allowed as to the accuracy of statements made from either delicacy, the wish to be let alone, ignorance, or the "little knowledge" carried to the point of "danger," conceit, caprice, or stupidity.

2. In controlling the amount, quality, and conditions of "expenditure," in *mental, moral,* and *physical* directions, the physician has a wide range of work. The elimination of force is as important as is that of matter. There is, on many sides—mental, moral, and physical—a tendency to meet excesses of one kind with excesses of another. There is a "polarity," so to speak, in society, to be seen in the way and degree to which over-work goes along with—I cannot say begets—under-work; mental strain is associated with mental idleness; eager attempts to solve moral and social questions by something more rapid than a motto of mere *solvitur ambulando* impotence, side by side with the lazy *nil admirari*, provoking egotism and uselessness of full-blown or unripe swelldom; while at the same time the training of the physical athlete is seen in heightened contrast by glancing at the waxy, cumbrous, dull stupidity of those who take no bodily exercise beyond that of lounging in the carriage or the club, diversified only by the too-frequent cigarette.

(*a*) Defective mental occupation begets—by way of bad hours, alcoholism, a love for poor literature, and self-indulgent habits—silliness, self-consideration, egotism, hysteria, hypochondriasis, and progressive feebleness of mind, memory, and understanding. Ten talents may earn another ten; or, *per contra*, they may be abused or lost, with character to boot, by simply being laid aside or hid in a napkin; for it is not the man with *one* talent only that may call upon himself the strong disapprobation of his Lord. To use the powers we have, and incite others to do the same, is a part of our work in the prevention of disease.

Again, the moral nature of man and of society may be stunted, misapplied, or blotted out by simple indolence. How often do we not meet with people who care nothing for anything or anybody but themselves; who read both sides of a debate, a philosophical dispute, or a police report with a languid indifference, and without ever caring to exercise their own thought as to which is right or wrong, "because it's such a bore to make it out, don't you know,"—until, by steady practice of not using the brains he has, his one little talent has shrivelled up, and when he may, perchance, try to turn it to some account, he finds that somebody or some conditions have put a brass farthing in its place. This don't-careism of young people so common now may be somewhat improved by parents and tutors, but it is the physician who will do more than either if he uses his opportunities aright.

The mere allusion that I have made to the deficiency of "physical" exertion, is enough to point out the true line that preventive medicine has to take. It is not so much in youth as in middle life that its effects are shown, and our powers are often limited to the diminution of troubles as they occur, rather than to their prevention beforehand.

(*b*) In this part of "the nineteenth century" we come into contact with excess of work—mental, moral, and physical—on almost every hand. But let us, so far as consequences to health are concerned, at once distinguish between work with worry and work without; which comes almost to mean voluntary and involuntary exertion. Work does not hurt much, worry does. Some are put to learn or do things that they are unfit for, and they suffer. The work may be of the kind that they cannot do, or the amount required may be out of proportion to their strength. Some men can no more learn mathematics than others can music. There is a *Pons Asinorum* somewhere, not only in Euclid, for almost everyone, and much trouble of school, and college, and after-life might be entirely spared if relatives and tutors would recognise the fact.

Mental work is not excessive if the appetite be good and the sleep sound; if these be interfered with, the student or the athlete (in muscle) is doing too much. Work for its own sake is beneficial, but under the pressure of an examination looming in the distance, or of some panic in business, work, to get over the difficulty, is often made excessive, and then worry comes on, with its train of physical troubles that attend loss of appetite and loss of rest. The functions of all

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down" occurs, and relations and friends exclaim, "This is quite too terrible; he seemed so young a man, and was only yesterday quite busy at his work, and full of life and schemes." He ought *not* to have been busy at his work.

As in babyhood we are exposed to the wills and whims of others, to carelessness, stupidity, or over-fussing, to bad feeding, neglect, or exanthemata, to tumbles, broken legs, or other frivolities; so, later on, when the romantic period of youth—be it for learning or for play—has done its best or worst, and *early middle life* begins, the exposures fraught with danger are those of over-excitement and over-work, and against these the physician knows only too well how much he could do if the patient would but hear and follow. We pass on to *middle life*: sometimes a wholesome table-land, but often a still arduous, too arduous climb, or a slow decadence of failure and dismay; and we see success leading to excess on the one hand, or failure plunging into dishonesty or despair upon the other, and here to we must again warn in time; and as the life goes on to its *second infancy*, through an emotional epoch of pitiful weakness, a senile hysteria, the physician has again to use all his care to see that he who has outlived all those who gave him joyous welcome to his cradle is yet tended as he should be, and piously cared for to his shroud.

There is no stage of life at which we are not wanted, no age when we are without anything to do; and let us be ever mindful of our high responsibility of foresight, being assured that in the vast majority of instances we, in spite of many prejudices, shall find ready adjutants thankful for any hints that we may give; and, by doing our work well, be spared having to frame an answer to the terrible question —sometimes quite fairly put—"Why did you not tell me this before?"

D. Temperament is a word more frequently used than analysed; and although its striking forms are known to all, it sometimes happens that its influence on the tendency to disease is disregarded until the disease is brought about. The physician, however, should be on his guard, and try to prevent the *sanguine* youth or man from relying too complacently on his energy—which may not always mean strength,—and so protect him from the consequences of undue hopefulness, carelessness, and from many troubles he had not in the least degree anticipated. On the other hand, the *phlegmatic* may have their morbid proclivities lessened or removed by timely warning and rousing to a sense of duty; while the *nervous* may be strengthened against their trouble by the wise counsel of the physician, who may have the art of obtaining confidence and speaking with authority.

II. I come now to the *second* great group of "causes of disease," to which I alluded at the outset—viz., the disturbances of the equilibrium or balance between the necessary elements of income and expenditure, whether these be of matter or of force. It is absolutely necessary for health that we should "take in" certain things and forces, and that we should "give out" others. It is also essential that what we "take in" should be wholesome, and conducive to healthy life. This range of subjects is so wide and varied that I can but enumerate some of them, and point out generally wherein the physician can act in the prevention of disease.

A. Income is both material and immaterial, or ponderable and imponderable; we need food and air, light and heat on the one hand; excretion of material, and exertion of nerve and muscle on the other. These should be balanced, or we are not in health.

1. The *income* of matter involves all that is included under the head of "Food"—solid, liquid, and gaseous—which may be either defective or excessive in quantity, or wrong in quality. The absence of certain elements—such as vegetables, for example—has its entail of scurvy; while deficiencies of either the albuminous, amylaceous, oleaginous, or saline elements produce their specific morbid changes. Deficiency of food of all kinds is often, too often, sadly, the cause of multiform maladies; associated, as it almost invariably is, with other anti-hygienic conditions, such as over-work, over-crowding, and intemperance. Excessive feeding, on the other hand, which at last brings its own remedy in loss of appetite, may, on the way to that stage, produce a hundred maladies of every organ in the body.

But the great source of disease, against which preventive medicine has shown its strongest powers, and with which it now wages war the most vigorously and incessantly, is the introduction of noxious matter, either with food, by the air we breathe, or by direct inoculation. The appliances of science have done much to diminish the evils that arise from the metallic or other poisons, such as lead, mercury, antimony, steel, phosphorus, and the like; and the mode in which good has been obtained is by the prevention of their entry into the organism, and also by rendering assistance in their excretion. In like manner, the more subtle poisons, which are the physical bases of all zymotic disease, are to be robbed of their power for mischief mainly by being kept out of the body. The physician has found out the sources of many of these poisons, as well as the modes by which they enter the body, and, having done so, has devised means for their arrest. The *materies morbi* has been separated from much that had surrounded it, and measures for its modification or destruction have been discovered and applied. Our knowledge of the definite importation of cholera, typhoid, and more recently of some outbreaks of scarlet fever, by means of water and of milk, and, further, the knowledge that by simply boiling these fluids the poisonous material is deprived of its power for mischief, afford grounds for hope that, by increased observation, the sources of other maladies may be found, and means for their destruction be devised.

The magnificent results that have been obtained and demonstrated with regard to vaccination and variola have stimulated the zeal of many enthusiastic workers, and raised—as almost all beneficial discoveries have done before—a perfect tempest of opposition, misrepresentation, and frivolous and irrelevant talk. The questions of syphilisation and of inoculation for rabies must be regarded as still *sub judice*; but a sufficiently strong case has been made out in regard to both these poisons, not only to justify, but to demand further inquiry.

2. There are certain imponderables, such as heat, light, and electricity, that we require for healthy life, and the deficiency in the income of which is the frequent cause of disease.

(*a*) We all need external warmth, and at the extremes of age the need is greatest. Many follies of habit may be rectified by the physician, even although in some individuals the constitution is so marvellously elastic that it can bear an amount of ill-usage that would kill many a race of animals. Whatever may be said of the process of "hardening" by exposure, it surely cannot be a universal advantage to undress under the trees of Hyde Park, in an east wind and drizzle, at 7 A.M., in the winter months, plunge into the half-frozen Serpentine, and get home to breakfast cold and blue, with chattering teeth, and exclaim with a mixture of pharisaism and apology in tone, "It is when it is as cold as this that it does you all the good in the world!" There is much "tubbing" and bathing in the present day that is excessive, unphysiological, and mischievous, and there are endless follies in the form of clothing that the physician can do little to cope with simply because there are two much more popular preachers than he—viz., fashion and fad. Excessive heat has some injurious effects in itself, but the really active sources of heat disease in hot climates are the malarial or other poisons which are there, and the injudicious clothing, eating, and drinking which in too many places are habitual. The occupations which expose stokers, furnace-men, and the like to intense heat may be rendered nearly if not quite innocuous by attention to clothing, to the length of exposure, to the full supply of water and of fresh air, and to the alternation of work done with periods of due freedom from exposure; these things to be arranged with knowledge of the wants entailed by special kinds of labour in individual cases. To the philanthropy of employers, and the zeal for all sorts of social improvements in a rapidly growing class of men, as well as to the labours of the men of science, are we indebted for the prevention of much of the evil that excessive heat might bring about.

(*b*) The absence or deficiency of light, and especially of sunlight, shows its morbid effects in the impaired health of miners, navigators, workmen in cellars, in city offices, and in the night. The night working to which I refer is such as must limit the income of sunlight to a considerable degree. Those who suffer most are the reporters, literateurs, printers, writers, and many others whose work is nocturnal exclusively, and who require some distinct changes to be made in their habits. Anæmia is the prominent mischief brought about by deprivation of light; and anæmia means very much—very much more than mere pallor of the skin. There is no organ in the body which it does not affect; it cannot be

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converse condition of insusceptibility cannot be regarded as a morbid condition. Caution as to exposure is almost as important in the one case as in the other, for rashness is not without its victims, and to this allusion has been made already. Many precautions must be taken on behalf of those who have hereditary taint, for the conditions may be multiform which come together to produce from it the fully developed disease. As an example of popular knowledge on this point I quote a paragraph from *The Times* of Sept. 12th, in its review of Mr. Colvin's recent "Life of Keats." The writer says, after alluding to the eminently pugnacious character of the poet in early life, "It was not till the hereditary taint of consumption, which had already killed his brother, became developed by the over-exertion of a walking tour in Scotland, that pecuniary troubles, caused by a stupid and stolidly unsympathetic guardian, combined with the hope deferred of a long engagement to Fanny Browne, and perhaps to some extent the disappointment of literary ambition, fostered a certain morbid tendency of his nature, if the term 'morbid' can fairly be applied to a turn of mind to which literature owes some of its greatest masterpieces."

B. Sex has always found its place among the "predisposing causes of disease"; and if general etiology were the theme of this address there is very much that ought to be said regarding it. But as the physician has no power to direct the production of boys or girls respectively, all that preventive medicine can do is to guide the development of each. Organs must be present to take on morbid action, but the *differentia* of sex are far wider than the possession on the one hand of ovaries, and on the other of testicles. The moral, mental, and physical conditions and aptitudes of the two sexes differ; and while civilisation has intensified, through generations, these *differentia*, the tendency of much recent fashion—I cannot call it civilisation—has been to diminish them: so that we encounter on every hand manly or "masculine" women and effeminate men. In uttering its protest against this perversion of nature, this devolution instead of evolution of the race, preventive medicine may be of service.

There is nothing to my mind more simply silly than the "cant" or "slang" that has been uttered about the "superior" and the "inferior" sex. Each may be perfect in its way, but each is spoiled when it apes the other. In rough conditions of life women may have been, and are now, better fitted for physical labour than are those whose very configuration and faculties have been modified by social habits of refinement; and it certainly is not the aim of the obstetric physician, either man or woman, to encourage the development of the "masculine pelvis."

It is worthy of note here that it is not the highest qualities of man that young women imitate, but rather, on the one hand, the roughness of the youth, his bravado, and uncouth language; or, on the other, the lackadaisical *nil admirari* tone of the pedant and the fop; with, it may be, an occasional dash into imitation of excessive learning, and the habits of the ascetic or recluse. The men who mock women's ways also mock their foibles, not their strength; and lisp and sigh or groan out their unsatisfied longings in vapid admiration of sentimental nonsense, whether it be in poetry, music, or painting, and find out something "quite too lovely" in a line, a strain, or a daub, that no sensible man would care to hear or see again.

The brain of women is not improved by being roughened or overstrained; and the emotional nature of man is enfeebled by this reversal of the order of Nature; and we find the tendencies to disease inverted without any advantage to either. The physician may, I think, do much in counteracting this tendency of the present day: protesting, on the one hand, against all foolish pruderies, mock-modesties, and the like; and, on the other, encouraging healthy habits of body and mind; always bearing in mind that the highest type to aim at is the perfection of woman and the perfection of man, and not the production of moral and mental hermaphrodites, which, thank Heaven, are usually sterile.

Let it not be supposed that I do other than admire the great strides that have been made of late years in the higher education of women, both for intellectual and practical work. These may be readily overdone as they are in men, and very frequently the results of over-strain are seen in illness, incapacity, and distress. Their exhibition, however, is less painful than the frivolous inaptitude and idleness of men, who, with all social and educational advantages, do nothing, never occupy themselves with any calling or pursuit, but are content to "bide or loaf about" and live upon their incomes, or their friends as the case may be. Over-strained women often become sour and cynical and morbid, as do briefless barristers and unpopular parsons, who may have much laboriously gathered learning in their brains, but have no congenial work to do. They complain of like discomforts, "diminished brain-power," as the favourite expression goes, and entire dissatisfaction with everything and everybody. Under-occupied men become hysterical and silly, and the prey to every form of hypochondriacal misery. It is the highest sphere of man and of woman to be the complement of each other, and to combine in the work of home first, and then of all around it; but the work of the one should be a woman's work, and of the other, "all that may become a man." It is in the imitation of the ways of the other sex that woman becomes repulsive, and man despicable.

With regard to sexual proclivities to organic diseases, there is something for the physician to do in being forearmed. For example, the greater frequency of simple ulcer of the stomach, of erythema nodosum, goitre exophthalmica, and the like in women, and of angina pectoris, carcinoma ventriculi, locomotor ataxy, and other maladies in men, may be of service not only in diagnosis and prognosis, but in treatment.

There is, however, much that prevention may do by regulating the habits of boys and girls. In healthy exercise, the avoidance of over-strain of muscles and prolonged fatigue, in wholesome food and sufficient rest, and in a score of ways, many a trouble which might easily become developed into disease may be avoided. Many cases of heart and lung disease originate in the rough games of schools; many of the troubles of women in their indolent and unwholesome school-room and after life, in the follies of their dress, and the hours they keep.

C. Age. We know much, but understand little, of the time-ordered events of life. There is an average pulse and respiration time; there is the incubative period of life as well as of the exanthemata; dentition, puberty, climacteric changes, and decay have their relations, more or less fixed, with time; and a knowledge of the predispositions attending various ages may be of service in the prevention of disease. In infancy the thermogenesis is low and the capacity for digestion limited to certain kinds and quantities of food; so that danger lurks in defective clothing and defective feeding. There is rapid development, and the reflex functions are over-active, so that there is undue proclivity to spasm, not only of the voluntary muscles, but of the vessels; for spasm may cause infantile paralysis as well as infantile convulsion. Febrile conditions are common, and so are local disturbances of the circulation, such as internal congestions, and other forms of congestion not internal, such as chilblains. It is by regard to the nursery, the clothing, the food, and the surrounding conditions of domestic kind that the physician will ward off much disease.

In dentition—whether first, second, or third—the nervous conditions which precede as well as accompany the eruption of the teeth must be duly regarded and foreseen, and so many troubles averted before local discomfort of the gums has taken place.

At puberty it is by guiding the *general* habits of the individual rather than by looking after possible *local* troubles, by maintaining a healthy tone of domestic life rather than by special treatment, that the physician will do his best to prevent disease. We are too often disposed to be looking for some special sign of change, forgetting that "change" is always going on; and so, sometimes, we may let golden moments or months pass by unused. The follicle of the wisdom tooth may be found in the embryo jaw, and many of the evils of all the so-called "changes of life" exist long before any special events have made them obvious. Bearing these thoughts in mind, we may always see much to guide us in advising those upon whom "age" is stealing, but who have as yet had no warning that it is so, for they are "younger than their years." Those who are "older" often come quite soon enough, but rarely too soon, for help. The horizon of thought and work ought to be made smaller when memory becomes treacherous, arteries rigid, and the heart's impulse low. Timely caution, based on facts which only the doctor knows, or from the revelations made to him in his confessional—although carefully concealed at home,—might save hundreds of "shocks," or more slowly growing and increasing griefs, when some unlooked-for "break-

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development of certain organs afford scope for the teratologist rather than the physician. They furnish illustrations of curious facts in heredity, and in this way are interesting and instructive, and may be useful. Hare-lip is so often the result of a mental impression made upon the mother, that the sequence of events cannot be confined to the chapter of accidents; the same is true with regard to supernumerary fingers or toes, and these peculiarities are liable to recurrence through successive generations. Observe here that the original cause of the deformity was not hereditary but accidental, and yet that it became hereditary. This question of the hereditary transmission of acquired habits or conditions is still *sub judice*, but to my mind many of the facts recorded by Darwin are susceptible of this interpretation, notwithstanding the very strong evidence afforded to the contrary by the history of the habits of the Mahomedans and Hebrews.

4. Morbid conditions of function or structure of particular organs or sets of organs, and such as do not affect the *general* health, are very commonly met with, and for some of them much may be done. These may be resolved mainly into organic changes which limit, or derange or destroy, functional activity. (*a*) The organs of special sense furnish the best examples of this class. Almost every variety of limitation or perversion of the sense of sight, from slight myopia to absolute amaurosis, seems to run in families. Sometimes the defects are congenital, sometimes they appear in adolescence, and again they may be deferred until declining years. It is in the early recognition of these maladies that the main hope of amelioration is to be found. Ophthalmic science is a growth of our own day, and its powers are now being used for the education and strengthening of the healthy eye; in the timely correction or removal of some sources of deficiency; and the supply of optical instruments to reduce to a minimum the disabilities with which some are born and which others acquire. Whatever may have been the prescience of our forefathers and their skill in surgery, it has been reserved for the latter part of this century to see "the blind receive their sight," and these not only among the favoured few but among the multitude; and still further, not as the result of any painful operation, or in the face of any risk, but simply by adding to a profound and scientific knowledge of the structure and functions of the eye the aid yielded by a mastery of the sister science of optics.

(*b*) Deaf-mutism, again, may be hereditary, congenital, or acquired, and some of the most astounding results of training have been witnessed in this field. A congenital deaf-mute, if left alone, becomes as a rule an imbecile; one who has been born with language and hearing, but has lost them both in early life, may become the same, if nothing be done to educate him, while the results of due teaching are marvellous. Two boys, brothers, were brought to me at about three and five years of age; they were congenital deaf-mutes and imbeciles, and examples of the same miserable condition were found in other members of the family. A very clever, most patient and persevering tutor was found for these boys, and when the elder was between eleven and twelve years of age he had been taught to read, write, and speak with accuracy. He could read not only from books, but from the lip or from the hand; could articulate very well; could parse a sentence in English and translate it into French or German! There are thousands in this country who have no advantage of this kind, and so they remain to the end of their days mere vegetating boys and girls, or men and women, a burden to their relatives and a disgrace to the community.

5. The fifth group of hereditary diseases is one so large that it seems to include almost all the maladies that flesh is heir to, except those that are the result of direct introduction of poison from outside. They are as numerous as the organs of the body, and as various as the possibilities of change. Such inherited ailments agree however, in their consisting of a general tendency to disturbance of varied functions and structures, and in their becoming expressed in the form of so-called diathetic or "constitutional" disease. If there are, on the one side, occasional examples of hereditary "nervousness," or simple epilepsy; there are, on the other, tubercle, scrofula, Bright's disease, and others about which it may be truly said, "the whole head is sick, the whole heart is faint, and there is no soundness in it.' Yet even in extreme cases preventive medicine has its work to do.

(*a*) The condition of ill-health most frequently met with in hereditary diseases of the nervous system is one of undue liability to disturbance;—given in any one of the antecedents of a particular individual, either insanity, epilepsy, hysteria, tendency to excesses, great nervousness, or what not, the outcome may be any other of the maladies mentioned, and not at all necessarily a reproduction of the initial disease. It is by bearing this fact in mind that the physician will see the necessity of being armed at all points. It is not enough to avoid or counteract the tendency to convulsions in the first dentition, the second, or the third; but other diseases such as chorea, hysteria, wilfulness, tricky ways, cruelty, and deceit must be borne in mind. No routine practice will be useful; it is often worse than useless. For example, a child at twelve becomes nervous and restless; his father had fits when he was young, and is an odd man now; some other members of the family had convulsions; an uncle was epileptic, and therefore this is regarded as a case for bromine, a diet restricted to insipid inefficiency, books are to be put aside, school abandoned, the boy petted and pampered at home in the bosom of his family, several of whom are somewhat queer, and so, in spite of bromide and of a redundancy of counsel, he becomes a victim to the very malady from which so much was done with the intent to protect him; and this, be it remembered—and the like has happened scores of times in my experience,—when the boy was simply anæmic, wayward, underfed, and not quite straightforward in his ways, and really required iron, not bromine; good food and plenty of it; the discipline of school, as well as its work; the companionship and the sports of his own sex, instead of the petting of his sisters and little brothers, over whom he tyrannised in secret, and so escaped the thrashing he deserved.

Another illustration of the like mistake is seen often in girls, whose mothers have passed through an early life of indulgent petting into one of hystero-mania, or ego-mania, and then gradually into that of chronic silliness, self-absorption, and the sacrifice of parent, husband, child, or friend to each and all of her foolish whims. "No one has ever opposed her"; "She has always had her own way": this is what we are told, and therefore she must go on as she has been doing, and her daughter must follow suit. There is nothing the matter with the girl except occasional migraine, from some real or hypocritical fasting, or from sitting up at night without food poring over a trashy novel. She can sit a horse, but she cannot sit upright in a chair; she can play lawn-tennis, but she cannot walk; she cannot sit out "morning church," but she can dance for five consecutive hours. "She is just like her mother," her relatives exclaim; "we dare not thwart her, or she will become as bad," and so she goes her own ways and fulfils their worst predictions. These are but common illustrations of the fault of thinking that hereditary disease must take its parent form; or of acting upon the presumption that, as the form is the same, there is nothing to be done. On the contrary, much may be done by taking patients from home and all its evil ways, giving regular employment of useful sort, exercise of mind and body, fresh air, good food, plenty of rest at reasonable hours, and utterly declining to admit the existence of anything but a slight malady that needs, however, definite treatment, and that of the kind described.

(*b*) Of gout, rheumatism, tubercle, scrofula, syphilis, cancer, Bright's disease, and many others, it is only necessary to observe that to be forewarned is to be forearmed; and that, when there may be a strongly marked hereditary taint, its development into disease may often be delayed or eradicated by timely care. We lose more lives through carelessness than through ignorance. May not the thin-limbed and thin-faced boy, with pink-and-white complexion, overtall for his age, who easily perspires and passes lithates, whose temperature and pulse run up quickly, who declares that he is very well until some general langour or local pain compel him to give in,—might he not often be saved from attacks of acute rheumatism, by careful habits, food, clothing, and medicine, and so spared all the troubles of a damaged heart? We have to look for these things, not have them thrust upon us. The day may be yet distant, but it will surely come, when regulated physical examination of the bodies of the young will be as necessary and as common as examination in the Latin grammar or the multiplication table, or other matters.

6. But there is another group of hereditary conditions, not common, but well marked—viz., a proclivity to "take diseases," sometimes of several sorts, sometimes of one only, for, e.g., such as scarlet fever or whooping-cough. The

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Address
ON
PREVENTIVE MEDICINE,

Delivered at the Congress of the Sanitary Institute of Great Britain, held at Bolton,

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THE causes of disease, with which preventive medicine has to deal, are so numerous and so various, that it is, first of all, necessary to arrange and classify them in some logical order. This I have attempted to do in the scheme which follows, premising that it is of provisional character only, and may be found useful as a working assistant until something better is propounded to take its place.

I. The first division is between those which are inherent in the individual, and those which are brought to bear upon him from outside. In the former category are to be found hereditary constitution, sex, age, and temperament; in the latter, all those influences which disturb the balance of income and expenditure of both material or ponderable and of immaterial or imponderable elements. Everyone has his life conditioned by the former. There is no possibility of eradicating the conditions, or of modifying them, when once developed in an individual; but their effects may be prevented from becoming disease by timely recognition and counteraction. Everyone, on the other hand, requires for the healthy performance of vital functions an equilibrium between the income of material—in the form of food, air, and the like—as well as the income of heat, light, and other forces, and the expenditure or excretion, or going out of material and of energy. Income may be wrong in quantity, or unwholesome in quality, while outgo may be at the same time defective; and so to the introduction of new poison from without is added retained poison from within. It is by the recognition of these causes of disease, and the employment of all our antagonistic powers, that preventive medicine may presume to be scientific in its method and successful in its results. The first of the inherent causes of disease is—

A. Heredity. There are many conditions passed down from one generation to another that are not morbid, such as configuration, height, mental and moral qualities, which are said to "run in families," but with which we have nothing to do here. But there are others which are morbid, and with the influences of which we have to cope, and if possible to intercept. They may be arranged under the heads of (1) redundancy or (2) deficiency of organs; (3) arrests of development; (4) unhealthy conditions of function or structure of particular organs or systems of organs; (5) disturbances of the whole body, diathetic, constitutional diseases, the tendency to which does or does not show itself until different epochs of life, when specific trophic changes occur; and (6) special proclivities to "take diseases" coming from outside; and, conversely, insusceptibilities of analogous kind, which latter cannot be regarded as morbid, but which may sometimes prove traitorous if relied upon too implicitly.

Speaking generally the power which the physician has to diminish hereditary disease lies in two directions (*a*), the forestalling of morbidity by the prevention of ill-assorted marriages; and (*b*) the special guidance of tainted children by all measures that can be used or devised for the purpose, by controlling moral, mental, social, and physical education, and regimen of life. This must be commenced before birth, continued in the nursery and school room, and maintained during manhood, and even to declining years.

(*a*) Marriages of consanguinity, even when there may be the very rare event of freedom from all taint on either side, are well known to become, in the second, third, or fourth generation, the source of much deformity and misery—and this in spite of all special statistics to the contrary. Marriages of consanguinity unfortunately "run in families," and so intensify the evil; and they are doubly difficult to circumvent—first, because of the primary bias to their contraction, and then because the poor creatures thus produced are specimens of nature's workmanship in its most untidy mood; features have rarely been duly chiselled, the sense of beauty has long been dead, while *gauche* figures and manners often render the victims little short of repulsive to all but those who, born under like conditions, have their faculties of perception so maimed and blunted that they know no better, and are also debarred by their own defects from making any higher choice. This is but a feeble account of what occurs too frequently when some distinct hereditary taints do exist in a family, and where marriages among its members have been permitted. Definite disease, as well as deformity, is the too frequent result; and the result is both persistent and aggravated until, happily, sterilisation may set in. No one can doubt the power of "artificial selection" in the production and perpetuation of advantages or peculiarities that may have been accidentally or artificially brought about. No one can doubt the force of "natural selection" along the lines of utility and the most consummate art; and no one can fail to see, or ought to fail to see, that there exists in man the power to modify the race to which he belongs; and acting up to his highest light, in all the paths of knowledge, to use his art to diminish or destroy that which has within it, at its beginning, the seeds of its own inherent decay, being assured that if he does his work well, nature will internally perform the rest. Conversely, every change, accidental or inherited, which limits the capacities of life, is liable to become fixed by transmission through successive generations.

But (*b*) there are marriages taking place daily, not those of consanguinity, but of unhealthy people, and of those who are actually suffering from developed disease, of marked hereditary character, or from as yet undeveloped taint, and that this often happens when the taint is very strongly exhibited in other members of the family. Let it always be remembered that hereditary taint, although undeveloped, is in itself disease, and then the grave character of the responsibility of propagating it may be, if not duly, approximately gauged. The function of the physician is to examine carefully and advise discreetly. He must weigh *all* the parts of the family history,—and here he will meet with the greatest difficulty, for often the facts are not known, or, when known, are either concealed or misrepresented. He must form an opinion of the intensity of the hereditariness in each particular malady, and also in the family under consideration; and he must have the courage of his convictions. This may make him unpopular or hated, but he must be strong enough to do his duty, and find in doing it his reward.

But it is in a very small minority of cases that preventive medicine is ever called into operation in this early stage. The minority is as small as the majority is vast in which the physician is consulted before disease has advanced into open and obvious activity. The devices that must be employed to prevent the development or further progress of inherited disease are as manifold as the affections themselves, and some further insight into the prevalence of the latter may be gained by a simple enumeration of those which are the most familiar. But here let me make two remarks by way of caution. First, there is no disease that has yet been shown to be *always* hereditary in its origin, so that, e.g., when we meet with insanity or phthisis in an individual we are not at once to conclude that it was "inherited" by him because a parent had been epileptic, or a grandparent had died of consumption. A large proportion of hereditary diseases can be traced to no hereditary source in particular individuals; therefore we must allow that, in a large number of cases where the possibility of inheritance is patent, a certain number may have developed the disease *de novo*. Secondly, with regard to many people the anti-hygienic conditions and habits which have led to disease in their ancestors may be persistent as cherished heirlooms, and be effective for mischief now. Especially is this the case with regard to the large group of diseases of the nervous system. There is much more than the mere physical contamination by descent in the etiologic conditions of a boy or girl who may be brought up in constant association with an idle, self-indulgent, hypochondriacal, or drunken father; and it is quite impossible to over-estimate the dire misfortune to a girl of being educated by an hysterical mother. No high powers of the microscope are needed to discover the *modus operandi* of the *materies morbi* of the contagium of "bad example."

I pass now to some special examples. (1) The redundancy, (2) the deficiency, as well as (3) the arrested

Remarks
ON
THE PRESYSTOLIC MURMUR, FALSELY SO CALLED.

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(*Concluded from p. 653.*)

If, then, what is commonly held to be a mitral obstructive murmur is not one, is there no such thing? If such a thing there be, it has been of late neglected, pushed from its stool by the "presystolic" murmur, which I have ventured to regard as falsely so called and erroneously interpreted as regards the direction of the blood. The auricular contraction and the obstructive mitral murmur (if there be one) must be simultaneous with the expansion of the ventricle. The ventricular systole is succeeded by a period during which this chamber remains closed and still; this by expansion of the ventricle and auricular contraction. The position of the second sound is important as marking time. This succeeds the first after an exceedingly brief space. The sigmoid valves are closed by the elasticity of the aorta almost directly the active contraction of the ventricle is over. But not yet does the blood begin to pass from auricle to ventricle. There is the period during which the ventricle waits empty and still. Not until it reopens can the blood enter from the auricle, or any murmur arise which belongs to this act. The murmur of mitral obstruction must therefore succeed the second sound with an interval. And it is obvious that there must be another interval between this murmur (if it exist) and the ensuing first sound, or any sound which is produced by ventricular contraction. The machinery has to be reversed, the dilatation of the ventricle has to be replaced by contraction, the muscle has to harden and pull itself together and stop the influx before it can get way on the departing blood. Thus between the auricular discharge and effective ventricular effort a certain time must elapse and a halt or break occur. The mitral obstructive or auricular systolic murmur must needs therefore begin after the second sound and end before the first, not "running into it," but distinctly separated from it. Such a murmur must be feeble, as is the auricular contraction, and it may well be, considering the want of *vis a tergo*, that it will be developed only in circumstances especially favourable to it.

Such are precisely the characters, as I have fully satisfied myself, of the true mitral obstructive murmur; and if this be so, cardiac diagnosis has in this matter followed somewhat of a planetary course, returning to the point whence it started some fifty years ago; but it has not come back empty handed, for it has acquired the art of recognising mitral stenosis with practical certainty, though by means of a hypothesis which is open to question. In the year 1839, Hope wrote as follows: "When the mitral valve is considerably contracted, a murmur (best heard in the same situation as the murmur from regurgitation, and distinguishable in the same way from semilunar murmurs) attends the ventricular diastole and second sound. From the weakness, however, of the diastolic current out of the auricle, the murmur is always very feeble, soft, like the bellows sound, and usually on a rather lower key than a whispered 'who.' I have found this murmur absent, unless the contraction of the valve was considerable, for the blood had still sufficient room to pass with tranquillity; and I have also found it absent when the contraction was *great*—when, for instance, the aperture admitted one finger only, or merely a quill, provided the current was preternaturally weakened by softening, by extreme dilatation of the heart, or by both. In such cases, however, the mitral disease would not be overlooked, as there is almost invariably a murmur from regurgitation. On the whole this murmur is exceedingly rare, though Laennec and authors in general have supposed quite the contrary from mistaking for it the murmur of aortic regurgitation. I have never known purring tremor to accompany a diastolic mitral murmur, the current being too feeble to produce it."[1]

Latham, in the year 1845, refers to the "mitral diastolic" murmur as indicating an impediment at this orifice, but as "a sort of clinical curiosity not found in practice." Watson, in 1857, recognises this murmur, and also its infrequency. "If the mitral valve be converted, as it often is, from a pliable folding valve into a long and rigid unvarying chink, the blood which passes through it from the auricle to the ventricle, during the diastole, may (though it seldom does) cause a rushing or blowing sound." Thus, the "mitral diastolic" murmur, small and infrequent as it is, was recognised by the older writers; and though of late its place has been usurped by the more obtrusive if less veracious "presystolic," yet the still small voice speaks as formerly, and occasionally finds a listener. Modern writers who accept the current view of the murmur which is called presystolic, yet recognise the old mitral diastolic. Bristowe, in his last edition, gives a diagram of each of these murmurs, both as significant of mitral stenosis. Austin Flint recognises two murmurs of mitral obstruction, the "presystolic" and the "mitral diastolic," the diastolic accompanying the early passive part of the emptying of the auricle, the other the concluding part, characterised by active contraction. Balfour holds similar views in this respect. Thus two murmurs, belonging, according to this belief, to different parts of the same act, may be separated by an appreciable interval; while two murmurs, the presystolic and the systolic, belonging to different acts, and made by the blood going opposite ways, may be inseparably blended together. This does not present itself with an air of probability.

Some of the writers I have quoted are among the greatest in medicine. To descend, I will describe the mitral diastolic or direct mitral murmur as it presents itself to my own ear and understanding. In a case of well-marked mitral stenosis where the characteristic *R-r-r-p* has indicated, as I believe, regurgitation through a constricted and ultimately closing valve, it is not very uncommon for one who looks for it to find in the middle of the cardiac pause a short soft whiff, brief, low, not abrupt either in beginning or ending, sometimes "a sound so fine that nothing lives 'twixt it and silence." This begins after the end of the second sound, and stops before the beginning of the first or of the murmur, which in such a case usually replaces it. If there be what is called a presystolic murmur, there is a distinct interval between its beginning and the end of the murmur which I am trying to describe. This murmur in time of occurrence resembles that of aortic regurgitation, though not exactly, for it does not replace or inseparably follow the second sound, but comes after it, usually with an appreciable interval. It is limited to the apex, which the aortic regurgitant murmur, often as it is heard there, seldom is—I must not say never. The direct mitral murmur is much lower in tone than is the aortic; it is not necessarily associated with the jerking pulse, or with what is called capillary pulsation, or with hypertrophy of the left ventricle, all of which are so well known as aortic concomitants. Notwithstanding these differences, there is reason to believe that the mitral direct has often been mistaken for the aortic regurgitant murmur, and possibly *vice versâ*.

To dwell for a moment on the differences and resemblances of the direct or diastolic mitral murmur and that of aortic regurgitation; if that in question be loud, intense, or accompanied with a thrill, it is certainly not a direct mitral. To be audible only at or close to the apex argues for a mitral origin, but not conclusively, since aortic diastolic murmurs are sometimes thus limited. I have endeavoured, but with imperfect success, to make posture a criterion. The aortic regurgitant murmur is commonly exaggerated by the erect position. I have seen cases, in which I have been practically sure that the diastolic murmur was mitral, in which it was audible only when the patient lay down; and it has been likewise observed with regard to the so-called presystolic murmur, which on any view is mitral, that this has sometimes been heard lying, not standing. But, on the other hand, I have found a similar variation with posture in murmurs which I thought to be aortic, though in cases in which mitral disease also existed. Upon this point more evidence is wanted, especially such

[1] Hope on Diseases of the Heart, third edition, p. 387.

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as is completed post mortem; but it is not too much to say that the loss of a murmur with the erect and the recovery of it with the recumbent posture is an argument, though not a conclusive one, in favour of its mitral origin. The resemblance of the aortic regurgitant murmur under certain conditions to the direct mitral makes, indeed, the chief difficulty in the sure recognition of the less frequent murmur. This is of the greatest importance, because it so commonly happens that the typical contraction of the mitral valve is the result of endocarditis, which process seldom fails to traverse the small space from the base of the mitral valve to the base of the aortic, and cause some, though generally slight, thickening of the latter. Thus the aortic diastolic murmur is apt to present itself in cases of mitral stenosis, as also is the mitral diastolic. Often, perhaps generally, the distinction can be confidently made; sometimes it remains in doubt. The interval which usually separates the mitral diastolic murmur from the second sound is an important indication, as also is the aortic pulse.

A word may be added concerning the thrill which so often accompanies the so-called presystolic murmur. I believe, with Hope, that the current from the auricle to the ventricle is seldom, if ever, strong enough to give a thrill along with the direct mitral murmur. If a thrill accompanies a mitral murmur, I should regard this as a proof that the murmur is due to the action of the ventricle, and is truly systolic and regurgitant. A thrill may of course accompany an aortic murmur; it is common with the regurgitant aortic: but this is outside my present contention.

I will now relate three cases, one of which might have done duty in the earlier part of this paper, as presenting instances of the direct mitral or true auricular systolic murmur. The first two displayed this murmur in connexion with the common mitral regurgitant, the last with the so-called presystolic. In all there was extreme contraction of the mitral orifice. I would draw attention to the fact that the only case in which the murmur was what is called presystolic was likewise the only one in which, as seen after death, the valve could have been judged capable of closure.

Richard B——, aged fifty-one, was admitted on March 23rd, 1887. He had dropsy, enlargement of the liver, and the general symptoms of mitral disease. The præcordial dulness was increased in extent, the apex beat diffused, its greatest intensity in the fifth space slightly internal to the nipple line. At the apex were two murmurs, an ordinary systolic and a post-diastolic, the latter following the second sound after a short but appreciable interval. This murmur, like the other, was audible only at the apex; it was soft and ended gradually. The second sound, as heard at the base, was rather sharp, free from murmur. Over the ensiform cartilage was a second systolic murmur, which was interpreted as tricuspid. We had, therefore, murmurs which were significant of both mitral and tricuspid regurgitation, without the speciality which would suggest for either the term presystolic, together with the murmur which followed the second sound, and which I, in common with some of the older writers, believe to be the only true auricular systolic. During what remained of life the heart was made the subject of frequent observation. Occasionally the action was so irregular, with repeated short sounds mixed with murmurs, that it was impossible to assign any order to them; when the murmurs could be placed, they were always as described. The first murmur appeared to occupy the early part of the systole, though not ending with the abruptness characteristic of the so-called presystolic. The second left apex murmur which I have called post-diastolic (it should more properly be called *diastolic*, for it occurred in the diastole, though after the diastolic sound), always exceedingly soft and faint, was sometimes indistinguishable. The second sound also became weaker, and at times could be heard only over the lower part of the heart, below the nipple. The associated sounds and murmurs were best made out with a two-ended stethoscope, which brought the central part of the heart and the apex into hearing at the same time.

After increasing dropsy and hæmoptysis the patient died on June 15th. The heart was generally of large size. The left ventricle was dilated and hypertrophied, the columnæ carneæ much so. The right ventricle was dilated and much hypertrophied. The left auricle was thickened, the right dilated. The heart weighed twenty ounces. The mitral orifice was narrowed so as to admit only one finger. From the auricle the hole presented a crescentic shape about an inch and a quarter long, and half an inch at its widest. Its margin was here studded with rough lumps of stony atheroma. Towards the ventricle the valve narrowed; the curtains were greatly thickened with fibroid tissue, and adherent together at their edges, so as to make an irregular funnel shape, presenting below a much smaller opening than above. The flaps were not obviously shortened, and closure could be brought about, except at one corner, where a nodule of stony atheroma as large as a nut prevented their apposition and maintained a small opening while the rest of the valve was shut. The tricuspid valve was not altered otherwise than by dilatation. The opening admitted five fingers. The aortic valves were slightly thickened, but serviceable; they could not have allowed of regurgitation. The pulmonary valves were natural. It was sufficiently clear that there must have taken place both aortic and tricuspid regurgitation, while the narrowing and the roughnesses which beset the channel were such as to confirm the view taken during life that the diastolic apex murmur was one of mitral obstruction.

Rebecca A— —, aged forty-one, was admitted on May 18th, 1887, with the general symptoms of mitral disease, dropsy, bronchitis, and flatulence. The heart was apparently dilated, especially the right side. No murmur was as yet audible. The impulse was to the right of its proper position, the sounds quick, as with a contracted mitral valve, which lesion was suspected, notwithstanding the absence of murmur. Under treatment, chiefly small doses of digitalis, the heart became slower and steadier. On June 2nd two murmurs became audible at the apex. The first was a very low, barely distinguishable bellows sound, which accompanied the systole, went all through it, ended softly, and had the well-known character which belongs to the mitral systolic as distinguished from what is called the presystolic murmur. The second was post-diastolic, to use the word in the familiar sense of after the diastolic sound. A short, low, but distinct murmur followed this sound after an appreciable interval. The murmur was followed by another interval, which separated it from the systolic murmur, about to recommence. The second was regarded as the auricular systolic murmur of mitral stenosis. The sounds and murmurs were therefore placed thus: systolic murmur, second sound, interval, final murmur, final interval.

On June 21st the patient died. The condition of the heart was as follows: There was a great amount of fibroid thickening about the mitral valve, the orifice of which was reduced so as to admit only one finger. From the auricular aspect the slit presented a serrated edge, which seemed well calculated to engender a murmur. The flaps of the valve, of which the free edges were about an eighth of an inch thick, were so massive and rigid that they could not be got to close with any accuracy, so that regurgitation must have taken place, and, as it seemed, continued through the whole systole. The tricuspid valve was affected similarly to the mitral, but to nothing like the same extent. The aortic valves displayed one or two small beads of recent lymph on their ventricular aspect, which could not have interfered with their closure. Had a murmur resulted from these minute vegetations, which did not seem probable, it must have been obstructive. The pulmonary valves were natural. The left ventricle was dilated; the right dilated and hypertrophied. The left auricle was dilated and hypertrophied. The heart weighed fourteen ounces.

Charles R——, aged thirty-five, was on April 16th, 1886, referred to my care by my colleague, Dr. Wadham, as having a well-marked murmur of the kind known as "presystolic." This was perfectly characteristic: a short intense murmur at the apex was abruptly terminated by a shortened sharp first sound, this being succeeded by an ordinary second sound; the apex beat was very feeble, and scarcely sufficed to move the spring and lever which I made use of to mark the beginning of the cardiac impulse, but after several attempts I satisfied myself that the lever moved with the beginning of the murmur. The patient now left the hospital. He came in again under Dr. Cavafy, and was by him transferred to me. From February, 1887, until the following April, when he died, he remained under my care. It is not my present purpose to deal with the symptoms, but I may say, in brief, that he had increasing general dropsy, hæmoptysis, and finally incipient gangrene of the left foot. The sounds of the heart varied within certain limits. The action was often irregular. The so-called presystolic murmur was often present as described; latterly it was often so feeble as to be nearly indistinguishable, sometimes entirely absent. In addition to this, there was occasionally audible, but generally not, a short, low blowing murmur. A puff or whiff, which pre-

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sented itself about the apex, was not to be heard elsewhere, and immediately followed the second sound, which itself was unaltered.

After death the mitral valve was found to be greatly thickened and narrowed by tough fibroid material, in which calcareous matter was embedded. The flaps were not obviously shortened, but they were adherent together laterally so as to form a nearly rigid irregular funnel, with so small an orifice towards the ventricle that it would not admit without force anything larger than the blade of a penknife. Towards the auricle, which was dilated and thickened, the opening presented a crescentic shape, the curved slit being about one inch in length and a tenth of an inch at its widest. From this, as its greatest opening, the channel narrowed to its smallest calibre at the ventricular exit. The auriculo-ventricular hindrance must have been extreme; it was, indeed, difficult to understand how the circulation could have been carried on. The valve flaps could be brought together by lateral pressure, though owing to their rigidity the closure must have been tardy and preceded by regurgitation. The left ventricle was of small size. The aortic valves were slightly thickened towards their bases, but were clearly efficient so as not to allow of regurgitation. The heart weighed thirteen ounces.

This case appears to have been one of double mitral murmur. As to the first, which was most characteristic of the so-called presystolic, I think it has been sufficiently shown that it was actually systolic with the modification upon which I have dwelt. The second or diastolic murmur, but seldom and feebly heard, was, I think, the true direct mitral or that of the auricular systole. The only point especially to note is that this murmur followed the second sound, without the interval which was noted in other cases, and to which I have attached importance. But notwithstanding this element of doubt, I think that, taking all the circumstances together, the murmur must be accepted as mitral rather than aortic.

In conclusion, I must recur to the meaning of the word "systole" as contraction, not sound. In this sense, I think, I have shown that the murmur is with the systole, not before it. If anyone is pleased still to call the murmur presystolic, let him do so, so long as he makes it clear to all that he speaks, not of the systole, but of the systolic sound. But if my contention be just, it will be best to avoid a term the use of which must involve an error either in observation or language. The point of practical importance which I submit is that the murmur does not belong to the systole of the auricle, but to that of the ventricle, and is therefore that of mitral regurgitation. The difference between this murmur and that of mitral regurgitation, as universally accepted, is chiefly in the modified first sound by which it is concluded, and the evidence thus afforded of the closure of the valve. It may be accepted as a general truth that a diseased mitral valve does not shut unless the orifice is narrowed; thus the so-called presystolic murmur becomes a sign of stenosis. For this great landmark of cardiac diagnosis we have to thank Dr. Gairdner. Our estimation of its value will not be lessened by any difference of opinion as to the precise origin of the morbid melody which we can so readily recognise, and from which we learn so much. Finally, I have endeavoured to rehabilitate the old mitral diastolic murmur, and restore it to its proper station as that of mitral obstruction and the auricular systole.

If the term presystolic is inappropriate, how is this murmur to be designated? We must call it something to distinguish it from the other regurgitant mitral murmur, the old-fashioned one, which continues through the whole systole and implies a valve that is always open. The "presystolic" might become "early systolic" in regard to its position in the systole, or the "stopped systole" in reference to its abrupt termination; while the other might be spoken of as the "full systolic," being unabbreviated and occupying the whole act. The feeble and infrequent murmur of mitral obstruction, the true auriculo-systolic, may keep its old titles, "direct mitral" and "diastolic mitral."

AT the Berlin meat examination station during the month of August there were examined 7945 calves, 11,788 sheep, 7216 pigs, and 8265 quarters of beef. Of these, there were condemned 17 pigs (including one from trichinæ) 8 from measles, and 4 from tuberculosis; also 3 calves and 9 sheep; 24 of the beef quarters, 8 of which were affected with tuberculosis, and 8 from jaundice; 62 lungs and livers were also condemned.

Introductory Address

DELIVERED AT

WESTMINSTER HOSPITAL

At the Opening of the Winter Session, 1887–88,

BY OCTAVIUS STURGES, M.D. CANTAB.,
PHYSICIAN AND LECTURER ON MEDICINE AT THE HOSPITAL.

GENTLEMEN,—When it was put to me that I should give the introductory lecture of this year, there seemed many and sufficient reasons for declining that honour. But amongst those reasons there certainly was not the want of a subject. I have always thought that the simple and obvious purpose of an introductory address is to introduce the student to his work. Its spirit should be that of which Mr. Black gave us example last year in words of cordial welcome and honest counsel which come so naturally from his lips. But there are some special reasons which this year bid us diverge somewhat from the beaten track. We are on the eve of grave changes in medical education. Whoever stands at this table next year will have to speak of measures by that time irrevocable, but which to-day have not passed beyond the stage of discussion. And the points at issue are so complicated, the interests concerned are so various, the conduct of the profession is so uncertain, that anyone occupying this place may fairly ask of his audience consideration and allowance in approaching a very difficult, but still a necessary, task.

Now, if I may be suffered to make a plunge where it is difficult to know how best to begin, I would class our present needs or defects in respect of medical education under two heads: one refers to the official tests of knowledge—the examinations; the other to the diploma or degree to be got in exchange for the knowledge so tested. The first want is a common standard of examination, and it is exemplified by the existence at present of some nineteen separate examining bodies. The second want is some appropriate designation or title for medical men which shall do away with the present invidious and misleading distinctions; and *it* is exemplified by the fact that there are now under consideration three, if not four, rival petitions, all designed to make London degrees more accessible.

As regards the first point—the examination standard. Has it ever occurred to you that a professional examination is no sublime or exalted institution? It is rather of the nature of a contract to which there are two parties. Each side makes conditions and gives guarantees. The examining body is responsible for the quality and completeness of its tests and for the public repute of its diploma. The candidate, for his part, attends lectures, produces certificates, and pays fees. It is a contract. But, unlike most instruments of that kind, the contracting parties are not equally watchful against infringement of the original terms. Penalty falls always on one side—the side of the candidate. As for the examiners, they may depart from the conditions by ever so much, and there is no one to call them to account. Thus they may exact too much, so that the candidate gets unfairly rejected; or too little, so that he passes unworthily. In either case the party examined is defrauded, yet without remedy. For if unjustly rejected, the complaint of the plucked is but lightly regarded, as being tinged with prejudice; and if too easily approved (although the wrong done to the student is not less than in the other case), it is not in human nature to criticise too severely the terms or the justice of one's own success. Yet, if you rightly think of it, is it not obvious that a strict observance of the terms of this implied contract is for the interest of both parties to it, and especially for the interest of the student? You seek to bring your goods—i.e., your professional knowledge—to the best market, where their quality will be appreciated and full value given in exchange. If the market tariff is uncertain, or the opportunity is denied you of making full display of your wares, or the price given for them is in a depreciated or obsolete currency, in any such case you strike a bad bargain, and are more or less wronged and defrauded. In plain words, if an examination is of no fixed standard, or the examiners are ill-skilled in eliciting or testing knowledge, or the reputa-

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tion of the diploma is equivocal, the detriment is mainly yours. It is to prevent these bad bargains and to protect the purchaser that we have been long seeking (and hitherto in vain) to fix one standard of professional examination, and to exact a rigid compliance with that standard on the part of all the examining bodies alike. That is the main point. It is not all. There is still a higher education, both technical and general, and unhappily it is not within reach of everyone. As with our university degrees, this extra training must be reckoned by way of honour. It cannot be demanded as of necessity. Remember, too, that there is no order of merit whatever that examining boards can confer which can, or which ought to determine for good and all any man's place in the battle of life. Examination does not make up the whole of life, though it may seem to some of you that it spoils the best part of it. But the time comes when you are no longer tested by book knowledge, but by your ability in applying it. We must not leave that out of account. The main qualification for practice is that which practice itself brings to crucial test; and it may modify or even reverse the judgment of the schools.

I am speaking now of *technical* knowledge, and in terms that would not apply to education generally. Such adequate medical capacity as is needed for the whole community must seek its practitioners among many classes and be found in combination, now with more now with less of general culture. That is inevitable. The day is coming, we hope, when the higher education shall reach all classes alike. It has not come yet; and nothing is gained by pretending that it has. But although we cannot at present insist upon one uniform standard of general education, we can, as I believe, so insist as regards medical qualification, maintaining for all such high level of competence as shall be quite safe from depreciation or disparagement or any stigma of inferiority.

Yet some would have it otherwise. I have heard it argued in high quarters that the needs of the public, rich and poor, can never be fully met unless we make provision for an inferior order of practitioners—to be supplied, as is more than hinted, from the Apothecaries' Hall,—whose business it shall be to attend the needy, and stand between them and the wholly unqualified vendor of drugs. The proposal is a bold and a striking one. It is likely to be met without any special effort on our part. Inferior practitioners are never likely to fail us; we need hardly adopt the name as a professional title, or start in life with deliberate intent to qualify for that position. It needs no competition to reach the bottom, and no one is "ambitious of dishonour or an actual candidate for disgrace."

But what I would ask you to recognise is the utter futility and the public risk of all attempts to range doctors or diseases into classes of better and worse. It may be asked, "How else than by the agency of practitioners of an inferior sort can you reach the remoter parts of England, and bring medical aid to the distant and scattered homes of the poorest of the people? There is a simple answer: an inferior practitioner can mean nothing else than one who is ill-taught in professional respects. As such he is a source of danger, and not of safety. He not only discredits his calling, but hurts the public. I fully admit the alternative and know of the many evils of what is called "counter practice" by druggists. But "counter practice," bad as it is, is not half so bad as the blind treatment of an ill-trained, yet legally qualified, practitioner. And for this reason: "Counter practice," having no legal sanction or security, is cautious on its own behalf. The practising druggist is ignorant, but safe. He has no cloak for his ignorance, and no friends when in trouble. He works, so far as he knows, with our implements, and when danger threatens he ceases to work at all. But the ill-taught practitioner needs no such caution, and, to do him justice, he uses none. His diploma protects him, and his worst errors escape exposure by the operation of that complex code of medical ethics which shields every registered practitioner from the censure of his neighbours. But it is said, "Let us at least utilise such ability as we find." Let the less instructed practitioner have charge of the simple case, while more serious and complicated illness falls to the more learned. What, then, I pray you, *is* simple and what complex in disease? There is disease in the making, and disease ready made; that which you meet most in the out-patient room, and that which you meet most in the wards; and which is the more difficult? The fact is, that if any such division of labour as is here proposed were possible (which it is not), it would be the precise reverse of what the people suppose. Advanced disease shows itself, for the most part, by obvious signs easy to recognise. But the earlier stages of disease—disease at its curable time—is habitually obscure. And if medical skill were to be apportioned at all, it is not for the hopeless end, but for its early threatening, that we should want the best of it.

Now what I am pleading for by these arguments, this one professional examination, equal for all, and embracing all the licensing bodies everywhere, is just what this jubilee year is bringing us. It comes, indeed, not precisely in the way that was expected. It seemed at one time—or it seemed to some—that the "Conjoint Scheme" of the two Colleges would beat down all rivalry and become the great central examining body. For good or ill it has not so turned out. The Society of Apothecaries still survives, and still examines; for my part, I can see no reason why it should examine less well than the Colleges; at any rate, all those who looked to see the higher life of that trading corporation squeezed out of it must now reconcile themselves to a competition which the Apothecaries have it in their power to make both real and sharp. More than that, we must abandon, now and for ever, all hope that the licensing bodies of the United Kingdom will be reduced either in number or in the spirit of rivalry. Still, unless appearances are deceptive, the practice of one examining board underselling another, the spectacle of students going up and down the country in search of cheap and easy professional decorations, all this is under sentence of doom. And its destroyer is none other than the General Medical Council!

I am not confident that the mere name "General Medical Council" excites enthusiasm. I am not even sure that its precise function or use is known to everyone. Its debates are lengthy, and their cost (as Dr. Quain lately announced) is twenty-two shillings a minute. But besides its debates, it publishes annually a "Register"—a remarkable volume which, judging from my own case and that of others, represents the world as it stood in 1870. Of all official guides I suppose it is the least accurate. And, in fact, it partly lives on its own errors; for instead of being grateful for correction (like other Directories), it will put nothing right under a fee of five shillings. It only fails to mislead because no one ever thinks of consulting it. Nevertheless, this same Medical Council, chiefly known to us at present by its unsuccessful authorship and its enormous cost, has taken a step in the interest of medical education and examination, the importance of which it is really impossible to exaggerate. In our country revolutions are accomplished silently, and it may be that the recent appointment by the Medical Council of visitors or inspectors of examinations throughout the United Kingdom has escaped the notice of some of you. Yet, in our present circumstances, how better can we secure equal and sufficient professional examination than by the appointment of eminent men who, by periodic inspection and comparison, shall spy out whatever is defective in the quality or in the conduct of examining boards? *Quis custodiet ipsos custodes?* Who is there to examine the examiners? That question is now answered, and, with this new rule of inspection, examiners may be found wanting as well as candidates, and they will have to satisfy their own supervisors. Will they all get through? Have all the quality for eliciting knowledge, the patience to wait for halting answers, the forbearance that gives courage to the diffident? We shall see. Under the new order there may be rejections on both sides of the table. Altogether the bare contemplation of what is awaiting these new inspectors in their efforts to make all examinations fair, equal, and adequate, must crave our utmost sympathy and goodwill. We shall at the same time be properly curious for the first report of these officers, and, for reasons which the Medical Council will understand, extremely anxious that this great task of inspection to which it is committed should prove a reality. It would be affectation to pretend that the Council so far has greatly impressed the profession or the public. It has no great reputation to maintain; it has a stronger incentive—a reputation to make. All who have the best interests of medicine at heart—all of us here to-day—will watch its conduct of this matter with the deepest interest, if not altogether without anxiety.

And so peradventure it may fall to some of us, after these many years of waiting, to see this educational want supplied and a common standard of professional examination meted out to all. But what of the other want? Shall we ever obtain a suitable official title for professional use; ever be rid of these eternal disputes

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about doctors and misters? I know full well that I am here treading upon delicate ground. It is easy enough to put forth general principles; it is far less easy to apply them. A number of persons starting from the same premisses will reach the most various conclusions; and the strange thing is that, even with much pains, it is often impossible to put the finger upon the precise place where the divergence begins. In what little I have to say upon the great M.D. question I shall not forget that by prescribed custom I have it all my own way for the moment. I shall not take your silence for consent, nor do I assume that there is but one way of stating the case. Yet there is one thing that may perhaps be taken for granted. We are all anxious to be M.D.'s; and the reason for that anxiety is that the public, even the educated public, owing to old associations and a natural reluctance to break with the past, are enamoured of that title, and believe, in a general sort of way, that a medical degree implies and guarantees superior knowledge. And from this position no argument can drive them. The actual facts have been explained repeatedly, but altogether in vain. They take our medicines, and much else at our hands, with a blind and touching confidence, but upon this one point they have so far insisted. That being so, what has been our own conduct—what is it now? Our present efforts are directed, no longer to removing, but to accommodating a false belief; accommodating it by some method or other which shall confer the Doctorate upon a more extensive scale than heretofore. It is very necessary, as I maintain, that this precise position of ours in reference to the title of Doctor should be kept in view. Much hinges on it. We might have dealt with the matter and with the public after a different and more direct fashion. This respect for a particular title is no worse than an anachronism. Doctors *were* learned men once. We might have had larger hope in time, waiting for a little, while the community at its leisure parted with the old beliefs and consented to surrender the obsolete. We might even by public pronouncement have protested against a delusion. We did none of these things. On the contrary, noting the mind of our clients, we are now about, not indeed to step over to their faith—it is not a faith,—but to yield to their prejudice and feed the idol of their superstition. It may be a good thing to do, and a politic, or it may be neither of these. Good or bad, it is what we are now about. And it is an indirect road to the desired object, which is certain to have perils of its own.

But someone will say, "Let the actual virtue of the symbols M.D. be what it may, the desire of London students to obtain a degree of their own, on terms similar to those which procure graduation at Glasgow or Durham, is perfectly legitimate, and ought to have been satisfied long ago. What is this pedantry that would stand in the way of our obtaining here in London, at the hands of the Royal Colleges, the very same decoration which, but for an accident, would have been procurable from a real London University?" Such language is reasonable enough, and I suppose there is no doubt whatever in the mind of anyone who has followed the discussions upon the subject that the want complained of—the want of a University—will be supplied. The question is, How? and I fear only too much in the breasts of some ardent spirits the question is, How soon?

It would be to little purpose now to relate by what accident, or series of accidents, it comes about that our vast city has no university of its own properly so-called. This Jubilee year fitly recalls the advance of medicine in many departments; most of all, I think, in that enlargement of its scope which places the public health, material and moral, among the concerns of the physician, making the progress of medicine all one with the welfare of the world. But for medical education the retrospect is less cheerful. University College to this day bears witness, by its name and the form of its government, to an abortive scheme which fell through on the very verge of accomplishment fifty years ago. And now, misled by a name, and in the belief that the examining institution in Burlington Gardens is in reality a university, the common saying is that what we Londoners want is a second university. "Why," it is said, "should a city more peopled than Scotland, of such vast treasure and resources, be content with a single university?" We are not content; and we have no university.

But while London has lagged far behind every city that respects itself, it is shaking off its lethargy, and the grand idea is beginning to take shape of a university so full and complete in all the requirements of modern science that the very thought of it is bewildering. And for years past, by its material development in art and science schools and museums, London has been preparing itself for incorporation as a great centre of intellectual training. Nor does it want for traditions not less venerable than those that enshrine the old universities. Tramping about London, I am often reminded that we have here, not our own merely, but the heritage of all the world. Old London, alas, is rapidly melting away. But there is hardly a street of it that does not recall memories that will never die. Take your way from the City to Westminster, and you leave Shakspeare at the "Mermaid" and Milton in Aldersgate; and, coming down Fleet-street into Covent Garden, you pass the lodgings of Goldsmith and of Johnson, the coffee-house of Dryden and Addison, the death chamber of Spenser, and the grave of the author of "Hudibras;" and so, by a barber's shop that saw the birth of Turner, greatest painter of the modern world, into Leicester-square, where, until late years, you had at a view Sir Joshua's studio, Isaac Newton's watch tower, and the workshop of our own John Hunter. There is no department of science, there is no school of art or of literature, there is hardly an invention or a discovery that has not had London for its home, if not for its birthplace.

All this, you may say, is fine talking; but we cannot build out of shadows or found a university of the dead. Such a work must take time, and we have no time to spare. There are corporations to be consulted; vested interests to be dealt with; conflicting claims to be adjusted. And, even when these are appeased, there is the University of London—the man in possession—to be considered. Your grand modern university is nothing but a dream. And so many of us have come to the conclusion that if we are to get help at all we must help ourselves. We have already a conjoint examination of the two Colleges; we shall have, we mean to have next, a medical degree attached to it. We shall be finished graduates while you are still dreaming.

"Your old men shall dream dreams." Yes; but let me remind you that the same scripture says, "Your young men shall see visions." Whatever our individual wishes may be, whether we favour or not this scheme of the Colleges for a medical degree, to be had on the spot and to be had soon, let us wake to realities and look the matter fairly in the face. Good or bad, the scheme is not unopposed. And the two petitions that are opposed to ours (that of the Teaching University and that of King's and University Colleges) speak with one voice. Listen to the words: "We deprecate any severance of the machinery for granting degrees in London from proper academic influences; any separation of the medical faculty from other faculties in the contemplated University."[1] It has seemed good to those who direct the policy of the Colleges to ignore these expressions of opinion. They have weighty support nevertheless. And, strange to say, among the active supporters of the opposing petitions are many leading members of our profession, who, but for this evidence, might seem by their silence to favour the scheme of their own colleges. It may be that in the end we shall accommodate the matter by mutual concession. It is much to be wished. But it is not as we stand now. The present proposals represent rival schemes. We cannot have all our prayers answered. One will be taken and the others left.

But suppose it done. Suppose that at the end of this year we learn that any candidate who has passed the conjoint examination is at liberty to go up for the degree of the two Colleges. Your first question in such a case will naturally be, What does "going up" mean; what extra subjects in arts or literature does the degree require? As yet there is no answer to that question, and no shadow of an answer. It has been asked repeatedly at the College, with no better result than to awaken those now well-worn chords as to the general excellence of the proposed degree whose music is now so familiar. I say that a large measure of the opposition to the Colleges' scheme is due to a wholesome fear lest this new degree should be conferred for professional attainment alone; that it should be used as a mere professional badge; and that thereby, however unwittingly, the position of medicine among the learned professions should be lowered.

But next comes this further consideration. You establish your new degree, and you set it down by the side of the existing M.D. of London. In so doing you must inevitably

[1] See Petition, Teaching University, p. 5; ditto, King's and University Colleges, p. 7.

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invite comparison; and if that comparison is unfavourable to the Colleges' degree, is it not possible that even our master, the public, shall note the difference and signify it by some epithet of inferiority? Other Doctorates of other universities are what they are. There is the degree of this city and of that, each with its own reputation; but the degree you now propose is a degree for London. Its rank is determined by its locality; it is settled beforehand, and you can neither exalt nor degrade it. "People," it is said—and most truly it is the source of half our troubles—"people do not go behind names." But here, with two London degrees side by side, they *must* go behind. Rival practitioners will invite them behind. And if, upon this inspection, they find the one title demonstrably inferior to the other, your whole plan fails, and the similarity of title goes very near to suggest what lawyers call "a colourable imitation." Such dangers and difficulties can only be overcome by making the two degrees equal—equal, that is to say, from the point of view of the public, and regarded as professional tests. It is often complained that the Preliminary Scientific Examination of the present London medical graduates is unduly severe, and that thus the door is shut upon candidates who would gladly accept and be easily able to satisfy the later requirements of the degree. But where is the Council or the Government that would consent to a double set of medical degrees in London on the ground that one of the two made its own entrance too narrow? That would obviously be a case for reconstruction, not new creation. No. We must base our demands upon one of two grounds: either, first, that we desire a degree for London which shall be more accessible all round—that is to say cheaper than the present degree; or, secondly, that we desire not merely the form of a university degree, but the substance of a real university training. In the one case, the very terms of your demand are fatal to the repute of the new degree; in the other, it is not the scheme of the Colleges that you favour, but that of the proposed Teaching University.

And when the matter is fairly faced, I do not know that those who favour the creation of a real University of London as the best solution of the difficulty, impressed as they are with the unequalled resources of the metropolis and the unequalled benefit of that college comradeship which is the special ornament of our higher national training—I do not know that these have any reason for despair. Ours is a conservative country. Our university system is old, yet vigorous. It is an integral part of our social life, and must grow and develop along with it. It was never, in our long history, so active, so wide-reaching, or so popular as at the present moment. It is true that this new degree, at present undefined, is much belauded beforehand. It has all the perfections of the unborn (like the offspring of old maids and bachelors), yet it certainly involves an anomaly, its future status is at the best precarious, and it is not easy to deny that its main design is to meet and overcome a prejudice, and, indeed, a misconception on the part of the public. At any rate, let us know where we are. We are at least entitled to ask that this scheme of the Colleges should be presented in its entirety, and that its precise intention, as regards those branches of education which are not purely technical, should be plainly declared. Is it proposed that these new graduates, provided they show themselves well instructed as medical men, shall thereupon be deemed eligible without regard to the higher education? Or if that is *not* intended, then (inasmuch as the two corporations concerned have no art or literature departments of their own, as universities have), give us some express assurance—not by mere rhetoric or rhapsody (we have had more than enough of that)—tell us in precise phrase how much or how little of that general knowledge which just now goes by the objectionable name of "culture," how much of literature and of reading, it is proposed to include in the new qualification. And indeed, without being captious, we might go further and ask by what external aid the Colleges propose to conduct their examinations in art and literature, subjects outside their own scope. For if that be not provided for, we may be in danger of making the confusion worse rather than better, and adding to a university that does not teach a second that cannot examine.

I have detained you too long and hasten to conclude. It seems strange, indeed, that a profession like ours (which in respect of producing names has no parallel for fecundity) should be baffled by a question which is mainly nominal. Let us take courage from what we have, and be circumspect in our search for more. The joint diploma of the two greatest medical corporations of Great Britain, name it as you will, must have its own value, and may be trusted to stand alone for a little while without meretricious adornment. As for the degree that is one day to supplement it, it will not come the quicker for our present disputes, or the sanguine expectations of those who assert that it is already at the door. With or without our help, a teaching, that is a real London University is at hand, and, as I firmly believe, our own interests lie not in opposition, but in cordial co-operation with those who are now labouring to promote it. Whatever the issue, and with all our differences, there is but one purpose inspiring us—the progress and the honour of a great profession.

One word in conclusion, which shall be addressed to those new comers to whom the details that have occupied us may seem wearisome, and who thought to hear some higher discourse. But, in fact, these matters concern you nearly. For when, according to the common lot, you come to appear at the examination tables of your country, the questions which now vex us will have reached some wise and definite settlement. "The mills of the Lord grind slow; but they grind exceeding small." Your time of preparation will be also the time when the tests to be applied are being made fair, equal, and sufficient; and your examination reward will be of that form which is finally decided to be the best.

Introductory Lecture

DELIVERED AT

ST. MARY'S HOSPITAL

At the Opening of the Winter Session, 1887-88,

BY ANDERSON CRITCHETT, M.A. CANTAB.,

OPHTHALMIC SURGEON TO, AND LECTURER ON OPHTHALMIC SURGERY AT, ST. MARY'S HOSPITAL.

GENTLEMEN,—Had Dante written in the nineteenth century, his magic pen might have done justice to the sufferings of those unfortunate members of our profession who, possibly by way of atonement for errors in diagnosis and faults in treatment, are condemned to pass their short vacation in a vain endeavour to infuse some interest and originality into an introductory lecture. I readily acknowledge, however, that for my own poor part, although for some weeks past I have languished under this cloud of work, it has not been without a silver lining, for I am enabled on my own behalf and on that of my colleagues to offer a cordial and hearty welcome at the opening of our winter session alike to those who have already borne with us the heat and burden of the day and to the new recruits who now join our ranks for the first time. I know that I rightly interpret the feelings of the staff when I express an earnest hope that you will always regard us as your sincere friends, for, believe me, we are actuated by a single desire to promote your welfare and happiness. In return we ask, and I believe we shall not ask in vain, for your confidence and your co-operation. There must be none of the innate distrust with which a pupil too often regards his pedagogue, for we are here *all* students, and though some of us have been pursuing the steep path of knowledge for more years than we care to remember, we all have the same goal in view, we are all striving to compass the same end—the relief of human suffering.

It seems hard that those gentlemen who appear amongst us for the first time should at once be lectured, for as yet they have done nothing to deserve such an infliction, and I feel somewhat in the same position as the stern parent who invariably gave his children a sound thrashing before breakfast on the ground that they might possibly need it later on in the day when he would not be there to administer the correction. I cannot, however, too strongly impress upon you the wisdom of adopting a methodical mode of work. Doubtless "distance lends enchantment to the view" as far as the College examinations are concerned, but that student alone can regard their approach with confidence and equanimity who begins to work steadily and with method from the commencement of his career.

Anatomy and physiology should at first occupy your

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almost exclusive attention, and your knowledge of these subjects must be sound and practical. Begin by studying the skeleton thoroughly, and be constantly in the dissecting room. Here I would offer a word of advice which may perhaps surprise you—it is this: do not occupy too much time in making elaborate and ornamental dissections. It is, of course, essential that you should acquire manual dexterity and neatness, but I am convinced that the most reliable anatomists are those who relentlessly pursue each muscle and nerve, and investigate each hidden bony cavity, as opposed to others who hesitate to be thorough because they might spoil the appearance of their dissections.

I may, perhaps, shock the feelings of our officers of health by advising you to live as much as possible in an anatomical atmosphere; but I mean by this expression that you should so far allow anatomy and physiology to absorb your attention that they may almost enter into the pores of your skin, and that they should form the chief subject of discussion with your fellow-students, for whose delectation and instruction you should at all times be ready to produce some hidden treasure, such as a carpus or a special cervical vertebra. In the evening you should, by study, not only consolidate the practical knowledge which has been gained during the day, but anticipate the work which lies before you on the morrow, so that, scalpel in hand, you may know what to look for, and where the object of your search is to be found. To those happy beings who have successfully passed the dread ordeal of the first examination, I would offer a few words of friendly warning—"Labuntur anni." In less than three years you must have put on such an armour of knowledge and experience as will enable you to face those terrible opponents—disease and death. Within the walls of hospitals you can witness the daily conflict, and even there, where the weapons of modern science and treatment are wielded by experienced hands, the foe too often gains the victory. But the time is coming when you must each of you and *alone* commence the struggle. The time is coming when the life of a fellow-creature will, humanly speaking, be given into your hands, as

> "When that voice, in feeble moans of sickness and of pain,
> But mocks the anxious ear that strives to catch its sound in vain;"

when the firstborn is in danger, and the mother's eye is turned to you appealingly for help; when the life-blood is flowing fast from the wounded artery, and all depends on your knowledge, precision, and resource. What will be your feelings if at such times you are found wanting because the bitter memory of your student's life shows nothing but a barren record of ill-spent time and wasted opportunities? I cannot, I will not believe that any of those whom I am now addressing will be found in the ranks of the ignorant and the unready. You would prove false to the standard of St. Mary's and its noble past; for as the soldier looks with pride upon the banner that bears the scroll of bygone victories, so we in our turn cherish the names of Alderson, Sibson, White Cooper, Wiltshire, and Meadows—of men who, though their sun has set, still light our pathway with a lingering after-glow of golden memories.

I would once more impress on you the importance of dividing your time into regular intervals of work; but I should also be amongst the first to acknowledge that he will labour most successfully who is ready in due course to relax his mental strings, and promote his physical welfare by healthy and manly recreation. My ideal of a model worker was realised in an old college friend at Cambridge who rowed in the first boat, was the best bowler in our eleven, and came out high enough, amongst the Wranglers, to obtain his Fellowship. You must, I know, accomplish a considerable amount of reading, and become during the long winter evenings slaves of the lamp, but your favourite fields of study should be in the wards, and in the out-patient rooms. There, and there alone, can you gain a sound practical knowledge of medicine and surgery, and I may perhaps be pardoned for the suggestion that you might do worse than devote the scraps of your spare time to the special departments. Later on in your student's career you will become dressers, clinical clerks, and finally, if you are found worthy of high office, house surgeons. In these several posts you will taste the sweets and bitters which pertain to personal responsibility, and I would venture to make a special appeal to you concerning your treatment of the patients who may be placed under your care.

There is a vague impression on the minds of many of the general public that constant familiarity with scenes of suffering begets a callous feeling in members of our profession. I cannot for a moment allow that such is the case; but I earnestly hope you will one and all remember that the accusation of needless cruelty is occasionally, though quite unjustifiably, hurled against us, both in poetry and prose, and it is by deeds, not by words, that we must refute the charge. The divine injunction that we shall "Do unto others as we would they should do unto us" can never be more perfectly carried out than in our treatment of our patients; while the helplessness, and too often hopelessness, of suffering and disease should stir the better feelings of our nature, and stifle harshness with their mute appeal. We should endeavour to combine with a gentle bearing calm judgment and unfaltering decision where prompt action is necessary; there should be the iron gauntlet in the velvet glove. Special care is needed in our treatment of children. A child's confidence is easily won, and a few moments devoted to the accomplishment of that end will not be wasted. Nothing is more touching than a child's implicit faith in our efforts for its relief, or more complete than its gratitude for results achieved.

And now for a few words of counsel as to the best method of utilising the first few years after you have emerged from the condition of student to that of qualified practitioner. There may, of course, be special reasons why some of you must plunge at once into the vortex of practical work; and it is a natural, and I may add a healthy, impulse which makes a young man desire to transfer the burden of expense and responsibility from other shoulders to his own. But I would earnestly advise such of you as have time and opportunity for additional study to pass some of the higher examinations, and, if possible, to acquire a university degree. Believe me, you should thus utilise those few invaluable years when the seed of knowledge is received and germinates in a pure mental soil, and when youthful energy and confidence are as yet unchecked by the cares and responsibilities which must inevitably accompany advancing age. Use, therefore, this priceless time.

> "It will not last for ever,
> Still ebbing from our gaze;
> The waves of life will never
> Bring back those golden days."

I strongly advise you to apply for resident appointments either here at St. Mary's, where, I am glad to say, they are freely open to our students; or, if there be not room for you at home (for with the best desire to do so, we cannot provide in that direction for all our *alumni*), then you must seek "fresh fields and pastures new," at some of our excellent provincial hospitals, where you will find physicians and surgeons from whom you may acquire much valuable knowledge, for the country contains many men who are more than able to hold their own with their metropolitan brethren. After devoting some time in the manner I have indicated, the most serious work of your life will commence. You will now realise more fully that life is real, earnest, and laborious. You will feel that your frail bark has at length quitted its safe anchorage and must sail on unknown seas, where there may be under-currents of jealousy, quicksands of professional rivalry, and sunken rocks of unforeseen disaster and discredit. In spite of prejudice and competition, you must slowly but surely win your way into that hardly-won fortress—the confidence of the public. The struggle will be severe, but let the work be loyally done. Let there be nothing mean or underhand, no attempt to gain credit at the expense of another practitioner, no trafficking with cant or hypocrisy: better to accept an honourable failure than stoop to such miserable expedients, which can but result in complete mental and moral degradation. Remember that material prosperity and wealth are only to be valued as they minister to refinement, to moral and intellectual progress, to the promotion of science, and to the furtherance of that broad and holy charity which elevates mankind. You must be ready to offer upon the altar of public duty that most precious and sacred of all virtues—self-sacrifice. A far abler pen than mine, and one which I may be pardoned for regarding with filial veneration, has thus described the life that is before you:—

"Picture to yourself for a brief moment the life of a medical man in the full tide of his professional career; what a stormy, anxious unrest it is; what exorbitant exactions are made upon his resources; what exaggerated expectations are formed of his powers; what unthinking demands are made upon his vital energies. By day and by night, for rich and for poor, with or without recompense, he must obey the summons of suffering humanity. How many

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anxious complicated unfortunate cases he meets—cases where great confidence is placed, where great interests are at stake, where the feelings are strongly enlisted—cases where life may be just quivering in the balance, and one slight error of judgment may snap the slender thread; when every eye is turned in anxious trusting faith and eager hope upon him, and he must sustain their drooping hopes by a fictitious calmness and assume a confidence that his judgment belies, until his over-taxed mind and over-wrought feelings are wellnigh exhausted with the effort. Again, he must be ever ready to encounter accidents, disease, and death in all their most appalling forms; when friends are paralysed with fear, and when contagion carries panic to the stoutest hearts, he must be there calm and unmoved. The blanched mother may be fluttering out her own life at the moment when she has given birth to another, the victims of cholera may present all the hideous features of death whilst yet writhing in vital agony, delirium and tetanus may compress the energies of a life in a few brief racking fatal hours, and still he must be there to gaze on sufferings he cannot relieve, and to feel that science is impotent and humbled in the presence of indomitable death."

Such is the picture painted by one who was himself a member of our profession, and who knew the hardships and anxieties of our toilsome life. Are there any now listening to me who hesitate to enter upon the thorny path that lies before them? I have been told that in the Latin Church each candidate for holy orders is required to pass many days in solemn prayer and solitude before presenting himself for ordination. When at length the fateful day has arrived, and they appear before God's altar, the bishop, after pointing out the nature of the sacrifice which must be made in the complete surrender of personal will, of wealth, and of the many attractions of the world, makes a lengthy pause, during which any who may still doubt the depth and sincerity of their convictions may at the last moment reconsider their position, and retire ere it be too late. In like manner, I would not have you enter lightly or unwarned upon the arduous duties and responsibilities which can never be dissociated from our career. Remember that, as in the case of the priest, the sacrifice must be complete and thorough, and that you must give the whole man for the whole time.

Although we feel a justifiable pride in our hospital, in our growing school, and in the number and character of the recruits who now flock around our banner, we would not willingly enlist one soldier of medicine who will not be true to his colours, or who will falter in the presence of the enemy, for we must present a serried and unflinching phalanx, firmly united by the bonds of mutual confidence and by the knowledge that those who fall will not have died in vain. But before you make your final decision, let me turn to the brighter and more sunny side of the medical landscape. "The old order changeth, yielding place to new," and the onward march of time has brought with it so many beneficial innovations in our method of work, and has made such large additions to our instruments of precision, that we go forth to the fray more fully equipped than were our forefathers; indeed, the advance in medicine and surgery has been proportionately rapid as the importance of physiology and pathology came to be recognised, and the phenomenal growth of these two giants has been of comparatively recent date. The early history of our profession is surrounded by an atmosphere of mist and haze, which not unfrequently accompanies the dawn alike of day and of scientific truth, and our brethren in the middle ages seem to have thought that a cloak of mysticism and necromancy would suffice to cover a multitude of medical sins. According to the chroniclers of the time, a visit to the doctor's cavernous sanctum must have demanded a mixture of courage and confidence to which many modern patients cannot lay claim. The dim light of a taper served to throw the contents of the chamber into unpleasant relief. A large stuffed lizard, apparently an indispensable companion, was suspended from the ceiling, while the walls were artistically decorated with toads, snakes, newts, and other slimy creatures; a large crucible occupied a prominent position, and the sulphurous odours which pervaded the room unpleasantly suggested the possibility of the doctor's having entered into an illicit partnership with the gentleman who lured Faustus to his ruin. We are not told whether as much importance was at that time attached to the possession of a good professional manner as is now the case, but the doctor evidently relied not a little upon the impression which a flowing robe, liberally garnished with cabalistic signs, would create upon the mind of his patient, and he was always ready to call astrology to his aid if he found himself face to face with any unusually tough matter for diagnosis. The remedies used in those days appear to have been extremely powerful, and, if history may be trusted, the drugs that obtained the greatest popularity were strong and reliable poisons, which were by no means devoted by the purchasers to the salvation of human life. The treatment of wounds did not err on the negative side, for the immediate application of boiling oil was considered an infallible specific until the practice received a salutary shock after one of the sanguinary battles. The stock of oil was unequal to the demand for it, and the unhappy surgeon, having no better substitute, treated a portion of his cases with cold water, and was much surprised to find that his new and involuntary remedy left the old one completely in the shade. Simplicity is not the least amongst the virtues. A few more revolutions of the wheel of time bring us to the period of the Barber Surgeons, the sign of whose calling showed that their fame for bleeding spread from pole to pole. Then in the sixteenth century came that pioneer of scientific research, the immortal Harvey, and we are proud in the knowledge that St. Mary's men are numbered amongst the most loyal and constant supporters of the Society which bears his name. Time would fail me were I to mention all those who have left the stamp of their genius upon the seal of their time, but the memory of such men as Sydenham, Cheselden, Jenner, and John Hunter makes us recognise with grateful admiration that "there were giants in those days."

And now we come within measurable distance of our own time, and are able to draw our records from living men. Wonderful indeed are the stories we hear of the capacity for disposing of heavy meals and unlimited port which English stomachs possessed at the commencement of this century, and equally wonderful were the heroic means adopted by our professional brethren to remedy the results of gastronomic indiscretion. Periodic bleeding and cupping, with the administration of strong purgatives, were deemed matter of necessity, and there was a constant supply of that which Ingoldsby has well described as

> "That nasty green fluid they so often send us
> Labelled, 'Haustus cartharticus mane sumendus.'"

It must have been as a mild protest against this system that a patient, when asked by the doctor whether he had followed his prescription, replied, "Certainly not; if I had I should have broken my neck, for I threw it out of the window." It was a matter of certainty that there would be a reaction from such a system, and the recoil took us so far in the opposite direction that I am amongst those who think with our respected friend, Dr. Hare, that we sometimes fail to take advantage of old and valuable remedies because their indiscriminate employment has brought them into deserved discredit.

Now let me turn from the period where I must rely upon the memory of others to that which comes within the circle of my own experience. In how many directions the sappers and miners have been successfully striving to compass the overthrow of suffering and disease, and in regions which had previously been deemed impregnable. I have only to allude to the extraordinary advances made in abdominal surgery, and in the treatment of stone both in the kidney and bladder, and to the brilliant results of ovariotomy with which the honoured name of Sir Spencer Wells must ever be associated, to prove the truth of my assertion. Then, again, even the opponents of Sir Joseph Lister must allow that the introduction of his system has taught us the incalculable advantages which accrue from extreme care, cleanliness, and attention to sanitary laws. The progress in medicine may not have altogether kept pace with the recent rapid strides made in the field of surgery, but the advance has nevertheless been sure and steady, especially in our knowledge of the pathology and treatment of diseases of the nervous system; while the comparatively new discoveries in bacteriology open out an almost illimitable area for researches, and may, I trust, lead to the downfall of many of those terrible diseases which have hitherto baffled their pursuers. We are proud to know that British physicians and surgeons can claim a sufficient share in the advance of science, but we must readily and gratefully acknowledge the heroic self-sacrificing and successful labours of our professional brethren both on the Continent and in America.

And now, before I conclude, I trust that my friendly

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audience will pardon me if I stray for a few moments into those Elysian ophthalmic fields where I have passed my happiest days, and which, though small in area by comparison with the vast tracts of surgery and medicine, possess a soil that yields some of the sweetest flowers of human gratitude.

I am old enough to remember the introduction of the ophthalmoscope by that great teacher and thinker, Helmholtz, who, I rejoice to say, yet lives to witness the priceless boon which his discovery has conferred upon the human race. It is difficult for those who are now familiar with its use—and their name, I trust, is legion—to conceive the wondering eagerness with which the original workers sought by the aid of their new weapon to bring to light those numerous hidden diseases of the eye which had till then been only partially and most imperfectly recognised. Many modifications of the instrument have since been introduced, and amongst the most recent and most useful improvements has been the ingenious adaptation of the electric light to the ophthalmoscope by my colleague, Mr. Juler.

Then, again, I remember the introduction of the subconjunctival operation for strabismus with hook and scissors, and the present method of enucleation of the globe, and with each of these operations the name of my honoured father must be associated. In the latter case the improvement on the previous rough and almost brutal method was so marked that the new plan was freely practised, and as there was a rather large stock in hand of eyes which needed removal, our witty friend and colleague, Monsieur Warlomont of Brussels, had perhaps at that time some slight justification for his suggestion that unless an oculist had enucleated at least one eye during the day he could not sleep well at night. About this period the venerated Nestor of English ophthalmic surgery, Sir William Bowman, inaugurated a new mode of dealing with epiphora and obstruction of the lacrymal duct by slitting the canaliculus and passing probes of various sizes; and he has been followed by Weber, Stilling, and other intelligent workers, who have grafted many ingenious additions to the parent stem. In 1856 came the remarkable discovery by our beloved von Graefe that the dread disease glaucoma, which had till then defied all the efforts of ophthalmic surgeons, might be successfully subdued in the greater number of cases by that safe and simple operation, iridectomy. He met the usual fate of great inventors, and encountered in many directions an opposition which was doubtless honest, but by no means unprejudiced; and I cannot but remember with pride that he received most loyal, and, as he gratefully owned, most valuable support from Sir William Bowman and my father, and from the large majority of English ophthalmic surgeons. The fact that iridectomy was too readily assumed to be a universal remedy, and that the iris seemed to act upon the minds of some oculists in the same manner that a red rag does upon a bull, by no means detracts from the merit of von Graefe's brilliant discovery. It has stood the severe test of the experience of thirty years, during which time it has been exposed to the searching rays of professional opinion, and its merits and demerits have been repeatedly and exhaustively canvassed; and although its efficiency in certain forms of chronic glaucoma is doubted by some, all must now admit that it is of inestimable value in the acute and subacute conditions of the disease. To von Graefe also belongs the credit of having introduced an operation for extraction of cataract, which, with certain slight modifications, remains to this hour the most successful and the most generally adopted method.

To our countryman, Mr. Jonathan Hutchinson, we are indebted for the discovery that certain forms of eye disease may be directly traced to hereditary causes.

We must not forget that amongst the numerous improvements in our art which have come from our distinguished confrère, Dr. De Wecker, of Paris, we have sclerotomy, the handmaid of iridectomy, being sometimes used as its efficient substitute, and sometimes as its successful supplement. From him also comes the treatment by jequirity in cases of pannus, and the application of the tattoo to dense and disfiguring leucomata. I can but glance briefly at the great progress made in the introduction of peritomy, of inoculation, of improved plastic operations on the eyelids, of evisceration, and of the methods of dealing with conical cornea; but I must not omit to make grateful allusion to that valuable local anæsthetic, cocaine, which, though a boon to all humanity, renders such exceptional service to the ophthalmic surgeon.

At the risk of taxing your patience unduly by dwelling too long upon this special subject, I must remind you of the colossal work achieved by the illustrious Professor Donders, who has opened out a new world for thought and investigation, and has elevated the study of practical optics to the dignity of a science. He has taught us that strabismus, headache, some forms of diplopia, ciliary spasm, and many other evils frequently depend upon some uncorrected error of refraction, and by placing it in our power to give the required relief, he has proved himself one of the greatest benefactors to humanity which the century has known.

You will acknowledge that the record of the last forty years is one upon which the ophthalmic surgeon can look back with mingled feelings of pride and thankfulness; but much remains yet to be done, and I trust that the time is not far distant when the spread of knowledge amongst us will alter those terrible statistics of sight lost in infancy through ignorant or wilful neglect of necessary care and treatment, and will also arouse the instructors of our children to a sense of their duties, and induce them to make that essential provision of light which is now too frequently absent.

You will, I am sure, desire that I should express the great regret which we all feel in losing the valued services of Sir Edward Sieveking, who joined St. Mary's Hospital when it began its struggle for existence, and has remained to see the fertile fruition of his labours. I must also, on your behalf and on my own, allude with grateful pride to the good work which has been accomplished, both for hospital and school, by our Dean, Mr. Field.

For the rest, gentlemen, I would entreat you to be ever mindful of the dignity of your calling. Regard not that calling from a commercial point of view, but rather from the high standpoint of philanthropic science. In manly emulation you may well engage—it is the soul of scientific as of all other enterprise; but, oh, beware those jealous feuds and petty rivalries which degrade a glorious contest to the level of a mean and merely personal competition. Let no sordid, selfish aims ever tempt you into courses derogatory to the true motive and purpose of your pursuits—the alleviation of human suffering. Never forget the saying of a famous surgeon, "Ours is the noblest of professions, but the vilest of trades." A due sense of the honour of your art will make you nicely observant of your own. Nor will you fail to remember that, even in the case of the most gifted student, industry is the indispensable handmaid of success. The mental, as the material, soil needs for the yielding of an abundant harvest careful culture, only to be achieved by thorough hard work and anxious observation. "Pater ipse colendi haud facilem esse viam voluit."

It is given to few members of our profession to achieve undying fame. The artist leaves the record of his genius on the painted canvas, and wondering ages worship at his shrine; the poet lives again in words of song that hang upon the lips of countless generations; and the musician breathes his soul into the enchanting melodies that echo for all time. Such fame is not for you. Yours is the priceless luxury of doing good; and in the gratitude of those whose pains you mitigate, whose sorrows you assuage, there lies a richer and a nobler recompense than "proudest record 'mid the tombs of kings." Be therefore of good heart. Rest assured that the reward which waits on diligence will in the fulness of time fall to your lot. As Hamlet says, "If it be not now, yet it will come: the readiness is all."

THE VALUE OF SHORTHAND TO THE STUDENT AND TO THE PRACTITIONER OF MEDICINE.[1]

BY W. R. GOWERS, M.D., F.R.S.

AMONG the miscellaneous uses of shorthand, not the least important is its value to the student of every kind. First to the student who learns by listening to oral lectures. Many students take notes of lectures in longhand. The process, however, interferes much with the thorough comprehension of the lecture, and so some students prefer simply to listen, to "take in" all they can, and trust to "reading up" the subject afterwards in books, to supplement their recol-

[1] Read before the International Shorthand Congress.

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lection and to learn the details that they fail to remember. Shorthand enables the student to secure the necessary abstract in writing, and at the same time to give almost as much attention to the subject as if he took no notes. But for this he must have a thorough mastery over the art. The temptation to the student who writes shorthand is to take down too much. A *verbatim* or really full report of a single lecture will occupy the whole of the evening in its revision and correction, even if it is not written out; and most students have to hear and master three or four lectures a day. To take a full report is a mistake; a good and terse abstract is what is needed, and, as I say, this can be taken in shorthand without any interference with the needful attention to the subject-matter; nay, the making of the abstract deepens the impression made by the speaker's words, and the student is actually able to carry away in his mind more of the lecture than if he merely listened to it or made an abstract in longhand. Longhand notes, like a leaden weight, keep the student constantly behind the lecturer, so that he has from time to time to omit in order to catch the speaker up. But the whole value of shorthand depends on the efficiency with which it is written. If the student has to attend to his writing, he cannot attend to the lecture. Hence the oft-repeated lesson that shorthand should be taught, and taught thoroughly, at school, so that the student starts in his pursuit of knowledge well equipped with this most useful weapon. If he has not learned it at school, it will still be well worth while for him to devote the needful time at the outset of his studies. He need not seek to acquire a very rapid speed, but he should be able to write 100 words per minute with the perfect ease of almost automatic action. An hour a day for three months will, in most cases, suffice to give the needful dexterity.

Shorthand is most useful to the student of what are called Arts and Literature. The facility which it gives of making brief abstracts of important facts and opinions is extremely valuable. My own old Latin and Greek text-books are studded with shorthand notes—notes of translation, on grammatical construction, on geography and history. But its value to the student of science is still greater. The well-known maxim of Captain Cuttle should be the motto of every student and investigator, and he who can write shorthand will, as a matter of fact, secure twice as many notes, and notes that are twice as useful, as he who does not write shorthand. "There is not time to make a note of it," is always hampering the longhand writer, but to the writer of shorthand the very meaning of the word "time" is almost changed. Minutes acquire the value that hours have to others.

To the student of medicine these remarks apply with peculiar force. Besides the set lectures that he has to attend, much of his teaching is at the bedside of the patient, or in the room in which out-patients are seen, and of the facts that come under his notice, and the lessons he receives, two-thirds at least are lost unless shorthand enables him to secure them. When he ceases to be a nominal student—for he should never really cease to be one—its value still continues, for in nothing is its advantage more strongly felt than in the process of taking notes of the cases of disease that come under his observation and care; notes which are often necessary, not only for his sake, but for the sake of the patient. Whilst the patient is describing his symptoms, they can be taken down in as full detail as is needful, and all the results of the examination can be recorded in a few minutes. I speak from experience, grateful experience, for I possess shorthand notes taken by myself of not less than twenty thousand cases of disease; of one kind of disease alone I have notes of nearly five thousand cases; and I am sure that the notes would not have been half as numerous, and not more than one-third as useful, had they been taken in longhand. And yet, strange to say, in no profession is shorthand less used, and I have observed with much surprise that I am the only member of the medical profession taking part in this Congress. In scientific work in medicine it is the same story. The facility the art gives in abstracting the work of others (I do not mean stealing), in collating facts, in arranging materials, in preliminary composition, in all but preparation for the press, its value is felt at every turn by those who possess the art. But for all this, shorthand must be well known; the worker must be able to write without thought and to read without effort, and the time spared from other work to acquire the needful dexterity will ultimately be repaid a hundredfold.

[I may anticipate a question that is sure to be asked by some readers of this paper, What system of shorthand is the best for these purposes? There is some difference of opinion as to the system best adapted for very rapid *verbatim* reporting; but there is a general consensus of opinion among shorthand writers of all systems that, for the miscellaneous uses here indicated, Pitman's phonography or phonetic shorthand is the best. Even for rapid writing it stands among the first, and is employed by many of the swiftest living writers. I have written it for nearly thirty years, and can testify to its excellence. Moreover, it has the advantage that there is a very large amount of literature published in it, including the works of many standard authors, several periodicals, and a dictionary of 50,000 words. Thus the facilities for acquiring the necessary ability to read this system are very great.]

SOME CONSIDERATIONS ON THE PATHOGENESIS OF DISEASES IN WOMEN.[1]

BY WILLIAM B. NEFTEL, M.D. NEW YORK.

AT the beginning of my medical career I was in charge of a ward for consumptives (tuberculosis of the lungs) in the large hospital attached to the medical school in St. Petersburg. At that time the absolute incurability of tuberculosis was a firmly established dogma, and any attempt to cure the affection, or even to arrest its progress, would have brought odium upon the investigator; certainly he would have been considered ignorant of scientific medicine, especially of morbid anatomy and pathological histology. Indeed, since the researches of Rokitansky, the progressively destructive character and the constitutional nature of tuberculosis were well known to every educated physician, and against that generalised destructive process it was thought medical science and art must always remain powerless. The utmost that could be done for these unfortunate patients was to alleviate their suffering by narcotics, and to diminish the colliquative excretions, at the same time carefully watching the progress of the disease to its fatal termination. The greatest care and study were devoted to the physical examination of these patients, and the diagnostic details had to be verified or corrected at the inevitable necropsy. It is true that at the post-mortem sometimes a characteristic cicatrix would be found in the lungs, thus indicating the healing of a former cavity, or, what was still more suggestive, such cicatrices would be found occasionally in the lungs of persons who died of other diseases, and in whom therefore a spontaneous cure of tuberculosis had undoubtedly taken place at some previous period of life. But such cases were considered simply as exceptions to the rule. And yet the truly scientific physician knows that there can be no exception in nature, and if there exists only one case of cure of tuberculosis, a similar result can be obtained in any given number of such cases, provided all the conditions are known under which the so-called exceptional case got well.

Entirely under the influence of the prevailing notions with regard to the incurability of tuberculosis, I met a case in private practice which by its peculiarity seemed to throw some light upon the etiology of this disease. In a large family, all the members of which were remarkably strong and healthy, and in which tuberculosis had never existed for generations, one married daughter, twenty-nine years old and mother of two children, was affected with pulmonary consumption. This patient was endowed apparently with the same robust constitution, and even the same features, as the rest of the family; she was brought up in the same locality and under the same healthy sanitary conditions, and yet was the only member of the large family affected with tuberculosis of the lungs. Her disease was diagnosed by competent physicians, and the diagnosis corroborated a few years later at her death.

This patient was for a time under my observation, and gave a detailed account of her previous history, and even explained the cause to which she attributed the origin of her disease. When a girl she was remarkable for robust health. During several years, while living in a fashionable

[1] Read in the Section of Medicine of the International Medical Congress, held at Washington.

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boarding-school, she wore day and night a tightly-laced corset in order to have a small waist, and was admired for her beautiful figure. She continued to wear her corset, even while asleep, after having left school, and gave it up only after marriage. Even whilst at school she became pale, and was often troubled with a dry, hacking cough, which, after marriage, became more troublesome, and at times was accompanied by febrile movements and increased expectoration. After the birth of her first child the symptoms of pulmonary consumption became manifest. The disease progressed slowly, and at the age of thirty-three the patient died in an advanced stage of general emaciation.

This case, by the simplicity of the conditions under which the disease originated and developed, could be compared to the exactness of a pathological experiment on animals. Indeed, the patient was in perfect health, and without any predisposition to tuberculosis, like all the other members of her family, but became tuberculous after a special condition had been introduced—a condition entirely absent in the others—viz., tight lacing. The positive result of this experiment appeared to me at the time a complete demonstration of the fact that a steady methodical compression of the chest and of the upper portion of the abdomen, continued for a certain length of time, can produce tuberculosis in a perfectly healthy person without hereditary predisposition to the affection. Of course there was no difficulty to find a hypothetical explanation of the fact in accordance with the prevailing theoretical ideas. The compression interfered with the free circulation of blood in the lungs, producing stasis, chronic inflammation, and exudation. The latter, according to the existing blood crasis, could become either organised, or else transformed into pus, tubercles, &c. I was determined to test this hypothesis by experimenting on animals, when working in Virchow's Pathological Institute in 1860. I will give here only a few examples taken at random from my old notes, as all the other experiments present almost identical results.

Experiment 2.—May 22nd: I applied a bandage, producing moderate pressure, around the chest and abdomen of a well-nourished black rabbit.—23rd: The rabbit manifested a high degree of dyspnœa, and the conjunctivæ were congested and the urinary secretion exceedingly scanty.—24th and 25th: The symptoms increased in severity, respiration very frequent and superficial, and conjunctivæ dark-red, forming a thick chemotic wall around the cornea.—26th: The animal was found dead. At the necropsy the internal organs, especially those of the abdomen, presented an intense venous congestion, there was dilatation of the right heart, and arterial anæmia of all the parenchymatous organs.

Experiment 3.—On May 29th a bandage with very slight pressure was applied around the chest and abdomen of a well-nourished white rabbit. The symptoms of dyspnœa, &c., developed more slowly, but in a few days reached the same climax as in the preceding experiment, and on June 11th the rabbit was found dead, with the post-mortem appearances as in Experiment 2.

Experiment 11.—June 12th: A bandage producing considerable pressure was tied around a large rabbit.—13th: The animal breathed with great difficulty and the bandage was taken off.—14th. Bandage reapplied quite loosely.—23rd. The rabbit appeared much emaciated, though the morbid symptoms were not acute, and on the 29th was found dead. At the necropsy there was considerable emaciation of the whole body, with arterial anæmia, dilatation of veins and of right heart; in the lungs nothing unusual.

The fatal result was uniform in all the rabbits experimented upon, even when the bandage of the chest and anterior portion of abdomen produced but a slight pressure. I then tried to entirely exclude pressure, and applied the bandage very loosely. Under this modification the acute symptoms would not appear, and some of the animals lived to the end of the session (August), when they were killed mostly by Claude Bernard's piqure; in some, however, death occurred spontaneously. In all of them the necropsy showed arterial anæmia and venous stasis with dilatation of the veins and of the right heart. Especially the liver was always greatly congested and enlarged, but nothing of special interest could be discovered in the lungs. Only once a generalised pathological process was found, closely resembling, if not identical with, tuberculosis. I tried the same experimental method on dogs in Berlin, and continued it in Dr. Harley's laboratory, University College, London, but with a still less satisfactory result. It was almost impossible to keep the bandage in position on dogs, unless made of plaster-of-Paris, and even then the animals would gradually succeed in loosening it to such an extent that a positive effect could not be obtained.

Experiment 8.—May 30th: A plaster-of-Paris bandage was applied rather loosely around the chest and anterior portion of the abdomen of a dog. The animal manifested no morbid symptoms.—June 14th: The bandage became perfectly loose, and had to be reapplied.—July 4th: The dog was found dead. At the necropsy a rather moderate degree of arterial anæmia and venous stasis in the internal organs existed. At the lower end of the spleen was a small infarction of the size of a pea. The small intestines were spasmodically contracted. As this was the only case of spontaneous death in a dog after the application of a bandage, I suspected accidental poisoning in the laboratory.

All the other dogs were killed in various ways at the end of the session, the necropsy showing in those where the bandage was efficiently applied general anæmia and dilatation of the right heart, with venous congestion of the parenchymatous organs, but in no case was there any special affection of the lungs. I finally abandoned these experiments, partly because they did not corroborate my original expectation to produce tuberculosis by compressing the chest, but more especially in consequence of Villemin's researches,[2] which proved that tuberculosis could always be produced by inoculation with tuberculosis. Villemin's views met with much scepticism at the time, but at present they appear quite prophetic. For instance, the contagiousness and specific nature of the organic poison of tuberculosis multiplying itself in the system, &c. Villemin thus diverted the entire question into a totally different direction, which ultimately led to the discovery of the bacillus tuberculosis.

On account of the negative result of my experiments with regard to the etiology of tuberculosis, I have not published them, although they offer some positive results in other respects. They demonstrate the deleterious effects of a continuous compression of the chest and abdomen in animals, even when applied in a moderate degree. It produces general arterial anæmia and venous stasis in the parenchymatous organs, especially in the liver and other abdominal organs. As regards the question of tuberculosis, the important result obtained by Villemin was soon threatened to be entirely lost by the subsequent work of numerous investigators who with faulty unscientific methods apparently succeeded in proving that tuberculosis can be produced by inoculation not only with tubercular substance, but with almost any substance, organic or inorganic. Fortunately, the admirable researches of Cohnheim's first experiments, conducted with Fraenkel, which, owing to imperfect methods, had led to the erroneous assumption that tuberculosis was produced by the absorption of inspissated pus, and were later refuted by himself, proved conclusively that tuberculosis is a specific infectious disease caused by a distinct living micro-organism present only in genuine tubercular substances; but its actual demonstration was left to Robert Koch. The brilliant researches of the latter show beyond any possibility of doubt that the bacillus tuberculosis is the real and only cause of tuberculosis, that without it tuberculosis is impossible, and that inoculation with the pure culture of the bacillus always produces tuberculosis. The effect of Koch's discovery on the profession was overwhelming. Not only the diagnosis of the disease became always positive and easy, but it was generally expected that with the knowledge of the etiology of the disease the prophylaxis and the treatment of tuberculosis would become successful. In this respect, unfortunately, the general expectation has not yet been realised, and matters remain exactly as they were before Koch's discovery; now, as before, the fifth part of the population die from tuberculosis. Moreover, although the bacillus tuberculosis is omnipresent, and hence everyone is equally exposed to the infection, yet only certain persons of predilection, those with a so-called phthisical *habitus*, or under certain conditions, are liable to become affected with pulmonary consumption. In other words, besides the bacillus a certain predisposition on the part of an individual is requisite in order to become consumptive. Thus we are practically brought back to the same condition of things which existed previously to the disease of the bacillus, inasmuch as the primary factor in the production of the disease is the predisposition. So far we are able to form hypothetical

[2] Cause et Nature de la Tuberculose, &c. Comptes Rendus, lxi., 1866. Gazette Hebdom., Nos. 48, 49.

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suppositions as to the nature of this predisposition to phthisis. For instance, a person may be considered predisposed when the respiratory mucous membrane is in a state of chronic irritation, and both the local and general resistance are diminished. The interesting researches of Metschnikoff[3] and his phagocytic doctrine, lend experimental weight and evidence to this hypothesis.

Again, the so-called phthisical *habitus*, a peculiar faulty formation of the chest, with weak respiratory muscles and general debility, is justly considered a predisposing cause of pulmonary consumption. Under these circumstances, the lungs not being thoroughly ventilated, the stagnant air and the slow pulmonary circulation afford a favourable condition for the settlement and proliferation of the bacillus tuberculosis. Perhaps the development of tuberculosis in the case above stated could be explained in a similar way. The prolonged compression of the chest by tight lacing in the perfectly healthy person seriously interfered with the normal pulmonary ventilation and circulation, and thus produced the same conditions which are so favourable for the development of consumption in persons with a congenital *habitus phthisicus*. I therefore maintain, though merely as a hypothesis, that compression of the chest by tight lacing, and continued for a certain length of time, constitutes a predisposing cause of pulmonary consumption.

As already mentioned, my experiments on animals show that a prolonged compression of the chest and abdomen invariably produces anæmia and venous congestion of the liver and other abdominal and pelvic viscera. Analogous results are frequently met with in human pathology. I often had the opportunity, especially in Berlin, of being present at the necropsy of women in whom the liver presented the characteristic malformation known as corset liver, and of which some illustrations are given in the classical work of Frerichs on Diseases of the Liver. In accordance with our present state of knowledge, the liver plays an important part in the hæmatopoietic function, and not only in the formation of blood, but also in its destruction. It is evident, therefore, that the distorted shape of the liver produced by tight lacing must necessarily interfere with its normal functions, and also that a continual disturbance and obstruction in the system of the portal vein must act injuriously upon the other abdominal organs. Hence the impairment of blood formation, of circulation, of digestion, and the engorgement of the internal sexual organs, the latter condition being a predisposing cause of obstinate chronic affections of the uterus and ovaries. The so-called corset liver is accompanied by a changed shape of the long framework of the chest, the ribs assuming a wrong direction, in which they become permanently fixed.

For the sake of brevity I will not draw clinical pictures of the morbid conditions induced by tight lacing and improper mode of dressing, for every medical practitioner is acquainted with these daily occurrences. It seems necessary, however, to call the attention of the profession to the following experiments, which have a direct bearing upon the subject under consideration. Schreiber[4] was able to produce experimentally albuminuria in persons whom he subjected to compression of the chest. After moderately compressing the chest in young and perfectly healthy persons, even during a minute and a half only, the urine always contained albumen in quantities varying from a trace to 2 per cent., according to the length of time the compression lasted. The albuminuria continued after the cessation of the pressure from one to thirteen hours, the urine containing occasionally, besides, albumen, hyaline casts, and red and white blood-corpuscles. Schreiber attributed the albuminuria following compression of the chest to stasis in the pulmonary circulation, produced by the diminished respiratory expansion of the lungs, and by diminished negative thoracic pressure. This condition leads secondarily to stasis in the renal bloodvessels, with consecutive alteration of the renal tissues.

There can hardly be a doubt in the mind of the medical profession that women's dress, especially the pressure exercised by it upon the chest and abdomen, must necessarily produce an injurious effect upon their health. Indeed, it would be quite impossible for anyone, unaccustomed from childhood to the female wearing apparel, to bear it for a single day without great discomfort. Only by a constant habit of wearing it a certain tolerance is created, owing merely to the fact that the compression gradually changes the natural shape of the internal organs, and even of its bony framework, just in the same way as the feet of the Chinese women become distorted by methodical compression. The last comparison is by no means exaggerated, and it can be truly said that the deformed feet of the Chinese women do less harm to their owners than the distorted viscera of our women. In view of this grave source of discomfort and disease it is hardly worth mentioning the minor inconveniences of women's dress. Anyone, for instance, who would try to wear several hours daily their high-healed shoes would soon become troubled with backache and general fatigue. I believe a certain kind of headache and facial neuralgia, induced by neuritis, is sometimes caused by exposure of the head, covered only by a fashionable bonnet in a northern winter. That such an uncomfortable mode of dressing unfits women for continuous and often hard work is self-evident. It seems strange that women, even those of great intelligence, do not modify their costume more in accordance with hygienic requirements, comfort, æsthetic taste, and common sense. Female fashions, as we all know, have their headquarters in Paris, where they are invented by a clique of uneducated dressmakers, totally ignorant of hygiene and devoid of æsthetic taste. From this principal centre the fashion instantly spreads to all the European courts and to America, and soon reaches the remotest parts of the civilised female world. All must submit to the dictates of fashion, which is the most absolute of despotisms, and against the decision of which, no matter how absurd and injurious, an appeal is impossible.

That a sanitary question of such magnitude effecting injuriously half of the population of civilised nations, and capable of transmitting morbid tendencies to future generations, is of vital importance and deserves immediate attention, will be admitted by every physician. I believe the only competent authority capable of remedying the existing evil is the International Medical Congress. After having tried in vain to influence the opinion of my own patients, among whom were a number of intelligent lady physicians, in favour of a healthy reform in the way of dressing, I now take the liberty of proposing to the International Medical Congress to appoint a commission to investigate the whole question of dress for women, and to report at the next meeting of the Congress. Such a commission might consist not only of physicians, but also of pedagogues, of artists, and of cultivated ladies from different countries, and would have in view, besides the health and comfort, the æsthetic taste of the sex, of which beauty and modesty are the distinctive characteristics. The work of the commission could begin with an inquiry into the different national costumes, which might offer some practical hints, as their usefulness has already stood the test of centuries. Above all, however, the commission could take into consideration the dress of the classical antiquity, as the idea of simplicity, grace, and comfort, which perhaps would become again a perfect model, when adapted to the changed requirements of modern life and to the various climatic differences. The inauguration of the much-needed reform in the dress of women by the International Medical Congress assembled in America would have a peculiar significance America has already powerfully contributed to the reform in the household affairs of women by the invention and introduction of the sewing, washing, and other machines utensils, and appliances, which have relieved women of so much tedious work, and have saved time now devoted to physical, intellectual, and social culture.

[3] Metschnikoff: Ueber eine Sprosspilzkrankheit, &c.; Ueber den kampf der Phagocytengegen Krankheitserreger (Virchow's Archiv, xcvi.). Ein Beitrag zur Phagocytenlehre, &c. (Virchow's Archiv, cvii.). Also Fortschritte der Medicin, &c.

[4] Ueber experimentell am Menschen zu erzeugende Albuminurie Archiv für exp. Path. und Pharm.: 1885, iii.; and 1886, iv.

THE MEDICAL ATTENDANCE ORGANISATION Committee will resume its sitting on Tuesday next, when they will consider a circular which they propose sending to the Metropolitan Hospital Committees upon the "desirability of forming a union between the hospitals and provident dispensaries," asking them to appoint representatives to attend a conference on this subject. After this the committee will proceed to consider the scheme which they have prepared "for the medical attendance of the industrial classes in the metropolis." If the proposed conference on the first question can be held in the early part of November, it is hoped that the committee will be ready with a full report in December, when a meeting will be called to consider the whole question.

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THE POSSIBILITY OF OPERATIONS ON THE ŒSOPHAGUS THROUGH THE STOMACH AS SHOWN BY DISSECTIONS.[1]

BY MAURICE H. RICHARDSON,
ASSISTANT PROFESSOR OF ANATOMY IN HARVARD UNIVERSITY, SURGEON TO THE MASSACHUSETTS GENERAL HOSPITAL.

A LITTLE more than a year ago my attention was first drawn to this subject by the patient whom I shall have the honour to present here to-day. At the time he came to the Massachusetts General Hospital for relief, his condition was so deplorable, and immediate action was so imperative, that there was no time for any preliminary work upon the cadaver for the purpose of studying the best methods of performing what has proved to be a new operation in surgery. The details of this case have already been published, with some few observations on the operation and the anatomy of the œsophagus.[2] Since that time I have made many dissections for the purpose of showing the best way of doing this operation, and of demonstrating the possibility of reaching any part of the œsophagus with the finger. In all the dissections the distance was measured from the upper incisors to the cardiac orifice, as well as that from the cardiac orifice to the point in the neck where external œsophagotomy is usually performed.

The patient, a man aged thirty-seven, tall and strong, weighing when in health from 160 lb. to 180 lb., had swallowed while eating a denture of four teeth. He had presented himself at the out-patient department of the hospital the next day, and I examined him then. The teeth were lodged near the cardiac end of the œsophagus. He was admitted to the hospital, and numerous attempts were made to dislodge them. At one time sufficient traction was used to break the coin probang which had been made fast to the plate. He was finally discharged from the hospital, having gained in weight, and it was thought that the foreign body had passed into the stomach.

Eleven months after the accident the man came again to the hospital, and the foreign body was found to be in the same place as before, fourteen inches from the upper incisors. The patient was reduced to 113 lb. in weight. He had continual pain, and it was with great difficulty that he was able to swallow enough liquid food to keep him alive. There were two methods of procedure possible, all attempts at removal through the mouth having failed: one by external œsophagotomy, in the manner described by Dr. Leroy Maclean of Troy, and so successfully performed by him;[3] and the other through the abdominal wall and stomach. I selected the latter method because it had been shown that the plate was very firmly impacted indeed, and it was very probable that it would be necessary to use the fingers in dislodging it. For two days before the operation the patient was nourished by enemata, and nothing was taken into the stomach but water and stimulants. After etherisation a cut was made parallel to the lower margin of the ribs on the left side, six inches in length, through which the stomach was drawn and held upon aseptic towels by assistants. A small opening through the stomach wall was next made midway between the curvatures, and forceps introduced for the purpose of grasping the plate. The cardiac opening could not be found. The cut was then enlarged enough to admit the right hand, which was introduced till the œsophageal opening was found. The foreign body was detected by the fingers about two inches above the diaphragm; after considerable careful manipulation with the index and middle fingers the plate was detached and removed. The mucous membrane of the stomach was closed with a continuous silk suture, after the method of Lembert. The patient made a good recovery, though complicated by slight lung symptoms, caused probably by the breaking of a small peri-œsophageal abscess into the lung by the manipulation of the fingers. He rapidly gained in weight from 113 lb. to 167 lb., and went to work as a teamster. He is now perfectly well, and able to do as hard a day's work as any man. In the selection of the above operation and in its first performance various questions arose, to the solution of which I devoted what little time I had. As will be seen, I was ignorant of several important points which I have since demonstrated. I am positive that the foreign body could have been removed with instruments had I known at the time what now I do about the subject.

During the past winter I have operated on sixty patients, and made various observations, the general result of which I herewith submit. The first question that naturally arose was as to the exact location of the foreign body with reference to the cardiac end of the œsophagus, and also with reference to the cricoid cartilage, in order that an intelligent choice might be made between gastrotomy and external œsophagotomy, it being taken for granted that that operation is better in which it is possible to use the fingers if instruments fail. The second question was:—What portion of the œsophagus is accessible to the fingers after the operation of external œsophagotomy, and what after gastrotomy? If gastrotomy is first performed, the best incision through the abdominal wall for reaching the cardiac end with the finger, and the best where instruments are to be introduced? Finally, the best incision through the walls of the stomach, and the details of the operation as to the manipulation of the stomach and œsophagus.

Location of the foreign body (or condition requiring operation).—If it is known how far the obstruction is from the upper incisors when the head is thrown back, in the position for passing the exploring probang, and if the distance from the same point to the cardiac opening is determined, it is evident that we can tell immediately whether the obstruction can be reached from below or not. The results obtained in the measurement of fifty-five subjects show that the distance from the upper incisors to the opening in the diaphragm is not constant. The average distance is fourteen inches and a half (36·8 cm.). Unfortunately there is no constant ratio between the height of the individual and this measurement. One subject six feet in height measured between the points mentioned fourteen inches and a quarter. Another, with a height of four feet ten inches, measured fifteen inches and a half. The greatest distance was seventeen inches, and the least ten and a quarter. The average distance from the cricoid cartilage to the cardiac opening was seven inches and a half in nineteen subjects, taken at random. The greatest distance was nine inches and a quarter, and the least six and a half. From these figures it must be said that it is not possible to locate the foreign body accurately, with reference either to the cardiac opening or the cricoid cartilage. If the individual is of average height, and with a neck of ordinary length, it is safe to say that the distance from the incisors to the diaphragm is about fourteen inches and a half. If the probang is arrested at a point more than thirteen inches from the incisors, the point of obstruction is probably at or near the cardiac end of the œsophagus. Inasmuch as the œsophagus is constricted at the diaphragm, it goes without saying that foreign bodies that have passed the constriction at the upper end are probably at the cardiac end. All parts of the œsophagus are accessible to the finger, either by gastrotomy or by external œsophagotomy.

In all the subjects examined, this fact was observed: In some of them it was quite difficult to reach every part, but it was nevertheless possible. The method of making these observations was to do first an external œsophagotomy in the usual way. Then the stomach was opened and the fingers of the left hand introduced into the cardiac opening. With the forefinger of the right hand in the upper wound and the forefinger and middle finger of the left hand in the lower end of the œsophagus, it was found possible, not only to make the fingers touch, but in many cases to make them overlap quite a distance. Coins and other bodies were passed from one hand to the other in both directions with great ease. In some cases it was necessary to use both the index and middle fingers of the right hand as well as the left.

It cannot be denied that these conditions of observation cannot be reproduced on the living subject, and that the results are therefore only approximate. It would be hardly practicable to do both operations on the same patient. If both hands are in use pushing towards each other it is of course much easier to bring the fingers together and to push the foreign body from one finger to the other waiting to receive it. Yet even in the living I think it is safe to say that there is no point in the œsophagus which cannot be reached by the finger, either from above or below. The other source of error is in the fact that in the cadaver the

[1] Read in the Surgical Section of the International Medical Congress held at Washington.
[2] Boston Medical and Surgical Journal, Dec. 16th, 1886.
[3] New York Medical Record, vol. xxvi., p. 282.

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diaphragm is relaxed. This does not make any appreciable difference, however, because the opening in the diaphragm is so fixed to the bodies of the vertebræ that it does not share to any extent in the contractions of that muscle. It is possible to reach with the left hand three inches above the cardiac opening—that is to say, the length of the left middle finger. From above, through the wound in the neck, one cannot reach quite so far on account of the sternum and clavicle. One can, however, easily reach the arch of the aorta, and even hook the finger under it in some cases. In a few of the dissections, the measurement was made between the centre of the incision in the neck to the diaphragm. The distance was a little over six inches. Allowing in the average neck an inch and a half to two inches from the cricoid cartilage to the lower point of the incision in the œsophagus, in external œsophagotomy we have the average distance from that incision to the cardiac opening of five and a half to six inches.

The general conclusion to which I have arrived from these measurements and digital explorations is that the obstruction can be reached by the finger in all or nearly all cases when it is situated more than six inches below the cricoid cartilage. If less than six inches below the cricoid ring, it can be reached best from above, though in some few cases it may be just beyond the reach of the finger. Even in these cases instruments can be easily and intelligently applied. The measurements of the point of inspection or obstruction having been carefully made, and it having been demonstrated that the point in the œsophagus to be reached if necessary by the finger is not less than thirteen inches from the upper incisors or six from the cricoid cartilage, the operation of gastrotomy should be performed.

Inasmuch as the best argument in favour of gastrotomy is that the fingers may be used to detach the foreign body if all other means fail, it is evident that the probability of the introduction of the hand into the stomach is the most important element in the selection of the incision through the abdominal wall. In the case of the patient upon whom I have done this operation it seemed to me best to make an oblique incision under the margin of the ribs on the left side, directly over the stomach. By this incision the stomach can be recognised very easily, and drawn out of the wound so far that the subsequent manipulations can be made without the escape of the contents into the peritoneal cavity. From a large number of dissections for the purpose of deciding the question of incision in the abdominal wall, I have come to the conclusion that the oblique cut is the best on the whole for this operation, although the fingers can be introduced into the œsophagus with ease after making the median cut. The incision through the walls of the stomach for the purpose of introducing instruments into the cardiac end of the œsophagus may be made anywhere, provided that it is far enough to the right to avoid the convexity of the lesser curvature. All that is necessary is to put the lesser curvature on the stretch, so that it makes a straight line to the diaphragmatic opening. The cut through the stomach wall must be far enough to the right to allow the passage of the instrument along the sulcus between the anterior and posterior walls of the stomach, made tense as above. If the instrument is brought obliquely to this groove and passed upwards, all the time being pressed gently against the straightened lesser curvature, it will glide into the œsophagus every time with the greatest ease.

The incision in the median line was made on many subjects, and the conclusion was that it is the better method of operation where it is intended only to pass instruments into the œsophagus. In these observations it was found practicable to pass instruments into the œsophagus and withdraw coins with the greatest ease through an abdominal cut in the median line only two inches and a half in length. By enlarging the incision it was found to be quite practicable to introduce the hand into the stomach and pass the fingers into the œsophagus, but not so easy as by the oblique incision. It was also much more difficult to draw the stomach out of the peritoneal cavity enough to avoid the escape of the contents of the stomach into the abdominal cavity. The stomach having been exposed by the lateral cut through the abdominal walls, and having been drawn out of the wound, it must be held by an assistant in such a way that the lesser curvature is put on the stretch. It is better for the assistant to hold the stomach in both hands, so that the whole viscus is flattened out. He should stand on the left of the patient, and grasp the greater curvature. The operator standing on the right of the patient, holds the lesser curvature between the left thumb and forefinger, thereby making tense the lesser curvature and assisting in the passage of the instrument. Before doing this, it is best to introduce the hand into the peritoneal cavity and examine the diaphragmatic opening externally. With the stomach held as described, the opening through its walls may be made anywhere in the flattened surface, so as to avoid the large vessels. It goes without saying that the incisions should first be just large enough to get hold of the stomach with the thumb and fingers and draw it out so as to stretch the lesser curvature. An incision through the stomach wall can then be made large enough to introduce the instrument, by which, I believe, the foreign body can be removed with ease in the majority of cases. In cases of stricture of the œsophagus, the instrument can be passed with very small openings both in the abdominal walls and in the stomach itself. The wounds in the stomach and abdominal wall should be closed in the usual manner.

In the selection of the operation, whether by external œsophagotomy or by gastrotomy, another reason for the choice of the latter operation is that there is less danger of wounding important structures in the thorax, where the traction is downwards, than upwards. If the body is at the orifice, it is not in direct relation with either pleura, heart, or aorta. There is much less danger of lacerating the œsophageal wall in pulling down the foreign body a short distance than in pulling it up a considerable one. Finally, the prognosis after laparotomy and gastrotomy where the opening in the stomach is small I believe to be very good indeed. As to the frequency of the conditions requiring this operation, with the exception of impacted foreign bodies and stricture of the œsophagus, I know of no indication for the operation. It is certainly within the experience of nearly every surgeon that foreign bodies do become impacted low down in the œsophagus, and that the dangers which arise therefrom are very great. It is in the hope that in such cases this method which I have described will be tried that I submit these observations. Since Labbé's successful case in 1875 to the present time there has been no reported fatal case of laparotomy and gastrotomy for foreign body in the stomach. In the two fatal cases, one had been preceded by an external œsophagotomy, and in the other the stomach wall had been perforated by the foreign body. The list comprises the cases of Labbé, Cocher, Edioubom, Thornton, Billroth, Credé, Bernay, and Polaillon.

AN EXPERIMENTAL CONTRIBUTION TO INTESTINAL SURGERY.[1]

WITH SPECIAL REFERENCE TO THE TREATMENT OF INTESTINAL OBSTRUCTION.

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THE following is a synopsis of the paper:—

I. ARTIFICIAL INTESTINAL OBSTRUCTION.

1. *Stenosis.*—(*a*) Partial enterectomy and longitudinal suturing of wound. Traumatic stenosis from this cause becomes a source of danger from obstruction or perforation in all cases where the lumen of the bowel is reduced more than one-half in size. Longitudinal suturing of wounds on the mesenteric side of the intestine should never be practised, as such a procedure is invariably followed by gangrene and perforation by intercepting the vascular supply to the portion of bowel which corresponds to the mesenteric defect. (*b*) Circular constriction of intestine. The immediate cause of gangrene in circular constriction of a loop of intestine is due to obstruction of the venous circulation, and takes place first at a point most remote from the cause of the obstruction.

2. *Flexion.*—(*a*) Flexion produced by partial enterectomy and transverse suturing of wound. On the convex surface

[1] Read in the Surgical Section of the International Medical Congress held at Washington.

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of the bowel a defect an inch in width can be closed by transverse suturing without causing obstruction by flexion. In such cases the stenosis is subsequently corrected by a compensating bulging, or dilatation of the mesenteric side of the bowel. Closing a wound of such dimensions on the mesenteric side of the bowel by transverse suturing may give rise to intestinal obstruction by flexion, and to gangrene and perforation by seriously impairing the arterial supply to, and venous return from, the portion of bowel corresponding with the mesenteric defect. (*b*) Flexion caused by inflammatory and other extrinsic causes gives rise to intestinal obstruction only in case the functional capacity of the flexed portion of the bowel has been diminished, or suspended by the causes which have produced the flexion, or by subsequent causes independently of the flexion.

3. *Volvulus.*—As in flexion, a volvulus gives rise to symptoms of obstruction when the causes which have given rise to a rotation upon its axis of a loop of bowel have at the same time produced an impairment or suspension of peristalsis in the portion of bowel which constitutes the volvulus, or when a diminution or suspension of peristalsis follows in consequence of the rotation.

4. *Invagination.*—Accumulation of intestinal contents above the seat of invagination is one of the most important factors which prevents spontaneous disinvagination, and which determines gangrene of the intussuscipiens. Spontaneous reduction is not more frequent in ascending than descending invagination. The immediate cause of gangrene of the intussuscipiens is obstruction to the return of venous blood by constriction at the neck of the intussuscipiens. Ileo-cæcal invagination, when recent, can frequently be reduced by distensions of the colon and rectum with water, but this method of reduction must be practised with great care and gentleness, as over-distension of the colon and rectum is productive of multiple longitudinal lacerations of the peritoneal coat, an accident which is followed by the gravest consequences. The competency of the ileo-cæcal valve can only be overcome by over-distension of the cæcum, and is effected by a mechanical separation of the margins of the valve; consequently, it is imprudent to attempt treatment of intestinal obstruction beyond the ileo-cæcal valve by injections per rectum.

II. ENTERECTOMY.

Resection of more than six feet of the small intestine in dogs is uniformly fatal; the cause of death in such cases is always attributable to the immediate effects of the trauma. Resection of more than four feet of the small intestines in dogs is incompatible with normal digestion, absorption, and nutrition, and often results in death from marasmus. In cases of extensive intestinal resection the remaining portion of the intestinal tract undergoes compensatory hypertrophy, which macroscopically is shown by thickening of the intestinal coats and increased vascularisation.

III. PHYSIOLOGICAL EXCLUSION.

Physiological exclusion of an extensive portion of the intestinal tract does not impair digestion, absorption, and nutrition as seriously as the removal of a similar portion by resection. Fæcal accumulation does not take place in the excluded portion of the intestinal canal. The excluded portion of the bowel undergoes progressive atrophy.

IV. CIRCULAR ENTERORRHAPHY.

A modification of Jobert's invagination suture by lining the intussusceptum with a thin flexible rubber ring, and the substitution of catgut for silk sutures, is preferable to Czerny-Lembert sutures. The line of suturing, or neck of the intussuscipiens, should be covered by a flap or graft of omentum in all cases of circular resection, as this procedure furnishes an additional protection against perforation. In circular enterorrhaphy, continuity of the peritoneal surface should be secured where the mesentery is detached by uniting the peritoneum with a fine catgut suture before the bowel is united, as this modification of the ordinary method furnishes better security against perforation on the mesenteric side.

V. INTESTINAL ANASTOMOSIS.

The formation of a fistulous communication between the bowel above and below the seat of obstruction should take the place of resection and circular enterorrhaphy in all cases where it is impossible or impracticable to remove the cause of obstruction, or where the pathological conditions which have given rise to the obstruction do not constitute an intrinsic source of danger. Gastro-enterostomy and jejuno-ileostomy should always be made by approximation with partially or completely decalcified perforated bone plates. In making an intestinal anastomosis for obstructions in the cæcum or colon, the communication above and below the seat of obstruction can be established by apposition with decalcified perforated bone plates, or by lateral implantation of the ileum into the colon or rectum. An ileo-colostomy, or ileo-rectostomy by approximation with decalcified perforated bone plates or lateral implantation should be done in all cases of irreducible ileo-cæcal invaginations, where the local signs do not indicate the existence or occurrence of gangrene and perforation. In all cases of threatened gangrene and perforation, the invaginated portion should be excised, both ends of the bowel closed, and the continuity of the intestinal canal restored by making an ileo-colostomy by approximation with perforated decalcified bone plates, or by lateral implantation. The restoration of the continuity of the intestinal canal by perforated approximation plates or lateral implantation should be resorted to in all cases where circular enterorrhaphy is impossible on account of the difference in the size of the lumina of the two ends of the bowel. In cases of multiple gunshot wounds of the intestines involving the lateral or convex side of the bowel, the formation of intestinal anastomosis by perforated decalcified bone plates should be preferred to suturing, as this procedure is equally if not more safe, and requires less time.

VI. ADHESION EXPERIMENTS.

Definitive healing of an intestinal wound is only completed after the formation of a network of new vessels in the product of tissue proliferation from the approximated serous surfaces. Under favourable circumstances, quite firm adhesions are formed between the peritoneal surfaces within from six to twelve hours, which effectually resist the pressure from within outwards. Scarification of the peritoneum at the seat of approximation hastens the formation of adhesions and the definitive healing of intestinal wounds. Omental grafts, from one to two inches in width, and sufficiently long to completely encircle the bowel, retain their vitality, become firmly adherent in from twelve to eighteen hours, and are freely supplied with bloodvessels in from twenty-four to forty-eight hours. Omental transplantation or omental grafting should be done in every circular resection or suturing of large intestinal wounds, as this procedure favours the healing of the visceral wound, and furnishes an additional protection against perforation.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

MIDDLESEX HOSPITAL.

THREE FATAL CASES OF NON-TROPICAL DYSENTERY.

(Under the care of Dr. CAYLEY and Dr. FINLAY.)

THE occurrence of non-tropical dysentery in England is so rare that the following cases will be found of interest. The liver does not appear to have been affected in any of these cases, but we have seen a case in which the disease (non-tropical) ran an acute course, and was attended with large hepatic abscess. For the subjoined notes we are indebted to Dr. Pasteur, medical registrar.

CASE 1.—Florence H——, aged nineteen years, single, was admitted on May 20th, 1886. Her grandfather on the mother's side died of phthisis, and her father's parents both died of bronchitis. Her previous health had been excellent, and she had never lived out of England. About a year ago she became subject to sore-throat, and her tonsils became enlarged. On the advice of her doctor she had the right tonsil removed. The hæmorrhage from the operation was severe, and did not cease completely for a week, the patient

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becoming much enfeebled by loss of blood. About three months previously to admission she began to suffer from constipation, and noticed blood in her motions at intervals, which had considerably increased of late.

On admission she was very anæmic, and complained of dyspnœa on the least exertion and loss of blood per anum, both during stool and in the intervals. There was sometimes pain in the lower abdomen and flanks. The abdomen was slightly distended and tense, with tenderness below the umbilicus. There was nowhere dulness or sense of local resistance, nor were there any signs of external piles. The liver and spleen were not felt below the ribs. The tongue was moist and slightly furred, the appetite good, and the bowels confined. The temperature was raised about one degree. The heart and lungs were perfectly healthy.

Progress and termination.—The first two stools passed consisted of clotted blood and mucus, and were accompanied by a good deal of pain. A rectal examination was made on May 25th, which revealed a circle of bleeding points (? minute polypi) about an inch above the internal sphincter. The previous night there had been severe abdominal pain, which necessitated the use of anodyne fomentations. The bowels acted on an average seven or eight times daily, the stools consisting almost entirely of blood. On the 26th the rectal speculum was again introduced, and the exposed bleeding points and "ulcers" freely dusted with powdered persulphate of iron, followed by a morphia and tannic acid suppository. By the mouth, chalk, catechu, and opium.

On May 27th she was transferred to the care of Mr. Henry Morris, who examined the rectum on the following day under ether and cauterised the bleeding ulcers, at the same time stretching the sphincter ani. Ergot was given twice daily, and a starch enema, with opium, catechu, and krameria when necessary. Three motions took place in the next twelve hours. The enema was administered three times.

May 31st.—Had persistent diarrhœa the whole of yesterday, the motions containing a little blood. Evening temperature above 101°.

For the next nine days the patient continued to get progressively weaker, the diarrhœa proving quite intractable. The pulse increased in frequency (100 to 140), and was at times intermittent. Blood continued to be present in most of the stools. The fæcal matters passed were light-coloured, but not particularly offensive. The evening temperature was on an average 102°, with a morning remission of about two degrees. The abdomen was tympanitic and considerably more distended than on admission, and occasionally very painful. Hot fomentations were employed continually. The tongue was smooth and raw-looking. On June 8th and following days there was troublesome ulceration of the mouth. On the 13th the mouth was better, but otherwise there was no change in the patient's condition. Towards evening she became rather suddenly collapsed, without increase of abdominal pain. She rallied somewhat with stimulants, but the stomach had become intolerant of all food, and death occurred the following evening.

Necropsy, thirty-eight hours after death.—Body fairly nourished. Heart and lungs healthy. Liver swollen and cloudy. Spleen very slightly enlarged. Kidneys apparently quite healthy. Abdomen: Cæcum and large intestine distended; mesenteric glands enlarged. Intestine: There were signs of catarrh at the lower end of the ileum, with injection of the mucous membrane, but no signs of ulceration. The caput cæci was free from ulceration, but throughout the remainder of the large bowel the mucous and submucous tissue was extensively destroyed, leaving only irregularly rounded islets of mucous membrane here and there. Over the intervening areas the muscular coat of the bowel was seen clean and free from slough. At the upper part of the rectum there was an area of about two inches in length almost free from ulceration, but at the margin of the anus a large ulcer was present, laying bare the muscular coat. Near this were several smaller ulcers. Some of the islets of mucous membrane showed bright injection at their margins. The muscular coat of the bowel was thickened throughout.

CASE 2.—Mary P——, aged twenty-three years, single, housemaid, was admitted on June 22nd, 1886. Twelve months previously she began to pass small quantities of blood at stool, without pain. This disappeared under medical treatment, and did not return until January, 1886. Since that date, however, the condition became aggravated. The act of defecation was preceded and followed by severe pain, and the quantity of blood lost was considerably greater than at first. On examination there were no external piles, but on introducing the finger into the rectum it was found to be much dilated above the internal sphincter, but not tender.

On admission to a medical ward at the beginning of July the temperature was subnormal; the pulse was soft and dicrotic (108); and anæmia and emaciation were both marked. The thoracic viscera were healthy. The liver dulness measured five inches vertically in the right nipple line, and the spleen was of normal size. There was tenderness in the epigastric and in both hypochondriac regions. A motion passed on July 6th was loose, of normal colour, streaked with blood, and not particularly offensive. Ordered to take lead and opium pill (four grains) three times a day.

During the next three days the bowels were moved three times daily, the motions containing a considerable quantity of altered blood. Was sick repeatedly on the night of July 9th. Pills discontinued. To be fed entirely by nutrient enemata and suppositories.

July 12th.—Feels better. Character and frequency of motions unchanged. Pulse very dicrotic.

17th.—Continues better. Diarrhœa as before, but no blood in stools.

19th.—Six motions containing blood.

25th.—Stools occasionally contain blood. Frequent sickness. Wasting rapidly. Ordered, ipecacuanha powder in full doses; iced champagne and mutton broth.

27th.—Sickness less. Motions as before, with the addition of membranous shreds and blood. Complains of slight abdominal pain.

There was a good deal of sickness during the next week, but the patient's condition was not appreciably altered. On Aug. 5th she was worse. There was more abdominal pain and profuse diarrhœa, and some delirium during the night. The pain subsided on the following day, but the diarrhœa persisted with varying intensity until death, which occurred on Aug. 12th. The temperature was subnormal, except on two occasions when it reached 100°, and during the last four days when the evening temperature was raised about one degree. The bowels acted on an average three times a day. The urine never contained albumen.

Necropsy, twenty-four hours after death.—Body greatly emaciated. Thoracic viscera healthy. No naked-eye lesions of kidneys or spleen. There was considerable gaseous distension of the intestines. In the lower three feet of the ileum there was well-marked thickening of the wall of the gut, and the mucous membrane of this portion was much swollen and shaggy. The patches of Peyer in this region were unduly swollen, and in the two lowest were several small, clean-cut, circular ulcers, with smooth bases. Besides these, there were several large, irregularly-shaped ulcers, with sharp edges and smooth bases, exposing the muscular coat; and over the last ten inches of the ileum the swollen mucous membrane was crowded with small, crater-like ulcers, both on and between the rugæ. In the large intestine the ulceration was much more general and extensive. From the valve to the splenic flexure the greater portion of the mucous membrane had entirely disappeared, leaving only a number of islets of varying shape and size. Some of the largest of these were undermined for a considerable way, so as to form bridges of swollen mucous membrane over collections of pus and shreddy caseous débris. In the intervening smooth areas the thickened muscular coat was laid bare. The serous surface of the gut was everywhere of normal aspect and free from adhesions. There was no contraction at any point. In the descending colon and sigmoid flexure the ulceration was rather less extensive, but of the same character. In the rectum the ulcers were still more scattered, and with one or two exceptions both smaller and shallower than elsewhere, and apparently of more recent date. Dr. Pasteur is unable to make any exact statement as to the colour and general appearance of the intestine at the time of death, as the specimen only came under his observation after being some time in spirit, and very brief notes were taken at the necropsy.

CASE 3 will be found described at length in the Middlesex Hospital Reports, 1885, p. 45. The patient was a woman, aged forty-five. She enjoyed good health until twelve months before her death, when she began to suffer from diarrhœa and tenesmus, which continued until death.

On admission there was severe diarrhœa with intensely fetid stools, occasionally containing blood, and "fleshy masses." She improved temporarily under large injections

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of nitrate of silver (twenty grains to the ounce), but eventually died of asthenia. The small intestine was not affected, but the large gut from beginning to end presented most typically the appearances found in dysentery. The other organs were practically healthy.

Remarks by Dr. PASTEUR.—The rarity of cases of non-imported sporadic dysentery is, I think, generally acknowledged. In support of this I may state that I have failed to find a single case recorded as such in the Transactions of the Pathological Society. And yet, in view of the clinical and pathological aspects of each of these cases, there cannot, I think, be any doubt that they are well-marked instances of the disease. Of the predisposing and determining causes I could get no information. The affection of the ileum in Case 2 is remarkable, and of uncommon occurrence even in the tropical variety of the disease. It accords strikingly with the description of it given by Hilton Fagge. Looking at the advanced stage of the affection in all three cases it is not surprising that treatment should have proved entirely unavailing. The absence of the characteristic fetor of the stools in the first two cases is worthy of note, and, judging by the writings of some authors on tropical dysentery, would have been sufficient to exclude the diagnosis.

BATH EASTERN DISPENSARY.

MALIGNANT DISEASE OF THE ŒSOPHAGUS; RELIEF BY GASTROSTOMY; DEATH TWENTY-EIGHT DAYS AFTER THE STOMACH WAS OPENED.

(Under the care of Mr. R. J. H. SCOTT.)

MARY ANN Z——, aged sixty-one. Has a consumptive family history. Had rheumatic fever sixteen years ago (?). About a year previously to admission she began to find difficulty in swallowing large pieces of food (no difficulty with fluids); this gradually increased until five months ago, when she had a fall (owing, she says to weakness), since which time the dysphagia has rapidly increased, and she has become much weaker. Five months ago pain commenced behind the larynx and on the left side of the neck, which also passed down the left arm, and was so great that she often lost sleep at night.

About April 14th the patient was in the following condition:—There was a tumour behind the larynx pressing it forwards; it was hard, firmly attached to the tissues around, and appeared as an oval swelling on each side of the larynx, about two inches in size from above downwards, and five inches across. There was pain on palpating the tumour, most marked on the left side, on which side also the cervical glands were much enlarged and tender. She was totally unable to swallow any solids, and with the greatest difficulty any fluids; usually on attempting to swallow fluids they were immediately ejected together with blood-stained mucus. She was frequently attacked with fits of coughing which ended in her expectorating mucus tinged with blood, and at times purulent sputa with a most offensive odour. She complained of a great craving for food, and was very thirsty. Passing urine also gave her great pain, the amount being only a few ounces in twenty-four hours, highly concentrated. The bowels were confined; the skin of her legs and arms was much shrivelled, and was red over bony prominences such as the malleoli, with a tendency to form bed-sores. The operation of gastrostomy, and the benefit she was likely to receive from it, having been explained to her, she consented to it being performed.

On April 16th, being under the influence of bichloride of methylene, and the skin of the abdomen having been washed with carbolic lotion, an incision was made about two inches and a half in length, parallel with, and about one inch below, the left costal cartilages. One or two small vessels were secured with catgut ligatures before the abdominal cavity was opened. The left lobe of the liver presented itself at the opening into the peritoneum; on pushing this to the right the lower margin of the stomach could just be seen moving with respiration under the left costal cartilages; this was seized with a pair of artery forceps and drawn carefully into the wound; a carbolised silk suture was then passed through its walls, by which it could be held in position in the wound. The stomach was next fixed to the abdominal wall by a double row of carbolised silk sutures care being taken only to transfix the muscular and peritoneal coats of the viscus. After eight sutures had fixed the stomach to the parietes so as to completely close the peritoneal opening, the part of the stomach exposed in the wound was then attached to the edges of the wound with small carbolised silk sutures. The wound was dressed with antiseptic gauze and salicylic wool. No spray was used, otherwise the operation was done antiseptically. In suturing the stomach to the abdominal wall the incised margins of the parietal peritoneum were brought well forward into the wound, so that as broad a surface as possible might be kept in contact with the visceral peritoneum. The dressing was not removed for five days, when the stomach was opened. During this time she was fed with nutrient suppositories twice a day. She expressed herself as feeling better soon after the feeding by suppositories commenced. No pain since operation. On April 21st the dressings were removed and the wound washed out with carbolic lotion; it had apparently quite healed. A narrow-bladed knife was passed into the stomach by the side of the silk ligature which had been used to bring the viscus into position whilst being sutured to the abdominal parietes; this caused the patient no pain. A No. 6 gum-elastic English catheter was now introduced by the side of the blade of the knife, which was withdrawn when the catheter was felt to have entered the stomach. Suction was made at the end of the catheter, with a sufficiently disagreeable result to prove that the tube was in the gastric cavity. A funnel and piece of flexible tubing was fastened to the end of the catheter, and six ounces of peptonised milk (warm) was gently poured in. The catheter was cut short to within three inches of the wound with a piece of salicylic wool in its open end, and the whole covered with salicylic wool and strapping. Nutrient suppositories stopped.

On the next day she was fed twice in the same manner, and with the same food. She expressed herself as feeling better than she had done for a long time, and that she had been able to pass more urine, which had given her great relief. She was allowed to sip a little Liebig beef and malt wine.

April 23rd.—Sutures removed. There is some excoriation around the tube, which is loose. A No. 8 gum-elastic catheter was now substituted for the No. 6 without any difficulty. She now takes ten ounces of peptonised milk twice a day. Salicylic wool packed around the catheter.

25th.—The gastric juice oozes by the side of the catheter, and keeps the surrounding skin excoriated. An elastic flexible tube, rather larger than a No. 12 English catheter, was now substituted for the No. 8, and an egg was beaten up in ordinary milk, about twelve ounces being slowly introduced twice a day. Patient says she feels much better. Urine gives no pain on passing, and is much increased in quantity. Has had a natural motion; says her skin feels much more comfortable, as it felt shrivelled before. The excoriated skin was painted over with a solution of nitrate of silver.

28th.—The skin around the wound now looks quite healthy. She is able to feed herself through the tube, which she takes out, cleans, and reintroduces, and she takes thickened beef-tea or mutton-broth at one meal, and milk and egg at another. As she complained of indigestion, she now adds a teaspoonful of liquor pepticus to each meal, which gives her great relief. Washes her mouth with cold tea.

May 6th.—Continues to feed herself very comfortably. The expectoration has increased and the tumour in the neck has grown larger. Nothing passes through the stricture. The glands in the left side of the neck are increasing in size and becoming more painful. Complains of great pain down the left arm, which she is now hardly able to use.

12th.—Pain in the arm and neck increasing. Still takes plenty of nourishment. Says the operation has given her immense relief from craving hunger and insatiable thirst; at the same time she is gradually becoming weaker.

The patient died on May 19th, apparently of exhaustion.

Remarks by Mr. SCOTT.—Though this patient only lived twenty-eight days after the stomach was opened, yet I cannot help considering that the operation was successful, gastrostomy being an operation the object of which is to relieve hunger and thirst, and as far as possible to prolong life, her condition before the operation being intense hunger, great thirst, and concentrated urine; all these were relieved, especially her pain in passing urine, which was no slight addition to her other troubles. There is no doubt that gastrostomy should be performed as soon as the patient is unable to swallow solids, but it is very difficult to induce patients to

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consent to its being performed so early as this. In the present case the patient had attended at the hospital out-patient department quite three weeks before, and I had endeavoured to persuade her to have the operation done, but she positively refused till later on, when she was able to take no nourishment at all. In the *British Medical Journal* of May 21st Mr. Golding Bird of Guy's Hospital reports a case in which he tried immediate feeding, but the patient died six hours after the operation. I cannot help feeling that if the patient is in such an extremely exhausted condition gastrostomy will be of little use; and if of little use, will do harm by bringing discredit on the operation. The operation is not a painful one, and therefore, if we can only induce patients to consider that by having it done earlier they will prolong life and lessen some of the terrors of the kind of death they will ultimately have to pass through, we shall, I think, do our duty to our patients and give the operation its due value in surgery. The strength of the patient may be fairly well kept up by nutrient suppositories during the few days that the stomach remains unopened, and these may be assisted by injections of tepid water, about four ounces in quantity, three or four times in twenty-four hours; the water appears to become absorbed, and gives relief to the intense thirst often occurring in these cases. Mr. Charters Symonds, in the *Journal* of April 23rd, brings forward four cases of the treatment of epitheliomatous stricture of the œsophagus by tubage or permanent catheterism. Three of his cases died finally of ulceration extending to neighbouring parts—i.e., the pleura and lung, the trachea, and the retro-pharyngeal or œsophageal tissues. I think that the passage of a tube, however soft, through a cancerous ulcerating growth must tend to hasten the ulcerating process; whereas, on the other hand, gastrostomy, though it does not stop the growth of the tumour (excepting by preventing the irritation of attempting to swallow food and fluid), does not, in any way that I can see, hasten the end.

Abstracts
OF
INTRODUCTORY LECTURES, ETC.,
DELIVERED AT
MEDICAL SCHOOLS OF LONDON AND THE PROVINCES
AT THE
Opening of the Session 1887-88.

ST. GEORGE'S HOSPITAL.

INTRODUCTORY LECTURE BY MR. C. T. DENT, F.R.C.S.

AFTER adverting briefly to the changes that had occurred during the past year in the Medical School, including the opening of the new physiological laboratories, the lecturer proceeded to his main subject—The Nature and Significance of Pain. Such a topic, he remarked, needs no excuse to a medical audience, for day by day a physiology of the mind assumes more a practical shape. Between physiology and psychology there is still a great gulf; but as the former science progresses the space becomes narrowed, and the time must arrive when the two sciences will begin to merge one into the other. Whence comes the universal liability to pain in mankind? The apparatus required for a sentient being consists of a nerve beginning to receive the impression from without, a nerve to conduct it, and, most essential, a brain to realise it. Possibly in an animal as low down in the scale as the sea anemone the first indication of a nerve is found, for we consider that to be a nerve which discharges the functions of such. In its primitive form it is but a process of homogeneous matter jutting out from a cell placed beneath the integument. A stimulus applied to the extremity of the process produces some change in the central cell, but there is no brain, and therefore no sensation. As we ascend the animal scale the nerves are found to be more distinct and the nerve cells become massed together to form a brain. At some point or another the brain first acquires the dawning power of appreciating impressions, and at some higher point the property first creeps in of realising them; what was below this merely a sensation, above it becomes the idea of a sensation. Pain is only an intense or disorderly sensation, or one that interferes with health or comfort. It follows that of a great number of impressions we cannot say positively whether they are painful or not. In medicine and surgery we have little to do with these "borderland" pains. The impressions are commonly unmistakable. The mind is unable to realise pain as such, and only, as it were, to become aware that it is disturbed by a series of impressions too disorderly or intense for the comprehension. Here, possibly, we may catch a glimpse of the nature of pain, as being the unavailing effort of the consciousness to realise its own disturbance. The phenomena of living muscle instance well the graduation of impressions leading up to pain. Of the muscular movements of respiration we are all but unaware; more powerful contractions, as in athletic pursuits, give pleasure, while intensely powerful contractions independent of the will or control, such as occur in lockjaw, cause agony. Through the senses of sight and hearing the bulk of our education is conveyed to the mind. It follows that intellectual development renders us susceptible to new pains. Highly sensitive people are in fault usually, not in the nerve paths, but in the brain. As we can educate ordinary touch, so we can educate the sense of pain, as may be seen in the case of the so-called hysterical. Pain will be as real in such as in others, for subjective may be at least as vivid as objective sensations. A brain may be functionally as unduly tender as any given part of the body. The world is sorry for the person whose brain is disturbed by the impressions coming from a disorganised joint, and too often only laughs at the patient who has the same disorder brought about by a different condition, yet both are diseased, and indifference or mockery may be to the tender brain as a blow or a jar to the tender joint. The lecturer strongly advocated the study of the mental aspect of disease, especially in asylums for the insane, remarking that such institutions were really special hospitals possessing the unique merit that nothing could be said against them. In commenting upon another aspect of the subject—namely, the conditions which diminish suffering,—the lecturer remarked that pain was necessarily confined to the animal world, the liability being proportionate to the physiological development. As, therefore, this liability increases, so does the capacity of the intelligence, to minimise pain augment. Pain bears no fixed relation to the severity or importance of disease: some almost trifling diseases are attended by a vast amount, other grave disorders with a minimum, of suffering; a toothache may be agonising; and yet a person might have a large aneurysm, or his liver might be saturated with cancer, without his being aware of the condition; so here, if nature exacts, she also grants. It is noteworthy that the value and defensive use of pain is of importance principally at the moment, for there is no real power of recollecting pain. Much is said nowadays on the subject of "preventable diseases"; assuming for the moment that disease and pain are convertible terms, we should regret no less in the clinical work of a large hospital, the waste of energy, the squandering of the utility of existence, the failure to profit by the opportunity of life due to preventable pain. In the wards and out-patient rooms it meets our eyes everywhere; poverty, ignorance, and vice are the great factors. The fallacy is often urged that health cannot be bought; in truth it is a most marketable article. Much immunity from pain or disease might be purchased, for rest is the natural antidote to pain. Where would be the joint and spinal diseases, the incipient phthisis, and the like, if rest could be provided, not merely prescribed? Such patients could be taken in and put on the road to recovery, or at the outset cured, at a shilling a day, if there were adequate hospital accommodation and means to buy health for the poor.

KING'S COLLEGE.

LORD SELBORNE, after expressing the pleasure it gave him to be present on occasions of this sort, said that with regard to what had been said about the establishment of a teaching university for London and the granting of higher academical rank and power to those kindred institutions, he dared say it was a subject attended with difficulties—indeed he knew that it was so from his own experience, for in his own profession he was extremely desirous to see the Inns of Court organised on a footing more worthy of the resources of their historical and privileged position, and, moreover, one likely to be productive of a more scientific

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and systematic study of law in all its branches. He could not help thinking that in London they had lost by the dislocation of the elements of education, which perhaps by better organisation might be more useful than they were. The University of London as it now existed stood very high indeed, and justly so, among the scientific educational bodies of the world, although it was not a strictly educational body, but a body which tested the results obtained elsewhere and rewarded them with very valuable degrees. Whatever happened, he trusted nothing would ever arise to diminish the value of the degrees of the University of London; but it was quite possible that an immense gain might be experienced for the better organisation of the teaching bodies in London, not only in medicine, but in law and the arts generally, which might either be united or not with the present examining University of London. All being really engaged in the same work, and most successfully engaged in it, he could not but believe that greater things were in the future before them than ever had been yet attained; and if this present movement should have that effect, he thought all good citizens, as well as all well-wishers of university education, might congratulate themselves upon it. In the course of some further remarks upon the comparative position of the professions, his lordship said that the profession of medicine hardly stood much below that of religion, for as a clergyman was always alleviating or applying remedies to the moral sufferings of mankind, so the work of the surgeon or physician was always to do good, and to alleviate those physical misfortunes which accidents or sickness brought to their fellowmen, and he thought they were certainly entitled to one of the most prominent positions among those who did good to mankind.

MIDDLESEX HOSPITAL.

AT Middlesex Hospital the usual custom of having an introductory lecture was departed from, and the session was opened by a distribution of prizes and a reception in the new buildings. The lecture theatre was densely packed with students and their friends, and numbers failed to gain admission. The Dean, Mr. Pearce Gould, read the annual report, which largely consisted of a sketch of the history of the school. From the foundation of the hospital in 1745, pupils were to be found in its wards, and some years later regular clinical lectures were given. In 1819 a room was set apart as a lecture theatre. Long before this, however—in 1773—the students had formed a medical society, which has continued to this day, and is now more flourishing than ever. This society is at once the oldest organisation connected with the school, and the oldest of students' medical societies in the kingdom. The first important connexion of the hospital with a medical school was on the establishment of the famous Windmill-street school, for the pupils of that school obtained their hospital practice at Middlesex Hospital; and when the majority of the lecturers and students migrated to St. George's Hospital, the hospital wards were opened to the pupils of the newly-founded University of London. On the building of University College Hospital in 1835, Sir Charles Bell, Sir (then Dr.) Thomas Watson, Mr. J. M. Arnott, Mr. Mayo, and the other members of the staff, founded "a complete school of medicine in avowed connexion with the Middlesex Hospital, and under the sanction of its patrons." After tracing the gradual growth of the school, the report went on to refer to the new buildings which were opened that day, and which made their accommodation complete. Former alterations and additions had satisfied special wants most pressing at the time, but now they could look round upon their school without the thought that something more would soon have to be supplied. There were theatres, class rooms, laboratories, museums, and library for teaching purposes; and in addition to providing accommodation for the comfort of all their students, they were able to offer to those who desired it the advantages of collegiate life. In reference to the schemes for establishing some source whence students at metropolitan schools could obtain a medical degree, the report stated that the school authorities had expressed their approval of both the plans suggested, as it was thought that either would secure the end in view, "it being always understood that the degree would only be granted after some further examination test than that now necessary for the usual 'Double Qualification,' while less severe and exacting than those conducted in Burlington House." After alluding to the changes in the teaching staff during the year, the success of the students at various medical examinations, the appointment of Dr. Finlay as inspector of examinations in medicine, the success of the school on the river and in the football field, the results of the various class examinations during the past year were read out, and the prizes were presented by the Lord Mayor of London, who afterwards gave a short address to the students. After congratulating the successful men, and encouraging all, he expressed his high sense of the value of the medical profession, and humorously referred to the universality of such a feeling when sickness or accident occurred. From his experience at Cambridge he felt confident that the new Residential College would greatly promote the welfare of the students. His lordship, after the usual vote of thanks, moved by Mr. Hulke and supported by Major Ross, M.P., then inspected the new buildings and the hospital.

ST. THOMAS'S HOSPITAL.

INTRODUCTORY ADDRESS BY MR. R. W. REID, F.R.C.S., LECTURER ON ANATOMY.

MR. REID, after welcoming the new students, said that the life of a medical student may be looked at in two aspects; firstly, in its professional; and, secondly, in its social. To the former of these two he should desire to direct attention. In its professional aspect there are two distinct periods of a student's life—viz., the *first two years* of his course, wherein he studies the structure and functions of man in his healthy state, with the addition of the sciences of botany, comparative anatomy, chemistry, and materia medica, in order to prepare him for the *second period* of his existence, wherein he investigates the human body in its diseased or injured condition, and the proper application of suitable means and remedies to relieve, if possible, this diseased or injured state. He should like particularly to draw a distinct line of demarcation between these two periods of a student's life, and no student ought to attempt to approach the latter without having first mastered the former; or, to put the matter plainly, no student ought to have anything whatever to do with the clinical treatment of disease before he has passed his examinations in the preparatory subjects of chemistry, anatomy, physiology, and materia medica. Anatomy, in its generic sense, is the science which determines the structure of organised bodies, whether dead or living. It resolves itself into vegetable anatomy or botany, treating of the structure of plants; and animal anatomy or zootomy, searching out the structure of animals. The latter divides itself, firstly, into a comparison of the structure of different animals with one another, constituting what is called comparative anatomy; and, secondly, into the investigation of any individual animal, constituting what is known as special anatomy. The anatomy of our calendar means the special anatomy of man as distinguished from that of the lower animals, and in the study of his structure in all its details students are called upon to begin their professional life. It goes without saying that we must understand the structure, appearance, and relations of the constituent parts of a machine before we can understand its working as a whole, or be able to put it to rights if it goes wrong. Similarly, it is evident that we must know the detailed structure of the human body before we can understand the function of its several parts, or attempt to repair it should any of those parts get out of order. As one would expect, therefore, anatomy is the oldest of all the medical sciences. The precise time of its origin is very uncertain. The Egyptian embalmers must have had some knowledge of the human body acquired in the process of the preservation of the dead, but as they were of the lowest order, and, abhorred by reason of their occupation, what knowledge they possessed they kept to themselves, and left no record of it behind them. We may divide the early rise and progress of the science from the fabulous ages to Hippocrates, from him to Galen, then to Vesalius, and then to Harvey, who died in the year 1657. After Harvey's day the School of St. Thomas's Hospital played an important part. Mr. Reid believed that this is the oldest regular anatomical school in England, and, if he said in Great Britain, he believed he was not wrong. Previous to its formation lectures upon anatomy were given at the College of Barber-

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Surgeons of London (afterwards the Royal College of Surgeons of England) and at the Royal College of Physicians, by members or fellows of either college under the various titles of Reader, Master, or Professor of Anatomy. It is interesting to notice that these posts were, with a few exceptions, held by physicians and not by surgeons, and that Mead, a physician of this hospital, held the office of reader in the year 1711, when he delivered a series of lectures upon the muscles, and thus was one of the first to hold the still existing post of Arris and Gale Lecturer at the College of Surgeons. The practice of the dissection of the human body was introduced into this country by Caius (a name familiar to all Cambridge men), shortly after his return from Padua about the year 1546 or 1547. He first taught practical anatomy in the Barber-Surgeons' Hall of London. To William Cheselden is due the first formation of this anatomical school. After Cheselden, we find, as lecturers upon anatomy, the names of Else, also professor of anatomy at the College of Surgeons; Cline, whom Sir Astley Cooper speaks of "as a moderate anatomist, but sufficiently informed for teaching and practice, a man of excellent judgment, but one whom politics and agriculture have drawn from the contemplation of his profession." We then come to Sir Astley Cooper himself. Cooper taught anatomy and surgery for a period of thirty-five years, in conjunction first with Mr. Cline, then with Mr. Henry Cline, and lastly with Mr. Green. He was appointed Demonstrator of Anatomy in 1789, and resigned the surgery lectureship in 1824. Cooper's name, as far as anatomy is concerned, is chiefly associated with his discoveries in connexion with the lymphatic system, descriptions of the parts concerned in different forms of hernia, and the structure of the breast, thymus gland, and testicle. A number of his preparations showing these different points are still preserved in the museum of St. Thomas's Hospital. He did not confine his attention solely to anatomy in its human aspect, for he was appointed Professor of Comparative Anatomy at the College of Surgeons in 1813. The lectures which he then delivered were the first set of lectures on that subject publicly delivered in London. They related to the classification of animals, and to certain anthropological subjects.

The study of human anatomy may be looked at in two ways:—Firstly, as the means of acquiring a knowledge of the structure of the body, whereby the student is placed upon a platform from which to view the functions of the body in health, and thereby to properly appreciate the effect produced upon the body should those functions become deranged; and, secondly, as a mental training. Mr. Reid claimed for human anatomy not only the study of the parts of the body which we can see by the naked eye, but also the study of minute details, too small to be seen in the ordinary way, but which, when treated with chemical reagents and otherwise specially prepared, become visible by the aid of the microscope. In the latter study, termed General Anatomy or Histology, he warned students not to come to too rapid a conclusion as to what they see when they view a part of the body through a microscope, as frequently the mode of the preparation of the specimen is apt to alter the minute appearances of the parts.

We may study the human body at different periods of its life, from the earliest appearance of the embryo to its fully formed state, and see the successions of forms which it presents at the different periods, constituting what is called Embryology or Developmental Anatomy. This study is extremely important, as by an understanding of it we can explain a large number of the irregularities and malformations to which the human body is liable. Again, we may study human anatomy with reference to the laws which have determined the structure of the body, constituting Morphological Anatomy; and lastly we may study man, or rather the human race, considered as a whole in its separate individuality, and in its relations with the rest of nature. This last branch of anatomical investigation is termed Anthropology. Now, as it is impossible in the matter of time for an ordinary course of lectures upon human anatomy to embrace all these several branches, the student will find that certain of them are relegated to lecturers upon other subjects. Hence he will find that histology and embryology are taught by the physiologists, and that what is left to the human anatomists is an investigation of the structure of the body in its macroscopic as distinguished from its microscopic sense.

As a mental training for the student beginning the study of medicine, Mr. Reid knew of none better than that of anatomy. In the first winter of his course he is called upon to master the subject of osteology. At first, one is apt to be somewhat discouraged by the apparently infinite number of facts, details, and unfamiliar names to be remembered in this branch. He could assure students of the first year, however, that by thoroughly applying themselves to the acquisition of these details their time is not lost; that by so doing they train their aptitude for observation and cultivate their memory. Mr. Reid remarked that of late it has been the practice of some to disparage the subject of human anatomy, for they say it is a worked-out subject, and simply consists in the recollection of a number of details which, almost as soon as they have been acquired by the memory, so soon they leave it. To such persons he should say that human anatomy is *not* a worked-out science, as the recent advances in the knowledge of the structure of the brain and spinal cord, and the exact position of some of the abdominal viscera, testify—advances which have formed the foundations for some of the recent rapid strides in the arts of medicine and surgery; and that the mastering of the so-called number of facts is the most healthy mental exercise the beginner can be put to; for, after all, the arts of medicine and surgery rest upon a basis of accumulated details arranged in their proper order. The sooner, therefore, the student gets into the habit of observing minutiæ, classifying them, and arranging them in such a way that he can thereby be able to draw deductions from them, so much it will be the better for him. He thought that the fault of there being a lack of interest taken in human anatomy does not rest entirely with students themselves, but that both teachers and examiners are greatly to blame. Under the present system teachers (and teachers are obliged to be guided by examiners, whatever may be said to the contrary) are apt to handle the subject as if it were one entirely set apart by itself and having no connexion with any other. They seem to strive to crowd into a short winter's course as many isolated facts as they possibly can, without having due regard to the object in view in the study of these facts. He was sure that if the huge amount of material to be gone over in the short space of two winters were sifted out more into what was important and what was less so, and that if all matter not having some reference to the future work of the student were eliminated from the study and examination of the ordinary "pass man," the labours of the first two years of a student's life might be greatly lessened. As far as the Fellowship and University honours men are concerned, the longer period of three years being allowed for their study, the subject might be treated in a somewhat more purely scientific way, looking at it more from the comparative, morphological, and mechanical adaptation sides—always, of course, presupposing an intimate knowledge of the simpler facts which have peculiar relation to the arts of medicine and surgery.

With regard to the younger and fascinating subject of physiology, Mr. Reid felt somewhat diffident in speaking. Within the last few years it has made such rapid strides, that unless one is in the position of what is called a "pure physiologist," one is hardly competent to say much about it. Physiology is a science which first of all supposes a knowledge of the anatomical structure of the body, and then applies chemistry and physics to investigate the laws of life. Unfortunately, according to the present curriculum, it is found that in the first year of their course students are required to study physiology at the same time that they study anatomy, chemistry, and physics. Happily, however, the authorities require a very elementary knowledge of physiology at the end of the first winter session, so that the student can devote the greater part of his first winter to chemistry, physics, and elementary anatomy. He strongly urged beginners to devote, in their first year, the larger part of their energies to the mastery of the preliminary scientific subjects of chemistry and physics. If they did this, and got rid of them by examination at the appointed time, they would find that they could throw themselves heart and soul, in their second year, to the more immediately medical subjects of advanced anatomy and higher physiology. As far as materia medica is concerned, Mr. Reid confessed that he was obliged to say that *per se* it is a somewhat dry and to the first year's student uninteresting subject. Its place, in the first summer, seemed to him an early one; still it naturally follows a course of chemistry. In its therapeutic sense it is anything but uninteresting, but considered in that sense, its place as one of the subjects of the first summer seemed to him nothing short of absurd, seeing that it implies, or ought to

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imply, a certain amount of knowledge of physiology and of the different forms of disease, which knowledge the student does not acquire till the second year in the first case, and the third and fourth in the last. However, as his hearers were obliged to devote themselves to the different subjects in the order they were prescribed, all he could say was: Attend diligently to the lectures delivered upon that subject, and take advantage of the thorough and practical teaching in the dispensary of the hospital.

Mr. Reid concluded by recapitulating the facilities which St. Thomas's Hospital affords for students to acquire a knowledge of the subjects he had mentioned, and pointing out the importance of attendance at lectures and class examinations.

UNIVERSITY COLLEGE HOSPITAL.

INTRODUCTORY ADDRESS BY DR RADLIFFE CROCKER.

DR. RADCLIFFE CROCKER commenced by giving a cordial welcome to the new students, and gave them some advice upon the way in which they should spend their time away from the College and in the selection of their companions. In advising them about their work, he began by showing them how not to do it, by describing certain types of students, whose methods did not lead to success, the types selected being the "Casual student," the "Dilettante student," and the "Over-diligent student." He then proceeded to show how the student should do it, and impressed upon them the necessity of being as practical and objective in their work as possible, pointing out that if they neglected their opportunities of learning the use of instruments of diagnosis while students, they could never learn it afterwards, however much they might try, and that thus their stethoscope would become a mere symbol of their profession, like "a portable barber's pole"; while, after all, the best equipped student, when he left the hospital, was not a medical man of experience, but a medical man capable of profiting by his experience. He also urged upon them the necessity of thoroughness and accuracy in the examination of their cases, as it was not so much how many cases they saw, as how they saw them, pointing out that thus a large hospital might become a disadvantage to a student, unless he was careful not to hurry over his cases. He showed how University College Hospital, for example, which was a hospital of moderate size, had, from making the best use of their materials and thoroughly training the student, turned out men equal to any in the profession, and instanced, among those of the present day, Erichsen, Thompson, and Marshall among the surgeons, and Walshe, Jenner, Russell Reynolds, and the late Wilson Fox among physicians, as a proof that it was quality, not quantity, that was essential.

The lecturer then briefly alluded to the necessity of an M.D. degree being accessible to the good average London student, from which he was at present deterred by the high standard and stringent regulations of the London University, and said that the teachers of London were determined that such a degree should be ere long within the student's reach. Passing on to the time when the student had got through all his examinations, and taking up the case of those who sought to go into consulting practice, he showed them what a long and trying time must elapse before practice came, and urged them not to be led into the error of the day of advertising themselves directly or indirectly in order to obtain practice by a direct appeal to the public sooner than they would by addressing themselves to the profession at large, and to look rather to the general practitioner to send them patients; he showed how the advertisers were the least trustworthy men in the profession, and that they for the most part belonged to two classes, ignorant or comparatively ignorant men, who yet made great pretence of knowledge, and whom he denounced as quacks, although they were in the profession, while in the other class were men of ability who were in such haste to be rich that they could not wait until practice came through legitimate channels, and though they doubtless cured their patients eventually, they secured as much money out of them as possible. Further elaborating the subject, he classified the advertising part of the profession on the principle Touchstone used in the gradations of quarrelling, and described humorously the "Advertiser Churlish" as the man who wrote works in which he made out everyone to be wrong but himself, professing to have made discoveries which the blindness and narrow conservatism of the profession prevented it seeing and adopting, and when patients had been previously treated, depreciated directly or indirectly their former adviser in order to exalt themselves. The "Advertiser Valiant" was a man who paraded his ability to cure obstinate or incurable diseases, such as consumption, cancer, &c., and ascribed his success partly to being always ready to make the more serious diagnosis even in comparatively mild forms of diseases, and thus he was credited with curing phthisis, or whatever the disease might be, without really deserving it; further, even if he failed, he was always having a succession of new patients through his advertisements. The "Advertiser Quarrelsome" took the form of writing pamphlets against the abuse of various drugs in the treatment of disease or against operations in various surgical affections, and claimed to show how he avoided all such dangerous methods, and yet cured his patients more quickly and safely. The last two were, the "Advertiser Direct" and the "Advertiser Circumstantial." Pointing out that very few went so far as to advertise themselves directly, as they ran too much risk of being expelled from the profession, he described the "Advertiser Circumstantial," who, while appearing to praise something else, was really putting himself forward. As the most flagrant instances, he mentioned men who lent their aid in puffing sundry trade articles, either directly, by writing testimonials to the vendors, or indirectly, by allowing extracts from their works to be reprinted by the vendors of drugs, foods, or hygienic articles, and sent round as circulars, or left in public places. Another plan was to write works known as "bread-and-butter books," of more or less pretension, on common diseases, such as "gout," or some fashionable new treatment, such as "massage," to give the impression that they are authorities on the subject; and he urged the public to be more ready to listen to the advice of their family practitioner as to whom they should consult, rather than be led by these plausible writings, of whose merits they were not competent judges to choose for themselves. He felt, however, that in the face of the support that the public gave to quack nostrums, systems, and unqualified pretenders outside the profession, they did not seem likely of themselves to discriminate as to who were or were not the quacks within it. At the same time, he feared that the profession were not as active as they might be in labelling these men as they deserved. He urged that they should refuse to meet them in consultation more than they did, and that they should shun their acquaintance; that men of repute should be more careful how they allowed their names to be on the consulting staff of special hospitals, often started by inferior men to serve their own ends; that medical societies should not only exercise care in admitting their members, which he acknowledged they did, but that when men advertised, and in other ways showed themselves unworthy, the offending member should be summoned before the Council, and, if necessary, expelled, and gave an instance in which this had not been done in a flagrant offender. Similarly, that licensing bodies should always exercise to the full all the powers they possess to stop those who offended, even when the advertisements were not absolutely direct.

The lecturer concluded by warning those who sought to do consulting practice that they must be content to wait some time before they could make a reputation amongst their medical brethren, who could judge of the merits of their work in societies and other scientific meetings, from communications to medical journals and *bonâ-fide* works, which would lay a surer foundation for their reputation than that which they might get from ephemeral popularity. He exhorted them, one and all, not to let money-making be their sole aim, nor to allow, as a French writer put it, "their conscience to be a watch regulated by the clock of the parish," but, in the words of Polonius to Laertes,—

> "This above all—to thine own self be true:
> And it must follow, as the night the day,
> Thou canst not then be false to any man."

ARMY MEDICAL SCHOOL.

THE winter session of the Army Medical School was opened at Netley on Monday, the 3rd inst. The introductory lecture was delivered by Professor David Boyes Smith, M.D., F.R.C.P., who in his discourse gave a review of the valuable work done in various departments of science by

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medical officers in India. During the present term there are no candidates for commissions in Her Majesty's British Medical Service, but, in their stead, twenty-three commissioned medical officers have joined to attend the courses of instruction. The same number of candidates for commissions in Her Majesty's Indian Medical Service also joined the School on the 1st inst.

ROYAL VETERINARY COLLEGE.

PROFESSOR THOMPSON LOWNE, F.R.C.S., in delivering the introductory lecture, said that the use and progress of scientific veterinary practice in this country had been exceedingly rapid. He remarked upon the petty jealousies that had arisen between two sister professions so knit together in a common cause, so unlikely to clash in interests, as the medical and veterinary, and said that in Germany the two professions were far more intimate than in this country, but he believed that the time was at hand when they would follow more closely the good example of their continental neighbours. Their knowledge of the causation of contagious epizootics had recently made vast strides. The discovery of the existence of all-pervading organisms, better known, perhaps, as disease germs by the laity, and the potency of these for harm both to man and animals, had thrown a new light upon contagious epidemics and epizootics, but there was still much to be learned in this direction. It was obvious that such matters could only be set at rest by prolonged and careful experiments extending over long periods of time. He was aware that such experiments had been recently carried out by the principal and his staff, and that a distinguished German, Professor Schutz, had been working in their laboratory. But there was less activity in forwarding knowledge of such methods in this country than could be desired. Lack of money set aside for such purposes was one of the causes of this. Our own apathy and carelessness were not worthy of the richest country in the world. There was another check upon original research in this country. The so-called Vivisection Act was in his opinion much to be deplored, as great difficulties were thrown in the way of all experimenters, which could only be overcome partially by a few men of known scientific reputation, so that original research into the causes of disease was seriously crippled in this country. Thousands of animals perished from such diseases as anthrax, rabies, diphtheria, consumption, and similar epizootics; man himself fell a victim to many epidemics; and yet such a mistaken policy threw every obstacle in the way of those who would fight the good fight against disease and death, even at times at the imminent risk of their own lives.

SHEFFIELD SCHOOL OF MEDICINE.

INTRODUCTORY LECTURE BY DR. SINCLAIR WHITE.

THE introductory address was delivered at the Firth College on Oct. 3rd.

Dr. White began his lecture by welcoming the new students who were about to enter the Sheffield School of Medicine. They were entering on a career second to none in point of interest, and equalled by few in point of usefulness. Although some other callings offered more tempting prizes, from a pecuniary point of view there were not many in which the risk of failure was less, provided the student possessed a fair amount of industry and health. He pointed out that medical science is a hard taskmaster and has no place for idlers, and that all who wish to attain eminence therein must toil on from point to point, until they have scaled the steep acclivities which lead to wisdom. In such a journey the quality that tells most is that of perseverance. A quick intellect and a retentive memory are valuable endowments; but the race is a long one, and the plodding man succeeds best in the end. Exactitude and thoroughness should be aimed at in all things, because, if a thing be worth doing, it is worth doing well; and the habits formed during student days form the groundwork of the character in after-life. Before another year had arrived a new medical school would be ready for use. This munificent gift they owed to the generosity of his senior colleagues and a liberal public. With the new students, and those who were to follow them, rested the opportunity of making it worthy of the efforts of its founders, and an institution of which their fellow-townsmen would be justly proud.

Dr. White devoted the greater part of his address to the subject of sanitation. As medical officer of health his position entitled him to speak with some degree of authority on the subject, and the occasion seemed a suitable one for urging the claims of sanitary science. After relating briefly the history of sanitation and dwelling on the achievements which hygienic reforms had brought about, he warned his hearers that the struggle against disease was a never-ending one. Lurking in our midst, in spite of all our boasting, there is much preventable disease, while the rapid growth of towns accentuates all the evils incidental to the aggregation of large communities. Hitherto the votaries of sanitary science have been drawn mainly from the medical profession, but the aims of the subject are far too great and good to remain a monopoly of any particular section of the community. Every true-hearted man must feel that to improve the physical, the social, and, indirectly, the moral condition of his fellow-men, to prolong life, and to curtail sickness, with its attendant poverty and misery, are objects worthy of his best efforts; indeed, looked at in this light, the aims of sanitary science are not very different from practical Christianity. Let those who come much in contact with the worst stratum of society reflect whether it is not a useless task to try to improve the social and moral character of these people, unless at the same time something be done to lift them out of the squalor in which they literally grovel. Let us go into their midst, taking heed where we walk, and, after having noted well their homes and surroundings, ask ourselves if it is possible to bring up children with pure minds and healthy morals in such places, where common decency itself is outraged. Without pausing to discuss whether the moral and social degeneracy of these people is the cause or effect of their squalid homes, it is sufficient to note that wherever filthy dwellings, foul air, and insanitary surroundings abound, there we are sure to find social and moral degradation of the people. It is unreasonable to expect pure water from a filthy spring; and sanitation must precede every other gospel if we would rescue these people from the depth of ignorance and depravity into which they have fallen. Give them more light and air in their homes, remove at once from their midst all forms of filth, provide for them paved and clean yards, and teach them that cleanliness is essential to self-respect. Then, but not until then, we may look with some degree of hope for the social and moral improvement in these people. There are a number of subjects connected with public health which still require parliamentary interference, but he who thinks that the mere enactment of sanitary laws will make the people more healthy is doomed to disappointment. The real remedy is to shed more light on God's laws. Men and women must be taught that it lies in their power to live longer, healthier, and happier by observing these laws; that cleanliness is essential to goodness, and even to godliness; that they have a mine of health in fresh air, soap and water; that the best heritage they can bestow on their children is a robust constitution; that intemperance, whether in eating, drinking, or in any other respect, is unmanly, degenerating, and suicidal; that infectious disease can be avoided, and that it is incumbent on them to avoid it by every known means; that as the fountain must be clean before pure water can flow, so the homes and surroundings of the poor must be cleansed before we can expect social purity. The task is an arduous one, but the objects to be attained are worthy of the struggle. The lecturer then alluded to the national and economic value of sanitation, pointing out that every healthy life was of a certain value to the State, and that preventable disease and death were enormous drains on our national wealth. The ever-increasing preponderance of town populations over that of rural districts had a tendency to reduce the physical vigour of the nation, and it was more than ever necessary that the conditions inimical to health and vigour in our large towns should be reduced to a minimum. Reference was made to the great amount of ignorance, even among the educated public, on hygienic matters, and the failure of the Educational Department to teach hygiene in elementary schools. The lecturer concluded by urging on his fellow-townsmen the desirability of forming a sanitary association in the town.

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NEWCASTLE COLLEGE OF MEDICINE.

THE winter session of University of Durham College of Medicine was inaugurated on the 4th inst. in the Wood Memorial Hall. Dr. Heath presided, and the prizes were distributed to successful students by Sir Lowthian Bell, F.R.S. The civic authorities were represented by the Sheriff of Newcastle. The Wood Memorial Hall, it should be explained, does not belong to the Medical College but to the adjacent building of the Mining Engineers. This will make Dr. Heath's opening remarks more intelligible to outsiders. He said "it was probably the last meeting of that description that would take place in that fine hall. That was not because their friends—the mining engineers—were less likely to be generous and liberal to them in the future; but because he hoped before next October to be in a hall of their own, as handsome as that and larger, and, he trusted, more convenient for their purpose. They were, in fact, about to leave their own home and to enter new premises, where they hoped to be as fortunate and successful as they had been in those they had hitherto occupied. They were absolutely engaged in the erection of a new college, which they trusted would be an edifice not unworthy of the city of Newcastle. They proposed to establish in it a new department, which they hoped would be of great public utility, and that was the department of comparative pathology, which was a branch of a much wider subject which had been discussed for the last thirty or forty years, and which had greatly occupied the attention of the medical profession, aiming as it did at searching out the origin of disease and its cause, and destroying it at its root."

THE PROFESSION OF MEDICINE IN JAMAICA.

SOME three years ago the people of Jamaica imported into their island the machinery of popular government, and acquired under the electoral law which was then passed by the local Legislature a very broad scheme of representation. Among other results of the important change thus effected in the constitution of the governing body have been some which seriously affect the standing and prospects of medical practitioners in the colony, and are of special interest to Englishmen who may contemplate making the island the sphere of their work. In order, however, to explain the present position of the medical profession in that part, it is necessary to give a short history of the relation of the State to the art of medicine for some few years past.

Ten years ago the Government awoke to the fact that the sparse and scattered population over which they ruled was very ill-provided with medical attendance. The state of things which then existed there is difficult of realisation by English readers. The case of an English rural district presents no parallel. The few medical men who had established themselves in the island were for the most part settled on the coast, and over a large proportion of the country districts it would happen that the nearest doctor would reside twenty or thirty miles away. The natural and obvious consequence was that the health of the community was sadly neglected. Private ignorance, if we may use the term, kept the rural population undefended and an easy prey to all the maladies that, in a tropical country, attend upon insanitary conditions, and official ignorance of the state of the public health in parts remote from the capital paralysed the efforts of the Government to cope with preventable disease. It was natural and wise that in such circumstances the Government should adopt a scheme for promoting the settlement among the rural population of a sufficient number of medical men. The earliest efforts made in this direction need not now detain us. Suffice it to say that they were not conspicuously successful, and in 1871 Deputy-Surgeon-General Mosse, C.B., of the Army Medical Staff, was appointed chief of the local medical department, and entrusted with the work of reorganisation. The scheme adopted by the Government under the advice of this distinguished officer was, broadly, as follows:—

English medical practitioners were invited to settle in the colony on the footing of members of the Colonial Medical Service. Their duties in that capacity would embrace "the medical charge of paupers on the parochial rolls, and of any hospital, almshouse, or prison in their districts"; they would be further required "to attend upon the constabulary; to exercise a general control and superintendence of the Government dispensaries of their districts; to vaccinate; and to advise the Government and parochial authorities on questions affecting the public health." These duties, though multifarious, were not too onerous to permit of simultaneous attention to private practice. Indeed, in the scheme put forward by the Government the private practice figured as the chief field of the medical man's labour and the principal source of his emoluments. The stipends offered by the Government were fixed at amounts varying from £150 to £250 a year; but, at the same time, it was stated that the value of the private practice would vary from £150 to £600, and the exact relation in which the medical man was to stand both to the Government and the population was accurately defined in the following terms:—"The district medical service of Jamaica is, in fact, to be regarded as a system in aid, the object of which is to diffuse medical assistance throughout the several parishes by inducing practitioners to locate themselves in districts which without some contribution from the Government would be altogether destitute of aid and advice, and the pay received by the medical officer from Government may be regarded as a retainer for professional services to be given as a private practitioner within the area in which he resides."

Such in its main outlines was the scheme of 1881. There were details, to which it is not necessary to refer particularly, conceived in the interest of the medical staff, which would of course suggest themselves to the mind of an old army medical administrator like Dr. Mosse. Two of these minor points, however, should be mentioned in passing, as they have a particular bearing on the controversy which has unfortunately arisen. These were the exercise of Government control over the local practitioner exclusively through the superintending medical officer; himself of course a medical practitioner of eminence; and the provision of a small pension upon retirement.

This scheme obtained the professional popularity which it deserved. A sufficient staff of thoroughly capable medical men was secured; the country was portioned out into districts measuring about twelve or fifteen miles across, so that medical aid, if not exactly brought to every door, was at least brought within reach; and, what is only less important, every district was provided with its own officer of health; while the several officers, on their part, were made responsible for districts large enough no doubt to require constant attention, but not too large to permit of their doing justice to them.

There was, however, one weak point in this generally excellent scheme. The duties of the medical officer had been somewhat loosely defined, and there thus arose the risk of these duties growing, little by little, more and more onerous without any corresponding increase in the medical man's emoluments, so as in the end to interfere seriously with the private practice which he had been encouraged to look for—which, indeed, originally afforded the principal reason for locating him in his district. This state of things has actually occurred. In some measure the result has come about spontaneously, as one may say. It is the fate of public officers in all parts of the civilised world to be called upon to furnish the Government with multifarious returns, and it is nowise surprising that there should be a gradual extension of the demand for returns as time wears on. This of itself has attained proportions in Jamaica which have long made the members of the medical profession there feel it to be an irksome and even oppressive task. Yet at its worst this is a comparatively small matter, and it is one which might be expected sooner or later to be satisfactorily arranged. The more serious ground of complaint has arisen upon the recent action of the Legislature in connexion with a reform of the Poor Law.

It is easy to understand that the relief of the poor is a matter of some considerable importance in Jamaica at the present time. The island, like other countries which depend for their prosperity in any considerable degree upon the sugar market, has suffered seriously from the depression of late years. Quite recently, also, there has been a falling off in the demand for labourers for the Panama Canal, and that has closed an important channel for the relief of destitution. Still, Jamaica is not nearly so badly off as some other of the West Indian Colonies. It has the capital advantage of

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possessing an assortment of staples, and cannot therefore be reduced to extremity by the failure of one. Thus it has happened that growth in the fruit and coffee trades, for example, has done much of late to compensate the community for the shrinkage of the trade in products of the sugar-cane. We in England, however, have good reason to know that compensations of this kind go hand-in-hand with much individual and class suffering. The community, as a whole, is much more versatile than its members, whether taken as individuals or as groups; and thus it happens that the hardship falls upon one part, while the compensation alights on another part, of the body politic. The remedy, so far as legislation can afford a remedy, is found in distributing the burden of poor relief as widely as possible over the community. But this principle the Jamaican Legislature does not seem to have adequately grasped. By a statute recently passed—Law 6 of the year 1886—the Poor Law of the island was remodelled, and a large and very undue proportion of the additional burden was cast without any valuable consideration upon the shoulders of the medical staff. Thus, by Section 29 of this statute, the district medical officer is required—(1) To make a monthly return of the sick poor to the parochial board; (2) to examine in a prescribed manner any person in the receipt of poor relief or any applicant for poor relief whom he is by the inspector of the poor requested to examine; (3) to give to the parochial board and to the inspector, when required, any "reasonable information" respecting paupers under his care; (4) to make such written reports as the central or the parochial board shall require relative to any sickness prevalent among the poor of his district; (5) to attend the parochial board meeting when summoned; and (6) to give written certificates, when required, to the parochial board or inspector of the nature of any pauper's illness.

Some of these duties, such as examining paupers and attending parochial meetings, are very onerous, involving, it may be, considerable travelling, in addition to the expenditure of time and energy upon the work itself. Yet all these are added to the duties heretofore discharged by the medical staff on the strength of the Government "retainer." But the time has assuredly gone by when this term can be applied to the allowance which is no longer even a liberal remuneration for the duties imposed. But while, on the one hand, the Government has derogated thus seriously from its own grant of a retainer, it has, on the other hand, pressed the theory of a retainer to the furthest point—so far, at least, as new members of the service are concerned—by binding them to a prescribed scale of fees. Such interference with individual freedom of contract, if justifiable at all, can be justified only on the ground of a special right to dispose of the services of medical men derived from the Government subsidy, and when that subsidy has been converted by the annexation of onerous conditions into a bare equivalent, the interference is convicted at once of being destitute of even the shadow of a just and sound foundation. Where in matters of so great moment the Government has shown such an absence of faculty to appreciate the equities of the position, it is not surprising to find that they have also withdrawn the advantages, which were granted in connexion with the earlier appointments, of a retiring pension and the mediation of a chief medical officer between the Government departments and the district medical man. These things add considerably to the dissatisfaction of the medical profession in Jamaica, and they make the prospect a very undesirable one for the men now and hereafter joining the staff. Altogether it may be admitted that the Jamaican Legislature displays a certain zeal for economy in the public service, but it is not "according to knowledge," and the result of the very inequitable apportionment of burdens to the medical practitioners in the colony can hardly fail to seriously affect the efficiency of the profession there.

SOCIETY FOR THE STUDY OF INEBRIETY.

A QUARTERLY meeting of the Society for the Study of Inebriety was held in the rooms of the Medical Society of London on Tuesday last, the president, Dr. Norman Kerr, in the chair.

Dr. E. P. Thwing, New York, read a paper on American Life as related to Inebriety, in the course of which he stated that the disease of inebriety, apart from the vice of drunkenness, was more prevalent in America than in England, was more rapidly developed, and attained to a higher degree of intensity. Americans could not stand liquor as Englishmen could, and the same greater susceptibility to the action of other narcotics prevailed. Turks, Hollanders, and Chinese could use tobacco and opium without impairing their eyesight, but Americans suffered in heart and brain, eyes, teeth, muscle, and nerve. This heightened American nervous susceptibility was the result of combined physical, psychic, political, and social conditions. For example, there were on that continent extreme thermal changes, he having known a leap in twenty-four hours from torrid heat to frosty chill. Political campaigns, with their brain pressure, contributed largely to inebriety. Over-pressure in education, the emulous rivalries of business life, speculation, and the national headlong rush through life, all acted powerfully in the production of the enormous development of the disease of inebriety in the United States.

The President narrated several cases observed by him in America twenty years ago, illustrative and confirmatory of Dr. Thwing's propositions.

Mr. Walter Kennaway treated of Asylums for inebriates in New Zealand, pointing out that, when the inebriate's brain was so sodden and saturated with poison that it had lost all sight of moral perspective, there was but one rational mode of cure. There must be deprivation of freedom and removal from present surroundings to rid the system of the poison and allow the will to recover its tone.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—The letter in your issue of last week from Dr. McLiesh ought not be allowed to pass without the presentation to your readers of the other side of the question of compulsory notification of disease.

In Reading, a borough until lately with a population of nearly 50,000, and recently enlarged to include 60,000, compulsory notification has been enforced for six years, with, according to my experience, the cheerful acquiescence and hearty co-operation of not only the medical practitioners, but also of the laity within the municipal jurisdiction. Undoubtedly the successful institution of this necessary safeguard, its good reception by practitioners and the public, and its subsequent smooth working have been mainly due to the tact and temper of our lamented colleague and friend, the late Dr. Shea, medical officer of health, who with rare professional qualifications for his official position combined unusual powers of conciliation and persuasion. He, appreciating the difficulties likely to arise from the delicate and confidential relations subsisting between practitioner and patient, wisely imposed a *dual* responsibility, by which, under a penalty of ten pounds, notification of infectious disease has to be made both by the medical attendant *and householder*, the former receiving a fee from the sanitary authority for his certificate. I apprehend from Dr. McLiesh's letter that the conditions at Bolton are different, in that, instead of the responsibility of notification being mutually shared, the householder is entirely relieved, and the whole onus thrown on the medical attendant. Herein lies the obstacle to the smooth and effectual working of the system at Bolton. Nor would the difficulty be obviated by throwing the reponsibility on the householder alone. In the former case the doctor is placed in the invidious position of an informer, while in the latter the temptation is presented, through prejudice, to dispense with medical supervision, and conceal the existence of infectious disease. The success of compulsory notification of infectious disease in Reading, is, I believe, chiefly due to this plan of imposing a double obligation respecting it, and, wherever the system may be adopted, I would urge that this condition is essential to its favourable reception and the avoidance of friction. Something, of course, depends on the relations existing between the practitioners of the district and the medical officer of health, and these will be pleasanter if he devote his whole time to his duties and do not compete with them in private practice. In conclusion, I believe I am warranted in asserting that, subject to the condition of double obligation, the medical profession in Reading emphatically approve of compulsory notification as being greatly to the public advantage. I am, Sirs, yours faithfully,

Reading, Oct. 3rd, 1887. J. HOPKINS WALTERS.

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THE LANCET.

LONDON. SATURDAY, OCTOBER 8, 1887.

WE are quite disposed to agree with a remark of Dr. HANDFIELD JONES at the opening of St. Mary's School on Monday, that the Introductory Lecture is a thing to be maintained and approved. He was speaking with special reference to Mr. CRITCHETT'S address. But, without any special reference, it seems fit that young men entering the great Temple of Medicine, and preparing to devote their life in its service, should be reminded of their high calling and of all that is needed to constitute medical character and to enable them efficiently to do medical work. Life is prosaic enough, and medical education in its details is apt to be somewhat dry; so that it is a kindly thing in one who has the power or the right to utter words of encouragement and inspiration, and to point out how the most prosaic of duties may be made interesting, and the driest of studies a means of enjoyment. There are students in whom the sense of duty or the love of work is strong enough to make them independent of such encouragement, and there may be others on whom all such influences are thrown away. Neither of these classes can be injured by an Introductory Lecture; and certainly neither of them constitutes the bulk of medical students, with whom a word fitly spoken on an eventful day in their history is likely to have very lasting consequences. No doubt the behaviour of some audiences at the Introductory is irreverent and disrespectful. So is the behaviour of the classes of many teachers; but this is often the fault of the speaker, and depends on the absence of that subtle quality of authority which is itself a gift, and which makes the class rooms of some men as decorous as a church. The individual addresses of this year embraced as usual a great variety of subjects. They should all be read by those who would learn the great fact that medicine is a large, many-sided subject, linking together individualism and society, body and mind, nature and art, man and the whole inferior creation. It would be invidious to make distinctions when each contained so much. Some of the lecturers were specialists of eminence, but their specialism was not obtruded. One could scarcely have told that Dr. CROCKER was a distinguished dermatologist, so broad was the basis of his eulogy of University College, and of such universal application was his advice to students to trust for reputation and success only to such work as would stand the judgment of men of their own profession and carry their approval, and his definition of quacks and advertisers of all sorts, whether in the profession or outside it. Mr. CRITCHETT, indeed, in his admirable address, did betray his affection both for his specialty and for one who was one of its greatest ornaments; but he did so in terms of perfect taste and much interest, and, taken as a whole, his account of the medical art and the means by which it is to be learnt and practised, was wonderfully proportioned and complete. Nor should we omit one word of remark on the silence and attention with which it was listened to. Dr. STURGES, in common with several other lecturers, discussed the burning question of a degree for London students, giving it the larger form of a true Teaching University for London. As might have been anticipated, his treatment of the subject was critical and discriminating, and may well be studied by all who are interested in this pressing matter. Equally worthy of attention were his observations on the examining bodies, and their supervision by the Medical Council. We hope he is not too sanguine of the good to be achieved by the Inspectors created by the new Act who have an enormous work to do in a very short time. At St. George's, Mr. DENT discoursed on a well-worn, but mysterious subject, the Nature and Significance of Pain, and he contrived to bring his scientific thoughts on the subject to a most practical conclusion. He made mincemeat of those who sit down in despair, and regard pain as inevitable and incurable. He magnified the discoveries which abolish pain for great surgical purposes. But beyond this he declared that health was "indeed a most marketable commodity," and that a shilling a day would procure for thousands much immunity from pain. Such cases as those of joint and spinal disease, of incipient phthisis, he maintained, might be relieved and saved if the rich and the strong would come to their help, and to the support of those medical charities which contemplate their relief. Mr. REID'S lecture at St. Thomas's was one of the best in its suggestions as to the course of medical education, and in its history of anatomical teaching in particular. Sir ANDREW CLARK presided, in the unavoidable and regretted absence of Mr. JONATHAN HUTCHINSON, at the dinner of the London Hospital School, inaugurating the splendid new buildings, which, as Sir ANDREW said, do so much credit to all concerned — the architect, the medical staff, and the house committee. Sir ANDREW descanted with characteristic eloquence and with justifiable pride on the history and work of the school, and on the proofs on every side of its vigour and capacity to adapt itself to new conditions. In common with Mr. PEARCE GOULD at the Middlesex, he boasted that his hospital was one of the earliest to use hospital cases for purposes of clinical teaching. We may leave two such good-natured combatants to say which was first. Both were doubtless early in the field. We want more information about the methods of medical teaching in London a hundred and fifty years ago. For most men who did not go to the Scotch or the foreign universities it doubtless consisted chiefly of apprenticeship with a barber-surgeon. Very different is the case of the students of to-day in London, who have a field of observation and study unequalled in the empire, and whose teachers vie with each other in demonstrating the last improvements in art and the last discoveries in science. If the students of to-day do not learn their profession, and if they fail to practise it with dignity and efficiency, it will be their own fault.

WHETHER a lunatic be criminal—as is quite possible—or a criminal be lunatic, it is undoubtedly undesirable that the leaven of that terrible compound, criminality and lunacy, should be allowed to permeate the lunatic population which has not already been contaminated by criminality. It is important to distinguish between criminality, or the potentiality of crime, and crime itself. Much nonsense has been, and still is, talked by eminent scientists who do not make

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this distinction, and consequently fail to discriminate between overt acts of law-breaking and the underlying state of mind which frequently, though by no means always, finds expression in crime. A "nature," or "mental constitution," or "moral character"—call it what you please—may be criminal and never bear fruit in overt acts against the moral or legal code of society. We are speaking of what religionists designate "the depravity of human nature." Of that science can have no knowledge, except as a fault of development. What we mean is a bias towards the gratification of passions and desires on purely selfish impulses, and in defiance of gregarious or social rules and considerations. We say that this bias may exist in a very high degree, and yet be held in abeyance by motives of interest or fear; or perhaps there may be disabilities of a mental sort—for example, lack of will power and purpose or downright stupidity—which prevent this criminality from bearing fruit in crime. What we want to make clear is that this potentially criminal selfishness, which is the germ of crime, is not *morbid*, and has nothing whatever to do with "mental disease" properly so-called; and those who confound the two things do discredit to common sense and detract from the *social* value of medical science by making it unpractical. We deny that it is scientific to class all departures from what is conceived to be the normal type of sane humanity as insane. There are many variations, whether of insufficiency or excess in development, which make men either "brutal" or "angelic" in their natures, that are not in any scientific sense faults or unsound. Monsters, both giants and dwarfs, in "mind" so-called, as well as in body, may exist without disease. The cannibal or earthman is not a lunatic, nor is the highly-developed theosophist or spiritualist necessarily insane. Meanwhile it is possible that the subject of an exceptionally variant nature may be both potentially criminal and insane, and when these two qualities coexist in the same individual, the compound is not simply noxious, but pestilent. It seems to put on specially vicious characteristics, and to originate a poisonous principle by which the weak nature with which it is brought in contact may be contaminated and debased. A little leaven leaveneth the whole lump, and it is inimical to the well-being of society that the criminally insane, or the insanely criminal, should be allowed to go at large, even though they may chance to be what is termed "harmless."

Provision ought unquestionably to be made for the safe custody of criminal lunatics of all classes apart from the non-criminal insane. It is in the last degree impolitic to incur the risk of creating the pestilent compound of potential criminality and mental unsoundness, to which we have just alluded, by discharging prisoners who have either become insane since the commission of the crime for which they were imprisoned, or were of unsound mind previously, into the ordinary asylums of the country. It is no true economy to spare the expense of providing special accommodation for "criminal lunatics," at the contingent cost of that contamination which must ensue when the weakly-minded, and therefore presumably susceptible, asylum population is exposed to the influence of natures which are both criminal and insane. It is to persons of this class that such suggestive remarks are made in the wards of asylums as—"If you were to kill him they couldn't do anything to you, because you are insane," or "The knives are blunted that you may not cut anyone's throat with them." Professor SHEPPARD, of King's College, long ago drew attention to the large proportion of persons in whom there is a minimum of insanity with a maximum of vice or criminality. It is a fact that much mischief is being done by the leaven of criminality in the insane population, and the matter is one to which the attention of our legislators ought to be directed without longer delay.

THE anti-vaccinationists of Leicester are greatly discomfited. The simple facts disclosed by our Commissioner, that vaccination and revaccination are the front line of defence in Leicester, as in every other place, against a disease which apart from vaccination mocks the most perfect sanitation, have acted like a bombshell on those who claim the liberty to have small-pox and to give it to others. Mr. BIGGS especially seems to wince under the publication of facts which so convict him of inaccuracy as a historian when he penned his famous sentence that no fewer than twenty-four importations had been stamped out in Leicester "by *sanitary measures alone*," omitting the information to the public that all officials were revaccinated, and that persons exposed to the patients were at once revaccinated by the Leicester authorities. Other writers of Mr. BIGGS's school make no attempt to invalidate our Commissioner's statement; Mr. BIGGS does. But he leaves the facts essentially where our Commissioner left them. He does not deny that the officials generally are protected by vaccination and revaccination, though he has been told by someone that the matron is an exception. We shall require some explicit particulars of the matron's case before attaching any importance to Mr. BIGGS's alleged exception, which does not invalidate the rule of practice at Leicester. Even Mr. BIGGS does not deny that the matron is vaccinated. She may even have been revaccinated, too. But she is not an unprotected person, like the hapless babies that to the number of 2000 a year are accumulating in Leicester. We have, by the way, before us another proof of the carelessness of Mr. BIGGS's statements. In his letter to the press Mr. BIGGS allowed himself to say, and to glory in the supposed fact, that there were only thirty-nine vaccinations by private practitioners in Leicester in 1886. The argument was that the intelligence of Leicester was losing its faith in vaccination. A return by the clerk to the guardians states explicitly in a note that of the 598 vaccinations in Leicester in 1886, 344 were done by private practitioners. Mr. BIGGS quotes the late medical officer of health as saying that he would undertake to stamp out small-pox without recourse to vaccination. He does not contradict the statement that this gentleman is revaccinated. He even tells us that he is an ardent advocate of vaccination. We leave Mr. BIGGS any consolation he can get out of the facts concerning the late medical officer of health's speculative views—a protected person and an ardent advocate of vaccination. We attach more importance to his example of guarding himself by vaccination and revaccination. Does the present medical officer of health help him? Let the public remember that our Commissioner's statements are

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based on information received from the medical officers of health, past and present, who know what is done better than does Mr. BIGGS, and that Mr. BIGGS himself does not pretend to adduce any contradiction from them of our main statements. The last report of the medical officer of health, published since our Commissioner's visit, and alluding to the Commissioner's visit, contains no contradiction, but a very practical recognition of his statements, with an actual illustration of the practice of revaccinating exposed persons. Mr. BIGGS says that all our statements and those of our Commissioner are based on the admission of a tramp and the revaccination of two paupers. Our Commissioner never mentioned the two paupers. Our proposition is that exposed persons, including the sanitary, medical, and nursing staff, and friends of the patients, are protected by vaccination and revaccination, and Mr. BIGGS does nothing to invalidate this statement. In another sentence of his letter to *The Times* he seems to attribute to Dr. CORY the belief that the safety of the 140,000 persons in Leicester depends upon the casual and perfunctory vaccination of two paupers. Neither Dr. CORY nor we hold any such opinion. Such safety as they have is due to vaccination primarily, but the population of Leicester are in a state of great danger, to be tested whenever they shall be exposed to the disease—as may happen in any casual train or place, or whenever the cordon of vaccinated persons is withdrawn in Leicester. It is nothing wonderful that when small-pox is kept out of their way people do not take it. Neither let Mr. BIGGS delude himself with the idea that we trust to vaccination alone. The great majority of the present generation are vaccinated. Many of them, as he says, take small-pox, but so mildly that only 9·37 per cent. of such die of the disease, against 45·2 per cent. of the unvaccinated. We trust to revaccination, and ask Mr. BIGGS to explain how it is that in the small-pox hospital at Highgate for the last fifty years the officials of the hospital have, thanks to revaccination, enjoyed absolute immunity, with the one exception of a temporary gardener, who, *refusing to be revaccinated*, took small-pox and died. There is no answer to such facts. Are we to be told of the things which follow vaccination? What about the things that follow small-pox? There is no proportion between the slight risks of vaccination and the certain risks of small-pox, as every intelligent inquirer must admit.

WE publish in another part of this impression an account of some important changes that have recently been made in the conditions under which the profession of medicine is exercised in Jamaica. The matter is one which does not by any means exclusively concern practitioners domiciled in the island. For many years past Jamaica has drawn its medical recruits principally from our schools, and the alterations to which we now draw attention, involving as they do the loss to the profession there of very substantial and very considerable advantages, mean, among other things, the closing of a possible career to many of our more promising young men. This is to be regretted on all hands. It is indeed true that the conditions of practice in the island may be insufficiently attractive now to the class of men who have heretofore looked in that direction, though it will still afford a refuge for those who are less qualified for the fiercer competitions of professional life. The better prizes go to the better men as a rule, and the lesser prizes to those of less desert. So far as it is a mere question of a market for professional services the difference is not great. If the more ambitious do not crowd into it, there is more scope for the less ambitious who do; and seeing that we are bound to have various degrees of attainment among the men who take medical qualifications, it is not altogether displeasing to find that there are consolations for the inferior men as well as rewards for the more brilliant. But this is the narrowest possible view. When we include a broader horizon and consider either the public interest of the colony itself, or that still larger public interest which is represented by the advance of scientific medicine, we find abundant cause for regret. The short facts are that the population of Jamaica is too sparse and poor over a large portion of the island to support a sufficient number of medical men. To meet this evil the Government has divided the country into medical districts, and, by means of subventions, has provided in every district the means of living for a local medical man. This practitioner has received an official appointment to which a small salary has been attached, confessedly by way of a retainer, his official duties being originally very light, and his principal task that of building up a private practice in the common interest of himself and the population specially confided to his care. These official duties have, however, grown gradually more and more onerous; and quite recently, in connexion with a reform of the Poor Law, the Legislature has cast so much unremunerated work upon the hands of its district medical officers as to threaten seriously to interfere with their private practice. It is abundantly plain that such a policy, both by its direct and its indirect effects, can only injure the Jamaican community. Even the work of poor relief, when arbitrarily and unjustly imposed upon unwilling hands, is apt, we fear, to be grudgingly performed. Still that, no doubt, will be done. What is far more serious is that the work of tending the sick who are not also indigent must be more or less neglected. The philanthropic work of ministering to the wants of the "disinherited" is of itself a noble task, and one eminently fit to be the care of Government and singularly congenial to professors of the healing art. But it is obvious that in a country circumstanced as is Jamaica there are claims paramount even to those of the sick pauper class—the claims, namely, of the sick, without distinction of social status. In sacrificing these larger claims to the smaller the Legislature of Jamaica is, in our judgment, committing a grave mistake, which we trust they will have the wisdom to discover and the candour to acknowledge in the practical way of rectification.

Of the injustice involved in the casting of public burdens on to the shoulders of one class we do not speak at length. The point is too plain to need elucidation, and where the sources of indignation lie so near the surface it is pleasanter at least, perhaps even safer, to pass with a light and hurrying tread. We rather choose to remark, in conclusion, that the indirect loss to Jamaica of the more capable men whom a liberal policy would attract to her shores is a heavy price to pay for the petrifogging economies of the new Poor Law. Isolated and daily face to face with grave medical problems, the district medical practitioner, to

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be fully equal to his responsibilities, should be chosen from among the most accomplished of his class. To such the field for practical and scientific achievement is illimitable. But opportunities are thrown away upon inferior men, and from this class the medical staff of Jamaica will assuredly be recruited unless by a return to more liberal and more equitable administration the Colonial Government succeeds in re-establishing good relations with the local medical profession.

Annotations.

"Ne quid nimis."

THE LATE MR. RICHARD QUAIN AND UNIVERSITY COLLEGE.

THE late eminent surgeon by his will, dated Aug. 5th, 1887, has bequeathed almost the whole of his fortune, amounting to about £75,000, to University College, London, subject to certain annuities to family connexions. The trustees—Lord Justice Fry, Sir William Jenner, the Warden of Merton, and Sir George Young—"are to apply the annual income in the promotion and encouragement, in connexion with University College, London, of general education in modern languages (especially the English language and composition in that language) and in natural science." It has been suggested by contemporaries that this affords an excellent opportunity for endowing London with a Teaching University, but it is obvious that the testator intended his munificent gift for University College, and for that College only. A large discretion is given to the trustees, but there can be no doubt that the wishes of Mr. Quain will be scrupulously carried out; and his suggestions for the benefit of the teacher and the pupil, "paying those who teach by salaries or other payments, as by endowing professorships," and "by pecuniary aid to those who are being taught, as by endowing scholarships and fellowships," are sure to have precedence in consideration.

DISCUSSION ON BILIARY CALCULUS AT THE MEXICAN ACADEMY.

AT a recent session of the Mexican Academy of Medicine, Señor Lavista reported an operation which he had performed on a case of enlarged and suppurating gall-bladder containing a considerable quantity of biliary calculi. The opening was made parallel to the border of the ribs, at a distance of two centimetres below it. The gall-bladder was laid open after being stitched to the abdominal parietes. The walls were found to be coated by a pseudo-membranous deposit of fibrin, in which the calculi were encysted. The cavity was scraped out, and it was then found to present three diverticula, one directed downwards, one towards the epigastrium, and another backwards, extending as far as the posterior border of the liver. Through this last the inner surfaces of the ninth, tenth, and eleventh ribs could be easily reached. Two drainage tubes were inserted into the wound and antiseptic dressing applied. At another session of the Academy a discussion arose out of the papers of Señor Lavista and Dr. Morales Pereira (see THE LANCET, October 1st, 1887) regarding the medicinal treatment of gall-stones, which, according to the President, Dr. Soriano, is an affection peculiarly common in Mexico, and for which he had been in the habit of using Durand's mixture (sulphuric ether and turpentine), but for which *simonillo* and *doradilla* (cotaraoh) enjoyed a considerable reputation. Señor Penafiel said that he had had no experience of the plants mentioned, but that he had used another Mexican plant, the *Kalea sacachiche*, employed with great benefit in the case of an inhabitant of Pachuca who had suffered from biliary calculus. This drug had caused the expulsion of a large number of gall-stones and cured the patient completely. Dr. Soriano stated that a medical friend who suffered frequently from symptoms of hepatic calculi, which sometimes set up true hepatitis, having tried various methods of treatment, had latterly adopted that of the *simonillo*, which had caused him to pass several calculi, since which time he had been quite well. He had, however, continued to take the drug. On being interrogated as to the manner in which the *Kalea sacachiche* acted on the gall-stones, whether by disintegration or solution, Señor Penafiel replied that it was impossible to say, the patient had passed two or three tablespoonfuls of pear-shaped grains, which were red by transmitted light and violet by reflected light. After passing these the patient recovered completely, and had had no return. In another case he had seen, the calculi were large and cigar-shaped, and were passed during, and apparently on account of anæsthesia.

PROFESSOR VON LANGENBECK.

WE regret to record the death on the 30th ult., in the seventy-seventh year of his age, of the celebrated German surgeon, Professor von Langenbeck. The following is a brief summary of the career of our late illustrious *confrère*:—

Bernhard Rudolph Konrad von Langenbeck was born in 1810 at Horneburg. He studied at Göttingen, and graduated in 1835 with the dissertation, "De Retinæ Structuræ Penitiore." Soon after he published his essay on the "Origin of Venous Cancer and the Possibility of Transferring Cancer from Man to Animals." He then became Extraordinary Professor in Göttingen, and wrote an essay on "Persistent Spasm of the Fingers and the Application of Division of Muscle and Tendon in its Treatment." He then busied himself with the questions of "Stammering and the Employment of Myotomy in Defects of Speech arising from Spasm," and the "Immediate Union of Wounds by Exclusion of Air." In 1842 he became Professor of Surgery and Director of the Friedrichs Hospital. In 1848 he was Director-General of the army of the Duchies against Denmark; and in 1847, after Dieffenbach's death, he was appointed Director of the Clinical Institute for Surgery and Ophthalmic Surgery. Amongst other essays of minor importance are the following: "Subcutaneous Osteotomy"; "The Permanent Warm Water Bath in the Treatment of Large Wounds, especially of the Stumps after Amputation"; "On the Extirpation of Interstitial Uterine Fibroids"; "The Osteoplastic Resection of the Upper Jaw"; "Essays on the Surgical Pathology of Veins"; "On Cleft Palate"; "On Resection of the Ankle in Gunshot Wounds"; "On Gunshot Wounds of the Joints"; "On the Terminations of Resection Operations in War"; "On Extirpation of the Pharynx"; "On Gummatous Tumours." Professor Langenbeck has of late years lived in Wiesbaden.

SMOKE NUISANCE ABATEMENT.

COPIOUS details are given in the Chief Commissioner's Report of the work of the Metropolitan Police during 1886 under the Smoke Abatement Acts. The total number of cases in which proceedings have been taken has shown a gradual falling off for some years past, and the record of 1886 is marked by the same feature. This is probably in large measure due to the continually increasing use of smokeless fuel, such as gas and gas coke, or of hydraulic power. In this way the progress of invention is doing much more to rid the metropolis of the nuisance of its smoke than the Abatement Acts. Indeed, it would seem as if these statutes, weak as they undoubtedly are, have never yet had a fair chance, for, again, the smallness and irregularity of the fines inflicted where convictions have been obtained are made the subject of remark by the Com-

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missioners. The average fine was in 1886 smaller even than in the previous year, and amounted only to £1 17*s.* 5*d.* Even making a liberal allowance for costs, this does not seem to be a large price to pay for the privilege of persistently annoying a populous neighbourhood. It were much to be desired that the metropolitan magistrates took more to heart considerations of the public health. Bakers and confectioners are very useful people in their way, and deserving of all respect; but we are at a loss to understand why, when by outrageously unscientific methods of manufacture they bring themselves within the magisterial jurisdiction, they should be let off easily. No doubt their services are highly necessary to the public weal, and for that very reason they should be the more carefully taught to consider the public weal at every point in their operations.

INTESTINAL SURGERY.

A REMARKABLE paper on Intestinal Surgery was read at the General Surgical Section of the International Medical Congress at Washington on Sept. 5th by Dr. N. Senn, a synopsis of which is given on another page of our present issue. It is interesting to learn thus early a new method of dealing with perforating gunshot wounds of the intestine by omental grafting, with and without scarification of the serous surfaces. This he calls—(1) the "adhesion" experiment; (2) ileo-colostomy in intussusception or intestinal obstruction, by opening the bowel above and below and bringing the artificial openings in apposition with decalcified bone plates; (3) enterorrhaphy, or the rubber ring method without the omental flap, when excision of bowel is necessary for gangrene—as in hernia, for example. This mode of dealing with the bowel consists in bringing the healthy ends of the intestinal tube together by means of a circular india-rubber ferrule or tube, made easily out of a piece of thin Martin's rubber bandage about an inch long, inserted into each end of the bowel, and the serous surfaces sewn together round this tube on the outside. Dr. Senn claims for the operation that in dogs it is a matter of little consequence whether three inches or three feet of intestine are removed. His results have been obtained chiefly on dogs, and the specimens shewn at the Congress by him were, we are informed, handed over by him to Mr. H. W. Freeman of Bath, who has brought them with him to Europe. These specimens were procured from dogs killed at the end of a fortnight, and show a perfect union in each case. The omental grafting effectually prevents all escape from the intestine into the peritoneal cavity. After forty-eight hours' application the omentum is placed as a band around the gut that has been perforated, and the ends sewn together only to the mesentery. Mr. Freeman writes to us that he will be happy to show these specimens.

GOVERNMENT COPYRIGHT.

A TREASURY Minute has just been published defining the Government claim of copyright in official publications. The official view is that literary or *quasi*-literary matter—e.g., the reports of the *Challenger* expedition, the Rolls publications, and other similar works, also charts and Ordnance maps—should be made the subject of a Government monopoly of reproduction. The reasoning by which this conclusion is supported upon public grounds is interesting and specious, if not quite convincing. "Unless," say the Lords of the Treasury, "copyright is enforced, cheap copies of the works or of the popular portion of them, can be produced by private publishers, who reap the profit at the expense of the taxpayer. And as such works are in any case a burden on the taxpayer, the greater the burden the fewer works can the Government, with justice to the taxpayer, undertake." Whence the conclusion is drawn that in the case of works of this class copyright should be enforced "in the interests of the taxpayer and of literature and science." It may freely be admitted that as a mere matter of arithmetic the proposition thus generalised is unassailable. But the arithmetical view of this subject is a very incomplete one, and it will, we think, be a matter of much regret to all who have the interests of science at heart that this very mercenary view should have prevailed. The publication of the "most popular parts" of a scientific report means the publication of the short result and summary of the whole, and there can, we take it, be no question that in the interests of science such publications are greatly to be desired. If the authentic statement of a generally interesting fact is denied except on the condition of purchase with it of a mass of detail and of evidence which the majority of readers have neither time nor inclination to digest, the sure result will be that paraphrase will take the place of republication. In that case the Treasury will probably realise—well, just what it would have realised from the sale of the original work in any case; and science will lose the benefit of the accuracy in statement which is the very crown and efflorescence of scientific writing. While, therefore, the new system appears to us well calculated to sacrifice the benefits of unrestricted publication, it seems as ill-adapted to secure the pecuniary advantages which afford its theoretical justification. Even were this not so, we should feel bound to protest against the injury done to science by the adoption at the Treasury of the maxims of the shop; as it is, we feel that our protest need be guarded by no saving of the illusory interests of the taxpayer to which "my Lords" appeal.

PHYSIOLOGY OF SHORTHAND.

A PAPER on the Physiology of Shorthand Writing, by Dr. Gowers, excited considerable interest at the recent Shorthand Congress. Shorthand is only a variety of writing, and the paper was therefore mainly occupied with an account of the cerebral physiology of writing. The chief points in the physiology of the brain relating to the act of writing were first described. It was explained that the arm-centre of the cortex is merely concerned in producing the movements for the written symbols, and that the word-processes are arranged in the motor speech-centre on the left side, as is shown by the fact that disease of this centre abolishes the power of writing as well as of speech. Thus in the work of the reporter, as far as is at present known, there is no direct transfer of the nerve-processes from the auditory to the arm-centre; they must go through the motor speech-centre. The fact that it is the activity of the latter centre which excites the arm-centre and the movements for the written symbols, affords a strong theoretical justification for the phonetic element in shorthand, in which the written symbols are uniform for the same speech-processes. The non-phonetic systems, in so far as they do not adopt the phonetic principle, proceed on a resymbolising of the ordinary longhand signs; there are two steps to the process, whereas in the phonetic systems the symbols replace the longhand signs, and are placed at once on their permanent footing in direct relation to the speech-processes. No doubt, however, the practical difference is less than appears from theoretical considerations, because in all systems the shorthand symbols ultimately stand in very close relation to the word processes, and are produced without any consciousness of intermediate steps. It was pointed out that the term "phonography," applied to the "phonetic shorthand," is not strictly accurate, since it is the speech-process, and not the auditory impression, that immediately excites, and is symbolised by, the written sign. It is really "speech-writing," not "sound-writing." The error is not great, however, because the speech-process and

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the auditory process are in perfect correspondence. The curious fact was mentioned that many persons, perhaps all persons, read by means of the motor speech-centre, so that if this is destroyed the power of reading is lost, and illiterate persons actually move the lips in reading. This affords another justification for the phonetic principle—i.e., for the uniformity of relation between the written symbols and the motor processes. The paper concluded with some remarks on the muscular mechanism of writing.

SMALL-POX AND VACCINATION.

MR. WILLIAM TEBB, well-known as an anti-vaccinationist, quotes, in a letter to *The Times*, a portion of an article which appeared in our columns over sixteen years ago, and uses it to help him in his argument that vaccination is no protection against small-pox. He refers to our statement that over 10,000 lives had, up to the date of our writing, been sacrificed in England and Wales to small-pox during the epidemic year of 1871, and that 73 per cent. of the admissions into London small-pox hospitals had been amongst vaccinated people. He refrains, however, from adding that our article showed also the exceptional virulence of small-pox on the revaccinated as compared with the vaccinated, [and he ignores the fact that a primary vaccination in infancy is not held to have the power to afford complete protection against small-pox in after years, and this especially when those who have failed to secure revaccination find themselves in the midst of an epidemic which is essentially due to failure to secure the full protection of vaccination. Whilst investigations during the past ten years into the influence of vaccination have shown that the protective effect wears off, they have also abundantly proved how potent is the protection of a comparatively recent vaccination against small-pox. Any tendency to numerical increase in small-pox cases is amongst the adult classes, whereas the vaccinated infantile community, which in non-vaccination days suffered most, is practically exempt from the disease. In short, revaccination is as necessary as primary vaccination. The facts brought forward in the report of the Medical Officer of the Local Government Board for 1881 are very conclusive on the point of the protective power of vaccination as regards children. Thus, it is shown that of 55,000 children under ten years of age who had not been vaccinated, 782 died from small-pox that year; whereas the deaths amongst 861,000 vaccinated children were only 125. And these 125 included vaccinations giving every variety of evidence of protection—good, bad, and indifferent. And it is clear that if the 861,000 vaccinated children had died at the same rate as the 55,000 unvaccinated, an additional 12,000 small-pox deaths of children under ten years of age would have occurred in the metropolis that year, and that the immense saving of life effected was due to vaccination and nothing else.

DEATH THROUGH EATING WHELKS.

THE adjourned inquest concerning the death of a soldier named Smith was concluded at Colchester on October 1st. Since the death of the deceased, some three weeks ago, a chemical analysis of the stomach has been made by Dr. Dupré. No traces of poison were discovered. The jury returned a verdict to the effect that death was due to some undetermined poison contained in the whelks eaten by the deceased. We have not been furnished with a complete account of the symptoms shown by the deceased during his fatal illness, but a full inquiry failed to reveal any other known cause of death. Of course, it is just possible that the ingestion of the whelks and the death were facts simply in sequence, and not related one to the other as cause and effect. At the same time, too many cases have been recorded to lead one to doubt that there is something more than a mere coincidence. It may be, and probably is so, that the poisonous matter is developed with great intensity in certain instances, but it is not unlikely that the susceptibility to the action of the poison is more marked in some individuals than in others. It has been truly said that what is one man's meat is another man's poison. A wide field is open for investigation into these enigmatical causes of death, for we know but little or nothing concerning them. To elucidate the nature of the poison contained in some molluscs, whether the result of an elaborating life process or of post-mortem decomposition, both chemical analysis and physiological experiments are required.

THE INTERNATIONAL HYGIENE CONGRESS AT VIENNA.

THE cause of hygiene throughout Europe must be advanced greatly by the Congress which has just been held at Vienna. Part of the opening remarks of the Crown Prince were admirable, including those memorable words, "Man is the most precious capital of the State and of society in general: every individual life represents a certain value." It is satisfactory, too, to notice the important part in the discussions taken by our countrymen Sir Spencer Wells, Dr. Humphry, Mr. Shirley Murphy, Dr. Corfield, and others. Not the least pleasant incident of the Congress was the distinguished honour done to Sir Spencer Wells by a special banquet in honour of him by the surgeons and professors of Austria-Hungary. The only toast was "The Guest of the evening," Professor Breisky doing full justice to Sir Spencer and the great operation with which his name will ever be inseparably associated, which has added lustre to surgery, and years to the average duration of life. Sir Spencer made a reply at once genial and able, acknowledging early lessons in the School of Vienna, and branching off vigorously into the great subject of hygiene, of which he has become one of the most lucid expounders. He repeated the remarkable statement which he made last year: that in the last fifty years, in the reign of our present Sovereign, the average duration of human life has increased nineteen years—that is, from thirty to forty-nine years,—and this with very imperfect sanitary laws.

BOTHRIOCEPHALUS LATUS AND PERNICIOUS ANÆMIA.

IT may be remembered that last year Professor Runeberg advanced the view that "pernicious anæmia"—in some cases at least—was dependent on the presence of the intestinal tapeworm—Bothriocephalus latus. His contention was supported by Dr. Reyhen and others, but strongly opposed by such notable authorities upon the disease as Professors Biermer, Quincke, and Immermann. A case which tends to support Runeberg's view has been recorded by Dr. Schapiro (in "Wratsch," cited in *Centralbl. f. Bacteriolog.*, ii., 12). A lad thirteen years of age came under treatment for intense anæmia of a progressive type, characterised by great diminution of red corpuscles (viz., to one-sixth of normal) and of hæmoglobin, with liability to cutaneous hæmorrhage, epistaxis &c., marked cardio-vascular bruits, pyrexia, and without any emaciation. It was not until the administration of anthelmintics had resulted in the evacuation of a large quantity of segments of bothriocephalus (to such an amount that several worms were probably present) that he began to regain strength and colour. His recovery from that date was rapid. The writer attributed the anæmia to the disintegrating action on blood-corpuscles of some chemical product of the parasite which was absorbed into the blood.

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THE SCARLET FEVER EPIDEMIC.

IN the week ending October 1st no less than 318 fresh scarlet fever patients were admitted into the hospitals of the Metropolitan Asylums Board. There remained 69 vacant beds in the urban hospitals, and as soon as the pavilions at Winchmore Hill can be furnished 160 more convalescents can be removed to that institution; but this only offered a prospect of 229 more beds, and day by day that number is diminishing by reason of the large number of cases stil coming in. It must also be remembered that the number of discharges for some time to come will be small; for, out of 1586 scarlet fever cases under treatment up to October 1st no less than 1329 had been admitted within six weeks and 800 within three weeks. In view of the rapidly approaching emergency, the managers asked the Local Government Board if they knew of any institution that was available, but they have answered that no workhouse or infirmary could, to their knowledge, be obtained. Under these circumstances a committee has been appointed to do the best they can, and at the same time to make progress in the erection of huts on the open spaces available at the existing hospitals. Dr. Bridges, representing the Local Government Board, congratulated the managers on having taken up the question of providing for convalescents; and, adverting to the contention that patients were kept in too long, he declared that in his visits to the hospitals during the past two months he had not seen a single patient who could properly have been discharged. He then raised an important point by expressing a hope that the managers would face the fact that they were the isolation authority for the metropolis, and that they would extend the number of their beds from 2000 to 3000. This was in accordance with the recommendation of the Royal Commission on Fever Hospitals; but that Commission further added that a reconstitution of the Board was needed. It is not Poor-law work to protect the public against infection, whether the infected are in receipt of Poor-law relief or not. It is essentially sanitary work, and since it will be impossible ever to call upon some forty different sanitary authorities to act independently in this matter, the sooner the managers are converted into a sanitary body by the weeding-out of much of the Poor-law element the better it will be for the metropolis. Such an arrangement will also in the end conduce to economy; for, whilst the expense must in either case be borne by the ratepayers, it is notorious that action by multiple bodies is the most extravagant of procedures.

FIRES IN THEATRES.

PROFESSOR JOHN MARSHALL, in a thoughtful letter to *The Times*, suggests that by structural arrangement the dangers of fires in theatres could be in some degree lessened in so far as the audience is concerned, and this quite independently of "the uncertain action of temporary contrivances, of agitated managers, and of momentarily paralysed assistants." Professor Marshall points out that as theatres are at present constructed the draught of air is always from the stage to the windows above or behind the gallery, and that when a fire breaks out, which it usually does upon the stage, the gallery serves, as it were, as a chimney to the fireplace, and its occupants are stifled by the products of combustion. He suggests that theatres should be constructed so that the draught should be in the opposite direction—viz., from the auditorium to a covered outlet in the roof above the stage, which he assumes is generally the highest part of the house. The ceiling of the auditorium must in this case be apse-shaped, sloping from behind the gallery upwards to a series of valved outlets (to prevent back draughts) placed above the proscenium. Mr. Marshall would, in fact, arrange the ventilation of his house on the model of a hop or malt kiln. This suggestion seems to us to be excellent, not only because the outlet for foul air is placed in the proper situation, but also because such a construction necessitates inlets for fresh air in the auditorium—inlets which, as theatres are at present constructed, are generally non-existent. The ventilation of theatres is scandalously neglected, and its neglect is a standing reproach to the architectural profession, which is sorely in need of some method for ensuring that those admitted to it shall be masters of at least the rudiments of natural science. There must also be other means of making theatres less dangerous than they now are. Few of us would regret the absence of a mass of flimsy and tawdry decorations which disfigures many of our theatres, and certainly increases the risk of fire. Surely, also, a great deal of the scenery might be rendered incombustible. Tin plate is nowadays almost as cheap as canvas, and we should have thought that with a very ordinary amount of ingenuity it might be made a suitable medium for the scenic painters' art. The use of the electric light is a step in the right direction, but of itself it only helps to diminish risk, and does not abolish the necessity of observing other precautions.

ENEMA LESIONS.

DR. ACHILLES NORDMANN, of Basle, has published a description of twenty-five bowel lesions due to the operation of administering enemata. They include three complete perforations and ulcers, and wounds of various depths and sizes. The causes of these lesions seem to have been the use of defective instruments, ignorance of the direction of the rectum, catching of the transverse fold on the tube, extreme irritation of the mucous membrane of the bowel, and obstructions caused by certain conditions of the uterus, the fœtal head, or an enlarged prostate. As a rule, these lesions are to be found on the anterior wall of the rectum, from one to seven centimetres from the anus. They are not always easy to diagnose, as other foreign bodies or caustics may produce similar appearances. Tubercular and hæmorrhoidal ulcers may be mistaken for them; these are, however, generally higher up. A perforating wound gives rise to paraproctitis, but this is not necessarily fatal, though a stricture generally results.

CHOLERA INTELLIGENCE.

THERE is some evidence that cholera is diminishing in Sicily. No returns now come from anywhere but Messina, and even these are irregular. During the week ending the 3rd inst. 175 cases and 115 deaths were reported, but in two days no returns were made. In Naples cholera still continues to cause mortality, but there is no tendency to an increase of the disease. The same may be said of Rome, where the cases have been largely of the sporadic type. From Malta we learn that the epidemic gives indications of dying out, but there were twenty deaths during the eight days ending October 3rd.

THE FORESTERS AND CONVALESCENT HOMES.

OUR contemporary, the *Observer*, says that the Midland Counties Courts of the Foresters are about to erect a Convalescent Home for their members, to be self-supporting. We wish the scheme all success. Our contemporary, in a sanguine spirit, goes on to suggest that the Foresters should not stop at convalescent homes, but go on to build hospitals (and of course maintain them) with such help as might be expected from large City companies and wealthy firms, into which their members or their wives and children might go in time of sickness. We cannot go quite so far as our contemporary here. It is not clear that hospitals could be raised in any such way as this, and they would inevitably

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compete with and damage the existing hospitals, which certainly need no competition, and which have open doors for all real cases, whether the patient be a Forester or an Odd Fellow, or neither one nor the other. For the really destitute the workhouse hospitals already provide, and our existing hospitals are for the benefit of the class best represented by our friendly societies. All that is wanted is that they should organise larger subscriptions to existing hospitals.

FRENCH MILITARY SURGEONS AND PROFESSORSHIPS.

A SURGEON-MAJOR in the French Army, who is also an *agrégé*, or assistant professor of anatomy, lecturing at Lyons, was recently appointed by the Minister of Public Instruction to a chair at Lille, vacant by the death of the former occupant. Three days after the announcement of this appointment in the official journal a notification appeared in the same journal signed by the Minister of War, stating that this gentleman was ordered to Tonquin. Here, therefore, we have an officer in the army, who is at the same time an official under the Minister of Public Instruction, ordered by his two chiefs to be in two distant places at once. It would seem to us an absurdity for a military surgeon to take an appointment as a civilian professor at a provincial medical school; but in France it is not impossible, though apparently the Minister of War objects to it, and has determined to make it impossible, in this particular case at least. In a somewhat polemical article on the subject, a writer in a French medical journal complains that scientific eminence is rather at a discount in the medical department of the army, where the efficiency of a medical officer is reckoned far more from the reports of the colonel under whom he serves than from the scientific work he has done. It is also remarked that the Corps de Santé does not now attract the *élite* of the medical schools, and that the class of those entering the service cannot be expected to improve while so little encouragement is given to those who are desirous of extending their professional acquirements. The author thinks that it should be recognised that there are in the army, as in civil life, two classes of doctors, one suited for constant practice, the other susceptible of a higher degree of scientific culture. Let the first class be left with their regiments, and give the others the hospitals, allowing them to compete for the coveted distinction of *agrégation*.

THE TIME OF COMMENCEMENT OF MENSTRUATION.

DR. SULLIES finds from inquiries made from 3000 pregnant women from the neighbourhood of Königsberg that menstruation commenced at the mean age of sixteen. The taller and the weaker girls menstruated earlier than the shorter and the stronger girls, and the brunettes earlier than the blondes. The earliest of all were the tall, weakly blondes; the latest, the short brunettes of medium strength. In 83 per cent. the function was performed regularly at the first.

THE ROYAL BERKSHIRE HOSPITAL.

A COMMUNICATION has been made to Mr. Benyon, the vice-patron and President of the Royal Berkshire Hospital at Reading, of which Her Majesty is patroness, expressing, on the part of twenty-eight medical men in active practice in Berkshire and the adjacent parts of Bucks, Hants, Oxfordshire, and Surrey, a desire to see a Fellow, or at least a Member, of the College of Physicians of London established in Reading as a consulting physician in connexion with the hospital, at which there is now a vacancy. It is also stated that a feeling exists among the above-mentioned gentlemen that reforms are needed at the Royal Berkshire Hospital, if it is desired that they should continue to advise their poorer patients to seek the aid of the hospital to which their richer patients are subscribers. The governing authority of the Reading Hospital can scarcely ignore such an expression of views.

HYSTERO-EPILEPSY CURED BY A SHAM OPERATION.

DR. CHIARLEONI, believing that the good effects said to be produced by spaying on women suffering from the different forms of hysteria are to a large extent attributable to the mental and moral impression produced by the operation, determined to put this theory to the proof on the next suitable patient who came to his clinic. This happened to be a woman who, after a fright, had been affected by hystero-epilepsy, with more or less convulsive and paralytic symptoms. There was evidently no disease of the pelvic organs. She was subjected to a pretended ovariotomy, which, however, was merely an incision into the abdominal parietes, but was accompanied by all the paraphernalia of a true abdominal section, chloroform being of course given. This operation was followed by a complete cure; consequently Dr. Chiarleoni thinks that spaying should not be resorted to except in cases in which it is imperatively necessary.

MYELITIS FROM A HYDATID TUMOUR.

A RARE case of myelitis due to compression by a hydatid tumour is reported by Dr. Pedkoff in the *Meditsinskoe Obozrênie*. The patient was a young woman who had for some time noticed a tumour on the left side of her back. At first it gave her no trouble but when she applied for advice there was decided loss of power in the lower extremities. Afterwards the temperature rose and arthritic symptoms began to appear, simulating those of acute rheumatism. Paralysis both of motion and sensation, together with retention of urine and obstinate constipation, supervened. The tumour was then opened; a quantity of colourless liquid first came out, followed by a number of hydatids. The wound was left open, and in the course of a month something like 100 hydatids must have come away. The patient gradually became weaker, and died. Unfortunately no post-mortem could be obtained.

MEDICAL RELIEF AND DISFRANCHISEMENT.

THE *Liverpool Courier* reports that in the Registration Court all cases of simply medical relief were allowed, but that in a case where the claimant had been for three weeks in Brownlow Hill Hospital suffering from rheumatism, the vote was disallowed. The Barrister thought the statute did not include hospital treatment, excepting cases where the local authority used the parish hospital for infectious cases, to which the patient went, not from poverty, but for the sanitary advantage of the public.

MEDICINE AND SURGERY IN ENGLAND.

THE *Graphic*, in its issue of the 1st inst., contains a lengthy and interesting account of the rise and progress of the art and science of medicine and surgery in England—in other words, a history of the Royal Colleges of Physicians and Surgeons. An account is given of the foundation of these Colleges, the connexion with and separation from the Barbers' Guild, their vicissitudes of fortune, culminating in one instance in bankruptcy, and their gradual progress to their present state of authority and importance. The sketch is profusely illustrated, among the most noteworthy of the appeals to the eye being portraits of Linacre, Cains, and Harvey, and sketches of the old building of the College of

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Physicians in Warwick-lane (now demolished), and the Court Room of the Barbers' Hall in Monkwell-street. Our contemporary in the same number also publishes collections of pictorial representations of "An Ambulance Class of Ladies," and "The Career of a Naval Surgeon at the Royal College, Haslar."

WILLIAM HARVEY.

As our readers are doubtless aware, next year will be the 260th anniversary of the publication of Harvey's immortal treatise "Exercitatio Anatomica de Motu Cordis et Sanguinis." In anticipation of the interest which this event will awaken, Mr. Richards of Holborn Viaduct has secured the copyright of a statuette of the famous physician by C. B. Birch, A.R.A., the sculptor, which, reproduced in terra cotta, aids materially in the adornment of the room in which it is placed, and serves to keep green the memory of one to whom the medical profession is so much indebted.

GASEOUS RECTAL INJECTIONS AND THE GLYCOGENIC FUNCTION OF THE LIVER.

MM. ARNOZAN and FERRÉ of Bordeaux communicated to the Toulouse Congress an interesting observation they had made with reference to gaseous rectal injections tending to show that sulphuretted hydrogen introduced into the animal economy in this manner arrests the glycogenic function of the liver. Three rabbits which had been subjected to these injections died, two of them in a short time, the third after a rapid and progressive emaciation. In all three the liver tissue was found to contain no sugar whatever.

THE ADVANTAGES OF NOTIFICATION OF INFECTIOUS DISEASES.

MEASLES having become fatally prevalent in Newcastle-upon-Tyne, Mr. Henry Armstrong has advised the Town Council to take steps for the tentative notification of this disease under the special act in operation in the borough. Only some half a dozen authorities have included measles in the list of diseases to be notified; but as the disease is so largely spread through the agency of elementary schools, and since there are now improved facilities for controlling such spread by the aid of the regulations under the Education Code, there may well be substantial grounds for the advice given. In Warrington measles is now being notified as a temporary measure, and the proposal with regard to Newcastle is that it should, in the first instance, be a notifiable disease for a period of five years. In giving his advice, Mr. Armstrong has set out materials for judging of the value of notification generally. In Newcastle this system came into operation under an Act passed during 1882; and since that date there have been some remarkable reductions in the fatality from certain infectious diseases. Thus, during the four years 1883 to 1886 the small-pox deaths have been 60, 12, 3, and none respectively; the typhus deaths were 24, 6, 7, and none; continued fever, 7, 3, 4, and none; and scarlet fever, 124, 156, 83, and 45. But, ignoring the fact that there has been no similar reduction in the case of enteric fever and diphtheria, we almost fear the time is premature for drawing anything like a definite conclusion from these results. Small-pox and typhus have always been, of all diseases, most amenable to immediate notification if followed at once by isolation; but even typhus reappeared in Newcastle this year. And as to scarlet fever, we know how its epidemic prevalences run in cycles, and it is to be presumed that the time for the next increase has, as yet, not come for Newcastle. In 1881, without notification, the deaths from this disease were only 7 more than in 1886, but then came a sharp rise to 82, 124, and 156 in the three following years. We have no wish to imply that the admirable sanitary system organised in Newcastle will be unable, with the aid of notification, to cope with the next epidemic; but we cannot regard the experiment as having been continued for a sufficiently long time to have really proved that the reductions in mortality which have taken place are due to compulsory notification.

IS CANCER CONTAGIOUS?

M. DUPLOUY of Rochefort reports a case where a man, who had for a long time carefully nursed his wife, who was suffering from uterine cancer, became affected with epithelioma of the glans penis, necessitating amputation. The question arises, Is this a mere coincidence, or does it point to the possibility of cancer being transmitted by contagion?

THE MEDICAL SOCIETIES.

THE Clinical Society will hold its first meeting on Friday, Oct. 14th; the Pathological Society on Tuesday, Oct. 18th; the Ophthalmological Society on Thursday, Oct. 20th. The Obstetrical Society commenced on Wednesday last.

FROM the report of the results of analyses of the metropolitan water supply made by Dr. Frankland, and recently issued by the water examiner appointed under the Metropolis Water Act, 1871, it appears that during the month of August the Thames water distributed by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies was for river water exceptionally free from organic matter, the average proportion present being even less than in July. Of the water principally drawn from the river Lea, that supplied by the New River Company contained less organic matter than any of the other waters, excepting that of the Kent Company, whilst the East London Company's supply contained slightly more organic matter than the Thames waters. All the samples were clear and bright.

AT a debate which took place at the Oxford Local Board on Wednesday upon the report of Dr. Thorne Thorne and Mr. Gordon Smith relative to the sanitary condition of Oxford, and the comments which had been made thereon in the daily press, Mr. Omond, Bursar of St. John's College, moved the following resolution:—"That the board regrets that a memorandum conveying an erroneous impression of the matters in dispute should have been presented to the Local Government Board." After a short discussion the resolution was carried unanimously.

THE guardians of the parish of St. James, Westminster which is one of the parishes benefited by the Craven Charity, have applied to the hospitals which receive subscriptions from this fund to receive scarlet fever patients. Under the contract between the trustees of the Charity and the authorities of the hospitals, the latter can be compelled to take in a certain number of cases (infectious or otherwise, small-pox alone excepted), but this is the first occasion on which any demand has been made for the provision of acccommodation during an epidemic of fever.

THE inaugural address at the Midland Medical Society will be given by Dr. Sydney Ringer on Nov. 9th. The subject of the address will be, "The Antagonism of Drugs, and its bearing on the Administration of Medicine."

THE epidemic of diphtheria at Dorchester has assumed serious dimensions, and several deaths have occurred. Mr. Kendall, a highly respected practitioner, is lying seriously ill, having caught the infection whilst attending a patient.

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MR. ALFRED EMSON, consulting-surgeon to the Dorset County Hospital, and one of the oldest practitioners in Dorset, died on the 5th inst. under melancholy circumstances. In February last, whilst performing an operation for cancer, Mr. Emson pricked his finger with one of his instruments. Blood poisoning set in, and, after months of suffering, death ensued from this cause. The deceased was seventy years old.

THE Cunard steamer *Aurania*, which arrived at Queenstown on the 2nd inst. from New York, brought details of the arrival at that city on the 22nd ult. of the Transatlantic liner *Alesia* from Marseilles with 364 passengers, sixteen of whom were then suffering from Asiatic cholera, eight others having died on the voyage and been buried at sea.

ON the 29th ult. the death occurred of Mr. Samuel Berry. The deceased, who retired from practice about five years ago, was formerly surgeon to the Queen's Hospital and Professor of Midwifery in the Queen's College, Birmingham. Mr. Berry was at the time of his decease in his eightieth year.

SIR GEORGE MACLEOD, M.D., Surgeon in Ordinary to the Queen in Scotland and Professor of Surgery in the University of Glasgow, has been appointed to succeed the late Dr. Fergus as Crown Representative for Scotland in the Medical Council. The appointment has our hearty approval.

THE Banbury Board of Guardians have resolved not to do their duty. By eighteen votes to ten they decided not to enforce compulsory vaccination. Are boards of guardians to make the laws of England? Or have they a discretionary power of throwing them into abeyance?

IN the Chancery Division, on the 5th inst., Mr. Justice Charles declined to grant an injunction restraining the Sheffield Corporation from erecting a small-pox convalescent hospital on some land situate near Totley Rise, Derbyshire, about five miles from Sheffield.

THE Lord Mayor for next year, Mr. Alderman Polydore De Keyser, is the grandson of a distinguished surgeon, and was himself intended for the same profession, an arrangement which was, however, set aside by the death of his brother in 1850.

THE death is announced of Dr. Lazarus Wittmann, *privat docent*, of Buda-Pesth.

THE ETIOLOGY AND TREATMENT OF SCARLATINA.

THE adjourned meeting of the Edinburgh Medico-Chirurgical Society for the discussion of the above subject was held on Wednesday evening, October 5th. The chair was occupied by Professor Grainger Stewart, President of the Society. Owing to the fact that the post-graduate courses are now in progress, there was a large attendance of visitors from a distance, in addition to the members of the Society. The President having opened the meeting, and referred to the discussion which took place in July, of which the present proceedings were the continuation, called upon Mr. A. W. Hare to read a second report now presented by the committee appointed to investigate and report upon the recent Edinburgh Researches into the Etiology of Scarlatina. The text of the report is as follows:—

SECOND INTERIM REPORT BY COMMITTEE.

Since submitting to the Society the preliminary report, your committee have further prosecuted the investigation of facts relating to Mr. Edington's paper on the Nature of the Contagium of Scarlet Fever. The committee have now collected a considerable amount of evidence bearing on the several points under consideration. While, however, the facts before them are of considerable importance, they do not as yet feel themselves in a position to present a final report. The following is a summary of their work:—

1. *Microscopical examination of the blood.*—Blood from ten typical cases of scarlatina, on or before the third day of the disease, was examined microscopically for the presence of micro-organisms. In this part of the investigations forty-four specimens were examined under the microscope, with the result that in the blood of one patient bacilli and micrococci were found, both in small numbers; in that of two patients bacilli and micrococci were found, the former in very small, the latter in moderate numbers; in that of four patients micrococci alone were found; and in the remaining three cases no micro-organisms could be detected.

2. *Cultivation experiments with the blood.*—The blood was taken from nine typical cases of the disease on or before the third day. In four of these cases bacilli and micrococci appeared in the culture material; in two micrococci alone; and in three a negative result was obtained. It is worthy of notice that the cases in which microscopic observation failed to discover micro-organisms only in one instance corresponded with those in which cultivation experiment failed. So that, taking the nineteen observations together, evidence of the existence of organisms was obtained in thirteen; or, taking the series of ten cases to which those observations refer, evidence of a positive nature was obtained in nine of them. The committee are not yet in a position to describe all these forms of microbes, but they are at present engaged in the investigation of the nature of the several organisms.

3. *Cultivation experiments with desquamation.* — One typical case was examined with negative results.

4. Several experiments were performed on calves with the "bacillus scarlatinæ" supplied by Mr. Edington. These consisted of an inoculation experiment by subcutaneous injection and scarification with this material, a feeding experiment with the same, and a combined feeding and inoculation experiment. In each case the result was negative.

5. In conjunction with Professor MacFadyean of the Royal Dick Veterinary College, to whom the thanks of the committee are due, three experiments were performed in which it was attempted to induce scarlatina in calves by injecting scarlatinal blood in two cases, and by feeding with desquamated scales in the third. The materials were from typical cases of the disease. These experiments also gave negative results.

6. The committee feel waranted in expressing their belief that the "bacillus scarlatinæ" of Edington is not, as suggested by some observers, the bacillus in eczema (Smith), the bacillus butyris, or the bacillus subtilis. They have, however, not yet been able to compare it with certain other forms of bacillus which it is said to resemble—*e.g.*, the bacillus epidermidis, the bacillus of acute rheumatism (Mantle), and the bacillus found in the skin in erythema marginatum (Mantle).

7. They believe that they have definitely ascertained the fact that the micro-organism described by Mr. Edington under the name of "streptococcus rubiginosus," is morphologically identical with the "streptococcus scarlatinæ" of Dr. Klein. The value of this identification is emphasised by the facts as to inoculation experiments described by Mr. Edington in a letter appended to this report.

In conclusion, your committee beg to state: (1) That they find that an organism resembling that described by Mr. Edington as "bacillus scarlatinæ" is in a certain proportion of cases present in the blood taken with due precautions from scarlatinal patients. (2) That they believe that the streptococcus scarlatinæ of Klein is identical with the streptococcus rubiginosus of Edington. (3) That they have as yet failed to corroborate the conclusions arrived at by Mr. Edington as to the pathogenetic value of the bacillus scarlatinæ.

The committee desire to obtain the sanction of the Society to continue the investigation, particularly as regards (*a*) the morphology of the several organisms; (*b*) the susceptibility of various animals to infection with scarlatinal blood and with the various organisms; their investigations so far

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having led them to doubt whether calves are susceptible to the action of human scarlatinal poison. They have therefore to ask the sanction of the Society for such further expenditure as this fresh line of experimentation may demand. Subjoined is a letter, with enclosure, which has been received from Mr. Edington, to which reference was made in the report and which the committee deem of such importance as to place before the Society *in extenso*.

(Signed) T. GRAINGER STEWART, Convener.
JAMES CARMICHAEL.
G. SIMS WOODHEAD.
ROB. W. PHILIP.
ARTHUR W. HARE.

ADDENDUM.

[COPY.]

41, Great King-street, Edinburgh, October 3rd, 1887.

DEAR SIR,—I herewith send you a letter received by me from Dr. Boswell Park, M.D., Professor of Surgery, Medical Department, University of Buffalo, together with microscopic preparations which accompanied it. The letter fully explains what they purport to be. Having carefully examined them, I am unable to see any distinctive difference in them from the bacillus which I have described, but I have intimated to him that these preparations of themselves are not sufficient to enable me to say that they are the same. You will, however, note that he states that cultivations in different media correspond with those described by me.

In response to your question as to my experimentation in man with scarlatinal material, I beg to say that, having inoculated a tube of gelatine with scarlatinal blood of the fourth day, I was successful, after thirty-six hours' incubation, in getting a profuse cultivation of streptococcus rubiginosus and diplococcus scarlatinæ sanguinis; and, having emptied half of it into some fresh milk, it was drunk by my brother. Three days later his blood, on being examined, showed micrococci, which, being cultivated, showed that the streptococcus rubiginosus was present. His temperature was carefully taken morning and evening for fourteen days, but never showed the slightest pyrexial rise. I might also state that he never has had scarlet fever. From this fact I doubt very much the pathogenicity of this organism in man.

I am, dear Sir,
Yours respectfully,
(Signed) ALEXANDER EDINGTON.

Professor Grainger Stewart, M.D., Convener of Medico-Chirurgical Society's Committee for the Investigation of the "Bacillus scarlatinæ," &c.

[COPY.] Buffalo, Aug. 24th, 1887.

DEAR SIR,—We have been very much interested in your papers on the Bacillus scarlatinæ, in Nos. 1380 and 1388 of the *British Medical Journal*, especially so because we have for the past fifteen months been cultivating a bacillus which seems to correspond with the one described by you. It was taken from the blood of a case of scarlatina when the eruption was well marked by puncturing the skin under due antiseptic precautions. It has been cultivated on gelatine, agar-agar, and potato, with the same characteristic growth detailed in your articles, and has seemed to be a comparatively pure culture from the start. Just now we have a beautiful potato cultivation undergoing the changes of colour you describe. The mounted specimens accompanying this letter were taken from it on the fifth and sixth days respectively. We have had no time to make inoculation experiments, or to study the bacillus carefully, and we are anxious to know whether it really corresponds to the bacillus found by you.

Respectfully yours,
(Signed) BOSWELL PARK, M.D.,
Prof. of Surgery, Med. Dept., University of Buffalo.
Alexander Edington, M.B., C.M.

THE NATIONAL SOCIETY FOR AID TO SICK AND WOUNDED IN WAR (British Red Cross Society) has received from His Highness the Khedive of Egypt Bronze Stars in favour of the following gentlemen for their services, under the auspices of the Society, in aid of the sick and wounded in the Egyptian Campaign 1884-5-6:—Egypt: Commissioner John Smith Young, and Surgeon Edward Francis White. Soudan: Commissioner Sir V. H. B. Kennett Barrington, and Commissioner Sir Allen Young; Surgeons Chas. H. Newby, J. Edward Squire, F. C. H. Piggott, and Richard Lake; Professor Alexander Ogston.

HOSPITAL RÉUNIONS.

CHARING-CROSS HOSPITAL.

THE annual dinner of the past and present students of the above institution will take place on Friday, Oct. 14th, at the Holborn Restaurant, at 7.30 P.M. Chairman: A. Julius Pollock, Esq., M.D., F.R.C.P.

KING'S COLLEGE HOSPITAL.

THE old students' dinner took place at Limmer's Hotel on the 4th inst., at 7 P.M. W. Paul Swain, Esq., F.R.C.S., was in the chair, and he was supported by a large number of the medical staff and about eighty former students. The principal toast—"King's College and King's College Hospital"—was proposed by the Chairman and drunk with great enthusiasm. His student days under Fergusson, Budd, Todd, and Partridge were very feelingly referred to, as well as their successors—Beale, Henry Smith, and Wood,—who then held junior appointments. Dr. Wace, the Principal of King's College and the chairman of the Committee of Management of the hospital, in replying, pointed out that recently great changes in the sanitary arrangements of the hospital had been made, and that a new nursing school had been instituted. Surgeon-Major Partridge replied for the Services, whilst Dr. Playne, of Maidenhead, and Dr. Buzzard responded for country and town friends respectively. A very enjoyable evening was spent, and Dr. Hayes and Mr. Rose, the honorary secretaries, were congratulated on its success.

LONDON HOSPITAL.

THIS dinner was held in the New Library of the Medical College, and an opportunity was thus given to a large number of old London Hospital men to inspect the very handsome buildings that have taken the place of the old College. The chair was taken by Sir Andrew Clark, Bart. Nearly 200 friends and old students of the Hospital were present, and among them were the members of the medical staff, the lecturers at the College, the members of the College Board, and the chairman (Mr. Carr-Gomm) and the treasurer (Mr. T. H. Buxton) of the hospital. The guests included Deputy Surgeon-General Harris, Surgeon-Major Poole, Dr. Glover, Dr. Christie of Ealing, Dr. Robert Barnes, and others. Sir Andrew Clark, in proposing the toast of the evening, gave an account of the history of the College from its commencement, and of its remarkable development during the last few years. Mr. Treves proposed the toast of "The Army and Navy," Mr. Buxton and Mr. Corner those of the "Medical Staff" and of "The Hospital." Dr. Stephen Mackenzie, to whose energies the success of the dinner was largely due, proposed the toast of "The Old Students." Among the other speakers were Mr. Carr-Gomm, Mr. Couper, Dr. Sansom, Mr. Munro Scott, and Mr. Openshaw.

The band of the Coldstream Guards played a selection of music in the gallery during the evening.

ST. MARY'S HOSPITAL.

A DINNER was held on October 3rd in the grand hall of the Criterion, Mr. George P. Field, Dean of the Medical School, in the chair. Considerably over two hundred gentlemen were present, including Dr. Chambers, Dr. Downes, Dr. Lawrence, Professor J. E. Morgan, Dr. J. D. Maurice, Dr. Milner Moore, Surgeon-Major Myers, Dr. Platt, Dr. Owen Roberts, Mr. Spencer Smith, Dr. Danford Thomas, Surgeon-Major H. de Tatham, Mr. Worth, Dr. Handfield Jones, F.R.S., Sir Edward Sieveking, Dr. Broadbent, Dr. Cheadle, Dr. Leeb, Dr. Braxton Hicks, F.R.S., Mr. Norton, Mr. Page, Mr. Malcolm Morris, &c. The usual loyal and patriotic toasts were given by the Chairman. In proposing the toast of "Success to St. Mary's Hospital Medical School," Mr. Field referred to the prosperous condition of the school and the steady progress it had made; the new entries, which for 1883 numbered thirty, had, during the four succeeding years, followed the satisfactory gradation of forty, fifty, sixty, and seventy, irrespectively of many students who had entered for special

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classes and short courses. Mr. Field stated that the negotiations for the acquisition of property adjacent to the hospital were actively progressing, his remarks as to the probable early extension of the hospital into Praed-street being received with enthusiastic acclamation. The toast of "Past and Present Students of St. Mary's Hospital" was given by Dr. Braxton Hicks, and on behalf of past students was responded to in most felicitous terms by Professor Morgan of Manchester. Other toasts were given, and a highly successful gathering was brought to a close by the recitation of "Horatius" by Mr. William Terriss.

MIDDLESEX HOSPITAL.

IN the evening of Oct. 3rd, after the distribution of prizes at the hospital, a large number of past and present students dined together at the Holborn Restaurant, under the presidency of Mr. T. W. Nunn. After dinner the usual toasts were drunk, and speeches were made by Mr. Nunn, Major Ross, M.P., Brigade Surgeon Cayley, Surgeon-Major Hopkins, Mr. Morris, Mr. Lowne, Dr. Fowler, Mr. Hulke, Dr. Alderson, Mr. Vickery, Mr. Burdett, Mr. Wylde, Mr. Ganz, Mr. Smith Turner, and the Dean. Very excellent music was contributed by Mr. Ganz, Dr. Pringle, and Mr. Balfe. A message of greeting was sent from those present to Mr. Shaw, the only remaining member of the original teaching staff of 1835.

ST. THOMAS'S HOSPITAL.

ON the afternoon of Saturday the 1st inst., at 3 P.M., the usual inaugural address was delivered in one of the operating theatres of the hospital. The lecturer this year was Mr. R. W. Reid, Vice-Dean of the School and Lecturer on Anatomy. The theatre was crowded. The address (an abstract of which we publish at page 713) was listened to with much attention, only interrupted by frequent expressions of approbation on the part of the students. On the termination of the address there was a meeting of the staff, visitors, and students in the library. At 6.30 in the evening the annual dinner was held in the Governors' Hall, when about 120 past and present students assembled. The chair was taken by Sir W. Mac Cormac, and a most enjoyable evening was spent. After the usual loyal toast, the Chairman proposed "The Navy, Army and Reserve Forces"; this was responded to by Sir J. Watt Reid, K.C.B., for the Navy, and Sir Thomas Crawford, K.C.B., for the Army. Dr. John Harley proposed "The Visitors," which was replied to by Sir Henry Doulton, who referred to the unchecked advertising and large sale of infallible cures. Sir W. Mac Cormac proposed "The Health of St. Thomas's Hospital," to which Mr. Alderman Stone, the treasurer, replied, mentioning the mutual respect and friendship which existed between the medical staff and the governors. Sir John Simon, K.C.B., consulting surgeon to the hospital, proposed "The Health of the Chairman" with much feeling and eloquence, and Sir William Mac Cormac suitably replied. In the absence of Mr. Le Gros Clark, Dr. Alfred Carpenter proposed "The Medical School," and Mr. R. W. Reid responded. Dr. Stone, in a humorous speech, proposed "The Old Students," and Dr. Rosser (of Croydon) and Mr. Cresswell Rich (of Liverpool) replied; Dr. Bristowe, in the absence of Professor C. Stewart, proposed "The Secretaries" (Dr. Mackenzie and Mr. Battle), who briefly responded. During the dinner the band of the Coldstream Guards played a selection of music, which added much to the enjoyment of the evening. After the dinner songs were given by Mr. Caldicott and Mr. J. E. Nichol.

WESTMINSTER HOSPITAL MEDICAL CLUB.

THE annual dinner of the Westminster Hospital Medical Club was held on Monday, the 3rd inst., at the Holborn Restaurant, Mr. George Cowell, F.R.C.S., in the chair. Amongst those present were Sir Rutherford Alcock, K.C.B., Sir James Crichton Browne, Mr. Macnamara, Dr. Allchin, Dr. Sturges, Mr. Holthouse. Dr. Fincham, Dr. Donkin, Dr. Hall, Dr. Hughes Bennett, Mr. Cooke, Mr. Bond, Mr. Black, Dr. Sutherland, Mr. Quennell, and others, upwards of eighty having accepted. At this hospital, the staff and lecturers dine together every quarter and discuss subjects relating to the medical school, an example which might well be followed by other teaching bodies. A special tribute of praise was paid by the Chairman to Mr. Quennell, the indefatigable secretary of the hospital, for his courtesy and energy in carrying out the erection of the various grand stands to view the Jubilee procession, which brought in a large sum to the funds of the institution.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5475 births and 3097 deaths were registered during the week ending October 1st. The annual rate of mortality in these towns, which had steadily declined in the preceding seven weeks from 23·7 to 16·2, rose again last week to 17·5. During the thirteen weeks ending on 1st inst., the death-rate in these towns averaged 20·4 per 1000, and was 0·5 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 12·8 in Brighton, 14·8 in Portsmouth, 14·9 in Plymouth, and 15·4 in London. The rates in the other towns ranged upwards to 24·5 in Manchester, 25·7 in Halifax, 25·9 in Blackburn, and 31·6 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined in the preceding nine weeks from 1301 to 440, rose again last week to 460; they included 168 from diarrhœa, 86 from scarlet fever, 62 from "fever" (principally enteric), 58 from whooping-cough, 39 from measles, 36 from diphtheria, and 11 from small-pox. These zymotic diseases caused the lowest death-rates last week in Sunderland, and Birkenhead; and the highest rates in Wolverhampton, Norwich, Preston, and Blackburn. The greatest mortality from diarrhœa was recorded in Cardiff, Wolverhampton, Norwich, and Blackburn; scarlet fever in Manchester, Oldham, Blackburn, and Preston; measles in Cardiff and Derby; and "fever" in Preston, Norwich, Leicester, Wolverhampton, and Salford. The 26 deaths from diphtheria in the twenty-eight towns included 20 in London, 3 in Huddersfield, and 2 in Newcastle-upon-Tyne. Small-pox caused 10 deaths in Sheffield and 1 in Bristol, but not one in Greater London or in any of the twenty-five other large towns. Only 2 cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease; whereas the number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 1716. The deaths referred to diseases of the respiratory organs in London, which had been 142 and 160 in the preceding two weeks, further rose last week to 219, and were 1 below the corrected average. The causes of 81, or 2·6 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Sunderland, Nottingham, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Blackburn, Halifax, and Brighton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·4, 18·7, and 18·3 per 1000 in the preceding three weeks, further declined to 17·7 in the week ending October 1st; this rate exceeded, however, by 0·2 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 3·2 and 16·4 in Perth and Greenock, to 20·9 in Leith and 24·8 in Paisley. The 442 deaths in the eight towns last week showed a further decline of 15 from recently weekly numbers, and included 23 which were referred to whooping-cough, 17 to diarrhœa, 12 to scarlet fever, 11 to "fever" (typhus, enteric, or simple), 6 to diphtheria, and not one to small-pox; in all, 71 deaths resulted from these principal zymotic diseases, against 112, 106, and 78 in the preceding three weeks. These 71 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by 0·2 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 40, 19, and 22 in the previous three weeks, rose again last week to 23, of which 8 occurred in Glasgow, 5 in Dundee, 5 in Greenock, and 4 in Aberdeen. The 17 deaths attributed to diarrhœa showed a further considerable decline from the numbers in recent weeks; they included 5 in Dundee, 4 in Edinburgh, 3 in Aberdeen, and

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3 in Leith. The deaths from scarlet fever, which had been 17 and 11 in the previous two weeks, rose again last week to 12, of which 7 occurred in Dundee and 4 in Glasgow. The 11 deaths referred to "fever" corresponded with the number in the previous week; and included 5 in Glasgow, 2 in Dundee, and 2 in Leith. Of the 6 deaths from diphtheria, an increase of one upon the number in the previous week, 3 were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 77 and 62 in the preceding two weeks, rose last week to 83, and exceeded by 16 the number returned in the corresponding week of last year. The causes of 54, or more than 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 34·3 and 30·6 per 1000 in the preceding two weeks, was 30·9 in the week ending October 1st. During the thirteen weeks ending the 1st inst. the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 19·6 in London and 18·2 in Edinburgh. The 209 deaths in Dublin last week showed an increase of 2 upon the number in the previous week; they included 19 which were referred to diarrhœa, 13 to measles, 3 to whooping-cough, 1 to "fever" (typhus, enteric, or simple), 1 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 52 in each of the preceding two weeks, declined last week to 37; they were equal to an annual rate of 5·5 per 1000, the rate from the same diseases being but 2·1 in London and 1·4 in Edinburgh. The fatal cases of diarrhœa, which had been 35 and 37 in the previous two weeks, declined last week to 19, but were still considerably above the average for the season. The 13 deaths from measles exceeded the numbers in recent weeks, whereas those from scarlet fever showed a decline. The deaths of infants exceeded by 16, while those of elderly persons were fewer by 6 than the numbers in the previous week. Five inquest cases and 2 deaths from violence were registered; and 65, or nearly a third, of the deaths occurred in public institutions. The causes of 34, or more than 16 per cent. of the deaths registered during the week were not certified.

SMALL-POX MORTALITY IN THE GERMAN EMPIRE IN 1886.

A report on the mortality of small-pox in the German Empire in 1886 has recently been issued in Berlin, bearing the name of Dr. Rahts. It is shown that among the more than forty-seven millions of the population of the German Empire only 155 deaths from small-pox were registered during last year, being equal to a death-rate of 3·3 per million. In England and Wales, with a population of rather less than twenty-eight millions, the small-pox deaths last year were 275, equal to a rate of 9·9 per million. Of the 155 deaths from small-pox in the German Empire, 61 were of infants under one year of age, 14 of children aged between one year and five years, 16 of young persons aged between five and twenty years, and 64 were of adults aged upwards of twenty years. A table in the report gives an interesting comparison of the death-rates from small-pox in 1886 in the largest towns of several European States. In 193 towns of the German Empire the death-rate from small-pox last year was 4 per million living; in twenty-eight English towns it was 8 per million (not 77, as misprinted in the report); in seventy-one Belgium towns it was 194; in fifteen Swiss towns it was 218; in forty-nine Austrian towns it was 325; and in twelve Hungarian towns it was 2428 per million. There is good ground for believing that these small-pox rates bear a very definite relation to the efficiency of the regulations for securing general infant vaccination in the different countries. During 1886 no death from small-pox was recorded in Breslau, Dresden, Cologne, or Frankfort, and only one in Berlin; while the highest rates in the large German cities were 30 and 36 per million in Konigsburg and Hamburg. Among the principal European cities outside the German Empire the small-pox rate per million ranged from 6 in London, 49 in Liverpool, and 90 in Paris, to 1213 in Rheims, 1342 in Rome, 1538 in Geneva, 3687 in Buda-Pesth, and 5453 in Marseilles. It is evident that both England and Germany enjoyed in 1886 a comparative immunity from fatal small-pox, which affords a striking contrast to the mortality from the disease in France, Austria, and Italy.

Correspondence.

"Audi alteram partem."

"PROTECTIVE POWER OF VACCINATION."

To the Editors of THE LANCET.

SIRS,—In the letter you honoured me by publishing in your last week's journal (p. 681) I had written that men "require a theory as an aid in further work or as a goal or object *for it*"—instead of "first." Overleaf, in the fifth line, a note of interrogation, followed by a capital, cuts a sentence into two parts where only a comma was intended. May I ask for space to correct these points, and again to repeat that M. Pasteur's new theory needs for its confirmation the experiments suggested by Mr. Vincent Richards. This inquiry could not be entrusted to better hands than those of the accomplished secretary to the Hydrophobia Commission. When he returns from his well-merited and happy holiday, we may hope he will be induced to undertake it.

I am, Sirs, yours very truly,

Oct. 1st, 1887. WILLIAM SQUIRE, M.D.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to correct an erroneous statement in Dr. Squire's letter, in your impression of the 1st inst., with regard to my predecessor Mr. Marson's practice as to the vaccination of the nurses and servants at this hospital. His usual custom was to vaccinate the nurses as soon as possible *after* their arrival at the institution, and preferably from arm to arm, either at the vaccination station here or at Blackfriars, and they were then sent on duty. The same practice has been continued at this hospital since Mr. Marson's resignation ten years ago, with equally good results. The disasters which occurred occasionally in the early days of the Asylums Board hospitals were, I venture to think, due to the use of lymph of a more or less inert character. When the medical officer of a small-pox hospital has any doubt as to the protective power of the vaccine lymph he is using, then certainly it is desirable that he should wait and ascertain the results of his vaccination before exposing his *employés* to the risk of infection.

I am, Sirs, yours faithfully,

HERBERT GOUDE, M.D.

Small-pox and Vaccination Hospital, Holloway, N., Oct. 5th, 1887.

To the Editors of THE LANCET.

SIRS,—Dr. Squire is mistaken in supposing that I questioned the experience that he referred to in regard to the protective power of vaccination after the infection of small-pox. I merely wrote for information, and gladly welcome any facts bearing upon the subject. I have not been able as yet to lay my hands on the London Asylums Board's Hospital Reports, but if the cases mentioned by Dr. Squire are all that are to be found there, few will think them sufficient to upset the whole former views, or to warrant the conclusion that vaccination under the circumstances is wholly useless. I do not suppose anyone says that vaccination will infallibly prevent small-pox if practised however early after infection, and it must be accounted rash to expose a person only just vaccinated to the infection of small-pox. But of its power to modify small-pox if practised early after infection, the facts are so numerous in its favour that it would take a great many adverse cases to subvert our faith in it. Much, I have no doubt, must depend upon the manner in which the vaccination is done, and the quality and quantity of the vaccine inserted.

I am, Sirs, yours faithfully,

Glasgow, Oct. 4th. HUGH THOMSON, M.D.

To the Editors of THE LANCET.

SIRS,—Permit me to comment upon Dr. Squire's letter on the above subject, which appears in this week's LANCET. Dr. Squire is correct in saying that the late Mr. Marson never received anyone for duty in the wards of the Small-pox Hospital "immediately upon vaccination, but waited for the result to be evident"; and, further, that he favoured

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"the practice of vaccinating all in any house or room where small-pox happened." Dr. Squire, however, is, I believe, mistaken in supposing that Mr. Marson held that this latter operation secured complete immunity from the disease. I was an intimate friend and pupil of Mr. Marson, and know that from conviction he taught that vaccination would not procure immunity if the poison of small-pox had already gained admission to the system; he held that it might modify the intensity of the attack, but would not prevent it. This has always occurred to me as a difficulty in accepting Pasteur's plan of inoculation after a patient has been bitten by a rabid animal; and I cannot but think that Marson's experience of vaccination in small-pox militates against the adoption of Pasteur's views on the efficacy of inoculation after the introduction of the poison.

I remain, Sirs, your obedient servant,

Parkhurst-road, N., Oct. 1st, 1887. W. HENRY KESTEVEN.

SCARLET FEVER: PROPHYLAXIS AND TREATMENT.

To the Editors of THE LANCET.

SIRS,—The present epidemic of scarlet fever, which seems to be spreading over the country, induces me to ask you to allow me to bring before the profession generally a method of treatment which, in my hands, has proved an unqualified success, not only in overcoming the disease and in preventing those numerous sequelæ which are often more disastrous in their results than the disease itself, but, when applied to those who have not "incubated" the disease, acts as a remarkable prophylactic.

It is now some years since I first commenced to treat scarlet fever with carbolic acid. At first it did not appear to have any specially beneficent action, and my patients dying in about the same ratio as before, I gave up the use of it, returning to the old methods of treatment. After some little time, however, I returned to it, bringing more thought to bear upon the matter, being also more enlightened concerning the life of bacteria in general when placed under conditions which, if not inimical to life itself, at any rate had the effect of checking propagation and accepting as a foundation for treatment that the poison of scarlet fever was but the presence within the system of some, as yet unknown, species of bacteria, its severity being due to circumstances especially favouring development. I therefore commenced anew the administration of carbolic acid, with this difference, that the dose was considerably increased and its frequency doubled. The result, since I arrived at definite conclusions concerning the dose and its frequency, has been that even during severe epidemics I have never lost a patient, though I have treated now nearly 300 cases. Out of this number I have had but three cases of albuminuria, one of glandular suppuration; but no aural or nasal complications, no secondary fever or cardiac disease, and a rapid recovery from even severe cases that I have never before witnessed. I use liquid carbolic acid, specially prepared for internal use, and rendered liquid by the addition of 10 per cent. of water. In children from two to six years of age I order three minims in syrup of orange-peel and water, together about an ounce, and this must be given every two hours night and day for the first three days, longer if necessary, but if the patient is doing well, every three hours until the fourth or fifth day, then every four hours until all danger has past, and finally three times a day until perfectly convalescent. In older patients the dose should be four minims, and in adults even five or six. I have found eight minims (equal to over seven grains of pure carbolic acid) the maximum dose. Beyond that I should hesitate to push it, as at that dose nausea, griping, and diarrhœa result. Naturally, with an increased dose the menstruum must be proportionately increased, so as to do away with the rather hot acrid taste of the acid. It is, however, a matter of the utmost necessity that in the early stages the dose should be every two hours night and day, and the patient, if asleep, awakened to take it. It is in the frequency as well as in the dose that safety is found. Carbolic acid when introduced into the system is extremely "fugitive," entering into combination with wellnigh everything that it comes into contact with; hence the absolute necessity for its persistent frequent administration. An almost infallible test as to whether the dose and its frequency have been duly observed is to be found in the urine; in fact, I might also add whether the dose is sufficient. In the course of from twenty-four to thirty-six hours the urine begins to present a smoky hue, somewhat similar to that observed at the commencement of hæmaturia, and in time becomes almost black. The absence of this hue invariably indicates either that the frequency of administration has been curtailed or that the dose is not sufficiently large. I have never known it absent if even the dose has only been two minims, provided it has been administered every two hours. I never consider my patient safe until this peculiar hue is present, the deeper the better. That this peculiarity of the urinary secretion is not due to the blood I have practically demonstrated. It is, I am of opinion, the result of some peculiar combination of the carbolic acid with the products of renal excretion; for the urine is sometimes passed quite clear, but in the course of a short time assumes the characteristic hue. I consider this colour of the urine of the utmost importance, as only upon its appearance can we assume that the drug is thoroughly saturating the whole system; for so rapid is its excretion that when the carbolic acid is ordered to be given only every four hours, the tint disappears.

This, then, is the treatment that has proved so successful in my hands. But to be effective it must be commenced *ab initio*. It will not do to begin on the second or third day, and if failure ensue credit it to the treatment, though possibly even then it may prove better than the old system. I do not interfere with the ulcerated tonsils, which, so far as my experience goes, are invariably affected in scarlet fever. I look upon the extent of the ulceration as an indication of the severity of the attack, and increase the dose of the acid. Once only have I applied nitrate of silver solution, and this was in a strumous child where the whole of the fauces was coated in twenty-four hours with a diphtheritic exudation. The child recovered, but had glandular suppuration on both sides of the neck: the only case I have had. With reference to the three cases of albuminuria, all were clearly traceable to distinct causes. One patient ran out into the garden without a cap chasing a cat which had escaped from the nursery, a keen east wind prevailing at the time. A second sat before a broken window; whilst the third was similarly circumstanced. All these were sufficiently well to sit up, and in each case albuminuria occurred before the tenth day. All recovered.

Desquamation, as a rule, is neither so prolonged or so acute. I have had no occasion to again resort to cold baths to check excessive temperature, the highest record being 104·5°. Only twice have I had serious nervous disturbance, which was speedily subdued by large doses of bromide of potassium.

With reference to the administration of carbolic acid as a prophylactic, I have used it with the happiest results. I give to all the other inmates of the house who have never had scarlet fever, irrespective of age, one minim of the liquid carbolic acid three times a day, and I do not prohibit intercourse with the sick. The result has been that in a few instances—I think four—the disease has been taken but very slightly, whilst the large majority have escaped. That this immunity was due to the acid may be inferred because subsequently those exposed have been attacked severely but have recovered. In one case a second child was attacked five weeks after the first was well. The house had been disinfected by the municipal authorities. It was taken ill on a Friday with diarrhœa and vomiting, but being subject to bilious attacks little notice was taken of it; on Saturday it was dull and listless; it was seen at 7 o'clock on Sunday morning, and found in a state of collapse, and died five hours after from suppressed scarlet fever. Nevertheless, during the illness of the first child it was an inmate of the sick-room after the fourth day, but was preserved from attack by the daily doses of carbolic acid.

These few outlines I have hastily put together, and neither time nor space can be found to give details of the cases treated, interesting as they are. I would conclude therefore with these few words. Each case must be treated on its own merits. The treatment should be commenced the same hour that the case is diagnosed. The severer the case at its outset, the larger the dose. Well diluted and flavoured with tincture of orange-peel, the taste is not unpleasant. Extreme nervous excitement should be calmed with bromide of potassium, and extreme nervous depression with brandy and the usual adjuncts. Dismiss the idea that any harm can ensue from these doses of carbolic acid, but, when possible, patients should be seen at least twice a

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day, to either increase or lessen the dose. If these views are carried out, the danger of scarlet fever will be reduced to a minimum, and those troublesome sequelæ, the dread hitherto of the practitioner, will rarely make their appearance.

I am, Sirs, yours, &c.,

ARTHUR WIGLESWORTH, L.R.C.P.L., &c.

Liverpool, Sept. 1887.

"THE DURATION OF SCARLET FEVER INFECTION."

To the Editors of THE LANCET.

SIRS,—Your annotation under the above heading in THE LANCET of Oct. 1st calls attention to a subject of great practical importance. The almost universally received opinion is that the infection lasts as long as desquamation continues, and that isolation of the patient is therefore necessary until the completion of that process. No doubt this was the correct and necessary practice in times past, but I question its necessity where the practice of disinfecting the patient's skin is thoroughly carried out. Unquestionably, the desquamating cuticle retains the infection longer than perhaps any other part of the body, but I have for a long time felt that if the skin is thoroughly anointed with carbolised or other disinfecting oil from an early period of the disease, and a daily bath containing some disinfectant be given as soon as the patient's condition will allow, he may with perfect safety be permitted to mix with others, even while peeling is actively going on. Acting on this belief, I have for some time back been in the habit of shortening the period of isolation without any evil result; and if this practice should, by a more extended experience, prove to be safe, the present congested condition of the hospitals of the Metropolitan Asylums Board might be much relieved.

I am, Sirs, yours faithfully,

Ludlow, Oct. 1st, 1887. MARK LONG, M.D.

JAMBUL IN DIABETES.

To the Editors of THE LANCET.

SIRS,—Since the publication of an abstract of my lectures on New Drugs in THE LANCET of Sept. 24th I have had many inquiries relative to my experience of jambul in diabetes. Would you permit me to answer them briefly in your columns?

First and foremost, the reason why I did not include jambul in my series was, not that I had found it *useless*, but that I was at the time of lecturing still accumulating results before pronouncing a definite opinion upon the drug. My experience is limited to surgical cases seen at the London and St. Peter's Hospital. They are as follows.

Diabetes insipidus.—No diminution of the urine with jambul.

Diabetes mellitus.—Cases presenting themselves with sloughing ulcers of diabetic origin, or accidental wounds in diabetics, refusing to heal under any application or treatment, gave these results: Water diminished; sugar decreased; ulcers filling in and wounds granulating and healing with surprising rapidity. Dose, 2½ gr. to 5 gr. in pearles thrice a day after food.

One case in point may be mentioned. A diabetic of eighteen months' standing, who had been lately under strict diabetic regimen and treatment, applied to me for relief of rapidly increasing sloughy ulcers of leg and thigh. These ulcers caused great pain. The patient stated that he filled a full-sized zinc pail with urine every night, and although he did not measure his urine in the day, he believed it was even greater in quantity. In one week with jambul (2½ gr. thrice daily) the urine diminished to one-half the quantity, and some of the deepest ulcers had filled up and skinned over. Few cases have impressed me so much with the value of jambul in diabetic ulceration as this.

I would seize this opportunity of saying that the New Therapeutical Society will be doing invaluable work if it devote some of its attention to the careful investigation and honest criticism of new drugs and remedies. Systematic and collective experience from the London hospitals alone would suffice in a few weeks to indicate worth, and to detect and reject much of the trash which is to be found in the mass of new remedies at present before the profession.

I remain, Sirs, yours truly,

Old Burlington-street. E. HURRY FENWICK.

"GAMALIEL IN WHITEHALL."

To the Editors of THE LANCET.

SIRS,—I have read your article of last week on Mr. Sclater-Booth's (I beg Lord Basing's pardon—"the king can do no wrong") invitation to the medical profession to disband themselves and to mistrust one another while trying to combat disease and death. You mention, without comment, Lord Basing's sneer at "Gamaliel in Whitehall." May I point out that a Hampshire squire might have read his Scriptures to the extent of learning what Gamaliel's teaching really was: "Let them alone," he says of those expounding truths which were new and possibly inconvenient to himself; "for if this counsel or this work be of men, it will come to nought; but if it be of God, ye cannot overthrow it." This would look like sensible advice—proceeding, indeed, upon the very lines that are commonly followed by the medical profession. It seems also to have come from a man who knew how to value facts above opinions, not from one who sought to decry advancing knowledge under cover of a hearsay phrase. I could wish it had been Lord Gamaliel who addressed the Sanitary Institute.

I am, Sirs, your obedient servant,

Oct. 3rd, 1887. WHITEHALL.

HEMIPLEGIA DURING THE PUERPERIUM.

To the Editors of THE LANCET.

SIRS,—In a conversation to-day with Dr. Finlayson regarding the case of hemiplegia during the puerperium, which is reported in the present issue of THE LANCET, he informed me that two apparently similar cases—that is of puerperal cerebral embolism without cardiac valvular disease—had been reported by himself. I find, on turning to the *Obstetrical Journal*, vol. vii., p. 666, that this is so, and that I have been wrong in supposing that my case was the first of the kind reported. Apart from the desire to correct this mistake, I am anxious, by referring to these cases of Dr. Finlayson's, to draw the attention of obstetricians further to this affection, which seems more common than is generally supposed; and it would be interesting to know to what extent such cases have occurred in the experience of your readers, or in the experience of others whose records they may have seen.

I am, Sirs, yours faithfully,

Newton-terrace, Glasgow, Oct. 1st, 1887. SAMUEL SLOAN.

ACCOMMODATION FOR INFECTIOUS CASES: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—While there are to-day only eight beds in the fever hospitals available to meet the present epidemic, there are literally hundreds of beds standing empty at the general hospitals—two hundred at Guy's alone. If Guy's, for instance, would contract with the Asylums Board to take the enteric cases, that would relieve about a hundred beds. It would be thought undesirable to admit scarlet fever to special wards in general hospitals, but two of those with beds closed might combine, and, putting all their cases in one hospital, let the other to the Asylums Board. Anything is better than leaving the cases in their own homes, putting the unfortunate children in draughty sheds in November, or sending out the convalescents before they cease to be dangerous.

I am, Sirs, yours &c.,

October 6th, 1887. X. Y. Z.

THE DRAINAGE OF BEXLEY HEATH.

To the Editors of THE LANCET.

SIRS,—A short time ago I came to this healthily situated place, and was surprised to see how sickly the children and people looked after seeing those at Putney, the place I had been living in. I now attribute it to the want of drainage. Here is a place of several thousand inhabitants using cesspools which drain through the soil into one another: the old garden closets would be perfect safety in comparison. Close to me there is a valley, and in its sides are seen the blackish leakage ultimately on its way to the Thames. Wells must also receive their share. The main drains of London are not far from us, and yet we will not

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connect. Ought not places of large size be compelled to do so, or use garden closets? It is sad to see lovely Kent villages so polluted, and London children had better be kept there than sent near places of this kind for their health. The expense of clearing out cesspools is greater than the rates would be, so that only those who never empty theirs are money gainers by this dirty and dangerous system. Something in your journal might cause people here to make a stir or move the authorities to interfere on behalf of those who wish to breathe real air instead of that from hundreds of impure drain-holes. Will not the cholera, when it comes, seize upon places like this in preference to those where there is drainage or closets in the ground, with no water used? I am, Sirs, yours truly,

G. BLAKELEY, Commander R.N.

Bexley Heath, Kent, Oct. 3rd, 1887.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—It is proposed at our next Council meeting to take into consideration the Darlington scheme, which, if adopted by the central authority, will enable Boards of Guardians to fix and regulate as they choose the salaries of all their officers. As this is a matter which will seriously affect all Poor-law medical officers, it is absolutely necessary that they should be "up and doing," as no time must be lost, a memorial to the President of the Local Government Board having been sent by the Darlington guardians and a request from them to all Boards of Guardians throughout the country to do the same.

Hoping to receive communications upon the subject from all Poor-law medical officers,

I am, Sirs, yours truly,

J. WICKHAM BARNES.

3, Bolt-court, Fleet-street, London, Oct. 5th, 1887.

THE SIXTH INTERNATIONAL CONGRESS OF HYGIENE.

(From our Special Correspondent.)

Vienna, Oct. 2nd.

THE greatest International Congress of Hygiene that has ever been held has now completed its labours. It is somewhat too early to judge the wisdom of its resolutions; and, indeed, these are buried in such a maze of documents, reports, and speeches that no one has yet fully realised what has been done. It is impossible to be in all Sections at one and the same time; and, were this even possible, the confusion of languages often makes it difficult to follow the debates. In this respect the Congress has not been so well managed as its predecessors. In all former congresses French was recognised as the official language. Speeches in other languages were allowed, but on the condition that they were translated into French, and, of course, all resolutions and official documents were drawn up in French, and the votes taken in French. Thus, foreign delegates were kept together and were fully able to follow the proceedings.

Considering the immense preponderance of Austrian delegates and members present, some regulation should have been established on the present occasian to prevent their speaking too often. The Germans, who, as the nearest neighbours, were the next in numbers present, joined heartily with the Austrians in speaking German. Thus speech after speech was pronounced in German, a language which the great majority of the foreign delegates present could not understand. These were so badly translated that the foreigners soon ceased asking for such interpretations; and, in some Sections, no attempt whatsoever was made at translation. Therefore the majority of the foreign members were obliged to pass wearisome hours, without understanding a word of what had been said. The result was that after a little of this experience a great many went away. Vienna is an attractive town; there were many excursions organised, and the proportion of foreign delegates at the Congress became less and less numerous. Instead of sitting out all the meeting, and taking an active part in the debates, they would look in for a moment or two and then revert to the greater attractions of the Ringstrasse. For hours together I was the only Englishman present in the several Sections I attended. Thus the Congress, to a considerable extent, degenerated from an International Congress into an Austro-German Congress.

Even worse than this was the method of voting. Those present raised their hands for or against the various proposition without any attempt to analyse the vote and ascertain what it represented. Thus, on one occasion, in the First Section, the Baron de Suzor and myself were the only persons present to speak or vote for Russia and England. If we take the Indian Empire, the English colonies, and the Asiatic as well as the European dominions of Russia, it will be found that the interests of something like five hundred million souls only counted as two voices in a division against thirty or forty Viennese doctors, who at most represented one single town. Considering that any Austrian who chose to pay 16*s.* was admitted as a member of the Congress, it was preposterous to give to hundreds of unknown amateurs who have never studied hygiene the same voting power as the distiuguished representatives of foreign governments and scientific societies. A national local congress could have told us what several hundred Viennese doctors have to say on various sanitary subjects. It was not necessary to bring delegates from all parts of the world to know what opinions prevailed at Vienna. What is wanted is the opinion of various nationalities on subjects of international interest. It would be most useful to record from time to time how this opinion develops itself; but if mere local majorities are to govern the decision of these congresses, there will be no sequence—they will alter according to each place where the congress meets, and will always exhibit contradiction. Thus, in Portugal the immense majority would be in favour of quarantines, and in England the result of the vote would be just the opposite. Evidently it is by nationalities that the vote should be taken. We want to know what nations are in favour of or against quarantines &c. The Austrians present should have had but one vote (however numerous they might have been), the Germans one vote, and so on for all nations. It is quite easy to call on the representatives of each nation to stand up and give their vote separately, and, when not agreed among themselves, the majority would govern, note being taken whether the vote was unanimous or not. The majority thus obtained would represent the opinion of the Congress—that is to say, a truly international opinion, and not, as at present, an Austrian vote with just a slight sprinkling of foreign elements. The as yet somewhat incomplete list printed sets forth that there were 2414 members of the Congress, and out of this number 1277 are marked as present. Now, of these members present, no less than 397 live in Vienna, and this does not include those who reside in the suburbs of Vienna. Thus, Vienna alone represents something like forty times the voting power of the entire British empire.

These criticisms are all the more necessary and important, as it is now decided, in response to an invitation of the British Sanitary Institute and the Association of the Medical Officers of Health, that the next International Congress of Hygiene shall be held in London. As the Universal Exhibition will draw most persons to Paris in 1889, it would be difficult to hold a Congress elsewhere that year; but, on the other hand, Paris has already been the seat of one Congress—namely, the Second International Congress of Hygiene. Consequently there will be a French Congress held in Paris in 1889, at which foreign representatives will not be obliged to attend, but where they will no doubt be heartily welcome if they choose to go. The Seventh International Congress of Hygiene will then follow in due course two years later—that is to say, in 1891,—and in London. In the meanwhile a committee has been elected to organise and prepare the International Congress, consisting of Dr. Brouardel for France, Dr. Dobroslavine for Russia, Dr. Billings for America, Professor F. de Gruber for Austria, Dr. Roth for Germany, Dr. Mosso for Italy, and Professor Corfield and Mr. Shirley Murphy for England. These gentlemen have agreed to meet at Dresden on the 10th of October next year to talk the matter over, and it is to be hoped that some arrangement will then be made to confer on the next Congress a more truly international and representative character.

In all other respects the present Congress has been a marvellous success. It would be difficult to find in all Europe a town better suited for a Congress than Vienna. The majesty of the buildings, the broad expanse of the thoroughfares, the splendid halls, restaurants, and meeting places all

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combine to facilitate a brilliant reception; but, more than all, the innate amiability, the courtesy, the easy gracefulness of deportment which distinguish the Viennese population, make it alike a pleasure and an honour to be entertained by such a people. From the Crown Prince, who graciously received the members of the Congress at the Imperial Court, mixing and conversing freely with his guests, down to the humblest attendant at the University where the Congress met, all were alike animated with that spirit of amiability which leaves a lasting and most pleasant impression. The excursions to Semmering, to Kaiserbrunnen, and to many other places of interest near Vienna, were all admirably organised and successfully conducted. And now 400 members of the Congress start for Buda-Pesth in a special steamer, where they will be entertained for two days and shown many things of interest.

As for the actual work done by the Congress, the report of the speeches will fill more than one bulky volume. Nor is it easy to give the resolutions, for in some instances, instead of resolutions, the summary of long papers was adopted. These constitute little pamphlets of themselves; and if a Congress chooses to adopt a pamphlet instead of a resolution, it can scarcely expect the press to reproduce the pamphlet. This and other similar mistakes can only be attributed to the fact that a considerable proportion of the members belonged to countries where the freedom of meeting, of association, and of debate is to a great extent denied. They have not acquired the habit of self-government, and therefore do not know how to conduct meetings so as to produce the greatest influence on public authorities and on public opinion. While in some Sections the resolutions, or conclusions as they were sometimes called, were of impracticable length, in other Sections no resolutions whatever were put or discussed. Thus in Section 1, dealing with the question most germane to hygiene—viz., drainage,—no definite result was obtained. M. Durand Claye, the chief engineer of the Paris Ponts et Chaussées, presented a report on the Shone and Waring systems of drainage. It would be impossible to underrate the services rendered by M. Durant Claye. His energy is indefatigable. In all the Congresses he comes to preach the holy doctrine of cleanliness, of plenty of water, and plenty of air. In Paris, he has had the courage to attack vested interests, to defend poor and unprotected tenants in working-class districts against the sanitary delinquencies of jerry builders and rack-renters. But, in discussing the Shone system, he clearly showed that he knew but little about the subject. He objected to all separate systems, because the rain water washing down the gutter in the streets of towns contained as much organic matter and germ life as sewage itself. But, as M. Poutzen, who defended the Waring system, replied, it is not the quantity but the character of the germ which is of importance; and, as the germ of typhoid fever does not liquefy gelatine, its presence would not be shown in the analysis brought forward by M. Durand Claye. Many eminent sanitarians took part in the debate, and the opinion with regard to a separate system or canalisation for sewage proper was about evenly divided. With regard to the Shone system, it was pointed out that it was not necessarily a separate system. In the Houses of Commons it drained off the rain, and the rain occasionally amounted to forty times in volume the quantity of sewage proper. At Eastbourne, where the rainfall had recently been estimated at half an inch within an hour and a half, it also took all the rain-water. Nor was there any complicated machinery. The Shone apparatus for raising sewage to a higher level by pneumatic propulsion had been in work for six years at Eastbourne without any breakage, accident, or stoppage whatever occurring. The real question is that in many districts, localities, and towns there is not a sufficient fall for sewers. Hence the sewers are not self-cleansing. In many instances the sewers are much too large; there is therefore more room for the generation of sewer gas, and there are more deposits on the sides. Smaller sewers would be much cleaner; but, on the other hand, cause much more friction, and therefore require steeper gradients. These the topography of a town does not generally provide. They must be created artificially. When the sewage is too low down it must be lifted up, so that it may once more resume its course by the force of gravitation. Steam pumps, as a rule, take too much room, and are too expensive to be applied on a sufficiently extensive scale. It is in such cases that the Shone system, already employed in eighteen towns, renders great service. The case of Henley-on-Thames was cited, where, as compared with the expense of providing a steam-pump and ordinary sewers, an economy in the original outlay of 25 per cent. and in the yearly working expenses of 50 per cent. will be realised. At the same time the sewage will be lifted four times the height, thus giving the sewers a fall four times greater, and will be sent a mile further away from the town. In the face of these facts, M. Durand Claye, in his reply, withdrew his aspersions against the Shone system; maintained that the adoption of this or the Waring system must depend on local circumstances; and that, for his part, he was quite content if the Congress agreed with him in the necessity of doing away with cesspools, and of draining directly into the sewer. With concluding remarks to this effect the question was allowed to drop.

On the other hand, in the discussion on cholera and quarantine, an immense number of resolutions were brought forward, some containing very mischievous principles. But they were most ably combated by Professor Max Pettenkofer of Munich, Dr. Mosso of Turin, and Mr. Shirley Murphy of London. The latter gentleman pointed out that all speakers at the Congress had approved the necessity of enforcing sanitary reform in the towns exposed to infection. This was recognised on all sides as the most effective precaution. The only point under debate was whether such measures of medical inspection should be adopted as practically involved the imposition of a quarantine of five days. In England the belief in the utility of such a precaution had long since been abandoned. Its application would lead to the neglect of those sanitary measures so strongly recommended by Dr. Max Pettenkofer. The idea of excluding from Europe ships which, in passing the Suez Canal, were found to have had cholera cases on board was not logical, for the land route would still remain open. The retention of these ships would engender a sense of false security and prevent seaport and other towns adopting those sanitary measures which were really useful.

The manner in which these and similar observations were received showed how greatly public opinion has developed on this question; but the speech of Dr. Mosso, the Italian delegate, was particularly remarkable in this respect. He explained that Italy had gone through both experiences. They had imposed the strictest quarantine, and had imposed it everywhere. But it had proved to be good money thrown away. The same Minister (Signor Crispi) who had imposed quarantines now declared them to be useless. At Turin, thirty trains a day came to the town from an infected district during the recent Exhibition. There were about 100 cases of cholera imported, and no further mischief arose. Quarantine in the Red Sea, while Algeria, Tunis, and Tripoli remained open was a mere vexatious inconsistency. By far the greatest good would be done by telling people that their immunity from cholera depended on their using plenty of pure water and living in clean houses.

By such speeches the worst passages were eradicated from the resolutions; and when these are published they will show that opinion on the Continent on this subject has made considerable progress. The resolution will have issued from the printing offices in the course of a few days, and then, and in another letter, it will be possible to deal more fully with the work of the Congress.

BUDA-PESTH.

(From a Correspondent.)

SIR SPENCER WELLS and Professor HUMPHRY have just been here on their way to the Hygienic Congress at Vienna, which, as will be remembered, Sir Spencer was requested to attend as delegate by the College of Surgeons of England, and Professor Humphry by the University of Cambridge. The members of the medical profession of the place, being forewarned of the visit of Sir Spencer Wells, availed themselves of the opportunity to do him honour and pay him attention. At appointed times they met him at the several hospitals to show him the institutions and consult him respecting the cases. In the evening they gave him a banquet in the Queen of England Hotel, during which an address in English was made to him by the medical

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students. In his reply, Sir Spencer encouraged them to diligent work, by which alone they could obtain success, and exhorted them to take advantage of the very great opportunities for clinical instruction which their hospitals afforded. Replying to his health, which was proposed in a complimentary English speech by Dr. Mackiesovszki, he thanked the members present sincerely for the honour they had done him, and expressed his great satisfaction at what he had seen in their hospitals. Professor Humphry, in reply to the toast, which was proposed to him as delegate from Cambridge by Dr. Jauffer, thanked those present on behalf of the medical profession in England for the honour they had done to one of its members who was justly esteemed for the part he had played in bringing about the great triumphs which had been recently achieved in abdominal surgery. The Professor further complimented them on their hospital arrangements, and the refinements in their instrumental methods of diagnosis, which exceeded, he believed, those employed in any hospital in his own country.

The hospitals which were visited certainly corroborate these remarks. Great attention is paid to ventilation and heating, which during the severe cold of winter are effected with much difficulty, to general sanitary arrangements, and to the care and comfort of the patients. The clinique of each professor occupies two or more hours daily. He attends himself to the dressings of the more important cases, and there is much harmony between him, his assistants, and the students. There is a physical laboratory, with a delicate electrical apparatus for testing the sensitiveness of the general surface and of the ear, the action of muscles, &c., in addition to the ordinary methods for diagnosis and treatment, also a histological and a bacteriological laboratory attached to each hospital. Antiseptics are largely used. In one ward under Dr. Ellescher were five women recovering from laparotomy on account of uterine and ovarian tumours. Several specimens of cancer of the uterus were shown, in which the whole organ had been successfully removed through the vagina by Dr. Jauffer, and this surgeon elicited the high approbation of Sir Spencer Wells for the manner in which he performed a difficult operation of enucleating from the left broad ligament a compound ovarian cyst of considerable size, which, from the position of the uterus and other signs, had been diagnosed by himself and Sir Spencer Wells to occupy that position. The carbolic spray was diffused through the room, not directed upon the patient, and carbolic water was freely used throughout. The bleeding vessels were secured with silk ligatures, and a portion of the broad ligament having been ligatured and cut away, the remainder was stitched to the surface of the uterus, as first done by Sir Spencer Wells.

The Red Cross Hospital, which has been opened about two years, receives private patients, who pay three, two, or one guilden (6*s*., 4*s*., or 2*s*.) a day, for which they receive board, lodging, and medical attendance, an extra fee being paid for operations. The plan and administration of this hospital are admirable. It is supported mainly by private contributions and subscriptions, and subsidised by Government, which pays for all the stores, medical and surgical appliances, ambulances and carriages for the sick and wounded, &c., which are kept here and supplied to the several military stations in time of peace, and to various parts in time of war. One block is reserved for nurses, who, having been trained in the hospital, are available for attending the surrounding district. The lady superintendent, who accompanied the party round, is a highly intelligent person, and deeply interested in the work, priding herself especially upon the excellence and cleanliness of the culinary department, as well as upon the variety of the stores and the manner of their disposition.

A NEW METROPOLITAN HOSPITAL. — The New Metropolitan Hospital buildings in Kingsland-road, which have for some time past been in course of erection, were opened for the reception of patients on the 1st inst. The institution was originally known as the Metropolitan Free Hospital, and has for some time had premises of a temporary character in Bishopsgate-street, but at a recent meeting of the governors it was decided that the word "Free" be omitted, and that in future all patients, except accidents, should contribute a small sum whilst under treatment. The cost of the new building, exclusive of the land, is about £25,000, but the entire cost when the intended south end block is erected is estimated at £40,000.

MANCHESTER.

(From our own Correspondent.)

OWENS COLLEGE.

THE opening of the medical department by an introductory address has within the past few years been more honoured in the breach than in the observance; this year, however, a return to the old custom is made, and Sir James Paget will to-morrow deliver the "introductory," which, from the high position held by Sir James as an orator, is being looked forward to by the profession with considerable interest. In the evening he will be entertained at the annual medical dinner to be held as usual at the Queen's Hotel. The departments of arts, science, and law were opened this morning by an address from Professor Dixon, F.R.S., successor to Sir Henry Roscoe in the chair of Chemistry. The evening classes of the College will be opened on Monday next by an address from Professor Kastner, and the department for women will be inaugurated by an address from the Bishop on the 17th inst.

ROYAL INFIRMARY, ETC.

At the last Board meeting of the infirmary an unusual offer was made to present to the institution a cottage hospital, to be situate in Hulme, fully furnished and equipped. The Board acknowledged the receipt of the handsome proposal, but requested time to consider the matter, as the maintenance of the hospital, some twenty beds in number, would entail an additional annual expenditure of at least £1000, and at the present time the Convalescent Hospital at Cheadle is a large drain upon the funds of the parent institution. At the same meeting Mr. Milner, late resident medical officer at Cheadle, was appointed resident surgical officer at the infirmary, in place of Mr. Collier, who has recently been appointed assistant surgeon to the Children's Hospital, Pendlebury. It is satisfactory to note that the higher resident appointments at the infirmary have of late been conferred upon Manchester students, as at one time it almost appeared that the powers that be had determined not to select students of our own school for the more responsible positions in the various institutions under their control.

HOSPITALS FOR INFECTIOUS DISEASES.

The question of the site for the new fever hospital proposed to be erected by the Salford Corporation is still a *quæstio vexata;* much angry discussion still goes on in relation to it, and much opposition will have to be overcome before the proposed building is an accomplished fact. At the last meeting of the Cheadle Local Board a proposal was brought forward for the provision of a small hospital there for infectious diseases, the cases from that district hitherto having to go to Stockport if they were isolated. At Newton Heath the Local Board still protest vigorously against the extensions of the Monsall Fever Hospital going on there, and consider they are hardly dealt with in having all the infectious disease of the city and suburbs brought into their township. At Gorton the Local Board have signified their willingness to pay 2*s*. 6*d*. for each certificate of infectious disease sent in by the medical practitioners of the district, compulsory notification not as yet being in force there.

POISONING AND HOMICIDE.

Two melancholy accidents have occurred within the last month at two of our hospitals. At the infirmary one of the house surgeons, in administering to himself a hypodermic injection of morphia to relieve the pain of neuralgia, took an over-dose, from which he never recovered; and at the asylum at Prestwich an attendant was attacked and killed by a lunatic, who had been an inmate for years and was considered quite harmless.

WATER SUPPLY.

Notwithstanding the late rainfall, we are still on "short time" with our water supply, it being turned off for twelve hours out of the twenty-four. The Water Committee assert that they are within three weeks of the end of their present supply, and that the rain hitherto has scarcely affected the quantity in the reservoirs; but now that the dry ground has become comparatively soaked, it is to be expected that each fall of rain will now find its way in large quantity to the reservoirs.

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CHURCH PARADE.

The Manchester Division of the Volunteer Medical Staff Corps attended their first church parade at St. Matthew's Church on the 25th ult., when a special sermon was preached by Canon Kelly, honorary chaplain to the corps. At the review held on Saturday last by the Duke of Cambridge, the same corps marched out in most creditable style under the command of Surgeon Crockwell, and elicited some words of commendation from the Commander-in-Chief.

Oct. 4th.

LIVERPOOL.

(From our own Correspondent.)

SCARLATINA AT THE SCHOOL FOR THE DEAF AND DUMB.

IN consequence of a serious outbreak of scarlatina, the School for the Deaf and Dumb has been temporarily closed. Four cases were at once sent to the fever hospital of the workhouse, and subsequently six more. When Mr. Charles G. Lee, the surgeon to the institution, was first appointed some years ago, he found the sanitary arrangements most defective. At his suggestion most of these have been remedied, and little remains to be done to make the building as perfect in a sanitary sense as possible. This institution, which, though not a medical one, is of great interest to the profession, is under excellent management, and every opportunity is afforded to its afflicted inmates to receive a good education, and to be eventually enabled to earn their livelihood.

THE RECENT CASES OF HYDROPHOBIA.

As might have been expected, such an unusual occurrence as three fatal cases of hydrophobia occurring within so comparatively short a time, has produced a scare here. The order requiring all dogs in the street to be under control has been extended to all the neighbouring townships, and also to Bootle. No other cases have been reported.

THE MEDICAL FACULTY OF THE LIVERPOOL UNIVERSITY COLLEGE.

Dr. Campbell Brown, the Professor of Chemistry, having been for some time located in the new laboratories, those formerly occupied by him have been added to the physiological laboratories, where, under the able superintendence of Dr. Larkin, physiology is now learned by the students in a most thorough and practical manner. Many improvements have also been made in the dissecting and anatomical rooms, where students can learn anatomy with every comfort and convenience. The rooms will be reopened to-morrow, between fifty and sixty students have entered their names, and an ample supply of subjects has been secured.

THE ROYAL INFIRMARY.

The buildings are being rapidly taken down, and it is expected that the foundation stone of the new buildings will be laid on or about the 29th inst.

Liverpool, Oct. 4th.

BIRMINGHAM.

(From our own Correspondent.)

HOSPITAL SUNDAY.

A VIGOROUS appeal, signed by the Mayor and the secretaries of the Periodical Collections Committee, has just been issued. The proceeds this year fall by rotation to the Queen's Hospital, and the appeal sets forth in earnest terms the necessities of this deserving charity. When it is stated that the increase in the numbers over the last triennial period is over 28,000, and we learn that the estimated deficiency is £2500, it will be seen that there is a good case for urging the wants of the institution among the various places of worship in the town and district.

MUSHROOM POISONING.

A man, aged thirty-five, in apparently good health, partook of a hearty supper with a quantity of mushrooms. A few hours later he woke up complaining of abdominal pain, vomited, and became insensible, dying at 4 o'clock in the morning. The doctor who was called in attributed the death to blood-poisoning caused by the mushrooms, which were probably decomposed. He stated that he had lately seen a case where similar symptoms were produced by eating mushrooms, adding that some people were particularly liable to ill effects from eating them. It is of importance that to be wholesome they should be fresh, and free from any mixture with fungi of similar appearance but of poisonous properties. It is highly probable that Saturday night suppers are often eaten hastily and accompanied by much drinking; for example, at the same time, an inquest was held upon the body of a man who had died from choking, a piece of raw meat an ounce and a quarter in weight being extracted from his throat after death.

QUEEN'S COLLEGE.

The annual conversazione and distribution of prizes was held on the 3rd inst., and was largely attended. After the reception and address by the vice-president, Dr. Wade delivered an address, which was well received. The report stated that the number of entries at the commencement of last winter was 46, the number of students on the books of the College being 178; 36 passes had been obtained at the examination, 6 being at universities; at other examinations 98; making a total of 134. Since midsummer the intermediate examinations in medicine at the London University had been very successful with regard to this College, for of 7 who went up 5 passed in all the subjects. The year was also marked by the opening of the Eye Hospital and the Orthopædic Hospital to students for practice, which now took their place with the other hospitals and the Borough Lunatic Asylum for teaching purposes. The requirements of professional knowledge are thus amply rendered accessible to all who desire them.

CHURCH CONGRESS.

At the neighbouring town of Wolverhampton the assembly of the Church Congress excites a large and widespread interest. From a medical point of view the profession may be congratulated on the fact of the Mayor of Wolverhampton belonging to their ranks. The dignity of his office has been well represented in the reception given to the members of the Congress, and by the appropriate manner in which he has shown that the position of the two callings are united in the pursuit of the highest and best works.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NO AMBULANCE.

AN inquest has been held on the body of a miner who died in a few hours after admission to the Durham County Hospital, having been severely crushed by a fall of stone during his work; he sustained a fracture of the thigh and compound fracture of the left leg, and also fracture of the left arm. When admitted, the house surgeon, Dr. Collinson, found him in a state of collapse. It appeared that at the mine, there being no ambulance carriage at hand, he was placed on a stretcher in a coal cart, a mode of transit rather slow and rough for such injuries, the coal mine being several miles from the hospital. The coroner and the jury, however, seemed to think it a light matter, and that the unfortunate man had suffered no injury from the journey.

POPULAR LECTURES.

The season of popular lectures has set in here, and our professional brethren are well to the front in this matter, as they generally take up subjects which they well understand. Dr. Robertson of Newcastle gave an interesting and most instructive lecture last week on "Life in South Africa." Dr. Robertson was well qualified for the task; he possesses a full knowledge of the country from prolonged residence there, and it is no wonder that he was frequently applauded by a critical audience, who fully appreciated the abilities of the lecturer.

Newcastle-on-Tyne, Oct. 4th.

A YOUNG man has died at Hamilton from injuries received about a week previously while playing in a football match.

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EDINBURGH.

(From our own Correspondent.)

THE SALUBRITY OF EDINBURGH.

THE water of Leith, a small tributary falling into the Firth of Forth, and traversing in its course some of the western districts of the city, has been for some years a source of annoyance and discomfort to the inhabitants of the localities through which it flows on account of its greatly polluted nature. This pollution has been shown by Professor Crum Brown and Mr. Reid to be in some part due to sewage contamination, but to a far greater degree traceable to waste products of manufactures finding their way into the river. It is alleged that this is especially true of the refuse material from paper works, where vegetable matter is allowed to ferment in water tanks to separate the fibrous constituents, just as is done in the preparation of flax. The water from these tanks, loaded with organic matter, and still in a putrescent condition, is allowed to enter the river in its higher reaches, and is by no means rendered pure and odourless before its flow through the city. Along its course the river deposits banks of mud, consisting chiefly of this organic matter originally in suspension in the water, and these mud banks left exposed in summer drought are a source of great annoyance. The Corporations of Edinburgh and Leith have at length, after repeated warnings, decided on taking legal measures conjointly for the abatement of the nuisance; and although this decision on their part has been met on that of the manufacturers by a strong protest in the form of a circular setting forth the "harassed and handicapped" condition of the British paper trade, it seems now certain that the matter will be pressed forward, and the nuisance, which has for long been a clamant evil, finally and completely removed.

THE WINTER SESSION.

The winter session will open two weeks hence, when a further advance in the number attending the University is expected. The preliminary examinations in general education now in progress are taken part in by nearly 400 candidates, an increase on the usual numbers at the autumn preliminary examination.

THE TEACHING OF AGRICULTURE.

Professor Wallace, of the Chair of Agriculture, is on his return voyage from India, whither he proceeded some months ago with the intention of becoming acquainted with the agricultural condition of that country. Every facility has been afforded him in his researches, and it is understood that his object has been fully realised. The materials now at his command will doubtless prove of much value in increasing the scope of his course of instruction, and enabling him to prepare students for a much wider area of usefulness than has previously been the case.

Edinburgh, Oct. 4th.

ABERDEEN.

(From our own Correspondent.)

ABERDEEN UNIVERSITY.

THE winter session commences on the 19th inst., and the preliminary examinations will be held on Monday, the 17th, and Tuesday, the 18th of October, commencing at 10 A.M. each day. A meeting of the General Council will be held in Marischal College on Wednesday, the 12th inst., and one of the items of business is a motion by Professor Struthers "that the Committee to watch over legislation affecting the University be reappointed." The office of Lord Rector of the University becomes vacant this year, and the Senatus have resolved to recommend to the University Court that Saturday, November 12th, be fixed as the most suitable day for the election of Lord Rector.

AMBULANCE LECTURES.

Mr. W. Leslie Mackenzie, M.A., lately delivered five lectures on Ambulance Work to railway servants. The lectures were illustrated by diagrams, apparatus, and specimens from the Surgical Museum, all placed at the disposal of the lecturer by Professor Ogston. The instruction was made as practical as possible. The attendance was very large, but divided into small classes. Each man had practical instruction in bandaging, the application of splints, &c. Mr. Dingwall, A.M., another medical student, delivered a similar course of lectures to the men engaged in one of our large quarries. Here also the instruction was as practical as possible, and the men entered into the work most enthusiastically. This work of ambulance instruction is carried on under the auspices of the Aberdeen Ambulance Association, and it is intended to hold classes during the winter in most of the large manufactories and works in the city.

Aberdeen, Oct. 4th.

DUBLIN.

(From our own Correspondent.)

KILKENNY.

SOME time since the services of Sir Charles Cameron as analyst for Kilkenny were discontinued, although his salary only amounted to £5 a year. At present there is a good deal of sickness in certain parts of the town, principally diarrhœa, which has been attributed to the water obtained from the pumps being contaminated with sewage. The Corporation are thinking of having the water analysed, and will have to pay a fee of two guineas for the same; while for the salary of £5 Sir Charles Cameron was bound to perform any number of analyses that might be required. Besides, it is not every medical practitioner who is sufficiently skilled in this particular branch to be able to analyse a sample of water, and it must not be forgotten that the cost of procuring the necessary instruments would amount to a very considerable sum. It follows from this, that should the Corporation require an analysis of the suspected water to be made, they may be obliged to obtain the services of Sir C. Cameron, the eminent analyst for Dublin.

THE DUBLIN DEATH-RATE.

The Public Health Committee of the Corporation of Dublin have had under consideration the excessive mortality in certain districts of the city, and have adopted the following resolution on the subject:—"That the attention of the dispensary doctors of Nos. 1, 2, and 3 North City, and Nos. 1, 2, and 3 South City, be directed to the very excessive death-rate in their districts, especially in No. 1 South City, where it reached 41·8, and in No. 2 South City, 52·24; and to request them to report if they can point out any cause for this excessive mortality, and whether it occurs in the infant or adult classes." The epidemic of measles, which has existed for months, during the last few weeks has shown a marked diminution in the mortality from this disorder.

The death is recorded of Dr. William Daxon, F.R.C.S., late resident medical superintendent of Ennis district lunatic asylum.

PARIS.

(From our Paris Correspondent.)

DR. BROUARDEL ON TYPHOID FEVER.

DR. BROUARDEL, who represented the French Faculty at the International Hygienic Congress recently held at Vienna, delivered a very interesting address on Enteric Fever. In referring to the etiology of the disease, he stated that whatever be the primary origin or nature of this affection, it is now certain that it may be propagated through the following principal agents: drinking water, the air which we breathe, the soiled linen of typhoid patients, and through the hands of the nurses attending them. These means of propagation, he added, have long been recognised, but they were hypothetical, whereas now it is possible to assign to each of these agents its proper position in the genesis of the disease, drinking water being the principal vehicle of the germs of typhoid fever, for in ninety-nine cases out of a hundred the cause has been clearly traced to it. Thus it may be seen that, whether the disease owes its origin to the decomposition of organic matter or to a specific virus, it will be easy, by

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appropriate means, to render epidemics of enteric fever, if not impossible, at least extremely rare.

In connexion with this subject, I may mention that during the epidemic of typhoid fever which recently prevailed at Belvès, four bottles filled with water drawn from fountains of the town were forwarded to the Academy of Medicine. This water was subjected to chemical analysis by two eminent chemists attached to the Academy, who found an exaggerated proportion of the chlorides and of organic matter. Dr. Chantemesse made a bacteriological examination, and found the bacillus of typhoid fever in the water of one of the fountains.

FURFUROL IN ALCOHOL.

At the meeting of the Academy of Medicine of last week M. Bacchi read a note on the importance of the purification of alcohol for drinking purposes. According to the author, all alcohols employed for the manufacture of spirituous liquors contain furfurol in variable quantities, and consequently are more or less injurious. To remove this furfurol it is necessary to distil the alcohols according to Bang's procedure, which he considers the only effectual one, in which case the alcohol only produces the phenomena of ebriety without any convulsifying symptoms. M. Bacchi, however, omitted to inform the Academy as to the nature of Bang's method. A description of furfurol was then given. It is met with particularly in the alcohols of grain, such as oats, rye, and barley. It is obtained by the action of sulphuric acid on oatmeal or on bran, or, better still, by the action of sulphuric acid on a mixture of sugar and starch, with binoxide of manganese. It is a colourless liquid, becoming rapidly brown under the influence of the air, and it possesses an odour recalling at the same time that of the oil of cinnamon and that of bitter almonds. When it is administered to animals in a dose of a few cubic centimetres, its toxicity immediately becomes evident; one observes almost instantaneously tetanic symptoms and genuine attacks of epilepsy, whilst the respiratory movements become slackened and are soon completely arrested. These experiments throw a great light on the pathogeny of alcoholism, and furnish the explanation of certain contradictory facts tending to admit a semeiology differing according to the country in which alcoholism is observed. In Ireland and in Scotland, for example, one frequently observes in acute alcoholism attacks of epilepsy; whereas in France these accidents are noticed only in drinkers of "absinthe," "bitters" (a liqueur), and "vermouth." This is owing to the fact that in these countries the workpeople and peasants drink not only alcohols of grain, but also the residue left by these alcohols after distillation. What is now known of alcohols of industry explains the toxic action of the greater part of brandies and of rum delivered for the consumption of the public. All these spirituous liquors are alcohols by a sort of irony termed *supérieurs*, more or less adroitly aromatised. Drs. Laborde and Magnan have made combined researches on the toxicity of alcohols termed *supérieurs* and of *bouquets artificiels*, the results of which have been recently communicated to the Society of Public Medicine and Hygiene, and may be summarised as follows: In 1869 the proportion of alcoholic patients admitted into the asylums of the Department of the Seine attained, of the total of all admissions, including children and epileptics, the proportion, already very high, of 26 per 100 for men and 5 per 100 for women. At the end of the siege of Paris and of the Commune the admissions into the Sainte-Anne Asylum rose to 48 per 100 of alcoholics; then there was a fall from 1872 to 1875; the annual average oscillated between 17 and 19 per 100, to rise again at the end of the latter year. In 1886 the average rose to 25 per 100, and the first half of the year 1887 gave an equally large proportion. With reference to liqueurs and bouquets, these investigators remark that liqueurs were formerly the product of the distillation of the alcohols of wine, holding in dissolution aromatic substances, whereas now manufacturers simply add essences and sugar to alcohol, more or less rectified. The liqueur termed "absinthe," which frequently contains salicylate of methyl, produces, besides ebriety, with loss of sensation and of motion, veritable attacks of epilepsy. I cannot here give an account of all the liqueurs referred to in the communication of Drs. Laborde and Magnan, but will conclude with their just remark, that the distillateurs are largely responsible for the physical, intellectual, and moral degeneration of the populations resulting from the products employed by them.

Paris, Oct. 4th.

THE SERVICES.

Deputy Surgeon-General Bradshaw, at present in medical charge of the Northern District at York embarked in the *Euphrates* troopship on Wednesday last for service in India.

Deputy Inspector-General John Caldwell, R.N., died on the 29th ult., at Hartfield-road, Wimbledon, in the fifty-ninth year of his age.

WAR OFFICE.—Army Medical Staff: The surname of the Surgeon-Major whose promotion to the rank of Brigade Surgeon was notified in our issue of the 24th ult., is MacAdam, and not as therein stated.

INDIA OFFICE.—The Queen has approved of the retirement from the Service of the undermentioned officers of the Indian Military Forces:—Brigade Surgeon David William Trimnell, Madras Medical Establishment (dated Aug. 1st, 1887); Surgeon-Major William Nolan, M.D., Bombay Medical Establishment (dated Sept. 24th, 1887); Surgeon-Major Francis Jones, Bombay Medical Establishment (dated Sept. 1st, 1887). The undermentioned officers have been granted a step of honorary rank on retirement:—Brigade Surgeon James Champion Penny, M.D., Bengal Medical Establishment (dated June 3rd, 1887), and Brigade Surgeon David William Trimnell, Madras Medical Establishment (dated Aug. 1st, 1887), to be Deputy Surgeons-General.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Charles Morton has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated September 27th, 1887). Fleet Surgeon James Nicholas Joseph O'Malley has this day been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. The following surgeons have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet:—Charles Albert Macaulay, M.D., and Christopher Pearson, M.A., M.D. (dated September 30th, 1887).

The following appointments have been made:—Staff-Surgeon C. A. Macaulay to the *Constance*, and Staff-Surgeon Christopher Pearson to the *Gannet*, reappointed on promotion (dated Sept. 30th).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Northumberland Fusiliers: Surgeon T. Stainthorpe resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the battalion on his retirement (dated Oct. 5th, 1887).

Obituary.

FRANCIS OGSTON, M.D.

BY the death of Dr. Francis Ogston, at the advanced age of eighty-four, which occurred at his residence at Aberdeen on the 25th ult., one of the few remaining links that bind the present with the early part of the century is removed, and the connexion with the foundation of the Medical School at Aberdeen, so far as living representatives is concerned, is entirely snapped. Born in Aberdeen, Dr. Ogston received his early education in that city, and subsequently studied medicine at Edinburgh, where, in 1824, he took the degree of M.D., and became a Licentiate of the Royal College of Surgeons. In 1832 he was appointed Lecturer on Medical Jurisprudence in Marischal College and University, Aberdeen, and in 1857, when that lectureship was converted by the Crown into a professorship of Medical Logic and Medical Jurisprudence, he was elected to the post. On the union of King's and Marischal Colleges in 1860 he was transferred to the same chair in the University of Aberdeen, the duties of which he continued to discharge down to the time of his retirement in 1883. He was therefore a teacher in the University for half a century, and was for a quarter of a century professor both of Medical Logic and Medical Jurisprudence. Dr. Ogston acted for a long period as police surgeon; for several years he held the office of Dean of Faculty; and for two separate terms he represented the Senatus in the University Court. Subsequently to his retirement, the University to which he had been so deeply attached, and which he had served so well, conferred upon

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him (in 1885) the honorary degree of LL.D. Dr. Ogston contributed several papers on medico-legal and pathological subjects to various British and foreign journals.

DR. JOSEPH MEYER.

ON the 25th ult., at Berlin, the Geheim-Medicinal-Rath, Professor Joseph Meyer, died at the age of sixty-six. He died, indeed, at his post as director of the Royal University Polyclinic. No Berlin physician enjoyed a higher reputation than he among his professional brethren and the general public. He first became favourably known as assistant physician to the late Professor Schönlein, at whose death he was called to fill the onerous position of directing physician of the Charité-Krankenhaus. On the death of Professor Romberg he succeeded that able pathologist in the superintendence of the University Polyclinic, and discharged its duties with exemplary skill and success till his decease. Some years before he had been nominated Professor Extraordinary in the University, and in the course of last session he was promoted as Geheim-Medicinal-Rath, a high professional honour. The lay journals of Berlin associate themselves with the medical in deploring the loss of an eminent citizen as well as of a valuable professional adviser.

Medical News.

SOCIETY OF APOTHECARIES.—The following gentlemen having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates to practise as Licentiates of the Society on Sept. 19th:—

Yunge-Bateman, Marcus George, Folkestone.
Beaumont, William Henry, Whaddon, Royston.
Bulst, James Joseph, Pembroke-terrace, Cardiff.
Clarke, Edward Albert, Manchester-road, Denton.
Hemming, John Joseph, Fitzroy-road.
Ledward, Milton Prentice, York-street, Cheetham, Manchester.
Millington, John Perrett, High-street, Wolverhampton.
Spreat, Frank Arthur, Weymouth-street.
Stevens, William Henry Arthur, Droitwich.

The following gentlemen passed the examinations in Surgery held on Sept. 14th, 15th, 28th, and 29th:—

Bell, Walter Whilmarsh, Westminster Hospital.
Blacklock, John, Owens College, Manchester.
Dickson, Herbert Edward Balmain, Edinburgh.
Marsh, Alfred Herbert, Owens College, Manchester.
Mc Oscar, John, Middlesex Hospital.

THE Aberdeen Infirmary Jubilee Extension Fund amounts now to £25,140.

PRECAUTIONS AGAINST TRICHINOSIS.—Small quantities of pigs' meat coming from Poland into Silesia are now examined at any of the toll stations at a fee of 6*d*.

THE measles epidemic in the Hebrides is still spreading, and during the past few days has assumed rather serious dimensions.

IT is reported that in the course of the interesting excavations at Pompeii, a wooden case has been dug up containing a complete set of surgical instruments, many of which are similar to those used in the present day.

THE FELDSHER SCHOOL AT KAZAN.—The school for feldshers (a lower grade of practitioners) in Kazan is about to undergo some modifications, a department for training female feldshers being added.

GUY'S HOSPITAL MEDICAL SCHOOL.—The entrance scholarship in Arts, of 125 guineas, has been awarded to Mr. Richard L. Wason; and the entrance scholarship in Science, of 125 guineas, to Mr. Alfred Theodore Rake.

AT a meeting of the Sanitary Committee of the Newcastle Corporation on the 28th ult., it was decided to adhere to the arrangement which had been made not to admit patients suffering from small-pox into the new Fever Hospital.

AN outbreak of scarlet fever at the Liverpool School for Deaf and Dumb has necessitated its being closed, the inmates who have not been attacked being sent to their homes. The children affected have gone to the Liverpool Workhouse Hospital.

VOLUNTEER MEDICAL ASSOCIATION.—At a meeting held on Friday, Sept. 30th, the following gentlemen were appointed Surgeon Instructors to the Ambulance Department:—Surgeon J. Edward Squire, M.D., Volunteer Medical Staff Corps; Acting Surgeon W. Pearce, M.D., 20th Middlesex (Artists), R.V.

THE GREAT NORTHERN CENTRAL HOSPITAL.—It is reported that the committee of the Islington Jubilee Fund have paid over to this institution a first instalment of £2000 to enable the Building Committee of the hospital to meet liabilities now falling due without borrowing.

THE NEW HOSPITAL AT HASTINGS.—It is proposed, we understand, to formally open the new buildings on the 13th instant. This hospital is, we believe, the largest hitherto built in England with circular wards, and the opening ceremony will therefore be attended with special interest.

A PROSPECTUS of the various classes to be held during the ensuing six months in connexion with the Young Men's Christian Association at Exeter Hall has been issued. The subjects treated are numerous, and the advantages offered by the Association to young men who possess no friends in the metropolis are beyond doubt most valuable.

MEDICAL ADMINISTRATION IN TONQUIN.—*La Semaine Médicale* has received information that the medical service in Tonquin is wofully defective. In some of the provinces there are no doctors, and combatant officers and even sergeants have to act as surgeons. Again, it is stated that at certain of the stations some important drugs—as opium, quinine, and bismuth—are entirely wanting.

A GENEROUS OFFER.—An offer has been made to the Board of the Manchester Royal Infirmary of a cottage hospital for twenty beds in Hulme. The building will be erected and conveyed to the Board free from all debt, and suitably and completely furnished, provided that body wil undertake the management and the cost of maintenance of the patients when it is completely finished. The matter has been referred to the Infirmary Committee.

UTILISATION OF MILITARY HOSPITALS FOR CLINICAL INSTRUCTION.—Most of the Russian universities suffer from an insufficiency of clinical material in the hospitals connected with their medical faculties. An arrangement has now been made to admit students to the practice of certain military hospitals, the military medical authorities and the university faculties appointing assistants and lecturers in concert with one another.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—The annual distribution of prizes to the students attending the school of this Society last session took place on the 5th inst., the ceremony of distribution being performed by the President, Mr. Michael Carteighe. The inaugural address was delivered by Sir Dyce Duckworth, and the Hanbury Gold Medal for Original Research in Natural History and the Chemistry of Drugs was gained by Brigade Surgeon W. Dymock of Bombay.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this Society (the first meeting after the amalgamation) will be held at the Holborn Restaurant on the 21st inst., at 4 P.M. Amongst the business to be brought forward will be the presentation of the reports of two committees, that, namely, appointed to consider the amalgamation of the several Societies of Medical Officers of Health, and that deputed with the task of considering the proposal to establish a laboratory for the study of bacteriology, and other experimental methods of research. At the conclusion of the annual meeting the sessional meeting will be held, at which the president-elect will deliver an address.

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THE HOSPITALS ASSOCIATION.—The first meeting of the fifth session of this Association will be held at the Library of the Society of Arts, John-street, Adelphi, on the 12th inst., at 8 P.M., under the presidency of Sir Andrew Clark (president), when a paper will be read by Mr. Henry C. Burdett explanatory of the scheme for the formation of a "National Pension Fund for Hospital Officials and Trained Nurses." Invitation cards may be obtained of Mr. Howard J. Collins, Secretary, Norfolk House, Norfolk-street.

THE FRENCH VETERINARY ASSOCIATION.—The Association of French Veterinary Surgeons, which has just met at Bordeaux, expressed an opinion that the inspection of meat ought to be very much more real than it has been. A vote was also unanimously passed expressing the view of the Association that veterinarians ought to be admitted as members of the National and Departmental Sanitary Councils. A vote passed last year at the meeting held at Lille, to the effect that one of the diplomas of Bachelor of Letters or Bachelor of Sciences ought to be compulsory for veterinary students, was confirmed.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADIE, ALFRED A., L.R.C.S., L.R.C.P.Ed., has been appointed House-Physician to the Royal Infirmary, Glasgow.

ATKIN, CHAS., F.R.C.S, L.R.C.P.Lond., has been appointed Honorary Assistant Surgeon to the Sheffield General Infirmary.

BROGDEN, RICHARD W., M.B., B S. Lond., has been appointed Physician to the East Suffolk and Ipswich Hospital.

BULLMORE, W. KING, M.D.St.And., M.R.C.S., has been reappointed Medical Officer to the Falmouth Dispensary.

COCKING, W. TUSTING, M.B.Lond., M.R.C.S., has been appointed Honorary Assistant Physician to the Sheffield General Infirmary.

DUNCAN, ALEX., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

EDGAR, JOHN, B.Sc., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

GRAHME, WILLIAM D., M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

GRANT, DAVID, M.A., M.D. Edin., Lecturer on Materia Medica at the University of Melbourne, has been appointed Physician to Out-Patients at the Melbourne Hospital; and Examiner in Therapeutics, Dietetics, and Hygiene at the University of Melbourne.

HALLAM, ARTHUR, M.R.C.S., L.S.A., has been appointed Honorary Assistant Surgeon to the Sheffield General Infirmary.

HILL, C. M., M.R.C.S., L.R.C.P.Lond., has been appointed Assistant House-Surgeon to the Halifax Infirmary and Dispensary, vice H. Fitton, resigned.

JAMES, ALFRED, M.R.C.S., L.S.A., has been appointed Medical Officer for the Workhouse of the Biggleswade Union.

MCEWEN, HENRY C., B.Sc., M.B., C.M., has been reappointed House-Physician to the Royal Infirmary, Glasgow.

MCLENN, ALEX. D., L.R.C.S., L.R.C.P.Ed., has been appointed House-Physician to the Royal Infirmary, Glasgow.

MILNER, H. TAYLOR, M.A., M.B.Oxon., M.R.C.S., has been appointed Resident Surgical Officer to the Convalescent Hospital at Cheadle in connexion with the Manchester Royal Infirmary.

ORD, FRED. W., L.K.Q.C.P.I., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

PLEWS, PAUL RHODES, L.R.C.P.Ed., L.F.P.S.Glas., has been appointed Medical Officer for the Fourth District of the Bethnal-green Union, vice Defriez, deceased.

PORTER, W. SMITH, M.D.Dur., M.R.C.S., has been appointed Honorary Assistant Physician to the Sheffield General Infirmary.

ROBINSON, HARRY W., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

SHIPLEY, A. E., B.A., has been appointed Demonstrator of Comparative Anatomy in the University of Cambridge.

THOMSON, GEORGE, M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

THORBURN, WILLIAM, M.D., B.S., B. Sc. Lond., F.R.C.S., has been reappointed Surgical Registrar to the Manchester Royal Infirmary.

WATKINS, HAROLD F., M.B., C.M.Ed., has been appointed Medical Officer for the Fifth District of the Mansfield Union.

WETWAN, WILLIAM A., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Bridlington Urban Sanitary District.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM BOROUGH ASYLUM.—Clinical Assistant. Board and residence, but no salary.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary £40 per annum, with board and lodging.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Registrar and Chloroformist. Salary £30 per annum, with an additional £20 if the post is held for twelve months.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C. — Junior Resident Medical Officer. Salary £50 per annum, with board and residence in the hospital.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTON DISPENSARY.—Senior House-Surgeon. Salary £60, rising to £70, with board and residence.—Also Junior House-Surgeon. Salary £50, rising to £60.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer and Local Secretary. Salary £150 per annum, with board and lodging.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Assistant Resident Medical Officer. Board and residence in the hospital.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant. Board, lodging, and washing, but no salary.

ROYAL BERKS HOSPITAL, Reading.—Physician.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Pathological Curator.

ROTHERHAM HOSPITAL.—Assistant to the House-Surgeon. Rooms, commons, and washing, in lieu of salary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Blomfield-street, Moorfields, E.C.—Junior House-Surgeon. Salary £50 per annum, with board and residence.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Physician.

TAUNTON AND SOMERSET HOSPITAL.—Honorary Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

COX.—On the 3rd ult., at Cape Town, South Africa, the wife of J. Herbert Cox, M.R.C.S.Eng., L.R.C.P.Lond., of a son.

MURRAY.—On the 1st inst., at The Parks, Tenbury, Worcestershire, the wife of W. Berkeley Murray, M.D., of a son.

ROSSITER.—On the 3rd inst., at Cairo Lodge, Weston-super-Mare, the wife of George Frederick Rossiter, M.B.Lond, of a son.

WYATT.—On the 30th ult., at Stamford-hill, the wife of W. T. Wyatt, M.A., M.D., of a son.

YOUNG.—On the 26th ult., at Rose Bank, Merton-road, Bootle, near Liverpool, the wife of T. Frederic Young, M.K.Q.C.P., M.R.C.S., of a son.

MARRIAGES.

CARTER—GRANT.—On the 23th ult., at Christ Church, Bootle, Liverpool, by the Rev. A. T. Scott, M.A., Vicar of Tunbridge Wells, assisted by the Rev. F. C. Master, Vicar of the Parish, Godfrey Carter, L.R.C.P., M.R.C.S., youngest son of J. H. Carter, formerly of Leeds, and grandson of the late J. Carter, Banker, of Barnsley, to Harriette Louise, eldest daughter of Duncan E. K. Grant, retired Commander, Royal Navy. (No cards.)

LOWNDS—REED.—On the 5th inst., at Christ Church, Sunderland, by the Rev. C. Wadsworth, M.A., James Richard Lownds, Camb., L.R.C.P., L.R.C.S.Ed., eldest son of James R. Lownds, M.R.C.S., L.S.A., of Newcastle-on-Tyne, to Patty, only daughter of Chas. H. Reed, J.P., Sunderland.

STACEY—HOWARD.—On the 5th inst., at St. Anne's Church, Stamford-hill, by the Rev. J. D. Letts, Vicar, assisted by the Rev. R. L. Allwork, Henry George Stacey, F.L.S., &c., eldest son of Samuel Lloyd Stacey, Esq., of 300, High Holborn, to Mary Josephine Howard, eldest daughter of Joseph Howard, Esq., M.P., of Tottenham, and granddaughter of the late John Eliot Howard, Esq., F.R.S.

WEBB—HAMMOND.—On the 1st inst., at Rotherham Parish Church, William Edward Webb, Surgeon-Major, Army Medical Staff, to Ellen Louisa, eldest daughter of Major Lawrence Hammond, late 90th Light Infantry.

DEATHS.

BUCK.—On the 4th inst., William Rigar Buck, M.A., M.D.Cantab., formerly Honorary Physician to the Leicester Infirmary, aged 39.

CALDWELL.—On the 29th ult., at Hartfield-road, Wimbledon, John Caldwell, Deputy Inspector-General, R.N., in his 59th year.

CHETTI.—On August 31st, at Madras, India (of heart disease), P. Parthasarathi Chetti, M.B., C.M., B.Sc.Edin., aged 27.

MOORE.—On the 23rd ult., at Liverpool, John Percy Moore, M.R.C.S., aged 76.

SIM.—On the 29th ult., at Aberdeen, John Sim, M.R.C.S., aged 84.

WALFORD.—On the 2nd inst., at Argyll-street, W., Robt. Walford, M.B., aged 36.

WHEELER.—On the 2nd inst., at Reigate, Wm. Hy. Wheeler, M.R.C.S., L.R.C.P., aged 34.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, October 6th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 30	29·75	N.E.	46	44	89	57	43	·02	Overcast
Oct. 1	30·03	N.	49	47	70	60	46	·15	Cloudy
,, 2	30·30	N.	54	50	67	57	47	...	Overcast
,, 3	30·36	N.	53	50	79	58	51	...	Overcast
,, 4	30·38	N.E.	54	50	69	59	49	...	Overcast
,, 5	30·34	N.E.	54	52	64	56	50	...	Overcast
,, 6	30·19	N.E.	52	50	...	56	49	...	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

AT LAST!

IT is gratifying to learn that humanity, to say nothing of good taste, has asserted itself at last among a section at least of the fairer portion of the fashionable world. At a conference of ladies held in Bond-street on the subject of dress, it was decided a few days ago that the plumage of small birds should no longer be considered as fashionable trimming for robes or bonnets. Let this decision become accepted by the community in general, and a foul blot on our civilisation will have been removed.

A Medical Muser.—Professor Gamgee, in his work on Yellow Fever (1879), quotes the late Mr. R. Clarke, surgeon to the natives on the West Coast of Africa, who, in a valuable paper in the 1863 volume of the Transactions of the Epidemiological Society, wrote to the effect that yellow fever "is wholly unknown" on that coast. Its prevalence in Africa seems never to have been brought about except by importation through infected shipping. The paludal fever of the West Coast of Africa is different from yellow fever. Yellow fever remains the only disease which in England admits of quarantine, and it is so dealt with purely for commercial purposes. The action taken at the Motherbank station would depend on the statement of the cause of death; and we doubt whether, if yellow fever were recorded as such cause, the authorities would have power to act otherwise than by detaining the vessel.

Mr. Fitzpatrick (Moville).—No, the only methods in use are the removal of the fluid by means of the aspirator or trochar and cannula, and possibly, for purposes of diagnosis, the hypodermic syringe.

J. N. (Cape Town).—The gentleman named has retired from the service.

THE DIETARY OF THE POOR.

To the Editors of THE LANCET.

SIRS,—At the recent meeting of the British Medical Association in Dublin Dr. Lindsay of Belfast read a paper on the dietary of the poor. This subject is a truly vital one, and has had too little attention paid to it—the nation being what its food makes it. Medical men individually can do but little, as advice on the subject is scarcely ever acted upon continuously and systematically. Dr. Lindsay says that the diet of the poor is meagre and insufficient. But this is by reason of its lacking in quality rather than quantity; and to remedy this evil effectually, I can see no way except to make the relative value of our various articles of diet a compulsory subject in all schools, and the elements of physiology also, if not already taught. It is only by beginning at the beginning that we can hope eventually to effect a change for the better in the stamina of our nation.—I am, Sirs, yours faithfully,

Aghot, Sept. 27th, 1887. J. WINTHROP WOODRUFF.

MEDICAL EDUCATION IN NEW ZEALAND.

MR. FRANCIS B. HUTCHINSON, M.R.C.S., &c., in a presidential address delivered recently to the members of the Wellington Philosophical Society, speaking of the present condition of medical education and practice in the colony of New Zealand, remarked as follows:—"It is not possible, with the available anatomical, pathological, and clinical material, that an efficient practical training can be given. Here 'cram' must reign. Hence I believe that the rule lately passed by the Senate, allowing men to graduate in medicine who have had no other opportunities of study than those afforded within the colony, is a mischievous one. The probable result, if carried to any extent into effect, will be that our University will take rank, as regards medicine, with those of the Western States of the Union, known as 'one-horse.' I trust the obnoxious rule will be rescinded, and in this case I speak with the more confidence as I do not express only my own opinion, but that of the members of the Medical Congress lately held in this city."

Ashton Street.—Under the fifth section of the 6 & 7 William IV., c. 89, a coroner is not only enabled, but required, to refuse fees for medical evidence given at his court in the matter of "persons dying in any public hospital or infirmary, or in any building or place belonging thereto or used for the reception of the patients thereof, or dying in any county or lunatic asylum, or in any public infirmary or other public institution, whether supported by endowments or by public subscription"—that is to say, that in such cases the medical officer whose duty it may have been to attend the deceased person as a medical officer of such an institution shall not be entitled to fees or remuneration. The late Bill is merely a consolidating one; it was passed with a view to further enactment of alteration and reform in a subsequent session. It leaves untouched the question referred to in the letter of our correspondent.

SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—With reference to Mr. Donnellan's explanation as to the primary cause of sea-sickness, might I ask why the "contents of the stomach being shaken about" should make the "food act as a foreign body"? Are not the contents of the stomachs of those persons who lead active lives daily "shaken about" in either their avocations or amusements? We do not hear of hard riders across country being specially liable to sickness of the stomach, nor is emesis, as far as I know, common in the hunting field, though I should say that the stomach recognises little difference in the motion conveyed to its contents in these cases from that which it experiences on board a large steamer in a heavy sea. Then if the nausea was due to the food acting as a foreign body, why should it not cease when the foreign body is effectually removed by vomiting, as its stay in the stomach can hardly have been long enough to have set up an irritation which would outlive its removal? It cannot have escaped Mr. Donnellan's notice that the remedy which he instances to prove his theory of "gastric irritation" (a mustard leaf or other counter-irritant) is often of similar value where the vomiting is due to cerebral causes. I do not venture to explain the cause of sea-sickness, but I do think from a fair experience of this complaint that its causes are more cerebral than gastric, and I certainly believe that the theory as to the disturbance of the circulation in the semicircular canals is as tenable as any yet advanced. I am, Sirs, yours faithfully,

Stratford-on-Avon, Oct. 3rd, 1887. S. A. L. SWAN, M.D.

To the Editors of THE LANCET.

SIRS,—I was somewhat surprised to see Mr. Donnellan, in THE LANCET of Oct. 1st, upholding the antiquated theory of "shaking about of the contents of the stomach" as a cause of sea-sickness. He does not, however, make any attempt to explain how the motion of the vessel is communicated to these contents. Even if he had succeeded in this, that would not throw any light on the fact that sea-sickness is most common when the stomach is empty, and not at all uncommon in nervous people when sailing upon a smooth lake or river. We have definite proof of nervous apprehension being the initial factor. Now this will not produce "shaking about of the contents of the stomach," though I see no reason, arguing from analogy, why it should not cause an inefficiency of the pyloric sphincter. At any rate, if there be any mechanical derangement, this is as likely as anything else. With regard to the brain, probably there is first anæmia, then congestive hyperæmia produced by the vomiting, and in long voyages this is likely to be a more or less permanent cause for the incessant sickness.

I remain, Sirs, yours very truly,

October 4th, 1887. J. RUSSELL HARRIS, M.D.

THE PRESYSTOLIC MURMUR.

WE have received several letters on the subject raised by Dr. Dickinson in a paper now appearing in our columns. We reserve the publication of the communications until next week, when Dr. Dickinson's paper will have been completed.

M.S.—As the case is represented by our correspondent, we think he would not be justified in giving a certificate.

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HOLIDAY AMENITIES.

Enquirens.—Our correspondent has three courses before him—either to appropriate the case, or to share the fee, or to hand over both the patient and the fee to the ordinary medical adviser. The last course is the kindest; but there would be nothing unreasonable in the second. We do not like the first. The fact that a man on his holiday has a partner who is not acceptable to his patients does not entitle him the less to the consideration of his professional neighbours.

De Lunatico Inquirendo.—1. Our correspondent may receive one idiot only into his house without a licence. The patient must be under order and two medical certificates, copies of which must be sent to the Commissioners in Lunacy.—2. There is no book to guide a practitioner intending to start an idiot asylum. A licence for such an institution would probably only be granted to an applicant who had had some experience in the treatment of insanity and diseases of children; and not then unless it could be shown that there was need for such an institution in any particular district. The new Bill awaiting enactment proposes to make legal the admission of an idiot to an asylum under one certificate.

Dum Spiro Spero is referred to an article in the Students' Number of THE LANCET, published on Sept. 3rd last.

THE "DOECKER" PORTABLE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—As sole agents for Doecker's Patent Portable Houses, and after communicating with the manufacturers, we take the liberty to call your attention to the unfairness you have allowed to creep into an article entitled, "Ducker Portable Hospital," in your issue of the 17th ult. We are sure that you cannot have been aware how misleading the article in question is to the public, and we feel equally confident that you will do us justice by publishing the following remarks.

It was Doecker's (not Ducker) Patent Portable Houses that obtained the prize at the international competition for ambulance barracks which took place at Antwerp in September, 1885, under the auspices of the Red Cross Society of Geneva, the prize consisting of a gold medal and £200 offered by the Empress of Germany, a gold medal having previously been awarded to the Doecker Hospital Huts at the Hygienic Exhibition in Berlin, 1883, and presented by H.I.M. the Empress Augusta to Captain de Doecker. We do not wish to enumerate the awards the Doecker Patent Portable Houses have obtained; suffice it to say that they have taken the highest prizes wherever they have been in competition, and that the imitations which have sprung up are sufficient proof in themselves of the superiority of the original Doecker Hospital Huts. The Ducker Portable Hospital, described in the article referred to, is a close imitation of the original Doecker Patent Portable Houses; but the amount of air-space has been curtailed. Taking the latter into consideration, an original Doecker Portable Hospital for the same number of beds will be about 5 per cent. cheaper than its imitation. The agents of the company making the Ducker Hospitals have tried all means to drive Doecker's Patent Portable Houses out of Berlin and Paris without result, and they are evidently anxious to make a similar attempt here. We enclose full particulars of Doecker's Patent Portable Houses, also copy of a letter from a hospital authority to Mr. Trier, the latter formerly the representative of the manufacturers in London, and apologising for thus far trespassing upon your valuable space,

We are, Sirs, yours very truly
(*pro* Banner Sanitation Co.),
A. B. HUBERT, Manager.

Northumberland-avenue, W.C., Oct. 1st, 1887.

HOSPITAL APPOINTMENTS IN BUENOS AYRES.

To the Editors of THE LANCET.

SIRS,—The post of house-surgeon to the British Hospital at Buenos Ayres was advertised in THE LANCET a few weeks ago as being vacant. Applications were to be sent to a firm in London (acting as agents) on or before September 30th. I sent in my application on September 23rd, and it was returned, the agents saying that they had received directions (not from the committee of the hospital) to do so, as so many applications had been sent in. I had taken a good deal of trouble about the appointment, and as I have some very influential friends in Buenos Ayres I thought I stood a good chance of getting it. I think that the application should have been submitted to the committee of the hospital. I should be obliged if you would publish this.

I am, Sirs, yours faithfully,
Sept. 30th, 1887. M. C. M.

*** We have received another letter to the same effect.—ED. L.

A QUERY.

To the Editors of THE LANCET.

SIRS,—I have a patient, an interesting lad of eight, the son of a collier, who two years ago had a very severe attack of scarlatina, and, as the result, lost both eyes and became completely deaf. He has now forgotten most of the words he knew; but in all other respects he is a strong, healthy boy. I shall be exceedingly thankful to any reader of THE LANCET who could inform me whether there exists in this country any institution where this boy, who is absolutely deaf and blind, could be received and taught.

I am, Sirs, your obedient servant,
Oct. 5th, 1887. B.

HOLIDAY COLONIES.

THE movement for sending poor children from large towns into the country or to the seaside during the holidays in "colonies" is making considerable progress in France. The society established by M. Gréard has provided for 600 Paris children, and this year a small "colony" has been taken from Bayonne to Saint Jean de Luz for three weeks with excellent results. According to M. Delvaille of Bayonne, the average increase in weight was 1·039 kilog., in height 6 millim., and in chest measurement 12 millim. Under ordinary circumstances the increase in weight would have been only 250 grms. M. Delvaille points out that it is during the holidays that the children are most subject to all the evil and unhygienic influences of their homes, which are he thinks much more serious hindrances to their health than even intellectual overwork.

In doubt.—1. No; the consolidated pay is supposed to cover hotel and travelling expenses. Of course, a medical officer travelling in India on duty obtains a railway warrant from Government.—2. Medical officers of the Indian Medical Service are supposed to do duty with the native troops when on military service. A considerable proportion of medical officers are engaged after a time on civil duties.

THE NAVAL MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—If a naval executive officer wishes to refresh his memory and keep himself in touch with the various improvements, alterations, &c. in the subjects of gunnery or torpedo practice and theory, he may, with the approval of the Admiralty, pass through a short course on board one of the ships established for the purpose. Now, a naval medical officer has no such facilities afforded to him in his special branch; and, as a rule, however anxious he may be to keep up with the times, he is absolutely unable to do so. A surgeon may be appointed to a naval hospital for fifteen or eighteen months after serving two commissions of three years and a half to four years each in some out-of-the-way parts of the world, during which time his practice has been of the scantiest description, usually one type of disease prevailing. He is then called upon to treat a hundred or two hundred cases of general medical and surgical diseases or injuries, after almost a blank, as far as his profession is concerned, of seven or eight years. Of course, he may endeavour to keep up his knowledge by reading the medical journals and new works; but reading without the chance of applying the principles taught is at best a thankless task. What I would suggest is that a surgeon should be allowed, if he desire it, to attend a London hospital or other recognised medical school for a short period, say, three or six months, at any time after he has served six years. The time so spent to count as full-pay time, on the condition that as soon as convenient after its expiration the medical officer should pass an examination which should prove that the time so spent had been to the benefit of the service. If he fail to pass, the time should be counted as half-pay. I feel confident that this suggestion (perhaps modified in several ways), if acted upon, would prove a great boon to those medical officers of the navy who do not wish to degenerate into mere machines of routine, and who really desire to do their duty efficiently to the service and their country.

I am, Sirs, yours truly,
Oct. 2nd, 1887. SURGEON, R.N.

HERPES AND VACCINATION.

To the Editors of THE LANCET.

SIRS,—If the following case be deemed of sufficient interest, I should be glad if you would insert it in THE LANCET.

C. F——, aged nine years, came to me early in September suffering from herpes costalis, which I treated with hot bathing and zinc ointment, and which was quite cured by Sept. 9th. On the 13th I revaccinated him, and on examining the arm on the 20th inst. I found there was a distinct and typical crop of herpes surrounding the arm for about three inches above and the same distance below the vaccine vesicles. It would appear that the irritation of the vaccination had brought out this fresh crop; and though only in the immediate vicinity of the vesicles these latter were quite ordinary, seeming not to be in the least degree altered by the herpes.

I am, Sirs, yours faithfully,
Montague-place, E., Sept. 20th, 1887. CHAS. J. THOMPSON, M.R.C.S.

A NEW METHOD OF VENTILATION.

A CORRESPONDENT asks for the address of Messrs. Young and Moss, which we have unfortunately mislaid.

ERRATUM.—In line 15 of Dr. Peter Hood's letter, published last week, page 682, for "the oyster preparation of the London Pharmacopœia" read "*creta* preparata of the London Pharmacopœia."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Suckling, Birmingham; Dr. Cox, London; Mr. Wells, Nottingham; Dr. Hugh Thomson, Glasgow; Dr. F. A. A. Smith, Cheltenham; Dr. Owen Travis, Crewe; Mr. Luff, London; Mr. S. Paget, London; Dr. J. C. Renton, Glasgow; Mr. Forshaw, Bradford; Miss Docwra; Mr. C. W. Cathcart, Edinburgh; Mr. P. Kent, Bromley; Mr. H. W. Freeman,

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Bath; Sir T. Longmore, Netley; Mr. G. Steell, Manchester; Mr. F. C. Turner, London; Mr. F. Treves, London; Dr. J. Weaver, Southport; Mr. S. Lee, Barking; Dr. Russell Harris; Mr. J. M. Shah, Junagadh State; Mr. H. Webb; Dr. J. Harley, London; Messrs. Warren and Co., Bristol; Mr. Borham, Fulham; Dr. W. Squire; Mr. Anderson Critchett, London; Mr. S. R. Lovett, London; Mr. Neatfield, Old Trafford; Mr. J. Clark, Edinburgh; Mr. Deut; Messrs. Robertson and Scott, Edinburgh; Dr. R. P. Harris, Philadelphia; Dr. Coode Adams, Hampstead; Dr. Hutchinson, Scarborough; Messrs. Parkins and Gotto, London; Mr. Poynter, London; Messrs. Glendenning and Co., London; Dr. Stricker, Frankfort; Mr. Feeny, London; Dr. Fly Smith, London; Dr. Swan, Stratford-on-Avon; Messrs. Allen and Hanburys, London; Mr. A. E. Hubert, London; Messrs. Wertheimer and Co., London; Dr. J. L. Steven, Glasgow; Mr. C. Ford, Hong Kong; Mr. Stannard, London; Dr. J. Oliver, London; Mr. Radcliffe Crocker, London; Mr. J. Milner, Hayes; Dr. Hassall; Mr. Hurry Fenwick, London; Mr. W. H. Kesteven, London; Dr. Samuel Sloan, Glasgow; Mr. J. H. Walters, Reading; Mr. J. Weaver; Dr. Ogier Ward, Tottenham; Mr. Groves, Dorchester; Dr. Coghill; Dr. Mark Long, Ludlow; Mr. J. M. Richards, London; Dr. Watson, Bournemouth; Mr. Aveling, Chelsea; Mr. Hilliard, Aylesbury; Mr. Durant, London; Mr. Bigg, London; Mr. Latty, Kensington; Mr. Mashen, Sandown; Mr. Clarke, London; Mr. Collins, London; Mr. Barrett, Chichester; Mr. Briggs, Cambridge; Mr. Hine, Caine; Mr. Randall, Windsor; Mr. Smith, Stafford; Dr. Stanley, Edinburgh; Mr. Gibbs, Rotherham; Dr. Muirhead, Edinburgh; Mr. Parnell, Bournemouth; Mr. St. Dalmas, Leicester; Mr. M. Morris, London; Mr. Dransfield, Penistone; Mr. Harness, London; Mr. Culleton, London; Mr. Oldham, Monsol; Dr. Phillips, Bilbao; Mr. Elliot, Carlisle; Messrs. Austin and Son, Clifton; Mr. Leikershafen, Homburg; Messrs. Christy and Co., London; Mr. Hope, London; Mr. Hulme; Mr. Labban, West Bromwich; Mr. Scott, Manchester; Mr. Man, Bradford; Messrs. Epps and Sons, Leeds; Messrs. Dingwall, Boston; Messrs. Keith and Co., Edinburgh; Miss Nicholay; Mr. Robinson; Mr. Hall, South Shields; Mr. W. A. Frost, London; Mr. Bennett, Liverpool; Bones; M. C. M.; M. S.; A. B., Derby; C. S.; Nitro-glycerine; De Lunatico Inquirando; A. B. C., Notting-hill; Medicus, Nottingham; Surgeon, R.N.; X.; Seaside; A Medical Muser; X. Y. Z.; B.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Norman Kerr, London; Mr. J. Dickinson, London; Messrs. Reynolds and Co., Leeds; Mrs. Powne, Chard; Mr. Blair, Leeds; Messrs. Pocock and Co., London; Mr. Greenwood, Liverpool; Mr. Birchall, Liverpool; Mr. Paine, Worthing; Mr. Lyons, Worcester; Mr. Gayley, Tipperary; Mr. Webb, Bury; Mr. Mawson, Bradford; Mr. MacIntyre, Consett; Dr. Woakes, London; Dr. Knowles, Barnsley; Dr. Dawson, Bournemouth; Mr. Fletcher, Northwich; Mr. Dixon, Northampton; Mr. Hornbrook, London; Dr. Godson, Folkestone; Mr. Davis, Worcester; Mr. Spencer, Barnes; Dr. Phin, London; Messrs. Bush and Co., London; Dr. Winslow, London; Mr. Webster, Shepherd's Bush; Mr. Hazel, London; Mr. Reed, Sutherland; Mr. Stenhouse, Glasgow; Mr. Jones, Boddern; Mr. Brown, Tredegar; Mr. Collins, Kirkham; Dr. Padley, Swansea; Mr. George, Oxford; Mr. Hoop, Ravensbourne; Mr. Greenhalgh, Bury; Miss Forrest, Nottingham; Deaconess Townson, Chester; M. N. P. Q.; H. F., Barnstaple; W.; Fellow; L.R.C.P., Tredegar; Spes; E. M. A.; P. H.; C. J.; C. H., Cranleigh; T.; M.B., Stourbridge; Medicus, Bristol; Neurosis, Birmingham; G. J. A., Sheffield; W. S., Keighley; M. N., Camdentown; S. C.; G. B., Kingussie; S. H., Dublin; F. A. A.; W. T., West Brighton; Clavicle, Liverpool; Medicus, London; M.B.; Forceps, Hyde; Dr. W., Darwen; Perdrix; Medicus, Northampton.

Educational Times, Westerham Herald, Warehousemen and Drapers' Trade Journal, Washington Evening Star, Illustrated Sydney News, Women's Suffrage Journal, Horticultural Times, &c., have been received.

Medical Diary for the ensuing Week.

Monday, October 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, October 11.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. J. Gordon: Scavenging, Disposal of Refuse and Sewage.

Wednesday, October 12.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
HUNTERIAN SOCIETY.—8 P.M. Dr. J. Braxton Hicks: (1) On the Intermittent Contraction of the Uterus in Pregnancy as a Means of Diagnosis. (2) A case of Inversio Uteri.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. P. H. Gosse: Twenty-four New Species of Rotifera.—Mr. C. R. Beaumont: Observations on the Metamorphoses of Amœbæ and Actinophrys.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M.—Specimens will be shown by Dr. Granville Bantock, Mr. Lawson Tait, Dr. Robert Barnes, Dr. Mansell Moullin and others. Dr. J. St. Clair Boyd: Pseudo-Hydramnios.

Thursday, October 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, October 14.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Prof. W. H. Corfield: Sanitary Appliances.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Handford: Pemphigus, Peculiar Affection of the Cicatrices, Arsenical Pigmentation, with Case.—Dr. Lediard: Case of Recovery from Bullet Wound of the Liver.—Sir Dyce Duckworth: A case of Pulmonary Arterial Reflux.—Mr. Treves: Case of Cephalhæmatoma, with extensive Ossification of the Cyst Wall.

Saturday, October 15.

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Introductory Address

DELIVERED AT THE

OWENS COLLEGE, MANCHESTER,

At the Opening of the Medical Session 1887-88,

BY SIR JAMES PAGET, BART., F.R.S.

I WISH to speak on the utility of scientific work in the practice of medicine and surgery; not in the sense of using, for the purposes of practice, all the medical scientific knowledge that has been acquired, but in that of using, after a scientific manner, all the opportunities which practice affords for the acquirement of more knowledge. In our calling careful practice and scientific study should be inseparable; they always may be so; and I want to urge that everyone of you should be, to the full measure of his ability, a scientific student both now and all his life-long. I have seen enough to make me sure that they who, whether they know it or not, do their work after a scientific manner are the best practitioners, and contribute most to the general increase of knowledge. Although, therefore, as I have said, my chief object may be to urge the use of science for gaining fresh knowledge by the study of what may be observed in practice, yet I would have it always understood that whoever will thus work will be all the more useful to his patients, whatever kind of practice he may be engaged in.

I shall not attempt to define "science" or "scientific." Like many of the most useful words in our language, they do not admit of any exact brief definition. What I mean by them may appear as I go on. Many of you are beginning, others have lately passed through, what are especially called your scientific studies, or the scientific part of your curriculum. I could wish that they were not so called, for it seems to imply that the studies following them are not scientific; and to some minds it implies that the studies which are called scientific are not useful—both of which are serious errors. For, to any of you who so choose, clinical study, whether in your pupilage or in your practice, whether in hospitals or in private, may be made as scientific, in any fair meaning of the word, as either chemistry or physiology; and to those of you who so choose the studies of the first two years of the curriculum may be made very useful in after life.

Whether these first years' studies are the best possible, or too many or too few, I shall not now discuss. I have spent too many hours on this question in other places to be willing to spend minutes on it in this. You must take the scheme of education which senates and councils have devised for you and do your best, and you may be sure that, when you have done your best, you will be far more fit for what is next to come than you are now. For, in all these first years' subjects, things are to be learned which, though they may be erroneously called "the foundations" of those to be learned later, are yet of great importance for the understanding of what is to follow. You may learn in them methods of study and the use of instruments for observation which are of the highest utility; and if you will work earnestly at them, these studies will supply a very good training for that scientific method of study which ought to be associated with all the work of your after life. It is, I believe, by this early cultivation of a scientific mind, even more than by the facts which they may teach, that these earlier subjects of medical study may achieve their greatest good. The teaching and continued study of these subjects will be the work of a few, and a constantly decreasing proportion of these few will be engaged in practice; but this makes it the more necessary that the scientific mind and method, the love of knowledge and of the means of gaining it, may abide in all those who take to the life which is called practical, and which may be scientific and is best when it is so.

Now, the first, and certainly in student life the only, safe means for becoming scientific in our profession is the training of the mind in the power and habit of accurately observing facts. Medicine and surgery are eminently a science of observation; deductions from facts are always unsafe; I believe that they have done far more harm than good; and, for the most part, when sufficient facts have been collected and arranged, the general conclusions that may justly be drawn from them are nearly manifest. The main thing for progress and for self-improvement is accurate observation. Some seem to think it easy to observe accurately—they cannot doubt, as they say, the evidence of their senses. There are few greater fallacies. In scientific studies the evidence of the senses needs as much cross-examination as any evidence given in a criminal trial. Self cross-examination it may be, but it must be steady and severe. For by accurate observation we must mean not the mere exercise of the senses, not the mere seeing, or hearing, or touching of a thing, with some levity of thinking about it—we must not mean even the keenest use of the eye cultivated in microscopic work, or of the ear hearing sounds that to the uneducated sense would be inaudible, or the use of the finger with the most refined detective touch. All these higher powers of the senses you must acquire by careful study and practice, and you must learn to exercise them with all the attention with which a strong will can direct and watch them; but even all this, difficult as it is, is only a part of scientific observation. This must include, besides, an habitual constant watchfulness, the taking notice of all the conditions in which objects or events are found; their concurrence, their sequences, their seeming mutual relations, all their variations. To do this, and to do it again and again, and with constant care, whether it be in things occurring naturally or in experiments—to do this accurately and always is really very difficult. A few seem to have the power naturally; there are some born naturalists, some born physicists; you have had some here; but in nearly all men, and, you may safely believe, in yourselves, the power to observe accurately needs careful self-training, self-suspicion, and self-discipline.

If accurate observation were easy, how could we explain the oversights and the errors of which the evidences abound in the whole history of medicine, and which, I think, every one could find in a retrospect of his own work? Look at the history of discoveries. As a general rule, every discovery of things that can be observed tells of previous oversight or want of observation. Some discoveries, indeed, have followed quickly on the invention of improved means of observation, or on the advancement of knowledge clearing away some previous obscurities. These, it may fairly be said, could not have been made much sooner; but of far more it may certainly be said that the discoveries in each generation are evidences of the oversights, the defective or erroneous observations, of men of previous times—even of the best of them. Take some leading instances. All the facts which enabled Jenner to discover vaccination were within the range of his predecessors; they saw and heard of them, but they did not observe them; they all overlooked them, except the one farmer who vaccinated his children, but could not persuade others to follow his example. All the sounds on which Laennec established his system of auscultation were within the hearing of previous generations and of his elder contemporaries; many had heard them, but they did not listen as he did, and they did not observe the conditions in which the different sounds occurred—how each coincided with some diseased process or change of structure in the heart or lungs. All the facts by which Hunter was guided to his operation for aneurysm might have been obvious to other surgeons of his own and lately previous times. They did see them; they did not carefully observe them. I need not multiply examples. Look at any discovery of this or last year, and think whether it might not have been made in the previous year or some years ago; and when you find that it might have been and was not, though men of excellent ability were within reach of it, then you may feel that accurate and complete observation is a really difficult thing, and that for the fulfilment of your duty, whether to science or to your patients, you must cultivate the power of searching and observing with all your might.

I have been more than usually impressed with these thoughts after lately looking through many of my old case-books, and finding in them evidences of more oversights and errors of observation than I had imagined myself guilty of; and though I might console myself by the examples of the distinguished men who did not discover vaccination or the

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use of auscultation and did not improve the treatment of aneurysm, yet it made me think that, as an act of penitence, I ought to try to make amends by warning some who are beginning such work as I have so failed in. For instance, among my records are those of nearly all the post-mortem examinations which I made nearly fifty years ago, when I was demonstrator of morbid anatomy at St. Bartholomew's Hospital. They are full and tedious; but the evidences of oversight and of errors in observation are many. I find, for example, complete and full records of the examinations of typhoid ulcers of the intestines; and they are regarded as illustrations of the typhus fever then supposed to be prevailing. Many others were thinking the same, many had thought so years and years before; but about the same time Sir William Jenner not only saw such ulcers, but accurately observed them, and he observed all the conditions with which they alone coincided, and he proved that they were characteristic of a fever essentially different from typhus. In the same records I find long descriptions of the morbid changes in different forms of venous and capillary embolism, but I wholly overlooked and missed their meaning till it was discovered by Virchow and my own pupil Kirkes, and by others more observant than myself. I saw all these things; they accurately observed them; they studied the associated facts; and embolism, which had been destroying healths and lives for ages in secret, was at last discovered.

Do not let me seem to suggest that I deserve credit for having seen these and other like things as if for discoveries for which others have been honoured. Far from this, these are evidences of that very oversight which I want to persuade you to avoid. It is a shame rather than honour to have seen a thing and not observed it; to have been within reach of a scientific truth and not have grasped it.

But, it may be said, these are examples of discoveries made in large fields of observation, and needing long and careful research among many cases; these are not within reach in ordinary practice. Look, then, at some simpler instances. Not a year passes but someone describes a disease of which we had no previous record—a spondylitis deformans, or some new form of myxœdema, an osteitis deformans, or some new manifestation of tubercle or cancer; it matters not what—a novelty. And the first case is thought unique, strange, and, by some, not much worth thinking of; but soon similar cases are found here and there, and the new disease seems hardly rare. I will not say that no new diseases ever appear. I have long maintained that they do: but they do not come among us on a sudden, and we may be certain, whenever a case of a new disease is observed, it is not the first that has occurred or the only one existing; similar cases have been overlooked, they have been within sight and have not been observed. And without doubt there are similar examples of oversight among us still. For example, a distinguished pathologist in Paris has lately described a disease which he names "acromegalie," with singular enlargement of the bones of the face and hands and feet. I cannot suppose that this disease is limited to France; it must, I think, be among us as well; but, so far as I know, no Englishman has yet observed it. Well, I blame no one unless it be myself; I want only to show by facts like these that it is very difficult to observe accurately, and that if you are to do your whole duty, either to your patients or to science, you must now and always study and practise the right methods of scientific observation.

I wish that the arguments for this were only in the oversights, the mere defects of observation. Unhappily the errors illustrated in all the history of medicine, and in much that is still in progress, are very numerous too. Facts, when not quite overlooked, are too often seen and recorded erroneously. I would not speak of such errors without a confession of having contributed to them, or without the fair motive of wishing to urge the best means for avoiding the like of them. For remember that many of them were made, or are being made, by men as honest as we are or ought to be, and as fairly in the pursuit of knowledge.

It would need some volumes to relate all the sources of error in scientific observation. I will mention only one, for I think it is the most frequent, and I should like you to be always watching against it. It is the habit that we have of inserting something of our own, something of our beliefs, of our expectations, nay even of our wishes, into that which we think or say that we observe. We expect facts or events to agree with what we believe that we know, and we make light of the differences and exaggerate the likenesses; we take no thought of what we call accidental exceptions; we think them unmeaning—as if anything in nature could be without meaning,—and we do not half observe them. In philosophy we can separate things from thoughts, the object from the subject; but in ourselves and in ordinary life they are mingled in every act of consciousness and reflection; and sometimes it is only by careful self-analysis and by habit studiously gained that we can separate them and observe simply and accurately.

There is a very common proverb that "seeing is believing," and many, as if trusting it, say, "I must believe what I see." It is often unwise to do so; for the sight, without the aid or control of other senses, is often fallacious. But there are many in every walk of life who, when they say "I believe what I see," might just as fairly say, "I see what I believe"; and these, though they are usually in the wrong, are usually the most positive in their assertions. They believe what they wish, and then they see what they believe; and then they become unable either to see or to believe anything contrary to their wishes—anything contrary to what they call their clear convictions. Well, as a man may see an unexpected likeness of himself in a caricature, so may we all see a defect of our own exaggerated in people such as these. We are all apt to see what we expect to see; to think that the knowledge already gained is so sure that that which is next to come must exactly agree with it. Our safeguard must be in careful scientific study, in the habit of observing without prejudice and with self-distrust, always remembering that everything brought within the range of human knowledge is brought within the much wider range of human error.

And here let me add that, however much the mechanism and other external helps for observation have of late been improved, our mental powers have not increased in the same degree; we are in ourselves as likely to observe erroneously as were our predecessors; in this sense we are not wiser than our fathers. It may even be doubted whether the improvements in the means of observing be more than in proportion to the much larger field and the more minute facts within reach of which we have been brought. It is comparatively easy now to see and do many things which used to be difficult or impossible; but it is not, therefore, easier to see and do new things. The higher we rise on the hill of knowledge the steeper and the more difficult does the ascent become. And we are not yet near the summit: it reaches up to Heaven.

I might speak of many means of helping ourselves in the cultivation of the power of accurately observing, such as reading—which is, perhaps, of all the most important,—and of drawing, collecting specimens, and many more; but I will speak of only one, which is far too often neglected. You will find it, I think, essential to scientific accuracy that you should have the habit of recording very carefully your observations and all the chief facts connected with them. No one should wholly trust his memory in such things; it may lose the facts, or, worse still, may gradually alter them; for, as belief and expectation and other mental states can affect the impressions which we derive from things even when they are present before us, so and much more can they affect those which we try to reproduce in memory. The self is here alone in all its fallibility.

I have heard a very truth-loving person say that if he had ever told the same story ten times he always became doubtful whether he was telling it rightly. You may do well to remember this when you are telling cases. You know the game in which a story is handed on through ten or more persons, and then there appears very little likeness between that told by the first and that told by the tenth. None of them have wilfully changed the facts, but everyone has been a little inaccurate, and the inaccuracies have accumulated. There is some measure of the same difficulty of exact representation of facts by each person's own memory, and we cannot too carefully guard against it. Inaccuracy, it has often been said, has done more harm than falsehood has; and this is certainly true in our own sciences.

Now there can be no better safeguard against these mischiefs than the habit of making studious and careful records of the things that you observe. It should be a constant habit of student life. It is good to make notes of lectures, but better far to write down descriptions of at least some of your own dissections, and of post-mortem examinations, and of cases; and, let me earnestly add, these records should be made whenever and as completely as they can be while you have before you that which you are to

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describe, so that you may write down the very facts that you are observing, and may revise them whenever you have a chance in the presence of the same or similar facts. *Ad naturam delineavit* used to be a common inscription on portraits and other such works of art. I wish that *ad naturam scripsit* could more often be justly put upon our scientific records. We ought to be able to have it written on the covers of our note-books, and on all our descriptions of pathological changes; and our records should be full, like finished *ad naturam* portraits made by one who has looked again and again at that which he is painting, not like mere pen-and-ink sketches made after a glance or two and then swiftly put in.

I hope I shall not make your future studies seem utterly hateful to you by thus speaking of them as if they were only full of pitfalls and occasions of mischievous error. Really there are none that you may not avoid; but you cannot be too cautious; so I shall continue my advice, for most of us need to be still more careful when in our studies we pass, as we always do, from observing to thinking, and to what we believe to be reasoning. John Hunter, it is reported, used to say to those who would draw conclusions rather than search for facts, "Don't think; try." Happily for science he often did not observe the rule; he was one of the very few who could really sometimes think a truth far beyond that which could be observed; but we are not all like him, and for all of us the saying is an excellent one, "Don't think; try." Do not suppose that you can safely think what must follow from what you know; try whether it is so. Do not think that you can safely explain what you observe by any hypothesis or theory; and that having thus explained it, there is no need of studying it further. Collect new facts, and "try" your theory by them; and if the theory and the facts do not agree, stick to the facts; they will accumulate into larger truths. We must have theories, or explanations as they are called, of many of the facts which we observe. We need them to help us to the best ways available for arranging the facts, as we need bookshelves for books; and they are useful for suggestions as to what, and where, and how to search for new facts. But here, or hereabout, should be the limits of their use; and the using of theories for purposes beyond these is full of danger, and often a great hindrance to progress.

As one looks back on the relations between the collection of facts in practice and the explaining of them in accordance with the theories which were in successive times accepted, and which were commonly called "general principles," and regarded as safe guides in the treatment of disease, we may fairly doubt whether the gain or the loss were the greater. You will see that in each successive generation every fact observed in practice was accepted, not merely as a fact, but rather as an illustration of some pathological doctrine of the time. Mercury was, at different times, an antiphlogistic, a depurative, an alterative, and I know not what besides; harmless words if they had not been used as facts; but because it was thought, not known, to be all these and more, it was so misused and did so much harm that it nearly lost all its just repute, and many disused it. Similarly, bleeding was practised in excess, not so much because of the good it sometimes did, as because the physiology of the time seemed to prove that it must be useful in a large number of conditions in which it was not. And because this was deemed sure, men overlooked the evidence that it was often useless and sometimes mischievous; they did not observe; they preferred thinking, and they thought erroneously, and were guided by their thoughts more than by the facts. Now, these were errors of men as honest and as clear-headed as any in our own day, and among them were some to whom medicine owes great help to progress. Surely, it should make us very cautious. I have cited old historic errors, but exactly similar modes of thinking are everywhere prevalent, exactly similar fallacies in letting doctrines rather than facts serve as our guides in practice. And we need the more caution because this assumed power of explanation is so much more attractive than the gathering of facts. The explanations are so much more our own; like very parts of ourselves; so much more impressive; they sound so learned, patients admire them; some, I have often thought, would rather have their maladies explained than have them cured.

I feel, again, that it may seem as if I thought of you all as entering on a course of study in which there would be only the misery of doubts and failures. It will not be all this. With due caution there may be great happiness as well as great utility in a life full of scientific observation. But it is impossible not to feel in oneself and to see in others how great is the risk of error, how great the risk of utter waste of time in anything but careful study; not to see how an error once begun becomes much more dangerous when we put thoughts into words; and then the words, as if with right, assume the force of facts, and then become guides to ourselves and others, even when we have the care of human lives entrusted to us. And, too surely, the further men pursuing scientific knowledge go from facts, the wider and the pleasanter become the ways of error to those who do not watch and guard every step they take. It is not in the religious life alone that the allegory of the ways is true; equally in science "straight is the gate and narrow the way that leadeth unto" truth, "and few there be that find it." In both alike he that will may find the way; and in both alike he may do well to remember a saying of Faraday, who lived, with equal earnestness, both the religious and the scientific life. Faraday said: "The education which I advocate has for its first and last steps humility."

I said just now "he that will"; I have spoken of the methods of scientific study, of its machinery; but, it may be asked, what is to be the force? what the driving power? It must be each man's will, by whatever motive stirred; when the will is wanting the most perfect scheme is useless; and let me take a privilege of age, and say to the much younger who are here as students that this will must be used and cultivated now, and from first to last, and that the will is even much more important at first than at last; for at last will becomes habit, as certainly for mental as it does for muscular uses. You know this well enough, for every exercise of the limbs, for every kind of athletic dexterity; the movements which required at first the constant force and direction of your will become at last so easy that you are scarcely conscious that the will is engaged in them. It is nearly the same with mental work; but for this, equally or even more, the will must be rightly and earnestly exercised during the whole of student life. Such as the student is, such will be the practitioner.

I have put in print an anecdote of Mr. Abernethy which bears on this; and let me say he ought to be remembered not as a rough wit or a mere eccentric, but as a man of rare sagacity, an admirable surgeon and teacher, and one of the most graceful scientific writers of his time. Entering his lecture-room at the beginning of a session, he looked round at the crowd of students and said solemnly, "Good God! what will become of you all?" Many years afterwards I tried to find an answer to such a question; tried in the dullest way—by statistics. I traced the careers of a thousand of my pupils. I need not give the numerical results; but the general and certain rule was as I have said: such as the student had been, such was the practitioner. There were some few exceptions, but the general rule was clear; and so you may be sure it always will be. So, if you are to be hard-working scientific practitioners, as I hope you will be, you must be hard-working scientific students; you must be always learning for yourselves; always observing, recording, collecting truths; searching for new truths as well as accepting those which you will be told by your teachers. And let me say again and again this will be the best way by which you may become as good practitioners as you possibly can be, and may go on in practice constantly becoming better and constantly acquiring fresh knowledge for others as well as for yourselves.

Often when I have been urging these things I have been told that in ordinary practice there is no time for observing or recording anything useful for science; and that, even if there were time for it, the cases are such as cannot be usefully studied.

Well, as to time, I hope you may all be overwhelmed with practice, and then you will be able to illustrate what I believe is usually true, that none find so much time to spare as they that have too much to do and do it with all their might. And as for the cases, I must admit that a very large number of the cases in private practice cannot be studied minutely or fully enough to yield useful knowledge; and certainly the practitioner may often look with envy on the physiologist, who can choose his study wherever novelties are most nearly within reach, and the renown of discovery may most easily be gained. Still, if there be only a mind for the work, any sort of practice will supply materials; science is possible anywhere and everywhere, even in small country practices. There are evidences enough of this around us; or, if great examples are needed, Jenner was in such a practice when he discovered vaccination, and

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it was no chance discovery, but the outcome of very careful analytic observations. Koch was a country practitioner in Silesia when he first showed the plant-nature of a specific morbid poison. Mayer was a poor country practitioner when he began his marvellous work on the correlation of forces; and nine-tenths of the honour due for the discovery of anæsthetics must be assigned to ordinary dentists, who worked without knowing it after a sort of scientific fashion. But you need not be ambitious for discoveries equal to those. Good will be done both to yourselves and to others by the observation and careful record of single rare cases or groups of cases of almost any kind, for literally nothing that is published is now lost.

I need not speak of the radiation of knowledge from scientific centres, such as you have here; it is diffused as far every year in all such meetings as those of the British Medical Association and of its numerous branches; further still, it is carried on and on by our medical journals; and from these, those admirable helpers of all good progress, the index-makers, with my friend Dr. Billings for their chief, and with Dr. Neale among ourselves, bring everything within orderly arrangement for those who will wisely search books as well as nature.

But, indeed, there are much larger subjects for which general practice, such as, I suppose, most of you will be engaged in, offers by far the best opportunities for study. Take, for instance, that of the inheritance of disease, than which there is scarcely one more important, either in daily practice or in the profoundest questions of pathology. Facts are wanted for its illustration, which none can supply so well as those who are distinctly family practitioners, and can learn the histories of families. Hospital practice is nearly useless for the study of the inheritance of the most important diseases, and consultation practice is, as I know, scarcely better. If one ventures, in a serious consultation, to ask the relatives of a patient anything about consumption, scrofula, cancer, or even gout, the commonest answer is at once, "Oh, nothing of the kind has ever happened in our family," and the answer is often given as if one had suggested suspicions about the family respectability, as if one had asked whether the father of the family was really an honest man. The facts are either not known, or they are willingly forgotten; and, in any case, negative statements of this kind are nearly valueless. Most persons know what their parents died of or suffered with, and some will tell; but very few can tell much of all their grandparents, and I have only found two who could tell me anything useful about the illnesses or deaths of more than two of their six or eight great-grandparents. Yet from any of these, to say nothing of still more distant ancestors, a tendency to any disease may have been inherited, and may determine the characters of any illness in the inheritor. It is common to see in a person still living a likeness in form or face to the portrait of some remote ancestor; and not rarely it is a likeness which seemed to have been lost in the intermediate generations. But likeness in external features is not more transmissible than are likenesses—whether in shape or in other properties—in any other part: as in liver, stomach, heart, blood, or lungs. We can see the one likeness more easily than the others; but there is no reason or probability that one manner of inheritance should be more frequent or exact than another.

I can see no better hope of gaining facts on these points than by the knowledge which may be gradually acquired by practitioners who, by their personal knowledge, or by record or careful inquiry, can tell what have been the prevalent diseases of members of the same family, or of families intermarrying, during two or three or more generations. Doubtless the knowledge thus gained will be incomplete, but it will be better than any we yet have or are likely to gain by any other means; and its importance in pathology cannot be overstated.

I said just now that negative evidence as to the inheritance of disease is useless; but I should have added that this means only the evidence of patients and their friends. The negative evidence of family practitioners might be very useful; it would be so, for example, if it could tell what proportion of children and of grandchildren do really escape a disease which can be transmitted. Suppose a woman dying with cancer. How many of her children living, say, to sixty will not have it? and how many of her grandchildren? I think I can be nearly sure that on the whole very few would, but no one really knows. It might be ascertained by fathers and sons practising together in places where families are apt to hold firm to their homes.

So, too, observations carefully made in private practice might clear up some questions concerning the mingling of diseases. Suppose, for example, that anyone were asked what are the probabilities of life and health in the members of a family of whose four grandparents one had gout, another cancer, another tuberculosis, another chronic rheumatic arthritis? I know no one who could answer. Yet cases of the kind are not rare, and the questions involved in them are very important for practice, for pathology, for life insurance. Every person may be reckoned as one on whom converge liabilities to the inheritance of any or all the heritable diseases from which his ancestors have suffered. Now, do any of them in their transmission and convergence modify or annihilate one another? Are any mutually exclusive? Unless some such change ensues, it is hard to imagine how our population should increase and maintain its working power. Or, again, are any capable of combining as in an organic compound? and what is that compound? Surely here are questions enough for anyone who in the opportunities of family practice will study them carefully and record them. They are among the many questions that can be settled only by facts, and many of you will have the facts within your reach.

I could easily add to the list of subjects for which the ordinary practice of our profession, whether in families or in hospitals, or dispensaries, whether private or in the public service, offers the best possible opportunities for scientific study. Such are the utilities and adaptations of proposed new medicines, the testing of them with much more than usual doubt and patience; the distribution of disease in reference to soil and other local conditions, and many more. Only learn to study after the right manner, and, as all who have had experience in it will tell you, you will find it a source of very rare happiness and utility, and of no harm whatever. There are some, indeed, who would tell you that the scientific man is ill-fitted for anything but science; that he cannot be punctual, business-like, a plain speaker, pious, or I know not what else. It would be difficult to find greater nonsense in any of the books or journals on a modern book-stall. There is nothing that a man may not be at the same time that he is scientific. I would not make light of anything that would hinder you from being business-like; for I should have to admit that I have known more failures in our profession through want of this quality than from the want of any other; more than from the utterest want of scientific or even of good practical knowledge. But the failures were not only among the scientific. Surely I need not say in Manchester that good men of science may be also good men of business; and what may be seen here may be seen everywhere. If a man of science cannot be business-like, it is the fault of his brain, not of his study; he would have been the same in any other pursuit in life. Devotion to science may be combined with whatever is good or evil; but in our profession its associations with what is good are far more predominant, and it may give a good direction to many mental dispositions which are apt to drift into mischief or to folly or to waste of time. But I need not dwell on these. It will be enough if you will bear in mind its utility for those whose lives and happiness will be committed to your care. As long as you live, the more and the better you study, the more you will know, and the more good you will be able to do; and this good will be of the kind that may be most real—the good not only of lengthening men's lives, but of increasing their working power and their happiness. And this is the better. Time is not the best or only measure of the value of life; for now, as distance may sometimes be best estimated, not by space but by the time required to traverse it, so each life, as to its quantity, should be measured, not by years, but by the work done in it. The good that medicine and surgery may do is not half estimated by bills of mortality that prove only an average greater length of life. More good is done by making a larger part of each life more fit for working; and in this may be a measure of utility such as may be unmatched in any other calling. Herein may be your utility; herein will be your duty; herein your grave responsibility.

And one word more. We boast of the progress of medicine and surgery in the last fifty years. We try to tell all the good that it has brought to men. In the next fifty, through which I hope you will all live, the gain will be still greater; for the progress of knowledge is with increasing velocity.

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Now, how much will each of you contribute to this progress? None can tell. But this at least is certain, that you are bound, by plain duty, to do your best to contribute to it largely: even as it is every man's duty to do all the good he can by all the means that can fairly come within his power. And remember always that wherever power is, there is duty; and wherever duty, there responsibility to God and man.

A CASE OF LYMPHOMA AFFECTING THE LARYNX, EYELID, AND CEREBRAL MEMBRANES.

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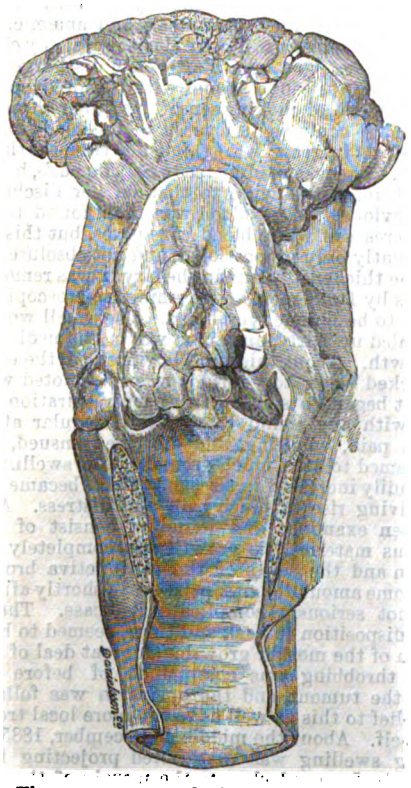
THE following case illustrates in a remarkable degree the truth of the present views with regard to lymphomata—viz, that they are liable to occur wherever lymphoid tissue is present in the healthy state. The distribution of the overgrowths of lymphoid tissue in this instance was peculiar, but apart from this peculiarity the anatomical character of the tumours was not in any way abnormal. Many of the minor clinical details not directly relevant to the main points of the case have been omitted for the sake of brevity. I am indebted to the kindness of Dr. Bristowe and Dr. Felix Semon for permission to make use of the notes taken under their supervision during the period of the patient's stay in St. Thomas's Hospital.

Mrs. B——, aged forty-one, wife of a builder, a small spare, delicate-looking woman, was seized in May, 1885, with sudden vomiting of large quantities of dark blood, fluid and in clots, which continued more or less during three days. She had been confined nine weeks previously, the labour having been natural and easy, but since that time she had had much swelling about the glands in the neck, a sore throat, and some difficulty in swallowing. It appeared that she had been subject to enlargement of glands about the sterno-mastoid muscles on both sides for the last two years. They had sometimes been more actively swollen on the one side and sometimes on the other, but had occasionally almost entirely subsided. One year ago a smart hæmorrhage had taken place, proceeding, as far as the patient's account indicated, from the tonsils. About the same time she had also had an attack of pleurisy, and possibly pneumonia. Her voice had been decidedly weaker ever since, but had never been quite lost. A slight phthisical taint could be traced in the family history on the mother's side, but the patient's own family of five children were apparently free from any signs of strumous or other constitutional peculiarity. There were no indications upon which to found anything more than a conjectural diagnosis of the origin of the blood. General physical examination disclosed nothing abnormal about the abdomen. The urine was natural. The heart's sounds were feeble, but clear at the apex, a faint systolic murmur being audible in the second left intercostal space. The lungs were quite normal. In the pharynx the left tonsil was greatly enlarged and very pale, feeling hard and lobulated to the touch, and with no evidence of any acute inflammation going on within it. The tongue was generally clean, the bowels constipated as a rule, and the appetite very poor. During the first few weeks after the hæmorrhage the patient gained strength slowly, the tonsil diminished in size, but the glands about the left sterno-mastoid muscle became more swollen and very tender. This condition again subsided, but the patient still remained very feeble and anæmic. On June 30th a certain amount of œdema of the subconjunctival tissue in the right eyelid was noticed, but no cause for it could then be made out. On July 9th the patient had sufficiently recovered strength to admit of the right tonsil being excised. The wound healed well in the ordinary way, and she remained in fairly comfortable health, but still with occasionally enlarged and tender cervical glands, for the next few weeks. Seen again in August, the subconjunctival swelling had considerably increased, the eye being nearly closed; the voice was very feeble and reedy, and there was a troublesome short cough. The glands on the left side of the neck were much reduced, whilst one or two on the opposite side had again increased in size. The larynx was examined for the first time since the extirpation of the tonsil, and it was noted that the epiglottis at its free edge appeared to be normal, but immediately below it and to the left was seen a thickening of the tissues resembling adenoid hypertrophy, and involving the lower part of the left side of the epiglottis, the left ventricular band, and to some extent the left glosso-epiglottic fold. This thickened tissue projected into the larynx, and in its anterior part obstructed the clear view of the left vocal cord. The left arytenoid cartilage was to some extent thickened in the same way, and was nearly if not quite motionless on attempted phonation, the cord itself only showing a very faint attempt at adduction. The patient was at this time seen by Dr. Felix Semon, who attributed the fixation of the left cord to a mechanical, and not to a paralytic cause. Shortly afterwards she was admitted into St. Thomas's Hospital under the care of Dr. Bristowe. During her stay of two months in the hospital no very marked change took place. The swelling of the eyelid increased a little in size, and she complained much of a sensation of pain and pricking in the eyeball. The pulse rate as a rule was high, but there was no rise of temperature. She had no difficulty of breathing or of swallowing, but remained very weak and anæmic. Microscopic examination of the blood did not reveal any changes of importance in it. One month after her discharge from the hospital she was seized at times with fits of dyspnœa, and complained much of choking sensations in her throat, but no definite change could be discovered in its condition, except perhaps a slight increase in the thickened tissue at the back of the tongue. She was readmitted to St. Thomas's, her general condition being very similar to that on her discharge two months previously. The blood was then found to contain a slight increase of white blood-corpuscles, but this increase was apparently only proportional, and not absolute. A small piece of the thickened tissue in the larynx was removed with the forceps by Dr. Semon, and examined microscopically. It was found to be simple lymphoma. The small wound thus caused healed up fairly, and there was no immediate return of the growth. About this time, however, till the end of the case a marked inspiratory stridor was to be noted whenever the patient began to speak. Ordinary respiration was not attended with any sound whatever. Irregular attacks of abdominal pain, vomiting, and diarrhœa ensued, and the patient seemed to lose much ground. The swelling of the eyelid steadily increased in size, and the lid became partially everted, giving rise to much pain and distress. A portion having been examined and found to consist of lympho-sarcomatous material, the growth was completely removed by excision and the edges of the conjunctiva brought together. Some amount of erysipelas set in shortly afterwards, but did not seriously complicate the case. The wound showed a disposition to heal, and there seemed to be hardly any return of the morbid growth. A great deal of occipital pain and throbbing was complained of before the removal of the tumour, and the operation was followed by marked relief to this as well as to the more local troubles in the eye itself. About the middle of December, 1885, a small fluctuating swelling was first noted projecting from the middle of the forehead close to the margin of the hair. In other respects the patient remained in about the same condition. In January, 1886, she was subject to several short attacks of faintness and vomiting, without any manifest cause. The frontal tumour increased in size, but was neither red nor tender; being very soft and fluctuating, it was explored with a capillary needle; but no fluid was withdrawn. It gave rise to very little discomfort, the patient only complaining that it ached sometimes. Until the middle of March the patient maintained strength, and seemed to improve; but after that time, without any obvious cause, she suddenly gave way, became rapidly prostrate, could take no food, and died, exhausted and unconscious, on March 21st.

Owing to unavoidable delays no post-mortem examination could be made until the fourth day, when the decomposition was very far advanced (the coffin had already been closed on that account). The tumour on the forehead was found to be a large lymphomatous growth from the under-surface of the dura mater, which had eaten its way completely through the skull, an opening with ragged edges being left in the frontal bone 4½ in. by 3½ in. in extent. The brain beneath, though much compressed, was healthy. In the neck were several masses of more or less indurated glands, some of

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them reduced to hard and almost fibrous material, others being soft and fleshy, but none of them caseous or disintegrated. There was no sign of any fresh enlargement of the tonsils, but the base of the tongue and the left glosso-epiglottic fold were much thickened by infiltration with lymphomatous material. The epiglottis also was thickened and infiltrated on its laryngeal side, the new material having a thickness of a third of an inch below the cushion of the epiglottis. Its free edge, however, was normal. The growth on the left side extended a little over the vocal cord, overlapping it, especially in the anterior third, but not in any way attacking the cord itself. The lymphomatous material, in fact, was limited to those parts in which adenoid tissue normally exists, and was most abundant in and about the ventricle. The swelling thus formed (as will be seen in the annexed woodcut) was not uniformly smooth, but divided by deep and irregular sulci, extending in places almost as far back as to the cartilage. Examined by the microscope, both this tumour and the one on the scalp were found to consist of small-celled tissue, loosely held together by a fine stroma (so loosely as hardly to be coherent in thin sections), and traversed by fibrous septa in places. The bloodvessels in it were small, few, and far



between. There was no marked enlargement of lymphatic glands elsewhere, with the exception of two masses of apparently glandular tissue, much decomposed, close to the spleen. Owing to the condition of the parts their exact relation could not be made out. The stomach and liver were normal, and no source of hæmorrhage could be discovered. The spleen was much decomposed, but not enlarged.

The chief points of interest in this case centre round the singularly abnormal distribution of the adenoid overgrowth. Few, if any, cases are on record of lymphoma affecting the interior of the larynx, and such growths in the eyelid and cerebral membranes are only mentioned in works upon the subject as of possible occurrence. The case, as a whole, may be classed as one of Hodgkin's disease, beginning, as it did, with a chronic affection of the cervical glands, gradually followed by hypertrophy of adenoid tissue in other parts. The clinical history of the disease differs considerably in different cases, its course being sometimes much more rapid and in others much more protracted than in the present instance, in which there would seem to have been a double process going on at intervals, one group of glands being subject to active hypertrophy whilst another was undergoing precisely the opposite change, the whole set occasionally subsiding to almost their normal proportions. The secondary growths also differed considerably in their activity. The frontal growth was rapidly progressive from its first appearance; the palpebral swelling, though steadily progressive, made a much slower advance; whilst that in the larynx remained almost stationary from the time when it was first diagnosed. It should be noted that the operative procedures, both in the eyelid and in the larynx, were quite successful as far as they went, and gave real relief to the patient, and that neither was followed by any return of the growth or by increased activity of the remainder of it. Although removal of swollen glands under these circumstances is forbidden in most of the text-books of surgery, except in cases of dire necessity, it is probable that much temporary relief to pain or even discomfort might be given by operative measures, when the other features of the case point, as in the present instance, to a decided tendency to recovery on the part of the patient. In the more rapid cases the rule of non-interference is no doubt the best, but in the more chronic cases there is often good reason to suppose that the duration of life would be considerably prolonged thereby and the suffering of the patient materially lessened. In the present case there was no very marked anæmia, the blood only showing a comparatively small diminution in the number of red corpuscles, nor was there the tendency to hæmorrhage which is frequently observed in such cases, although the patient was subject to several small surgical procedures involving some degree of bleeding. The painless course of the frontal tumour, eating its way slowly through the frontal bone and giving rise to no more serious symptom than occasional aching, was by no means in accordance with ordinary experience. The pressure upon the brain beneath, although very considerable in extent, was not marked by any positive symptoms, unless the few attacks of faintness and vomiting from which she suffered during the last few months, can be attributed to it. The case therefore forms somewhat of a pathological curiosity, and, as far as the laryngeal part of it is concerned, a decided rarity, but it may have some bearing upon practical treatment, as showing that free removal of such tumours may afford for a time the greatest local and general relief, even when undertaken, in defiance of the ruling text-books of surgery, under circumstances which are not of themselves sufficiently grave to threaten the life of the patient.

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NOTES OF A CASE OF HEPATIC ABSCESS BURSTING INTO BOWEL; RECOVERY.

BY HUBERT A. BURKE,
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G. J——, aged thirty-four, carpenter, complained first of feeling ill on Feb. 7th, 1887, on board H.M.S. *Orion* at Alexandria. The progress of the case is as follows:—

Feb. 7th: Headache for two or three days. Bowels open by purgatives. Pain in abdomen, over hepatic region. Liver chiefly enlarged, and spleen also. Pulse 88; temperature 99·8°; evening temperature 102°, 102·4°, 101·8°. Ordered diaphoretic mixture three times a day.—8th: temperature 100·8°. Tongue furred. Pain at epigastrium on pressure. No sickness. Pulse 80; temperature 102·2°, 101·6°, 101·6°. Twenty grains of quinine ordered.—9th: Bowels constipated. To have an ounce of castor oil. Temperature 100·2°, 100·2°, 100·4°.—10th: Bowels open three times. Tongue cleaner. Still pain in epigastrium. Cannot sleep. Ordered fifteen grains of quinine. Temperature 101°. Tongue furred. Great tenderness at epigastrium. Poultice to be applied to abdomen. A mixture composed of dilute hydrocyanic acid (five minims) and aromatic spirit of ammonia (one drachm), in an ounce of water, to be taken immediately.—11th: Temperature 98·8°. Still pain at epigastrium. Tongue very furred. Bowels confined. Ordered an ounce and a half of castor oil.—12th (noon): Tongue cleaner. Bowels well open. Pain in epigastrium diminished. Pulse 72; temperature 100°. The acid mixture with gentian (one ounce) to be taken three times a day.—13th: Temperature 99·2°. Some pain in epigastrium at one spot. Ordered ten grains of

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sulphate of quinine. - 14th: Temperature 98·6°. Better. Pulse 85. Tongue cleaner. Bowels confined. — 15th: Temperature 98·8°. Bowels not open for three days. To take an ounce of castor oil; also a drachm of hydrocyanic acid mixture three times a day. Evening temperature 99°, 100·6° — 16th (noon): Still pain in epigastrium. Bowels well open. — 17th (noon): Better.—18th (noon): Pain in epigastrium diminished. — 19th (noon): Bowels confined. Ordered a black draught.—20th: Bowels well open. Patient has lost flesh a little. Appetite poor. Has been fed on soups, chicken, rice-pudding, and milk.—25th: Still pain in epigastrium, but general condition improved; so he returned to duty.

This case was considered as one of constipation and dyspepsia, and treated as such. When he went to duty, he still complained of the pain at the epigastrium, and whilst at work he had on many occasions to apply for a purgative, as he always for years had suffered from constipation. He slept fairly well until March 27th, 1887, when he again presented himself to me for treatment.

March 27th: Temperature 101·6°; pulse 110. Skin moist. Complains of great pain in the abdomen. Breath very fetid. Bowels open once after taking a black draught. The following mixture ordered: dilute hydrocyanic acid, five minims; aromatic spirits of ammonia, ten minims; chloric ether, fifteen minims; water, one ounce: three doses.—28th: Temperature 99·6°. Bowels not freely open. To take an ounce of castor oil. Breath still fetid. Low diet. Evening temperature 100°, 100·2°, 100·6°. Still pain in epigastrium, but better than yesterday.—29th: Bowels open; scybala; very fetid. Pain at epigastrium. To apply a mustard plaster to abdomen. Temperature 100·2°.—30th: Temperature 99·6°. On examining the abdomen, there is a hard swelling over the liver, which is circumscribed. No sign of fluctuation to the right of the mesial line of the abdomen below the ribs. Extent ½ in. by 2 in. There is pain on pressure. The general health of the patient is good. He likes his food well. Can lie only on his back. Tongue very foul. Percussion over tumour is dull. Slight bulging of the ribs on right side. Pain on respiration. Short dry cough. Unable to sleep at night. Twenty-five minims of hydrochlorate of morphia to be taken at night. Temperature 100·2°. Bowels constipated. Podophyllin pill (quarter of a grain) given. Bowels open three times; motions very fetid; loose biliary matter, with lumps of hard fæcal matter.—31st: Temperature 99·2°. Swelling very distinct; very prominent when the patient stands up; conical in shape. Liver enlarged. Complains of great pain. Fomentations applied. To take an ounce of acid and gentian mixture three times a day, also to have four ounces of port wine. Restless at night. Repeat morphia.—April 1st: Temperature 99·4°. Swelling larger; hard; no fluctuation; distinct edge around it; pain on pressure; dimensions of whole circumscribed tumour 4½ in. by 3¾ in. Abdomen distended; abdominal veins enlarged. Patient was sick once (bilious matter). Is losing flesh rapidly. Expression of face anxious. Weight of patient 140 lb. Tumour is adhering to abdominal wall, but very slightly. Can lie only on his back; much pain and dragging if he stands up. Bowels not open. Ordered a soap enema. Evening temperature 99·8°, 100·4°, 101°. Ordered low diet, with port wine; also to take acid and gentian as before.—2nd: Temperature 99·6°. Passed a fair night after morphia. Pulse small and weak. Abdomen less distended, as the bowels were well open; had large evacuation of hard fæces, with biliary matter. No sign of fluctuation in tumour, which is getting more conical. Appetite fair. Evening temperature 100·8°. — 3rd: Temperature 99·8°. Swelling in abdomen increased in size downwards. Pulse quick, small. Skin hot. Tongue cleaner. Sleeps after morphia. Distension of abdomen smaller. Evening temperature 101°. Swelling inclined to point in abdominal wall. Skin slightly red. Frequent poultices have been applied to the swelling. Some sense of fluctuation. Ordered a turpentine enema.—4th: Temperature 100°; pulse 104. A very large quantity of scybala, hard and black, evacuated. Swelling now extends to umbilicus; is larger, measuring 5 in. by 4 in. Distension of abdomen gone. Patient says he feels much easier. Urine acid, containing bile, but no albumen. To repeat poultice. Six ounces of wine to be given. Patient is getting very thin; face drawn; expression very anxious.—5th: Temperature 99°. To repeat enema. A large quantity of scybala came away, with some mucus. Swelling more prominent in abdomen; soft; distinct fluctuation; extends upwards to xiphoid cartilage; feels soft in the centre, but hard all round. Urine clearer; contains biliary matter. Repeat poultice.—7th: Soap enema given; a small quantity only retained. Bowels open; motion consisting of small hard lumps of fæcal matter, with a little mucus. 10.20 A.M.: Bowels open again; a large quantity of pus passed, mixed with blood, and having a fetid smell; this gave instant relief to the patient. Swelling soft at one point of abdomen; pits on pressure; slightly glazed; dull on percussion. Six ounces of brandy given. 1 P.M.: Bowels open; more pus and blood passed; at stool twenty minutes; two pints of contents; pan contains urine, a small amount of fæcal matter, and a large quantity of pus and blood. Tumour smaller. Patient is very much relaxed. Temperature 98·6°; pulse 130. Anxious expression of face is gone. Patient much emaciated and very weak from frequent purgation, but is bright and more cheerful. To have six ounces of wine, also soup, milk, &c. Has lost much flesh during the last three days. Ordered half a grain of opium powder, a grain and a half of extract of belladonna, with a sufficient quantity of extract of gentian, every three hours.—7th (noon): Still the same faint sign of fluctuation in swelling, which is much smaller. General condition of patient greatly improved. Takes food well. Not sick. During the last few days the skin has had a slight icteric tinge, also the conjunctivæ. To repeat opium and belladonna; and six ounces of wine to be given. Pulse 104; temperature 99·4°, 100·4°; 100°.—8th (noon): Pulse 124; systolic murmur at apex, probably anæmic. Swelling much diminished; no fluctuation. Bowels open; fæcal matter more normal; some pus and blood.—9th (noon): Doing well.—10th (noon): Better. Swelling very much smaller.—11th (noon): No pain over swelling. Pulse 130. Bowels confined; an ounce of castor oil to be given.—12th: Bowels well open; some pus, but very small amount. Patient better and more cheerful.—13th (noon): Got up to-day for the first time. Diet to be chicken broth with wine. Tonic medicine ordered.—14th (noon): Swelling disappearing. General health good. Bowels confined; castor oil to be taken.—15th (noon): Bowels open.—16th (noon): Swelling smaller and hard. Patient continued to improve in every way; gained flesh and appetite, and the swelling gradually disappeared. On May 1st he went to duty. On April 29th his weight was 146 lb., and on May 31st 155 lb., when there was no sign of the tumour, but merely a feeling of hardness over the part where the tumour had existed.

Patient's previous history.—Has never had any sickness before; no symptom of dysentery at any time. He is well developed. Has not been temperate in drink and has always eaten in large quantities. He has been thirteen years in the navy. He has served only in the Mediterranean, and is now serving at a China station.

Remarks.—The man left Alexandria for Singapore on March 17th and reached here on April 26th, so that he was ill during the whole voyage. Temperature in the sick bay was from 90° to over 100° F.; we had no ice or milk, and everything was against the patient's recovery. The patient came to me on June 6th suffering again from intense pain over the liver, which was evidently a return of his former trouble, and I invalided him home; but the hopes for his ultimate recovery are very small.

Singapore.

ON THE HÆMO-DYNAMICS AND TREATMENT OF CEREBRAL HÆMORRHAGE.

BY LEONARD BRADDON, F.R.C.S.

Is there any situation more hopelessly depressing than the attitude of the physician by the bedside of a severe case of cerebral hæmorrhage? So certain of the diagnosis that he seems able to view the fatal clot through the very skull, perfectly acquainted with the antecedent pathology and the actual mode of operation of the silent force that, as it leaks, destroys, he yet stands helplessly by, the author only of trivial directions, utterances apathetically oracular. From the days of darkness until now no vigorous attempt seems to have been made to deal rationally with an accident that sweeps away thousands of active lives, and the routine of treatment invariably adopted might be designated insignificant, if it were not probably actually injurious. "*Post sanguinis missionem, si non redit motus et mens,*" Celsus wrote,

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"*nihil spei superest.*" This treatment has, after long ages, been discarded; the three last words, however, seem to be impressed upon the profession with all the indelibleness of despair. In this short article I am neither about to attempt to add to the already clear pathology of the question, nor to recapitulate cases and symptoms; but I wish to draw the attention of the profession to certain aspects of the lesion, which, if they have been before studied, have been since neglected, and which afford, as I believe, grounds for the adoption of strong and, there is every hope, successful methods of treatment.

At the post-mortem table the most striking feature in a fatal apoplexy is the comparatively enormous amount of blood poured out and the force which has been liberated. The grey and white matter is ploughed up in all directions, commissures are burst through, and often smaller vessels torn across. Dr. Wilks says the weight of the clot is commonly 3½ oz.,[1] and from these considerations infers that the vessel must be of great magnitude in such cases. But apart from the fact that the miliary aneurysms of Charcot and Bouchard, the most frequent sources of hæmorrhages, are formed on, usually, the smaller twigs, none of the vessels entering the brain substance are of any magnitude; those from which bleeding has been shown to have occurred have been secondary branches of these; and, inasmuch as it is hardly possible for an artery to be torn completely across, in all cases the seat of leakage must be a hole of very inconsiderable diameter. How, then, is such tremendous force exerted that the extravasation can overcome the resistance of the brain substance, which in a fresh brain exposed to a stream of water is evidently considerable, and in a situation where it is uniformly supported by unyielding walls on all sides must be much more?

When a trephine hole is made in the calvaria and the dura is cut, the brain always bulges slightly into the aperture; at any rate, it never shrinks downward on exposure. This shows, and tracings from the fontanelle and from accidentally exposed brains support the view, that the pressure within the skull is certainly not negative; it is probably a good many millimetres positive, although I know of no exact data on the subject. The extravasation then occurs from an arteriole where the pressure cannot be more than, say, ten millimetres, into tissue confined at certainly an atmospheric pressure; and into this tissue it is extruded to the extent of some ounces, an amount which must considerably add to the condensation of the brain substance and the total intra-calvarian tension. Some estimate of the force exerted may be gained from the flattened aspect which, in severe cases, the convolutions frequently present. By artificially effecting such flattening on a fresh healthy brain it might be possible to reduce such an idea to figures, but I have had no opportunity of doing so. However, the pressure happens and has to be accounted for. It is, in fact, a problem in hydro-dynamics. The first drop, outside the first small rupture, represents, in fact, a miniature but perfectly complete hydraulic press—a "hæmostatic" paradox. Surrounded on all sides by solid, communicating with a small tube, in which the heart-beat works like a piston, every impulse in the arteriole increases the extravasation (perhaps widens the inlet); the total pressure in the arteriole at the seat of rupture is multiplied in increasing dimensions by the area of the extravasation, the force of which is exerted in all directions equally. Thus each heart beat, like the force-pump, increases the quantity of fluid in the hydraulic chamber and the destroying force of the extravasation—only the safety valve is a long way down, at the aortic valves. [One would thus *a priori* assert it to be impossible for cerebral hæmorrhage to occur in a case of aortic regurgitation, so perfect is the analogy.] When the pressure in the bleeding leak is multiplied by the superficial area of even a moderate hæmorrhage, it is easily seen that the force exerted by the latter is very great. Supposing a hæmorrhage of 10 mm. in diameter, and a tension in the arteriole of 10 mm., the total extravasating force would be $(10 \times \pi\rho^3 =)$ 3750 mm., or about five atmospheres. These figures may be exaggerated, but they are not probably far wrong. Of course it would not take five atmospheres to tear apart brain tissue *outside*, but within the calvaria the resistance to rupture must be considerably greater. In any event, it is evident (1) that the destructive effect of an intra-cerebral hæmorrhage is due to the hydraulic force of the leakage; (2) that as the disruptive power increases in hydrostatic ratio, every second of time is of paramount importance in treatment; (3) lastly, that there is a hopeful method of treatment.

If the views suggested above are correct, every hæmorrhage into the brain unchecked ought to be, it may be said, inevitably fatal. I believe it to be only an accident, contingent on the manner merely of rupture, that every hæmorrhage into the brain from an arteriole little smaller than one of the perforating arteries is not invariably fatal. But one can imagine that (1) the sources of the smaller hæmorrhages are capillary vessels; (2) that in the case of miliary aneurysms, the redundancy of tissue, and in other ruptures fragments of tissue, or clot, may act in a valve-like manner to prevent further leakage; (3) the tendency to early clotting dependent on general (and perhaps unknown local) conditions is, in cerebral as in any other hæmorrhages, the greatest check and natural safeguard against further bleeding.

Assuming, then, the truth of the theory as to the production of the spreading force of the hæmorrhage, the problems of treatment are how to check a commencing, and how to relieve the symptoms due to a large established, extravasation. Inasmuch as every heart beat is a hydrodynamic force fraught with danger, every pulse restrained is treatment for success. Since blood pressure means blood extravasation, every remedy that will lower it will increase the chances of recovery. On these grounds, it seems that text-books and physicians have all for generations erred alike. The patient is generally directed to be laid low; to be kept cool, or even cold externally; to be fed on little, and nothing warm. Drugs, save purgatives, are decried; narcotics are especially condemned. Now, the horizontal posture, if it lower the frequency of the heart beat, increases the blood pressure within the cranium, the outflow from which gravity, best brought to bear in an upright attitude, especially assists. Cold externally means congestion inside. Starvation and cold food mean foregoing the immense advantage of attracting as much blood as possible to the portal system, and so lowering the supply elsewhere. Narcotics producing sleep, during which the brain is anæmic, could not be certainly injurious; and although of doubtful utility in the presence of better drugs, in their absence opium ought not to be despised; it lowers the blood pressure and relieves the brain. As regards purgatives, they are an open question. Trousseau, in his graphic lectures, alone, so far as I know, has adopted such a plan. He makes his patients sit up, take food, and, if possible, exercise. More important than all in medical treatment should be drugs which lower the blood tension. In nitrite of amyl, nitrites generally, pilocarpine, and other tension-decreasing remedies, we have powerful means of treatment. Warmth to the hypogastrium and the hot bath act similarly. But the simplest, the most potent, the most readily applicable, and yet most ignored remedy of all lies in surgical resource. The lesion consists in hæmorrhage from a distant and unreachable source; the remedy, therefore, is to cut off the blood supply by applying pressure to the nearest main trunk. If the seat of the hæmorrhage is diagnosed, the carotid ought to be immediately compressed upon that side, and the pressure should be kept up for several hours in order to give the ruptured artery time to become obstructed by the formation of a clot. In any case, upon the first symptom of hæmorrhage, this operation should be had recourse to instantaneously. That, if this were done in all cases at the first onset, many grave and fatal hæmorrhages would be checked, I have no manner of doubt. From time to time the pressure might, after the first three hours of continuous application, be omitted, and observation be made whether the symptoms of bleeding continued. If it is impossible to diagnose the side of the lesion, both carotids might, in grave cases, be compressed. If continued pressure cannot be applied efficiently, the carotid ought to be tied. This procedure can of course only completely arrest the bleeding where it proceeds from a branch of the external carotid—i.e., is extra-meningeal. But, in spite of the circle of Willis, it must obviously greatly diminish the force of blood-flow from intra-cerebral vessels, of which there is indeed abundant clinical evidence.

Two or three years ago, when dresser to Mr. Howse, in a case of extra-meningeal hæmorrhage for which he trephined, and in which, after turning out the clot, the bleeding could not be checked, I suggested compression of the carotid with the direct intention of checking it by this means, and

[1] Wilks and Moxon, Path. Anat., p. 229.

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Mr. Howse approved of the suggestion. In that case I kept up, with his approval, constant pressure for three hours, with the result of arresting the bleeding; and this did not recur. The artery ruptured in this case was evidently of large size, judging from the stream sent out through the trephine aperture. Mr. Howse afterwards reported the case at, I think, the Clinical Society: and subsequently Mr. Charters Symonds, in a paper on the Treatment of Extra-meningeal Hæmorrhage, referred to this case, and advocated compression or ligature for arresting uncontrollable bleeding. But I do not know to whom they credited the original suggestion. It is possible, of course, although not recommended in text-books or known generally, that the plan is by no means novel. However, it is a valuable, the only valuable, resource in cases of beginning intra-cerebral hæmorrhage.

The greater problem remains: Is there any treatment worthy of the name for those more severe and so frequently fatal cases to which one is called, to find a comatose patient breathing stertorously and slow, with dilated pupils and a burdened pulse, with distorted features and turgid veins, with rigid or relaxed or convulsive and twitching limbs, and absent reflexes—with, in fact, any or all of the symptoms which indicate a severe and progressing extravasation within the brain? If the side can be diagnosed, the carotid can still be compressed and the hæmorrhage arrested; but what then? With three or four ounces of blood distending the brain substance, and drowning vitality by mechanical pressure, what is to be done? In many cases, without treatment a speedy fatal issue is obvious, and in such any plan which offers a ray of hope is justifiable. Trousseau, in defending his rejection of the bleeding plan in such cases, compares the clot to a foreign body, which cannot be affected by such measures. His analogy is good; but the general implication is not correct. It is not because extravasated blood is a foreign body that cerebral hæmorrhage kills. In the extra-meningeal case of Mr. Howse already referred to (and which I may be allowed to quote since he has published it), upon removing the bone the symptoms were immediately alleviated, the pulse falling, the dilated pupils contracting, the respiration quickening, the convulsions and rigidity (on opposite sides) ceasing. In a similar case reported in THE LANCET (August 20th) the same thing is noted. Immediate relief follows the removal of the bone, and consequent diminution of pressure. It is, in the graver cases, not only the shock, the diffuse effect of the local lesion, but still more the mechanical pressure of the hæmorrhage, that kills. The nerve centres essential to life are not directly bruised, but the great intra-cranial pressure evidently crushes out their vitality by direct vital interference. Tumours, hydrocephalus, abscesses, act similarly; their pressure destroys. Now, if there be any, ever so small, an opening in the hydraulic press, the hydrostatic paradox is destroyed; and if an opening were made into these cerebral hæmorrhages, at least one avenue to death, that by mechanical pressure, would be barred. There is plenty of evidence in apoplectic cysts, chalky abscesses, cured hydrocephalus, and pachymeningitis to show that extravasations which have not killed by pressure may be absorbed in the brain as elsewhere. And in these days of cleanly surgery meningitis need not be feared. Hence it is no heroic surgery to propose that in a case of bleeding, very grave or tending clearly to a fatal issue, the calvaria should be trephined, and a trocar or bistoury or probe plunged into the brain substance to reach the outpoured mass of blood. A way thus opened for its escape, it is probable that some of it would be gradually extruded; at any rate the intra-cranial pressure would be thus relieved; and with the application of a sitting posture, the use of nitrites, compression of the carotid, and the other measures advocated for checking further bleeding, one may hope for a successful issue to the treatment of this, one of the most fatal and hitherto the most hopeless of all the assaults by which death essays to vanquish the human stronghold.

Upton-on-Severn, Worcestershire.

A CURE FOR MALINGERING.—Some members of a Dresden workmen's benefit society, having gone on the sick list on account of pains of a character that could not be diagnosed by the surgeon, and of alleged inability to use the arm as required for their work, were ordered by the club to attend at the factory where they were employed, to sit on a bench during the whole of the working hours, and to look at the men at work. Scarcely any of them held out for more than a week.

SOME REMARKS
ON THE
KIND OF SPLINT MOST AVAILABLE FOR GUNSHOT FRACTURE OF THE LOWER LIMBS
ON THE FIELD IN CONNEXION WITH TRANSPORTATION.[1]

BY R. F. TOBIN, F.R.C.S.I.,
HON. BRIGADE SURGEON, ARMY MEDICAL STAFF; LATE ASSISTANT PROFESSOR OF SURGERY, ARMY MEDICAL SCHOOL, NETLEY.

MY remarks have reference chiefly to gunshot fractures of the hip and the upper third of the femur; and as whoever has had practical experience of the difficulty of giving to such injuries during transport and subsequent treatment that essential condition to recovery—rest—will gladly welcome any suggestion on this subject that may even in a slight degree be helpful, I shall make no apology for occupying attention during a very brief period.

An appliance that will give rest to a fracture in the locality indicated must fix not only the injured limb, but also its fellow and the trunk as far as the thorax. For it is plain that, if the sound leg is left free, the patient will try from time to time to ease his position by means of it, and so tilt the pelvis and disturb the fractured parts; and that even a still greater amount of disturbance will occur if action of the psoas and iliacus muscles is permitted by the movements of the pelvis and lower half of the spine being left unrestrained. It also seems to me desirable that the appliance selected should fix the injured part by being placed behind it, rather than in front or at one side. A Liston's or a Bryant's splint gives immobility as long as it is supplemented by the patient's bed, but, as far as my experience goes, no splint on which the limb does not rest by its own weight, gives satisfactory support when for any purpose the patient has to be lifted. The foregoing conditions are fulfilled by the splint to which Mr. Thomas of Liverpool has given his name, and by that of Mr. Fagan of Belfast, which was brought to the notice of this Section during the Congress of 1881. To the general employment of these on the field, the difficulty of fitting the one and the costliness of the other are obstacles—obstacles not insurmountable, and which, as the instruments are most useful ones, will, I hope, be overcome. In the meantime, let me bring to notice the following appliance, which affords rest and support in a somewhat similar manner, but by means of materials more available on active service. The patient having arrived at the dressing station, where, by whatever name it may be known in different countries, the wounded first undergo a thorough examination, and it having been decided to make an attempt to save a limb fractured as described, I would proceed as follows: Having treated and dressed the wound after the fashion in vogue for wounds in general, the canvas of a stretcher with removable poles is spread upon the ground, and is cut transversely into two about its centre. The following materials are also made ready: (1) Two pairs of trowsers—viz., that of the wounded man and any other obtainable of about the same size; (2) a few strips of blanketing or a few large towels or other material, of a size to go as a binder round the waist and hips in three or four layers; (3) one stone and a half of plaster-of-Paris; (4) three gallons of water; (5) a bucket or other receptacle in which to mix the plaster and water; (6) three yards of calico torn into three many-tailed bandages; and (7) a roll of cotton wadding. The plaster is mixed with about an equal quantity by measure of water, and into the creamy fluid so formed the two pairs of trowsers and the material that is to go round the waist and hips as a binder are immersed. When these have been thoroughly imbued with the fluid, the trowsers are spread out one over the other on the canvas of the stretcher, the forks of the combined trowsers being made to lie a few inches away from and above the division in the canvas, and a many-tailed bandage placed, ready to be tied, under each leg. The material which is to form the abdominal binder is spread, with a many-tailed

[1] Read in the Military and Naval Section of the International Medical Congress held at Washington. Dr. Marston, in the absence of the author, read the above paper, enlarged upon the method of application, and expressed his opinion that it was an eminently practical and original suggestion. A short debate followed, in which several American surgeons took part and made some practical and pertinent observations.

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bandage underlying it, transversely under the waist of the trowsers; and over all a thick layer of wadding is laid. On to the splint thus formed the patient is lowered in such a position that the margin of the fork of the trowsers corresponds to a point two inches and a half above the arms, and that his legs, being immediately over each leg of the trowsers, are about six inches apart at the knees. The fractured limb is held in good position by the surgeon, while two assistants, by tying together the tails of the bandage, bring the splint into close apposition with the posterior surface of the patient's legs, buttocks, and loins, and make the binder encircle the hips and abdomen. As soon as the plaster has set, the poles are passed through the folds in the canvas and the patient is removed. The whole dressing, not including the treatment of the wound and the setting of the plaster, can be applied in less than a quarter of an hour by a surgeon and two skilled orderlies. During the subsequent treatment of the case the canvas of the stretcher is never removed from underneath the patient. When an action of his bowels is about to occur, the poles are put in position, the halves of the canvas are separated, the patient is raised, and a bed-pan passed underneath him. He is lifted in a similar way when his wound requires to be dressed. The situation of this may require that windows be made in the splint and canvas: and in cases where it is apparent that this will have to be done, hoop-iron, if obtainable, should be placed between the trowsers, when first put in position, so as to strengthen the splint under the injured limb.

I regret that (unforeseen circumstances preventing my being present at the Congress) I am unable to show by demonstration how rapidly this splint can be applied and what excellent support it affords. I have not brought it to notice without having first thoroughly tested it by having had it tried on myself in person, and I would strongly urge anyone who may think of using it to do the same. Whoever does so will, I believe, be led to agree in this that, wherever reliable plaster-of-Paris can be obtained, this method of applying it will give very great help in the treatment of a class of wounds than which no others baffle more the skill of military surgeons. Of course the liability of plaster-of-Paris to deteriorate is a great drawback to its use on active service, and it should therefore be tested immediately before being employed. There are also, I know, other objections to its use as a material for splints, but these have force chiefly when it is used so as to surround a limb, and not when it is made to lie against one and take its shape. So employed, it is in my opinion the dressing most available for gunshot fracture of the lower limbs in connexion with transportation.

ON FROTHLESS ALBUMEN IN CERTAIN CASES OF ALBUMINURIA.

BY ROBERT KIRK, M.D. ED., F.F.P.S. GLASG.

IT is not a little remarkable that so striking a phenomenon as the frothing of albumen should have received no attention either from physiologists or clinical observers. The property on which it depends must be intimately connected with the purposes which proteid substances are destined to subserve in the animal system, and it varies in the degree in which it is manifested by different specimens of albumen. In the *Glasgow Medical Journal* for October, 1881, I pointed out the fact that in a few cases of albuminuria the albumen has altogether lost the frothing power, while in a much larger number of cases this property, although not entirely lost, is very much diminished in comparison with that of blood serum. The object of the present communication is again to call attention to these cases, but more especially to record a curious fact which I ascertained last winter—namely, that the more or less frothless forms of albumen appear to consist of a certain combination of serum-albumen and paraglobulin, and that when the latter is precipitated by dialysis or by saturation with salt the power of frothing is again perfectly restored to the albumen.

I first observed this with a watery extract of ox heart, which I had prepared for quite a different purpose. The solution was red, apparently containing a considerable amount of hæmoglobin, and I found on blowing a current of air through it that it was as frothless as water, not a single bubble rising to the surface. Some of it was thrown on a dialyser, and after twenty-four or more hours' dialysis I found, to my great surprise (for the experiment was tried accidentally so to speak), that it now frothed as perfectly as any specimen of serum albumen I had ever seen. There was a large precipitate of paraglobulin, and the mixture had become very viscid and proved difficult to filter. I at once tried the same experiment with a specimen of ropy albumen from an ovarian cyst and with a comparatively frothless albumen from a case of albuminuria, and in both with an identical result. It was even more decided when the paraglobulin was thrown down by neutralising the urine, saturating with magnesium sulphate, and keeping it for twelve hours or longer in a hot-air chamber at a temperature of 100°F. Indeed, merely stirring in a handful of salt was sufficient to produce an immediate and marked effect.

The explanation of this fact is not apparent. In my earlier experiments I had found that the paraglobulin of blood serum frothed nearly quite as well as the albumen, and the serum itself, containing both together, is, as every one knows, highly frothy. I had ascertained also that neither acid nor alkali had any considerable effect on the frothing power, and that neither saturation with salt, nor the removal of salt by dialysis, could destroy it when present. I had not, however, as now, tried the latter two procedures on the frothless forms of albumen, not having the slightest reason to suppose they would exercise any effect on them.

Albumen as it occurs in various exudations has often much less power of frothing than blood serum. I have seen a case of hydrocele serum (second tapping) in which the albumen was as frothless as water. In albuminuria, as far as my observations have gone, I have found that the frothless forms occur in acute nephritis, and generally in the absence of confirmed and chronic renal disease. In any case of albuminuria I invariably regard a deficiency of the frothing power as in itself a very favourable symptom—an opinion which I was led to express in 1881 in the paper above referred to. A case is there mentioned of a patient seventy-five years of age who recovered from severe albuminuria with uræmic symptoms, and enjoyed good health for several years afterwards, and whose urine throughout was nearly frothless. At present I have under treatment a woman of fifty-five years of age who is recovering from dropsy and albuminuria of three months' duration, and complicated with pleurisy, whose urine also, though highly albuminous, has always been less frothy than serum albumen. The experiment of precipitating the paraglobulin has been frequently tried in her case, and has never failed to restore the frothing in a wonderful manner.

To form an idea of the frothing of the urine, it is not sufficient merely to shake it up in a bottle. I have sometimes employed a U-shaped tube, through which air is drawn by an aspirator; but this is too troublesome for ordinary use. It answers tolerably well to put an ounce or two of the urine into a cylindrical jar fifteen or eighteen inches high and about two or three inches in diameter, and to blow a current of air through it by means of a long glass tube conveniently bent. A hand-bellows may be used, but the expired breath answers well, a full expiration giving a tolerably uniform quantity of air in each experiment. In this manner the difference between water, normal urine, various specimens of albuminous urine, and blood serum may be readily demonstrated.

Partick, Glasgow.

ON A NEW METHOD OF TREATING THE VOMITING OF PREGNANCY.

BY WILLIAM DUNCAN, M.D., F.R.C.S.,
ASSISTANT OBSTETRIC PHYSICIAN TO THE MIDDLESEX HOSPITAL.

THE complete and rapid relief which followed the local application of cocaine in the three cases here briefly recorded seems worthy of note:—

CASE 1.—Mrs. W——, aged nineteen (hospital patient), applied on March 11th, saying she "had not been able to keep anything down for the last month." The patient looked emaciated and ill; she was just two months pregnant with her first child. On examination, the uterus was found to be *markedly anteflexed*, and decidedly tender when pressure was made on the cervix. Sims' speculum was introduced, and the whole of the vaginal roof and cervix

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freely painted with a 15 per cent. solution of cocaine, a probe covered with cotton-wool and soaked in the solution being carefully inserted into the cervical canal to the depth of three-fourths of an inch. A dose of peppermint-water was ordered (as a placebo) three times a day. The patient returned on March 18th, saying that *she had not vomited once since taking the medicine.* She has continued perfectly well since.

CASE 2.—Mrs. T——, aged twenty-six, nearly three months advanced in her second pregnancy, consulted me for severe vomiting, which had existed for a month. On vaginal examination the uterus was found to be normal in position, but tender on pressure. The same local treatment was adopted as in Case 1. No medicine was prescribed. The result of the treatment was precisely similar, for the patient did not once vomit after the application.

CASE 3.—Mrs. G. R——, aged twenty-three (a hospital patient), two months and a half pregnant, applied on June 17th for relief from constant vomiting, from which she said she had suffered for six weeks. On examination, the uterus was found to be somewhat anteflexed. The same treatment as the foregoing was adopted, except that no application was made to the interior of the cervical canal. Peppermint-water was taken three times a day. On June 24th the patient stated that she had had no vomiting for four days after her last visit, but that then it recurred, although in a less severe form. Another application of cocaine was made; but this time the interior of the cervical canal to the depth of three-fourths of an inch was painted. On July 1st the patient said that no further vomiting had occurred. She could take her food with a relish, and was feeling quite well.

Remarks.—If these cases be not mere coincidences, we have in cocaine, locally applied, a most valuable remedy for the speedy cure of that distressing condition—the vomiting of pregnancy. It will, however, be necessary, before we are in a position to form a definite opinion as to its efficacy, to apply it in many more cases, and it is in the hope that all who have an opportunity will try this simple remedy and publish the result that I venture to report the above cases. It seemed to me that the *modus operandi* of the cocaine would be to remove the morbidly hyperæsthetic condition of that portion of the uterus about the internal os which is supposed to exist in these cases. It is most interesting to note that in Case 1, where marked anteflexion was present, the vomiting completely stopped without any interference with the flexion. It is evident from Case 3 that in order to obtain the full effect of the cocaine it must be applied to the cervical canal, and herein lies the danger, for a careless or unskilful application might easily produce what is of the utmost importance to avoid—viz., abortion; still, with proper care there is very little risk, as I have many times made applications to the cervical canal during gestation without terminating the pregnancy in a single instance.

Harley-street, W.

CASE OF TRIPLETS, WITH MONSTROSITY.

BY H. J. CLEMENTS, L.R.C.P. & S., L.S.A., &c.

ABOUT Sept. 14th, while doing locum-tenens duty for Dr. Beeby, partner of Dr. Ilott of Bromley, Kent, Mrs. G—— called at the surgery to engage the services of Dr. Ilott, for her approaching confinement, which, as far as she knew, would take place about the middle of October. I saw her on this occasion, and inquired when she last menstruated. Her answer was she had not seen anything since her last confinement, which took place about the middle of January, 1886, and that she became pregnant during the time of suckling, but fixed on the middle of October as the most probable date for her confinement. I took particular notice of her appearance, which was very much drawn, with hollow cheeks and expression indicative of anxiety and pain. She informed me that for some time past she had experienced a grinding pain, and could not lie on her right side, and had sensations quite different from any she had ever felt before.

On Sept. 21st her husband called for Dr. Ilott to come immediately, as his wife was in labour pains. Dr. Ilott, being unable to go himself then, asked me to go for him. I arrived at the house at 6.45 P.M., and found Mrs. G —— in bed in a comatose condition, with little or no uterine action. I was told the liquor amnii had escaped at 3 A.M., but the pains were very slight and wearying all day. On examination, I found the os fully dilated, with the head presenting. I gave her one drachm of a solution of ergot and ammonia in a little water. Some short time after, uterine action showed signs of becoming a little more brisk, but soon died away again. I then discovered the head lower down in the vagina, with the left side of the face presenting, and, having a forceps with me, I introduced the upper blade only, and by its means as a lever brought the head into the proper position, but on taking away the blade it soon turned back again. The mother was growing weaker and uterine action was almost *nil*, so I put both blades of the forceps on, proceeding as before, with the upper one first, and delivered the head. I then withdrew the forceps, waited awhile for uterine help, but in vain, and with the left hand on the abdomen and the fingers of the right hooked round the neck of the child I simultaneously used pressure and traction with but very little result. I again waited awhile, but the uterus did not seem disposed to act, and feeling the delay dangerous to the life of the child, I introduced my finger and with some little trouble brought down the right arm. I repeated this with the left, and having both arms down, I hooked the fingers of my right hand into each axilla and made good traction, at the same time using pressure with my left over the abdomen. By exerting myself thus to no inconsiderable amount, I succeeded after a little time in bringing the child down below the ribs, but could not yet see the cord. Here there was a block. All along there was little or no hæmorrhage, the pulse was weak, and the mother expressed great sense of weariness and dread. I had by this time of course come to the conclusion that there was something abnormal present, and the first idea that suggested itself to me was that there was an unusually short cord attached to a strongly adherent placenta. I now became anxious for help in order to well manipulate the abdomen, and at the same time use traction on that part already exposed, as I believed this to be the only means now left for the expulsion of what remained. My wishes were soon gratified, for Dr. Ilott entered the house and came immediately to my assistance. He took the body of the child in both his hands and made traction backwards and forwards, while I, at the same time, used strong pressure and well kneaded the abdomen. This soon proved successful, for the left buttock appeared inclined to come, which it did, and in about a minute afterwards a broad surface joined to something else made its appearance; this turned out to be the back of another child, and without much more trouble was removed with the remainder of the body, and thus left in our hands an extraordinary specimen of a freak of nature. Nor was this at an end, for having tied the cords and wrapped up the prodigy in a flannel petticoat, I examined the vagina for the placenta, when, to my astonishment, I distinctly felt another bag of membranes unruptured, and feeling through it I found some toes or fingers easily distinguishable, as well as a soft mass, which clearly seemed to me to be the breech of another fœtus. Dr. Ilott then made an examination, and corroborated my opinion, and, there being total absence of pain, the membranes were ruptured, the liquor amnii escaped freely, and we proceeded as before—viz., with external abdominal pressure,—following the uterus well down until the fœtus was expelled by a breech presentation, and a living female child was in our hands. I again made an examination, and found the placenta quite low down, which, with slight external pressure, I easily removed with very little hæmorrhage. The uterus was found to contract very soon after, as was evidenced by its well-known feeling through the external abdominal walls resembling that of a cricket-ball. The mother was weak, but gaining strength, and experienced great relief at having got rid of her burden, though of course terribly grieved on learning the condition of her offspring.

I saw them twice a day up to Sept. 24th, and afterwards took the prodigies to the studio of a photographer, where I had them photographed in three different positions, which clearly shows the point of union, as well as the spina bifida. The grandmother, who nursed them, informed me that they could not retain the milk given them, so I tried to give them some myself in a teaspoon, and found them deficient in the power of deglutition, though I felt satisfied that it was not altogether wanting. They could not, however, take sufficient to sustain life; atrophy set in, and they died on the 24th at 8 P.M., having lived three days.

Description of monstrosity.—The weight a few hours after birth, accurately weighed by myself, I found to be

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6 lb. 13 oz. Above and below the union they were like two ordinary children, with one exception—that the skin was somewhat wrinkled and had an unhealthy colour. The union commenced at the lower end of the lumbar vertebra, and extended to the end of the sacrum, but not exactly in the middle line of both, which would make them appear as back to back. The sacrum of one was united by the middle line to the side of the sacrum of the other, so that viewing them from behind they had but two buttocks between them. The sex was female, and it had externally the appearance of only one vagina being present. On examination after death there was found to be a double one, but no urethral orifice could be discovered in the usual site. The mons veneris and labiæ were abnormally large and swollen. There was but one anus, through which meconium passed freely. A spina bifida about the size of a small orange could be seen at the lower end of the lumbar vertebra, where the union of both commenced. There was no deformity anywhere else, as the features, bodies, arms, and legs were not wanting in any particular.

The other child still lives, and is right in every respect. I weighed it at the same time as the others, soon after birth, when I found it to be exactly 4 lb. There was but one placenta, which weighed 2 lb. 9 oz., and was divided into two compartments, one for the prodigy and the other for the separate child. That for the prodigy had one ordinary sized cord, with a supplementary one about half the size attached to its base as it entered the substance of the placenta. The other was covered all over with membrane, the substance of the placenta being nowhere exposed. The cord here went through the membrane, and was attached to the placenta at the wall of the compartment. I took it entire to the museum of the College of Surgeons, and found that there was no specimen like it there. The prodigy was also taken there soon after death, when it was found that, though they had not a specimen exactly like it in preservation, a cast of one similar to it was discovered on the shelves.

Family history.—The father was about thirty, strong, healthy, and born of healthy parents; one of his grandmothers died recently at the advanced age of one hundred and eight years. The mother, aged thirty, had four previous confinements, and suffered from puerperal convulsions with the first child. The third child is affected with infantile paralysis; the others are well. She had nine brothers and three sisters. Four of the brothers are dead; the sisters are all alive. One of the surviving brothers has always been deficient in mental power; one of the sisters is insane, and in a lunatic asylum. Her father and mother contracted a consanguineous marriage, being first cousins, children of two sisters. The mother relates that some three or fourth months ago she received a very great shock when going through the streets. Two men in a dog-cart, driving furiously along, got one of the wheels of their cart locked in a wheel of another cart standing in the street, and dragged it along for some distance. The suddenness of the incident affected her so severely that she was obliged to rest in a shop close by. She felt extremely faint, and soon returned home, but the incident made a deep impression on her.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ALARMING SYNCOPE FROM SYRINGING THE EAR.

By J. MIDDLEMASS HUNT, M.B.,
SURGEON TO THE THROAT AND EAR DEPARTMENT, NEWSHAM DISPENSARY, LIVERPOOL.

ON August 7th I was called to see E. G——, a boy of three years of age, and found him in a state of profound coma, with slow irregular respiration, rapid pulse, lividity of lips, cold extremities, dilated pupils—to all appearance, in fact, on the point of death.

The history I got was that the child had suffered from measles two months before, and since then had had a purulent discharge from the right ear. This was being treated, under the direction of a surgeon, by injections of a solution of boracic acid, and on the day in question, just as the mother finished syringing the ear, the child fainted. Till this happened he had been running about, and was apparently quite well. The mother first made efforts herself to revive the child, carrying him into the open air, but as his condition became worse I was sent for, and, arriving half-an-hour after the syncope began, found him as already described. The parents had not observed any convulsion, nor had the child at any time previously suffered from convulsions. After watching him for five or ten minutes, during which time his condition remained unchanged, I ordered mustard to be applied to the nape of the neck and the lips to be moistened with brandy-and-water. Giving the worst prognosis, I left, promising to return within two hours. When I returned I was surprised to find the child conscious and to all appearance well, except that he was somewhat pale and languid. I was told that a few minutes after the mustard was applied consciousness returned. Examination of the ear showed extensive destruction of the membrana tympani, but there were no signs of caries. The urine was free from albumen, and the child has remained well since.

Remarks.—I find a somewhat similar case recorded by Roosa in the *Archives for Otology* (vol. ix., p. 17), where a man, aged forty-five, passed into a state of coma after his ear had been syringed to cleanse it from a chronic purulent discharge. In Roosa's case the coma was equally profound, but does not appear to have lasted beyond a few minutes, though the patient was unable to leave the consulting room for two hours afterwards. Roosa does not offer any explanation of his case, in which no examination of the tympanic membrane was made. Probably such cases are due to a nervous reflex starting either from the terminations of the auditory nerve in the semicircular canals and labyrinth or from the tympanic plexus. I am inclined to the latter view, as to the course of the reflex, on account of the connexion, demonstrated by Lockhart Clarke, between the roots of the fifth cerebral, the glosso-pharnygeal, and the vagus.

THE ETIOLOGY OF SKIN DISEASES.

By F. AUGUSTUS COX, M.B. LOND.,
SURGEON TO THE WESTERN DISPENSARY FOR SKIN DISEASES.

I HAVE read with interest Dr. Frederick Pearse's note on the above subject. To label a particular eruption as "eczema," and, without regard to its causation or manner of development, regard and treat it as a definite pathological entity is, of course, not satisfactory. As regards "eczema," a good many causes have been assigned for it, yet it is not always possible to trace any particular case back to its origin—at any rate, if we exclude those cases caused by external irritants. The nomenclature of skin diseases is to blame for a good deal of the confusion that exists. For example, the term "eczema" itself is a most indefinite and misleading expression. Under it have been included the most varied lesions ranging from a simple erythema to the formation of pustules or scabs. If we could get rid of such a term as eczema, or never employ it without qualification, some progress would have been achieved, and we might hope to be more successful in our attempts to determine in any given case the cause which has been operative.

In the case of acne, several of the assigned causes are often simultaneously present, but it is not always easy to say which is the active one. Great stress has been laid on sexual irritation as a cause, but many authorities deny its influence. A medical man who had seen many cases once remarked to me that he had never seen but one in a married person, and that was in a man living apart from his wife. I cannot, however, corroborate this observation, having many times seen married persons suffering from acne, and one of the worst cases I ever saw was in a young married woman. I had recently under my care a young lady affected with tinea versicolor over the chest. Ordinary antiparasitic remedies were prescribed, and the affection quickly disappeared, but as it did so a well-marked patch of acne punctata took its place. I should, however, hesitate to suggest any causal relation between the two disorders. I should add that the acne punctata soon vanished on using a weak sulphur ointment, combined with a free use of soap and water.

In regard to one cutaneous disorder—psoriasis—mentioned by Dr. Pearse, our knowledge of its etiology is almost *nil*. Excluding heredity, to which it can often be traced, we can often discover nothing. It frequently seems by choice to

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attack the most healthy people. As I once heard Mr. Malcolm Morris epigrammatically express it, "It is a disease of health." Most practitioners would admit the truth of this so far as the general health of the patient is concerned. Yet the lesions in psoriasis are well marked and their morbid anatomy accurately known. There is presumably a cause if we could only unravel the tangled web leading to it.

South-street, Park-lane.

CASE OF PUERPERAL PERITONITIS.

By FRANK STURGES, L.R.C.P. LOND., &c.

THE following case seems to present points of sufficient interest to warrant my wish to obtrude it upon the notice of the readers of THE LANCET. I will first give very briefly my daily notes.

Mrs. G——, aged thirty, multipara, a pale and delicate-looking woman, was delivered of a living child on Aug. 22nd at 7 P.M., after a labour that would have been quite normal but for a somewhat prolonged first stage (about ten hours). The placenta was expressed without any difficulty a little later.—Aug. 24th: Slept little, and complains of great abdominal pain. Light tapping with fingers reveals extreme tenderness over hypogastric and both iliac regions. Temperature 99·4°; pulse 80. Has vomited, and feels sick. Ordered milk and lime-water diet, half a grain of opium every four hours, and mustard and linseed poultices continually.—25th: Vomited and retched a good deal since last note. Lochia small in quantity, but very offensive. Peritonitis most acute over the whole abdomen. Temperature 100·6°; pulse 100, feeble. The uterine cavity was washed out with water coloured by iodine tincture. Ordered half a grain of opium every three hours; poultices to be continued; a diet of milk and lime-water, and a little strong beef-tea; and a dessertspoonful of brandy every four hours.—26th: Passed a better night. Has not vomited, and says she is much better. Light palpation still causes pain, but not so severe. Lochia more in quantity and less offensive. Temperature 99·2°; pulse 80, of better volume. Uterus again washed out, and treatment continued.—27th: Had a good night, and is much better. Lochia quite sweet. Light palpation causes little or no pain. Temperature 98·4°; pulse 64, and of fair volume. Diet to be milk and beef-tea; brandy omitted, and half a grain of opium given every six hours. Uterus again washed out. From this period nothing of note occurred, the convalescence being rapid and complete.

Now, this case is most interesting to me, probably largely on account of its gratifying termination. I have always regarded acute peritonitis coming on so soon (about thirty hours) after the commencement of the puerperal period as almost necessarily fatal, and on Aug. 25th the patient was so very ill that I hardly thought she could recover. With regard to the causation, there is much of interest. The woman was living as caretaker in an empty house, a house that had not been properly inhabited for some considerable time. In this house were three waterclosets—one, scarcely ever used, on the same floor as the room in which the patient was confined. And I believe that, although I was informed there was plenty of water and I never detected any drainage smell, the flushing of this closet had been much neglected. This, then, would be a sufficient cause, only there is something else to be told. The nurse who was present at the birth was suffering from an attack of acute tonsillitis, which rendered her barely able to discharge her duties; and when she showed me her throat I was greatly exercised in my mind as to whether I ought not to send her home, and whether, if she stayed, she could convey by any possibility septic poison to my patient. However, she stayed till Aug. 24th, when I was informed, on paying my morning visit, she had gone home, feeling too ill to attend to her work. Thus, for two nights the nurse had slept with the lying-in woman, and some time during the second night the peritonitis came on. And, I might add, the nurse went away, and the patient got better: was it because the cause was removed? And then, lastly, concerning the treatment. I have already told how I treated the case; but the nurse treated it also, and in this way. On the morning of Aug. 24th, before going home she gave the patient, without any authority, six much advertised patent pills. I did not hear of this till the following day, when I was told that Mrs. G—— had had two actions of the bowels causing such intense pain that she twice fainted. Mr. Lawson Tait has, I believe, advocated the treatment of these cases by Epsom salts; and although it would seem to me to require all Mr. Tait's great reputation to put that treatment into practice, I would not take upon myself to say that these pills administered by the nurse had not something to do with the recovery. For they were given early on the 24th; they acted twice in the night; on the morning of the 25th the patient was much worse, but during the day she changed for the better. We must also bear in mind, however, that on the morning of the 25th I injected the uterus with a solution of iodine, and by that time, too, notwithstanding aperient pills, the opium and counter-irritation were beginning to have effect. Should it be my misfortune to have another case of the kind, I shall certainly treat it with iodine irrigation, opium, and counter-irritation, and not with the aforesaid pills or Epsom salts. Still, I have considered it right to record this case in its entirety because of its peculiar and speculative interest, and because of the terribly fatal nature of the disease; and I ask members of the profession to take all the facts into their careful consideration and draw their own conclusions.

Beckenham.

VERY RARE PRESENTATION IN MIDWIFERY.

By W. H. BORHAM, L.R.C.P.E., M.R.C.S., L.M.

ON Sept. 20th, 1887, Mrs. C——, aged thirty-two years, was being attended in her confinement with her sixth child by a midwife. She had been in labour for two days, and the midwife left her for about an hour. On her return she found a loop of the funis, three inches in length, protruding from the vagina, and "something wrong above" in connexion with the head of the child.

The midwife sought for my attendance. Upon examination I found the cord hanging external to the vulva in a loop about the length stated; there was a slight pulsation in it, and it was getting cold. Upon introducing my fingers, I found the palm of the child's left hand was flat and pronated on the side of the child's occiput between it and the mother's sacrum. In the interim of the pains, which were flagging, I at once introduced my hand into the vagina, pushed up the child's hand and head, then gradually insinuated my right hand into the uterus and grasped the left foot, turned the child, and in a few minutes delivered the mother of a female child. It had suspended respiration, but the heart was still pulsating. With the usual treatment of warm bath, &c., the child was restored, and both are now quite well.

During a forty years' experience, and after attending some thousands of cases, I have never met with a similar presentation, nor do I remember reading of such a one by any authority. The fact of the hand resting on the head and the cord lying along the side of the wrist and thumb prevented that pressure upon the cord which would otherwise certainly have cut off the circulation of the blood and killed the child. Speedy version and delivery were necessary to save the child. All the parts of the female pelvis were capacious, and the soft structures amply relaxed. Some authorities state that both feet should be grasped and drawn down together in this operation, but most experienced accoucheurs in this operation, I think, will agree with me when I say that this is more easily said than done. To grasp both feet, which may be widely apart, with a cramped hand in the uterus, where the liquor amnii has escaped, is no easy task to accomplish, especially when one has so little time to secure a living child. It is better to be sure and bring the first grasped foot down, especially in such a case as the above, and I have never had any difficulty in easily delivering in this way. The joints and tissues in the new-born infant are so supple and flexible that no danger need be apprehended if carefully manipulated.

The mother of this child, when she was five months pregnant, fell downstairs, which may have altered the position of the fœtus in utero, and caused this unusual presentation.

Fulham.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The following office-bearers have been elected for the present session:—President: Mr. J. Brindley James. Vice-presidents: Dr. Peter Horrocks, Mr. Thomas Moore. Council: Mr. G. H. Cable, Dr. Ernest Clarke, Mr. Peter Cooper, Dr. W. Collingridge, Dr. Alexander Forsyth, Mr. Frederick Moon, Mr. J. Poland. Treasurer: Dr. Prior Purvis. Secretary: Mr. H. W. Roberts. Librarian: Dr. Ernest Clarke.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

EPITHELIOMA OF TONGUE AND GLANDS; REMOVAL BY KOCHER'S METHOD; PATIENT FED FOR A FORTNIGHT THROUGH A TUBE RETAINED IN THE WOUND; COMPLETE RECOVERY.

(Under the care of Mr. A. E. BARKER.)

THE point to which we would direct special attention in this case is the method employed of feeding the patient after operation. Great advantage was derived from the use of the tube, the patient being well fed, and that without discomfort to himself; whilst, as Mr. Barker points out, no irritation or unnecessary disturbance of the wound was required.

S. W——, aged fifty-eight, was admitted on Aug. 20th, 1886, suffering from extensive epithelioma of the right side of the tongue and of the submaxillary lymphatic glands on the same side. The disease had appeared on the right side of the tongue about five months before admission, and had rapidly extended to the pillar of the fauces. When first seen there were enlarged glands beneath the chin and over the carotid vessels below the angle of the jaw. The suffering was very great and the difficulty of taking food extreme. The patient had come over from America to obtain relief.

In view of the extent of the disease, and the implication of the glands, Kocher's method of operating was selected as giving freer access to the latter and control over the lingual artery before section of the tongue; it also offered an opportunity of putting in practice a means of feeding the patient subsequently during the healing of the wound, which it had occurred to Mr. Barker might possess many advantages.

The mouth having been constantly cleansed with chlorate of potash lotion from the day of admission to the 25th, the face and neck were shaved and thoroughly washed with carbolic lotion. An incision was then made from a point just below the lobe of the right ear to the body of the hyoid bone, then horizontally forwards along the body of the latter for three-quarters of an inch, and then up to the symphysis of the jaw. The flap of skin thus marked out was now dissected up towards the jaw and the whole submaxillary space exposed. This was then completely cleared out of all glandular structures, an infiltrated mass being also removed from over the carotid vessels, and also from beneath the chin. In this dissection the facial artery and vein were divided and doubly ligatured. When the digastric space had been completely cleared of all secondary infiltration of glands the lingual artery was ligatured behind the hyoglossus muscle. Then Kocher's method was so far modified that the tongue was attacked from within the mouth. The latter being held open with a gag, the organ was secured with a cord passed through its tip and held over to the left. It was then detached from the jaw all round by means of scissors, which were made to cut straight down to the hyoid bone at once. When well isolated, it was divided with scissors obliquely across at its root from left to right, the left lingual artery being at once caught up with Wells' forceps. During this part of the operation but little blood was lost and no trouble was experienced. The first wound in the neck, provisionally closed with a carbolised sponge, was now open to the mouth and pharynx, and there was thus free access to the whole area of operation. This was then carefully cleaned, dried, and dusted with iodoform, and the two ends of the incision were stitched, the middle being left unclosed for drainage. Through this part of the wound a piece of rubber tubing about a third of an inch in thickness and eighteen inches long was introduced and passed well down the œsophagus, the other end being secured to the right ear. The neck around the edges of the wound was now dusted with iodoform and carefully padded with salicylic wool, a great mass of ordinary wool being packed over all round the neck to secure the head from movement, which end was fully attained when the mass of wool was firmly bandaged. The rubber feeding tube projected above the wool at the ear.

The patient suffered but little shock from the operation. In the evening a quantity of beef-tea was poured into the stomach through the rubber tube, without disturbing the patient or the wound in the smallest degree. This method of feeding was continued every four hours or so for sixteen days, and was a great improvement on the ordinary methods. The dressing was left undisturbed for two days, and was then replaced by fresh packing as before, the skin wound healing by first intention, except at the spot where the tube lay. The latter was left *in situ* until the floor of the mouth was nearly healed, and was only removed on Sept. 9th. Cicatrisation was rapid and unaccompanied by any trouble; the temperature remained normal throughout, and the patient was very cheerful and rapidly regained strength from the regular feeding. The latter was carried out in the simplest manner by introducing the point of a funnel into the tube lying outside the dressings, and through this pouring in beef-tea, milk, eggs, &c. The patient had not to move, and the mouth was left undisturbed.

Remarks.—The chief points of interest in this case are, first, the extent of the operation. Not only was the tongue removed with the structures of the floor of the mouth on the right side, but all the glands of the submaxillary space from the chin to the lobe of the ear. And yet there was but little shock—a fact due probably to the ease with which bleeding can be arrested in operating from without. The next point to be observed is that by operating as above it was possible to keep the wound in the mouth absolutely clean from beginning to end, and at the same time to maintain the parts in a state of perfect rest. The patient had nothing to say to his own feeding; in fact, it could be done while he was in any position without disturbing him. No food passed through the mouth, consequently the wound in the latter could be treated like any other wound, and did not need even to be washed out receiving only a puff of iodoform from time to time. As there was no swallowing, there was no pain. Mr. Barker was much struck with the superiority of this method of feeding over that by enema or nasal tube, and has adopted it since in other similar cases with equally satisfactory results.

The patient was seen some months later, with no trace of recurrence, looking very well, and very much pleased with what had been done for him.

OLDHAM INFIRMARY.

CASE OF PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS IN ITS FIRST STAGE, OR PROGRESSIVE MULTIPLE NEURITIS; RECOVERY.

(Under the care of Mr. FAWSITT.)

FOR the following notes we are indebted to Mr. John J. Weaver, late house surgeon.

P. B——, aged twelve years, a rope-maker (i.e., engaged in making or repairing ropes), was admitted on Oct. 1st, 1886. About five weeks before admission he noticed some numbness or "cramp" in the thumbs and fingers of both hands, especially affecting him in the early morning, and he was in the habit of calling his mother up about 5 o'clock in the morning to rub his hands on account of the pain. The mother would rub them for about ten minutes or so at a time. She thought the pain had something to do with the boy putting his hands into water at his work. This affection of the fingers lasted on and off for about a fortnight, and was then followed by the pains in the calves of the legs described below. The mother noticed that about this time the boy seemed less inclined than usual to run about, but preferred to sit down and read to her instead. Three weeks before admission the patient noticed a "dull" pain in the calves of his legs, which came on about four times a day, and lasted about ten minutes at a time. Less than a week after this pain in the calves commenced, the boy fell one day while at work, and then found that he could not get up again. He crawled to a stake in the ground, and by means of that raised himself up. This fall was the first symptom that caused the mother to seek medical advice, and for which she brought the boy to the infirmary. About a week after the fall the patient stated that he had on one occasion some aching pain at the bottom of the back, lasting about

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fifteen minutes; no recurrence since. For about three weeks before admission he was in the habit of wetting his bed now and then—not an old habit with him. It occurred also once or twice after admission during the first week or so, but ceased altogether afterwards. Previously to his present illness he has always had very good health, and been able to run about as well as other boys. Family history: Father and mother living and healthy; one sister, aged eighteen, healthy; one brother, aged sixteen, consumptive. Both sister and brother were seen at the infirmary. No history whatever of any previous similar case in the family. Mother's sister's children in Australia; none affected.

On admission the patient was a bright, intelligent, and healthy-looking boy. When put on all fours he was quite unable to get up. His efforts to get up were characteristically those of pseudo-hypertrophic paralysis. When asked to stoop and pick up a pin from the floor he raised himself with great difficulty from the stooping position by placing his left hand just above his left knee, and so pushing himself up. He could get up easily from the sitting position, as from a chair, to the standing position. Gait somewhat waddling. He raised his knees up rather higher than natural, and put his feet down again forcibly; easily tumbled over on turning round, or on the least push. He was quite unable to get up the stairs leading to the ward, and had to be carried. He could walk about the ward, but was easily tired. When standing the legs were held apart and were unsteady; there was slight rocking of the body backwards and forwards, and he seemed unable to stand perfectly still. Decided increase in lumbar curve, and abdomen protuberant. A plumb-line let fall from the most prominent dorsal spines easily escaped the sacrum. Calves of legs hard, the hardness being very noticeable even when the patient was lying on his face on the bed. Calf muscles apparently not enlarged, though they compared favourably in development with the rest of the muscular system. Measurement of calves (greatest diameter): right calf 10½ in., left calf 10⅝ in. No apparent enlargement in muscles of thigh or in the infra-spinati. General muscular system poorly developed. Pectoral muscles much wasted, especially the lower or sterno-costal portions. The latissimi dorsi muscles could not be brought into view. No wasting of muscles of hands or thumbs; no weakness of hands out of proportion to general muscular development. Muscles of face unaffected. Sensation everywhere unaffected. Intellect very good. Knee jerk in both legs absolutely lost. No ankle clonus.

Oct. 4th.—Electrical reactions: Patient flinches so much with even the weakest currents that it is very difficult to be sure of the results. The gluteal muscles give with the faradic current apparently diminished reaction; with the galvanic current the reaction seemed at first apparently increased, afterwards uncertain. The reactions of the calf muscles to both forms of electricity are greatly diminished.

5th.—Patient begins to walk better. Can now get up from the stooping position after picking something off the floor with difficulty, but without placing his hand upon his knee. He cannot get up from all-fours.

6th.—The boy can to-day for the first time get up from the all-fours position by placing his left hand upon his left knee.

7th.—Patient vomited yesterday, morning and afternoon, and also this morning. Constipated; ordered aperient. No recurrence of vomiting.

8th.—Patient can get up from the stooping position without the use of his hand upon his knee. In getting up from the all-fours position, still uses his left hand upon his left knee; walking much improved. He appears to feel both forms of electricity more on the left side of the body than the right.

10th.—Patient was allowed this afternoon to go out into the infirmary yard, but ran away to his home, which is only a few streets away from the infirmary. He was, however, brought back by his mother in the evening. He was a good deal distressed at being brought back, and his walking was much worse. He was quite unable to get up the stairs to this ward, but had to be assisted by someone supporting him on either side.

11th.—Dr. Ross, having kindly promised to see the case, the boy was taken over to Manchester. In getting into the cab or carriage, the step being rather high, he placed his left hand upon his left knee to push himself up. Dr. Ross pointed out the very extensive fibrillary contractions in the muscles of the back, legs, and triceps muscles of the arms; also the general muscular wasting. Grasp of hand, fair strength. Patient, sitting and resting heel upon ground, is able to raise toes from the floor. Dr. Ross apparently easily obtained electrical reactions in the muscles of the back by faradism (even with dry electrodes), but with galvanism the reactions could not be made out on account of the patient's flinching. This was the only occasion on which Dr. Ross saw the case, and, as will be seen from the notes, the boy's condition by this time had very much improved. From the symptoms as they then existed, Dr. Ross was therefore unable to confirm the diagnosis of pseudo-hypertrophic paralysis. One note, made at the time, but which until now on account of its uncertainty has been omitted, is to the effect that in grasping anything "the dorsum of the hand was drawn slightly towards the extensor surface of the forearm in the act, one hand (left?) more so than the other." On repeated trials it was very uncertain, and therefore it was afterwards omitted. It proves, however, that there was no loss of power of extension of the wrist.

Measurement of calves (greatest diameter).

		Right leg.	Left leg.	Boy's weight.
Calves decreasing in size.	Oct. 1st*	10½ in.	10⅝ in.	—
	,, 11th	10¼ ,,	10⅜ ,,	—
	,, 13th	—	—	65½ lb.
	,, 17th	10 ,,	10¼ ,,	65½ ,,
Calves increasing in size.	Nov. 6th	10 ,,	10¼ ,,	66½ ,,
	,, 18th	10¼ ,,	10½ ,,	67 ,,
	Dec. 10th	10½ ,,	10½ ,,	67½ ,,
	Jan. 3rd	10½ ,,	10½ ,,	68 ,,
	,, 7th†	—	—	—
	,, 17th	11 ,,	11 ,,	71½ ,,

* Date of admission. † Patient discharged.

It will be noticed that at first there is a gradual decrease in size of both calves, followed later by a gradual increase in size, accompanied then by a gradual increase in the patient's weight.

Treatment.—On the assumption that the case was one of pseudo-hypertrophic paralysis, the treatment adopted was that recommended by Duchenne for the first stage of the disease—viz., faradisation and shampooing. The boy was therefore shampooed daily for about twenty minutes at a time, the muscles being thoroughly well rubbed and squeezed, and electricity, sometimes one form, and sometimes the other, but most frequently the faradic current (being much better borne), was applied directly to the muscles. In addition, a mixture containing syrupus ferri phosph. comp., and five-minim doses of liq. strychniæ and liq. arsenicalis was prescribed. The boy was kept in bed as little as possible and encouraged to move about.

Jan. 7th, 1887.—The patient was discharged from the infirmary. With the exception of the total absence of knee jerk, he appeared to be in perfect health. His gait was natural; he could get up from all-fours naturally and without difficulty, and could again run about perfectly well. He was seen again on Jan. 17th.

Feb. 17th.—Patient was seen at the infirmary. The improvement is still maintained. The knee jerk is still absent. The patient's general muscular development is much improved, especially the condition of the pectoral muscles. The latissimi dorsi muscles also can now be made out. The calf muscles have still further increased in size, both calves now measuring 11½ in.

July 11th.—This was the last occasion on which Mr. Fawsitt saw the boy, six months after his discharge from the infirmary. The only trace of any disease that could then be found was the fact of the knee jerk being still absent. But on this occasion for the first time, though he had tried the method at all previous examinations, a very slight knee jerk was obtained by getting the patient at the same time to interlock his fingers and pull upon them (Jendrassik's method). The jerk was very slight on either side, but slightly more marked on the left side than on the right. The calves now measured 12 in. The boy got up from all-fours position with perfect ease.

In addition to the above account, one or two facts which cannot so well be put under dates may be added. First, as to the patient's manner of getting upstairs. On admission the boy could not get upstairs at all, not even with the help of the banisters. As his condition improved he was able to

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get up by pulling himself up by both hands, the hand nearest the banister being placed on the top of the banister and the other on the banister rails. At the time of his discharge from the infirmary he was able to get upstairs without touching the banisters. The boy's intelligence was very good, as shown by his clear answers to questions, and by the fact that soon after his admission he proved himself the best draughts player in the ward.

Remarks by Mr. WEAVER.—I am fully aware of the difficulty of diagnosis in this interesting case. Undoubtedly at first sight the case appeared from the collection of symptoms and their well-marked nature to be a case of pseudo-hypertrophic paralysis, and as such I believe it was certainly regarded at that time by all who saw the boy. On different occasions soon after his admission to the infirmary this patient was seen by each member of the medical staff, and also by one or two occasional medical visitors to the infirmary, and although the absence of any marked enlargement of the calves or other muscles was noted, the diagnosis of pseudo-hypertrophic paralysis was on no occasion disputed. When, however, later, it was found that the boy's calves were not increasing in size, but rather decreasing, and that at the same time his general condition as to walking, getting up from the floor, &c., was rapidly improving, in my own mind at least a doubt arose as to the diagnosis. At this time, however, I was inclined, rightly or wrongly, to regard the decrease in size of the calves as possibly due to the smaller use of the muscles, resulting from the change of the boy's circumstances, involving the confinement in a hospital ward, and the additional necessity of the boy keeping his bed at times for the purpose of treatment by shampooing and electricity. I was also aware that almost every conceivable condition of the muscles as to size had been recorded in pseudo-hypertrophic paralysis, and that even, as Dr. Gowers states, "the absence of muscular enlargement is of little significance."[1]

The actual size of the calves of this patient is, I think, worthy of note, though I do not wish to lay much stress upon this point. In this boy of twelve years, in whom the general muscular system was poorly developed, as noted by myself and afterwards by Dr. Ross, the right and left calves measured respectively 10½ in. and 10⅝ in. From a few comparative measurements I have made of calves of other patients about the same age I believe this patient's calves to have been rather above the average size. They may be compared also with a case of pseudo-hypertrophic paralysis recorded by Dr. Gowers,[2] in which in a boy aged thirteen years and a half the calves measured respectively 10½ in. and 10⅝ in., and are thus described—"Their undue size and firmness were very distinct"; and a case recorded by Mr. W. Adams, in which in a boy aged fifteen the calves are described as "large and prominent, each 9½ in. in circumference."[3] But regarding the muscles as not markedly enlarged, the case still seemed to me to correspond exactly in all its symptoms with the first stage of pseudo-hypertrophic paralysis, in which, as described by Duchenne, there is loss of strength without muscular hypertrophy, a stage of the disease also recognised by Charcot as "the first clinical stage noticed by all observers, a period in which the only appreciable symptoms consist in a more or less marked weakness of certain muscles which do not as yet exhibit any apparent hypertrophy, and which even sometimes show themselves manifestly atrophied."[4] Lately I have been able to compare the case with two cases of recovery from pseudo-hypertrophic paralysis recorded by Duchenne in the *Archives Générales de Médecine*, 1868. As considerable doubt has been thrown by most authorities on the nature of these cases, I may be allowed to point out that the two cases of recovery were respectively the ninth and thirteenth cases of a series of thirteen cases of hypertrophic paralysis, upon which Duchenne founded an exhaustive and accurate description of the disease as it is known at the present time. The description was published in 1868. Duchenne had met with his first case of pseudo-hypertrophic paralysis in 1858; his first case of recovery (the ninth of the series) occurred in 1863; his second case of recovery (the last of the series) in 1867. Of the first of these two cases, that of a boy aged seven years and a half, though the details are not fully reported, Duchenne says: "When I was first called to this young patient I made out the whole of the symptoms characteristic of pseudo-hypertrophic paralysis, but the apparent hypertrophy is slight and limited to the gastrocnemii; the lordosis is moderate (the father says it has increased)."[5] The second case of recovery, the case of a girl aged six, is fully reported as having all the characteristic symptoms of pseudo-hypertrophic paralysis, including separation of the legs while standing and walking, throwing back of the body (lordosis), waddling gait, the characteristic method of getting up from all-fours by putting the hands on the knees and mounting up the thighs.[6] In this case also the size of the muscles of the lower limbs is reported as "far from attaining the ordinary proportions of a more advanced stage of the disease," but as "contrasting with the thinness of the upper extremities." The treatment of this case is given in detail further on in the articles (p. 578). The different phases of this last case were evidently followed up closely by Duchenne, as he himself states.[7] It seems therefore impossible, whatever may have been the nature of these cases, to have any doubt as to the symptoms. The close resemblance of these two cases and the case I have reported I think is clear.

After the patient had left the infirmary I submitted the notes of the case to Dr. Gowers, and he expressed the opinion that the case was "certainly one of the muscular disease of which pseudo-hypertrophic paralysis and idiopathic atrophy are varieties. To which of these varieties your case belongs is a question to which different authorities might give different answers..... I should myself place it with pseudo-hypertrophic paralysis. The condition of the latissimi and pectorales, so far as my experience goes, is a conclusive proof of the nature of the malady." To account for the rapid onset and rapid improvement, Dr. Gowers is of opinion that in this case there was "a supra-added functional impairment of the nervous system which was manifested most by the muscles that were weakest, and so produced the semblance of a more advanced stage of the disease."

Dr. Ross, on the other hand, regards the case, "with cases of the kind reported as occurring in children after measles, chorea, scarlet fever, rheumatism, diphtheria, and other diseases, as a case of progressive multiple neuritis." Dr. Ross also considers that the cases of chronic poliomyelitis occurring in infants, as described by Dr. Bennett, belong to the same group.

If this case is one of progressive multiple neuritis, is it not possible to go a step further, and regard pseudo-hypertrophic paralysis itself as a progressive multiple neuritis? May not the pathological change in the muscles in pseudo-hypertrophic paralysis be regarded as a special manifestation of the later stages of the disease, and dependent perhaps, as Duchenne, after discarding the spinal origin of the disease, held, on a lesion of the vaso-motor system?[8] The frequent occurrence of vaso-motor changes in multiple neuritis has been pointed out by Dr. Buzzard;[9] and that a change in the muscles corresponding anatomically with the changes observed in pseudo-hypertrophic paralysis may follow a nerve lesion is also made clear by a case recorded by Hitzig and quoted by Dr. Gowers, in which, after an "injury to the nerves of the arm near the shoulder-joint, a slow increase in the size of the arm resulted, and the condition of the muscles was found, by harpoon examination, to be the same as in pseudo-hypertrophic paralysis."[10]

[1] Monograph on Pseudo-hypertrophic Paralysis, by Dr. Gowers, p. 50.
[2] Ibid., p. 15.
[3] Note by Dr. Poore in his Translation of Selections of Duchenne's Works, New Sydenham Society, 1883, p. 189.
[4] Charcot's Lectures on Diseases of the Nervous System, New Sydenham Society's Translation, 1883, p. 253.
[5] Archiv. Gén. de Méd., 1868, p. 17. [6] Ibid., p. 23. [7] Ibid., p. 577.
[8] Ibid., p. 569. [9] THE LANCET, Nov. 28th, 1885.
[10] Pseudo-hypertrophic Paralysis, by Dr. Gowers, p. 45.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—The office-bearers of this Society for the session 1887-88 were elected at a meeting of the Society on the 7th inst., and are as follows:—President: Professor T. McCall Anderson. Vice-Presidents: Dr. D. C. M'Vail, Dr. Alex Patterson, Dr. Jos. Coats, Dr. Jas. Stirton. Council: Dr. S. Gammell, Dr. J. W. Anderson, Mr. A. E. Maylard, Dr. D. N. Knox, Dr. Alex. Robertson, Dr. Wm. M'Ewen, Dr. Edward Macmillan, Dr. A. Wallace. Treasurer: Dr. Hugh Thomson. Secretaries of Sections: Dr. Geo. S. Middleton, Dr. John Barlow, Dr. T. K. Dalziel, Dr. T. F. Gilmour. General Secretary: Dr. Wm. G. Dun.

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Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, Oct. 5th, W. F. Cleveland (Vice-President) in the chair.

A gracious acknowledgment of the address from the Society to the Queen, on the occasion of Her Majesty attaining the fiftieth year of her reign, was received from the Home Secretary.

Mr. BUTLER-SMYTHE showed a Fibro-cystic Tumour of the Uterus, together with the Uterus and Ovaries, which he had removed that afternoon.

Mr. ARBUTHNOT LANE read a paper entitled "What are the Chief Factors which determine the Differences which exist in the Form of the Male and Female Pelves?" The author criticised the supposition that many, if not all, of the differences which exist in the form of the male and female pelves are due to force exerted by the femora and sacrum upon the innominate bones. He considered that the conditions of the thorax and pelvis are exactly analogous in the two sexes, and described in detail the manner in which the female thorax differs as a whole and in its constituent parts from the male thorax. He thought that the factor which determines the altered form of the female thorax from the male thorax (which he regarded as the original type) is the additional function performed by the former—namely, that of accommodating the fœtus during the later months of pregnancy. In the case of the pelvis, that of the female performs one function in addition to those performed by the male pelvis. That additional function is the support and transmission of the fœtus, and he regarded this as the sole factor which determines the variations in form in the two sexes. He thought that there is a fallacy in arguing from the manner in which certain forces produce changes in the pelves of diseased female subjects during the lifetime of a single individual, that the same forces acting upon a healthy female subject determine this peculiarity in the form of the pelvis, and that, should these forces be absent, the characteristic peculiarities do not result. He attempted to prove this point by applying the same argument to the analogous condition of the female thorax. He discussed the two most common variations in the form of the male pelvis and their probable cause, and showed that these variations do not occur in the female subject. The pressure exerted by the fœtus, represented as a developmental factor, is the cause, he considered, which prevents the occurrence of such variations in the female subject. He then alluded to pressure changes due to carrying loads upon or in front of the trunk, and from premisses gathered from these several points came to the conclusion that the sole determining factor of the variations in the form of the male and female pelves is, as in the case of the thorax, the force or pressure exerted by the fœtus.—Dr. HERMAN agreed with Mr. Lane in holding that the form of the pelvis was due to inheritance—i.e., to influences acting on many generations of ancestors—more than to forces acting during the life of an individual. But he thought the way in which the shape of the pelvis was modified in transmission through many generations was mainly this—that women with well-shaped pelves were able to bear large strong children, likely to survive and to inherit and transmit that type of pelvis; while women with small pelves produced either stillborn children or small weak children, not so likely to survive, and so a stock with small pelves tended to become few. If Dr. Herman interpreted literally Mr. Lane's view of the way in which the shape of the pelvis was modified—viz., directly by the pressure of the head during labour—he could not agree with him. The head only pressed on the bones bounding the pelvic cavity during the second stage of labour. This stage on the average lasted less than two hours. Supposing the individual to have ten children (which was the largest estimate of the average), this made twenty hours' pressure during the whole of life, and usually no part of this pressure was exerted till after ossification was complete. He could not attribute any appreciable influence on the shape of the pelvis to pressure so brief and intermittent, exerted on hard, fully ossified bones.—Dr. PLAYFAIR said that Mr. Lane seemed to assume that pressure was generally described by authors on midwifery as determining the shape and dimensions of the female pelvis. He could recollect no modern text-book in which such a reason was given, the generally received explanation being that the increased size of the female pelvis was caused by the fact of the reproductive organs being contained within the pelvic cavity in women, and not external to it as in the male. It seemed very probable that a process of evolution might in time produce pelvic changes from constant factors, but not from accidental and occasional circumstances such as the presence of a fœtus in utero.—Dr. GALABIN had never understood that the mechanical effects of the body weight and muscular action were supposed to bring about the characters special to the female pelvis, but that the peculiarities of the female had been ascribed to the forces of development or the presence of the genital organs in the pelvis. If any peculiarity in an individual of one sex tended to be transmitted to the same sex more than another, he thought it might be capable of proof in the breeding of animals. Dr. Galabin thought that any special character, as size, colour, or strength, was transmitted to sons and daughters equally. The principle would be one of great interest as regards the future of our race if it were established. Strong-minded women were wont to ascribe any slight inferiority of woman's intellect which others might admit to the fact that women have been kept in a kind of slavery for many generations. He had always thought this was a fallacious argument, and that if women had in any way suffered, their sons would be the losers as well as their daughters. If Mr. Lane's principle were true, the case was altogether different; and if women exercised sufficiently their intellects and their bodily powers, they might in course of generations not only wipe out any slight mental inferiority, but come to equal or even surpass the men, both in average stature and muscular strength.—Dr. MATTHEWS DUNCAN had greatly admired Mr. Lane's former papers on the skeleton, and took special interest in the explanation of the changes of the pelvic joints at the end of pregnancy by mechanical influences.—Dr. CHAMPNEYS wished Mr. Lane to name any eminent obstetric writers who assigned sexual peculiarities to causes common to the sexes. He had never met with such a statement. The effect of pressure on respiration cannot begin before the sixth month, which leaves three months in each pregnancy, or thirty months in ten pregnancies, and against this we have to put the remainder of the whole of a lifetime of, say, sixty years. The production of alterations in the skeleton during pregnancy was one thing, and the alteration of the skeleton by laborious occupations was quite another thing.—Mr. LANE, in reply, was sorry that it would be impossible to attempt to answer offhand the many questions and criticisms, which would necessitate a complex and lengthy reply, but preferred to base his case on the material contained in the paper.

Dr. J. MATTHEWS DUNCAN then read a paper on Tonic Uterine Contraction without Completeness of Retraction, in which he called attention to the occurrence of a rigid, spastic condition of the uterus, especially just after delivery, without complete retraction and while the uterus has no contents opposing complete retraction or closing. In this state the hard uterus has a globose cavity. He more particularly called attention to the occurrence of hæmorrhage from the placental site while the uterus is in this state of firm spastic contraction with incomplete retraction, and mentioned cases. He regarded this hitherto unknown or unrecognised condition as probably affording an explanation of the well-known difference of opinion among obstetric authorities, some asserting the occasional occurrence of hæmorrhage after delivery from a hard contracted uterus, some denying it. A similar condition, he believed, occurs very rarely in the unimpregnated uterus.—Dr. HERMAN had published a case in THE LANCET, 1882, p. 1110, to illustrate the practice of injection of fluid into a vein. This was a case of secondary hæmorrhage coming on nine days after delivery. When seen by Dr. Herman the uterine cavity was globose and large enough to contain a fœtal head, and its walls were hard and rigid. The interior was swabbed with solution of perchloride of iron, and this was followed by thorough contraction of the uterus and arrest of hæmorrhage.—Dr. HORROCKS asked if the cervix as well as the fundus was affected by the tonic contraction, because, in regard to cavities such as the uterine and vesical, when the detrusor contracted the sphincter dilated. In Dr. Duncan's case, though the contraction of the uterus was tonic, it was incomplete, leaving an actual cavity. He mentioned a case in his own practice where bleeding came on ten days after labour. The fundus was contracted and hard, and yet the

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cavity was not closed.—Dr. GALABIN was specially interested in hearing this paper, because he had thought that in a former paper Dr. Duncan had not distinguished a sufficient number of conditions in which the uterine wall might possibly be. He had understood him to identify that state of continuous action or tetany of the uterus with retraction. Dr. Galabin considered it was quite different, and more analogous to the post-partum condition now described. Retraction was a normal sequence of contraction. Continuous action was abnormal, and might be even antagonistic to retraction, for after such continuous action the uterus was liable to post-partum hæmorrhage. He remembered a case of cancer of the whole cervix, in which the uterus passed into a state of continuous action without any rhythmical pains having occurred, and the pulse became accelerated as in prolonged labour. Cæsarean section was performed. The uterus did not retract. Hæmorrhage took place from the placental site, and was only stopped by perchloride of iron. He thought such a condition might have a distinct analogy to rigor mortis. In rigor mortis a muscle was rigid as if strongly contracted, but if the tendons were divided the muscle did not retract in the least. The condition was really one of stiffening.—Dr. CLEVELAND said he had been sometimes puzzled to account for bleeding after natural labour where the uterus seemed of natural size and contracted, but as these cases occurred in delicate women he attributed them to the effects of a hæmorrhagic diathesis. He was convinced that in earlier experience his anxiety to remove clots from the uterus may have been carried too far. He now believed that where bleeding resulted from imperfect coagulation it was necessary for a clot of some size to remain within the uterus.—Dr. CHAMPNEYS thought that these cases threw some light on the vexed question of the action of ergot, which in some cases seemed to produce tetanus of the uterus without reducing its size or producing retraction.

Dr. JOHN PHILLIPS read a paper on a case of Pregnancy complicated by Secondary Hepatic Cancer. The patient, aged forty, mother of nine children, was operated upon in November, 1883, for scirrhus of the right mamma. Six months afterwards she was seen by the author for considerable pain in her right side; she was then six months pregnant. The pain increased in spite of all remedies, and her condition became so grave that after consultation induction of labour was performed. An easy labour followed, and, on the uterine tumour lessening, the liver was found enlarged and covered with umbilicated bosses, probably of a malignant nature. Jaundice and ascites appeared, and she died comatose three days after her confinement. The author made a few remarks as to the treatment in these cases, confining his attention more particularly to the rectitude of induction of premature labour. He also quoted one other case of a similar character.—Dr. HERMAN had read a paper before the Society[1] on the complication of pregnancy with cancer of the genital canal. In that paper he had discussed the influence of pregnancy on cancer of the genital organs, and had said that from the greatly increased blood supply to the breast and uterus during pregnancy we should expect that cancer of those parts would grow quicker if the patient became pregnant, and he had quoted a case which showed that this was so. A colleague had since communicated to him another case which showed the same thing. Dr. Phillips had referred to authors who were of opinion that pregnancy retarded or suspended the growth of mammary cancer. Dr. Herman believed this was an opinion not supported by observation. He had shown that in cancer of the uterus pregnancy frequently ended in the birth of a decomposed fœtus due to the cancerous cachexia causing the intra-uterine death of the child. This was a strong reason for bringing on labour prematurely as Dr. Phillips had done. Dr. Phillips had spoken of Cæsarean section being dangerous for the child. He doubtless based this opinion on the fact that the statistics of this operation showed a high infantile mortality. Dr. Herman thought statistics were here misleading. The risk which the child incurred in Cæsarean section was almost nothing, and the high death-rate of the children arose from such circumstances as too late performance of the operation, want of attention to the child at the time of operation, &c. If the operation were done when the child was alive, and with proper precautions for its safety, there was no reason why its life should be lost.—Dr. JOHN PHILLIPS, in reply, thought that induction of premature labour was preferable to Cæsarean section.

[1] Trans., vol. xx.

Dr. JOHN PHILLIPS also read a case of Hæmatocele successfully treated by Operation. A young married woman was attacked during menstruation with rheumatic symptoms. There was an aortic systolic murmur. Metrorrhagia continued for a month. A tumour the size of a Tangerine orange was found in Douglas's pouch, and after seven days a large swelling had formed in the left broad ligament, pushing up the uterus to the right, and producing a considerable abdominal swelling. The tumour descended towards the rectum, and in consequence of the precarious condition of the patient aspiration was performed, with no result. The next day the cyst was opened under ether per vaginam with a Pacquelin's cautery, and a large amount of blood clot let out. A Keith's ovarian drainage tube was inserted. The tumour rapidly subsided, and the patient made a good recovery.—Dr. GALABIN thought the case of interest as bearing upon the question when vaginal section and when abdominal section should be chosen if it became necessary to operate on a hæmatocele. He had never intentionally opened a hæmatocele, but had twice made an exploratory abdominal section with good result in cases which turned out to be hæmatocele, not dependent on extra-uterine fœtation. In both cases there was an elastic tumour reaching to the umbilicus. In both the peritoneal cavity was washed out with hot water, the contents of the hæmatocele having in one of them been in an intensely fetid condition. In one of these cases double pyosalpinx was found and removed, and the advantage of abdominal section was its allowing the removal of sources of mischief.—Dr. HERMAN thought that in cases in which the formation of hæmatocele was followed by gradually increasing pyrexia, the practice which he followed—viz., to let out the blood—was the right one. The majority of cases of hæmatocele got quite well under expectant treatment.—Dr. AMAND ROUTH thought Dr. Phillips' practice was the correct one. An incision into the tumour per vaginam was less dangerous than an abdominal section, and in the former the peritoneal cavity was not opened, as the bulging downwards of Douglas's pouch proved that adhesive peritonitis had closed this above.—Dr. CHAMPNEYS said that, where it was necessary to open a hæmatocele, it was certainly best to open it freely and drain and use antiseptic precautions. Much of the bad results in the past were, he thought, due to aspiration without free opening and drainage, septic matters being introduced into the sac without free escape.

MEDICAL OFFICERS OF SCHOOLS ASSOCIATION.

A GENERAL meeting of the Association was held at the rooms of the Medical Society on Thursday, October 6th. The chair was occupied by the President, W. S. Savory, Esq., F.R.S. The Council reported that Mr. Charles Paget's paper on School Sanatoria had been printed and distributed to members, further copies being obtainable from the publishers, Messrs. Churchill, at one shilling each. It was also stated that the Council intended to bring before a future meeting of the Association a code of suggestions as to the construction and maintenance of school infirmaries and sanatoria.

Dr. Hunter Barron, medical officer to Christ's College, Finchley, and Dr. R. P. Smith, medical officer to King Edward's School and assistant medical officer to Bethlehem, were elected members of the Association.

A discussion on "Some points in the Construction and Maintenance of School Sanatoria" was then opened by Dr. Shelly, medical officer of Haileybury, who deprecated the confusion arising from the common employment, as interchangeable and synonymous, of the terms "infirmary" (which should stand for the building in which ordinary non-infectious illness and accidents only were treated) and "sanatorium" (which, in default of a better substitute being invented, might be used to indicate the building reserved for the treatment of cases of infectious illness only). The desirability of providing sanatorium accommodation in all cases, the proportion which the accommodation for patients and nurses should bear to the size of each school, the provision to be made for treating school servants in sanatoria, and several other points connected with the construction and maintenance of such buildings, were brought before the meeting, and provoked a full discussion. Any members who have not received their copies of Dr. Paget's paper are requested to communicate with Dr. Alder Smith, Christ's Hospital.

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CAMBRIDGE MEDICAL SOCIETY.

A MEETING of the above Society was held on the 8th of July, Mr. E. Carver, F.R.C.S., President, being in the chair.

Supernumerary Tooth.—Mr. CARVER exhibited a photograph of a child, aged six years and a half, showing a tooth growing from the right lower eyelid. Through the kindness of Mr. A. W. Stocks he was able to give the following history of the case. The patient, W. H——, was under the care of Mr. A. Young in the Salford Hospital, and "when born had a small excrescence on the lower lid of the right eye. This increased in size until he was about four years and a half old, when there appeared on the outer side a small white spot, which was found to be hard, and gradually the crown of a tooth (canine) was protuded until the whole tooth obtruded. In this condition it remained until removed. The fang of the tooth is somewhat bulbous. The number of deciduous teeth is perfect, and he has cut the upper and lower middle incisor teeth." Mr. Carver remarked that the number of milk teeth being perfect, this tooth could not be looked upon as a canine of the temporary set in an abnormal position, that its form and imperfect development pointed rather to its being a supernumerary tooth. That it was not uncommon to meet with these supernumeraries during the first and second dentition, particularly in the upper jaw, either within or without the dental arch more frequently in the latter situation—e.g., in the nasal fossa,—and occurring as they often do in the region of the incisors, some have looked upon their appearance as a return to the normal mammalian type of six incisors. He alluded to the small size of the superior maxilla in early life, and that with a full complement of milk teeth a supernumerary tooth might be developed at some distance from the dental arch; but the position of the tooth under consideration—i.e., in the lower eyelid—was not so easy of explanation. After these remarks, Mr. Carver invited Dr. Cunningham to favour the meeting with his views on this interesting case.—Dr. CUNNINGHAM said supernumerary teeth may be divided into two groups—those that may be ranked with one or another of the members of the dental series, and those which differ in form from the latter, called the conical teeth. Those belonging to the first group are usually incisors or bicuspids. An extra canine tooth is a very uncommon occurrence. Heider records a remarkable case where a woman, after losing by extraction a well-developed canine, erupted in three months a small tooth, the size of a rice kernel, with its extremity covered with enamel. After the removal of this first supernumerary, a second and finally a third appeared at similar intervals. The second group resemble the canine teeth in form, though there is no danger of confounding the two. The crown with the invariable single root is conical, and in rare cases the crown may be pyramidally three-sided. Their locality is variable—either in the arch, or more generally within the arch. Their eruption takes place during the first or second dentition, or in the interval between the two. Sir John Tomes records two cases in children of five years. In most cases they belong to the second dentition and are permanent. The question as to whether they are secondary developments from the germs of milk or permanent teeth may be answered negatively, inasmuch as they differ in shape from normal teeth. Reasoning from this latter point of view, it is more probable that they are independent dental germs, products of the superficial mucous membrane, and do not originate, like the permanent teeth, from secondary germs. The upper canine teeth, more frequently than any others, are the subjects of total displacement.

Uniocular Triplopia.—Mr. WHERRY said that this was the case of a patient who, under certain conditions, while using only one eye, saw a single object appear as three. A well-known biologist and good observer, about thirty years of age, told him that after working with the microscope—which he always used with the *right* eye—he lost sight with the *left*, especially for distance, and objects seen near were multiplied. This condition would pass away after some hours. On Oct. 17th, 1885, after working with the microscope with the right eye, he paid him a visit and described a single circle on a white ground, when seen with the left eye only, appearing as distinctly three rings. The circles were sketched at Mr. Wherry's request, intersecting, though sometimes they were quite separate. The object was held at 2′ distance, further off was not multiplied, and nearer was blurred.

L. V. = $\frac{20}{60}$: cyl. − 0·75 *D.* − *V.* = $\frac{20}{15}$ easily.
R. V. = $\frac{20}{30}$: − 0·75 *D* *V.* = $\frac{20}{20}$

Ophthalmoscope shows a thin irregular atrophic crescent at each *o. n.*, otherwise normal. On Oct. 20th, after two days' rest from microscope work,

L. V. = $\frac{20}{30}$ improved with − 0·75 *D.* to $\frac{20}{15}$.
Rt. V. = $\frac{20}{40}$ easily: improved with − 0·75 *D* to $\frac{20}{20}$,

and the defect in sight and multiplication of images is no longer complained of. There was nothing to be discovered abnormal in the eyes except what was mentioned. The patient suffered from habitual constipation, and lately from fissure of the anus. Mr. Wherry said this was probably a case of ciliary spasm; it was curious that the eye which multiplied the image was not the eye which was used in microscope work. It was not unlike the case of uniocular diplopia which occurred in an amateur astronomer, and was reported by him to the Society in December, 1883.

Remarkable Fit after a Fall.—Mr. WHERRY also related the case of an athletic young man, who fell over a rope on to grass, picked himself up, made a remark, and then went off into an apparently unconscious state; was carried by his friends into the nearest shelter, and was laid on a table in a large room. When Mr. Wherry arrived the patient was surrounded by about twenty sympathising friends; his right elbow, supposed to have been hurt, was being supported, and he lay on his back; face flushed; eyes closed; apparently unconscious. Limbs and joints seemed perfectly sound; the right arm was rigidly fixed in extension; the little finger flexed forcibly into the palm. Some slight facial contortions occurred when the lower cervical spine was pressed upon. The eyes seemed closed by effort; the pupils active and equal. Did not speak or answer questions. When asked if he had walked after the fall, and if the right leg had been stiff like the arm, a strong rigidity immediately occurred in the right lower limb. In about twenty minutes he answered a question with a short grunt. Was put to bed; passed urine eight hours after the fall, about eleven hours after his lunch. He gradually recovered in about three days. There was a history of a severe fall, while steeplechasing, two years before, and he was said to have been unconscious for days, followed by frontal headaches of a severe kind. This may be looked upon as a so-called "hysterical" fit. The influence of suggestion in stiffening the right lower limb, and perhaps also the elbow, is worth noting. The rigidity was very marked, the muscles becoming hard, and the right limbs resisting all attempts at flexion. Careful examinations failed to detect any lesion, not even bruise or swelling of the skin.

The following specimens were also shown by Mr. Wherry: Fatty Tumour of the Tongue; Horny growth from face.

Notices of Books.

Ein Beitrag zu den Operationen der Cephalocelen (A Contribution to the Operative Treatment of Cephalocele). Pp. 33. By Dr. BERTHOLD FLOTHMANN. Berlin: Henser.—This *brochure* contains the account of a case of cephalocele which was successfully treated by excision, the child dying eighteen months later of hydrocephalus. A needle armed with stout silk was passed through the centre of the pedicle, which was now tied in two halves; the tumour was then cut off, and, after tying one artery, the edges of the wound were carefully brought together with twelve sutures. An iodoform dressing was applied. There was little or no reaction, union being perfect on the third or fourth day, when the stitches were removed. The sac contained a serous, slightly blood-stained, albuminoid fluid, with a specific gravity of 1006. The interior of the sac wall was for the most part smooth; but presented near its attachment a somewhat villous appearance. There are figures representing the case before and after operation, as also the microscopic structure of the sac wall. The author reviews and summarises the various measures which have been adopted by different surgeons for the removal of such

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cases. The occurrence of hydrocephalus after successful removal of the sac is an interesting fact, and is in keeping with the but too frequent result of obliteration of the corresponding malformation of the spinal column—i.e., spinal meningocele,—whether by removal or after injection.

The New Religio Medici (Chapters on Present-day Subjects). By FREDERICK ROBINSON, M.D. London: Elliot Stock.—Under the above title are included a series of short critical essays dealing with certain subjects relating to religion and modes of public worship which are capable of treatment from a medical standpoint. The author is evidently well read in Scripture. His position is not that of a merely dispassionate observer, or, in modern language, Agnostic, but of a sympathetic exponent of Christian doctrine, while at the same time there is little or nothing of morbid asceticism in his belief as here expressed. The book opens with two chapters of sensible remonstrance against the monotonous formality of Sunday services as they are often conducted, supported by a protest in favour of a less automatic, more attractive, and still perfectly orthodox system. The familiar questions connected with the action of faith as a healing power are treated in a judicious manner. Then follow chapters on "The Church and the Army," on Hinton's theory of "Universality through the Flesh," &c. There are interesting and studious reflections on the origin and purpose of sickness, on "Biblical Plague and Pestilence," and on "Possession by Demons." Among the faults of the work we have noticed in some parts a certain laxity in the argument, and especially an abruptness in style, which, if concise, is rather too bare to be attractive. It is, we might say, Carlylean, without the glow of picturesqueness which gives a living force to the writings of the Puritan in letters. This defective style is partly due, no doubt, to the purely didactic nature of the purpose by which it is inspired.

Hints on the Breeding and Rearing of Farm Animals. By THOMAS WHALLEY, Principal of the Royal Veterinary College, Edinburgh. Pp. 68. Turnbull and Spears. 1887.—The little book before us is an enlarged edition of an address read before the Fife Farmer's Club on the breeding and rearing of animals. It deals with a subject of the first importance, not to farmers only, but to every resident in these islands. We must congratulate the author on having placed in so small a compass, so tersely, so simply, and yet so thoroughly, the first principles of farm-breeding before his readers. He touches upon the choice of parents, and the management they require during the breeding season; next, on the management of both parents and young at the period of parturition; and, lastly, on the management of the young subsequent to their birth. The practical farmer will find some simple but most excellent advice in this book on the subjects just mentioned. We would specially refer him to the sections which deal with cleanliness, a matter which is far too often left entirely out of his consideration. The author shows that cleanliness of the stalls, of the drinking water, of the attendants themselves, and wholesomeness of the food, are as essential items in the rearing of healthy animals as they are in the rearing of healthy human beings.

Journal of the College of Science, Imperial University, Japan. Vol. I. Part 3. Tokyo, Japan. 1887.—This part contains some very creditable work done by the professors and students in the Science College of the University of Tokyo. The first memoir is by K. Mitsukuri, the professor of zoology, and C. Tshikawa, assistant in zoology, and is upon the formation of the germinal layers in Chelonia. The material for this was obtained from M. Hattori's large hatching establishment in Honjo, a suburb of Tokyo, where hundreds of the snapping turtle (Trionyx Japonicus, Schlegel) are annually bred for culinary purposes. It may just be noted that they agree with Balfour and Hartwig in stating that the mesoblast always arises as paired masses, one on each side of the median line, and that these two masses are to be regarded as paired denticula of the alimentary canal. This memoir is illustrated with four plates. 2. S. Watase: On the Caudal and Anal Fins of Goldfishes, with two plates. 3. C. Sasaki: Some notes on the Giant Salamander of Japan (Cryptobranchus Japonicus). 4. Aikitu Tanakadate: A Coilless Pocket Galvanometer and a Flat Coil Pocket Galvanometer. 5. B. Koto: Some occurrences of Piedmontite in Japan. 6. S. Sekiya: The severe Japan Earthquake of Jan. 15th, 1887. 7. C. G. Knott: Notes on the Electric properties of Nickel and Palladium. 8. A. Tanakadate: Note on the Constants of a Lens.

Sul Laringismo Stridulo e le Convulsioni dell' Apparato Respiratorio (Laryngismus Stridulus and Respiratory Convulsions). By Dr. W. H. BARLOW. — This is a reprint from the "Archiviodi Patalogia Infantile," published in in Naples. Dr. Barlow (of the Manchester General Hospital and Dispensary for Children) discusses the causes of these convulsions, and especially points out how in artificially fed children, who so frequently suffer from gastric irritation, such convulsions are produced. The share which rickets plays in their production is referred to, though too briefly; and among the remedies he suggests, we notice that cod-liver oil is not mentioned, which, in our opinion, should be the practitioner's sheet-anchor. The *brochure* is an interesting summary of what is known on this matter.

Atlas von Beleuchtungsbildern des Trommelfells (An Atlas of the Membrana Tympani as seen through the Otoscope). By Dr. KURD BÜRKNER. Fourteen Tables in Chromolithograph. Jena: Gustav Fischer. 1886. — The author, who has charge of the ear department in the University Poliklinik at Göttingen, has published this Atlas as a complement to the many existing text-books on ear disease, and in the hope of facilitating the interpretation of what may be seen through the otoscope. The plates contain eighty-four figures, with brief descriptions. Each figure is taken from nature by the author, and the most common forms of ear disease have been selected. In conjunction with a good description of the disease, such as is furnished in many of the text-books, this Atlas will prove very useful and very acceptable, especially to those who are commencing this kind of work, as well as to such as are not within reach of special instruction.

The Common Diseases and Accidents to Life and Limb. By M. M. BASIL, M.A., M.B., C.M. Edin. London: J. and A. Churchill.—In the form of a popular lecture, Mr. Basil has contrived to convey in a readable and entertaining manner a large number of sound hints to those who may be in attendance on persons who meet with accidents or who suffer from various medical and surgical affections, including insanity. His advice is more frequently not to do things which people are in the habit of doing than to resort to a specific set of directions as to treatment, and he very properly exposes several popular fallacies. Amongst other matters, the author gives some excellent hints about the manner of "sending for the doctor."

Atti della Reale Accademia Medica di Roma. 1883-86. Vol. XII., Serie 2.—This volume of the proceedings of the Royal Medical Academy of Rome contains the following articles:—Pyelo-nephritis, by Professor Majocchi; Interparietals and Preinter-parietals of the Human Skull, by Professor Sergi; the Connexions of Muscle with Tendon, by Professor Giuliani; the Prophylaxis of Phthisis, by Drs. Celli and Quarnieri; the Development of the Sulci and Convolutions of the Brain, by Dr. Mingazzini; some Statistics of Disease in Rome, by Professor Scalzi; the Chemical Reactions of Vibratile Cilia, by Dr. Bocci; and the Blue Pigment of Physalia Pelagica, by Professor Colasanti. These papers are many of them of considerable interest, especially when read with the assistance of the plates and diagrams which accompany them.

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Analytical Records.

ALPINE MILK GUARANTEED FREE FROM SUGAR OR ANY OTHER FOREIGN SUBSTANCE.

(FIRST SWISS ALPINE MILK EXPORTING COMPANY, SWITZERLAND.)

ANALYSIS showed that this article is genuine condensed milk. It contains no trace of added sugar, or of boracic or salicylic acid. Diluted with two parts of water it gives a milk rather above the English standard—that is to say, a milk which, although not very rich, is rich enough for domestic use. The direction on the label is that three parts of water are to be added. This would give rather a poor milk, which would contain only 8·15 per cent. of non-fatty solids, 1·97 per cent. of fat, and 0·65 per cent. of ash. It will be seen that the milk is absolutely free from adulteration. It is a valuable article, and can be used with confidence if not excessively diluted.

BON FOOD.

(BON FOOD SUPPLY COMPANY, 31, CHARLOTTE-STREET, OLD KENT-ROAD.)

A mixture of cereal and leguminous flour with a small quantity of sugar. It is well prepared, and is a highly nutritious and convenient form of food. It is well adapted for domestic purposes, and can be used with advantage for puddings, custard, and porridge. It is needless to add that it is highly nitrogenous.

LEMONETTE.

(WILLIAM WHYSALL, GRANTHAM.)

We have before noticed with approval Mr. Whysall's preparations. The present is an excellent non-alcoholic beverage, quite free from lead and other poisonous metals and from mineral acids; 100 cubic centimetres contained acid equivalent to 1·673 grammes of citric acid, which is a fair proportion.

LOCK'S BEEF EXTRACT.

The sample we examined contained the following:—

Water, expelled at 212° F.	64·5
Organic constituents	32·0
Ash (phosphates, &c.)	3·5
	100·0

Beef-tea made from it was good in flavour. Finely divided fibre was found to be present in considerable quantity. The preparation evidently contains the whole of the meat, and as such is of great nutritive value.

RUSSIAN CAVIARE.

(CH. H. SENN, 329, VAUXHALL-BRIDGE-ROAD.)

This is pressed caviare of excellent quality. Ordinary caviare is so very oily that many who like the taste cannot eat it. Pressing removes much of the oil and improves the flavour in a remarkable degree. We recommend all who are benefited by cod-liver oil to try pressed, if not unpressed, caviare on buttered toast with a little lemon. It is unnecessary to commend it to the epicure.

TABLE DELICACIES: POTTED FOIE GRAS, DEVILLED TONGUE, SARDINE PASTE.

(CH. H. SENN, 329, VAUXHALL-BRIDGE-ROAD.)

All that the analyst can say of these preparations is that they are well made and free from adulteration. That they are excellent in flavour the public will soon discover.

BROMIDINE (BORLAND'S PATENT DISINFECTANT, ANTISEPTIC, AND DEODORISER).

(MAY & BAKER, BATTERSEA, LONDON).

The value of bromine as a disinfectant is admitted by all, and this preparation is certainly a most convenient source of the element. The white powder has merely to be moistened with water, and bromine vapour is given off in abundance. Following the printed directions, we took as much of the powder as would lie on a penny, and, treating it with water, found that six grains of bromine were liberated. There is no trouble or risk of failure in the use of the preparation, and it is certain that bromine could not be so easily generated in any other way.

LIQUOR PODOPHYLLIN ET PEPSIN (HOCKIN).

(HOCKIN, WILSON, & CO., DUKE-STREET, MANCHESTER-SQUARE.)

Hockin's well-known liq. podophyllin is now associated with pepsin. In such a mixture all depends on the quality of the pepsin, and as we find by experiment that a small quantity of the liquid dissolves a considerable quantity of starch paste, we have no hesitation in recommending it. Hockin's podophyllin and pepsin is a trustworthy preparation.

LIQUOR PODOPHYLLIN ET BELLADONNA C. STRYCHNIA (HOCKIN).

(HOCKIN, WILSON, & CO., DUKE-STREET, MANCHESTER-SQUARE).

This, like the last, is a genuine and reliable preparation, suitable for hepatic and intestinal derangements. The strychnine can be extracted by ether, and is recognised easily by the bitter taste and the bichromate test. Each drachm of the mixture contains one-fourth of a grain of podophyllin resin, one-eighth of a grain of extract of belladonna, and one-thirtieth of a grain of strychnine.

TETT'S LILY TABLET.

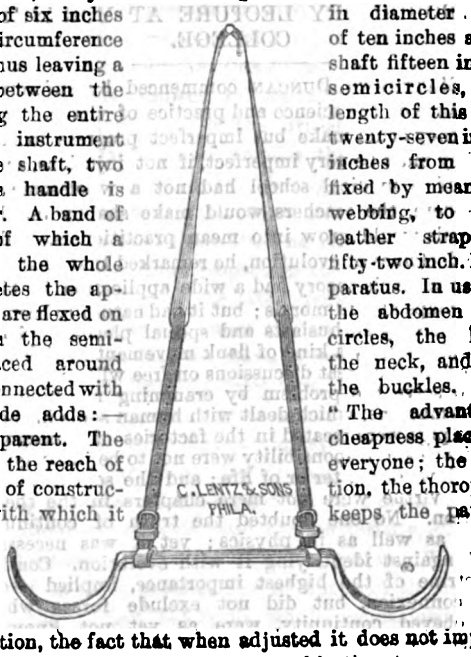
(F. G. TETT, 80, CARLTON-STREET, KENTISH TOWN).

This is a white, solid cake, smelling of camphor and slightly perfumed. It is not a soap, but is intended for use after washing. The presence of camphor is readily detected by careful sublimation, and the residue saponifies easily with potash, white fatty acid separating from the soap on the addition of acid. It is a pure and elegant toilet preparation, well adapted for softening the skin.

New Inventions.

APPARATUS FOR MAINTAINING THE LITHOTOMY POSITION.

THE apparatus figured in the woodcut was designed by Dr. McBride, of Philadelphia, to enable the surgeon to keep his patient in the exact lithotomy position during the performance of operations on the perineum or neighbouring parts. "It consists of a piece of hard elastic wood, ash, hickory, or white oak, one inch wide, three-eighths of an inch thick, thirty-six inches long, bent at each end in a semicircle of six inches in diameter or a semi-circumference of ten inches and a half, thus leaving a shaft fifteen inches long between the semicircles, and making the entire length of this part of the instrument twenty-seven inch." To the shaft, two inches from each end, a handle is fixed by means of leather. A band of webbing, to each end of which a leather strap is sewed, the whole fifty-two inch. long, completes the apparatus. In use the thighs are flexed on the abdomen and put in the semicircles, the hand is placed around the neck, and the ends connected with the buckles. Dr. Mc Bride adds:—"The advantages are apparent. The cheapness places it within the reach of everyone; the simplicity of construction, the thoroughness with which it keeps the patient



in position, the fact that when adjusted it does not impede the circulation, which is the great objection to so many similar inventions, the lightness and strength, render it a valuable acquisition to the surgeon and gynæcologist."

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THE "NELATON" PATENT VALVE SYRINGE TUBE.

THIS syringe tube has been introduced to supersede those generally in use on account of two special features. First of all it is perfectly flexible; then, instead of the usual aperture, it has several fine slits which open out when fluid is forced into the tube, but are quite closed and almost imperceptible at other times. The flexibility of such a tube



is a matter of the very highest importance; the number of accidents that have occurred, even to trained nurses, from the use of ivory and other rigid enema tubes is so large that they ought to be universally abandoned. It is also well known that unless great care is taken in its manufacture, the common large aperture in a rubber tube may be a cause of a great deal of pain to the patient. This cannot arise when such a tube as the "Nelaton" is used.

NEW UTERINE SUPPORT FOR EQUESTRIENNES.

SHORTLY after my association with the Wild West I asked the frontier girls whether the violent riding did not shake them considerably, and was told that at times they suffered a great deal of pain. I advised them to get abdominal belts for support whilst riding; they did so, and felt great benefit therefrom. On talking the matter over with Mr. E. Huxley, of Old Cavendish-street, he suggested a uterine support, which consists of a peculiar shaped pad with two straps which cross over the sacrum, and are brought to the front and fastened with any amount of tightness the wearer may find desirable. I got him to make one for each of the girls, and they say they are such a comfort and support that they will never ride without them. I think the belt will prove a great blessing to ladies in the hunting field, as well as to professional riders.

R. J. MAITLAND COFFIN, F.R.C.P. ED.

Baron's Court, S.W., Oct. 1887.

INTRODUCTORY LECTURE AT YORKSHIRE COLLEGE.

DR. MATTHEWS DUNCAN commenced by enforcing the importance of the science and practice of virtue. Without virtue they could make but imperfect progress in science, and they must be very imperfect, if not injurious, in practice. If a medical school had not a wholesome moral atmosphere, the teachers would make shabby pupils, and the pupils would grow into mean practitioners. Alluding to the doctrines of evolution, he remarked that that charming and valuable theory had a wide application in biology, and perhaps also in morals; but it had naturally been forced to extremes by enthusiasts and special pleaders. To such, it would seem, by a kind of flank movement in dialectics, to render vain the great discussions on free will and necessity, and to solve the problem by cramming mankind into a fatalist machine, which dealt with human souls in the same way as pigs were treated in the factories of Chicago. But conscience and responsibility were not to be justly governed by the laws of matter or of life; and the science and practice of virtue were not mere chapters in the theory of evolution. No one doubted the truth of continuity in morals as well as in physics; yet it was necessary to guard against identifying it with evolution. Continuity, a doctrine of the highest importance, implied sequence with connexion, but did not exclude forces which, if they obeyed continuity, were as yet not known, but only suspected to do so. No one doubted the continuity of the prevalence of scarlet fever. It was always among us, carrying off its victims at, at least, an average rate. But that continuity, with its average, was violently disturbed—not utterly broken—by the unaccountable appearance of epidemics, which despised the average and raged according to a different law. So, in politics, there was a continuity, but it was disturbed by a Cæsar, a Charlemagne, or a Napoleon. So, in the science of medicine, continuity was modified by a Lavoisier, a Bichat, or a Schwann. So, in the practice of medicine, continuity had its uniformity of course interfered with by a Hippocrates, a Galen, or a Cullen. The appearance of a great original genius in medicine was a matter equally beyond their powers of explanation or control. It appeared to infringe the law of continuity, as that law was known to them by the general progress of professional knowledge. Every sane man, and every sane school, provided according to the known laws of continuity. No sane man conducted his education as that of a great original genius. No wise school provided for other than the average intellect. But this provision, according to the law of continuity, with its averages, did not imply flat sameness, or absence of genius in individuals, or the uselessness of individual effort. Were such perversion of the laws of continuity into the fatalist form of evolution sanctioned, then individual effort, if not utterly useless, would be at least discouraged or paralysed, and his remarks would be baneful and misleading. Medical students had to study the continuity of their individual lives, the continuity of their social lives, as members of a school, and the continuity of their social lives as members of a professicn. By individual effort they must push this way and that, always taking care that the direction was to higher and better. They should aim at accumulation of knowledge, acquisition of skill, and improvement in virtue, the last being paramount, and bringing all the rest in its train. Having glanced at the advantages which students now possessed as compared with those obtainable 100 years ago, Dr. Duncan said the amount of knowledge was always increasing, and with it the amount of time needful for its acquirement. Not long ago three years were enough. Now four were required, and it looked as if it would soon rise to five. Every medical school should keep the university ideal before it, and this was implied in their Leeds school being now in process of incorporation with a rising university. In the universities of Scotland and Ireland that ideal was maintained. No medical school had a more interesting or more honourable history than that of Leeds—a history that plainly indicated vigorous life, and showed great rapidity of healthy growth. Started in an imperfect form, not much more than half a century ago, by the wise enthusiasm of a few medical men in the town, it had grown into a completely equipped and recognised medical school, and, already forming part of the Yorkshire College, it would soon, he understood, be completely incorporated with the prosperous Victoria University. They might well be proud of the nursery in which they were reared and passed on to the ranks of the medical profession.

"IS CANCER CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—The interesting question is raised in an annotation in THE LANCET of this day as to whether cancer is contagious. M. Duplouy's case certainly gives some grounds for believing that it is so. I daresay it has fallen to the lot of others, more than it has to my own, to observe with regard to this disease equally remarkable "coincidences." And I venture to say that if to such experiences as M. Duplouy's publicity were given, they might prove a means of elucidating valuable facts with regard to this insidious disease. A case of this kind came to my knowledge some time ago, the particulars of which, I think, are worth relating briefly.

A member of the medical profession married a lady who was subsequently found to labour under mammary and uterine cancer, from which she soon died; not long afterwards the gentleman himself, who had previously been healthy, developed symptoms of cancer, which disease subsequently became localised in the stomach and liver. Before his death he again married, and a year or so later the second wife was under the necessity of having both mammæ removed for cancer, in successive operations, and she sank after the second operation.

I am, Sirs, your obedient servant,

Harley-street, W., Oct. 8th, 1887. JAMES ADAM, M.D.

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THE LANCET.

LONDON. SATURDAY, OCTOBER 15, 1887.

THE decision of the International Hygienic Congress to hold their next meeting in London makes their recent proceedings in Vienna of especial interest to Englishmen. It has only of late years been possible to regard the subject of hygiene as one fitted for international consideration. The complete neglect of sanitation in some countries and its imperfect recognition in others proved that its relation to national prosperity was not sufficiently understood, and suggested that no general European interest would be felt in the discussion of conditions affecting health. By degrees knowledge has increased, and, taught by the sad experiences of the last few years, the more enlightened nations have turned their attention to methods of preventing disease. As a result the Congress at Vienna brought together nearly three thousand people from all parts of the globe, and papers were read and discussed in a manner which proved that a higher value attached to health than heretofore. This was especially seen in the demand for legislative control which was put forward by many who took part in the proceedings at Vienna. Interference with the freedom of personal action is more readily accepted on the Continent than in England, and it is but natural that those who have satisfied themselves of the advantages which legislation on one point or another would confer on communities should thus wish to enforce their doctrines. But the Congress showed, as all Congresses show, that if the opinion of the many is to be made the basis of legislation there would at times be the greatest amount of interference with the least amount of good. The Vienna meetings will serve the double purpose of indicating the necessity of skilled investigation of the causes of disease, and of encouraging statesmen to rely upon work of this character rather than upon collective opinion.

The excellent work which is carried on in the continental laboratories has undoubtedly had its effect in teaching the value of exact knowledge, but there was none the less too great a desire at Vienna to record by resolution the opinion of numbers, regardless of their fitness to exercise any proper judgment upon the points at issue. This was especially objectionable when the subject had any reference to the practice of different nations. In meetings composed in greater part of members of one race and of one way of thinking, it was impossible that decisions should not depend upon this circumstance, and any attempt to express an international feeling, whatever it might be worth, was therefore certain to lead to an untrustworthy result. In the Congress to be held in London this would be still more undesirable. In some respects England is far in advance of other countries; she has been the subject of numerous experiments extending over many years, and the experience thus bought has placed her sanitary administration on a more secure footing. It would be impossible to prevent English feeling unduly preponderating if collective opinions were sought at meetings in London, and it will be well to guard against any action that would place the members of other nations at a disadvantage.

The best work of the Congress is educational. The excellent paper of M. EMILE TRÉLAT of Paris will certainly do much to encourage a study of the principles which should guide architects and local authorities in the building of houses and the laying out of streets. The accumulation of evidence in papers read before the Congress that cholera is disseminated by human intercourse, and especially by the fouling of water supplies, will give impetus to the improvement of localities which may now give opportunity for the propagation of this disease. It is by work of this nature that the teaching of peoples can be best effected, and the fact that all nations are alike interested in the questions which affect life is the best promise that their study will progress.

IN an able and interesting article published in the *Fortnightly Review* Mr. CHARLES ROBERTS deals with the question of the physical degeneracy of our town populations. The inquiry is for obvious reasons chiefly concerned with the condition of the labouring classes, though, in contrasting variations of death-rate, average weight, stature, and the like, there is an inseparable reference to the vital state of whole communities, without regard to rank. The author of this paper, we are pleased to note, is not one of those prophets of evil in whose eyes the future of our poorer townsfolk wears only an aspect of unbroken gloom. It is true he does not ignore the fact that causes hostile to the natural and vigorous development of human life are more largely present in cities than in rural districts; but while admitting this, he justly objects to the wholesale acceptance of evidence derived from statistics which are still necessarily imperfect, and he acknowledges the certain past and probable future success of efforts in the direction of sanitary reform. Among the signs of a progressive degradation of the national type as found in towns have been classed the diseases and infirmities of constitution exposed in examinations of recruits enlisted for the army at the present day as compared with those of twenty-five years ago. Sir THOMAS CRAWFORD entered at some length into this subject in an address delivered at the last annual meeting of the British Medical Association. While granting the premiss that the number of rejections on the score of bodily unfitness in the period 1860-64 amounted to 371·67 per 1000, and in the years 1882-86 to 415·58 per 1000, he refuses to accept the adverse conclusion drawn respecting the physical condition of men enlisted during the latter period, and chiefly in towns, inevitable as that may at first sight appear. In dealing with these data we must, as he says, take account of the fact that formerly rejections were not officially notified with the same strictness as they now are, and also that under the present short-service system allowance has to be made for a larger number of half-grown youths provisionally recruited without previous examination. These qualifications of necessity, and very materially, affect the value as evidence of the statistics in question. We doubt, indeed, if on other grounds the relevancy of the latter as regards the subject before us can be maintained. On a comparison of the two tables, it is at once evident that certain particulars of health, which are noted and have

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their numerical equivalent in the later, are not even mentioned in the earlier; and, what is of even greater consequence, in the list of failures included under the former category, deficient weight, chest measurement, height, and erroneous age go far to swell the total, while there is decidedly less evidence of serious bodily disease or deformity. The recruit, if smaller, is healthier and better made; and while we cannot deny the important significance of diminished size, neither can we, in the face of a frequent miscalculation of age, of which there is ample evidence, resist the impression that youths have in many instances been enlisted instead of men. Statistics of this character have consequently the less value as bearing on the condition of the adult population. The whole argument, as far as it rests upon this kind of proof, is as yet quite unripe for accurate decision; and while therefore we must be careful not to ignore the suggestive note of warning thus conveyed, we must equally avoid any tendency to pessimism, founded on such insufficient data. If, again, we turn for information to strictly civil life, there is no lack of circumstances which obviously tend towards deterioration. Measures of sanitation have not certainly among the masses inhabiting our larger towns arrived at that perfection which is desirable. Physical energy is far too often overwrought, and the conditions of daily work are too commonly insalutary. Improvement in this direction is, however, steadily progressive. There is also an increasing tendency on the part of employers to allow, and on the part of the employed to accept and utilise, some hours of the working week for purposes of recreation. Physical exercises are, as a consequence, viewed with increasing favour, and, whether for child or man, are winning their natural place among our national necessities. It was never, indeed, to be expected that they would cease to be regarded with favour. The sole fear was that their right of observance might be swallowed up by the more urgent claims of labour, and this fortunately the common sense of public opinion is not likely to allow. The food question, though probably incapable of a wholly satisfactory solution, occupies a position much advanced beyond that which it held in the earlier half of the present century. The influence of this and other allied matters of nearly equal moment, a decided and general rise in wages, diminished cost of clothing, of house-rental, and of living as a whole, have, as Mr. ROBERTS observes, exercised a most beneficial effect in checking that process of retrograde change which many regard, not without a reason, as a possibility of the future. Thus far, however, we feel a certain satisfaction that the evil of decadence is more visionary than real, but at the same time we must recognise the practical truth that continued future prosperity is compatible only with a vigilant observance of those laws of healthy life which nature constantly defends by imposing on those who disregard them the penalties of physical enfeeblement and final extinction.

THE French, imaginative and inventive as ever, are, generally speaking, more suggestive and less matter of fact than most other nations. Take, for instance, the subject of Hystero-saturnine Paralysis, which has created considerable interest in French papers of late. Hysteria engendered by lead poisoning may produce sensory and motor paralyses having all the essential characters of ordinary hysteria. Such paralyses must therefore be regarded as of genuine hysterical nature. We believe that these propositions express the central idea of those who have lately written on the question; certainly of M. POTAIN, whose contribution may be read in *Le Bulletin Médical*, No 54. The case recorded there was that of a man aged twenty, a house painter by occupation, who had followed his calling for eight years. He suffered on three separate occasions from lead colic, the last occasion being in 1885. About the same time he was also the subject of an attack of typhoid fever. But beyond these illnesses he had never suffered from any complaint, and certainly not from nervous morbid phenomena, being neither more irritable nor more emotional than the common run of men; nor had his sleep ever been disturbed by night terrors or by nightmares. Finally, he does not seem to have committed any excesses either in venery or alcoholism. In the family history a slight neuropathic disposition appears to exist.

Fifteen days before his admission to hospital the patient experienced in his right arm, without any apparent reason, an increasing weakness, which gradually progressed to the point of complete wrist-drop. The treatment pursued in the hospital consisted in the employment of faradisation, iodide of potassium, and sulphur baths, but no definite improvement resulted to the paralysed member. There was total inability to extend the fingers or the wrist, and he had no power of abducting or adducting the wrist joint. The flexion of the forearm upon the arm was voluntarily possible, and in this movement the long supinator manifestly joined, although its contraction was feebler than that of the sound limb. *The paralysed extensor muscles of the forearm contracted energetically on the application of the faradaic current*, more energetically and more rapidly than the muscles of the sound arm did to the same strength of current. It was further observed that the patient bore with equanimity and without apprehension or pain the most powerful faradaic shocks on the paralysed limb, again contrasting strongly with the opposite limb. From time to time complaint was made of cramps in the legs, and further investigation discovered that there was anæsthesia of the right side of the body, and of a typical hysterical sort. The tactile sensibility was diminished, painful sensations were not felt at all, and sensations of heat were scarcely recognised, and to them he certainly made no resistance. There was no loss of colour-vision, or any disturbance of the same, but the acuteness of vision was blunted, and the diameter of the visual field of the right eye measured but one-half of that of the left. The acuity of hearing was likewise lowered in the same degree as that of vision, and on the same side. But although the olfactory sense was diminished on the right side, there did not appear to be any defect of the sense of taste proper. A slight but definite "lead line" was detected at the base of the canine teeth. The difference in the grasps of the two hands was represented by the numbers 9 for the right and 31 for the left hand. The right hand and forearm were also colder than the left. A horseshoe magnet was applied to the outside of the right forearm, and its application continued for forty-eight hours, at the end of which time the paralysis was found to have changed sides, as in ordinary cases of *transfer*. A few days later the para-

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lysis almost entirely disappeared, but some of the symptoms remained longer, though lessened in degree.

It is perhaps not assuming too much to suppose that many practitioners would have been contented in this case to diagnose the presence of lead paralysis; but the anæsthesia and the character of the electrical reactions, together with the precise distribution of the paralysis, form a group of conditions sufficiently antagonistic to such a diagnosis.

The chief lesson to be inculcated in cases of the kind is the necessity of recognising the fact that diseases of different kinds may coexist and progress together in one and the same organism, and we should admit the possibility of this combination whenever any unusual circumstance is evident in a case in which the probability is great that the two or more lesions are results of the same morbid agent. If a patient has a rash on the body suggestive of syphilis, and has also vague symptoms of nervous disease which may be syphilitic, the most probable diagnosis is that the nervous lesion is also syphilitic; but we must allow that other causes may also be acting, aiding and abetting the syphilitic cause, and such causes will frequently be found to be either lead, alcohol, or mercury. We may remark, in conclusion, that LETULLE and others believe mercury may be a cause of hysteria, and that syphilitic patients with nervous tremors may confront the practitioner who attributes the movements to syphilis, when in some cases it is evident from further inquiry that a long mercurial or iodide treatment may have had some share in the causation of the abnormal movements.

THE nature and limitations of the protection of the Leicester community from small-pox is now pretty well understood. Even the sanitary authorities of Leicester dare not yet—as our Commissioner has shown—face the awful disease without the protection of vaccination, and generally of revaccination or previous small-pox. This protection the sanitary authorities, as a whole, have done much to disparage, so that they boast of an enormous number of absolutely unprotected persons. The only security of such persons is living in Leicester, and this only holds so long as vaccinated persons can be found to face importations of small-pox, and the importations themselves are few and far between. It is conceivable that the authorities in Leicester may carry their detraction of vaccination so far that vaccinated persons will not be forthcoming to stand between the plague and the people as at present; or small-pox may not always be so much in abeyance as now—not having caused one death in Greater London for a month past or more, and most of the twenty-eight greater towns being equally free. There is no great virtue in not contracting small-pox when it is so scarce. But some day it may rage as a fire, and Leicester people will be apt to find that they have been living in a fool's paradise. The authorities do not promise them any security outside of Leicester. Their policy may be compared to that of a father who, to save his children from being drowned, denounces swimming, and thinks to keep them from going to the seaside. All that need be said now is that intelligent unvaccinated people in Leicester—if such an expression be permissible—have no excuse for being deceived as to the limitations of their protection. All the sanitation in the world will not make small-pox anything else than small-pox, any more than it will make arsenic less than arsenic. All the admirable sanitary police arrangements of Leicester—to which our Commissioners did justice—will not avail one of its citizens who happens to stray into a neighbouring town where small-pox rages. And here we propose for the present to leave this subject. It is a mistake to throw threats and warnings away. The occasion of our breaking silence was the remark of Mr. BIGGS that by sanitary measures alone small-pox had been stamped out, omitting all mention of vaccination-protected persons. This was too much for our patience after having been at special pains to ascertain the facts. But having reminded the public of the system which we explained last year, we leave the subject, well satisfied to leave violations of law and common sense to speak for themselves.

Annotations.

"Ne quid nimis."

SIR DYCE DUCKWORTH ON PHARMACY.

THE introductory address of the session was delivered by Sir Dyce Duckworth at the School of Pharmacy on the 5th inst., and right well did the lecturer acquit himself. There was a high conservatism in his views of pharmacy and prescribing; a misgiving about our new-fangled remedies and combinations of food and physic in all sorts of forms; but withal a very hearty recognition of the services rendered to medicine by the professors of the School of Pharmacy and its members generally. He expressed the opinion that the higher the proper education of a druggist, the less likely he was to forget his own duties and trespass on those of the medical man. Referring to recent legislation and the action of the Medical Council in perpetuating the Apothecaries' Society, he expressed dissent, and the belief that the need for apothecaries had now wellnigh ceased, and, indeed, that medical men had now too much to do and to think about to dispense well. Sir Dyce Duckworth does not like the exclusion of old and long-tried drugs from the Pharmacopœia, and made a feeling confession of his satisfaction, unlike Sir Henry Acland, at the retention of musk, which he largely uses. He was, on the other hand, disposed to regret that we have on our tables extra and unauthorised Pharmacopœias, though it must be admitted that they are often very useful indeed when the regular Pharmacopœia lags behind. He also mooted one or two questions of great interest to chemical manufacturers and pharmacists, such as the almost exclusive supply from Germany of such drugs as chloral hydrate and salicylate of soda, and the vast importation of the commonest drugs from America. These are questions for our pharmacists to settle. We agree with Sir Dyce Duckworth that they ought to be able to compete with either Germany or the United States.

SCARLET FEVER IN LONDON AND OTHER LARGE ENGLISH TOWNS.

DURING the thirteen weeks of last quarter the annual death-rate from scarlet fever in the twenty-eight large English towns dealt with in the Registrar-General's weekly return was equal to 0·39 per 1000 of the estimated population, corresponding with the mean rate from this disease in the same towns in the third quarter of the five years 1882-6, in which the rate ranged from 0·59 in 1883 to 0·23 in 1885. The rate in London last quarter was 0·40, while in the twenty-seven provincial towns the mean rate was 0·38, or only slightly lower. No death from scarlet fever was registered during the quarter either in Leicester or in Derby, and the lowest rates in the other towns were 0·02 in Notting-

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ham, 0·06 in Sunderland, and 0·07 in Birmingham. The scarlet fever death-rate ranged upwards in the other towns to 0·59 in Preston, 0·66 in Manchester, 0·74 in Birkenhead, 0·90 in Oldham, 0·97 in Bristol, and 1·41 in Blackburn. It would be interesting to know what proportion of the fatal cases of scarlet fever in these several towns occurred in hospital. It appears from the Registrar-General's recent weekly returns that during the five weeks ending last Saturday nearly 40 per cent. of the deaths from scarlet fever occurred in hospital, showing a marked increase upon the proportions in recent years. The death-rate from scarlet fever during last quarter varied very considerably in different parts of London: it was 0·20 in the north, 0·29 in the west, 0·38 in the east, 0·46 in the central, and 0·57 in the south groups of sanitary areas. It is noteworthy that the highest rate last quarter in any of these London groups of districts was exceeded in Preston, Manchester, Birkenhead, Oldham, Bristol, and Blackburn. If the rate in South London be examined more closely, we find that it was 0·84 in Newington; 1·02 in St. Saviour's, Southwark; 1·12 in Bermondsey; 1·68 in St. George's, Southwark; and 2·73 in St. Olave's, Southwark. The sanitary authorities in Southwark should take particular note of the exceptional fatality of scarlet fever within their districts, affording evidence as it does in corroboration of the warning conveyed by the constantly high death-rates from all causes that prevail therein.

PROPOSED CHEMICAL LUNG TEST.

DR. ZALESKI, of the Dorpat Physiological Institute, has published in the *Vrach* (No. 32) an account of some researches he has been making with the object of introducing a new lung test, which may be trusted to give satisfactory results in cases where the hydrostatic test is inapplicable or of doubtful value. He suggests that, as at the moment of birth there is not only an influx of air into the lungs, but a very marked increase in the blood circulating through them, and as blood contains iron in a tolerably definite proportion, the quantity of iron found in the lungs should furnish a clue to the question as to whether the child had breathed or not. He examined the lungs of four stillborn children and of three children born alive; also those of a healthy man who had been killed by an accident. Having of course taken care that the lungs had not been subjected to any previous section or manipulation, he tied the roots and cut off the bronchi. They were then immersed in distilled water for the hydrostatic test, and, after being dried with filtering paper, they were weighed in a platinum dish, and sections were made and carefully examined. After this they were dried in a hot-air chamber at from 115° to 120° C. until they ceased to lose weight. Soda was added to the dried lung substance, also water, and the whole was dried in a water bath. The mass was then ignited in a Bunsen's burner, treated with water, and thrown on a filter, which gave no ash. The whole was then again ignited. Here, all the iron was of course, not in the filtrate. It was then heated with strong hydrochloric acid in a water bath. After the hydrochloric acid had evaporated, the residue was treated with sulphuric acid, reduced by zinc, and the iron estimated by a solution of permanganate. The result of the observations showed that the iron contained in the lungs of children that had breathed was always considerably more in proportion to their weight than in the lungs of stillborn children. The mean percentage of iron (Fe) in the lungs of the stillborn was 0·0110 of the weight of the fresh lung, and 0·0828 of that of the dried lung; whereas the mean percentage of iron in the lungs of the children who had been born alive was 0·0188 of the weight of the fresh lung, and 0·1182 of that of the dried lung. The iron in the case of the adult was still more than in that of the infants, the percentages being 0·0217 and 0·1266 of the fresh and dried lung substance respectively. In one case in which the child had lived for five days part of the left lung was found diseased, there being evidences of septic pleuritis and pneumonia. Here the diseased portion of the lung was separately examined, and found to contain a percentage of 0·0192 of iron in the fresh state, and of 0·1197 in the dry state, so that it would appear that the "iron lung test" holds good even for diseased lungs. The author has not made observations in cases where there has been profuse hæmorrhage from the cord, nor in those where putrefaction has commenced, but he thinks it probable that the test would answer here as well as when the lungs have been immersed in spirit. Of course, artificial inflation after death would not vitiate the test, as was indeed proved by one of the cases where Schultze's method of inflation was adopted five hours after stillbirth. Dr. Zaleski's "iron lung test" is evidently of too complicated a nature to be carried out by the ordinary practitioner, but in doubtful cases it would be quite practicable to preserve the lungs and send them to an expert, just as the stomach and other viscera are sent in poisoning cases. Before, however, any real value can attach to evidence deduced from it, a large number of experiments must be made by different observers, and their results collated.

BURIAL REFORM.

A MEETING of the Church of England Burial Reform Association was held at Wolverhampton on the 3rd inst., during the Church Congress week. The Mayor of Wolverhampton, Mr. Vincent Jackson, senior surgeon to the Wolverhampton and Staffordshire General Hospital, presided, and in his opening speech warmly advocated the claims of the Association, which, though promoted by members of the National Church, was unsectarian. He also observed that "its aims were not faddy, or ephemeral, or merely sentimental, but based upon the conviction that their adoption would benefit the human race. The Association was zealously endeavouring to impress upon the public that the only mode of burial of the dead which was consistent with the health of the living was that which enabled the body as quickly as possible to be brought into contact with the earth and the air, and its decomposition and its absorption effected. The best mode of burying the dead in a sanitary point of view belonged to the domain of preventive medicine. It was, therefore, the duty of medical men to become the Society's auxiliaries, and to give on all occasions the most emphatic and dogmatic counsel upon this vitally important question. The reforms required were as follows:—The coffin should be of the most perishable and lightest material, such as compressed pulp, metallic and every form of imperishable coffin being most objectionable. The interment should be as early as possible. The pall, which was an unnecessary and baneful covering, should be discarded. The burial should be in the plain earth, in conformity with the instructions of the Burial Service, 'earth to earth,' to the total disuse of vaults and bricked graves, which convert a graveyard into a heap of putrescent remains, a source of contamination of the most deadly character to surrounding wells and watercourses for all time to come." The following resolution was subsequently moved by the Mayor: "That the prevalent mode of burial is contrary to the mode plainly indicated in the Burial Service—namely, simple burial in the plain earth; and that a return to this simple mode is necessary on grounds sanitary and economic." In seconding this, Dr. Malet, medical officer of health for the borough of Wolverhampton, said that the present system of heaping bodies in graves, or, still worse, in cemented or built-up vaults, could not be too strongly condemned, tending as it did to the spreading of disease and injury to the health of those attending such burials. The resolution was unanimously adopted.

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MICRO-ORGANISMS IN INHERITED SYPHILIS.

PROFESSOR DOUTRELEPONT of Bonn, writing upon this subject (*Centralbl. f. Bakteriolog.*, No. 13), reminds us that early last year Kassowitz and Kochsinger reported the detection in the organs of five cases of hereditary syphilis of streptococci, which were contained within capillaries or their vicinity. These cocci differed from those of erysipelas in their situation, and from streptococci pyogenes in that that they were not associated with suppuration. The authors refrained, however, from speculating as to their precise significance. Kolisko, who had made numerous preparations from syphilitic infants dying within a day or two after birth, had failed to find streptococci except in one case of furunculosis, and this he attributed to infection by the streptococci pyogenes. Again, Chotzen, in Neisser's clinic at Breslau, had discovered streptococci occasionally in the bones, skin, liver, and intestinal mucosa of subjects of hereditary syphilis; but he looked upon their occurrence as accidental; although there is no doubt these particular microbes are different from those of erysipelas and suppuration. Chotzen suggests that the cases in which they occur are instances of "mixed infection," and that a streptococcus-septicæmia may be the cause of death in many cases of hereditary syphilis. The ulcerated surfaces of the mucous membranes might conceivably be the entrance of the streptococci. Professor Doutrelepont then proceeds to give his own experience. He says that in pursuing his researches upon bacilli in syphilis he met with streptococci in papules removed from an infant that died fourteen days after birth. No lesion of bones or internal organs was found in this case. The histological examination of the affected skin showed the horny layer of the epidermis over the papules to be raised up, and between this and the rete mucosum were masses of streptococci and staphylococci, especially abundant in the hair follicles and ducts of the sebaceous glands. The cutaneous papillæ were infiltrated with small cells, especially around the vessels, and streptococci were met with here also. The bloodvessels were for the most part free from cocci, but in a few which contained blood streptococci were seen between the corpuscles. On the other hand, the lymphatic channels were blocked with the micro-organisms, some of which were even detected in the subcutaneous tissue around the sweat glands and between muscular fibres. By using special double-staining methods, Professor Doutrelepont was enabled to display in the same specimens the bacilli which have been described as characteristic of syphilis, although they occurred but sparsely. He believes that the streptococci have no relation to the syphilitic process, for he has never met with them in all his previous and numerous examinations of syphilitic products. He inclines to Chotzen's view that their presence is due to a septic infection, which the cutaneous and mucous lesions of syphilis render possible.

SELF-TREATMENT.

THERE are a great many persons with whom the treatment of their own illnesses is a familiar practice. In certain cases this is, perhaps, not unjustifiable—in those, namely, where a little knowledge of medicine is found to be useful rather than dangerous in dealing with lesser ailments, and where the means of cure are commonly safe in their action, even when they fail to effect a desired result. Care must always be taken, even in such cases, to guard against mistaken application. The position of medicinal poisons for internal use is altogether different. They have no allowable place in household therapeutics. We would caution even the members of our own profession against a too great readiness to betake themselves to such means of relief, since none can gauge his own condition and its needs so accurately as a careful and intelligent outside observer, who is able to correct subjective evidence by that of skilled examination. It is much to be regretted that these considerations are apt to be regarded as unworthy of notice. At intervals an accidental death by poisoning will awaken the public mind to a sense of the danger incurred by one who thus treats himself, often with the scantiest knowledge of that self and of the drug employed, and we may hope that the lesson thus impressed will in time be learned. Still, the sad occurrence of a week ago, when a gentleman fatally overdosed himself with laudanum and chloral, is far from unique. It may well serve as a warning proof that a general, or even a somewhat intimate, knowledge of the action of poisons is not enough to justify their use in self-treatment by persons otherwise uninstructed in medicine. The use of opium in particular is becoming much too common in the hands of others besides practitioners, and it is probable that instances in which death has thus been actually incurred bear only a very moderate proportion to those in which it has been narrowly escaped.

COMPLAINTS AGAINST HOSPITALS.

IT is to be wished that when a coroner finds himself charged with an inquiry that tends to implicate our great hospitals, he should summon the medical officers, who can explain the facts. Lately a paragraph went the round of the papers touching an inquest on a boy who had sustained a blow on the head from a cricket bat, and was in the first instance taken to St. Thomas's Hospital. Thereafter a medical practitioner was called in, who attended the case, which terminated fatally from abscess of the brain six weeks after it had been seen at the hospital. At the inquest the mother seemed to reflect on the hospital authorities for not taking her boy in, and for not examining him more thoroughly. We have been at some pains to ascertain the facts, and we learn that he was carefully examined on the last occasion of his visiting the hospital, and that no evidence of serious mischief was then found. It is certainly rather hard on house physicians and other medical officers to be blamed in their absence, and have no opportunity of defending themselves.

SCARLET FEVER IN LONDON.

THE number of cases of scarlet fever admitted into the hospitals of the Metropolitan Asylums Board showed a slight diminution during the week ending Oct. 7th. Previously to this the increase had been regular, and if we may judge by the habitual behaviour of this disease, the reduction to which we have referred does not augur that we have come near to the end of the epidemic. Probably this will not be seen until the first week in November, when it may be hoped that there will be some evidence that the climax has been reached. In the meantime the managers are learning by experience that the recent Royal Commission were well advised in believing that some 3000 beds would be required by London for the treatment of cases of fever. Already more than 1900 beds in the Board's hospitals are occupied by persons suffering from this class of disease alone, and we hear with regret that measles and chicken-pox have appeared among the convalescent patients at the Eastern and Western hospitals, and that the need for their isolation will make further demands upon the accommodation at the disposal of the Board. It is fortunate that the probability that more than one of the affections the managers have to treat will attain epidemic prevalence at one time is remote; nevertheless, some number of beds in separate wards are required for typhus and enteric fevers, and for those cases which prove not to be infectious fever, as many as 132 beds being at this moment needed for persons who have not scarlet fever. The force

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of circumstances has proved plainly enough that the hospitals of the managers are no longer regarded by the public as Poor-law institutions, but as provision for infectious disease occurring amongst all classes of the community. At the same time, all the parishes have not agreed to consider these institutions as part of the metropolitan sanitary administration; some still cling to the idea that it is well to maintain the cumbersome machinery which is required for the admission of the sick into Poor-law infirmaries, and insist upon the order of the relieving officer being obtained before the infectious person can be removed. As has been pointed out, it is time that this came to an end. If the present epidemic does no more than advance the time when London will be given a uniform sanitary administration, its occurrence will be less matter for regret. If the necessity for some better control of infectious disease is not recognised through the loss of life which has occurred, it is probable that the sum of money expended this year for hospital provision will teach this lesson to London ratepayers

WINDOW-CLEANING ACCIDENTS.

ATTENTION has been repeatedly called to the extreme risk to which servants are exposed when standing or sitting on the outside ledges of windows for the purpose of cleaning them. It should go without saying that such work is wholly unfit for female servants and they ought never to be permitted to clean the outside of windows at all. Even for men, unless they are steady, careful, and "strong"-headed, there is much danger. Yet what is to be done? The professed window-cleaners are generally reckless of carpets and paint, and the percentage of panes of glass they break, while repudiating all liability for damages on frivolous pretences, is very large; moreover, they are so arbitrary in their practices and aberrant in their arithmetic that it is a misery to employ them. Windows ought to be so constructed as regards sashes that they could be cleaned from the inside. Where this is not practicable it is better to use long-handled pads, which do not necessitate either standing or sitting on the ledges, or leaning against the too often broken or insecure frames themselves. It is lamentable that limbs and lives should be imperilled and occasionally sacrificed in the performance of a simple and quite ordinary domestic function which ought to be wholly free from risk.

NORWEGIAN LUNACY STATISTICS.

AN official report recently issued in Norway gives some interesting statistics relating to the inmates of lunatic asylums in that country. It appears that at the beginning of last year the eleven asylums dealt with in the report contained 1319 inmates, that 690 were admitted during the year, that 611 were discharged, and that 71 deaths occurred, leaving the number of inmates at the end of the year 1327. It need scarcely be pointed out that the number of the insane confined in lunatic asylums affords no clue to the number of the insane in any country. The rapid increase of the asylum population in England and Wales in recent years cannot be accepted as evidence of increase of lunacy, because we know that there has been in this country a constantly increasing proportion of the insane treated in asylums. In England 70 per cent. of the known insane are in asylums, 22 per cent. are in workhouses, and the remaining 8 per cent. reside with relatives or others out of public institutions. The proportion of all the insane is now 2·9 per 1000 of the population. If the proportion of the asylum inmates to the total insane is the same in Norway as it is in England, which is most improbable, the proportion of the insane to the population is in Norway scarcely more than a third of the proportion in England and Wales. In the Norwegian asylums the number of inmates discharged during last year (including the deaths) was 682, of which 229 were classed as recoveries, 209 as not recovered, 167 as improved, whilst the deaths numbered 71. The large proportion of "discharged not cured" seems to require explanation, as does the very low death-rate. The mean number of resident inmates in the asylums during the year was 1330, and the 71 deaths show a mortality of but 5·3 per cent., whereas the mean rate of mortality in England and Wales in the county and borough asylums in 1886 was equal to 10·4 per cent. Such figures as are furnished by this report appear to show that not only the proportion of the insane, but the rate of mortality among the insane, are considerably below the proportions prevailing in this country.

SIR JOSEPH HOOKER ON VACCINATION.

IF there is one subject which has been carefully studied, and on which there can be no two opinions, it is the advantage which results from the production of multiple vaccine vesicles. Since Marson first published the results of his observations at Highgate the experience of every small-pox hospital has taught the same story, that the duration of protection against small-pox is directly dependent upon the character of the vaccination, and especially upon the fact whether one or several vesicles were produced. Medical men will have heard with astonishment that Sir Joseph Hooker has recommended the production of one vesicle, because they are accustomed to regard his teaching in his own branch of science as deserving of confidence and respect. It was well that he should be fully answered. The letters of Dr. Buchanan and Mr. Claremont in *The Times*, and the admirable article which has appeared in that journal on this subject, have fully demonstrated the fallacy of Sir Joseph Hooker's contention. Greater efforts should be made to instruct the public upon matters which so closely concern their welfare. If Sir Joseph Hooker could be mistaken in regard to so assured a fact, how many more otherwise well-informed persons must there be who are in the same mental condition with regard to an operation to which every infant is required to submit. Much of the growth of feeling against vaccination is due to the misstatements of anti-vaccinationists remaining uncontradicted and unexplained. There is no question that medical men are too prone to regard as unimportant the frequent letters which appear discrediting vaccination, yet these have for years been exercising an influence upon many who accept their teaching, and who have come to consider vaccination in the light of a curse rather than a blessing. Our profession has duties beyond that of the treatment of disease, and the first is certainly that of teaching the public how it may be avoided.

LINGUAL "HEMIPLEGIA."

EXPERIMENTAL researches and clinical observations have conclusively proved that the lowest third of the ascending frontal convolution is concerned in the voluntary production of movements in the opposite side of the face and half of the tongue. Raymond and Artaud have collected six cases of cortical glossoplegia, or rather of divers troubles of lingual motility, due to cortical lesions of the ascending frontal convolutions, but in all the cases facial paralysis coexisted. Bernheim of Nancy has observed one case in which lingual hemiplegia was the only lesion. A young woman, aged twenty-three, was the subject of multiple sarcomatous tumours generalised throughout the body, and during the course of the illness, about one month before death, it was observed that the tongue on being protruded was thrust out to the right of the middle line. This lingual abnormality permitted the patient to swallow easily and also to articulate most words, but prevented the production of a whistling or

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hissing sound. We have Bernheim's authority for stating that there were no other signs of dextral hemiplegia, unless a slight difference in the grasps in favour of the left be taken as sufficient evidence of the arm centre being involved. A fibro-plastic sarcoma into which hæmorrhage had occurred was found, measuring five or six millimetres broad and deep, and situated at the lower margin of the inferior extremity of the ascending frontal convolution, at the anterior aspect of this convolution, and six millimetres behind the sulcus which separates it from the third frontal gyrus.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

SINCE the meeting of the Sanitary Institute at Bolton a discussion has been going on in the public press on the question of the compulsory notification of infectious diseases. All seem agreed as to the necessity of some general measure by which such notification may be universally carried out, but there remains the important divergence of opinion as to the person who can properly be called upon to make the notification. On the one hand, we have a majority of medical officers of health contending that the system cannot be efficient unless the notification be made by the medical practitioner in attendance, and they allege that, where all medical men must act alike, there is no such thing as a patient discarding one doctor for another merely because he has acted as all his fellows would have been equally bound to act. Many also assure us, by the aid of statistics, that in several towns where the system is in vogue people do not, in consequence, avoid medical treatment. On the other hand, there is a large body of opinion amongst practitioners generally—and this includes some of those medical officers of health who combine sanitary work with the general practice of their profession—to the effect that the householder is the only person who can, without injustice, be required to make the needed notification. So long as this difference of opinion remains, it is clear that no general enactment on this subject is possible, and it will be well that matters should remain as they are, and that further experience should be obtained from such towns as now have, or may voluntarily seek, the needed compulsory powers. Apparently, those powers will only now be given on the duplicate system of requiring notification in all cases from both the medical practitioner and the householder, although where this system exists the former is, in practice, the only one from whom the information is demanded.

BREATHING SPACES AT OXFORD.

THE Oxford Local Board of Health have held a meeting to consider the report which was presented some time back on the question of the need for bye-laws as to open space about houses, and they have passed resolutions embodying a declaration that erroneous impressions have been communicated to the Local Government Board, and that they are quite prepared to amend their bye-laws provided they are not required to adopt the model code of the central authority. It is not clear on what point erroneous impressions have been brought about; for, from the description of house property which has lately been contained in the Oxford local press, it is clear that the inspectors of the Local Government Board in no way exaggerated the evils which they described; indeed, they were locally taken to task for having omitted to deal with the worst conditions prevailing in the city. That some remedy is needed, no one who knows Oxford can doubt; and we are glad to learn that the present inefficient bye-laws will be amended. We hope, however, that the amendments to be proposed will not be such that they cannot, in the interests of health, receive the needed Government sanction.

THE CROWN PRINCE OF GERMANY.

WE are glad to hear that his Imperial Highness continues to make satisfactory progress, no recurrence of the warty growth having taken place since the application of the electric cautery last June. The upper air passages, however, show a marked predisposition to catarrhal inflammation, and render it most necessary that his Imperial Highness should be in a warm climate, and, as far as possible, abstain from the use of the voice. It may be pointed out that, roughly speaking, there are two forms of chronic inflammation of the larynx: One in which the inflammatory process is confined to the mucous membrane, and gives rise to intermittent disphonia or loss of voice. This condition may last a whole lifetime without undergoing any further development. The second kind of inflammation, on the other hand, often causes interstitial changes, resulting in thickening, false excrescences, ulcerations, &c. Although the Crown Prince's affection belongs to the latter category, no unfavourable development has hitherto taken place, and the fact that his general health is very good makes it in the highest degree improbable that there should be any such untoward sequela. When Sir Morell Mackenzie left Bareno a few days ago, we understand that all was going on well, and there is every hope that, with time and care, the vocal function will be completely restored.

BRETONNEAU, TROUSSEAU, AND VELPEAU.

THE fame of the three men whose names are given above is world-wide. It is less known that they were each natives of Touraine, and it was to perpetuate this fact, and at the same time to erect a worthy memorial of them, that a movement was initiated in 1885 by the medical faculty of the Department of Indre et Loire. The result of their appeal to the medical profession and the public has been satisfactory, and on the 30th inst. the monument, which has been executed by two artists of Paris, MM. Sicard and Lalaux, will be unveiled in the Square de l'Archévêché of that city. The monument consists in an allegorical figure, holding in one hand the symbolic shield with three towers, and with the other crowning her three sons, who are represented in medallions on the top of the pedestal. The portraits are said to be excellent. The ceremony of unveiling will be accompanied by three speeches in honour of each of the scientists. Professor Duclos of Tours will speak on Bretonneau, Professsr Guyon of Paris on Velpeau, and Professor Peter of Paris on Trousseau. It may be added that Bretonneau was born at St. Georges-du-Cher in 1790, held for a long time the office of senior physician at the Tours Hospital, and died at Passy in 1862. Velpeau was born at Brédes (Indre et Loire) in 1795, and died at Paris in 1867, having been successively on the staff of St. Louis, St. Antoine, and La Pitié Hospitals. Trousseau was born at Tours in 1801, and became physician to the Hôtel Dieu, Paris, in which city he died in 1867.

THE URINE IN TABES DORSALIS.

THE following facts are set forth by MM. Livon and Alezais as the result of a series of researches on the urine of patients affected with an apyrexial disease of the cord—namely, tabes dorsalis: A tendency to diminution of the urea eliminated in the twenty-four hours; a diminution in the total daily discharge of phosphoric acid, with a tendency to proportional augmentation of the discharge of earthy phosphates; a great variation in the elimination of chlorine, with a bias in favour of hyperchloruria. Intravenous injections of tabetic urines appear to be sufficiently toxic in their action, since it has been found that from twelve to twenty-four cubic centimetres of urine per kilogramme of body weight of animals was sufficient to kill dogs.

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CALISTHENICS IN LONDON BOARD SCHOOLS.

IT is highly characteristic of the backward state of public thought and feeling in respect of matters of hygiene that in the reports of the Commissioners appointed to examine into the working of the Elementary Education Acts, questions relating to the sanitary conditions and physical regimen to which school children are subjected should obtain only a very inconsiderable place. The case of starved or half-starved children has indeed forced itself into notice; but short of this, and saving only some discussion of the subject of over-pressure, points bearing upon the health of the vast school-attending community have scarcely received any attention whatever at the sittings of the Committee. Even more conspicuous than its omissions have been the shortcomings of the Committee in this respect when it has set its hand to the work. The third report, just issued, contains, for example, the evidence given by the lady who is engaged by the London School Board as superintendent of the girls' and infants' departments, and she was able to give the Commissioners some very interesting facts relating to her work in that capacity. Thus we learn that there are at present 1200 teachers within the jurisdiction of the London Board who are either trained or under training, and that physical education has been introduced into upwards of 250 schools. Furthermore, the work is being vigorously pressed on, and it is anticipated that within a period of five years there will not be a teacher who will not have received special physical training. This is as it should be, and in this respect at least the metropolis sets a good example to other urban School Board districts all over the country. The Commissioners, however, did not interrogate their witness as to the nature of the exercises in which she practises the children. It is quite needless to say that upon this will depend the whole value of the physical instruction imparted. It would seem that Ling's system affords the basis upon which the London teachers work, but it does not at all appear how much of this method they are practically able to embody in their scheme. The only question bearing upon this important matter was: "Is it a very important part that is omitted?" Answer: "The most important part, and the one which really develops the child best, is not omitted. The part which we practise with the children is the fundamental and the most necessary part." Probably that is so, but it would have been interesting to have fuller details from which an independent judgment might be formed.

SMALL-POX IN RIO DE JANEIRO.

IT is useful now and then to call attention to the ravages of small-pox in communities in which vaccination, not being compulsory, is doubtlessly much neglected among the poorer and lower classes. It appears from a monthly bulletin of mortality in the city of Rio de Janeiro for June last that out of 1170 deaths from all causes (excluding still-born) no fewer than 291 resulted from small-pox. The estimated population of the city is given as 400,000, and it may therefore be calculated that the annual death-rate from this disease in Rio during last June was equal to 8·7 per 1000. The same return shows that during the second quarter of this year 622 deaths from small-pox occurred in Rio, giving an annual rate for the three months of 6·2 per 1000. As evidence of the probable comparative neglect of infant vaccination, it may be pointed out that of the 291 deaths from small-pox in Rio in June last, 121, or 42 per cent., were of children under five years of age; whereas in England and Wales in the five years 1881-85 the proportion of deaths from small-pox occurring under five years of age, which has steadily declined with the increase of infant vaccination, did not exceed 2·3 per cent., including the cases of infants under vaccination age. With reference to this return from Rio, it may be remarked that the 1170 deaths in the city during last June were equal to an annual rate of 35·1 per 1000 of the estimated population, showing that the rate from all causes other than small-pox was 26·4. It should at the same time be stated that, with the exception of malarial fevers, which caused 70 deaths during the month, the rate of mortality from other forms of zymotic disease was not excessive. It appears that 188, or 16 per cent., of the deaths were of infants under one year of age, but the return contains no data from which the rate of infant mortality can be calculated.

THE PICTORIAL ARTS OF JAPAN.

WE learn from the *Japanese Weekly Mail* that His Majesty the Emperor of Japan has been graciously pleased to accept a copy of Mr. W. Anderson's work on "The Pictorial Arts of Japan." Many of our readers will know that Mr. W. Anderson spent several years in Japan, where he obtained a thorough knowledge of its history and studied the art of the country in all its forms. The outcome of this study appears in the work mentioned, and also in the splendid collection of Japanese art, with its catalogue, now in the British Museum. It is difficult to speak in too high terms of the excellence and artistic beauty of this work, and the reviews of it which have appeared bestow on it unstinting praise and admiration. This work, produced in the leisure of half a score of years by one engaged in the busy practice of his profession as a surgeon, is a proof of great perseverance and artistic ability, reflecting honour not only on the author, but also on the medical profession.

A NEW ELECTRO-GENERATOR.

AN important advance in the direction of producing electricity from heat is just announced from America. The inventor is the inexhaustible Mr. Edison, and his invention appears to have the merit of extreme simplicity and adaptability to a great variety of circumstances. The principle is, as often happens, so simple, that one wonders at its not having been thought out long ago. It is well known that the magnetic properties of iron are dependent, among other things, upon the temperature, and that any change in this latter involves corresponding change in the magnetic conditions of the metal. Furthermore, the effect of a change in the magnetic condition of an iron core upon the play of electric currents in its vicinity has been one of the main branches of electrical science since the time of Faraday, and is illustrated in every magneto-electric machine, of which the largest form is the gigantic "dynamo," and a smaller and more familiar form, the ordinary medical electrical machine, working with a handle, and yielding a current in quantity and tension suitable to ordinary medical purposes. In both these classes of electrical machine the current is induced in a coil of wire which surrounds an iron core, the magnetic condition of which is caused to vary rapidly by rotating a magnetic armature in its "field." Every change of magnetic potential in the core induces a current in the surrounding coil, and hence the observed results. Mr. Edison's invention dispenses with the armature altogether, and produces the desired magnetic change in the core by altering its temperature. Alternately heating and cooling his cores, which for this purpose are made hollow, he produces electrical currents in the coils analogous in every way to those which result from bringing the core under the temporary influence of a magnet. It is claimed for this invention that it will enormously simplify the production of electricity from fuel, since it will render wholly unnecessary the mechanism which has at present to be interposed between the source of heat and the magnetic core which is

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to be influenced by its means. The heat will act directly on the core, and the steam or gas engine will be wanted no longer. If fuller details should justify the very rose-hued picture which has been transmitted across the Atlantic, there can be no doubt that this will prove to be an invention of incalculable value. By no means the smallest of its advantages would be the facility and economy with which it would enable us to subdivide motive power. There are numberless purposes subservient both to sanitation and convenience which demand an independent and inexpensive motor of small power. This is, indeed, one of the most pressing requirements of the day. If Mr. Edison can supply it, he will indeed deserve well of his generation, and of posterity to boot. But it is too early yet to make sure that we have here exactly what we want. The whole subject of thermo-magnetism is at present very obscure, and our knowledge, such as it is, appears to indicate that certain high critical temperatures, at least in the case of iron and most other metals, are required for the manifestation of its most conspicuous and probably most serviceable phenomena. If that is so, it may well prove that this, like some others of Mr. Edison's very ingenious inventions, is but ill adapted for any but laboratory use.

POST-GRADUATE COURSE AT CHARING-CROSS HOSPITAL.

THIS course has had a most encouraging commencement, which augurs well for its future usefulness and success. On Friday last the first lecture was delivered by Dr. Julius Pollock, F.R.C.P. (senior physician to the hospital), on the subject of Rheumatism. There were present upwards of eighty practitioners who have joined the class, and, judging by the interest they evinced by taking copious notes of the lecture, they heartily appreciated the lecturer's efforts. The vast majority of the members are men in large and successful practice, many of them University graduates, Fellows of the Colleges, or holding high positions in the Army Medical Service. Since the lecture about a dozen more have applied for admission, and the roll will soon contain one hundred names. After the lecture Dr. Pollock proceeded to the wards, and gave clinical lectures on several instructive cases. The second lecture will be delivered to-day (Friday), by Mr. Richard Barwell, F.R.C.S., on the subject of Lateral Curvature, when several typical cases will be shown.

DR. JOSEPH ROGERS.

OUR readers will be glad to learn that Dr. Joseph Rogers has so far recovered from his severe illness as to be able to use his pen. He intends to write his experiences of workhouses, which extended over a period of twenty-six years. The result ought to be interesting. Dr. Rogers's recovery is in itself a fact of interest. His condition was extreme, with heart disease, anasarca, and pleurisy. On two occasions, on the advice of Dr. Bristowe, he was aspirated with much relief.

DUST COLLECTION AT KENSAL TOWN.

MR. G. R. STRACHAN, surveyor to the Chelsea Vestry, has prepared a report showing some of the difficulties which local authorities have to face in the collection of house refuse. The contractor, having been requested to call at every house on his rounds, met with 1522 houses out of 2548 visited in the six days August 10th to August 16th where the occupants refused to allow dust to be removed. In the week ending August 23rd the number of houses visited was 3180, and at 2549 of these the dust was refused, some of the refusals being at the same houses where refusal was met with in the previous week. Thus a large proportion of householders do not want either weekly or fortnightly removal, and this even during the month of August. Mr. Strachan urges that to meet this state of things small zinc pails capable of holding only about two cubic feet of contents should replace the old brick dustbin, which is both a nuisance and inconvenient for scavenging, and that a few persons should be proceeded against under Section 126 of the Metropolis Management Act, 1855, for refusing to allow their dust to be removed.

SIR WILLIAM GULL.

WE regret to learn by telegram from Killiecrankie that Sir William Gull, Bart., is suffering from paralysis of the right side. There has been no loss of consciousness, and we are glad to be able to announce a gradual improvement in his condition.

THE IRISH COLLEGE OF SURGEONS AND APOTHECARIES' HALL.

AN abstract of the regulations controlling the conjoint examinations for the diplomas of the Royal College of Surgeons and the Apothecaries' Hall of Ireland has just been published. These bodies, as we have already intimated, are now for the first time about to hold their examinations in conjunction, by which means students can, by one series of examinations, obtain the two qualifications, and will thus be entitled to be enrolled in the Medical Register, and to enjoy all the privileges of practice in Medicine, Surgery, and Midwifery.

CHOLERA INTELLIGENCE.

THE cholera returns from Sicily fortunately indicate a decided abatement of the epidemic. Data from Messina come irregularly, and the only recent records are as to eighty fresh attacks and twenty-eight deaths between October 3rd and 8th; three deaths occurring during the same period at Palermo. No further cholera news comes from the mainland of the kingdom of Italy. From Malta there is also a history of a general diminution in the disease. It is still mainly prevalent amongst the natives in the inland villages where no such British military administration prevails as in the fortified places. The outbreak is, however, not at an end, for thirty-seven deaths occurred in the week ending October 10th.

CREOLIN v. CARBOLIC ACID.

DR. E. VON ESMARCH, assistant in the Royal Hygienic Institute of Berlin, has made a series of experiments with creolin, a new disinfectant, which has been highly spoken of by Professor Fröhner of the new Veterinary School of Berlin. Dr. von Esmarch made a number of comparative observations with carbolic acid on the disinfecting, deodorising, and antiseptic properties of creolin. Amongst other observations, he noted the effects of the two substances on fluids containing cholera, typhus, and anthrax bacilli. As a rule, creolin appeared to be much the more active. Similarly the offensive smell of various putrefying liquids was controlled much more readily by creolin than by carbolic acid. Creolin soap, too, showed itself more active as a disinfectant than corrosive sublimate soap.

EPIDEMICS ABROAD.

MEDICAL returns from Simla state that there were 30,780 deaths from cholera in the North-West Provinces during August; the disease is now normal. The yellow fever epidemic at Tampa, Florida, is reported to be abating. The recent outbreak of small-pox at Launceston, Tasmania, has been completely controlled. All the cases have been isolated, and no doubt is now felt that the disease will be effectually subdued in a short time.

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ICTERUS NEONATORUM.

SILBERMANN (*Arch. f. Kinderheilk.*, Bd. 8, cited in *Fortschr. d. Med.*, No. 19) has studied the subject of icterus neonatorum, and arrived at the conclusion that it is a jaundice of reabsorption and of hepatogenous nature. The bile-stasis occurs in the bile capillaries and interlobular ducts, which are compressed by the dilated branches of the portal vein and blood-capillaries of the liver. The congestion of these vessels is brought about by the changes in the hepatic circulation that arise soon after birth, which is one effect of a general change of the blood-plasma. This blood change is a sort of fermentation depending upon the destruction of red corpuscles shortly after birth. The icterus is more marked in the more feeble infant, for in it the blood changes are more considerable than in the strong. The destruction of red corpuscles and their accumulation in the hepatic vessels afford material for the formation of bile in excess.

GUY'S HOSPITAL: TWO HUNDRED VACANT BEDS.

THE authorities of Guy's have only, so far, got £78,000 of the £100,000 for which they appealed last Christmas. Surely before Christmas comes they will have received the rest. One wonders how these 200 vacant beds, hitherto maintained by a benefactor dead for 100 years, do not haunt the dreams of our present millionaires, and beget a determination to fill every one of them.

ANTIFEBRIN AS A DISINFECTANT.

DR. S. A. VAN LEER has been prosecuting a number of researches in the Hygienic Laboratory at Groningen on the antiseptic properties of antifebrin (acetanilide). When added to milk, so as to saturate it, acetanilide prevents it from turning sour; similarly, albumen can be kept from becoming putrid. It does not, however, seem a suitable substance for dressing wounds, as it does not easily dissolve or become moist, and irritates the surface of wounds. Dr. van Leer examined the effects of solutions of antifebrin of various strengths on several kinds of bacilli, and found that the development of many of them was not by this means prevented; consequently he does not think that the suggestion of Leube to employ antifebrin for surgical dressings is likely to prove of any advantage.

FOREIGN UNIVERSITY INTELLIGENCE.

Bucharest. — Dr. Babes, Professor of Histology and Bacteriology in Buda-Pesth, accepted some time ago the invitation to a similar chair in Bucharest, he being a Roumanian by birth. The authorities seem alive to the importance of having secured so illustrious an observer, and propose to give him £1000 a year, besides which an institute is to be built, which when completed will have cost £10,000.

Kasan.—Dr. Adamyk, Professor of Ophthalmology, is about to retire. Dr. Michel Reich, a well-known ophthalmic surgeon from the Caucasus, is likely to be appointed in his place.

Kharkoff.—The Professorship of Forensic Medicine, vacant by the transference of Professor Anrep to St. Petersburg, has been filled up by the appointment of Dr. Patenko, *privat-docent* in the Military Medical Academy, St. Petersburg.

Kieff.—Dr. W. Podvinsotski has been appointed Lecturer in General Pathology in succession to Professor Chrzonszczewski.

Lemberg.—This University has no Medical Faculty, but a decree has just been issued by the Austrian Minister of Education establishing Professorships of Anatomy and Physiology in connexion with the Philosophical Faculty. This step is looked upon as precursory to the establishment of a Medical Faculty.

Vienna.—Professor Billroth, being quite restored to health, has resumed his ordinary duties.

THE MEDICAL SOCIETIES.

THE Medical Society will hold its first meeting on Monday next, October 17th, and the Royal Medical and Chirurgical Society on Tuesday, October 25th. We announced the first meetings of the other Societies in our last week's issue. The Clinical commences to-night (Friday), and the Pathological on Tuesday next.

ON the 12th inst., at the instance of the Mansion House Council on the Dwellings of the Poor, a public inquiry into the sanitary condition of Bethnal Green was opened by Mr. D. Cubitt Nichols and Mr. Shirley F. Murphy, the Commissioners appointed by the Home Secretary. After a short discussion with the counsel engaged in the case, the inquiry was adjourned for the purpose of an inspection of the streets alleged to be in an insanitary state, which the Commissioners expected would occupy at least a week.

DR. LÄNGER, *primaraerzt* of the great Vienna Hospital, after a somewhat unpleasant interview with Prof. Boehm, the newly appointed director of the hospital, took a large dose of morphia with the intention apparently of committing suicide. He was, however, promptly treated by the performance of tracheotomy and the mechanical inflation of the lungs through the opening. By this means his life has been saved. Dr. Länger, who is greatly respected, has been for some time past subject to melancholia.

THE Italian War Office, through its medico-statistical officer, Colonel Pecco, gives the following returns of the health of the army throughout the peninsula during 1885. In the military hospitals there were under treatment 160,848 men. The deaths were 2095. The mean mortality was 10·30 per 1000. The losses of recruits amounted to 2873. The number of those sent home on sick leave was 7392.

THE Aberdeen University Court, at a meeting held on Oct. 7th, appointed the following gentlemen to be extra-professorial examiners for medical graduation: Dr. J. Macdonald Brown (Edinburgh), Dr. W. D. Halliburton (London), Dr. David Lowson (Hull), Dr. Robert W. Philip, A.M. (Edinburgh), Dr. Wm. Robert Smith (London), and Dr. F. Buchanan White (Perth).

IN connexion with the Medical Society, University College, London, Sir William Roberts, M.D., F.R.S., will deliver an address in the Botanical Theatre of this College on Wednesday Oct. 19th, the subject being the Effects of Alcohol considered from the points of view of History and Natural History.

THE *Gazette* of Tuesday last announces that the Queen has been pleased to appoint William Scovell Savory, F.R.S., President of the Royal College of Surgeons of England, and surgeon to St. Bartholomew's Hospital, to be Surgeon Extraordinary to Her Majesty, in the room of Richard Quain, deceased.

AT the annual meeting of the Pharmaceutical Society of Ireland, held on Monday, Mr. James E. Brunker, M.A., was elected President, in the room of Mr. W. N. Allen, resigned. Mr. G. Lane M'Cormack was elected to a seat on the Council, vacated by the retirement of Dr. Aquilla Smith.

WE regret to have to record the somewhat sudden death, on the 7th inst., of Mr. William Trotter, the foreman printer of the advertising department of this journal. For over forty-one years Mr. Trotter had been most faithful and devoted in his service to the proprietors of THE LANCET.

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Pharmacology and Therapeutics.

SACCHARIN.

THE saccharin tabloids of Burroughs, Wellcome, and Co. contain half a grain each of this new sweetening agent, which is doubtless destined to play an important *rôle* in the treatment of disease in the future. The tabloids are very convenient in form, are certainly efficient sweetening agents, and have no reducing action on Fehling's solution, thereby showing the absence of sugar. Reynolds and Branson's compressed discs of saccharin, besides containing a little carbonate of soda, have some grains of milk sugar in their composition. These reduce Fehling's solution rapidly.

EUCALINUM.

The new antiseptic poultice matrix introduced by Messrs. Rocke Tomsitt and Co. is decidedly a step in the right direction. Many practitioners object to poultices on the ground of their uncleanliness in the aseptic sense of that term, and there is sometimes ground for fear lest in dressing open wounds with poultices we may introduce pathogenic organisms. Eucalinum would tend to prevent the growth and development of such germs, whilst at the same time the added eucalyptol mitigates the sour smell which is frequently developed during the application of ordinary linseed and bread poultices.

COCA IN GASTRALGIA.

M. Ardenne, of Toulouse, states that he has found the extract of coca of great benefit in relieving gastric pain. He gives two drachms and a half during the twenty-four hours. If there is no anatomical lesion, the relief is rapid and complete. If, however, the mucous membrane is diseased, the relief is partial and temporary only. Similar results have been obtained by M. Cunéo with cocaine in cases of gastralgia with vomiting, even in those of uterine origin.

KAIRIN, THALLIN, AND ALLIED BODIES.

Kairin lowers the temperature by diminishing the production of heat, and by augmenting the radiation of the same. Its deleterious action on the red blood discs and its lowering action on the heart constitute its chief dangers. Thallin lowers the temperature by the same means, and has the same inconveniences. Hydrochinone lowers the temperature by augmenting the radiation of heat from the dilated vessels. Resorcin equally dilates the vessels, and exercises a tonic action on the heart. Antipyrin perhaps raises the blood pressure slightly, but leaves intact the red globules of the blood, whilst lowering the temperature. These are the conclusions of G. Beyer, and may be found *in extenso* in the *Deutsche Med. Zeitung*, Aug. 11th.

NAPHTHALIN IN DIARRHŒA.

Dr. Lunin, of the Elizabeth Children's Hospital in St. Petersburg, following up the remarks of Rossbach at the Wiesbaden Congress in 1884 on the value of pure naphthalin in affections of the intestinal tract, has given this drug in quantities of 7½ to 30 grains per diem, in the form of emulsion with castor oil, to children between one and five years of age with diarrhœa, with excellent results. Dr. Lunin gives, in a recent issue of the *Vrach*, a short account of ten cases in which this treatment was followed by great improvement or complete cure. He remarks that cases sometimes are met with in which naphthalin has no effect at all, and here recourse must be had to other drugs.

STRYCHNINE IN ALCOHOLISM.

Dr. Dobronravoff, who has treated a number of cases of various forms of alcoholism by hypodermic injections of strychnine, as recommended by some other Russian observers (see THE LANCET, 1886, p. 733), speaks as highly as they do of its effects. He began with the one-hundredth of a grain twice a day, and increased this dose cautiously to one-fiftieth and one-thirtieth; in one very grave case he gave one-fifteenth. He found that by this means a quiet sleep free from visions was induced in acute cases, and, in chronic forms, nausea, vomiting, and loss of appetite rapidly gave way. No evil effects could in any case be traced to the use of the drug. The total quantity given varied from a tenth to a third of a grain.

COLLODION.

The silky fibre or silk-cotton obtained from the pods of the Eriodendron anfractuosum, a plant common both in the East and West Indies, has been found to make the finest collodion possible for surgical purposes.

SALOL.

As the outcome of an examination of the results obtained by various doctors who have employed salol to reduce the temperature of many diseases, including all forms of rheumatism, typhoid fever, pneumonia, phthisis, and pleurisy, M. Ricklin concludes that it has no advantage over salicylic acid or antipyrin.

EPHEDRINE.

Chlorhydrate of Ephedrine is a new mydriatic alkaloid obtained from Ephedra vulgaris by M. Kinnossuke Minra. It has to be employed in a solution ten times more concentrated than homatropine, but it is much less costly. It does not paralyse the accommodation for near vision.

AMYLENE HYDRATE is the latest addition to the list of hypnotics; in activity it stands between chloral hydrate and paraldehyde, and is less objectionable than the latter.

PILOCARPINE has been synthetically prepared.

BROMIDE OF ETHYL is advocated by Dr. Pauschinger as an anæsthetic in minor surgical operations; it is administered in the same way as chloroform.

LITHIUM SALICYLATE is frequently contaminated with the sodium salt.

The British and Colonial Druggist (vol. xii., Nos. 5, 6, and 7) is publishing a useful table of the new antiseptic, antipyretic, and soporific remedies, drawn up by H. Helbing, apothecary to the German Hospital.

HEALTH OF THE ARMY.

No. III.

THE number of recruits medically inspected in 1885 was 72,249; and of these, 28,933 were rejected, being in the ratio of 400·5 per 1000. Of these, 57,898 were examined by army medical officers, with a rejection in the ratio of 400 per 1000, and 14,351 by civil medical practitioners. Of the latter, 198 per 1000 were rejected on primary inspection, and 185 per 1000 on secondary inspection by army medical officers, or a total of 383 per 1000. Of the recruits passed into the service, 278 were discharged as unfit within three months of enlistment, or 6·4 per 1000 of those originally found fit. The ratio of 400·5 per 1000, however, does not correctly show the proportion found unfit on medical grounds, as a certain number of recruits are included who were rejected as being "under height," "over height," and "apparent age not in accordance with general order." These are obviously military and not medical causes of rejection, and amounted to 38·6 per 1000 inspected. Deducting these and the men discharged, as above noted, under three months' service, the ratio rejected was 358 per 1000, or 10 per 1000 less than in the preceding year. The most frequent cause of rejection was "under chest measurement," amounting to one-fourth of the whole; "under weight (muscular tenuity and debility)" was assigned in one-eighth and "defective vision" in one-tenth of the rejections. The ratio of rejections was highest for infantry regiments—404 per 1000 inspected,—and lowest for the Foot Guards—314 per 1000. The proportion of recruits furnished by England and Wales was 757, by Scotland 99, by Ireland 134, and by British colonies and foreign countries 10 per 1000. The proportion of recruits between eighteen and twenty years of age was 582 per 1000—exactly the same as in the preceding year; but of these the number between eighteen and nineteen was rather higher than in 1884. The chest measurements of the recruits compare unfavourably with the preceding year, the proportion under 33 inches having been 243, as against 219, per 1000; the weight also of those inspected by army medical officers shows a reduction, the proportion under 130 lb. having been 627, as compared with 607, per 1000. There would therefore appear to have been a deterioration in the physique of the recruits for the year. There was an increase, compared with the preceding year, in the proportion of labourers and of manufacturing artisans, and a reduction in the other classes of occupations from

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which recruits are drawn. As regards education, there was a decrease of 28 per 1000 in the numbers returned as well educated, and of 23 per 1000 in those unable to read, and an increase of 36 in those able to read and write, and of 15 in those able to read only. Notwithstanding the influence of board schools, there is still a sufficient number of uneducated and very imperfectly educated recruits to furnish work for the army schoolmaster. Of the recruits found fit, 922 per 1000 bore marks of vaccination, 23 of small-pox, and 55 had no satisfactory marks of either. The vaccination returns seem to be imperfect, as only 634 primary vaccinations are reported, while the number of unprotected recruits was 2372. Of the primary vaccinations, the proportion of successful cases was 577 per 1000; of 35,629 revaccinations, 466 per 1000 were successful. No information is given regarding the vaccination, and its results, of 7053 of the recruits. The value of vaccination and revaccination is shown by the fact that in a protected force of 177,928 men serving at home and abroad, only 88 cases of small-pox with 7 deaths occurred during the year; of these, 52 cases and 4 deaths were in the force employed in Egypt, so that in the rest of the force the proportion was only 21 cases and 1·78 deaths in 100,000 men.

There are a number of interesting papers in the appendix to the report. The first of these is a medical history of the frontier field force on active service in the Soudan from Nov. 27th, 1885, to Jan. 27th, 1886, by Surgeon-Major W. S. Price. The force consisted of 264 officers and 5873 non-commissioned officers and men. During the two months included in the report there were 33 admissions and 3 deaths of officers, 2 of the deaths being from wounds received in action. Among the non-commissioned officers and men, there were 1052 cases and 36 deaths, being in the *annual* ratio of 1147 and 39·26 per 1000 of strength. Nine of the deaths, 7 in and 2 out of hospital, were from injuries received in action. Upwards of one-third of the admissions into hospital were from fevers and dysentery. Enteric fever gave rise to 95 admissions and 17 deaths, being in the annual ratio of 104 and 18·54 respectively, and dysentery to 127 cases and 4 deaths, or 138 and 4·36 per 1000. No definite cause could be traced in the cases of enteric fever. On Dec. 30th the force attacked the enemy at Giniss on the right bank of the river, and completely dispersed them after a brief fight. Of the British troops, 1 officer was killed and 1 wounded, and 20 non-commissioned officers and men were wounded. Of the Egyptian troops, 1 officer and 4 men were killed and 3 officers and 11 men wounded. "The Egyptian troops behaved very well throughout." During the two months included in this report there were 3 officers and 43 men admitted on account of wounds received in action, being in the annual ratio of 73 per 1000 of strength of officers and 47 of men. One officer and 2 men were killed in action, and 1 officer and 7 men died in hospital from wounds received in action, all inflicted by firearms. Two of the deaths in action were from wounds of the head, and one of the chest; 2 of those in hospital were from wounds of the head, 4 from wounds of the chest, and 1 from a wound of the abdomen. Details of the fatal cases are given in the report.

In a report on the Abu Fatma Hospital and line of communication with the Nile Expedition, 1884-85, Surgeon-Major L Corban gives an interesting account of the arrangements made for the treatment of the sick and wounded, and for the despatch of convoys of invalids down the river to Wady Halfa. During the first five months of 1885 there were 83 officers treated, of whom 3 died, and 931 non-commissioned officers and men, of whom 25 died. The most fatal disease was enteric fever, of which there were 164 cases with 15 deaths; 129 cases of wounds were admitted, of which 2 died; 119 of dysentery, with 3 deaths. The arrangements both of the hospital and of the transport appear to have been most satisfactory. Surgeon-Major Corban reports that "the conduct of the Medical Staff Corps was excellent. Though native spirit could be purchased there was no drunkenness and only a few minor offences. Their duties, especially at Abu Fatma, working through the long trying summer months, were of a most arduous and difficult kind. The high rate of mortality and invaliding among officers and men speaks for itself. Four medical officers were invalided from the working at Abu Fatma; 2 surgeons and 7 orderlies died at their post, and are buried at this station, victims to hardship and exposure in the climate of the Soudan."

There is yet another paper connected with the health of the troops in Egypt, a report by Surgeon J. Boulger of a series of cases of small-pox among the British troops in Cairo from January to October, 1885. He gives details of 50 cases, of which 4 died. The men bore marks of vaccination, and 39 had been revaccinated with various results. The 4 fatal cases had been revaccinated, 2 unsuccessfully and 2 modified. All the mild cases, 21 in number, had good cicatrices, and "the severe cases, 12 in number, had for the most part but very indifferent marks, though some amongst them showed well depressed scars."

Brigade-Surgeon A. F. S. Clarke has furnished an excellent report on the outbreak of diphtheria in the neighbourhood of the Royal Military College at Sandhurst in October and November last. The disease prevailed in the villages of Yorktown, Camberley, and in adjacent parts of Frimley parish, chiefly among the families and domestic servants of officers, retired officers, and civilians living in these places, and therefore in close proximity to the Royal Military and Staff Colleges, but no case occurred in either of these institutions. There were altogether 88 cases between Oct. 11th and Nov. 14th, in a population of something under 4000. Of these, 18 died, 3 of them after removal from the locality. The history of the outbreak is preceded by a short but clear description of the locality in which it occurred: its soil, the health of the district, the drainage of the villages, and the water supply. The first cases occurred on Oct. 11th in two children of an officer living in Yorktown, and the wife of an officer of the Royal Military College living in "The Terrace" of the College. These were followed by many others in houses at distances varying from a quarter to two and three miles from one another, and without regularity in the attack. During the first week there were upwards of 60 cases and 10 deaths. The disease began to decline at the end of a fortnight, and the last death was registered on Nov. 10th. "The outbreak, though short, was very severe, attacking more than 40 houses of the better class, the poorer community escaping almost entirely; their cases were milder, only one death occurred among them, with the exception of a domestic servant in the house of a lady whose child was attacked." An exhaustive inquiry into the causes of the epidemic led irresistibly to the conclusion that it arose from infected milk. "Every house and even cottage where diphtheria had occurred had obtained their milk from one dairy farm. ..... Further investigation very shortly justified us in coming to the conclusion that infected milk was the *sole* cause of this outbreak." Not only were the whole of the infected houses supplied from this dairy, but in four families which did not take in this milk a case in each occurred which was clearly traced to the persons affected having drunk some of it in houses which were so supplied. The question then arose, How did the milk itself become infected? And after a very careful inquiry, the medical officers came to the conclusion that it had been caused by the use of "dangerously polluted water" in cleaning the dairy utensils. "Brushing aside, then, other theories as to the milk infection in this outbreak, we have an established fact that the water used for washing the milkcans was 'dangerously impure and polluted with sewage;' it is also just possible that the milk *may* have been diluted with this water by some servant or *employé* of the dairy." It is remarkable that cases of diphtheria occurred in thirty-two out of forty-three houses of the better classes, while there were only 5 cases in fifty cottages and artisans' houses, all supplied with milk from the same dairy. Brigade Surgeon Clark thinks this difference may be accounted for "by the fact that the poor man buys daily only a small quantity—a pennyworth or less — of milk, uses a portion in his tea, and the rest is made into a pudding for the children; they, too, generally, buy skimmed milk, which has often been scalded." The measures adopted, and fortunately with success, to present the spread of the disease to the college, were: "Officers and *employés* who had cases in their families were rigidly 'quarantined;' suspicious sore throats were at once isolated; strict attention was paid to all sanitary matters; milk and drinking water were boiled; servants were warned to report at once any illness in their families; social gatherings bringing a large concourse of people to the village were interdicted; the sanitary condition of all the buildings was carefully examined, defects pointed out, and as far as possible remedied." A good map illustrating the area of the diphtheria is attached to the report, which is of great interest and most creditable to its author, Brigade Surgeon Clarke.

In a note appended to some remarks on beri-beri, as it occurs in the Straits Settlements, by Surgeon A. A. Lyle, he gives some details of an outbreak of this disease, in the

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criminal prison at Penang in 1882. It appears to have been introduced by some prisoners who arrived from Singapore by steamer, and of whom 36 out of 186 were found to be suffering from it. Although every precaution was taken and a special diet was adopted for all the prisoners, the disease spread until only 22 remained unaffected; 27 of the cases died. Among the Penang prisoners, 240 in number, 61 cases occurred, of which 12 proved fatal. Mr. Lyle believes the disease to have been propagated through excreta, but there seems some reason to connect its appearance with an inadequate supply of food, and that of an unsatisfactory character.

There is a careful and interesting paper by Surgeon R. H. Frith, on "The Relation of Malarial to Physical Causes, at Meean Meer, Punjaub, with an analysis of soil and water, and a *résumé* of meteorological observations." It would be impossible in the space at our disposal to give a useful summary of this paper, but the conclusions at which the author has arrived are thus stated:—"Malarial fevers are at their maximum in Meean Meer in September and October; this period of their greatest prevalence appearing, from an examination of the meteorological data, to be simultaneous with the termination of (1) maximum soil temperature; (2) minimum daily variation of soil temperature; (3) maximum rainfall; (4) maximum of CO_2 in the soil air; (5) maximum of humidity; (6) minimum amount of ozone in the air. The subsoil water level, the barometric pressure, and the air temperature appear from the same data to have little, or, if any, only a secondary, influence upon malarial production. . . . . The sum of our knowledge regarding the nature of malaria is very limited. We understand it merely as a subtle and unknown agent, a cause of disease known only by its effects, a product of continuous heat and moisture upon vegetable organic matter."

The usual list of operations performed at Netley Hospital during the year, with notes of the more important cases, some of which are of considerable interest, is furnished by Brigade Surgeon C. H. Y. Goodwin, the assistant professor of military surgery. We regret again to observe the Department Report issued without any contribution from the medical branch of the hospital. Surely there must, in such an establishment, be an opportunity of collecting valuable information which ought to be utilised for the benefit of the service and of the profession. We fear that the state of Professor De Chaumont's health is but too good a reason for the absence of any special sanitary communication from him.

TWELFTH CONGRESS OF THE ITALIAN MEDICAL ASSOCIATION.

CONGRESSES beget congresses. Indeed, especially abroad, they are multiplying so fast that anything like a detailed account of their proceedings must imply a readjustment of the hitherto essential conditions of existence—time and space. At Pavia, for example, the twelfth meeting of the Italian Medical Association on the 19th ult. did not close its highly interesting discussions till it had founded and organised a branch association—the Società Idrologica Nazionale (National Hydrological Society) for promoting scientific water-analysis throughout the peninsula and for obtaining Government assistance in developing its resources in mineral waters. Both these objects are in themselves highly commendable, and the latter, if attained, will do more for the prosperity of the country than any means hitherto devised for evoking its natural wealth. Italy only wants capital and enterprise to attract within her frontier thousands of the *habitués* of spas and health resorts who have long been a rich source of revenue to Germany, Switzerland, Austria, and France. The facts elicited at Pavia in the discussion that preceded the foundation of the Società Idrologica spoke eloquently for the fruitful work before it, and for the remunerative harvest it must confer on the country. Its first place of meeting will be at Bologna, some time to be yet fixed in the autumn of 1888, and its president will be Professor Chiminelli, director of the establishment at Recoaro, and its vice-president, Dr Vinai of the well-known institution at Andorno. Of the Pavia Congress it will suffice to say that in the department of surgery its papers and discussions were of exceptional interest, Drs. Bassini, Ceci, Tansini, De Paoli, and Ferrari dividing the honours of the section, De Paoli of Turin, in the course of an exhaustive communication on goitre, pointed out that the most approved modes of surgical interference with the malady were really due to Dr. Porta of Pavia, their original author and practitioner, and not, as is generally believed, to the Germans. The medico-chirurgical exposition was a great adjunct to the interest and efficiency of the Congress—the Society of the Red Cross, the Italian War Office, and many prominent firms in Italy and abroad having contributed novel and valuable additions to the *matériel* of the healing art. From the official report of the proceedings, now printing, the professional public will gather their scientific results, which by universal admission marked a signal advance on those of the previous congresses of the Association. Professor Bottini brought the meeting to a close in a congratulatory address, and the *rendezvous* for the thirteenth Congress was announced to be Padua.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

The Sanitary State of Oswaldtwistle, by Mr. J. SPEAR. This district lies at the northern extremity of the Lancashire coal fields, and has an estimated population of 13,400. On this population the general death-rate, the deaths under one year of age, the measles, scarlatina, whooping-cough, fever, and diarrhœa death-rates are all substantially in excess of those for England and Wales as a whole. The fever is enteric fever, and when we read of defective sewers holding deposits and having inadequate ventilation, and of large, deep, sloppy middensteads of the worst northern type, together with a water-supply which should be excellent, but which is exposed to pollution from farmsteads and cottages, there is nothing to wonder at in the presence of this fever. House accommodation is fairly good in so far as commodiousness is concerned; but some houses are built back-to-back, and are dilapidated and dirty; some are built on old refuse tips; and others have but a small enclosed space, this being characterised by filth nuisances. Unfortunately the authority have been placed in great financial difficulties, and have incurred a loss of £20,000 owing to the defalcations of a clerk; but there is room for steady improvement, which need not involve an immediate disbursement of any large sum, and it is to be hoped that the recommendations annexed to the report will be accepted as a guide for future work.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sunderland Urban District.—This borough, with a population of 127,422, had, during 1886, a birth-rate of 36·2 and a death-rate of 19·4 per 1000; the latter rate contrasting favourably with a mean rate for forty years of 24·4. Mr. A. E. Harris takes the opportunity of indicating the improvements with which this reduction has been associated, and he refers specially to the efficient and systematic cleansing of middens, ashpits, and pails. This work is done in the night, an arrangement which we believe, in most instances, to be faulty; for the cloak of darkness is not favourable to cleanly operations or to the remedy of discovered defects. Phthisis is one of the diseases the mortality of which has been lessened, and the change is attributed to the healthier conditions affecting life in the borough. The zymotic rate was also less last year than during any year as to which records are available; it amounted to 2·4 per 1000, and it involved a material diminution in the incidence of most of the infectious diseases. The notification of these diseases is in operation in this district, and is stated to have operated most beneficially. Forty cases of typhus came under notice, Sunderland being one of the districts where this disease has made its reappearance, and the occurrence calls to mind that there is still much property that needs removal in the sanitary interests of the borough. A detailed account of the current sanitary work of the district is included in Mr. Harris's report; statistical tables form an appendix, and a disease chart shows at a glance the distribution of the

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principal preventable diseases that have prevailed in the borough.

Poplar.—In the south district of this metropolitan area the death-rate was 19·9 per 1000 during 1886, this being the lowest, except that for 1885, since registration began. Amongst the exceptional deaths that took place was a sudden one from lead poisoning, and Mr. F. M. Corner states that in the last three years six women from the same firm have died from the same form of poisoning, death occurring with but little previous warning. In the north district the general death-rate was as low as 15·4, and this with no less than 1·26 measles deaths, which raised the zymotic rate to 2·6. The difficulties in preventing the spread of this disease are very great, and we must look to more intelligence on the part of parents before they can be met. Referring to the number of people who prefer to sleep out of town, Mr. R. M. Talbot says that between 2 and 7 A.M. the air in the streets at the East-end is often as pure as that of many country towns, and this the more so because no fires are burning. But London is most difficult to sleep in at a time of year when the fewest fires are alight; and, besides the fact that people want to get to sleep before 2 A.M., there are other hindrances to sleep than smoke and mere impurity of air.

Holborn.—The main portions of this report relating to the health of the district are statistical. The death-rate is given as 24·4 per 1000, after the necessary corrections; but Dr. Gibbon thinks that a proper estimate of population would lower this rate. Referring to smoke abatement, he points out that there is about 15 per cent. more sunshine near Lewes than at Greenwich, the two places where record is kept, and he attributes the difference to the gross and wasteful way in which coal is consumed, and which leads to a canopy of smoke over London. At present 75 per cent. of coal is wasted in our domestic fireplaces, and he hints that instead of taking off the coal duty in London it would be well to apply it everywhere, so as to induce greater economy by the construction of proper grates.

Islington.—In this parish a death-rate of 15·7 per 1000 during the past year constituted the lowest recorded rate. It occurred in connexion with an exceptionally low birth-rate of 30·0 per 1000. Referring to the marked absence of small-pox, Dr. Tidy fears it may be the precursor of a rising wave, and he urges cleanliness and protective vaccination and revaccination, matters that are but too often neglected in non-epidemic times. Tabulation of the scarlet fever and diphtheria deaths, both for the metropolis and for Islington, shows how, with improved diagnosis, the proportional fatality of the two diseases has altogether changed; for whereas formerly the deaths from scarlatina were all but uniformly in excess of those for diphtheria, the reverse is now the case. Of 112 samples of food analysed, Dr. Tidy only found five adulterated, and in these cases the article was milk, and the vendors were prosecuted. In connexion with the general sanitary work, it is stated that under the bye-laws as to houses let in lodgings, though much has been done, it would be impossible, in the absence of a caretaker, to enforce the carrying out of the minor requirements. Having this in view, Dr. Tidy expresses the conviction that people can never be regulated into being cleanly and obedient to the laws of health. Fortunately much has already been done throughout the kingdom in this direction, and we are not without hope that the "many improvements" which even in Islington have been effected by the new regulations will not be the last result of the adoption of the code referred to.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5877 births and 3099 deaths were registered during the week ending October 8th. The annual rate of mortality in these towns, which had been 16·2 and 17·5 per 1000 in the preceding two weeks, rose again to 17·5 last week. During the thirteen weeks of last quarter the death-rate in these towns averaged 20·4 per 1000, and was 0·5 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 11·6 in Wolverhampton, 13·9 in Bradford, 14·1 in Brighton, and 14·4 in Birkenhead. The rates in the other towns ranged upwards to 24·1 in Blackburn, 24·6 in Bolton, 25·6 in Manchester and 30·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 440 and 460 in the preceding two weeks declined last week to 412; they included 96 from scarlet fever, 95 from diarrhœa, 66 from whooping-cough, 58 from "fever" (principally enteric), 46 from measles, 38 from diphtheria, and 13 from small-pox. These zymotic diseases caused the lowest death-rates last week in Hull, Brighton, and Nottingham; and the highest rates in Derby, Blackburn, and Bolton. The greatest mortality from scarlet fever occurred in Norwich, Birkenhead, Huddersfield, Salford, Bristol, Blackburn, and Halifax; from "fever" in Manchester, Portsmouth, Salford, and Plymouth; from measles in Manchester, Bolton, and Derby; and from diarrhœa in Blackburn and Bolton. The 38 deaths from diphtheria in the twenty-eight towns included 25 in London, 2 in Birmingham, and 2 in Liverpool. Small-pox caused 13 deaths in Sheffield, but not one in Greater London or in any of the twenty-six other large towns. Only 4 cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease; whereas the number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 1759. The deaths referred to diseases of the respiratory organs in London, which had been 142, 160, and 219 in the preceding three weeks, declined again last week to 206, and were 51 below the corrected average. The causes of 72, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Hull, Brighton, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Newcastle-upon-Tyne, Oldham, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·3 and 17·7 per 1000 in the preceding two weeks, rose again to 18·1 in the week ending October 8th; this rate exceeded by 0·6 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 12·3 and 13·0 in Greenock and Perth, to 18·7 in Glasgow and 26·5 in Paisley. The 453 deaths in the eight towns last week showed an increase of 11 upon the number in the previous week, and included 22 which were referred to diarrhœa, 19 to scarlet fever, 17 to whooping-cough, 7 to diphtheria, 6 to "fever" (typhus, enteric, or simple), 3 to measles, and not one to small-pox; in all, 74 deaths resulted from these principal zymotic diseases, against numbers declining in the preceding four weeks from 112 to 71. These 74 deaths were equal to an annual rate of 3·0 per 1000, which exceeded by 0·3 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 55, 28, and 17 in the three previous weeks, rose again last week to 22, of which 8 occurred in Glasgow and 7 in Dundee. The deaths from scarlet fever, which had been 11 and 12 in the previous two weeks, further rose last week to 19, and included 7 in Dundee, 6 in Glasgow, 3 in Perth, and 2 in Edinburgh. The 17 fatal cases of whooping-cough showed a decline of 6 from the number in the preceding week; 6 occurred in Glasgow, 4 in Edinburgh, 2 in Leith, and 2 in Dundee. The 7 deaths from diphtheria showed a further slight increase upon recent weekly numbers, 5 occurring in Glasgow. The deaths referred to "fever," which had been 11 in each of the preceding three weeks, declined last week to 6, of which 3 occurred in Glasgow and 2 in Paisley. The deaths attributed to acute diseases of the respiratory organs in the eight towns, which had been 62 and 83 in the preceding two weeks, declined again last week to 78, and were 15 below the number returned in the corresponding week of last year. The causes of 56, or more than 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 34·3, 30·6, and 30·9 per 1000 in the preceding three weeks, declined to 24·2 in the week ending October 8th. During the thirteen weeks of last quarter the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 19·6 in London and 18·2 in Edinburgh. The 164 deaths in Dublin last week showed a decline of 45 from the number in the previous week; they included 13 which

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were referred to diarrhœa, 6 to measles, 4 to "fever" (typhus, enteric, or simple), 3 to scarlet fever, 2 to whooping-cough, 1 to diphtheria, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had declined in the preceding seven weeks from 78 to 37, further fell last week to 29; they were equal to an annual rate of 4·3 per 1000, the rate from the same diseases being but 1·9 in London and 2·2 in Edinburgh. The fatal cases of diarrhœa, which had ranged in the preceding seven weeks from 38 to 19, further fell last week to 13. The deaths from measles also showed a further decline from recent weekly numbers, while those referred to "fever" showed an increase. The fatal cases of scarlet fever, "fever," and whooping-cough did not show much variation from recent weekly numbers. The deaths of infants showed an increase of 1, while those of elderly persons were fewer by 9 than those returned in the previous week. Four inquest cases and 3 deaths from violence were registered; and 49, or nearly a third, of the deaths occurred in public institutions. The causes of 22, or more than 13 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

"THE PRESYSTOLIC MURMUR, FALSELY SO CALLED."

To the Editors of THE LANCET.

SIRS,—In a very interesting contribution to THE LANCET of Oct. 1st and 8th, Dr. Dickinson has once more raised a question as to the true character of the "presystolic," or, as I prefer to call it (and as it is usually called here), *auricular-systolic* murmur, as observed in cases of mitral stenosis. The controversy invited by Dr. Dickinson's communication is, as he himself admits, not a new one, inasmuch as it was exhaustively treated in your own columns in March and May, 1872, as between the late Dr. Andrew Barclay and others, Dr. George Balfour of Edinburgh being on that occasion, as in his well-known book published in 1876, the able and sufficient champion of the view which I regard as the correct one, and which has been taught in Scotland for thirty years or more to medical classes in Edinburgh and Glasgow. Still, there is an advantage in having any matter of medical doctrine supposed to be still in controversy taken up by one like Dr. Dickinson, who is too much in earnest, too practical in his tendencies, and too well versed in original research to be likely to trouble himself at all with a purely academical discussion *pro* or *con*. For this reason I venture to submit a brief rejoinder to his "remarks" in the same spirit as the remarks themselves. I do not propose fully to discuss the question of the auricular-systolic murmur on the present occasion, but only to indicate what I consider sufficient reasons for adhering to the customary nomenclature and views of its nature and causation.[1]

Perhaps it may be as well to place in the front of the argument the points on which both sides are agreed. Fortunately Dr. Dickinson is by no means grudging in his admissions in this respect, nor does he obscure the question at issue by any irrelevant or disturbing doubts in respect of the practical significance of the murmur as a diagnostic fact. After describing anew the murmur and briefly alluding to the theories of it, he adds (p. 650): "Some of these propositions I am about to dispute, but there is no possibility of doubting the practical outcome. The murmur which has been thus described ..... is pathognomonic of mitral stenosis. If the theory is to be judged only by the correctness of the diagnosis which follows from it, it must be correct." And, again, towards the close of his paper (p. 697): "It may be accepted as a general truth that a diseased mitral valve does not shut unless the orifice is narrowed; thus the so-called presystolic murmur becomes a sign of stenosis. For this great landmark of cardiac diagnosis we have to thank Dr. Gairdner. Our estimation of its value will not be lessened by any difference of opinion as to the precise origin of the morbid melody which we can so readily recognise, and from which we learn so much." Dr. Dickinson is here almost too generous; but the history of this subject is a long and involved story, which has been admirably told by Dr. Balfour in an address[2] recently published, and I therefore abstain from remarking upon it further than to indicate that no kind of personal question, apart from the purely scientific issues involved, interferes, or at least ought to interfere, in the argument on the present occasion.

We may take it, then, as admitted on all hands that a murmur immediately preceding the first sound, having, moreover, a peculiarity of character and intonation which Dr. Dickinson does not fail amply to recognise, and very frequently, if not invariably, accompanied by some alteration in quality of the first sound itself, as well as by a more or less pronounced reduplication of the second sound, is distinctive of mitral stenosis. The question at issue is whether the murmur so characterised is produced only while the ventricle is in systole (but at the very commencement of the systole) before the auriculo-ventricular valve has had time to become completely closed, or whether it occurs at the very end of the ventricular diastole, and while the auricle is contracting (the valve, of course, being still in the open position). It might even appear to some that this question is, after all, an academical rather than a practical one, or, as Dr. Balfour puts it, "To all such arguments it might at first sight be sufficient to reply that so long as what is called a presystolic murmur is duly recognised as an infallible sign of mitral stenosis, it is a matter of no importance whether we regard it as auricular-systolic or ventricular-systolic in rhythm."[3] But in a matter of this kind nothing that conduces to clearness of thought and accuracy of observation can be said to be of *no* importance. There are curiosities, even mysteries, enough about the murmur of mitral stenosis, clear as its practical significance may be in most instances, which should make us anxious to avoid all needless confusion of thought about it. Besides, I quite agree with Dr. Dickinson when he says that "a sum has been known to prove, notwithstanding that errors have crept into the working of it." I will only add, therefore, that in my own teaching, from first to last, the practical fact of the coincidence of the murmur with mitral stenosis has been set forth always as of the first, and the theory of it as of the second, degree of importance. But I am by no means disposed to concede that there is, as the matter stands at present, any doubt or insecurity in respect of the theory of this murmur as set forth by me in 1861. In point of fact, the theory stands, if it stands at all, by its own inherent simplicity as an explanation of the facts. If, as Dr. Dickinson affirms, "Dr. Gairdner's position became that of orthodox medicine," the "orthodoxy" is not the result of any highly elaborated arguments or unduly dogmatic declarations on my part, much less of any assumption of papal or ecclesiastical infallibility, for to "orthodoxy" of this kind I have ever been entirely opposed.

There is a feature of the auricular-systolic murmur (as I still venture to call it) which has been overlooked, or cast into the shade, by Dr. Dickinson, as well as by all his predecessors, in the views he has adopted, but which the reader will find most carefully and deliberately laid down, and illustrated by a diagram, in my first publication on the subject in 1861. "The auricular-systolic murmur may merely precede the first sound—i.e., it may follow the pause of the heart's action; or it may appear to be prolonged out of, or even quite through, the period of rest, being in this last case necessarily associated with a degree of the ventricular-diastolic murmur presently to be described. Its essential character, however, is preserved in every case, as above defined, and as represented in the diagram."[4]

In other words, while the most *characteristic* (and also the least variable) element in the A.S. murmur is that which immediately precedes the first sound, and coincides (as I believe) with the auricular systole, the murmur itself is often much more prolonged than this, and may cover not only the auricular-systolic period, but also the period corresponding with the active diastole of the ventricle, and also with the pause, or rest, of the heart; and in such cases

[1] I may refer the reader also to the *Glasgow Medical Journal* for Sept. 1887, p. 226, for some further observations on a paper by Dr. McVail, which, I observe, has been reproduced in the *British Medical Journal* of last week without my rejoinder as made in the Medico-Chirurgical Society immediately after the paper.

[2] Harveian Discourse for 1887: On the Evolution of Cardiac Diagnosis from Harvey's days until now, *Edinburgh Medical Journal* for June, 1887. pp. 1078, *et seq.*

[3] Clinical Lectures on Diseases of the Heart and Aorta, 1876, p. 107.

[4] Clinical Medicine, p. 575.

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(I will add, as the result of all my subsequent experience) the murmur, though varying, it may be, in intensity, is usually homogeneous as to character and intonation,[5] so that even in cases of the most complex and combined murmurs it is for the most part easily distinguished from the others which may be accidentally associated with it.

Now, I fail to see how this fact (supposing it to be a fact) can be reconciled at all with Dr. Dickinson's hypothesis. On the view of the case that I have adopted, it is at least possible to understand how, with a stenosed orifice, there should be a murmur extending over the entire period when the ventricle may be supposed to be gradually filling, *a tergo*; although it may be, and is, difficult to explain why this murmur should vary so much in intensity, and otherwise, in individual cases of like pathological characters, and even in the same case at different times. But it is utterly out of the question to suppose that a murmur which begins soon after the second sound, and extends throughout the pause up to the first sound (with varying intensity, but essentially unchanged characters), can be associated with the ventricular systole or caused by regurgitation from the ventricle. The only explanation of such a phenomenon open to Dr. Dickinson would be to affirm in all such cases that the murmur heard was not *one* murmur, but *two*. And this I take to be his actual explanation, judging from the latter part of his paper (p. 695), in which he aims at rehabilitating the damaged credit of the old "mitral diastolic" murmur of Hope and others, by distinguishing it from the so-called presystolic. But he will excuse me if I prefer the evidence of my own ears, long exercised in this very inquiry, and assuring me on many occasions that the long-continued, rumbling, and very characteristic murmur to which I am now referring is identical, in all its essential attributes, with the much more brief murmur immediately preceding the first sound, to which we in Scotland usually apply the term auricular-systolic (A.S.).

Take, for example, the very remarkable, if not unique case recorded at pp. 602-3 of my "Clinical Medicine," a case all the more valuable for my present object, because the clinical description of it was written and published years before the verification of the essential diagnosis by a post-mortem examination. In that case there was, strictly speaking (as afterwards discovered), no stenosis at all; but there was, on the other hand, a ball-valve obstruction of the tricuspid orifice caused by a globular tumour depending from the auricle, and acting as a plug, partially damming up the opening, but *only* during the flow of blood from the auricle to the ventricle. The right ventricle and all the parts in front of the tricuspid valve were in this case absolutely normal; so that there was no excuse whatever for ever suspecting a murmur of regurgitation, or, indeed, any other murmur than one of obstruction.[6] These facts give to the following brief description an importance out of all proportion to the amount of detail in it, inasmuch as it was the carefully condensed result of a large number of observations made over a lengthened period of hospital residence on a case which, on account of its exceptional character, attracted much attention. "The cardiac murmur begins immediately after the second sound, continues (*diminuendo*) throughout the pause, and then goes on (*crescendo*) up to the first sound, at which it stops abruptly. I think tricuspid contraction [it should have been *obstruction*, to correspond with the actual conditions afterwards found] may in this case be predicated with all but mathematical certainty; the fact, however, of having witnessed this typical instance only serves to make me more entirely confident that I cannot have overlooked the fact in many other cases." It will be observed that the intonation and acoustic characters of the murmur are not here critically reported, but the impression intended obviously to be conveyed is of one and the same murmur, prolonged without a break through the entire interval. I am very sure, even now, that this *was* the impression vividly and instinctively conveyed to the ear throughout the long period of observation in this case. But if, as sometimes happens, the *diminuendo* portion of the murmur should have disappeared, or should become (according to Dr. Dickinson's apt poetic quotation) "a sound so fine that nothing lives 'twixt it and silence," there would be no small risk of misconception; the *one* murmur, homogeneous throughout, might then easily be conceived of as *two*, of which the former would be certainly diastolic in rhythm. This, at all events, is all that I can urge on behalf of Dr. Dickinson's descriptions to bring them into some kind of conformity with my own observations. And if this be not the authentic basis in observation for the "old mitral diastolic murmur," then I must simply affirm that I am not acquainted with it at all, and am therefore not in a position to recognise it as a separate and distinct phenomenon.[7]

There is another point in which Dr. Dickinson's descriptions fail to convey to my mind the impressions derived from the use of my own senses, and thus fixed in my mind as the result not of theory but of sheer experience. At page 651, col. 2, he speaks of the case, not at all one of infrequent occurrence, when a murmur preceding and a murmur following the first sound are associated together. He seems here to attribute to the advocates of the current theory a confusion of language or of thought, or both, on the strength of which he immediately builds up an apparent paradox in argument, such as he feels bound to repudiate. But the confusion and the paradox are alike foreign to all that I have observed and written upon the subject. When these two murmurs coexist (he says in effect) they are inseparably blended. "The two have become one. The presystolic and the systolic are so joined *that no man can put them asunder, or say where one begins and the other ends.*" I ask now, with some astonishment, Is Dr. Dickinson here professing to give his own observations or mine? If the latter, I would simply refer him to pp. 577-78 of my "Clinical Medicine," without quoting the passage at length, as it is somewhat long. He will there find that I have been at the utmost pains to show that these two murmurs are never thus inseparably blended; that they always preserve their exact separate rhythm, and are sharply demarcated from one another, either by the first sound remaining clear and definite (as it usually does) between the two, or by an abrupt change in the character of the murmur itself, marking, as it were, an interval between them (though the interval may be too brief to appear *soundless* to the listening ear). And this is not a mere matter of words or a trivial difference in respect of the facts; for it is on this very misconception that we are apparently to be driven into the false position that believing, as we do, these two murmurs to be absolutely distinct, we yet find them, as a matter of observation, thus inseparably blended. I say emphatically, for myself, that the error and confusion here, if any, are not mine. The two murmurs (A.S. and V.S., as we always denote them in Glasgow) both *are* and *appear* quite distinct to the ear in all but a fractional minority of cases. Nay, it is their very easy differentiation in fact that constitutes, in my mind, one of the leading objections to Dr. Dickinson's theory. For if *both* of these murmurs are in reality *ventricular-systolic*, and therefore murmurs always of regurgitation, why should they be ever distinguished, either in fact or in appearance, the one from the other? Dr. Dickinson's paradox thus, to my mind, proves fatal to his own hypothesis, and not to mine.

Since I began these hastily written remarks, which are all that I can ask you to give space for at present, I have received a letter from Dr. Sansom to the following effect:—"I am not at all convinced by Dr. Dickinson's reasoning in THE LANCET concerning the presystolic murmur—rather am I convinced the other way. I must meet his observation as to the *time* of the ventricular systole in a case of manifesting the murmur by a direct negative, for I have convinced

[5] In using this expression as that of the broad statement of the facts conveyed to my ear in most cases, I am not indisposed to admit, with Dr. Balfour, that the diastolic element of this murmur is softer, as a rule, than the presystolic; and that it may also occur in some cases when the latter is indistinct, or perhaps even absent. These cases are, however, so exceptional that I admit their existence with some difficulty, although they may possibly have been present to the minds of some of those great auscultators who have insisted upon the diastolic mitral murmur as "exceedingly rare"—"feeble, soft, &c., owing to the weakness of the diastolic current out of the auricle" (Hope); or who (like Walsh) have "never observed diastolic thrill at the left apex," and "have never heard this murmur of great intensity." See also a note further on upon this subject.

[6] The preparation illustrating this very rare case is now in my possession, and has been shown to numbers of persons, including a very full meeting of the Medical Section of the British Medical Association in London.

[7] I must, however, allow for a small and perplexing minority of cases in which, from one cause or another, the rhythm is difficult to follow, and even the facts remain more or less uncertain. I will not, therefore, declare absolutely against the old mitral diagnostic murmur; and I will observe a similar reserve as regards Dr. Austin Flint's curious but exceptional experience of a murmur, apparently of mitral stenosis, occurring with free aortic regurgitation and with an unindured mitral valve and orifice. (See the *Glasgow Medical Journal* for September, referred to above.)

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myself and every observer in an instance now under my observation that the maximum of movement is exactly with the end of the murmur—i.e., with the ventricular systole." This, too, is entirely in harmony with such impressions as I have hitherto been able to form as regards the facts; but I should have hesitated in saying so in the face of the apparently precise statements and experiments detailed on p. 651 of Dr. Dickinson's paper, were it not that I very fully recognise the difficulty which Dr. Dickinson has himself experienced of making "two senses work together in exact consent." I will only say, therefore, that, so far as my observations go, Dr. Saneom is right; and from his well-known exactness and skill in the employment of mechanical appliances in cardiac diagnosis, I fully expect that he will be able ere long to supply further evidence upon the subject.

In the meantime I hope, and indeed feel sure, that Dr. Dickinson will excuse me for dealing thus imperfectly, on the spur of the moment, with his elaborate and very suggestive paper, and that he will also readily pardon any too eager expressions of dissent from his views, in the full conviction that such dissent is governed by, and indeed mainly due to, the sincere respect I have always entertained for his large and fruitful labours in various departments of scientific medicine.

I am, Sirs, yours truly,

W. T. GAIRDNER, M.D., LL.D., &c.,
Professor of Medicine in the University of Glasgow.

Glasgow, Oct. 11th, 1887.

To the Editors of THE LANCET.

SIRS,—It has a long time occurred to me to question the interpretation of murmurs generated at the various cardiac valves; and in relation to mitral disease, I have on more than one occasion in the out-patient room written down a diagnosis thus: Mitral systolic murmur—stenosis. I have also had prepared for some time the basis of a paper on this subject, but was diffident of publishing it, knowing how opposed the views contained therein would be to those generally accepted. Dr. Dickinson's brilliant paper in THE LANCET of Oct. 1st has shown me that, whilst differing from the opinion of most of the great authorities as to the cause of this so-called presystolic murmur, I am at least in good company when on the same side with Dr. Dickinson. Much therefore that I can say must be supplementary to, as well as in support of, Dr. Dickinson's contentions.

My basis of argument must, firstly, be made plain. I do not contend that a mitral stenosis is not often accompanied by a thrill and by a loud murmur terminating abruptly, which occupies the time in which one would suppose the ventricle to be in diastole, and which murmur we have been taught to call presystolic or "auricular systolic." But I do contend that this murmur is not generated at the mitral ring, but that it is generated by, and entirely owing to, altered flaps and chordæ tendineæ, and that it is evidence of regurgitation, and not of obstruction. In other words, although the so-called presystolic murmur may be, and probably is, diagnostic of mitral stenosis, the pathological condition which has caused this narrowing of the orifice has also, at the same time, caused thickening and rigidity of the mitral valve with thickening and shortening of the chordæ tendineæ attached thereto; and it is these latter conditions which form the musical instrument. The recognition of the murmur, like the writing on the wall, has been apparent; the interpretation thereof has not been so easy.

In my out-patient practice at the North London Hospital for Diseases of the Chest, I examined post mortem the hearts of two children who died after having had for some months all the physical signs of mitral stenosis. The dissections in both cases revealed stenosis, some little dilatation of the left auricle, together with the alteration in the mitral curtains, to which I have alluded. But (and here I would differ from Dr. Dickinson) the stenosis was not so marked a condition as the rigid thickened valve. The question then arose, How did, in each case, the miscalled presystolic murmur occur? There was in each case a prolonged first sound, with accompanying thrill. This first sound, which I looked upon as systole, was attended by, in fact replaced by, a murmur which increased in intensity towards the end of systole, till it finally terminated in a sharp note (or "snap" of Dr. Ormerod); then could be distinctly heard a break or interval, followed by a typical second sound. The sounds heard during this cycle of events may be represented by *f-r-u-u-m-p—dup*. Supposing this were tabulated so as to represent the views of our great authorities on valve disease, it might be written thus:—

	1.	2.
f r u Presystolic murmur.	*u m p* Systole.	*dup* Diastole.

But let us see how it would meet our views if written thus:

1.	2.
fru u mp Systole prolonged and laboured.	*dup* Diastole.

Against the first proposition I would contend that if the first part of the murmur be presystolic, there ought to be, as Dr. Dickinson insists, a break between auricular and ventricular systole; a period of slack water between the flow and ebb tide; an arrest between the up and the down stroke, as in fiddle-bowing,—a condition which does not occur. There must be invariably narrowing of the mitral ring with roughened surfaces of this ring and of the auricular aspect of the valve, there should be also auricular hypertrophy.

On the other hand, let it be conceded that a rigid flap hanging in the ventricle cavity, and attached to its wall by a shortened cord, responds slowly to the current raising it, and we have, as I think, all the elements producing the phenomena known as the presystolic murmur. The whole of the noise up to the "snap" is, I take it, caused by ventricular systole; it is synchronous with the heart's prolonged heave; the rigid mitral curtains which are edgeways on to the returning current vibrate by means of their rigidity being opposed to the current; regurgitation into the auricle is occurring all this time; the mitral flaps are being slowly raised (physiological time), they ultimately meet one another with a shock, systole is completed, and regurgitation arrested. I will compare this state of things to the lower lock gates of a canal when the lock is being filled. The current of the water is enough to gradually push the gates towards one another, some water at the same time escaping through them; the gates eventually close and fit tight with a sharp sound, and leakage is stayed. In a normal heart's action, I take it that the mitral flaps are raised at once directly the ventricular chamber begins to contract; the two flaps next meet one another, and their soft smooth convex surfaces come together with a slight noise. The right segment of the valve, being common to both aortic and mitral orifices, has a double function: it acts as a factor in completing the closure of the auricular-ventricular orifice, and it also serves as an inclined plane directing the column of blood into the aortic infundibulum. But in a rigid valve conditions are altered. There is no sudden closure by the mitral. The doors are heavy, they take some time to move, they are held down by thickened, altered, and inelastic cords; and when at last they do close, their meeting is marked by an abrupt, explosive sound, marking the climax to a murmur which has been going on all the while. The murmur may therefore be presystolic in the sense that the term systole, in view of its comparatively quick completion, is marked by the sudden closure of the valve, but it is still ventricular systolic in its causation.

As regards thrill. Must we be satisfied with the view that it is caused by blood being crowded through a narrow slit-like, roughened orifice; that a weak chamber acquires, in a short time, power enough to generate a vibration, which is coarse enough to be felt, but not rapid enough to cause a musical note? If this be so, should not the whole organ itself participate in the tremor, and therefore should it not be felt all over the cardiac area, although it might be intensified and accentuated at the mitral ring? This seems to me difficult to accept. Does it not seem more likely that a stiffened flap, held edgeways, or perhaps a little aslant, to the regurgitant stream shall fill all the conditions required to produce a thrill? A vocal cord produces a note; it also produces a thrill.

The proposition advanced in the foregoing may be summed up thus: In cases of so-called presystolic murmur there are—1. A thrill felt over the apex. 2. A prolonged roaring murmur, composed of distinct vibratory elements, terminating in a snap or bang. 3. There is no halt or break in rhythm, and no sudden alteration in musical character

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between the commencement and the end of the murmur. 4. The roaring murmur is caused by the ventricular systole. 5. The termination thereof (or snap) represents the concussion of the mitral flaps and the arrest of regurgitation. 6. The thrill is produced by a rigid flap vibrating in a stream powerfully propelled.

Propositions 1, 2, and 3 may perhaps be granted. Propositions 4, 5, and 6 do not probably as yet meet the views of the profession; but, if I read Dr. Dickinson's paper aright, they are held by him as well as by myself.

I am, Sirs, yours obediently,

Seymour-street, W., Oct. 1887. SEYMOUR TAYLOR.

To the Editors of THE LANCET.

SIRS,—May I be allowed space in THE LANCET for a few sentences in defence of the auricular-contraction theory of the production of the presystolic murmur, which was assailed in last week's number by so great an authority as Dr. Dickinson, who contends that the murmur in question is really a regurgitant murmur of systolic rhythm?

With regard to actual points of observation, I am disposed to disagree with Dr. Dickinson only on one, albeit an important one. It is his statement that the presystolic murmur accompanies, and does not precede, the apex impulse. I have over and over again convinced myself, and others who were with me, that the presystolic murmur and its accompanying thrill do precede the impulse of the apex, and, moreover, close abruptly with it. Coming to matters of theory, a large class of cases of mitral stenosis which never present a presystolic murmur at all demonstrate the fact that the closure of the mitral valve takes place at the beginning of the systole, for in these cases both a systolic sound and a systolic murmur are present, but the sound invariably precedes the murmur. I quite agree with Dr. Dickinson that a mitral systolic murmur must be regurgitant. The preservation of the first sound in cases of mitral regurgitation, accompanied by a systolic murmur, is matter of common observation, not only in cases of regurgitation through a constricted orifice, but in cases where there is no disease of the valves, their incompetence depending on the muscle of the heart, as well as in cases of structural change in the valve curtains, while yet it is in an early stage, as witnessed in the course of acute rheumatism. Dr. Dickinson, in the following sentence seems to ignore altogether the large class of mitral regurgitant murmurs which are preceded by a first sound: "The ordinary or old-fashioned mitral regurgitant murmur simply takes the place of the whole first sound, and lasts to its end." In nearly all cases of mitral stenosis accompanied by presystolic murmur, a systolic murmur indicative of regurgitation through the deformed orifice may from time to time be heard; but this murmur invariably follows the first sound. Moreover, the *crescendo* character of the presystolic murmur and *diminuendo* character of the systolic murmur (usually soft and blowing in character) are well marked, and the two murmurs are separated by the first sound. The systolic is, no doubt, regurgitant, but it follows the first sound. The peculiar accentuated and shortened character of the first sound, I believe, depends on the small quantity of blood in the ventricle at the time of its contraction. The left ventricular walls are usually healthy, and contract with vigour, so to speak, on a light burden.

Dr. Dickinson refers to the difficulty met with in attempting to account for the absence of a pause between the presystolic murmur and an accompanying systolic murmur, but a first sound is always represented in these cases, and it is to it that the presystolic murmur "runs up." The sound implies only the closure of the valves, and the abrupt cessation of the current producing presystolic murmur is just the condition that explains the abrupt cessation of the murmur coincidently with the first sound.

Dr. Dickinson states that he has found that the presystolic murmur begins with systolic (i.e., ventricular?) movement, but such movement does not necessarily imply contraction. It seems very likely that there will be some movement communicated to the ventricles by the contraction of the auricles.

The difficulty of explaining the loudness and roughness of the presystolic murmur by a current of blood resulting from contraction of the thin-walled auricle is considered an objection to the auricular contraction theory, but a diastolic murmur due to mitral constriction sometimes possesses almost as much loudness and roughness as the presystolic murmur, and is quite commonly accompanied by marked thrill, yet the forces producing the soniferous current can only be the blood-pressure in the lungs and the sucking action of the expanding ventricle. The theory that explains the loudness and roughness of the presystolic murmur must also explain its remarkable limitation to the apex and its extraordinary capriciousness, as shown in its coming and going, while the structural conditions remain unaltered.

I am, Sirs, your obedient servant,

Manchester, Oct. 4th, 1887. GRAHAM STEELL.

To the Editors of THE LANCET.

SIRS,—Dr. Dickinson, in his excellent remarks on this subject, speaks of the hardihood of daring to take into question one of the accepted canons of cardiac medicine—viz., that promulgated by Dr. Gairdner. It will, I hope, be some satisfaction to Dr. Dickinson to know that I, for one, have never accepted this unphysical and unphysiological doctrine, but, on the contrary, have always taken the opportunity of exposing its fallacy to the members of my class.

The arguments which I have used to disprove an auricular systolic sound are precisely those employed with so much force by Dr. Dickinson—viz., first, that the auricular contraction is insufficient to produce the necessary vibration of the diseased valve; and secondly, and very obviously, there is no break in the so-called presystolic and systolic sounds.

It does not surprise me to find that such fancies as the one Dr. Dickinson combats should occasionally take the place of plain facts, when we find that there are a number of intelligent men who are unable to appreciate the simplest and efficient cause of the first sound of the heart. There are other *impenetrabilia* in our constitution, I fear, besides "colour blindness." I am, Sirs, yours truly,

Stratford-place, W., Sept. 30th, 1887. JOHN HARLEY.

GOUTY DIABETES.

To the Editors of THE LANCET.

SIRS,—Will you allow me to call attention to a class of cases which is not only a large one, but the cause of much anxiety and frequently of considerable disappointment to practitioners who have not had the opportunity of studying it on a sufficiently extensive scale and in detail. I allude to that variety of suppressed—or, more accurately, *undeveloped*—gout, in which the symptoms are chiefly and often characteristically "diabetic." Persons affected with this malady are generally of large frame, with little stability or power, full-sized but flabby muscles, and a tendency to the accumulation of fat. They are great—or intermittingly great—eaters, and energetic or impulsive, but weak and easily exhausted. The skin is pale, and they suffer from coldness of the extremities. They sleep badly at night, and worry in their wakefulness; while by day they are drowsy, and when falling asleep breathe heavily, or, if not roused, sink into a state verging on coma with puffing, sighing, or laboured respiration. They are commonly subject to attacks of vertigo, in which surrounding objects seem to race from left to right; and not seldom they have weak hearts with rhythmically irregular pulses, and perhaps a short mitral systolic murmur, which is not constant, but more likely to be heard when the heart is acting languidly than when it has been recently stimulated by exercise. The characteristic phenomena are: (1) very great variability in the quantity, colour, and density of the urine passed in twenty-four hours, and the want of relation between the bulk of the fluid consumed and that excreted; (2) sugar is present when the urine is small in quantity, rather than when it is abundant; (3) the acidity is abnormally low in proportion to the percentage of urea; (4) there is generally much uric acid (Haycraft's test) when the sugar is absent, and less than the average proportion of health when sugar is present; (5) albumen is often found soon after a meal, either with the sugar or during a free elimination of uric acid, and when there is no albumen the phosphates are generally in excess; (6) the liver is enlarged *vertically*, and the bowels are constipated, with occasional attacks of diarrhœa, the stools being pale when scanty, and bilious when profuse. Hæmorrhoids are usually present and troublesome in these cases, and when they do not bleed they

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often attain great size. Not infrequently there is also a prostatic gleet.

I will not trouble you with any attempt to account for this curious and, as it may appear, contradictory combination of symptoms and indications, although I have my own theory, and may hereafter have something to say on the subject; nor will I venture to set out the *rationale* of the line of treatment which has proved serviceable. Suffice it to state the clinical facts as I have myself observed them, and to report the means by which the symptoms have been generally ameliorated—often, as it would seem, wholly removed. In the management of cases of this class many difficulties have to be encountered, and they are far from easy to overcome. Meanwhile, one thing is certain—namely, that dieted as it is the fashion to diet patients suffering either from gout or diabetes, and treated on conventional principles either at home or at the continental spas, the subjects of gouty diabetes do not do well. They may be for the moment relieved, but they quickly relapse and, on the whole, go from bad to worse steadily. It is with a view to plead for a more generous regimen and tonic treatment I am writing. Wisely, but liberally fed, with meat in such quantities as the stomach will take, *ordinary* bread and vegetables,—in short, a full mixed diet—dry champagne, which contains a minimum of alcohol and a large proportion of ether, and well-matured port wine, in appropriate and measured quantities (the effect being carefully watched), they do well. The albumen and sugar disappear; the quantity of urine excreted becomes normal and relatively regular. The pulse gains strength and rhythm, and the condition throughout improves, under some modification of the following treatment: Ferri lactatis, 10 gr.; acidi lactici, 15 m.; quiniæ puræ, 1 gr.; extracti convallariæ fluidi (*e floribus*), 10 m.; aquæ ad ½ oz.; every sixth hour, or in bad cases every fourth, or even third, hour. Should there be constipation, I add five or ten minims of the fluid extract of cascara sagrada (U.S.); or diarrhœa, or excessive diaphoresis, ten minims of tincturæ cotonis. The results of this management, in a considerable number of cases which have recently fallen under my observation, have been so good that I think it right to place the facts on record without further remark.

I am, Sirs, yours faithfully,

Hanover-square, Oct. 1887. J. MORTIMER GRANVILLE.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—Dr. J. H. Walters undertakes, in your last issue, to prove that, as regards the town of Reading, compulsory notification has been shown by six years' experience to be valuable as against disease and also acceptable to the profession. I should like him to support this opinion by categorical answers to the following questions:—

1. In what respect and to what exact extent, as shown by the death-rate of, say, the last two years, has Reading benefited in health by the system? I do not want statistics of notifications, but of deaths.

2. Is the form of notification such as to permit the practitioner, as he may in Edinburgh or elsewhere, to exclude the health officers from the disinfection and sanitation of the infected house if it is his interest to do so?

3. What proportion of the deaths are recorded by the burial authorities as having been attended by chemists and other unqualified practitioners?

I put these questions because I have in vain asked for evidence, presented by death-rates, that notification towns have improved in health in any greater degree than non-notification towns similarly situated; because I have reason to know that in towns in which the medical attendant is allowed (by stating in the notification form that the interference of the health officers is not necessary) to keep those officers from interfering with his private cases, the notification is a complete sham, many of the cases notified and paid for not being infective at all, and many infective cases being allowed to fructify just as if their existence had never been notified.

Finally, I have reason to believe that, if inquiry were made as to the number of persons attended by quacks, chemists, and other unqualified persons in notification towns, it would be found that the dread of the interference of the health officers drives very many of the sick into the nets of these persons. Can anyone produce actual figures to disprove these statements? If not, no one should trust in the unsubstantiated imaginings of Lord Basing or any other pro-compulsion partisan.—I am, Sirs, yours &c.,

Dublin, Oct. 8th, 1887. ARCHIBALD H. JACOB, M.D. Dub.

EMPYEMA FOLLOWED BY MELANCHOLIA.

To the Editors of THE LANCET.

SIRS,—I have been greatly interested by the account of Dr. Squire's case at the North London Hospital for Consumption, recorded in THE LANCET of Sept. 17th, and I am tempted to give you the notes of a somewhat similar case of my own, the curious point being that the mental symptoms in my case occurred within a few days of Dr. Squire's patient becoming melancholic.

W. B——, aged sixty-five, was taken ill about Christmas, 1886. Pleurisy was diagnosed early, but was almost devoid of pain. The left side was involved. Hiccough became incessant about the beginning of February, when my partner (Mr. G. H. Jackson) was called in. On Feb. 14th the patient was aspirated and nearly six pints of pus were removed. On the 17th I saw him with Mr. Jackson. The temperature had only once reached 99·8°, and that was quite early in the case; it was then 98·4°; respiration 24; pulse varied, about 90. The heart was displaced a little to the right. The dulness extended downwards to a distance difficult to ascertain, but the thoracic cavity gave very little evidence of fluid or consolidation. He lay on the left side. On the 19th Mr. J. Hutchinson saw him and agreed in employing free drainage, but advised us not to excise any bone, as he considered the space between the ribs sufficient. On the 20th I incised the seventh space in the anterior axillary line and inserted a very large drainage tube. A lead probe passed nearly up to the clavicle and in all directions freely. About a quart of pus was removed. Temperature 98·8°; respiration 22; pulse 96. The operation was performed under chloroform, but only lasted a few minutes. Next day his pulse intermitted every third beat with perfect regularity. The apex beat was now one inch to the inner side of the nipple. On the 27th delusions were noticed, and his mental condition grew worse daily up to March 20th, when improvement began to be seen. During this time the wound had gone on perfectly well, and as there was very little discharge the tube was removed on March 8th, in the hope that if by chance the chest closed the general health would improve. On the 14th the temperature rose to 99°, and the pulse was 103 and rather weak; the wound had closed. On April 4th the old wound burst open and a large quantity of pus escaped, and for a week the amount of discharge was great. The refilling had been watched with anxiety, but the choice lay between leaving nature to find a vent, or risking a recurrence of the insanity from which he had now so nearly recovered. About April 14th the discharge had abated materially, but I kept the tube in till May 7th, when, on its removal, the wound closed at once. His mind had now perfectly recovered, and on June 24th his only complaint was a dragging sensation on the left side. Practically nine weeks elapsed between the operation and complete closure.

I consider that the age should be noticed as an encouragement in similar cases. The melancholia assumed at one time a very dangerous type, but the watchfulness of his attendants avoided any disaster such as occurred in Dr. Squire's case, though a similar attempt was made. Did the melancholia result from weakness? Sir James Paget speaks of insanity after operations, and Dr. Savage has, I believe, recently made some remarks as to insanity in women after chloroform or other anæsthetics. I have attempted to glean information on this subject, but in vain, and I should very much like to hear from anyone who has met with a case of insanity after operation, as I propose to collect all the cases I can with a view to comparison. I wish to mention that agraphia was very much marked, and his penmanship improved *pari passu* with his general health. As a rule, the temperature was subnormal. He was not kept in bed a day longer than was absolutely essential, being out of bed thirteen days after the operation.

I happen to have seen Mr. B—— to-day (Sept. 30th). He tells me he is remarkably well, and weighs only 2 lb. less than the greatest weight he ever remembered scaling.

I am, Sirs, yours faithfully,

Tottenham, Sept. 30th, 1887. A. OGIER WARD, M.D.

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"THE TREATMENT OF SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—Mr. Arthur Wiglesworth, in his letter to THE LANCET of October 8th, draws attention to the treatment of scarlet fever by the internal administration of carbolic acid. I have recently had two cases of this disease under my care, one of a very severe character, in which this method of treatment was resorted to, and with a satisfactory result. Dr. Alexander Keith of Normanby, in a communication to THE LANCET of Jan. 22nd, 1869, calls attention to the treatment of these zymotic diseases by the internal administration of carbolic acid. Six hundred cases were so treated, with five deaths. The dose of pure carbolic acid administered was from about four to six minims. He believes that the physiological effects of the acid are profuse perspiration, rapid lowering of the pulse, subsidence of pyrexia, cleansing of the tongue, diminution of soreness of throat, and increase of appetite; he also observed, as noticed by Mr. Wiglesworth, that the urine was of a dark colour.

I am, Sirs, yours faithfully,

Barking, Oct. 8th, 1887. SAMUEL LEE.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

NEWCASTLE.

THE relations of the College of Medicine with it students are at present rather strained. This unpleasant state of affairs has arisen out of the students' boisterous behaviour at the opening on the 4th ult. It is true that the students have become more and more unruly on these occasions the last few years; but on the last occasion a speaker unfortunately lost his temper and made use of a rather strong expression to the students; this gave rise to a scene which may be described as little short of a riot. For the maintenance of order the College authorities have taken the extreme steps of expelling three students, and have suspended nine others for a period of six months. Although some of the students have misbehaved, the punishment is considered to be rather Draconian, and the case might still be met by an apology and a reprimand. It is felt that, although the students have fallen under censure, the authorities are not altogether free from blame.

GATESHEAD CHILDREN'S HOSPITAL.

The committee of the Gateshead Children's Hospital, having been disappointed in obtaining the site originally selected, have been presented with a very eligible one by Lord Northbourne and a donation of £200. This gift makes £900 contributed by the Northbourne family.

SUNDERLAND.

In his quarterly report, Mr. A. E. Harris, the medical officer of health, points out that the death-rate, 19·35 per 1000, is the lowest since his appointment in 1873. The report refers to the use of feeding bottles as the cause of many deaths of children who died under twelve months. Fourteen were suckled, fifty-three fed by the bottle, and three otherwise fed. Mr. Harris states as his opinion that the use of the feeding bottle is often resorted to from laziness, and to his mind feeding with the spoon is perhaps the best form where the infant has to be fed.

RIPON.

A very painful sensation was caused in the neighbourhood of Ripon last week by the death of Mr. Thomas Millar, surgeon, of Kirby Malzeard, near that city, who died in consequence of a carriage accident. Mr. Millar was thrown from his gig on Monday morning. He was being driven by a boy, and the horse becoming restive the whip was used, the result being that the animal reared and both the occupants were thrown from the trap. The boy did not receive much injury, but Mr. Millar died from his injuries on the following Friday.

Newcastle-on-Tyne, Oct. 10th.

THE foundation stones of the extension of the Providence Eye Hospital at St. Helens were laid on the 6th inst. by Lord and Lady Stanley.

EDINBURGH.

(*From our own Correspondent.*)

THE DISCUSSION ON SCARLATINA.

LAST Wednesday the adjourned meeting of the Medico-Chirurgical Society for discussing the subject of Scarlatina was held in the hall of the Society for Promoting the University Education of Women. There was a considerable attendance of members and visitors; but it is to be regretted that many leading Edinburgh physicians and teachers of the school were unable to be present and take part, as it was hoped they would do. The first business of the evening was the reading of a further *interim* report by the committee appointed to inquire into recent researches into the etiology of the disease. The conclusion of chief importance at which they have arrived so far is to the effect that one of the microbes described by Mr. Edington as a harmless organism is identical with that recognised by Klein as the streptococcus scarlatinæ. In commenting on this conclusion from the president's chair, Professor Grainger Stewart, who is convener of the committee of inquiry, drew special attention to the important issue which it raises in relation to Dr. Klein's researches, for with this organism it appears Mr. Edington had already experimented on the human subject with negative results. In other respects the report was of little interest, save that the experiments performed by the committee seem to have produced no positive evidence in favour of the pathogenic action of the bacillus, while they are too scanty for the aggregate negative results obtained to increase materially the doubt which attaches to its true significance in relation to the disease. The discussion which ensued dealt chiefly with the treatment of the disease and with methods of prophylaxis. Under the former heading, the chief controversy was in regard to the best method of combating pyrexia in the acute stage, and of treating the renal, glandular, and articular after effects of the disease. In regard to the second point, Dr. Ritchie spoke of the value of sulpho-carbolate af soda in small doses, along with isolation, as a prophylactic measure; Dr. Illingworth referred to his encouraging experience with biniodide of mercury; and Dr. Jamieson referred to the method of inunction with antiseptics and antiseptic warm baths. Drs. P. A. Young, Buist, and Murdock Brown also took part in the discussion, which was summed up in a few words by the President, who thought it had been of value in many practical directions, although it had shown how great a need there was for further light upon all aspects of the question. At a private business meeting held subsequently, the Committee of Inquiry were authorised to continue their research.

THE POST-GRADUATE COURSE.

The Autumn Session, if one may so designate what has now become a regular part of the year's teaching work in Edinburgh, comes to an end at the close of this week. The satisfactory results of this year's course, both as regards the interests of teachers and taught, render the maintenance of the system a certainty, and reflect considerable credit on the men to whose foresight and energy the orginiation of the system is due. It is fifteen months since, after some preliminary conferences with his colleagues in the University and the Extra-academical School, Professor John Chiene drew public attention to the project in his address to the Edinburgh graduates on the 2nd of August, 1886. In the course of that address he pictured to his hearers the continuity of personal intercourse which could thus be maintained between themselves and their *alma mater*: showing that the benefit to be derived from the system was a mutual advantage, giving to the school a new and larger interest in preparing to supply its past graduates with practical instruction on an advanced basis, while they, in their turn, profited no less by coming in contact with the practical demonstration of recent advances, than by renewed intercourse with the minds to whose activity many of these are due. The astonishing success of the first effort made in Edinburgh last year has not been without distant as well as local effects: the latter seen in the permanent system already referred to, that has taken root in Edinburgh; the former evidenced by the springing up of similar systems in other centres of medical education. Birmingham was the first to

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follow the lead, a short course of lectures to graduates having been held there last November. This year Aberdeen has already seen the satisfactory completion of a holiday course for graduates; while reports from Charing Cross show that the system can thrive in the metropolis no less admirably than elsewhere. Although the course in Edinburgh this year has shown a great development as compared with last year's course, it is evident, from the expressed desires of those attending the demonstrations, that there must be a still greater differentiation in next year's curriculum if the wants of all are to be supplied. This can be accomplished without difficulty, since the number of teachers in Edinburgh is so considerable. By working on the basis of cordial co-operation that has so far obtained, a suitable division of labour among them may be established, which will include the practical treatment of all such subjects as are susceptible of tutorial demonstration.

AN AGED ZOOLOGICAL SPECIMEN.

Many old Edinburgh students and others acquainted with the Royal Botanical Gardens will hear with regret of the death of the famous sea anemone that has been kept there for so many years. Its great age—for it survived until the sixtieth year of its captivity—and the immense number of its immediate offspring, amounting to over 600, had obtained for it the familiar cognomen of "granny." It was a specimen of the Actinia mesembryanthemum, found at North Berwick in 1828 by Sir John Dalyell, in whose house it remained until the time of his death. It then came into the possession of Professor Flemming, D.D., and has since been cared for by three successive curators of the Royal Botanical Gardens. Its portrait appears in an elaborate monograph by P. H. Gosse on the Actiniæ, and it is also figured in Sir J. Dalyell's publication on the "Rare and Remarkable Animals of Scotland." So great was the public interest in this long-lived zoophyte, that an album was kept for many years in which were inscribed the names of its particular visitors; this volume contains over 1000 autographs, among them those of many distinguished travellers and scientific men. This interesting creature was fed regularly once a fortnight with half a mussel, and was supplied with fresh water after each of these meals. It was apparently in robust health until a few weeks ago, when it was attacked with a parasitic disease (*saprolegnia*), to which it shortly succumbed.

Edinburgh, Oct. 11th.

DUBLIN.

(*From our own Correspondent.*)

ROYAL UNIVERSITY OF IRELAND.

A MEETING of Convocation was held last week, presided over by Lord Emly, Vice-Chancellor of the University. After some preliminary business had been transacted, the adoption was moved of an additional report of the annual committee, read at a meeting held last December. It had reference to matters that arose with regard to a rule adopted by the Senate, providing that the signature of each person applying for admission as a member of Convocation should be his own. In consequence of some matters brought before the Annual Committee by the secretaries, the opinion of the Attorney-General was taken on the matter. It appeared that some seventy or eighty applications had been put in, all apparently in the same handwriting. A difficulty then arose with the secretaries as to the registration of the names, and in the result the opinion of the Attorney-General was taken, which stated that there was no means of testing the genuineness of the signature, and therefore the validity of the application, and suggested that the matter should be brought before Convocation. The resolution having been passed, Dr. Thomson proposed the adoption of the report of the Annual Committee. The committee submitted the following resolutions:—(1) That the Standing Orders 50 to 55, which were rescinded at the last meeting of Convocation, be restored. (2) That, pursuant to the said orders, an annual committee for the ensuing year be now elected. (3) That the following new Standing Orders be adopted: "That in future no alteration of the Standing Orders be made at any meeting of Convocation except at the ordinary annual meeting of Convocation, nor unless notice thereof shall have been given at the next previous meeting of Convocation." The report having been seconded, was agreed to. Professor Pye proposed a resolution in reference to the extent of study to be pursued by candidates for medical degrees in the University. He thought the regulations did not provide sufficient protection to the public, inasmuch as they permitted students obtaining degrees in medicine, surgery, and obstetrics, and a diploma in sanitary science, after a professional training of three years. The Vice-Chancellor having pointed out that this was one of the matters under the consideration of the medical committee, Professor Pye withdrew his resolution. The Annual Committee was elected. The last business before the meeting was a series of resolutions by Mr. Croke, but a quorum not being present no action was taken in the matter, and the proceedings terminated.

THE DEATH-RATE OF DUBLIN.

At a recent meeting of the Dublin Sanitary Association attention was directed to the Registrar-General's returns, and to the great increase in the Dublin death-rate. The general death-rate in Dublin during the quarter ending October 1st was 30·9, as compared with an average rate of 28·1 during the corresponding quarter of the previous five years, and with a rate of 19·6 in London during the corresponding quarter. The fatality from zymotic diseases has largely increased, the deaths by this class of affections rising from 212 in the first quarter of the present year to 365 in the second and 776 in the third quarter. In the entire year 1886 the total deaths from zymotic diseases amounted to 1100, while for the nine months of the present year they numbered 1353.

At a meeting of the Public Health Committee of the Corporation on Tuesday, a report was read from Sir Charles Cameron, medical superintendent officer of health, on the subject of the abnormally high death-rate in certain districts in the city. In this he states that the severity of the measles epidemic depends to some extent upon the number of children who had not been attacked in previous years. In 1886 there were only nine fatal cases of measles, and consequently but comparatively few of the many children born during that year could have been protected from measles by having had a slight attack of the disease. Similarly, in 1884, there were but 21 fatal cases recorded in Dublin, and in the year following the mortality rose to 250. The high mortality has also been largely influenced by other indirect causes, such as exposure to cold, want of proper food and care. Two important factors in the recent high death-rate have been diarrhœa and dysentery. These Sir C. Cameron attributes to the excessively high temperature during the summer and autumn, and to the extreme dryness of the atmosphere. The intense heat favoured the more rapid decomposition of organic matters, rendering the air more impure, and causing certain food to undergo putrefactive changes more readily. In conclusion, he points out that the death-rate in Dublin from preventible diseases has undergone a marked decline in the last five years, and that two of the diseases which are largely prevalent in towns in an insanitary condition have almost disappeared from Dublin—viz., typhus and enteric fevers.

The Introductory Lecture at the opening of the Medical School of the Royal College of Surgeons will be given this year by Sir W. Stokes, Professor of Surgery at the College.

Dublin, Oct. 12th, 1887.

PARIS.

(*From our Paris Correspondent.*)

PROF. VERNEUIL ON IMAGINARY LINGUAL ULCERATION.

AT the meeting of the Academy of Medicine last week, Professor Verneuil read a note on an affection to which he gave the name of "imaginary ulceration of the tongue," characterised by intense local pain, without, however, any appreciable lesion. He looked upon it as a purely neuralgic affection of the tongue, and compared it to an affection of the breast described by Velpeau under the name of imaginary tumour of the breast, which, like the above-named affection, was also characterised by intense local pain without any appreciable lesion. In both cases the mind is very much affected, and the patients almost invariably suppose that their malady is of a cancerous nature.

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The treatment adopted by Professor Verneuil was that he employed in neuralgia in other parts of the body, in which he was always successful. He stated, however, that in case of failure he would not hesitate to employ hypodermic injections of analgesic substances, cauterisation with the thermo-cautery of the painful part, and the destruction of the calciform papillæ which are generally to be found on the tongue in such cases. As for neurotomy, he would discard it, not only on account of the difficulty attending such an operation, but owing to its being impossible to know whether it is the lingual or the glosso-pharyngeal nerve that should be operated on. A long discussion followed, when most of the speakers agreed with Professor Verneuil as to the nature of the malady, but added that according to their experience the subjects were generally monomaniacs, and should be treated as such.

FLUORHYDRIC ACID IN CONSUMPTION.

Dr. Garcin, physician to one of the dispensaries established in Paris for the succour of patients applying for aid during the night, recently made a communication to the Academy of Sciences on the treatment of pulmonary phthisis by inhalations of the fumes of fluorhydric acid mixed with air, which he has found most efficacious in this affection. From the month of August to within a week ago he had observed 100 cases of pulmonary phthisis in different stages. The results obtained were the following; Stationary condition, 14; improvement, 41; cures, 35: deaths, 10. The procedure employed consisted in ordering the patient to remain for an hour daily in a room measuring six cubic metres of air saturated with fluorhydric acid. This saturation is obtained by passing a current of air by the aid of a pump into a jar of gutta-percha containing of distilled water 300 grammes, fluorhydric acid 100 grammes. Under the influence of this medication, the fits of coughing are at first rapidly diminished, and then cease altogether. The sputa are changed in character, the dyspnœa and the spots of pleurodynia are also diminished. By this treatment the bacilli disappear in a few days, and at the end of fifteen or twenty sittings the condition of the patient is considerably improved, if not cured. To obtain local anæsthesia in an operation for in-growing of the nail, the toe is sprayed with ether. Dr. Chandelux of Lyons observes that it takes some time before the analgesic effect is obtained, and in order to favour the production of this latter the author employed Esmarch's bandage, of course previously applied to the limb to be operated on. In using this expedient, Dr. Chandelux found that anæsthesia was obtained in from twenty to forty seconds; whereas by the spray, without the previous application of the bandage, it requires on an average two minutes. After the employment of the ether spray, and when once the part becomes cold, the anæsthesia lasts about three minutes longer, thanks to the ischæmia produced by the application of Esmarch's bandage, owing to the heat conveyed to the part through the blood being suppressed. The preceding method has also the advantage of preventing the flow of blood during the operation with the knife, so that the surgeon is thus enabled to minutely dissect the parts, and, in the case of the in-growing of the nail, no portion of the matrix of the nail is left in the half which is removed.

COMPARATIVE DEATH STATISTICS

A very interesting return has been prepared at the Bureau of Statistics attached to the Prefecture of the Seine, showing the relative proportion of deaths from fever and other diseases in different parts of Europe. With regard to typhoid fever, Besançon heads the list with 205 deaths per 100,000 of the population. Toulouse and Marseilles come next with 118 and 108 respectively. Paris has only 46, Brussels 29, and London 17. The lowest death-rates are at Leipzig and Vienna, which give 11 each. England generally compares favourably with France, Liverpool having 34 cases and Manchester 33. Marseilles appears to have suffered greatly from small-pox, the number of deaths from this disease being 578 per 100,000 of the population. As regards scarlet fever, Holland heads the list with 285, St. Petersburg 93, Glasgow 68, Brooklyn 51, Liverpool 47, Paris 18, London 17, and Rome only 5. The greatest mortality from consumption is in the large Austrian cities, and the smallest, contrary to general opinion, in English cities.

THE CLUNY NORMAL SCHOOL.

Shortly before the holidays a few cases of typhoid fever broke out among the pupils of the Cluny Normal School, when the whole of them were hastily sent home. This precaution was, however, considered to have come too late, as numbers of the youths carried away the germs of the disease; 150 were stricken down, and several died. An investigation showed that a main sewer and three feeders running through the foundations of the school buildings were obstructed, and the foul matter had permeated the soil around them. Moreover, it was found that the water used for drinking purposes in the school came from a well fed from a neighbouring spring. An analysis of this well water showed unmistakably the presence of the bacilli of typhoid fever.

DEATH OF M. RUOLZ.

M. Ruolz, the inventor of the electro-plate process which bears his name, has just died at Neuilly, at the age of eighty years. It was not generally known that he was a Doctor of Medicine. He was also *Docteur ès Sciences* and *Docteur en droit*. He never practised medicine. He began life by composing music: he then directed his attention to industry, and made some remarkable discoveries, and among them he devised the means for melting steel and utilising bronze for different purposes.

Paris, Oct. 11th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a Quarterly Meeting of the Council, held on Thursday, October 13th, the Minutes of the last meeting were read and confirmed.

Sir James A. Hanbury, K.C.B., was introduced and admitted a Fellow of the College.

A resolution was unanimously carried recording the regret of the Council at the decease of Mr. Richard Quain, past President and member of Council, and member of the Court of Examiners of the College; and their appreciation of the great services which he rendered to the College whilst holding those offices. A portrait of Mr. Richard Quain, by Richmond, bequeathed "to the Treasurer of the College of Surgeons, for such College," was accepted by the Council.

The following gentlemen, having been nominated by the committee, were elected examiners in Public Health, subject to the approval of the Royal College of Physicians:—Dr. T. Stevenson, Dr. Edward Ballard, Dr. Thorne Thorne, and Dr. W. H. Corfield.

Mr. John Marshall was re-elected a member of the Committee of Management.

The draft of the report to be presented to the Fellows and Members of the College at the meeting to be held on Thursday, the 3rd of November next, was approved and adopted. This can be had on application to the Secretary on and after Monday next.

The President reported that, in pursuance of the provisions of the Bradshawe Bequest, he had "chosen" Sir Joseph Lister, Bart., as the Bradshawe Lecturer for the present year, the lecture to be delivered at some convenient date in December. He further reported that Sir James Paget, Bart., will deliver the Morton Lecture on Cancer and Cancerous Diseases at a convenient date in November.

The Secretary submitted to the Council a copy of the conviction and sentence to two years' imprisonment at the Central Criminal Court of Mr. James McCully for libel. This being a criminal offence within the meaning of Clause 3, Section 16, of the Bye-laws, Mr. James McCully was removed from being a member of the College, subject to confirmation at the next meeting.

The motion of Mr. Hutchinson (see Minutes of Aug. 4th) was not brought forward, he being absent.

THE SERVICES.

ADMIRALTY.—The following appointments have been made:—Surgeon Ludlow T. Colthurst, to the *Scout;* and Surgeon John S. Lambert, to the *Royal Adelaide.*

ARTILLERY VOLUNTEERS.—1st Gloucestershire: Honorary Assistant Surgeon S. Skinner to be appointed Acting Surgeon (dated Oct. 8th, 1887).

RIFLE VOLUNTEERS.—4th Volunteer Battalion, the Gordon Highlanders: Acting Surgeon J. W. Mackenzie Gunn, M.B., resigns his appointment (dated Oct. 8th, 1887).—5th Cheshire: John Herbert Hacking, Gent., to be Acting Surgeon (dated Oct. 8th, 1887).—4th Volunteer Battalion, the South Wales Borderers: Frederick Erskine Paton, M.B., to be Acting Surgeon (dated Oct. 8th, 1887).

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Obituary.

SURGEON-MAJOR G. C. ROY, M.D., F.R.C.S. ENG., INDIAN MEDICAL DEPARTMENT.

GOPAL CHUNDER ROY, son of the late Babu Loke Nath Roy, was born in Calcutta on May 16th, 1844. Having received his preliminary education in the Hindu School, he prosecuted his medical studies at the Calcutta Medical College and Hospital. During his college career he obtained prizes and certificates for proficiency in chemistry, medicine, surgery, and anatomy, and held the senior scholarship for two years. Passing out of the College in 1865, he obtained the diploma of L.M.S. His first appointment was as house surgeon to the first surgeon's ward, Medical College Hospital, under Dr. Fayrer. At this time he was also teacher of the vernacular class in the College. On expiry of the term of office he was recommended by his immediate superiors for the post of teacher of Nagpore Medical School. This appointment he held for two years, when, desirous of entering the Indian Medical Service, he proceeded to Europe in 1869. He obtained the F.R.C.S. Eng. by examination in 1870, and the degree of M.D. Glasg. in 1871. Dr. Roy stood sixth in the list of forty successful candidates. After finishing the Netley course, where he maintained his position, he returned to India towards the end of 1872, and was then appointed inspecting medical officer in the Burdwan district during the notorious epidemic fever which prevailed in that district for years. It was at this time Dr. Roy received the special thanks of the Government of India for the eminently satisfactory way in which he had discharged his arduous duties. Dr. Roy then successively held the appointments of superintendent of prison camp at Debri, civil surgeoncy of Serampore, superintendent of vaccination, Ranchi circle, and the civil surgeoncy of the latter place for a time, in addition to his other duties. In 1878 Dr. Roy was appointed permanent civil surgeon of Beerbhoom, which appointment he held up to the date of his death.

DR. GAETANO PINI.

DEATH has indeed been busy in the ranks of our Italian brethren, and the year now drawing to its close will be sadly memorable for the multitude of distinguished and promising practitioners it has seen cut down throughout the peninsula. The latest removal from the roll was in some respects the most difficult to replace.

Gaetano Pini was born on April 1st, 1846, at Leghorn, and pursued his preparatory studies in literature under the celebrated Latinist and man of letters, Atto Vannucci of Prato. From that provincial collegio he proceeded to Pisa, where he devoted himself to medical science, and after an interval similarly employed at the University of Naples he returned to Pisa, and graduated there in medicine and surgery, *summâ cum laude*, in 1869. The honours he took were all the more creditable when the interruptions to his curriculum are considered. In 1866, when Venetia had to be wrested from Austria, he enrolled in the 2nd Regiment of Grenadiers and bore an honourable part in the disastrous day of Custoza. Again, in 1867, when Garibaldi sought to force the surrender of the Papal States to Italy, young Pini, with a few Livornese and Pisan friends, joined the auxiliary column of Niccola Guerrazzi, and engaged in much active guerilla work in the Agro Romano, including some sharp encounters with the Pontifical Zouaves at Farnese, at San Lorenzino, and at Viterbo. With the solution of the Roman question, brought about on the lines of Cavour's policy in 1870, Dr. Pini resumed professional study with fresh ardour, and assisted Dr. Corradi-Pagliari and his staff in the compilation, at Milan, of the "Enciclopedia Medica Italiana." In the same city he took up the question of the treatment of rachitic children, and his energy and counsel culminated in the splendid institution erected for these little unfortunates in 1875. In 1878 he planned and organised the Royal Italian Society of Hygiene, the last meeting of which at Florence in May, 1887, was reported as a brilliant success in THE LANCET.

It was as an active promoter of cremation, however, that, in Milan particularly, Dr. Pini was most widely known. The Cremation Society founded by him in Milan in 1876 has been followed by the organisation of thirty-six others, mainly in Upper Italy, of which fourteen possess a highly efficient crematory furnace. In 1881, when a renewed attack was made on this mode of sepulture by the Florentine clergy, he delivered in the Circolo Filologico of the Tuscan capital a powerful defence of it, which will long be referred to by all who require from time to time to recapitulate the arguments for its vindication.

Dr. Pini was indefatigable in devising medical charities and putting them into working order. His Filantropia senza Sacrifici (Philanthrophy without Sacrifices) has been eminently useful in supplying relief to the deserving invalid poor, consisting as it does in an organisation for collecting all waste paper from cities and communities, storing it, and then disposing of it, the proceeds being applied to a well-constituted charity. Other associations as serviceable in their way were also set on foot by him, such as the Soccorso Fraterno (the Brotherly Aid) and the Asili Notturni (Night Asylums).

As an author on special subjects, Dr. Pini was diligent and judicious, as evidenced by his work in Schivardi's "Annuario delle Scienze Mediche," and in the "Dizionario Etimologico di Scienze Mediche e Veterinarie," which he edited in conjunction with Schivardi, Longhi, and Fivinazzi. With all this he found time to assist on many commissions (particularly on hygiene), of which the Pellagra Commission was among the most memorable; and his abilities on such occasions were so esteemed by the Government that it associated him with Bertani as representative of Italy on the Jury for Hygiene and Medicine in the Paris Exposition of 1878. For his services he was presented by the French Government with the badge of Officer of Instruction, and by that of Italy with the Cross of SS. Maurice and Lazarus. One of Dr. Pini's last works was a practical paper on bread-making, addressed to the Milanese bakers in May, 1887, showing how the nutrient elements in bread could best be conserved and utilised; and this in view of practical State measures against *pellagra*. He died at the early age of forty-one, on September 25th, at his residence in the Sifilicomio in Milan, of which he was director, regretted by all, even by the Church party who opposed him, as one whom Italy and humanity could ill spare.

JAMES THOMAS CARTER, F.R.C.S. EDIN., &c.

WE regret to record the death, at the age of thirty-seven of Mr. James Thomas Carter of Glasgow. Mr. Carter was Lecturer and Demonstrator in Anatomy in the Western School of Glasgow, having previously distinguished himself in Edinburgh as chief assistant and demonstrator in the large classes of Mr. Symington in Minto House. In Glasgow his success was rapid and great. In one year he had over a hundred students. His knowledge of anatomy was exact and wide, and he had the happy power, not given to all great anatomists, of being able to teach it. He was little known to the public, but was beginning to make a name in the medical societies of Glasgow by work of great promise. Mr. Carter's general qualities as a man and a teacher were such as to make his early death a grievous event to all concerned in medical education. He died from scorbutus and pernicious anæmia. Mr. Carter was a Lancashire man, and educated at Owens College and Edinburgh.

VITTORIO GIUDICI.

The autumnal mortality among our Italian brethren has been heavy this year, and to the three distinguished names already recorded must be added a fourth—in some respects the most distinguished of all—Vittorio Giudici, major-general on the hygienico-military staff. He succumbed on the 3rd inst. to cerebral paralysis in Rome.

Born at Nesso on May 13th, 1819, he was in the revolutionary year of 1848 enrolled as a volunteer in the Lombard contingent under the Provisional Government, and on June 5th of the same year he obtained the rank of lieutenant. In 1849 he passed as surgeon-major into the 6th Regiment of Infantry in the Sardinian army, and thereafter rose steadily through every rank of the medico-military career. It was in the campaign of 1859, when Sardinia and France took the field against Austria, that he signalised himself most conspicuously, having obtained,

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after the sharp encounter at Montebello on May 29th of that year, honourable mention for valour under fire, and again, on June 24th, he received a like tribute after the fiercely contested battle between King Victor Emanuel and General von Benedek at San Martino. From Jan. 10th, 1880, he had been attached to the Commission of Military Hygiene, and from the January of 1883 he held the highest office in the department. As a deputy in the Italian Parliament he took an able and effective part in all sanitary legislation, particularly as it bore on the health and physical well-being of the soldier. He had, shortly after his election in 1859, to resign his seat, his official appointments bringing him under the law of "incompatibility," as it is called; but this was for a brief interval. As soon as he legally could, he offered himself to the constituency of Como, and continued to represent it till the day of his death.

His death is deeply deplored by his brother deputies, as well as by the whole profession throughout Italy. His funeral, on the 5th inst., was an impressive one. From his house in the Via Balbo on the Viminal it proceeded through the principal streets between that quarter and the cemetery at Campo Verano, the route being lined with troops and spectators, and the highest posts in the army, the navy, the legislature, the universities, and the professions being all represented. The Duke Torlonia placed a wreath of fresh flowers on the bier, and, at the halt in the Piazza dei Termini, the usual *oraisons funèbres* were delivered in the name of the army and of the Chamber of Deputies.

Medical News.

ROYAL UNIVERSITY OF IRELAND. — The following have passed the Second Examination in Medicine of the University:—

UPPER PASS DIVISION.—Isaac Banks, Robert Carse, Joseph Eldon, William Hartland, John Hennessy, Thomas McDermott, John McNamara, Arthur Mitchell, William O'Donnell, James Taylor, James Tracy.

PASSED.—J. Adrian, R. Barnes, Helton Bernard, F. Bradshaw, W. Bullen, James Cluff, F. Dick, C. Donovan, P. Donovan, R. Dudgeon, W. Hughes, J. Kelly, D. Leahy, J. Loftus, R. Lyons, W. McCallin, A. McComisky, J. McLeish, C. McVicker, M. Mahony, H. Morton, T. Mulholland, J. Nevin, J. Obre, J. O'Leary, A. P. O'Toole, J. Richey, A. Robb, J. Steen.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—At the recent examination for the degree of Master in Surgery the following candidate satisfied the Examiners, and was awarded First Class Honours:—

Thomas Horrocks Openshaw, M.B., B.S., F.R.C.S.

PHARMACEUTICAL SOCIETY OF IRELAND. — At the October Examinations the following obtained the licence of the Society:—

Alexander Ferguson Allan, Robert Wagner Maxwell, Samuel Robb, John Simpson Robinson, Robert Joseph Ronselle, and Edward Walker.

DR. ULLMANN, in a report he has just issued on some experiments he has conducted with a view to test the efficacy of Pasteur's inoculation method, pronounces in favour of the system as a preventive of hydrophobia.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—The inaugural meeting of the above Society will take place on Oct. 28th, when an address on Cremation will be given by Sir Spencer Wells, Bart.

FIRE AT A LUNATIC ASYLUM.—A telegram from Cleveland, Ohio, announces that a fire has occurred at the lunatic asylum at that place. Six of the inmates perished in the flames, while three others were injured.

ENTRANCE SCHOLARSHIPS.—At *St. Thomas's* Hospital Medical School, the first Entrance Scholarship in Natural Science (value 125 guineas) has been awarded to Mr. James Edward Harris, and the second (of the value of £60) to Mr. William Bamford Winston. Messrs. J. H. Fisher and B. G. Heather were specially mentioned. Eight others obtained marks qualifying for a scholarship.—At the *Charing-cross* School the entrance scholarship of £30 has been awarded to Mr. Harold Gardner, and that of £20 to Mr. Dudley C. P. Taylor.—At the *Westminster* School the Entrance Scholarship, value £80, has been awarded to Mr. Alfred Milne Gossage.

ON the 12th inst. Lord Stanley of Preston opened the new park, baths, and infirmary presented to Northwich by the late Mr. Verdin, M.P.

NAVAL MEDICAL SUPPLEMENTAL FUND. — At the quarterly meeting of the directors of this fund, held on the 11th inst., Sir W. R. E. Smart, K.C.B., M.D., Inspector-General, in the chair, the sum of £64 was distributed among the several applicants.

POISONING BY OYSTERS.—Several cases of poisoning by oysters are reported from Rotterdam. The first symptoms came on from sixteen to twenty hours after eating the molluscs. None of the cases have proved fatal.

NEW MEDICAL MISSIONS IN LONDON.—According to *Medical Missions at Home and Abroad*, two new medical missions have recently been opened in London, one in Canning-town under Dr. Frank Laird, the other in Brontë-place, East-street, Walworth, in connexion with the "Mildmay" workers under Dr. Henry Marston.

AT the annual meeting of the supporters of the Grimsby Hospital on the 3rd inst., it was reported that the debt on the institution amounted to nearly £1000. It was resolved that, with the consent of the donors, part of the Jubilee Endowment Fund should be used to liquidate this encumbrance.

DERBYSHIRE INFIRMARY SATURDAY FUND.—At the recent annual meeting of the committee of this fund, the balance-sheet presented by the secretary showed the total receipts for the year to have been £992, against £1026 last year, the expenses having been £66. Considering the depression in trade, the figures were regarded as satisfactory.

TEMPERANCE AND PHYSIOLOGY. — It is announced that a course of eight Friday Evening Popular Lectures will be given by Dr. W. B. Richardson, F.R.S., during the coming winter, commencing October 14th, at the Memorial Hall, Farringdon-street, E.C. The lectures will be illustrated by specially prepared diagrams shown by oxy-hydrogen lime-light apparatus.

BROCA'S STATUE.—The statue of Broca which is to be erected at Sainte Foix is to be of bronze, and not of zinc as originally proposed. The cost of this material being very high, the committee is obliged to appeal for more funds. The sculptor's charges will fortunately be saved, as the Anthropological Society, which has just erected a statue of Broca in Paris, has kindly promised the use of the mould.

BIRMINGHAM ORTHOPÆDIC HOSPITAL. — At the annual meeting of the supporters of this institution on the 7th inst., it was reported that the building required several structural alterations to render it satisfactory, and plans and estimates for these alterations have been considered by the committee. The scheme embraces new wards, operating theatre, increased sleeping accommodation for the staff, and a much-needed mortuary, the estimated cost being nearly £500. As an alternative plan, it was suggested that £2500 should be raised by debentures at 4 per cent., guaranteed on the present income, and that a new hospital should be at once built. Should this latter scheme promise to prove successful, it was decided that the committee should be recommended not to carry out the improvements mentioned.

ST. JOHN AMBULANCE ASSOCIATION.—The report of this Association just published shows that upwards of 270 administrative centres have now been formed in all parts of the world, while the detached classes are numbered by hundreds. During the past twelve months 17,718 certificates have been issued, being an increase of 5928 over any previous year, making a grand total of considerably over 110,000. Prominent features of the movement are the continued extension of classes for railway *employés* and police and county constabulary, and the increased number of ambulance and nursing "corps" formed among certificated pupils both at home and in the colonies. Detailed statements bear testimony to the good service frequently rendered by members, and reports are included showing the usefulness of the stations formed at the Colonial, Indian, and Liverpool Exhibitions, while a special letter of thanks from Sir Charles Warren records the valuable assistance rendered by the "Invalid Transport Corps" on Jubilee Day and other recent occasions.

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THE Emperor William has sent a sum of 10,000 marks to be distributed among the necessitous people in the cholera stricken district of Messina.

A GIRL aged thirteen years died in the Liverpool Royal Infirmary on Wednesday from the effects of burns received on the previous evening by the upsetting of a paraffin lamp. She was terribly burnt.

FEMALE MEDICAL MISSIONARY INSTITUTION FOR AGRA Dr. Valentine, the principal of the native Medical Missionary Institute for training young men as native medical missionaries in Agra, is very anxious to see a similar institute established for female agents. The head-quarters of Lady Dufferin's National Association for supplying Female Medical Aid to the Women of India is to be at Agra, but those employed by that association will be under a solemn obligation to abstain from saying anything about Christianity to their patients, so that missionary societies will have to make their own arrangements for female medical evangelists. There is no reason, however, why these should not be trained in professional knowledge in the Government Medical School at Agra together with Lady Dufferin's native medical women.

PRESENTATION. — During the early months of the present year, an ambulance class was conducted in the spacious club room of Messrs. Frederick Braby and Co., Limited (the corrugated iron manufacturers), of Deptford, by Mr. W. Davies, surgeon, of King's-road, Peckham, the class being for the *employés* of Messrs. Braby, twenty-two of whom went up for examination and obtained certificates. On the 1st inst. the annual meeting of the library and club belonging to the firm was held, and on that occasion the members of the ambulance class presented Mr. Davies with a very handsome large writing desk, made of Italian walnut, completely bound in brass, and beautifully fitted, having on it a brass plate bearing the following inscription artistically executed: "Presented to Dr. Wm. Davies, in appreciation of his services, by the members of the St. John Ambulance class. —Messrs. Frederick Braby and Co., Limited, October 1st, 1887."

ANOTHER DEATH FROM HYDROPHOBIA AT LIVERPOOL.—An inquest was held on the 12th inst. by Mr. Brighouse, county coroner, upon the body of a boy, aged two years and seven months, residing in Bootle. On the 17th ult. the deceased was bitten near the ear by a collie dog. Carbolic acid was applied to the wound, but no doctor saw the child until five hours after, when Dr. Wills of Bootle saw and treated the case. Deceased apparently recovered, but on the 9th inst. symptoms of hydrophobia appeared. Dr. Wills was called, and found saliva running from the mouth; the temperature over 120°; and food and drink refused. Death occurred on the 11th inst. The case was seen also by Dr. Clampitt, who confirmed the diagnosis. Dr. Wills gave evidence at the inquest, and a verdict of death from hydrophobia was returned. A police inspector stated that nothing was known of the dog in question. A number of dogs found straying within the last two months have been destroyed.

THE HOSPITALS ASSOCIATION.—On the 12th inst., at the Society of Arts, Sir Andrew Clark presided over the first meeting of the session of this Association, when the subject of the provision of help for nurses was discussed in a paper by Mr. H. C. Burdett, under the head of "A National Pension Fund for Nurses and Hospital Officials." Sir Andrew Clark, in opening the proceedings, said that the Hospitals Association was founded to help in the great work of hospitals, with the desire to make, if possible, their work more economical and, at the same time, more efficient, and also to obtain the registration of nurses, who formed so important a part of hospital administration, and he insisted that this registration was necessary for the security of nurses who were of character competent and of proved loyalty to their duty. Mr. Burdett stated that during the last five years there had arisen a feeling in favour of the establishment of a fund to provide on provident principles for the relief in sickness and age of those engaged in ministering to the requirements of the sick when incapacitated from further labour in the cause of suffering humanity. There was now reason to believe that the time had arrived when the outlines of a scheme which would adequately meet the requirements of those referred to might be usefully formulated and discussed. A discussion followed, and eventually, on the motion of Lord Sandhurst, Sir Andrew Clark was requested to lay before Her Majesty the whole subject of establishing this fund.

BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.
Traité complet de l'Examen Médical dans les Assurances sur la Vie.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
Manual for the Physiological Laboratory. By V. D. Harris, M.D Lond., and D'Arcy Power, M.A., M.B.Oxon. Fourth Edition. pp. 268, with Illustrations.
Dental Caries. By Henry Sewill, M.R.C.S., L.D.S.Eng. Second Edition. pp. 93.
Tables of Veterinary Pœology and Therapeutics. By Geo. Banham, F.R.C.V.S. pp. 189.

BARLOW, W. S., Bury.
Conversation Lessons on Prompt Aid to the Injured. By Henry Webb. pp. 122, with 47 Illustrations.

BLACKWOOD & SONS, Edinburgh and London.
A Manual of Zoology. By H. A. Nicholson, M.D. &c. Seventh Edition, rewritten and enlarged. pp. 939, with Illustrations.

CASSELL & Co., London, Paris, New York, & Melbourne.
The Rectum and Anus, their Diseases and Treatment. By C. B. Ball, M.Ch. Dub., F.R.C.S.I. pp. 410, with Illustrations.

CHURCHILL, J. & A., New Burlington-street, London.
Vaccinia and Variola: a Study of their Life History. By J. B Buist, M.D., F.R.S.E. pp. 224, with 24 Plates.
The Operative Surgery of Malignant Disease. By Hy. T. Butlin, F.R.C.S. pp. 407.
Surgical Pathology and Morbid Anatomy. By Anthony A. Bowlby, F.R.C.S. pp. 548, with 135 Illustrations.
Pathology and Treatment of Ringworm. By George Thin, M.D. pp. 87.
Diagnosis and Treatment of Eczema. By Tom Robinson, M.D. pp. 136.
Holden's Human Osteology. Edited by Charles Stewart and R. W. Reid, M.D., F.R.C.S. Seventh Edition. pp. 356, with Illustrations.
Public Health Reports. By John Semon, C.B., F.R.S. Edited by the Sanitary Institute of Great Britain. Two Vols. pp. 554—618.

FIELD & TUER, Leadenhall Press.
The Duties and Conduct of Nurses in Private Nursing. By W. L. Richardson, M.D. pp. 59—x.

KEGAN PAUL, TRENCH, & Co., Paternoster-square, London.
Weather: a Popular Exposition of the Nature of Weather Changes from day to day. By Hon. Ralph Abercromby, F.R.M.S. pp. 472. Illustrated.

LEWIS, H. K., Gower-street, London.
Manual of Hypodermic Medication. By Drs. Bourneville and Bricon. Translated from the Second Edition, with additions, by A. S. Currie, M.D.Ed. pp. 304.

LONGMANS, GREEN, & Co., Paternoster-row, London.
A Handbook of Diseases of the Skin. By Robert Liveing, A.M., M.D. Cantab., &c. Fifth Edition, revised and enlarged. pp. 451. 5s.

MACMILLAN & Co., London and New York.
On the Growth of the Recruit and Young Soldier. By Sir W. Aitken, Knt., M.D. Second Edition. pp. 259.

PHILIP, G., & SON, Fleet-street, London.
Modern Gymnastic Exercises (Elementary). By A. Alexander. pp. 140, with 200 Illustrations.

PUTNAM'S SONS, New York and London.
Differential Diagnosis of Diseases of the Skin. By C. W. Cutler, M.D., M.S. pp. 139.

RELIGIOUS TRACT SOCIETY, St. Paul's Churchyard.
The Diseases of the Bible. By Sir Risdon Bennett, M.D., LL.D., F.R.S. pp. 143.

SMITH, ELDER, & Co., Waterloo-place, London.
Dictionary of National Biography. Edited by Leslie Stephen. Vol. XII.: Conder—Craigie.
An Index of Surgery. By C. B. Keetley, F.R.C.S. Eng. Fourth Edition. pp. 536.
Handbook of Modern Chemistry, Inorganic and Organic. By C. Meymott Tidy, M.B., F.C.S. Second Edition, revised and enlarged. pp. 894.

SWAN SONNENSCHEIN, LOWREY, & Co., Paternoster-square, London.
St. Bernard: the Romance of a Medical Student. By Æsculapius Scalpel. pp. 474.
Health Maps: complete Series of Prescribed Exercises of the Body for Daily Use. By Anna L. Arnim. Five Groups.

WATERLOW & SONS, London Wall.
Dr. Jaeger's Essays on Health Culture. By G. Jaeger, M.D. Stuttgart. Translated and Edited by L. R. S. Tomalin. pp. 309. 1s.

WOOD & Co., New York.
A Reference Handbook of the Medical Sciences. By various Authors. Edited by A. H. Buck, M.D. Vol. V.: Mil—Pot. pp. 812, profusely Illustrated.

Light Diet; by W. H. Seager, M.D. (Simpkin, Marshall, & Co.).—Index Medicus, Vol. IX., No. 8.—Transactions of the Medical and Physical Society of Bombay, No. 10.—Études Cliniques sur le Morrhuol; par Dr. E. Chazeaud.—Transactions of the Obstetrical Society of London;

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Part II. for March, April, and May, 1887.—Prevention of Infective Fevers and the Use of Disinfectants, with Notes on the Health of Children; by Wm. Squire, M.D.—Bench-book for Test-tube Work in Chemistry; by H. T. Lilley, M.A. 1s.—Bourne's Handy Assurance Directory, 1887-8. 1s. 6d.—Third Annual Report of the Health Commissioner of the City of St. Louis, Mo.—The Royal London Ophthalmic Hospital Reports, Vol. XI., Part 4.—Annals of Botany, Vol. I., No. 1 (Clarendon Press).—Journal of the College of Science, Imperial University, Japan, Vol. I., Part 1 (Tokyo).—Anniversary Address to the Wellington Philosophical Society; by F. B. Hutchinson, M.R.C.S. Eng., &c.—Recherches sur l'Action Physiologique et Thérapeutique du Méthylal; par Drs. A. Mairet et Combemale.—Report on Anæmia or Beri-beri of Ceylon; by W. R. Kynsey (Skeen, Colombo).—Hansom Cabs; by J. C. Robinson (Darling and Son, London).—Artificial Cultivation of Vaccine Lymph; by J. Dougall, M.D., &c. (Macdougall, Glasgow).—What is an Earthquake? by J. Davis, C.E. (Houlston and Son).—Wintering Abroad; by Alfred Drysdale (Virtue).—Placenta Prævia; by J. F. Le Page, M.D.—Ignaz Philipp Semmelweiss; von Dr. Jacob Bruck (Prochaska, Wien).—Magazines for October: Good Words, Sunday Magazine, Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Scribner's Monthly.—The Arrangement and Construction of School Sanatoria; by Charles E. Paget (Churchills).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOWKER, EDWARD H., L.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Fylingdales District of the Whitby Union.

BROCKWAY, ARCHIBALD B., M.R.C.S., has been appointed Assistant Medical Officer to the South-Eastern Hospital, Metropolitan Asylums Board, New-cross.

CAMPBELL, WALTER SCOTT, M.B., C.M. Univ. Glas., has been appointed Public Vaccinator for the Crediton District of the Crediton Union, vice J. A. Edwards, resigned.

COONEY, JOHN EDWIN, L.R.C.P., D.P.H. Camb., has been appointed District Medical Officer for the Fulham Union, No. 2 District, vice T. A. Appleton, M.R.R.S., transferred to No. 1 District.

LEWIS, JOHN NICHOLLS, M.R.C.S., L.R.C.P.Lond., L.S.A., has been appointed Resident Clinical Assistant to the East London Hospital for Children and Dispensary for Women, Shadwell, E.

MILNER, E. TAYLOR, M.A., M.B.Oxon., M.R.C.S., Resident Medical Officer of the Convalescent Hospital, Cheadle, in connexion with the Manchester Infirmary, has been appointed Resident Surgical Officer to the Royal Infirmary, Manchester.

PHILPS, PHILIP, M.R.C.S., L.S.A., has been appointed Medical Officer for the Fourth District of the Faversham Union.

ROSS, JAMES, LL.D., M.D., C.M. Aber., F.R.C.P. Lond., has been appointed Joint Professor of Medicine at the Owens College, Manchester.

SEALY, FRANCIS M., M.R.C.S., L.S.A., has been appointed Medical Officer for the Sutterton District of the Boston Union.

SMYTH, ROSS V. B., M.A., M.D., B.Ch.Dub., has been appointed Medical Officer for the Third District of the Barnet Union.

THOMSON, J. A. M., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Workhouse of the Bradford (Wilts) Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to rename the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence at £30 per annum, with board, washing, and lodging.

CARNARVONSHIRE AND ANGLESEY INFIRMARY, Bangor.—House-Surgeon. Salary £100 per annum, with board and lodging.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary £40 per annum, with board and lodging.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Registrar and Chloroformist. Salary £30 per annum, with an additional £20 if the post is held for twelve months.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Junior Resident Medical Officer. Salary £50 per annum, with board and residence in the hospital.

HOSPITAL FOR WOMEN, Soho-square, W.—Two Clinical Assistants.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior House-Surgeon. Salary £60, rising to £70, with board and residence.—Also Junior House-Surgeon. Salary £50, rising to £60.

LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY.—Resident Medical Officer. Salary £200 per annum, midwifery and vaccination fees, coals and gas, with house free of rates.

NORTH LONDON CONSUMPTION HOSPITAL.—Physician.

ROTHERHAM HOSPITAL.—Assistant to the House-Surgeon. Rooms, commons, and washing, in lieu of salary.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House-Surgeon. Salary £100 per annum, with board and lodging.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—House-Surgeon. Salary £50, with board and residence in the hospital.

ST. MARY'S HOSPITAL, Quay-street, Manchester.—House-Surgeon and Resident Obstetric Assistant Surgeon. Salary for the first year £130, with board and residence.

TAUNTON AND SOMERSET HOSPITAL.—Honorary Surgeon.—House-Surgeon. Commencing salary £100, with board, lodging, and washing.

VESTRY OF ST. MARY, Newington.—Medical Officer of Health. Salary £300 per annum.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House-Surgeon. Board, lodging, and attendance. House-Physician. Board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 6th inst., at 70, Fernhead-road, W., the wife of C. Denovan Adam, L.R.C.P., M.R.C.S., of a son.

BAKER.—On the 8th inst., at Dawlish, S. Devon, the wife of A. De W. Baker, L.R.C.P.Lond., M.R.C.S., of a son.

CHAVASSE.—On the 9th inst., at Barnt-green, Worcestershire, the wife of Thomas Frederic Chavasse, M.D., of a son.

GUBBINS.—On the 7th ult., at Naini Tal, North West Provinces, India, the wife of W. L. Gubbins, Surgeon-Major, Army Medical Staff, of a son.

HARRIES.—On the 6th ult., at Suffolk-street, Pall-mall, the wife of Arthur Harries, M.D., of a son.

HARBORD.—On the 26th ult., the wife of H. Augustus Harbord, M.R.C.S.Eng., L.R.C.P., of 36, Bedford-square, W.C., of a son.

HUME.—On the 6th inst., at Sutton-place, Hackney, the wife of Walter A. Hume, M.R.C.S., L.S.A., of a son.

HUNTINGTON.—On the 6th inst., at 59, South-street, St. Andrews, the wife of W. Huntington, M.R.C.S., L.R.C.P.Lond., of a daughter.

KANE.—On the 7th inst., at Lanherne, Kingston-hill, the wife of N. Henry K. Kane, M.D., of a son.

MACKERN.—On the 7th inst., at Cambridge-street, Hyde-park, W., the wife of John Mackern, M.D., of a daughter.

REID.—On the 4th inst., at Oakley, Kirkcudbright, N.B., the wife of W. S. S. Reid, M.B., of a son.

SUTTON.—On the 8th inst., at Bagdad, the wife of Hy. Martyn Sutton, M.R.C.S., L.R.C.P., Medical Missionary, C.M.S., of a son.

WHITE.—On the 7th inst., at Harley-street, the wife of W. Hale White, M.D., of a son.

MARRIAGES.

DALZIEL—WADDELL.—On the 6th inst., at Palmerston-place Church, Edinburgh, T. Kennedy Dalziel, M.B., C.M. Ed., to Madge, third daughter of John Waddell, Esq., of Inch, and Belford-park, Edinburgh.

DANIELL—HENDERSON.—On the 6th inst., at All Saints', Wandsworth, by the Rev. William Reed, Vicar, Richard Thomas Daniell, M.B.T.C.D., F.R.C.S.I. (Exam.), to Margaret Marion, fourth daughter of the late Robert Henderson, of Leghorn and Glasgow. No cards.

HORSLEY—BRAMWELL.—On the 4th inst., at St. Margaret's, Westminster, Victor Horsley, F.R.S., to Eldred, eldest daughter of Sir Fredk. Bramwell, D.C.L., &c.

VENN—STEVENS.—On the 8th inst., at Holy Trinity Church, Tulse-hill, by the Rev. N. A. Garland, M.A., Vicar of St. Matthew's, Brixton, assisted by the Rev. W. C. Moore, M.A., Vicar of the Parish, Albert John Venn, M.D., of 27, George-street, Hanover-square, to Emma, daughter of the late William Stevens, of Springfield, Tulse-hill.

WATKINS—CHAMBERS.—On August 10th, at St. Andrew's, Summer-hill, New South Wales, by the Rev. James Clarke, Sydney C. Watkins, M.R.C.S.E., of Manly, New South Wales, to Florence Bessie, daughter of Thomas Chambers, M.D., of Sydney, formerly of Chester-square, London.

DEATHS.

MACGRATH.—On the 7th inst., at Colville-terrace, W., Wm. Michael MacGrath, M.K.Q.C.P.I., L.R.C.S.I., aged 46.

MARTIN.—On the 28th ult., at 13, South-place, Kennington-park, Hon. Brigade-Surgeon James Martin, aged 57.

ROOKE.—On the 8th inst., at Redhill, B. P. Rooke, M.D., formerly of the Medical Department, Bombay Army, aged 86.

SPOONER.—On the 10th inst., at 1, Maida Vale, London, Edward Oke Spooner, F.R.C.S., late of Blandford, Dorset, in his 80th year.

TOWNE.—On the 9th inst., at his residence, Rectory-road, Stoke Newington, Alexander Towne, jun., M.R.C.S., L.S.A., aged 47.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, October 13th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 7	30·06	N.W.	52	50	82	60	49	...	Overcast
,, 8	29·94	W.	53	50	89	63	50	...	Cloudy
,, 9	29·73	W.	55	51	62	57	50	...	Overcast
,, 10	29·41	W.	48	46	60	50	45	·09	Overcast
,, 11	29·72	W.	41	38	78	49	35	·27	Bright
,, 12	29·67	N.W.	37	35	72	47	33	·04	Cloudy
,, 13	29·78	W.	36	34	...	43	31	...	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE DOSAGE OF COCAINE.

G. P.—It is impossible to name a dose that is safe for all individuals, since many persons are unfavourably affected by even small quantities of cocaine. As a general rule no external application weaker than 20 per cent. is satisfactory. Taken internally, cocaine may be exhibited in doses of from a quarter of a grain to a grain. For hypodermic administration a 10 per cent. solution should be employed, but not more than ten minims used. In operating for fistula, for the removal of small tumours, or for circumcision, first paint the surface with a 20 per cent. solution, then wait five minutes; after this inject hypodermically a minim or two of a 10 per cent. solution by various punctures around the seat of operation. To extract teeth under cocaine, at least a grain must be injected into the submucous tissues by three punctures opposite the root or roots of the tooth to be removed. Operate ten minutes after this. Great care is needed, as cocaine produces faintness, and in some persons a degree of collapse very alarming, and not devoid of danger. Cocaine rapidly develops fungus, which renders its solutions dangerous.

Mr. Lawson Tait (Birmingham).—We shall be glad to receive a report of the case mentioned by our correspondent.

Mr. V. B. Clarke will find a notice of the matter in our present issue.

EXAMINATIONS AT THE APOTHECARIES' HALL.

To the Editors of THE LANCET.

SIRS,—As a regular subscriber, allow me to point out through the medium of your journal the unbusiness-like way in which examinations are conducted at the Apothecaries' Hall. As I possessed the M.R.C.S. only, I entered for the Materia Medica, &c., of the Hall, in order to obtain the L.S.A. to register. Accordingly on Wednesday last I presented myself for the written papers, and some eighteen of us were then told to be present next day at 2 o'clock for Practical Chemistry, to be followed by the complete *viva voce*. This we accordingly did, and at 3 o'clock we were marched into a room where we were kept till 6 P.M., before a single examiner arrived. Imagine then in what a nervous state most of the candidates were, and little wonder if some were too muddled to answer properly. Most of us were asked which hospital we came from—a question I consider highly improper. We were then all kept till the result of the whole examination was arrived at (about 8 P.M.), and though I happened to be one of the fortunate ones, I cannot help thinking that with your powerful aid something could be done to make the Hall examinations more satisfactory.—I am, Sirs, yours truly,

Oct. 7th, 1887. M.R.C.S.

OMEIRE, AN AFRICAN MILK DRINK.

HERR MARLOTH describes in a German Pharmaceutical journal an African milk drink, called "omeire," which he saw prepared by the natives of the Herero tribe, who employ themselves almost entirely in rearing cattle, some of the chiefs possessing as many as 10,000 head. They do not, except on festival occasions, slaughter them, but live on their milk. The omeire is prepared in the following manner:—Fresh milk is poured into calabashes which have not been washed since the operations of the previous day, and which therefore contain some milk. A number of these calabashes are connected together by a network of strings, so that a man sitting on the ground can keep them all in a continual state of agitation. This goes on for from one to three hours, according to the heat of the weather, the fermentation process, of course, progressing more rapidly when it is hot. The omeire is then finished. It is a somewhat thick, half-curdled fluid, something like buttermilk, with a slightly acid and pungent, but very agreeable, taste. When kept it becomes more acid. Indeed, Herr Marloth found that when it was twenty-four hours old it set his teeth on edge. The natives, however, seem to prefer it when it is very sour. He was not able to examine omeire chemically on the spot, but brought some home with him, into which he had put salicylic acid thirty hours after it was made, in order to prevent any further alteration. This he found contained 0·007 per cent. of alcohol; but he thinks it probable that in the fresh state a larger proportion of spirit exists in the drink, which on keeping is very quickly converted into acetic acid.

X.Y.Z.—The answer to our correspondent's questions can scarcely be given by anyone but himself, so much depends on his own estimate of the value of his time. Besides there are no data on which to estimate the work of such an appointment. It would be better to defer fixing the remuneration for a time.

Dr. Pedro S. de Magalhaes (Rio de Janeiro).—We have been unable to find any further reference to this subject in the writings of helminthologists.

R. H.—Sir E. H. Sieveking's little work, "Medical Advice on Life Assurance," would no doubt answer the purpose.

Mr. R. H. Wagner.—We cannot insert any more letters at present on this subject.

"THE DUODENUM: A SYPHON TRAP."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 13th last, on page 308, Mr. Collier makes an ingenious comparison between the duodenum and a syphon trap, and tries to explain that the curve of the duodenum serves the important function of a syphon trap in the human economy, by preventing fetid intestinal gases from ascending into the stomach and escaping by the mouth. Being somewhat in arrears in my reading, I regret I did not notice the interesting article earlier. As I feel somewhat puzzled and am not satisfied with the trap theory, I would consider it a great favour if Mr. Collier or some of your numerous readers would be pleased to enlighten me on the subject. I can bring myself to imagine the curve of the duodenum acting as a syphon trap, in the erect or sitting attitude, when its curve is directed downwards, but I do not see how it can serve as such while one is lying prone, or supine, or to his left. Furthermore, disregarding the peristaltic and propulsive action of the intestines, I can also imagine that the curve is "kept constantly full of fluid" discharged from the common bile-duct so long as the trunk is erect, and the curve looking down; but I fail to understand how the fluid would keep at the curve to check the passage upwards of the gases when any other ordinary posture is assumed. In other words, a syphon trap has always its curved tube directed downwards, to retain the fluid and resist the entrance of gases. If turned sideways (i.e., if put in a horizontal plane) or with its curve directed up, the fluid would run off, and it would cease to be a trap. This, I imagine, is exactly what would happen in case of the curve of the duodenum, more or less, when one lies down on his back, or face to his side. The curve, though constant, does not adapt itself to the ordinary postural changes so as to be a good trap always; and fetid gases would certainly find plenty of opportunities to get into the stomach, and thence further on. The constant presence at the curve of secretions from the liver and pancreas, in quantity more than could be accounted for by its proximity to these, and sufficient to fill it up so as to efficiently obstruct the gases reaching the stomach, has not been demonstrated. Again, the intestinal walls are distensible, and the fluid at the curve in any quantity cannot of itself withstand the pressure of gases liberated below. No provision exists resembling a ventilating trap to meet the exigency of extraordinary gas pressure as would be met with in special conditions giving rise to intestinal obstructions. What is there to prevent fetid gases under high pressure displacing the fluid and gaining the stomach? Add to this the reversed peristaltic action present at times. This would cause the fluid at the curve to regurgitate into the stomach and upwards. It can easily be imagined how powerful inverted peristalsis is when one sees injections being occasionally vomited. When thus the fluid is carried off from the duodenal trap, what is there to oppose the gases making their way to the stomach?

I remain, Sirs, your obedient servant,

F. S. DAVAR, L.M. and S. (Bombay).
Assist. Surg. Sirsi Charitable Dispensary.

Sirsi, Bombay Presidency, Sept. 19th, 1887.

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"THE RADICAL CURE OF RUPTURE."

AN American is at present making the most benevolent attempt to convince the British public that he is in possession of a radical cure for hernia, and he is circulating advertisements and a book which are meant to convince the most doubting. The book certainly does tell some wonderful stories. Amongst other feats a testimonial to this great genius, "Dr. Sherman," is produced, purporting to be from *The Lancet*, 1874. We need not say that we never published such a thing. If all the other testimonials are equally incorrect the public is to be pitied. Mr. Sherman may say it is some other journal of the same name from which he quotes. That will not avail him with honest people in this country, who, reading in a book which he puts into their hands a quotation from *The Lancet*, will certainly construe it to mean THE LANCET of England. A word to the wise is enough.

Enquirer.—Such qualifications do not justify the title mentioned. There are no legal difficulties in the sense that any legal action would be likely to follow.

Dr. Perdigao (Porto).—We cannot exchange.

"LEICESTER PROTECTED BY VACCINATION."

To the Editors of THE LANCET.

SIRS,—Your special commissioner, in his article on "Leicester and its Immunity from Small-pox," published in THE LANCET of June 5th, 1886, says:—"Tell it not in Gath—but it is even so,—Leicester owes its protection, even with all its boasted and really good sanitary arrangements, to VACCINATION! or rather, I should say, to *revaccination*. All the persons in the house of the patient are vaccinated or revaccinated." What is this statement based on? Simply on intimation of the recently appointed medical officer of health that on the twenty-fifth importation of small-pox during nine years *two* only out of nearly a dozen persons who came in contact were induced to submit to the operation. Even the nurse attending the case was not revaccinated. After a careful search through the medical reports during nine or ten years I cannot find a word about the vaccination or revaccination of a single individual during twenty-four importations of small-pox. The only reference is that in the report of 1886 on the twenty-fifth importation. The only measures recorded are prompt isolation, quarantine, disinfection, and sanitation. Quarantine is optional, and instances of refusal have been known; but usually the people cheerfully agree to it, and they doubtless would elsewhere quite as readily as they submit to vaccination.

The following extracts from health reports confirm what I have said. In 1883, after recording seventeen importations of small-pox, Dr. Johnston says: "Notwithstanding this large number of importations the disease has always been stamped out. ..... The continued exemption from small-pox experienced in Leicester under so many instances of its importation is highly satisfactory, and is *altogether due* to the success which has hitherto attended the efforts of the health committee in securing not only the immediate reporting, but also the prompt removal to hospital, of all the cases as they come under notice." In 1884 three outbreaks are recorded. Dr. Johnston says: "Owing to the immediate removal of all the inmates of each house where the disease appeared to the fever hospital, together with the thorough disinfection and lime-washing of the infected houses, the further spread of the disease was arrested." The further part of the report practically repeats the above. In 1885 the report was written by Dr. Tomkins. He says: "During the year small-pox has made its appearance at four points in the town, &c. ..... By the prompt and vigilant action of Inspectors Braley and Buxton all these cases were at once removed to hospital, and those persons who were known to have been possibly infected by them were removed to the quarantine wards." In another part of the same report the Doctor says: "In the case of small-pox and scarlet fever every effort is used to induce the patient or patient's friends to avail themselves of the hospital." The 1886 report, which has given rise to all the misrepresentation, has been quoted so often that I will only give a few words: "The usual prompt measures were adopted. The patient was removed to the small-pox wards, and two other persons who had been in contact with him were subjected to fourteen days' quarantine, and were revaccinated."

In the above quotations I have given all that is said about vaccination or revaccination in the reports so far as they relate to the actual treatment of small-pox cases during twenty-five importations in Leicester for nine or ten years. I maintain that they totally refute the statement of your Special Commissioner.

Now, as to the second part of his assertion. He says: "Every person brought into contact officially with the case of small-pox—the medical officer of health, the inspectors, the nurse and matron of the infectious hospital—are all vaccinated and revaccinated." The following facts I have personally ascertained, and they may be verified if necessary. The present sanitary staff comprises the medical officer, one chief inspector, three sub-inspectors, and one office clerk, all of whom were in office at the time of your inspector's visit. Of this number the chief inspector, one sub-inspector, and the clerk have never been vaccinated since infancy, and the protection must have ceased long ago. Of the other sub-inspectors, five years in one case and two years in the other have elapsed since the operation was performed. The nursing staff consists of the matron and two nurses, who were in office at the time of your Special Commissioner's visit. Of these the matron has not been vaccinated since childhood, and nineteen years have elapsed since one of the nurses was revaccinated; the protection has therefore ceased. The other nurse was vaccinated at West Hulme Hospital on the receipt of a small-pox patient, but proved insusceptible. She states that about three weeks after proving insusceptible to vaccine she fell of variola, and had small-pox—an experience unique and interesting to the medical world. Of four nurses since appointed, two only have been revaccinated since childhood. The other person concerned is the porter at the hospital, who was revaccinated about five years since. At the last admission of a small-pox case the nurse attending was not revaccinated, although an assistant was operated upon. We have therefore in all ten persons who were in office at the time the special report was made, four of whom have never been vaccinated, and one in whom the protection has vanished many years ago. Of the remaining five, the most recent revaccination was performed two years ago, unless Dr. Tomkins has himself been revaccinated within that period. Not one of the nursing staff has been vaccinated since appointment, excepting the assistant nurse named above.

In the presence of this overwhelming refutation the question arises, Who could have given the information which led the Commissioner astray? I lay no blame upon him, excepting this—he should have exercised more care. The whole matter calls loudly for a searching investigation in the interest of all concerned.

After this I hope nothing further will be heard of unfairness or omission; and the *amende honorable* is due from any who have thought proper to insinuate a charge of *suppressio veri* against

Yours truly,
J. T. BIGGS,
Leicester, Oct. 5th, 1887. Member of the Board of Guardians.

*** We have, from an excessive disposition to give fair-play in this life and death controversy, given Mr. Biggs space which we could very ill spare for his long letter. He spoke in his letter to *The Times* of one member of the sanitary staff who had not been revaccinated. He now thinks he has discovered that four have not been revaccinated, and, with that fine confidence so lacking in experts, he puts in a fifth, "in whom the protection has vanished many years ago." He asks us to take these facts on his personal authority. He will forgive us for saying that we do not consider him a good authority on such questions. We should entirely approve of inquiry by competent and unprejudiced persons. Mr. Biggs is easily satisfied of any point on which he desires to be satisfied. For example, it was part of our Commissioner's information that all persons in Leicester in the houses in which small-pox cases occurred were promptly revaccinated. Mr. Biggs looks through the reports, and seeing little allusion to such operations in them concludes that they did not take place. Our Commissioner did not say they were reported, but that this was the practice of the medical officers of health—a statement not denied by the gentlemen affected. Mr. Biggs' letter contains important evidence of our proposition that persons not revaccinated are very liable to take small-pox when exposed to it. One of the nurses at the Leicester Small-pox Hospital had been vaccinated (revaccinated?) at West Hulme Hospital on the receipt of a small-pox case, but "proved insusceptible." In about three weeks "after proving insusceptible" "she fell [ill] of variola and had small-pox." Mr. Biggs and his school think this nurse's case a "unique" one for the study of the "medical world"; instead of which we are constantly telling him it is the common case. A person is revaccinated and does not take, and votes herself, or is voted, "insusceptible." On being exposed to small-pox she falls a prompt victim to it, clearly showing that she was susceptible, and that the vaccination was simply not effective. A man like Mr. Marson vaccinating with arm-to-arm lymph was so unerring in his skill that the nurse might go, and for fifty years did go, straight into the small-pox hospital unscathed. But most vaccinators had better see their revaccinations "take" before sending their nurses to such a fiery test. Mr. Biggs' refutation leaves a staff of officials, every one of whom he admits to be vaccinated—and many of whom he allows to have been revaccinated. It suits his convenience to say several times dogmatically of those of the staff who have not been vaccinated for years that "the protection must have ceased." Where did Mr. Biggs get his precise knowledge of the exact time at which the virtue even of a first vaccination ceases? The evidence is that at all ages it has much virtue in modifying the severity and fatality of the horrible disease. If Mr. Biggs again writes on the protection of Leicester, let him be careful to say that all persons in immediate attendance on the patients are vaccinated or revaccinated, and that Leicester herself is not yet so enlightened, or so hardy in her belief in mere sanitation, as to receive small-pox by any but vaccinated persons. We are glad to agree up to a certain point with Mr. Biggs. Good police arrangements for small-pox patients are useful. Small-pox obliterates all questions of personal liberty in the person affected, and even such a Radical community as Leicester finds ways of shutting them up. But what about the protection of the people of Leicester who go to Sheffield and the other benighted parts of the United Kingdom? Leicester people cannot be all shut up in Leicester? When the deadly disease and they, together, are abroad, what about their protection?—ED. L.

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"NEW METHOD OF VENTILATION."

In reply to a correspondent of last week, we are enabled to state that the addresses of Messrs. Young and Mors are as under:—10, Cathedral-close, Lincoln, and 30, Queen-square, London, W.C.

Bones.—The placard in question is not to be commended. A true hospital should not be situated in private premises, and any advertisement of it should apply rather to the committee which guarantees it than to individual surgeons.

Cyclops.—The terms mentioned are the ordinary conditions of membership in provident dispensaries. The remuneration of medical men is not sufficient.

Mr. W. Rae.—Our correspondent should apply to any of the principal London instrument makers.

Mr. J. R. Nott.—Our arrangements will not permit us to entertain the proposal.

THE NAVAL MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—I am glad to see "Surgeon R.N." airing the subject of occasional general hospital practice as being desirable for naval surgeons after long sea service, as, though they may have many opportunities of studying subjects not met with by the ordinary general practitioner, they are likely to get wofully rusty in some of the commoner branches of the profession. Such a short course as he mentions would be an immense boon to any man who had not lost all interest in his profession. Modifications of his view of the case I fancy would be necessary, especially as regards the examination. I think that a certificate of having attended ward practice and operations given by the dean or visiting surgeons would be sufficient, as it is difficult to conceive any examination which would show the extent to which a surgeon had improved himself during the course of study; the book work, which presumably he has kept up, should have been sufficient to enable him to pass any ordinary examination in writing. Even the opportunity of a course of study in a general hospital might be dispensed with were every surgeon on return from long foreign service to be appointed for a few months, either as a supernumerary or otherwise, to one of the naval hospitals. As it stands at present, few surgeons have this opportunity, as those who have once served at a hospital are the most likely to be appointed to another, as in several cases in my mind's eye at the present moment; whilst the surgeon from the gunboat on the West Coast goes to a harbour ship, whence all important cases are immediately sent to hospital, his experience having thus a downward tendency. Haslar, Plymouth, and Chatham, to which I may add Malta, Hong Kong, &c., would give ample scope for the rusty surgeon to recruit his knowledge, especially just before his examination for staff surgeon. The cases not met with in these establishments are the diseases of women and children, subjects of but little importance in the naval service; whilst the loss of this branch is more than counterbalanced by the great number of the commoner diseases met with in the navy. Let all surgeons have an equal chance of naval hospital practice, with lectures at the naval hospitals by competent seniors, and the inexperienced naval surgeon would soon become a thing of the past.—Yours truly,

Oct. 10th, 1887. ANOTHER NAVAL SURGEON.

"THE WASTE OF LIFE BY PREVENTABLE DISEASE."

To the Editors of THE LANCET.

SIRS,—At the present time, when we are again visited by scarlet fever in an epidemic form, it may be considered desirable after perusal of the very interesting paper read before the Sanitary Institute of Great Britain by Mr. J. S. Haldane at Bolton, to make some change in the nature of the internal surface of houses. The contamination of the surface by dust was found to have an effect on the number of micro-organisms present in the rooms, a progressive contamination of the floors being the producing agent. The important deduction to be drawn from these researches appears to me to be that the surface should be of a non-porous character, rendering the absorption of noxious matter out of the question. I am, Sirs, yours obediently,

SAMUEL LEE,

Barking, Sept. 29th, 1887. Medical Officer of Health.

CATARACT OPERATIONS.

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly give me the usual percentage of success in cataract operation with Graefe's modified operation or the operation most approved of at present? If the percentage of success from the hands of all operators in the Moorfields Eye Hospital for the last five years be given, this will suit my purpose. May I ask if a surgeon who gets a percentage of only seventy-four successful cases is justified in continuing to operate for cataract?—I am, Sirs, yours faithfully,

Sept. 20th, 1887. SAPO MOLLIS.

SWALLOWING A COIN.

To the Editors of THE LANCET.

SIRS,—The following case may be deemed sufficiently interesting to be placed before the readers of THE LANCET.

A child aged six swallowed a bronze halfpenny on Sept. 26th last, and passed it in stool on Oct. 3rd. The coin thus took nearly eight days to pass. No inconvenience was perceived. No treatment except as thick food as a child of that age could take was used. The coin was blackened on the surface. I am, Sirs, yours faithfully,

Oct. 10th, 1887. H. F. S.

THE VALUE OF SHORTHAND TO THE STUDENT AND PRACTITIONER OF MEDICINE.

To the Editors of THE LANCET.

SIRS,—That the employment of shorthand is of paramount moment to students—more especially those of medicine—cannot be gainsaid. I do not think it is in use much by London students, at any rate, at the cliniques (so far as I have been able to observe), while at Edinburgh I have been surprised at the diligence with which *verbatim* reports are taken of systematic lectures and cliniques, and the students do not appear to lose touch of the gist of the professor's teaching. And not only are *verbatim* notes taken at the University classes there, but diagrams made by the professors are rapidly copied beautifully. The diagrams are made on the board by different coloured chalks, and these are copied by the same coloured pencils. These notes are afterwards rendered into longhand, the drawings reproduced, and the mere rendering and reproduction suffice in a great measure, as I learnt, to impress and digest each individual lecture. A great many of these students had, as I learnt, previously employed shorthand in the University classes for Arts and Science degrees, as a great number of these are graduates in Arts and Sciences (Masters of Arts and Bachelors of Science), so that it comes like A B C to them to take down every word as uttered by the professor, notwithstanding the rowdyism of those who occupy the higher and more distant benches in the lecture theatres. It is of greater importance there, more particularly in certain subjects, to master the professors' lectures rather than read standard works. The diligent and able student not infrequently makes a double use of the shorthand system by reproducing neatly, or getting them copied at some of the University booksellers', and selling the lectures, word for word almost, and fully illustrated, for instance, the botany, natural history, pathology, and other lectures from large plates hung up or drawings made previously to the lecture by the professor or his class assistant. The best students go to the lecture room a long time beforehand to copy the diagrams, synopsis of the lecture, &c. Many of the students, however, who do not know shorthand still take almost *verbatim* notes by longhand. There is no doubt that shorthand is of great service in practice, more especially in the consulting room, where the physician can take notes fully as he is questioning and examining, and will be of great avail if the same patient consults the physician after a distant period again; and also for the employment of these notes afterwards for clinical study.

Dr. Gowers' paper, published in THE LANCET of Oct. 8th, is well worthy of the close attention of students, who should certainly strive to master Pitman's shorthand system, which is the one, I believe, mostly adopted by reporters on the newspaper press, who can write at the rate of from 200 to 250 words a minute easily. The correction, revision, and rendering into longhand and preparation for the press do not take much time. Many of the gentlemen of the newspaper press who are rapid *verbatim* reporters are excellent descriptive writers, and can summarise or rapidly write leaders from their own shorthand. This being so, the medical student can afterwards summarise the lecture and thus omit repetitions. Two students, who are friends, can both take shorthand notes, and afterwards compare and supplement deficiencies. I am, Sirs, yours truly,

South Kensington, Oct. 7th. JOHN LUCAS, M.D.

ANTIPYRIN IN MIGRAINE.

To the Editors of THE LANCET.

SIRS,—I was recently called to Mrs. F——, fifty-one years of age, who was suffering severely from migraine, to which she had been a martyr for several years, never having passed a single day without an attack of greater or lesser intensity. I immediately prescribed antipyrin, giving it in doses of fifteen grains three times daily. I saw her again to-day, and learned that the first dose gave marked relief, and that from the second day of the treatment up to the present time she had been entirely free from pain. Comment seems unnecessary.

I am, Sirs, respectfully yours,

Paris, Oct. 6th, 1887. EDWARD WARREN-BEY, M.D., C.M., LL.D.

NOISES IN THE EARS.

To the Editors of THE LANCET.

SIRS,—Kindly allow me to ask through your valuable journal for any hints as to treatment in a case of exaggerated noises in the ears as a sequel of severe typhoid. The fever ended early last April, but the sounds seem to have been ever present to my patient, who is a married man and a builder's clerk, aged thirty-six years. In other respects he is well, and no organic change can be detected in the ears. No treatment so far seems to touch the case. He says the noises almost drive him mad.

I am, Sirs, faithfully yours,

Oct. 8th, 1887. A SUBSCRIBER OF TWENTY YEARS' STANDING.

INSTITUTIONS FOR THE DEAF AND DUMB.

To the Editors of THE LANCET.

SIRS,—In your issue of the 8th instant, a correspondent, "B.," wishes to know of any institution where a boy who is deaf and blind may be educated. I shall be glad, if he puts himself in communication with me, to give him full information. We have had one or two similar cases, and very successfully overcame the great difficulties.

I am, Sirs, yours truly,

WM. MARTIN, Manager.

Royal Blind Asylum and School, 53, Nicolson-street, Edinburgh, Oct. 10th, 1887.

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COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Paget, London; Dr. Julius Pollock, London; Mr. Bellamy, London; Sir E. Lechmere, London; Dr. T. D. Pryce, Nottingham; Dr. Braxton Hicks, London; Dr. Lewers, London; Mr. L. Humphry; Mr. Fitzroy Benham, London; Mr. Frewer, London; Dr. Saundby; Mr. Lawson Tait; Dr. Warren-Bey, Paris; Mr. J. A. Bloxam, London; Dr. W. T. Gairdner, Glasgow; Mr. J. H. Morgan, London; Dr. McF. Gaston, Chicago; Dr. R. Kirk, Partick; Dr. J. Lucas, London; Mr. Klugh; Mr. H. J. Clements, Brighton; Dr. Körösi, Buda Pesth; Dr. Seymour Taylor, London; Mr. Davar, Sirsi; Dr. Tily; Messrs. Masters and Son, London; Dr. Bell Taylor, Nottingham; Dr. Newth, Hayward's Heath; Mr. Martin, Edinburgh; Dr. Jas. Adams, London; Dr. Percy Boulton, London; Mr. A. Barker, London; Messrs. Partridge and Cooper, London; Mr. Hawkins-Ambler, Riley; Messrs. Hampton and Son, London; Dr. A. J. Jacob, Dublin; Mr. J. R. Nott; Mr. Harry Furniss, London; Dr. J. L. Steven, Glasgow; Messrs. Wright and Co., Birmingham; Mr. R. G. Lender, Berlin; Dr. Munro, South Shields; Mr. H. Ussher, London; Dr. W. Sharp, Rugby; Dr. Sinclair White, Sheffield; Dr. Roughton, London; Mr. Pirkis; Messrs. Allen and Son, London; Mons. H. Perdigas; Mr. S. Lee; Messrs. Gordon and Co., London; Mr. Wm. Tebb, London; Messrs. Phillips and Son, London; Mr. G. Rendle, London; Mr. Venman; Messrs. Eason and Son, Dublin; Mr. Jefferson, Newcastle-on-Tyne; Messrs. W. and A. Gilbey, London; Mr. Saunders, Manchester; Messrs. Starks and Co., London; Mr. Ivory, London; Dr. Curran; Messrs. Warren and Co., Bristol; Dr. Fitzgerald, Brighton; Mr. Clarke, Doverscourt; Mr. H. Bigg, London; Mr. Hawkins, London; Mr. Gordon, Petersfield; Mr. Parson, Worcester; Miss Mead, Kingsale; Mr. Hosegood, Witherhead; Mr. Mitchell, Merton; Mrs. Ramsey, Buxton; Mr. W. A. Frost, London; Mr. Roathwell, Middlesbro'; Messrs. Sutton and Sons, Reading; Messrs. Birch, Dublin; Dr. Moullin; Messrs. Bell and Co., Edinburgh; Dr. Peters, Buckley; Mr. Lewis, Bristol; Messrs. May and Co., London; Mr. Eastwood, Blackburn; Dr. Higginson, Bangor; Mr. Davidson, Edinburgh; Mr. J. Vickers, London; Messrs. Smith and Son, Manchester; Mr. Terry, Winchester; Messrs. Blendenning and Co., London; Mr. Browning, Manchester; Dr. Corby, West Coast of Africa; Dr. Carlisle, London; Mr. Park, Glasgow; Mr. Davies, New Quay; Mr. Moning, London; Mr. Mullin, Salford; Mr. Macarthny, Liverpool; Dr. Hamilton, Bury; S. Leiterschofen, Homburg; Deaconess Elsie, Tottenham; Another Naval Surgeon; Fellow; The Director-General of the Navy Medical Department; Medicus, London; Cymro; A Subscriber of Twenty Years' Standing; Medical, Liverpool; R. H.; M.R.C.S.; H. F. S.; R. P., Folkestone; A Student; R. H. T.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Adams, London; Mr. Huntington, St. Andrews; Messrs. Thompson and Son, London; Mr. Wormald, Manchester; Messrs. Ratcliff and Co., Liverpool; Mrs. Winpenny, Ainsdale; Messrs. Dingwall and Co., London; Mr. Williams, Willeton; Mr. King, Woburn; Dr. G. Hanby, London; Mr. Scott, Manchester; Mr. White, Bayswater; Mr. Keeling, Birmingham; Mr. Hughes, Holloway; Mr. Robertson, Grays; Mr. Genhill, Derby; Mr. Wallis, St. Mawes; Dr. Muirhead, Edinburgh; Dr. Artsong, Kansas; Mr. Guest, Darlington; Mr. Foote, Cirencester; Mr. Schafer, London; Mr. Wilmott, Malta; Mr. Morgan, Stafford; Rev. J. Summerhayes, Ealing; Mr. Mainwaring, West Kensington; Dr. Powell, London; Mr. Hine; Mr. Webster, Merthyr Tydfil; Dr. Sinclair, Nottingham; Dr. Jones, Bacup; Dr. Somerville; L. M.; Medicus, Nottingham; A., Liverpool; Medical Assistant, New Whittington; Traveller; Medicus, Cardiff; X. N., London; W. G. S., Kilburn; Margaret, Loughboro'; Dr. A. M., London; Omega, Newport; Surgeon, Hulme; Maternity; B. B., Stamford-hill; N. L. P., Hull; A. S., Leicester; C.H., Bradford.

Liverpool Courier, Leicester Daily Post, Beverley Echo, Midland Free Press, Washington Post, Malta Standard, &c., have been received.

Medical Diary for the ensuing Week.

Monday, October 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Opening Address by the President (Dr. J. Hughlings Jackson).—Dr. Clifford Allbutt (of Leeds) will read a paper on Simple Dilatation of the Stomach.

Tuesday, October 18.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. C. H. Cassal: Food, (including milk), Sale of Food and Drugs Act.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hadden: Lymphadenoma.—Mr. D'Arcy Power: Congenital Umbilical Hernia.—Dr. Hale White: Carcinoma of Pancreas, and Semilunar Ganglia.—Mr. Bland Sutton: The Guttural Pouches of Horses.—Dr. Handford: Dilatation of Œsophagus.—Dr. A. H. Robinson; Aneurysmal Varix in a Stump.—Mr. A. M. Sheild: Rectal Polypus.

Wednesday, October 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, October 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. J. Bland Sutton: Hypertrophy and its Counterfeits.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Living and Card Specimens at 8 P.M. Mr. Nettleship: Case of Persistent Hyaloid Artery.—Mr. Gunn: Chronic Abscess of the Cornea.—Mr. Hartridge: An Unusual Appearance of the Optic Disc.—Mr. Keall (Bristol): Congenital Small Lens in one Eye.—Dr. S. Herbert Habershon: On Hereditary Optic Atrophy.

Friday, October 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Infectious Diseases and Methods of Disinfection.

Saturday, October 22.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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The Harveian Oration

DELIVERED AT THE

ROYAL COLLEGE OF PHYSICIANS

On Tuesday, Oct. 18th, 1887,

BY W. H. STONE, M.A., M.B. OXON.,

PHYSICIAN AND LECTURER ON NATURAL PHILOSOPHY AND MATERIA MEDICA, ST. THOMAS'S HOSPITAL.

NOTHING would have better pleased me, Mr. President and brother Fellows, than to have revived the ancient and time-honoured custom of a Latin Oration, such as these walls have so often echoed to; and this the more gladly from my belief that the practice tended to maintain the dignity of our College and its reputation for learning. But there is a tide in popular opinion which seems just now to be setting somewhat strongly in a direction opposite to the older and traditional cultivation, and a prepossession abroad that a knowledge of the ancient tongues on which our English language is founded is incompatible with ability to search out the secrets of nature by way of experiment. A striking refutation of the fallacy exists in the very man whom and whose labours we are met here to-day to commemorate, and whose honoured name as written in Latin by his own hand should stand in the forefront of my discourse as it does on the title-page of the manuscript: GULIELMUS HARVEIUS. I say in his own hand for, thanks mainly to the energy and labours of Sir E. Sieveking, we have now before us a noble production of his manuscript lectures delivered in 1616; not merely the *auros ekeir*, but the *autos egrapse*, the very autograph sign manual of a great mind, wherein we can read not only his verbal utterances, but can, with a little care at the same time, trace character, education, and temperament. It is just ten years since the gentleman named above announced to the College the rediscovery of the first Harveian lectures, and now the autotype copy with its transcript is fully before us. My object therefore on the present occasion will be to endeavour briefly to comment on this most interesting and unique work, and to sketch the lineaments of Harvey, self-revealed, as a scholar, a lecturer, a physicist, and as a man of genius, not to say humorous, disposition. In so doing we may gather from the *ipsissima verba* of one who "being dead yet speaketh" two lessons which, I believe, have not occupied the attention of my many far abler predecessors in this chair. First, an instruction in the art and method of lecturing, and wherein in this age of printed books it may still be of service. Secondly, what a large field of discovery and research still lies open to us, as it did to Harvey, on the borderground between physics and physiological medicine. For this reason I have ventured to give my oration the title of *Iatrophysica*, just such a word as he would, I fancy, have delighted to jot down, possibly in red ink, with his cypher appended, in some corner of his manuscript notes. For the discovery which has rendered Harvey's name famous was strictly physical, I may even say mechanical. It had, moreover, the one great element of accuracy in applied mechanics: it was computational and quantitative.

There can be little doubt that general ideas were abroad on the subject of the circulation, and that similar views, not indeed incorrect, but loose and inaccurate, had been entertained by others. Even Cesalpinus, *pace* Dr. George Johnson, undeniably had glimpses of the truth. It was, however, Harvey who first saw and proved that the problem was one of hydrostatics, and that it must be solved, and could be solved, by mechanics, and proved by numerical relations. There is a remarkable page in the Lectures, one of the best written and most legible in the book, in which this is stated with absolute clearness, and which at once disposes of any claims advanced in other quarters. It runs as follows: "Constat per fabricam cordis sanguinem per pulmones in Aortam perpetuo transferri, ita by two clacks of a water bellows to rayse water. Constat per ligaturam transitum sanguinis ab arterijs ad venas, unde A perpetuum sanguinis motum in circulo fieri pulsu cordis." The two hydrostatic conditions of the circulation are herein defined with geometrical accuracy, and read like the enunciation of a theorem in Euclid. Indeed, it is remarkable what a strong mathematical element runs through the argument of both his great treatise and of the lectures; not of course mathematics as we now understand them, for at the date of Harvey's death Newton was a boy of fifteen, but those of Euclid and of Archimedes. In the second page of the MS. work he speaks of form "ut trigonis in tetragonum," of proportion "ut diapente in diapason," the relation of the triangle to the square, of the fifth in music to the octave. An even more remarkable reference to musical ratios occurs a few lines later, "ut semiditonos diapase," like a semitone to an octave. Again in the ninth page we find "Proportio pectoris ad ventrem diapason ut 3·4 sesquitertia; pectoris ad caput 1 diapente, pectoris ad alvum 1 diapason;" both these last two ratios being expressed as fractions. We have, moreover, direct personal evidence to his studies in this direction; for Aubrey found him reading Oughtred's "Clavis Mathematica," and working the problems when he was no longer a young man. Now his strongest and most irrefragable argument for the new view of the circulation is distinctly numerical. "Supponamus," he says, "quantum sanguinis sinister ventriculus in dilatatione quum repletus sit contineat, sive ℥ij; sive ℥jss; ego in mortuo reperi ultra ℥ij." And further on the problem thus concisely proposed is continued: "Ita in homine protrudi singulis cordis pulsibus, supponamus unciam semis, vel drachmas iij, vel drachmam unam sanguinis, qui propter impedimentum valvularum in cor remeare non potest. Cor unâ semihorâ plus quam mille pulsus facit. Jam multiplicatis drachmis videbis unâ semihorâ, aut millies drachmas tres, vel drachmas duas aut uncias quinquies centum, per cor in arterias transfusam, quæ major est copia quam in universo corpore contingat reperiri. Quare concludendum si unciam transmissam contingere, libras 83 et ℥iv in unâ semihorâ transfusas esse de venis in arterias." He saw distinctly that the heart was simply a double force-pump, propelling an incompressible fluid into an equally double system of tubes; that it was the sole efficient cause of the motion thus engendered (indeed he uses the phrase "solum a corde"); that the lungs, although an air-pump of no inconsiderable power, both for compression and rarefaction, had nothing whatever to do with this; that the valves of the heart acted equally as machines to make good the dynamical advantage thus obtained, and that the quantity of fluid thus raised was incomparably greater than had been before supposed. The conception is as distinctly mechanical as that of the steam engine, or of the mechanical equivalent of heat which were to arise in later centuries. Even of this last great generalisation in mechanics he had no indistinct glimpse; for in the thirteenth page of the MS. he compares heat to a hammer. "Calor ut malleus instrumentum instrumentorum." With the working out of this complex but perfectly precise problem in hydrodynamics, came accuracy and certainty in place of theory and conjecture. "Flux and reflux" had had their day, and no more need be said of that unlucky Euripus which is fabled to have driven a great natural philosopher, Aristotle, to suicide, and which had been an incubus on science ever since.

Only twenty-six short years after the first Harveian lectures were committed to paper, and fourteen after the treatise "De Motu Sanguinis" appeared, the wondrous boy was born who was destined in like manner to penetrate another of nature's mechanical mysteries—the problem of universal gravitation. Newton was fifteen years old when Harvey died, and already studying Oughtred's "Clavis Mathematica," the very work which Aubrey found Harvey engaged upon, as above stated. As regards Harvey's classical scholarship, little needs to be added to what has already been well said. The scholar of Canterbury Grammar School and the pensioner of Caius College, Cambridge, was clearly well trained in classics, dialectics, and physics. He evidently knew Aristotle thoroughly, and often quotes him, especially the grand treatise on "Metaphysics," and the excellent book on the "Generation of Animals," a quotation from which stands on the title sheet of the Lectures. For it must be remembered, in these days of detraction, that Aristotle was no mean naturalist, and even comparative anatomist; many of his shrewd observations in this direction being sound even to the present time. "Naturæ diligentissimus investigator" are the words. Harvey also quotes the "Gorgias" of Plato, and there is a passage in the preface to his treatise "De Generatione," which so com-

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pletely recalls the myth of the cave in Plato's "Republic" that it cannot be an accidental coincidence. "Hi," says he, "non veras ideas, sed falsa idola et phantasmata inanis mente concipiunt; unde umbras quasdem et chimæras sibifingunt." It is difficult also to believe that this metaphor had not been recalled to Harvey's memory by the use of it under the name of Eidola Specus, in a great work then recently produced, which overtly in its very title professed to be an extension of Aristotle's grand work on formal logic—namely, the "Novum Organon" of Bacon.

Aubrey says, in his "Lives of Eminent Persons," that Harvey understood Greek and Latin pretty well, but was no critic, and wrote very bad Latin. We are, however, now in a position to judge of this for ourselves from the real autograph. The Greek words scattered freely through the lectures are well written and spelt, though in one or more instances the first part of a word begins in Greek and finishes in English characters. But this is only on a par with the whole work, which is a canto of Greek, Latin, and English, never intended to be seen by any eye besides that of the writer himself. Yet even thus in passages they rise almost to eloquence, as in p. 47, where, speaking of the maintenance of human species by generation, in spite of the death of the individual, he says: "By the string tyed to eternity. Unde cum naturâ non potuit Individualem æternitatem, id quod potuit harum partium facultate speciem æternitatis generando sibi similem in secula. Unde sacris literis greatest blessing Issue, that thy seed shall remayne for ever." And further on: "Apparet item maribus et fœminis qui moderate utuntur never more brave, sprightly, blith, valiant, pleasant, or bewtifull," which cannot fail to remind us of the passage in the fourth Georgic of his favourite author Virgil:

> "Ergo ipsas quamvis angusti terminus ævi
> Excipiat (neque enim plus septima ducitur æstas)
> At genus immortale manet, multosque per annos
> Stat fortuna domûs, et avi numerantur avorum."

But before leaving the loving commemoration of our great benefactor, I wish to point out some evidences of his genial and even humorous temper, which must have made the lectures pleasant to listen to. At page 16, speaking of the position of the abdominal organs, he says: "Situs omnium partium certus partim incertus." Then, breaking into familiar English, he notes: "Natura Romidges (*sic*) as she can best stow, as in ships." While still on the same topic, he points out that malposition of organs occurs in "yeoung (*sic*) girls by lacing; unde cutt there laces." In another place (page 53), in describing an irreducible hernia, he says it may be filled "cum maximâ quantitate aquæ et flatus." "The man behind Covent Garden bil." At page 35 the spleen is described in man "as washous to the kitchin," and its absence in lower organisms, "Inferior kitchins need noe washhous." Lastly, "in quibus vitiatum temperamentum, Lien Major the washhous exceed ye kitchin." It is difficult to believe that the passage which follows (page 54), "Mas a vigore spiritus higher sett, unde Bastards brave men, quia magno fervore geniti vetito concubitu" is not a reflection of Shakspeare's bastard, Faulconbridge, a character which Harvey may have seen represented, even by its creator himself, at any time in the eighteen previous years. But perhaps the quaintest entry is one speaking of some rather controvertible anatomical assertions which he thus records (page 50): "W. H., a little staggerum in these." He describes the thymus gland as follows: "Thimus, sweete bread, nutt of veale, corpus glandosum molle, heare they sticke the piggg." And a little further on, speaking of some idle controversy of previous writers, he describes it "est de lanâ caprinâ," which is obviously a note jotted down from the Horatian line, "Alter rixatur de lanâ sæpe caprinâ." In an excellent account of the signs of asphyxia, he says: "Soe curst children by eager crying grow black and suffocated, non deficiente animali facultate," which again recalls to our memory Kate the Carst in the "Taming of the Shrew."

There is, however, one page of this remarkable volume which requires more than cursory notice, as beyond illustrating the character of our distinguished benefactor, which I am specially directed to do, it affords us from his example a valuable lesson for our own instruction. These are the *canones anatomiæ generalis*, rules which he evidently laid down to himself, and in which he has left us a precious legacy of advice. They are twelve in number, hastily, but evidently after mature thought, jotted down in the strange mixture of Latin and English which is throughout the book adopted. They occur at page 4:—

"Canones Anatomiæ generalis

1 shew as much vno intultu as can be
vt de toto ventre: vel toto aliquo quæ accidunt
deinde dividere (propter situs et conexiones
2 demonstrare propria filius Cadaveris
Nova vel Noviter Inventa
3 to supplye only by speech what cannot be shewn
on your own credit and by authority
4 cutt vp as much as may be in presentia ut cum
Historia peritia innotescat
5 observationes proprias et alienas recensere
ad confirmandam propriam opinionem vel obsignatis
tabulis in alijs Animalibus agere
secundum Socratis regulam: where it is farer written
vnde observationes exoticas
1 ob causas Morborum: Medicis præcipue vtilissimas
2 ob varietatem Naturæ philosophicæ
3 ad refutandos errores et proinde solvendos
4 ob vsus et actiones Invenlendas dignitates
et propter inde Colectanea
Anatomiæ enim finis partis Cognitio propter quid
Necessitas et vsus
philosophis præcipua qui inde sciunt
ad vnamquamque actiones quæ requiruntur quod præstat
Medicis item qui inde constitutionem naturalem
regula quo diducendi ægrotantes
et inde quid agendum morbis
6 Not to prayse or disprayse. all did well
and behowlding ijs qui perperam quis occasio
7 Not to dispute confute alias quam argumentis
ostensis quia plus quam iij dies requiruntur
8 Brefly and playnly: yett not letting
pas any one thing vnspoken of which
is subiect to the vew
10 Not to speake anything which with outt the carcase
may be delivered or read att home
11 Non nimium curiose pertinet enim particularibus
dissectionibus et tempus non patitur
12 to serve in their iij courses according to the glass
1° ventris inferni nasty yett recompensed by 'admiry'
admirable variety
2° the parlor 3° divine Banquet of the brayne."

It is singular how much of this is still valuable, though written at a time when printed books were scarce, oral lectures the chief mode of teaching, and primers, text-books, compendia, with all the artillery of cram, unknown. Indeed, a direct answer is given to the paradox, which has of late obtained some vogue, and which has been fostered by examining machines miscalled universities, that lectures are useless, and that it is only necessary to ascertain that a student knows certain prescribed facts without asking how and where he learned them. Those of us who are teachers and examiners—and I am aware I am speaking before the most learned body of teachers and examiners in this kingdom—know the fallacy; it is a fallacy, moreover, chiefly in the higher branches of thought, where absolute certainty is unobtainable, and where tact, experience, and the exercise of a judicial function of the mind are necessary. It is a fallacy still more where acutely cultivated sense—the memory of the eye, of the ear, and of the touch—have to be added to these characters. As an examiner myself to this College of over seven years' standing, I feel I can often detect book knowledge and parrot-like iteration of catch-words learned by rote, but not thought out, in some voluble but superficial candidate. Indeed, Charles Dickens and Albert Smith (the latter a medical student himself, both acute observers of human nature) have each pilloried flagrant offenders in this direction with the severity and incisiveness of real humour. To these book-read anatomists and school-board paradoxists an admirable answer is given in the words, "Cutt up as much as may be in presentiâ, ut cum Historiâ peritia innotescat," that, with the description, practical experience should arise.

But it is not only the superficial and sciolistic learner who may gather lessons from this remarkable page; there is much that we as lecturers and teachers may take to heart with advantage. "To supplye only by speech what cannot be shewn on your own credit and by authority"; also, "observationes proprias et alienas recensere, ad confirmandam propriam opinionem." There is often, even at the present day, much difficulty in the full performance of the duty here so lucidly and tersely set forth—that, namely, of comparing our own with others' observations. It occurs to a great extent in the department to which the present speaker's chief attention has been devoted—that, namely, of physics. Much valuable work and information is stored away in papers read before learned societies, in small detached pamphlets, in foreign and scientific periodicals, and similar places very hard to reach for purposes of consultation. Hence follows no little repetition of labour in rediscovery,

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and the consequent disappointment of perfectly conscientious observers who have unwittingly gone over the same ground as their forerunners in science. It is, moreover, from comparison of one's own views with those of previous labourers, if it be performed in a conscientious and thorough manner, that new views and ideas often arise.

It is not, however, so much in the seeking out of new facts in nature that these *canones* help us, as in the suggestions for the communication of knowledge, a function especially important in the art of medicine, because at the end of our educational chain there hangs suspended a human life. There can be no hesitation in calling this pregnant collection of maxims a treatise on the art of imparting knowledge, an art too much neglected even in the present age. For, sooth to say, Englishmen fall, I fear, somewhat behind their French and German rivals in the practice of this important function. Even their speech and articulation are often inferior, as anyone who has listened to Trousseau, Claude Bernard, or Virchow must be well aware. "Brefly and playnly, yett not letting pas any one thing unspoken of which is subject to the vew," says our thoughtful monitor. Then again, "Not to dispute confute alias quam argumentis," a quiet sarcasm on obtrusive controversialism which may go home to many a pulpit beyond this from which I have the honour to address you.

We are now in a position to gather in the fruit of our author's teaching; and first as to the utility of lecturing. We have it in his quaint language that it is justly a combination of what a book can give—namely, knowledge; with what it cannot—namely, *intuitus* or demonstration. In many subjects, in none certainly more than general anatomy, this is a point of no mean importance. The eye can assist the ear; two inlets are afforded at once to the sentient brain instead of one, and two forms of memory can be called forth. For it is a fact, though one seldom insisted on, that memory has at least as many forms as there are senses. The memory of the ear is perhaps the commonest but also the least intellectual, unless applied to harmonious sounds and melodies. Unfortunately, the mere reproduction of the dry husks of thought termed words is too much cultivated in these days of overpressure, and too little care is taken to secure the essential nucleus of the grain of thought. To the anatomist, the surgeon, and the man of science generally, the memory of the eye transcends the former. A geometrical memory, which can reproduce forms healthy or diseased, is an acquirement especially to be cultivated by the student of medicine and pathology. This is far better done in lectures than by books.

Secondly, the lecturer can keep himself abreast of all things *nova vel noviter inventa*, whereas the book, even if at first up to date, as it seldom is, soon falls back in the race and becomes ancient. There are, indeed, books, like the "Metaphysics" of Aristotle, the "Republic" of Plato, and the "Aphorisms" of Hippocrates, and more lately the "Principia" of Newton, the "Religio Medici" of Sir Thomas Browne, and the work "De Sedibus et Causis Morborum" by Morgagni, which will never grow old; but when we come to the new philosophy, and wrest daily fresh secrets from nature, the case is different. Here also the lecture far transcends the book; especially if the lecturer, standing on the brink of the precipice which separates the known from the unknown, can detail facts or deductions which he can vouch for and prove "on his own credit and authority," as saith our teacher. It is a severe labour, indeed, but a labour of love in these days of scientific progress, to keep oneself informed of all fresh truths as they arise, so as to impart them "brefly and playnly" to younger and still thirsty minds. If to these he can add *observationes propriæ*, original facts and investigations, the lecture reaches a pitch of individual interest which none but the greatest books, certainly no handbooks or manuals, can ever attain.

Lastly, the lecture, well delivered, has a greater point and flexibility than the written volume. The lecturer, like the actor, can study his audience, and wake their attention by a judicious or even humorous allusion. The manuscript before us teems with these; indeed, several have been already cited; perhaps, however, the quaintest of all occurs in the description of the diaphragm. After giving its function as a septum or partition, he mentions the old English name *midryf*, and this he compares to the *shere* or *shire reva* or *reeve*, a well-known county officer at the time, and says, "his office serving to both belly and lungs he is stickler between them." There can be but little doubt that a smile passed over the grave countenances of the assembled physicians at this homely allusion.

Thus did the first Harveian lecturer, as we see from the veriest *editio princeps* possible of the first lectures, fulfil the precept to "make these dry bones live," to give the vivifying force of character, fancy, and originality to the general facts of anatomy. Since then two hundred and seventy-one years have run their course, and still the sacred fire of thought and genius burns in them undimmed by time.

There yet remains one part, perhaps the most important, of my prescribed task to be performed, and that is to draw a practical conclusion from the essentially physical and mechanical character of Harvey's great discovery. That he himself fully knew this has been already shown in his own words; it is also by his division of anatomy into three parts—philosophica, medica, and mechanica. Now at the present time investigation and research is abundantly carried on in the pathological, physiological, and therapeutical aspects of medicine, but the physical or mechanical side is somewhat neglected. For hundreds of ardent questioners of nature who are labouring with the microscope in the biological and bacteriological laboratories, those who attack medicine from its physical side may be counted on the fingers of one hand. Nor, indeed, are the written treatises on this subject abundant, in this country at least. The "Animal Mechanics," of the Rev. Dr. Haughton, of Trinity College, Dublin, is an exceptional work of great value, which has hardly received the attention it deserves from the medical profession, but it stands almost alone as the representative of its class. On the Continent, however, and in America the case is very different. The admirable "Medical Physics" of Professor Wundt, of Heidelberg, has been translated from the German into French, with valuable additions by Dr. Ferdinand Monayer, who regularly lectures on medical physics at the Lyons Faculty of Medicine, and affords a storehouse of information of the highest value to the medical practitioner. Dr. John C. Draper, Professor of Chemistry and Physics in the Medical Department of the University of New York, has also made a valuable contribution to the literature of this subject in his text-book of "Medical Physics," published the year before last. There is, indeed, a small but scanty manual by Dr. McGregor Robertson, the Muirhead Demonstrator of Physiology in the University of Glasgow, published in Cassell's Student's Series, but it is entirely unfit to compete with the two exhaustive treatises named before.

As with the bibliography, so with the teaching. With the exception of a course of lectures which the present speaker has delivered since 1871 in St. Thomas's Hospital, I am not aware of any systematic attempt in London to teach the medical student the vast mass of physical facts which underlie the daily practice of medicine. This College, however, forms an honourable exception, for it has on two occasions kindly given me the opportunity to bring before my brother physicians some few of what our Harvey terms *nova vel noviter inventa* respecting the physical basis of auscultation in the Croonian, and the electrical conditions of the human body in the Lumleian, lectures of a few years back. It is true that the University of London in its Preliminary Scientific Examination for the degree of Bachelor of Medicine requires students to satisfy their examiners in physics by means of a written paper. But this paper is the same as that set to Bachelors of Science not medical. It is a terrible stumblingblock to the rising medical generation; it bristles with what the late genial Professor De Morgan, himself a mathematician of the highest order, delighted to call mathematical conundrums. It is set by pure physicists, who know nothing, and probably care little, for the problems which interest us as medical men. It contributes a large percentage to the slaughter of innocent aspirants to the higher degrees in medicine, on which one of their most distinguished graduates, now Censor of this College, has feelingly and righteously commented. In the sixteen years during which I have carefully read the papers there set, I have never once seen a question directly or indirectly bearing on the physics of medicine. The fact is that the large, difficult, and somewhat heterogeneous branch of knowledge connoted by the word "physics" is rapidly splitting into several independent portions. There are now distinctly molecular, mathematical, industrial, and physiological physics. It is the last of these with which we are concerned. The third or industrial branch has been enormously developed of late by the technical colleges at Bristol, Manchester, the City guilds at Kensington, and elsewhere.

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The mathematical branch is well cared for by the two old Universities of Oxford and Cambridge; but the physiological section has been hitherto hardly enough recognised by our teaching bodies. Surely an earnest student should be able somewhere to obtain information as to the natural laws on which the stethoscope, the microscope, the ophthalmoscope and the sphygmograph are founded, without having to wade through interminable problems on the C. G. S. system of units, or vortex theories of matter, or, chimæra of chimæras, the possibility and advantages of four-dimensional space.

It is to the promotion of this particular branch of study by means of experiment that it is this day my duty to exhort the College. An admirable opportunity exists, for in April of the present year the Committee of Delegates appointed by this College and the Royal College of Surgeons of England reported—"1. That it is desirable to utilise the vacant ground adjoining the Examination Hall for scientific purposes under the control and management of the two Colleges. 2. That the 'scientific purposes' be, in the first place, the investigation and exposition of such branches of science connected with medicine and surgery as the two Colleges may from time to time determine." The College has subsequently adopted the report.

Now I submit with the utmost respect, but with the greatest earnestness, to those here assembled that a course of physiological physics to be delivered in the new College of Science would be a real boon to all students of medicine, whether they had succeeded in obtaining their diploma or not. The human body is a mass or congeries of separate machines, susceptible of mechanical explanation; but, setting aside the heart and lungs already named, how many students have their attention specially drawn to Donders' and Landolt's optical researches on the eye and eyesight, or to Helmholtz's account of the mechanism of the ear? Such a course, moreover, would in no way clash with other courses given elsewhere on different branches of the same great subject, and it would eminently fulfil the exact purpose even to the very words of the great man whom we are to-day met to commemorate.

Remarks

ON THE

PSYCHOLOGY OF JOKING.

Delivered at the Medical Society of London, October 17th, 1887.

By J. HUGHLINGS JACKSON, M.D., F.R.S.,

PRESIDENT OF THE SOCIETY.

AFTER some introductory remarks, Dr. Hughlings Jackson said:—

I think punning does not receive enough attention. In spite of Dr. Johnson's well-known dictum, we should not despise punning. Sydney Smith says that it is the foundation of all wit. Supposing three degrees of evolution, I submit that punning is the least evolved system of joking, that wit is evolved out of punning, and that humour is evolved out of wit. Everybody has heard of Sydney Smith's remark—that it requires a surgical operation to get a joke into the head of a Scotchman. But he spoke without distinguishing. The Scotch have a great appreciation of those highly evolved jocosities displaying the humorous, although, no doubt, a scorn of simple, lowly evolved jocosities, such as plays on words. It is difficult to form a conception of a Scotch punster. Yet I have heard an Aberdonian, a physician of world-wide reputation, make a pun.

Punning is well worthy of the psychologist's attention. I seriously mean that the analysis of puns is a simple way of beginning the methodical analysis of the process of normal and abnormal mentation. This, I think, I can easily show. Vision is stereoscopic; in a sense it is slightly diplopic, for there are two dissimilar images, although there seems to be but one external object, as we call it. To borrow the ophthalmological term, we can say that mentation is "stereoscopic"; always subject-object, although we often speak of it as single ("states of consciousness," &c.). Just as there is visual diplopia, so there is "mental diplopia," or, as it is commonly called, "double consciousness." Now I come back to punning. We all have "mental diplopia" when hearing the answer to a riddle which depends on a pun:—"When is a little girl not a little girl?" Answer: "When she is a little horse" (hoarse)." The feeble amusement we have in the slightly morbid mental state thus induced is from the incongruous elements of a "mental diplopia." The word "hoarse" rouses in us the idea of a little girl who has taken cold, and the same sounding word "horse" rouses in us the idea of a well-known quadruped at the same time. We have the sensation of complete resemblance with the sense of vast difference. Here is, I submit, a caricature of the normal process of all mentation. The process of all thought is "stereoscopic" or "diplopic," being the tracing of relations of likeness and unlikeness.

To call punning a slightly morbid mental state may be taken as a small joke, but I do not think it very extravagant to describe it so; it certainly is not if it be a caricature of normal mentation. A miser has been defined as an amateur pauper; the habitual drunkard is certainly an amateur lunatic; and in the same style of speaking we may say that—well, we will say that punning is playing at being foolish; it is only morbid in that slender sense. The word "play" carries us forward in a slightly different direction. Jocosities of all degrees of evolution—(1) puns, (2) witticisms, and (3) humorous statements—are the "play of mind"; play in the sense in which the word has been used in the remark that the "æsthetic sentiments originate from the play impulse." A further definition of play as thus used is given in the following quotation from Spencer:—"The activities we call play are united with æsthetic activities by the trait that neither subserve, in any direct way, the processes conducive to life."[1] There would be a great intellectual advance—due, I presume, to internal evolution—when man began to value things for their beauty apart from their use, one sign of his having "got above" his mere animal self. For it showed that, over and above mind required for mere animal existence, he had some surplus mind for greater ends of life. So I contend that our race owes some respect to the first punster. For the dawn of a sense of the merely ridiculous, as in punning and the simplest jokes, shows the same thing as the dawn of æsthetic feeling—surplus mind, something over and above that required for getting food and for mere animal indulgence. All the more so if punning be that out of which wit and humour are evolved. It is not a good sign if a man be deficient in humour, unless he have compensation, as Wordsworth had, in a sense of the sublime, or in great artistic feeling, or in metaphysical subtlety. The man who has no sense of humour, who takes things to be literally as distinct as they superficially appear, does not see fundamental similarities in the midst of great superficial differences, overlooks the transitions between great contrasts. I do not mean *because* he has no sense of humour, but because he has not the surplus intellect which sense of humour implies. Humour, being the "play" of mind, is tracing deep, fanciful resemblances in things known to be very different. This is "playing" at generalisation, and is only a caricature of the same kind of process which made Goethe declare that a skull is a modified part of a vertebral column.

Now I am about—not really digressing from what I have just said—to say something which sounds very paradoxical: that persons who are deficient in appreciation of jocosities in their degrees of evolution, are in corresponding degrees deficiently realistic in their scientific conceptions. One would infer this *a priori*. Every child knows that a man born blind has no idea of light, but the educated adult knows, too, that the congenitally blind have no notion of darkness. And I think that observation confirms what *a priori* seems likely—that *pari passu* with the evolution of the sentiment of jocosity (playing at unreality) is the evolution of power of realistic scientific conception—from sense of the merely ridiculous with parallel realistic conception of simple things, up to sense of humour with parallel realistic conception of complex things. But we must be on our guard not to take commonplace realism about simple things to be realism when applied to very complex things. It seems at first glance more realistic to suppose that sourness is inherent in vinegar than that it is always a sensation in some percipient. But that the former hypothesis is very unrealistic is easily seen when we put such

[1] Prin. Psych. vol. ii., p. 627.

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crude metaphysics in other words, the doctrine then is that part of the tester's own mind is outside himself. It is possible for the same person to be truly realistic in simple things, and to be intensely unrealistic in complex things. Thus, the really practical man, who may tell us that he despises metaphysics, may be crudely metaphysical when he deals with complex things—"explaining," for example, that a man comatose does not move because he has lost consciousness. Surely the truly realistic conception is that the comatose patient does not move any of his limbs from some physical disability—for, essentially the same reason that a hemiplegic man does not move his arm and leg.

I now go back to my small joke that punning is a slightly morbid mental state, a "mental diplopia," a caricature of the normal "diplopia" of healthy mentation. From this point I make the assertion that the "physiological insanity" of dreaming is diplopic—a caricature of that of waking mentation. A physician reads in the day of the strained relations of European States; in his dream at night he is called in consultation by Bismarck, and advises a course of the iodide of potassium (directions for the application of the remedy were not given). Clearly, there are here two very dissimilar mental states "pretending" to be stereoscopic; manifestly a seeming fusion of ideas of prescribing for a patient with ideas of the attitude of European States. I hope some time to be able to show that such diplopia has the same kind of mechanism as that of the pun—that the two elaborate dissimilar states are held together by two same, or similar, simple mental states. I go on to remark that in some people there are beliefs as incongruously diplopic as some states in dreams—diplopic in that way to other people, at any rate:—(1) Killing a rabid dog to prevent people already bitten by it going mad. (2) Imagining it to be possible to study what are called "diseases of the mind" methodically without distinguishing between the physical and the psychical. (3) A cleanly mother, from maternal solicitude, refraining from washing the top of her baby's head, lest it should come to have "water on the brain." (4) Imagining it to be possible to investigate complex subjects without the use of hypotheses; for instance, that Harvey could have made observations and experiments to *prove* the circulation of the blood without *supposing* beforehand that it did circulate. (5) Anointing a blade with healing salve to cure a wound inflicted by the blade.

Once more I go back to punning for a new start, trying to show again by very simple cases that punning is only a caricature of, and therefore for the psychologist a valuable experiment on, the process of normal mentation. I take first a case which is almost if not quite a pun, but one made unwittingly. What is called the inelegance of using the same word in one sentence, or in two consecutive sentences, causes mental diplopia. For even if each of the two words has the same dictionary meaning, we must bear in mind that a word loses something of that kind of meaning when forming part of a proposition, losing and taking meaning by and from its context. Hence the second time the word comes there is a faint revival of the idea it symbolised when used the first time, along with a vivid revival of other ideas it now symbolises; there is trivial confusion from slight mental diplopia, like that from an ill-understood pun. I now give a more striking example—one in which there is manifest diplopia without confusion.

A smell, say of roses, I now have makes me think of a room where I passed much of my time when a child. Here clearly is "mental diplopia," and the mechanism of it is quite similar to that of the pun, making allowance for caricature in the latter. For the true process is that the smell of roses, now having, develops what we call the same smell, but really another smell, that of roses once had, in the old room. The two scents, linked together, hold together two dissimilar mental states (1) present, now narrowed, surroundings, and (2) certain vague quasi-former surroundings. When the scent of hay, or the caw of rooks, rouses in us vague pleasurable feelings, the mechanism is of the same kind, but the process is more complex. To further insist on the fact that mentation is stereoscopic, with more or less manifest diplopia, I give an example of mentation which is exceedingly common. Whilst writing I suddenly think of York Minster. Here is manifest mental diplopia (1) narrowed consciousness of my present surroundings, with (2) cropping-up of consciousness of some quasi-former surroundings. Of course something, whether I can mentally seize it or not, in my present surroundings has developed a similar something associated with York surroundings.

Recapitulating, I say that the process of all thought is double, in degrees from a stereoscopic unity of subject and object to manifest diplopia (two objective states for one subject). The process of all thought is tracing relations of resemblance and difference, from simplest perception—to say what a thing is, is to say what it is like and unlike—up to most complex abstract reasoning. The formula of the caricature of the normal process of thought is the "pretence" of some resemblance between things vastly different,—from punning, where the pretended resemblances and real differences are of a simple order, up to humour, where both are highly compound. We have the "play" of mind in three degrees of evolution, three stages of increasingly complex incongruousnesses.

If I had time, I could, I think, show that this address on jokes is not itself merely one big poor joke, but that what has been said applies closely to the study of "mental symptoms" in serious diseases. I should begin the new stage of the inquiry with the quasi-healthy feeling of "reminiscence," clearly an element in a mental diplopia. For my task would be an endeavour to show that all morbid mental states are departures from normal (stereoscopic) mental states in particular ways—that, for example, the process of mentation in the maniac is but a caricature of stereoscopic and diplopic mentation in healthy people. Thus, the reminiscence, although it is almost pedantic to call it morbid, is really a link between perfectly normal and decidedly abnormal mentation. For reminiscence occurs in slight attacks of a certain variety of epilepsy, as do other voluminous mental states ("intellectual aura"): I call them all "dreamy states." These cases I should take next. There is clearly in them morbid mental diplopia, and yet this is traceably only a gross caricature of normal mental diplopia, being linked on to it by the reminiscence occurring in people we call healthy. And I think we may show that it has the same mechanism that puns have. Next taking these miniature and transient cases of insanity, and other cases commonly called insanity, I should try to show that the comparison of mentation with vision is of direct value. In the symptomatology of a patient who has paralysis of an ocular muscle there are many elements. There is morbid visual diplopia; in insanity there is morbid mental diplopia. The ophthalmologist's "true" and "false" images have their analogues in the "true" and "false" mental states in the cases of epilepsy mentioned. In the former, when the divergence of the eyes is slight, there is more visual confusion; in the latter, when the dissolution of the highest centres is shallow, there is more mental confusion. In the former, when the divergence is great, diplopia ceases (the patient, the ophthalmologist says, "neglects" the false image); in cases of epilepsy, upon deeper dissolution than that with which there is the "dreamy state," the actions are considerably coherent. The "erroneous projections" of the former have their clear analogues in the hallucinations of many cases of insanity. Believing that all diseases are to be looked on as flaws in different parts of one evolutionary system, I urge the "Comparative Study of Diseases of the Nervous System." I submit that, recognising the enormous difference between insanity and ocular paralysis, a profitable comparison and contrast may, nevertheless, be made, which will further a better knowledge of both. I do not mean simply that ocular paralysis may be taken as an illustration to simplify explanation of a case of insanity, but also that, both being examples of dissolution, the very same principles are displayed in each.

PARALYSIS OF THE ABDUCTORS OF THE VOCAL BANDS.

By GORDON HOLMES, M.D.,

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History.—The theoretical conception of this disease, as far as literary records go, is first due to Galen,[1] who states that "if the muscles which open or shut the glottis are rendered immobile," both voice and respiration will suffer in proportion to the extent of the lesion. But his notions, based on no precise observation, are of the vaguest kind, the more especially as he considered that the inter-arytenoid and thyro-arytenoid muscles alone had the power of closing the glottis, all the others being in his view dilators. Hence

[1] De Locis Affectis, lib. iv., c. 6.

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he would have connected the semeiology of this malady with paralysis of the lateral crico-arytenoid and crico-thyroid muscles, as well as with that of the posterior crico-arytenoids. Nevertheless, Galen was so much in advance of his own age and that which succeeded him that more than fifteen centuries elapsed before a pathologist arose to extend his conception, or even to appreciate its suggestiveness. About 1829 Albers[2] of Leipzig noticed cases of impeded respiration, which he called "laryngoplegia," and was inclined to set down to "paralysis of isolated muscles, especially the musculi dilatores glottidis." Such instances he conceived would arise in œdema of the glottis and croup (being then the chief cause of dyspnœa); also when tumours, such as aneurysm of the arch of the aorta, enlarged glands, &c., are so disposed as to press on the recurrent nerve; and, further, in case of ulceration or caries causing the muscles and cartilages to become separated. Before the introduction of the laryngoscope, however, this disease was of too recondite a nature to be recognised practically in clinical medicine. The first pathologist who gave it a really definite place in nosology was Gerhardt[3] of Jena, who about 1863 observed cases visually, and wrote an accurate description of the affection. "Should the posterior crico-arytenoid muscles on both sides," says he, "be alone affected, the strong contraction of their antagonists produces a glottis-narrowing continually progressive almost to closure. The inspiratory breath stream urges the vocal bands so near together that at the edges of the narrow chink remaining a loud friction sound exists (audible respiration). The voice is unaltered, whilst in recurrent paralysis it is essentially changed."[4] In these few sentences we have a picture of the disease almost clinically complete, and this short description was further elucidated by Gerhardt by remarks on the etiological and other collateral questions. In 1868 Mackenzie made this paralysis familiar to practitioners in this country by his essay on "Hoarseness and Loss of Voice," which exhibited for the first time a full view of laryngeal paralyses under an intelligible nomenclature. Finally, we may refer to Riegel's[5] extensive monograph on "Respiratory Paralysis," as marking the closing stage in the history of the malady, and bringing us up to the threshold of contemporary work in laryngology.

Semeiology.—Paralysis of the posterior crico-arytenoid muscles may be unilateral or bilateral. It is only in the latter case that the chief phenomena of the affection are developed.

Subjectively, as regards the larynx the leading symptoms relate to (*a*) respiration, but the (*b*) vocal condition also demands consideration.

a. In bilateral cases, the earliest—we may say, in fact, the only—trouble complained of is shortness of breath. The patient is always well aware from his own sensations that the obstacle to free breathing resides in the larynx. Thus he never, in uncomplicated cases, refers the obstruction to the chest, as happens in cardiac or pulmonary disease. This dyspnœa, as seen clinically, is usually progressive, and in the beginning, no doubt, as a rule, is almost imperceptible to the sufferer. In many instances, however, it halts at a certain point, and the patient may be but slightly incommoded, unless when muscular effort creates a demand for increased respiratory activity. In unilateral cases there is little or no interference with respiration, as the sound muscle by super-contraction can dilate the glottis sufficiently for all normal purposes.

b. With respect to voice, it is almost an antithetical distinction between bilateral and unilateral examples that the latter class present a vocal as exclusively as the former a respiratory obstacle. But the parallelism goes but a little way, because the vocal affection never attains any magnitude, whilst the dyspnœa may progress to a fatal result. Hoarseness, more or less decided, marks the unilateral paralysis; but the bilateral form, unless accompanied by a catarrh of the larynx, as not seldom happens, is free from this symptom. We have, of course, the phenomenon inseparable from all cases of respiratory derangement—viz., the impossibility of uttering a whole sentence in one breath, whence speech has a fragmentary broken character, with an [illegible] interval between every two or three words of [illegible] In addition, however, persons affected [illegible] by this paralysis speak so that the words have a peculiar short sharp ring, appearing to indicate that the vocal bands can only be held together firmly and steadily when assisted by the impulse of first approximation, although there may be no obvious affection of the adductors. No person in whom the malady is well developed can utter even a few words in a full and firm vocal tone. Hence, the bald statement usually found in text-books, that in the bilateral paralysis the voice is unaffected, appears to me to require a good deal of modification, and I consider there is a vocal characteristic that may often be recognised by the educated ear without further investigation as almost pathognomonic of this disease.

Objectively we have but one laryngoscopic sign proper to paralysis of the abductors of the vocal bands—namely, narrowing of the rima glottidis in its transverse diameter. This stenosis being brought about, as it is, by two distinct causes, also occurs in two different directions—namely, in lateral relationship, which is primary; and with respect to the linear centre of the glottis, which is secondary. At the earliest period of the malady in its bilateral form, before the development of any subjective phenomena, visual inspection could only notice that on full inspiration the glottis does not open to its widest extent, as happens in the normal condition; and during this act, when the paralysis has attained precisely its full development, the vocal bands cannot be drawn apart beyond the place they occupy when all the laryngeal muscles are at rest, —that is, the "cadaveric position," as Ziemssen calls the arrangement of the vocal bands as seen in the dead subject. But the narrowing, of course, does not necessarily stop here, for, in analogy with palsy in other parts, contraction of the unopposed adductors is likely to draw the vocal bands nearer and nearer, till, despite all efforts of the patient, the width of the glottis-slit is insufficient for the vital needs of expiration. Sonorous inspiration, often extremely loud during sleep, generally accompanies this stage. These results, however, are by no means constant, and many cases of much lower grade are lost sight of by the practitioner after having remained for many months in an apparently permanent unprogressive state. Thus the laryngoscopic picture is the exact complement of the subjective dyspnœa, and suggests nothing relative to vocal disturbance. In the unilateral paralysis the appearances, as confined to one side, are the same; and the glottis, especially during inspiration, is asymmetrical. We may also be able to observe that the affected vocal band is on a different level from that of the sound one, slanting from before backwards and downwards. The maximum of depression—which, however, is not likely to attain to 0·01 in.—is in the vicinity of the vocal process. The hoarseness, of course, directly arises from, and is proportionate to, this abnormality.

Pathogenesis.—In a majority of cases the exoteric etiology of this paralysis is very obscure. In some instances it undoubtedly originates in cold, especially when a subacute affection of a rheumatic character is produced in the cervical region.[6] It is also seen occasionally as the sequel of an acute attack of laryngitis, usually of a comparatively mild form.[7] Beyond these associations, clinical observation may recognise tumours disposed so as to press on the vagus or recurrent nerves, or evidences of brain disease, in which cases the paralysis is not likely to be pure, but will be more or less obviously complicated with other defects of motion or sensation in the larynx or elsewhere. Hence the pathogenesis of this malady is spread over a wide field, which can only be appropriately explored in the physiological laboratory or the post-mortem room, involving questions more proper for discussion in the next section. Mackenzie[8] thinks that

[illegible]

[2] Die Lähmungen und Therapie der Kehlkopfkrankheiten. Leipzig, 1829.

[3] Studien und Beobachtungen über Stimmbandlähmung. Virchow's Archiv, Berlin, 1863, Bd. xxvii.

[4] This last statement, as we shall see later on, is only partially correct.

[5] Volkmann's Sammlung Klinische Vorträge, No. 95. Leipzig, 1870.

[6] A healthy young man, aged twenty-seven, applied to me for relief on account of a difficulty of breathing, which had lasted several days. He complained also of some stiffness and aching in the neck, but was otherwise well. The laryngoscope showed that the vocal bands did not separate for more than a quarter of an inch on deep inspiration. The larynx in general was quite healthy. Respiration was accompanied by a blowing sound. Hot inhalations were ordered, and in a week the patient returned almost cured.

[7] A strong, well-built man, aged forty, came under my care for dyspnœa, which had been increasing for about a week subsequent to an acute attack in the throat. Inspection of the larynx showed paralysis of the abductors of the vocal bands, which could not be separated beyond the cadaveric position. They had, moreover, a dull appearance, and were just perceptibly marked with a few pink spots. Generally the laryngeal mucous membrane was in a similar condition, and indicated the recent subsidence of a sharp attack of acute catarrhal laryngitis. Similar treatment to that in the last case was adopted, and the patient did not apply for further assistance.

[8] Diseases of the Throat and Nose, 1880, vol. i., p. 438, [illegible]

mechanical injury of the muscles during deglutition, owing to their exposed position, accounts for many cases. Such injury is supposed to be maintained and increased owing to the unceasing activity of the muscles, even when in a condition demanding temporary quietude. In proof he cites an instance from Ott,[9] in which the malady apparently arose from a piece of meat being impacted at the entrance of the œsophagus for twenty-four hours. Under ordinary circumstances such a conception of pathogenesis must appear far-fetched, nor can it be doubted that the activity of the muscles would be involuntarily modified were they in a tender state. Viewing, however, the rarity of cases of this disease (about one in two thousand of all laryngeal affections), it is possible to accept an equally rare etiology.

In the accompanying table of sixty cases of bilateral paralysis of the abductors of the vocal bands (nearly all published with sufficient detail) many points of its pathogenesis and practical relations are illustrated. Thus we can observe (*a*) that, though the disease may occur at any age, it is rare till after adult life; (*b*) that males are more frequently affected than females (two to one); (*c*) that the etiology is often obscure, and the line between neuropathic and myopathic examples cannot easily be drawn; (*d*) that the primary causes are extremely varied; (*e*) that many instances exist for years *in statu quo*; (*f*) that death from actual closure of the glottis is nearly always obviated by tracheotomy, &c.

Unilateral cases are probably much more common than bilateral, but owing to the slightness of their subjective symptoms must be constantly overlooked. On account of their slight semeiological importance in pure laryngology observers have not usually published the examples met with. Not requiring the concurrence of pressure on both vagi or recurrents, they remo are often associated with thoracic

TABLE OF SIXTY CASES OF BILATERAL PARALYSIS OF THE ABDUCTORS OF THE VOCAL BANDS.

Case.	Age.	Sex.	Neuropathic or myopathic.	Cause.	Known duration.	Result.	Authority.
1	25	Male	Myopathic	Rheumatism of neck &c.	3 weeks	Cure	Author
2	40	,,	,,	Laryngitis (sequel of)	2 weeks	,, (?)	,,
3	55	Female	,,	(?)	1 year	(?)	,,
4	45	,,	Neuropathic	Disease of medulla (?)	6 months	(?)	,,
5	48	,,	,,	,, ,, ,, (?)	6 months	(?)	,,
6	51	Male	,,	Aneurysms of arch &c.	Some weeks	Death	Mackenzie
7	67	,,	,,	Cancer of œsophagus	(?)	,,	,,
8	15	,,	,,	Enlarged thyroid gland	9 months	,,	,,
9	60	,,	,,	Aneurysm and enlarged bronchial glands	6 months	,,	,,
10	44	,,	,,	Disease of medulla	21 months	(?)	,,
11	30 (?)	,,	,,	,, ,, ,,	1 year	Death	,,
12	25	,,	,,	,, ,, ,, (syph. ?)	2 years	Improvement	,,
13	50 (?)	,,	,,	,, ,, ,,	3 years	Death	,,
14	35	,,	Myopathic (?)	,, ,, ,, (?)	2 years	,,	,,
15	61	,,	,,	Overwork of voice (?)	15 years	Tracheotomy	,,
16	34	,,	,,	Syphilis (?)	9 months	Death (tracheotomy)	,,
17	30	,,	,, (?)	Disease of medulla (?)	9 months	Cure	,,
18	61	,,	,,	Rheumatism (?)	1 year	Tracheotomy	,,
19	43	Female	,,	(?)	2 years	(?)	,,
20	40	Male	,,	Laryngitis (abscess)	21 months	Death (tracheotomy)	,,
21	29	Female	,,	(?)	1 year	(?)	,,
22	46	,,	,,	Syphilis (?)	1 year	Tracheotomy	Woakes
23	65 (?)	Male	,, (?)	Bronchocele (?)	26 years	(?)	Gerhardt
24	5	,,	Neuropathic	Mediastinal inflammation &c.	1 year	Death (tracheotomy)	Riegel
25	58	,,	Myopathic	Phthisis (?)	1 month	,, ,,	,,
26	61	Female	Neuropathic	Disease of medulla (syph. ?)	(?)	,, ,,	Pentzoldt
27	68	,,	Myopathic	Facial erysipelas &c. (?)	Some weeks	Tracheotomy	Feith
28	26	Male	,,	(?)	9 months	Cure	Ziemssen
29	12	,,	,,	Typhoid fever (?)	6 weeks	Tracheotomy	Rehn
30	27	,,	,,	(?)	6 months	(?)	Duranty
31	32	Female	Neuropathic	Hysteria (pregnancy)	10 months	Cure (2 tracheotomies)	Ayaguez
32	35	,,	,,	,, ,,	(?)	Tracheotomy	Wemer
33	67	Male	,,	,, (?) ,,	6 months	Death (suffocation)	Heinze
34	36	,,	,,	Catarrh of larynx	2 years	Improvement	Klemm
35	33	,,	,,	,, ,, ,,	6 months	Tracheotomy	,,
36	43	Female	,,	Tabes dorsalis, or tubercle	Some weeks	(?)	Hischmann
37	36	Male	Myopathic	Catarrh of larynx	(?)	Cure (tracheotomy)	Glynn
38	62	Female	,,	Syphilis (secondary)	9 years	Tracheotomy	Böcker
39	19	,,	,,	Hysteria	3 months	Cure	Burow
40	24	,,	Neuropathic	Enlarged glands	18 months	Tracheotomy	Koch
41	20	,,	Myopathic	Hysteria	7 months	Cure	Schreiber
42	32	Male	(?)	Pressure from catarrhal thickening (?)	2 years	Death (tracheotomy)	Semon
43	47	Female	Neuropathic	Disease of medulla	2 days	(?)	Burow
44	62	Male	Myopathic	(?)	5 months	Death (tracheotomy)	,,
45	59	,,	,,	Catarrhal infiltration	(?)	(?)	Fischer
46	42	Female	Neuropathic	Syphilitic tumour of gullet &c.	3 months	Cure	Dreschfeld
47	40 (?)	Male	,,	Tabes dorsalis	1 year	(?)	,,
48	51	,,	,,	Aneurysm	3 months	Death (tracheotomy)	Semon
49	79	,,	,,	Cancer (post-tracheal ?)	18 months	,, ,,	,,
50	58	,,	,,	Cancer of gullet	4 months	,, ,,	Taylor
51	48	,,	,, (?)	Syphilis	1 year	Cure (tracheotomy)	,,
52	32	Female	,, (?)	Catarrh of larynx	2 months	(?)	,,
53	46	Male	Myopathic (?)	Diphtheria	15 months	(?)	Whipham
54	50 (?)	,,	Neuropathic (?)	Goitre (?)	2 years	(?)	Smith
55	31	,,	Myopathic (?)	Syphilis (?)	4 months	(?)	Hayes
56	49	,,	Neuropathic	Tabes dorsalis (incipient)	1 year	(?)	Weil
57	61	,,	,,	Aneurysm	3 months	Death	Hall
58	3	Female	,,	Persistence of thymus	Congenital (?)	(?)	Massei
59	46	Male	,,	Disease of brain or medulla	6 months	(?)	Bristowe
60	42	,,	,,	Phthisis (enlarged glands)	(?)	(?)	Gouguenheim

Note.—By "cure" is meant that the abductors ultimately regained their functions; by "tracheotomy," that life was maintained only by means of constantly wearing a cannula. In all fatal cases, except Nos. 16, 33, 42, and 44, death was manifestly due to the primary disease. Individual references to all the cases need not be given here. Burow's table, the only one hitherto published (Berliner Klinische Wochenschrift, 1879), gives the above details in twenty-eight cases, and there many of them will be found. Others are in Mackenzie (Diseases of the Throat, 1880), and a few again in Semon (Berliner Klinische Wochenschrift, 1888), bringing the number up to forty-six. Fourteen then remain to be accounted for. Two of my own have already been described; respecting Case 3, there is nothing to add; in Case 4 there was hemiplegic paresis, with anæsthesia, and in Case 5 partial paralysis of the tongue. The rest will be found as follows:—Thirty-one in L'Union Médicale, No. 46, 1885; thirty-six in Annales des Maladies de l'Oreille, &c., May, 1886; forty-five in Wiener Medizinische Wochenschrift, No. 19, 1885; fifty-five in Dublin Medical Journal, 1879; fifty-six in Berliner Klinische Wochenschrift, No. 13, 1886; fifty-seven in British Medical Journal, 1885; fifty-eight in Riforma Medica, Nos. 84, 85, 1886; fifty-nine in Brain, Oct. 1885; sixty in Annales des Maladies de l'Oreille, &c., Jan. 1886.

[9] Prager Medizinische Wochenschrift, No. 15, 1879.

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aneurysm and lung tuberculosis than the bilateral form. Thus, out of twenty-three instances I find that nine arose from aneurysm and five from tubercle. Of these Semon[10] has collected sixteen cases, and seven have come under my notice. From a pathogenetic point of view the unilateral paralysis possesses a much greater importance than it does when regarded as a purely local lesion. Owing to the intimate relations of the recurrent nerves with the arteries within the chest, thoracic aneurysm or other tumours may produce this paralysis as a symptom of their presence long anterior to any other phenomenon clinically recognisable. Hence in suspicious chest cases examination of the larynx becomes a necessity, and *vice versâ*. The chest should be well explored on discovering the least grade of abductor paralysis.[11]

(To be concluded.)

SOME NOTES ON THE MINERAL SPRINGS OF AUVERGNE.[1]

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As the season has arrived when medical men are in the habit of suggesting for their patients additional therapeutic agents, in the shape of mineral waters, as a concomitant to change of air and scene, I thought a few notes on the many valuable springs of Auvergne, which I visited in the autumn of last year, would not be uninteresting to the Academy. Owing to the ease with which it can be reached from Paris by the Paris, Lyons, and Marseilles Railway, and the number and variety of the springs that exist in this volcanic district, Auvergne offers, in my opinion, one of the best localities on the Continent in which to choose a mineral water that will suit the therapeutic indications of most of the ordinary ailments physicians are called upon to treat. Situated in the midst of the most beautiful mountain scenery in France, and within easy reach of each other, these springs offer many attractions to the invalid, as well as to the daily increasing number of fashionable valetudinarians, who consider a course of mineral waters absolutely necessary in their annual existence. To one of the springs of this region—Royat, now so well known—I need not allude, as its character and therapeutic properties were so ably and graphically brought under notice by the late President of the College of Physicians, Dr. Cruise, in a paper read by him before the Academy of Medicine last year, that I could add nothing that he has not called attention to. There are other springs of this region to which it was his intention to allude in a future communication, and I trust he will not consider that it is in any spirit of anticipating him that the few remarks I have now to offer in connexion with them are made. The other springs to which I wish to allude are La Bourboule, Monte Dore, and Chatel Guyon.

La Bourboule.—This spring is now beginning to share with Royat an equal amount of popularity. The attention it is receiving at present from medical men in England, as a water particularly suited for the treatment of obstinate skin diseases, is calculated to make it ere long one of the most flourishing and fashionable, as it is at present one of the best, of the many springs of Southern France for such cases. Though for many years recommended by the Paris physicians for the value of its waters in such affections, it is only within the past seven or eight years, coinciding with the growth of [illegible] and the easier means of reaching it now by railway from Clermont—the capital of Auvergne,—that its value as a powerful arsenical spring has been recognised in these countries. The value of its waters is enhanced by its situation in the most mountainous part of Auvergne, being about 2600 feet above the sea level; and the invalids [illegible] go there can reach it in thirteen hours from [illegible]. Laquelle, which is the railway station for both La Bourboule and Monte Dore, is distant only about five miles from either place, and comfortable omnibuses convey visitors from the station to both of these places on the arrival of trains. The Bourboule springs have two sources, the source Perrière and the source Chaussy, both identical in chemical composition. The Perrière spring supplies 368 quarts per minute, at a temperature coming from the earth of 140° F.; and both springs, in addition to containing arsenic, with the chlorides and bicarbonates of the alkalies, contain large quantities of free carbonic acid, which renders them sparkling and limpid in appearance. The first chemical analysis made of the Bourboule waters in 1853 showed them as containing a large quantity of arsenic, a quantity equal to twenty-one drops of Fowler's solution in each quart of the water, the largest quantity contained in any mineral waters now known. Professor Berthelot, in giving his opinion of the origin of the arsenic in these springs, says: "The conclusion at which I have arrived is that the soluble arsenic contained in the Bourboule waters takes its origin from the interior of the earth; it is brought up in the waters through the fissures in the granite, and is not produced by their contact with disintegrated earth schistes and other materials situated above the granite. Soundings were also made through the granite formations of a depth of 250 ft. below the surface by M. Perrière, who found the pure arsenic waters at this depth. Nine-tenths of the solids contained in these waters are salts of soda, with ammonia, potash, and lithia, with lime, magnesia, alumina, and traces of iron; while the acids contained in them represent arsenious, hydrochloric, and carbonic. In 1856 M. Gonod discovered in the sediment of these waters the presence of iodine. Professor Gubler, when studying the composition of these waters, considered the salts contained in them corresponded to the salts found in the blood. They may be described as thermal, alkaline, arsenical, chlorinated bicarbonate, gaseous waters. Ten years ago La Bourboule was only a mountain village, with a few houses and one hotel; it is now a town of fine hotels (of which there are over fifty), with two parks, a theatre, and casino, and twelve or thirteen medical men, several of whom speak English. As indicating the rapid growth of the place, statistics show that in 1865 only 600 patients underwent the course of treatment, while in 1877 there were over 2800, and last year there were over 10,000 or 15,000 visitors. In 1875 the first respectable bathing establishment was built by a Frenchman, Dr. Chaussy, and a few years later, in 1879, a company purchased his interest in the place and built two other establishments, one of which, the Grand Établissement, is capable of accommodating over 300 bathers at a time, and is completely fitted up with all modern improvements. The waters for drinking are brought into the central hall of this establishment, and all round are situated bath-rooms, and halls for inhalation of the waters in a state of steam, and apparatus for pulverising it for throat and laryngeal cases, with rooms for ascending and local douches and wet and dry massage. The latter form of treatment is carried out on the most approved principles by skilled masseurs, so that any physician desiring such a mode of treatment for his patients can have it carried out here in perfection. Dr. Chaussy left a record of the cases treated by him at the spring for a period of over twenty-nine years, and nine-tenths of these cases were scrofula, rheumatism, and gout, especially the cutaneous manifestations of these diseases; special mention was also made of their beneficial effects in cases of chronic rheumatic arthritis. The springs are also held in high repute for the treatment of intermittent fevers, chronic coryza, hay fever, nasal and pharyngeal catarrh, strumous or tubercular joints, bronchial catarrh, asthma, and emphysema. Judging from my own observation of the cases I saw there, skin diseases, especially psoriasis, eczema, and lichen, seemed the more numerous, with numbers of cases of naso-pharyngeal catarrh, for whom the waters in the form of nasal douche and spray seemed admirably suited. I also noticed numbers of cases of suppurating cervical glands. As showing the beneficial effects of these waters on cases of all kinds of skin diseases, the medical men from the other watering places are in the habit of sending them to Bourboule to be cured, and my friend Dr. Brandt told me that many cases of psoriasis and chronic eczema that were not cured at Royat rapidly got well by an after course of Bourboule. The waters have generally to be taken cautiously at first, beginning with half a glass three times a day, increased to a glass, and their high temperature and saline taste are rather agreeable to some. If taken in too large a quantity they cause colic and diarrhœa, but most patients (even atonic dispeptics) bear them well, producing in them a feeling of warmth in the stomach, and

[illegible] 1883.
[illegible] in his papers
[illegible] Academy of [illegible], June 1st, 1887.

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sharpening the appetite. The usual course of the baths and waters is twenty-one days, when saturation is supposed to be reached. As the altitude of Bourboule is high, the season does not begin until June, and it ends with September. The autumn months are generally considered the best, and medical men sending patients there should recommend a supply of warm clothing, as the evenings are often cold. The waters bear exportation well and keep a long time, and are, in my opinion, a most suitable form in which to administer arsenic, from the ease with which they can be assimilated by the most delicate stomachs. Either source will do, as they are both exported, and it is quite immaterial whether the brand indicates the source Perrière or Chaussy, as the waters are identical.

Monte Dore.—Monte Dore, which is four miles higher up in the same valley (the valley of the Dordogne River) than Bourboule, is reached in the same time from Paris. It occupies, however, a higher altitude than the latter, being about 4000 ft. above the sea level, and enjoys a cooler climate. Its waters are below those of La Bourboule in temperature, being 113° F. as they come from the earth. Like the Bourboule waters, they contain arsenic, but in smaller quantity and in combination with iron, which latter exists in the Bourboule water as the merest trace. They are therefore considered more tonic than the Bourboule waters, but are not, in my experience, so easily assimilated or drunk by the visitors in such quantity. The springs of Monte Dore were known to be three in number since the last century. They are now nine, and the united quantity of water they give is equal to that of Vichy. The Cæsar spring is the best known, and contains the largest quantity of free carbonic acid. The Raymond spring, which is the most ferruginous, is the one most generally drunk in conjunction with the Madeline, which contains much less iron. These three springs are the principal ones. The springs of Monte Dore are very ancient: they were known to the Romans, and the remains of their baths are still to be found in tolerable preservation where they were hewn out of the solid rock at the foot of which Monte Dore is built. The bathing establishment of Monte Dore consists of two parts: the establishment proper, and another building called the Vapour Establishment. In the first were found the remains of the Roman Piciua, where the waters came hot from the foot of the mountain. In 1877 two new halls were added to the pavilion—built in 1866—with thirty-six bathing closets, which originally contained only seven baths hollowed out of the rock. These new halls contain from fifty to sixty bath rooms, with a Piciua or bathing place, one of which is reserved for the poor *gratis*. The vapour establishment is, however, the great feature of Monte Dore. It was opened in 1852. On the ground floor are two galleries upon which sixteen vapour-douching closets open, eight on each side; between these two galleries here two pulverising-halls, one on either side for each sex, for the treatment of affections of the throat and nasopharynx. Each inhaling hall gives access to another smaller room where patients can breathe a less thick and hot vapour. Each patient before entering these halls is provided with a suitable waterproof dress worn over their ordinary clothing. A hundred patients at least can be accommodated in each inhalation hall. In 1877 the number of these inhalation halls was increased. The objects of inhaling the waters in a state of steam are to promote the absorption of their chemical constituents into the blood through the bronchial mucous membrane, and to medicate the bronchia and lungs locally should they be diseased. That the waters have a sedative action on the bronchial mucous membrane administered in this form, we cannot deny, and the doctors of Monte Dore ascribe it to the carbonic acid present in the waters. They illustrate the sedative and anæsthetic action of carbonic acid applied locally by getting patients with neuralgia of the face to hold the painful part over a tube placed over one of the springs so this gas escapes from it coming from the earth, and into which it is received, and they find after a few minutes complete relief from pain, while considerable anæsthesia of the parts is produced. They also use what is called a carbonic acid bath to relieve neuralgia or gouty pains occurring in the joints or muscles. Monte Dore enjoys a high reputation for the treatment of asthma, both of the spasmodic and bronchial kinds, and judging from its sedative action on the bronchial mucous membrane when applied in the form of steam inhalations, its good effects in the latter form are undoubted. In the spasmodic form of the disease, which we most commonly see often dependent on the presence of poisons in the blood, derived either from ptomaines or the unoxidised products of urea circulating in the blood, my own impression of the efficacy of the waters in this affection is that they play a very doubtful part in the cure, which is, I think, more due to the bracing mountain air and the better oxidation of the blood and better assimilation of food which takes place in such an altitude as a high altitude. Dyspepsia on any diet in such an altitude is consequently unknown, and quickly disappears after a short stay in Monte Dore. The Monte Dore doctors speak in glowing terms of the curative effects of the waters, when inhaled in the form of steam vapours, on ulcerating tubercular cavities in the lungs. My own impression is that change of air and the high altitude have more to do with any beneficial effects that are the outcome of their use than anything contained in the waters themselves. There is one feature in the manner of using these steam vapours which, judging from the recent light thrown on the pathology of phthisis, is certainly to be condemned—namely, crowding a number of cases of lung affections into a close moist atmosphere. We know such an atmosphere is just the very one in which the bacilli of phthisis is most at home, and there is every reason to suppose that mild or non-infected cases are likely to become the receptacles of the microbe, if they are not so already, by breathing such an infected atmosphere. I expressed such an opinion to one of the medical men there, and he agreed with me, and said the authorities of the place were taking steps to fit up separate inhalation rooms for each phthisical case, instead of having them, as at present, all crowded together. The medical men of Monte Dore do not consider the presence of hæmoptysis any contra-indication for the use of the waters, as they act, in their opinion, as astringents, both internally and topically; and they treat active hæmorrhage from the lungs by immersion of the feet in the rock-hewn baths where the water comes directly from the earth at its highest temperature, considering the revulsive action thus produced acts like the application of a Junod's boot. Besides cases of phthisis, most of those I saw at Monte Dore were cases of bronchitic asthma, emphysema, laryngeal affections, including tubercular ulceration of the larynx, laryngo-pharyngitis (clergyman's sore throat), rheumatism, uterine affections, palpebral conjunctivitis, and also chlorosis. The place enjoys a great reputation amongst singers for its effects on all laryngeal troubles, and, judging by the numbers who come there, they must derive benefit from it. The season at Monte Dore begins late (end of June), and is generally over by the beginning of September. The hotels are numerous and good, but the village itself is a dirty and an uninteresting one.

Chatel Guyon.—The third spa which I have mentioned, Chatel Guyon, is situated in a charming and picturesque valley of Auvergne, about six miles by road from Royat. Riom would be its railway station coming from Paris. Chatel Guyon is called by the French physicians the Kissingen of France, and its springs are very numerous, bubbling up in all directions over the place. Unlike Kissingen, its waters are hot, and not nearly so bitter or disagreeable to the taste. The amount of carbonic acid contained in the waters, and which escapes from the earth in every direction, makes the ground (especially in the large bathing establishments) quite hot under the feet. Their taste is slightly salt and acidulated, leaving a styptic after-taste. If drunk at the spring the saline taste is masked by the carbonic acid present, but if allowed to stand for some time the gas escapes and the saline taste reappears. The waters as analysed by Dr. Magnier, of the laboratory of the Paris School of Medicine, shows them as containing a large quantity of chloride of magnesium—thirty grains to the quart, to which their aperient action is due. They possess also very considerable diuretic properties. This analysis also shows them as containing, besides the chloride of magnesium, chloride of sodium, and bicarbonates of lime, soda, potash, and iron. When kept in a closed vessel these waters deposit their iron, with a small quantity of carbonate of lime and magnesia. For this reason the waters do not look well when exported if kept for any length of time. After taking a few glasses of these waters hot from the spring, there is a feeling of intestinal gurgling, followed by an abundant bilious discharge, with either copious diuresis or a free action of the skin. Although the peristaltic action of the bowels is rapid, it is neither preceded nor accompanied by griping or pain. The stomach feels no inconvenience from the use of these waters, except in cases where the drinkers take too large quantities at a time placed in the hour of the morning a glass or tumbler of the water, and then part passes down into the intestines and [illegible]

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intervals. In some cases of obstinate constipation the laxative effect is not produced the first day, but when it is once produced it continues uninterruptedly without pain or inconvenience. The internal effect of these waters is considerably assisted by the action of the baths, which, from the large quantity of carbonic acid gas present in them, has a most exhilarating effect on the bather, producing a feeling of what the French call "bien-être," which none but an atonic dyspeptic can sufficiently appreciate. Owing to this effect, when used as baths, and taken internally, the waters are largely availed of by dyspeptics, and for many such cases these waters are superior to Royat, the waters of which, as is known, have no aperient action. The cases that seemed to me to frequent Chatel Guyon were those of obstinate constipation, and the medical men of the place speak in high terms of their effects in such cases, and that when once the habit of a daily evacuation is produced by their use the good effects continue after leaving the spring. I also noticed a number of people who came there to get cured of obesity, for the treatment of which the waters enjoy a considerable reputation; and Professor Gubler considers them especially useful in cases of Bright's disease and diabetes. The waters also occupy a high position in the opinion of gynæcologists as a remedy in endometritis, uterine catarrh, leucorrhœa, and dysmenorrhœa.

In concluding these remarks, I have only to add that those who visit Auvergne either for health, recreation, or amusement, will not come away disappointed. And the invalid who cannot find among its many mineral springs one to suit his particular ailment is not likely to find it elsewhere, but he cannot fail, at all events, to come away much impressed by its splendid scenery and improved by its bracing mountain air.

Dublin.

CASE OF

EPITHELIOMA OF THE TONGUE; REMOVAL OF LEFT HALF.

REMARKS ON THE OPERATION AND AFTER-TREATMENT.

BY LOCKHART STEPHENS.

MRS. H——, aged forty-two, first came under observation on Feb. 17th of this year for an ulcer on the left border of her tongue of five and a half months' duration, caused by a sharp point on the first lower molar of the left side. There was no history of malignant disease in the family or of syphilis in herself. The ulcer occupied the middle third of the left border of the tongue, extending slightly on to the dorsum, but more on to the under surface, and its character was that of epithelioma. No glandular enlargement. The rest of the tongue looked healthy. Early removal of the left half of the tongue was strongly advised. For a week before operation the mouth was well washed out six or eight times daily, and especially after taking food, with a saturated solution of boracic acid. On March 1st, chloroform being administered through the mouth by Mr. Palmer Stephens, laryngotomy was performed, and a silver tube tied in, through which the anæsthetic was then administered till the end of the operation. Assisted by Mr. Rory Fletcher, I proceeded to remove the left half of the tongue. The back of the pharynx was well plugged with two pads of sublimated wood-wool wadding, and the mouth well washed out with the boracic acid solution. Nearly the whole of the left half of the tongue was removed according to Mr. Whitehead's directions, with this exception, that instead of scissors a stout blunt director was used to tear through the muscles down to the lingual artery, which was ligatured before being divided. Except a few small vessels, which were readily stopped under sponge pressure, there was no bleeding beyond a general slight oozing. The mouth was again washed out with the boracic acid solution, and the pads removed from the pharynx. Although the anterior parts of the pads were saturated with blood, the posterior parts were quite clean, shewing that no blood had passed through or by them. The cut surface of the tongue was painted over with iodoform suspended in ether, whereby a uniform even coating of the powder was deposited. The laryngotomy tube was now removed, and the wound [illegible] with iodoform collodion. A small wood-wool pad was placed in the floor of the mouth, a strip of iodoform gauze laid over the teeth, and the mouth completely covered with an antiseptic pad made of sublimated wood-wool wadding in iodoform gauze. During the day, after the operation, some eight or ten of these pads were required, as all saliva and discharge passed into them before coming into contact with the air of the room. For the first four days the treatment consisted in the patient washing out her mouth three times daily with the boracic acid solution, iodoform being applied on each occasion. All nutriment was administered per rectum by means of enemata prepared with the extractum pancreatis and zymonised suppositories, which were given every four hours. The temperature never rose above normal, nor was there at any time the least odour to the mouth beyond that of the iodoform. On March 5th the patient drank half a pint of warm peptonised milk three times during the day in addition to the feeding per rectum, which was continued until the 11th, the diet consisting of milk, ox-tail soup, jellies, and beef-tea, all of which were peptonised. On the 11th she was able to go for a drive, and was gaining flesh. On the 17th the tongue had almost healed, and was feeling soft and natural. No glands could be felt. The patient was ordered to do very little talking for the next six weeks, and at most for only a few minutes at a time: to eat no solid food which would be likely to irritate mechanically, and to avoid hot and pungent articles of diet; also to take extract of malt with peptones three times daily after meals. On April 23rd it was noted that she had gained weight and strength since taking the malt.

Remarks.—That there is still much difference of opinion in the minds of surgeons as to the best method of operation and after-treatment of cases of epithelioma of the tongue is, I think, obvious from the different accounts to be found from time to time in the medical press and literature. The success of operators in Germany is in advance of those in our own country, if I am rightly informed, and this seems to be due mainly to their more elaborate application of antiseptic principles in operations on the tongue and jaws. Having had the opportunity of watching cases of removal of the whole or part of the tongue by nearly all the methods practised in this country, I believe that removal with scissors through the mouth is in most cases the best, in that it admits of antiseptic measures throughout, both as to drainage of the mouth and keeping the discharge aseptic. For at least a week before any operation on the tongue the patient should be instructed to wash out the mouth frequently, and especially after taking food, whether solid or liquid, with some antiseptic lotion, such as a saturated solution of boracic acid. The offending tooth or teeth should be extracted some three or four days before operation, in order that there may be no unnecessary oozing of blood after the tongue is removed. In the place of sponges I used pads of sublimated wood-wool padding enclosed in iodoform gauze, of various sizes, such as are largely used in most German hospitals, and found them most satisfactory. These pads can be made of any size, and are admirably adapted for making firm pressure on a bleeding point; they absorb well, and are readily seized by any kind of forceps or sponge-holder, and as any number of them can be ready to hand no time need be taken up in washing, as in the case of ordinary operation sponges. At first sight it seems difficult to apply an antiseptic dressing to a tongue case, but the difficulty is, I think, more apparent than real. After painting the tongue with the iodoform ether, the application of which causes a little smarting, not amounting to pain, and leaves a good even film over the wound, I well covered the mouth with a wood-wool pad, and kept it in position by elastic loops over the ears. By this means all saliva passed through a layer of absorbent antiseptic material before coming into contact with the external air. A number of these pads should be prepared for use, and a fresh one applied on each occasion of washing out the mouth or on its becoming saturated.

Mortality after operation.—In Mr. Butlin's work on "Diseases of the Tongue," I find up to Oct. 16th, 1886, Mr. Whitehead had removed the *entire* tongue in fifty-eight cases, with nine deaths, of which five were due to septic pneumonia. Mr. Morrant Baker at the same date had operated in "forty cases, with four deaths, of which three were due to septicæmia or septic pneumonia." Mr. Butlin, in discussing the causes of death after operation, says: "Although hæmorrhage cannot be made directly responsible for many deaths, it exercises a very large indirect influence on the results of operations. ..... The small quantity of blood which is lost is, in part at least, swallowed and in part passes down into the trachea and bronchi. It is liable

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to undergo decomposition, and is probably a very important factor in the production of the earlier deaths from affection of the lungs and septic poisoning." Again, "the most common, and that to which attention cannot be too persistently directed, is affection of the lungs."

The fact that in nearly all these cases of lung affection the condition is due to septic changes is sufficient evidence that it is theoretically (and why not practically?) preventable. The possibility of *any* blood, no matter how small the amount, obtaining entrance to the air passages is of itself an element of danger and should be prevented. This in the hands of very skilful surgeons may be possible; but with many operators the safer plan would be to perform laryngotomy as a preliminary step, and to make sure that the pharynx was efficiently plugged before commencing the main operation. For this suggestion and others I am indebted to my friend Mr. Jacobson, of Guy's Hospital. So little inconvenience did the laryngotomy wound cause, that to this day, so far as I am aware, my patient does not know that she had a laryngotomy tube in for some twenty minutes. No additional risk is incurred by this precaution; but with the pharynx plugged a great source of danger is avoided. In connexion with the operation there is one point which cannot be too strongly insisted upon, and that is to stop each bleeding point as it is met with.

With regard to the after-treatment, the customary practice is, I believe, to omit feeding per rectum as soon as food can be taken by the mouth. With many cases this is not wise; for by the rectum a large amount of nutriment can be very efficiently introduced into the system. One reason for the early omission of rectal feeding has been the irritability of the bowel, which soon follows the use of ordinary nutrient enemata. This difficulty, formerly a real and practical one, has been overcome by the use of nutrient suppositories and peptonised enemata.

Emsworth, Hants.

CHLORIDE OF AMMONIUM IN THE TREATMENT OF HEPATIC DISEASE.

BY SURGEON-GENERAL W. STEWART, M.D.

THE method of treatment of hepatic disease by chloride of ammonium having been lately brought prominently forward in the columns of a contemporary in connexion with the controversy arising out of the discussion on Dr. Harley's paper on Hepatic Phlebotomy, read at the late Brighton meeting of the British Medical Association, I think the present an opportune moment to again revert to the subject, which I hold to be one of supreme interest and importance, seeing the great extent of our Eastern possessions, and the suffering and mortality from hepatic disease to which a large body of our troops and officials are exposed by service therein.

It is not my intention at present to touch on the surgical procedures that may be advisable in certain forms and stages of hepatic trouble. In a future paper I hope to say something on that point. Meanwhile I am tempted to quote the pertinent remarks made by Surgeon Thornton, in his highly interesting and suggestive paper read at the above meeting, that "we may include the liver in the domain of surgery, always, be it understood, when the physician says, 'I can do nothing more here.'" In his interesting letters on this subject in a contemporary,[1] my old friend and former brother officer, Brigade Surgeon W. Alexander, of Streatham, under the heading of "Chloride of Ammonium *versus* Exploratory Incisions in Inflammatory Diseases of the Liver," not only bears testimony to the great value of the chloride of ammonium treatment in his own hands, at home and in India and Burmah, but makes pointed allusion to the fact that "it is not generally known in this country." Surgeon-Major Ryan, too, in his able communication in the same journal,[2] bears similar testimony both as to its value and its inadequate appreciation by the profession at home.

Elsewhere,[3] I have ventured on a detailed explanation of the action of the chloride of ammonium, both special and general, in hepatic congestion. I have shown how, as long as that condition lasts, a local depletion is effected from the portal capillaries by each succeeding dose of the drug; and how, at the same time, by a species of auto-transfusion from the portal into the general circulation, the entire portal system, from its origin in the venous radicals in the intestinal mucous membrane, is freed from engorgement, and thus the liver is not only relieved from congestion and its functions restored, but the occurrence of dysentery, so apt to supervene in hepatic congestion, and particularly in tropical abscess, is prevented. The depletion of the congested abdominal viscera thus effected, unlike that by leeches or other local means, is not attended with depression or loss of vital fluid, a loss which in such cases is but ill borne.

Since the publication of my first paper on this subject in THE LANCET of May 7th, 1870, the chloride of ammonium treatment has been embodied in several of the leading text-books, both in this country and America. But I am sorry to say that, with the exception of Professor Aitken, not one of the English writers has given the details of the auxiliary treatment, diet, and management, without attention to which I have all along held its full success could not be attained. Murchison, however, adds his own testimony to "its great utility in hepatic congestion in this country as well as in India," and as the *general* effects of the chloride of ammonium, in hyperæmia of the liver, are summarily and tersely described by him, I cannot do better than reproduce them here. "In doses of twenty grains, two or three times daily, it induces free diaphoresis, increases the flow of urine, diminishes portal congestion, and relieves hepatic pain. It is believed also to stimulate the absorbents, especially those in the liver, and thus to effect the absorption of hepatic abscesses."[4]

Those who have seen the acute congestion of the liver in the East, as it reacts under the systematic use of the ammonium chloride, know how true all this is. But to those who have no experience of its effects in such cases, or who have only employed it in chronic cases, which have been ineffectually treated in India, till the liver has become chronically enlarged and demoralised, so to speak, so as to be much less amenable to the action of the remedy, the above statements may appear somewhat surprising. The latter class of cases, however, are those likely to be met with in invalids from abroad, whether in the private practice of the specialist or in the Royal Victoria Hospital, Netley. Indeed, the same may be said of the various convalescent depôts and general hospitals in India, into which similar cases make their way from up-country and out-stations after a variety of remedial measures have been employed and failed to effect a cure.[5]

In the limits of a paper of this kind it is impossible to do more than present a short summary of the auxiliary treatment, diet, and management of cases of hepatic congestion and tropical hepatitis, and of the rules to be observed in the administration of the ammonium chloride. But before doing so I must give a brief account of the *special* and characteristic symptoms produced by the drug in hyperæmia of the liver, which are peculiarly and directly referable to the liver and related parts, and for which it is necessary the doctor should be on the look-out, lest they be mistaken as evidences of the medicine disagreeing. They are, on the contrary, signs of its successful action—success signals, so to speak,—and as such should be carefully noted. The liver once freed from congestion, they, along with the *general* symptoms, are no longer manifested, and hence their occurrence after the administration of the drug in any given obscure case may be considered *diagnostic* of hepatic disease.[6]

The symptoms now to be described occur shortly after the medicine is taken, in from five minutes to half an hour. Sometimes a "shock" is felt, or as if "something gave way" in the side; at other times a succession of shocks is experienced in the hepatic region, accompanied or not by a

[1] British Medical Journal, Dec. 24th, 1886, and Jan. 29th, 1887.
[2] Ibid., Feb. 5th, 1887.
[3] The Treatment of Hepatic Disease, pp. 21-35. London: Smith, Elder, and Co.

[4] For its use in the congestive stage of cirrhosis, see also Ringer's Handbook of Therapeutics.
[5] In this statement I also include cases in which, although the chloride of ammonium may have been used, it has not been systematically or persistently administered. That such cases are of very frequent occurrence, a long experience in charge of the European Detail Hospital at Madras, and afterwards as Deputy Surgeon-General of the district, has convinced me.
[6] For an account of the *general* symptoms produced by the drug in hyperæmia of the liver, which are equally characteristic and remarkably regular in the order of their occurrence, see my monograph and paper in THE LANCET, May 7th and 21st, 1870, above quoted.

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pricking sensation ("pins-and-needles"), or as if cold water were trickling down the side; or the action is described as that of "a pulling" from one hypochondrium to the other, or from the margin of the right costal arch upwards and backwards as if through the liver; or a "clawing," "working," or "gnawing sensation" is spoken of as felt by the patient. When a single sharp shock is experienced in a debilitated, nervous, and susceptible subject, it is often severe; and I have known the patient to cry out in consequence, frightening the other patients in the ward, and being himself alarmed. Immediately afterwards, however, the severe hepatic pain vanished, and never again returned with its original severity; and with each succeeding dose a sensation of "pulling" only was felt in the hepatic region, till at length all sensible action ceased with the removal of the hepatic congestion, the case being one of simple enlargement of the liver. With the local actions excited in the liver and related parts—through reflex nervous action—when a full dose of the drug has been taken, motor impulses are similarly communicated to the muscles of the intestinal canal, causing its peristalsis to become more rapid and energetic, as evidenced by the "twisting" and other movements experienced in the situation of the duodenum, or all over the abdomen, and which at times are more sensibly felt in particular parts, in the situation of the umbilicus, or in the inguinal region. Simultaneously with or closely following the above phenomena, the abdominal muscles may be thrown into tonic contractions, which are perceptible at times to both sight and touch; and pulsatile movements are felt and are sometimes visible along the margins of the right inferior ribs. I have, in my monograph[7] above referred to, shown that all these phenomena are highly purposive, contributing, with other vital actions and processes brought about by the drug, to diminish portal congestion, restore the diseased liver to a healthy state, and afford relief to the entire system.

The following is a summary of the auxiliary treatment, diet, and management of congestion of the liver, and mode of administering the ammonium chloride:—

"Bearing in mind what has been said of the therapeutic effects of the drug in hyperæmia of the liver, and the indications to be drawn from the symptoms and pathology of the disease, the first thing to be done is to put the patient to bed, there to remain, in acute cases, during the whole course of the disease; in short, till the congestion, pain, and general and local distress and uneasiness shall have subsided, and that the patient may have no occasion to quit his bed, a bed-pan and urinal should always be at hand, as well as a trusty attendant to minister to his wants. By the recumbent position and the avoidance of all sudden and violent movements, mechanical rest and support are given to the enlarged, weighty, and oppressed or painful organ. The horizontal position, too, facilitates the auto-transfusion of the blood from the portal system, through the hepatic capillaries, into the general circulation, under the influence of our special remedy—a process which will be better understood now that the reader is in possession of the details of the local signs expressive of the effects produced by it: the excitation of the muscles of the intestinal canal to increased peristalsis, and those of the abdomen and thorax surrounding the liver to tonic contractions, by which muscular pressure is brought to bear on the radicals of the portal vein, and on the liver and gall-bladder, which not only hastens forward the entire portal stream, but may squeeze out of the liver some of the superfluous blood as well as free it and the gall-bladder from retained bile. By the increase of the functional activity of the liver, as well as the increased flow of blood to the skin, as a further result of its action, a *vis a fronte* is brought into play in aid of the *vis a tergo* above described, by which the equilibrium of the entire circulation is speedily restored. The free perspiration induced by the drug is also promoted and chills avoided by the rest and warmth of bed. I have shown elsewhere that it is to this latter stage of its operation that much of its value is due—the free diaphoresis favours sleep, while the nervous system generally is exhilarated and soothed, and the patient almost entirely relieved from all his distressing symptoms.

"It is equally important that the congested (or, it may be, inflamed) liver should enjoy, as far as possible, physiological rest. To this end, on no account must solid food be given to the patient, and wine, beer, or other alcoholic stimulants must be strictly prohibited. The diet must be of the least irritating character, and only small quantities of milk, beef-tea, or farinaceous articles should be taken at a time. Barley water may be taken freely as a drink. If there be diarrhœa, the patient passing frequent loose bilious or dark-coloured motions, a pill composed of two grains of mercury and three grains of Dover's powder, repeated every two hours till four or five have been taken, will be found the most effectual means of checking it without the risk of setting up gastro-intestinal irritation. Looseness of the bowels, however, does not contra-indicate the use of the chloride of ammonium—indeed, it is in itself the best remedy in cases of diarrhœa associated with hepatic congestion. The only condition which contra-indicates the immediate use of the drug in acute cases is the existence of a combined hot and dry state of the skin with pyrexia. Under such circumstances its use should be preceded by a few small and frequently repeated doses of solution of acetate of ammonia, till the skin is rendered moist and perspirable. Pyrexia being absent—or, if present, the skin being soft and perspirable,—the chloride should be at once commenced and persistently administered in doses of twenty grains twice or thrice daily, with strict attention to the rules above laid down as to diet, rest in bed, &c., till it no longer produces sensible effects, or till all local uneasiness, hepatic pain, and tenderness have subsided. Fomentations or hot bran-bags applied to the seat of pain in the side will be of use in aiding determination to the skin generally, as well as by their local soothing effects.

The following case illustrates the beneficial action of chloride of ammonium, as well as the characteristic and *special* symptoms following its administration in the various forms of liver congestion met with in India and other tropical countries. But congestion of the liver and functional derangements are of more frequent occurrance at home than is generally imagined, and our special remedy has been found to be of great service in this country, not only in congestion, but what is commonly known as "torpor of the liver", and functional derangements, attended by lithæmia (Murchison), associated with congestion of the liver, want of sleep, and depression of spirits, in all of which cases the drug is pre-eminently useful.[8]

H. C—— was admitted into the hospital, Secunderabad, on Nov. 9th, 1880, suffering from simple enlargement of the liver, with much pain and tenderness in the right hypochondriac and epigastric regions. He stated that for about six weeks prior to admission he felt more or less uneasy in the right side. This feeling was not one of pain, but gradually prevented him lying on either side, owing to a sensation of weight and increased uneasiness in the hepatic region; and this feeling was increased by lying on the left side. For about three days before reporting himself sick he experienced a dragging pain in the right side. For some time previously to admission he felt a bitter taste in his mouth on rising in the morning. On admission the left lobe of the liver was found to descend to within two inches of the umbilicus, and hepatic dulness existed in the right mammary line to within two inches of the crest of the ilium. There was exquisite tenderness all over the hepatic region on gentle pressure. Decubitus dorsal; bowels regular; temperature normal; pulse 74. Chloride of ammonium (twenty grains) was given thrice daily, fomentations were applied to the side, and the patient ordered not to quit or move suddenly in bed.—Nov. 10th: Medicine acted characteristically, producing symptoms which the patient described as follows:—A short time after taking the medicine a sensation of "pins-and-needles" starts from the middle line in the lumbar region, and travels slowly up along the margins of the ribs of the right costal arch, and on reaching a point corresponding to the right mammary line remains stationary for a while, and is then followed by a "darting" at the above points, when the pain subsides, and he remains relieved for a considerable period.—12th: Yesterday evening the patient sent for the apothecary on duty, complaining of severe darting pain situated at the margin of the ribs in the right mammary line. He was hysterical and sobbing. He said the pain came on a short time after the last dose of the medicine—about half an hour previously. The pain increasing in intensity, he either lifted or "felt himself lifted up," as he expressed it, and immediately

[7] See also the Madras Monthly Journal of Medical Science for February and March, 1872.

[8] Murchison: Clinical Lectures on Diseases of the Liver. Edited by Dr. Lauder Brunton and Sir J. Fayrer. Third Edition. Pages 128, 260, and 687.

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afterwards felt another dart, worse than before, and something seemed to slip up, and he felt relieved and went to sleep. The lower margin of the liver has receded an inch and a half higher up from the point previously noted, and the pain and tenderness are much relieved. Continue treatment.—14th: The liver has receded in the right mammary line to its normal position under the ribs, and the left lobe is now nearly of normal dimensions. Temperature normal; pulse 74; bowels regular. Pain and tenderness over the hepatic region much diminished, and medicine still acts characteristically, but its action is not so marked. Continue treatment, and low diet as before.—16th: Pain and tenderness gone. Liver enlargement entirely reduced. The local action of the medicine is not now so marked. The sensation of "pins-and-needles," commencing in the centre of the lumbar region, reaches only to a point an inch from the right mammary line in the course of the costal arch. Continue treatment.—20th: Doing well. Medicine produces no sensible action. No pain or tenderness anywhere, on pressure or movement. Countenance clear and bright. Colour returning to face. Continue treatment.—26th: Doing well; chloroide of ammonium (ten grains) given thrice daily. To have chicken diet. Allowed up for half an hour daily.—30th: Discharged from hospital quite well, but a little weak. To attend hospital as a convalescent for a few days.

The above case furnishes a good example of that state of disordered liver—well described by Annesley more than seventy years ago—so common in the stations of the Madras Presidency, which, commencing in imperfect discharge of the liver functions, when long continued terminates in congestion of the portal veins and engorgement of the ducts conveying the bile from the secretory structure of the organ. If this stage or form of disease be neglected, or only partially recovered from, it will terminate in a longer or shorter time, according to circumstances, in inflammatory action of a subacute kind with marked tendency to suppuration, in a limited portion or portions of the parenchyma. But in tropical hepatitis, no matter what may be the stage, the ammonium chloride is still the one special remedy for the specific disease, as I have fully shown, and amply confirmed by the statistics and cases published in my monograph. In the *Indian Medical Gazette* of July 1st, 1881, will be found further statistics on the subject; but as this paper is, I fear, already rather long, I must reserve what I have to say on that point for a future occasion.

Ilymington, Hants.

TWO CASES OF EMPYEMA.

By JAMES W. FRASER, M.D. C.M. EDIN., M.R.C.S. ENG.

The following almost parallel cases of empyema illustrate the well-known superiority of the treatment by early incision and dry antiseptic dressing.

CASE 1.—Ellen J. C——, aged eight years, was first seen on April 15th, 1886, in an acute febrile condition, depending apparently on the inhalation of sewer gas. This was followed by left-sided pleurisy with effusion, which increased in spite of treatment until May 13th, when the heart was found to be beating entirely to the right side of the sternum. Aspiration was therefore employed on that date, and the effusion, which was serous, was removed, the heart returning to its proper position, or nearly so. The fluid, however, reaccumulated; but the aspiration had had such a demoralising effect on the parents, and the child herself was so unmanageable, that when further operative interference was declined it was not strongly urged. The effusion increased, becoming purulent, and pointed in the mid-axillary line in the sixth interspace, the opening taking place spontaneously on July 16th. Preparations for the discharge were made by washing the skin with carbolic lotion and covering the side with a thick layer of corrosive sublimate wood-wool wadding. No further antiseptic precautions, beyond the insertion of a drainage tube and in the later weeks of the treatment washing out the side with weak iodine water, were taken, but the discharge never became offensively septic; still it was so abundant as to require the dressings to be changed daily until Aug. 10th. It was not until September 11th that the child could be sent from home, even then with a small discharging sinus. She has since been seen, and the chest appears equally resonant on both sides, nor is there any lateral curvature.

CASE 2.—Charles P——, aged nine years, had a very slight attack of scarlet fever, the rash appearing on March 31st, 1887. He progressed favourably until early in April, when he apparently caught cold, and the signs of left-sided pleurisy were discovered on April 13th. The effusion increased rapidly, and the apex beat of the heart on the 15th was to be felt to the right of the ensiform cartilage. The aspirator was used on that day, and the effusion was found to be purulent. The fluid reaccumulated, and the boy passed into a hectic condition, with diarrhœa and an evening temperature of 102·5°. Though this patient was fully as unmanageable as the former, the parents were more reasonable, and their consent to opening the side was readily obtained. This was therefore done on the 21st, cocaine being used as the anæsthetic, and full antiseptic precautions taken. The carbolic spray was used, and when the natural flow of the matter had ceased, a further quantity was removed by the method of perflation described by Dr. Ewart in THE LANCET (vol. ii. 1886, p. 226). The incision was in the sixth interspace behind the posterior axillary line. A large-sized drainage tube was introduced, and a dry dressing of corrosive sublimate wood wool applied. The dressing was only changed when the discharge came through, which for the first week was night and morning. Signs of carbolism were seen on the 24th, depending partly on the liberal use of the spray and partly on the carbolic lotion used to purify the air used in the perflation. Tincture of iodine was substituted for the latter, and the dressings were performed as rapidly as possible and the carbolism disappeared. The temperature fell to normal on the day after the operation, and all went on well until May 2nd, when the hectic fever and diarrhœa recurred. These appeared to be caused by the dressings blocking the mouth of the tube, for when this was remedied the use of aromatic sulphuric acid and tincture of bark soon reduced the temperature and controlled the bowels. On May 20th the tube was found to have been pushed out, and the only sign of the disease was a sinus less than half an inch deep. The boy is now perfectly well and the lung is evidently well expanded, though the left side is still less resonant than it should be.

From the opening of the abscess to the time of full recovery in the first case was seven weeks, from the incision to the full recovery in the second four weeks; a clear saving of three weeks by antiseptic incision and dry treatment, to say nothing of the saving of all the time occupied in the natural passage of the pus to the surface in the former. Two minims of a 10 per cent. solution of cocaine was the anæsthetic used in the second case, and the boy, though he roared lustily all the time, confessed afterwards that he never felt the knife. In order, if possible, to obtain quietness by removing the pain even of the prick of the subcutaneous needle, a 5 per cent. ointment of cocaine in lanoline was rubbed into the side, but only appeared to deaden the pain; possibly a 10 per cent. ointment would have been more successful. The use of tincture of iodine instead of carbolic lotion in the wash bottle of the perflation apparatus is also important by reducing the danger of carbolism.

Hull.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN.

TWO CASES OF CALCULUS; OPERATION; REMARKS.

(Under the care of Mr. JOHN H. MORGAN.)

As is well known, a very great revulsion has taken place of late years in the treatment of calculus at all ages, and the more general application of lithotrity, with complete evacuation, has proved so satisfactory in its results in adults that surgeons are turning their attention to the question of its applicability in the case of children. Whatever the verdict that may be arrived at in future, cases will arise in

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which lithotomy must be the operation preferred, and then comes the question as to the choice of the old and well-tried lateral operation or the more recently advocated one through the abdominal parietes. The following two cases (for the notes of which we are indebted to Dr. Penrose) may serve to illustrate the question of choice, and also to emphasise the satisfactory results obtained by either operation in suitable cases.

CASE 1. *Embedded calculus; supra-pubic lithotomy; recovery.*—E. H——, aged sixteen months, a weakly-looking boy, with marked evidences of rickets, was brought to the hospital on account of difficulty in passing urine. The mother had noticed this three months previously, when she also observed that the straining gave rise to prolapsus ani. A doctor had attended the child during this period on account of wasting and diarrhœa. A fortnight before admission the boy did not pass any urine from 8 P.M. one evening until 9 A.M. the following morning, during which time he was in great pain, screaming violently, and straining. This was relieved by a doctor who passed a catheter, at the end of which, on its withdrawal, a small piece of hard substance, about the size of a pea, was brought away, and another similar piece was passed by the child a little later; this was whitish and hard, and crumbled away when exposed. After this he was better, but screamed when passing urine. No blood was observed in the urine. He was sounded under the influence of chloroform, and a stone detected, which appeared to be of considerable size, but not readily movable in the bladder. Here was a set of circumstances in which lithotrity could not be entertained; the large size of the stone, its immobility, together with the small calibre of the urethra and the very feeble condition of the child, all tended to put such a suggestion out of court. Again, the very narrow orifice of the pelvis, which was deformed by rickets, did not promise success to the lateral operation if performed, especially considering the presumed size of the calculus. It was accordingly decided to perform the suprapubic operation, and this was done according to the method now in vogue on June 11th, the bladder having been emptied and then injected with boracic solution, and the rectum distended by an indiarubber cone. Upon opening the bladder, which was devoid of all peri-visceral fat, the left forefinger was inserted, and the stone was felt lying in a sacculus in the region of the trigone below and between the orifices of the ureters, surrounded and overlapped by the mucous membrane of the bladder to such an extent that it became necessary to raise the calculus from below by the assistance of the right forefinger inserted into the rectum. By this means it was easily freed and pushed into the cavity of the bladder, where it was grasped and removed by a pair of forceps. The stone was conical in shape, the base which lay uppermost being nearly flat, whilst the cone lay deeply embedded in a sac of mucous membrane. It was composed of uric acid, with a crust of phosphatic material, and measured seven-eighths of an inch from base to apex, the weight being fifty-three grains. No sutures were applied to the bladder wall, but a small piece of catheter was inserted and allowed to project from the lower part of the abdominal wound, which was brought together above this point by three sutures of catgut. Next morning a small shell of phosphatic covering of the stone was found under the protective. The temperature was normal, and some urine was passed per urethram, as happened also upon the following day. On the third day following the operation almost all the urine passed by the proper channel, and from this date until his discharge at the end of a fortnight there was no interruption to perfect recovery.

CASE 2. *Lithotrity in a boy aged three years and three months; recovery.*—F. B——, who had been suckled for a year, was noticed to have pain in passing his urine in February last, after a severe attack of bronchitis. In the following May he was circumcised at another hospital, but was taken to Great Ormond-street, on account of the frequency with which he passed urine. The passing of motions caused him to cry, and the stools contained slime and worms. He occasionally woke at night to pass urine. He was admitted and sounded, and a fair-sized stone was detected. On July 13th, the patient being under the influence of chloroform, the meatus having been slit to a small extent, Mr. Morgan introduced one of Weiss's lithotrites, No. 7 English scale, and, after breaking up the calculus, washed out the bladder with the evacuator described by him in THE LANCET (Sept. 2nd, 1882), and using a tube of the calibre of a No. 8 catheter. The lithotrite was introduced three times, the third time for the purpose of sounding only, and the bladder was washed out four times. No further fragments being found, the child was sent back to bed. No difficulty whatever was found in introducing either the lithotrite or the tube of the evacuator once the meatus had been passed. The fragments of stone collected weighed forty-one grains and a half. For the next two days the boy suffered no pain; the urine was passed naturally and without pain, and on examination was found to be acid, with a small amount of albumen, the sediment containing pus and epithelium cells. On the third day two small fragments of stone were passed with the urine, which weighed about one grain. On the sixth day there was much pain in micturating, and frequent desire to pass urine. This soon subsided under treatment, but no more fragments were passed. Ten days after the operation the patient was sounded carefully under an anæsthetic, and the bladder washed out with warm water. No more fragments of stone were found, and on July 25th he was discharged from the hospital, eleven days after the operation, and he has since that time remained perfectly well.

Remarks by Mr. MORGAN.—This case is interesting from being the first in which, at the Hospital for Sick Children, a boy of such early age has undergone the operation of lithotrity, and the ease of its performance and the successful result point to its adoption in similar well-suited cases. At the same time, the case which precedes it shows that lithotomy in some form cannot be abandoned in certain circumstances, though how far the supra-pubic will supplant the older lateral operation still remains to be seen.

GREAT NORTHERN CENTRAL HOSPITAL.

DISEASE OF THE HIP-JOINT; EXCISION OF THE HEAD OF THE FEMUR; SUBSEQUENT REMOVAL OF THE GREAT TROCHANTER; GOOD RESULT.

(Under the care of Mr. W. SPENCER WATSON.)

WE are indebted for the notes of the case to Mr. Strugnell, house-surgeon.

Lavinia D——, aged seventeen years, had suffered from the usual symptoms of hip-joint disease on the left side since the age of five years. Successive abscesses had formed, and the joint had become painful, with nocturnal startings, sleeplessness, and hectic. There was no movement of the joint, and a shortening of an inch. Weight extension and rest were tried from Dec. 20th, 1884 (the date of admission) to May 20th, 1885. At first the relief experienced by the extension was very great, but the pain and all the other symptoms were soon as great as ever, and on May 20th the head of the left femur was excised, leaving the trochanter and shaft untouched. The head was entirely denuded of cartilage, and presented an eroded and wasted surface; the cartilage of the acetabulum was ulcerated, but, there being bare bone, it was not scraped or otherwise interfered with. The wound was dressed antiseptically, and both lower limbs put up into a Bryant's splint, which, however, was exchanged on May 24th for an interrupted Liston's splint, with weight extension. On June 1st the wound had healed, with the exception of a small sinus. There were no other symptoms of note, and on July 18th a Thomas's splint was applied, and on Aug. 22nd the girl was allowed to get up and go about on crutches. She was discharged on Sept. 19th, there being still a slight discharge from a small sinus, but the limb was movable at the hip to the extent of 30° from the perpendicular axis.

In November the girl was readmitted and complained of severe pain. The still discharging sinus was reopened and the cavity of the joint explored with the finger. No bare bone was felt, but the great trochanter was found to be drawn up with great force over the edge of the acetabulum by the muscles attached to it; and it was thought that this continual muscular action was the cause of the constant pain complained of by the patient. On Feb. 13th, 1886, the wound was freely opened and the great trochanter sawn off. The small trochanter and the muscles attached to it were not interfered with. The progress of the case after this last operation was satisfactory but slow, and with intercurrent attacks of severe pain and rise of temperature; but in the autumn of 1886 the sinuses had all healed and left a movable sound joint, with very moderate amount of shortening.

On March 20th the patient came to the hospital on

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crutches, looking much stronger and better. She was now able to walk for a few steps without crutches.

May 4th.—Has been in hospital again with a small superficial abscess in the inner aspect of the thigh, which was opened and has now healed. The condition of the joint is still quite satisfactory.

Remarks.—The operation of removing the head of the bone without the trochanters seemed to be likely to succeed in this case, as the disease was strictly confined to the head and acetabulum. The pain, however, due to the spasmodic action of the muscles on the great trochanter was so great that it was necessary, after all, to remove this process of bone. The operation being a larger one, and exposing the cancelli of the shaft, is probably a more dangerous one, and it would be well if we could by some means avoid it without exposing the patient to the risk of the pain due to muscular action afterwards. It would be desirable to divide the muscles attached to the trochanter only, and leave the bone untouched. The difficulties of the case were aggravated by the extremely irritable and hysterical temperament of the patient, and the want of sleep associated with this temperament. Mr. W. Adams' osteotomy saw was used for the purpose of removing the head of the bone in the first operation, and the difficulties of the section of the neck would have been insuperable without this instrument.

BRISTOL GENERAL HOSPITAL.

A CASE OF SUPRA-PUBIC LITHOTOMY, AND ONE OF SUPRA-VAGINAL HYSTERECTOMY.

(Under the care of Mr. NELSON DOBSON.)

Supra-pubic lithotomy.—A man, aged fifty-one, looking older than his age, was operated on by the supra-pubic method on September 3rd. The case is interesting from several circumstances, but chiefly because he had been twice operated upon by Mr. Dobson in six months for stone in the bladder; on the first occasion by the lateral method, and on the second by Peterson's method. The patient was very intelligent, and with his experience of both operations he gave a preference to the supra-pubic as having given him more freedom from discomfort after the operation; but unfortunately, as the rectum was wounded in the lateral operation, he experienced more uneasiness than is usual after this operation, and therefore his comparisons between the two operations to which he was subjected are scarcely fair tests of their relative merits.

This patient first came under Mr. Dobson's care in March, 1886. He was a highly nervous, sensitive man; had had for a long period difficulty in passing urine, pain (very acute) accompanying and following micturition. He said that he had a stricture at the orifice of the urethra, for which he had lately been under the care of two surgeons. He was told that he possibly had stone in addition to his other troubles. Chloroform was given, and a narrow, very unyielding stricture of the urethra, commencing at the orifice and extending down the urethra for an inch, was found; also, on sounding, a stone, which appeared to be of fair size, and gave the impression of being phosphatic. It was attempted to dilate his urethra with a view to crushing; but it would not dilate beyond about No. 5 sound; therefore, as his sufferings were very considerable, on March 5th, having introduced a No. 5 staff, lateral lithotomy was performed. On introducing the finger, Mr. Dobson felt a round smooth stone about the size of a large walnut. The forceps were passed and the stone grasped very lightly, and the operator prepared to extract, when the forceps appeared suddenly to have lost grasp of the stone. Search was again made for a few moments for the stone with the forceps, but, failing to find it, the finger was introduced and discovered the bladder strewn with a crumbled phosphatic stone. The débris was removed by the scoop and frequent washings. The weight of the recovered fragments was 125 gr., but as much again was lost in the washings. There was no evidence of wound of the rectum; but on March 8th, an aperient having been given and the bowels moved, fæces were noticed in the perineal wound. This wound was examined with the finger, and an opening found in the rectum. On the 10th the perineal and rectal wounds were laid into one by cutting through the sphincter. On April 27th all had healed except a small rectal fistula; and by June 1st the fistula had quite healed.

On Sept. 3rd the man came again to the hospital with the old symptoms of cystitis and pain stricture still tight, but improved; the pain and constitutional disturbance severe. On sounding, a calculus was found. Having regard to the condition of his urethra at the meatus, and low down in the perineum, Mr. Dobson decided to perform supra-pubic lithotomy; this was done on Sept. 3rd, and a small irregular phosphatic calculus removed. The rectum was distended by means of Peterson's bag with 13½ oz. of water, and the bladder with 12 oz. of warm boracic acid lotion. There were no difficulties of any kind. A catheter was placed in the bladder, and a large drainage tube in the wound. Next day the drainage tube was removed, and on the 8th the catheter was also permanently removed. On the 27th the wound was nearly, but not quite, healed. In a few days later he left the hospital quite well, and has not since been seen. He complained very little of the discomfort of the second operation, but was somewhat envious of a patient in a bed opposite to him, from whom several fragments of stone had been removed by the median operation thirteen days later, and who was quite well before him; this last patient had been subjected to litholapaxy by Mr. Dobson and others on more than one occasion, who had felt compelled to cut him in consequence of the evacuator being broken just as he was about to crush him once more.

Remarks by Mr. DOBSON.—The advantage of the supra-pubic operation in this case was greater than usual, because it enabled me to evercome all the urethral difficulties, and to be quite sure by inspection that I had thoroughly emptied the bladder. I would also lay stress on the importance of dividing the sphincter in all cases of accidental wound of the rectum in the lateral operation. I have done the lateral operation many times, and have, so far as I know, avoided this accident in all my previous cases. I believe when this accident does occur the proper treatment is as I have indicated, notwithstanding the divergence of opinion among the authorities.

Supra-vaginal hysterectomy for uterine myoma.—J. S——, aged forty-seven, a slim, delicate, highly neurotic single woman, was first seen in July, 1886. She had been much overworked as a governess, and in failing health for some months. She had been completely confined to bed for three weeks. She was so nervous and sensitive that only the most superficial examination could be made. The walls of the abdomen were œdematous, and the legs very œdematous from the feet to the groins. There was no albumen in the urine, the temperature was normal, her pulse feeble and rapid, and she was much emaciated. A large solid tumour occupied the centre and left side of the abdomen, stretching from the pelvis to the diaphragm, smooth, and apparently movable as far as her tenderness would allow. Vaginal examination only indicated normal conditions so far as the finger could reach; the uterine sound was never used. There was no evidence of fluid in the abdomen, nothing to be noticed on auscultation; but a distinct pulsation was communicated to the hand laid gently on the abdomen, which pulsation was transmitted from the aorta; the percussion notes those of a solid (probably uterine tumour). Mr. Dobson gave a decided opinion against operation, thinking from her general condition she had only a very short time to live, and also that the tumour was malignant. When seen again in December her condition was much the same as before, though somewhat improved; she had now for more than seven months been completely confined to bed, and was anxious to have her tumour, which at this time was thought to be a myoma of the uterus, removed. This was done at the hospital on Jan. 17th, 1887. She still continued to menstruate, had just passed her period, and never suffered excess or any irregularities. Chloroform being administered, a four-inch incision was made and the nature of the tumour ascertained. The incision was then carried rapidly through and beyond the umbilicus; the uterus turned out with its tumour; and, as the right broad ligament was very expanded and difficult to surround with the serre-nœud, it was ligatured in two parts, but the ligatures when applied shrunk the broad ligament sufficiently to enable the serre-nœud to be passed behind, and this was rendered more easy as the left ligament was of abnormal size. Having passed the pin through the centre of the pedicle, and having also dissected off from the front of the tumour the bladder, which was very closely connected at this point, a pedicle was left as thick as the wrist. The pelvis was then packed with sponges, and the mass cut off above the central line and closely trimmed. About a pound of blood escaped from the tumour, but none found its way into the abdomen. The tumour, which was mostly intramural and growing from the fundus, weighed seven

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pounds. The cavity of the uterus was not enlarged. The abdominal wound was closed with twenty-five silk stitches, and the operation was done under the spray, with Listerian precautions. The serre-nœud came away on the fourteenth day. The temperature never exceeded 99°, and the patient left for home in six weeks, able to sit up, and, though still somewhat an invalid, much improved in general health. Though the tumour was not large by weight as such tumours go, yet it was relatively large both in appearance and effects in this very fragile and slim person.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lymphadenoma.—Congenital Umbilical Hernia.—Carcinoma of Pancreas and Semilunar Ganglia.—Guttural Pouches of Horses.—Dilatation of Œsophagus.—Myxoma of Skull.—Aneurysmal Varix.—Rectal Polypus.

THE first meeting of the winter session of this Society was held on Tuesday last, Dr. J. Syer Bristowe, F.R.S., Vice-President, in the chair.

Dr. HADDEN showed specimens of Lymphadenoma, in which the intestinal glands were extensively affected. The patient was a man aged fifty-four, who had suffered for several months from abdominal tumour. He had effusion into the serous cavities and enlargement of the spleen. The abdomen was tapped twice, and the fluid withdrawn was milky, as in chylous ascites. Before death pus formed in the anterior chamber of the eye. The temperature was usually normal, and nothing special was noted about the stools at the necropsy. The abdominal tumour was found to arise in enlargement of the mesenteric and retro-peritoneal glands. All the lymphatic glands of the body were enlarged, and secondary growths were seen in several organs, especially in the spleen, which was much enlarged. The glands of the small and large intestine, agminated as well as solitary, were enormously enlarged; but the coats of the intestine were not infiltrated, as in the recorded cases of Dr. Murchison and Dr. Coupland. The author directed attention to the milky nature of the effusion in the serous cavities, and suggested that it might be due to the same cause as a chylous ascites.—Dr. BRISTOWE remarked that the enlargement of the lymphoid tissues was remarkable in being limited to the glands and not invading the parietes, as in Dr. Coupland's and others' specimens.

Mr. D'ARCY POWER showed specimen and drawings of Congenital Umbilical Hernia. He was indebted to Mr. J. J. de Zouche Marshall of Lamberhurst for the history. The mother of the child, born at full term, is a healthy young woman. The hernia was discovered as a transparent sac containing several coils of small intestine, situated in the umbilical cord at the part nearest to the child's abdomen. The cord was ligatured and divided in the usual manner, and an ineffectual attempt was then made to get back the bowel through the umbilical opening. After gentle taxis for ten minutes without success, the sac was carefully opened on a director, and as the gut could not yet be returned the umbilical ring was enlarged. About a foot of the intestine was then with some difficulty returned into the abdomen. The edges of the ring and of the wound were next brought together with silver wire and carbolic dressing, the whole being supported with lead plaster and a bandage. The child died at the end of three days of peritonitis. Antonio Scarpa and Sir William Lawrence in their treatises on ruptures had given a complete description of this hernia. Usually this malformation was accompanied by spina bifida. The tumour appeared to be formed by a dilatation of the coverings of that portion of the umbilical cord which was nearest to the body of the child. It had a fusiform shape, with the main constituents of the funis running as a bundle along its lower border, the umbilical cord again appearing at the distal apex of the swelling. The external surface was polished, and closely resembled the outer surface of a cord; whilst internally the sac was covered with a smooth layer, which was apparently derived from the peritoneum. It contained about a foot of small intestine, and at a short distance beyond the tumour was a second small sac filled with a viscid fluid.—Mr. E. J. GODLEE had seen two cases of hernia into the base of the umbilical cord; the outer surface of the tumour becomes dried into caky brown masses. In one case strangulation necessitated operation, but the patient died shortly, as the other did, without operation.—Mr. F. TREVES had had five cases under his own care. Twenty cases had been recorded, and the majority were covered by thick tissues and surrounded by a substantial sac. In a few instances the sac wall was very thin. Imperfect closure of the visceral plates was the chief cause of the hernia. If not the cæcum, then a Meckel's diverticulum was the most likely constituent of the hernia. The bulk of cases require immediate operation, for the skin over it becomes dry and inflamed. It would be wiser to lay open the sac, reduce the contents, and bring the edges together. In nearly all the reported cases of this variety there was no other deformity.

Dr. HALE WHITE showed Microscopic Sections of the Semilunar Ganglia which had been invaded by scirrhus spreading in from the pancreas. The patient was a woman aged fifty-four, whose only important symptoms during life were a vague abdominal pain, wasting, and vomiting. The growth was situated in the centre of the pancreas, both head and tail being free. A portion of the jejunum was bound down to the pancreas, and thus partially constricted. The nerve cells in the ganglia were granular and slightly pigmented. The cancer had spread along the bundles of nerve fibres in the semilunar ganglia, so that sometimes a bundle of nerve fibres would be replaced by a tube of cancer cells, bound in by the dense fibrous tissue surrounding the nerve fibres. The vomiting might well be explained by the constriction of the intestine and the wasting and the vomiting, so that we had two organs, the pancreas and the semilunar ganglia, both affected by growth, and yet no symptoms were produced that could with certainty be attributed to their implication. Dr. Hale White thought this case supported his view advanced in the *Journal of Physiology*, that the semilunar ganglia were organs which in us were dying out both physiologically and structurally. It was to be noticed that here the nerve cells were not more granular than they frequently are in individuals in whom no disease of the ganglia is known to exist.

Mr. BLAND SUTTON showed specimens of Guttural Pouches of Horses. In these animals the Eustachian tubes formed large sacs, and might be so large as to hold six or seven ounces of plaster, and they take up the space in the horse which corresponds to the pharynx of man. They communicate by means of a narrow valvular orifice with the posterior nasal passages. Some suppose that they substitute the function of the mastoid cells, which are ill developed. The sacs are very liable to inflammation, and the narrow orifice causes the secretions to be retained; suppuration may occur, and necessitate operation of letting out the pus through the skin, which they distend between the styloid process and the lower jaw.—Dr. COUPLAND asked whether these concretions had been microscopically examined, for they might be formed on a basis of grass or other foreign body.—Mr. F. TREVES asked whether the fossa of Rosenmüller had any relation to the guttural pouches of horses.—Mr. SUTTON, in reply, believed that Dr. Coupland's suggestion might be a true explanation, and he agreed with Mr. Treves that the pouches might arise as dilatations of the Rosenmüller fossa.

Dr. HANDFORD showed a specimen of Dilatation of the Œsophagus taken from the body of a man aged fifty-two, who had suffered for more than five years from regurgitation of food. This occurred many times daily; sometimes immediately after meals, occasionally half an hour or an hour after. He was at the same time suffering from advanced heart and vascular disease, of which he died six days after admission into the Nottingham General Hospital. At the necropsy the heart was found much enlarged, the aortic valves incompetent, and the aorta enormously dilated. This dilatation affected the whole of the thoracic aorta, but was much diminished at the lower part. The œsophagus was very markedly dilated throughout its whole length, except at its passage through the diaphragm, where it was constricted to very slightly less than the normal size, but there was no induration or sign of stricture; it contained several ounces of undigested food. After being opened and preserved for several months in spirit, its greatest width was three inches and a half. Just above the cardiac orifice it was one inch and three-quarters. Microscopic sections were examined, but no very marked changes were found. There was no disease of the stomach. Dr. Handford thought it possible that the dilated aorta in its passage through the diaphragm

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might have pressed the œsophagus against the central tendon, and so interfered with the free passage of food. Other possible causes were general muscular atrophy, as in the cases recorded by Klebs and Luschka, or disease of the vagus. Dr. Handford did not consider it a case of simple congenital stenosis.—Dr. BRISTOWE referred to a case which showed symptoms only three months before death, and probably due to mere catarrhal or inflammatory changes; at least, there was no stricture. Was the condition recognised during life? The answer to this was in the negative.

Dr. JACOB of Leeds showed a specimen of Myxoma of the Skull. During life the man exhibited an enlargement of the skull. There was but little inflammatory condition. Under the microscope there was only myxomatous structure, and not of the syphilitic type. There was a large overgrowth of the calvaria in the parietal region, and apparently chiefly of the diploë. The specimen was referred to the Morbid Growths Committee.

Dr. A. ROBINSON showed an Aneurysmal Varix taken from the amputated stump of a man aged thirty-two, who had had his leg amputated sixteen years previously through the upper third. There had been much pain in the stump since a blow which it had received two weeks before he was seen, when expansile pulsation was discovered. The aneurysm, the size of a small orange, was excised, and the varicose veins were removed from the soft posterior part of the stump.

Mr. MARMADUKE SHEILD exhibited a Villous Polypus of the Rectum, removed from a woman who had suffered for eight years from syphilitic disease of this part. The growth used to prolapse from the anus. It was a lobulated and foliaceous pediculated growth, recalling the appearance of a pancreas. The tumours were somewhat rare. They did not infiltrate the rectal wall, and rarely if ever recurred.

The following card specimens were exhibited:—Mr. F. S. Eve: Part of an ancient Egyptian Skull affected with Osteoporosis. Mr. P. D. Turner, for Mr. Christopher Heath: Villous Tumour of Bladder and Surgical Kidneys. Dr. H. A. Lediard (Carlisle): (1) Melanotic Sarcoma growing from the Edge of the Nail of Index Finger; (2) Sarcoma of Palate in an Otter Hound; (3) Large Subcutaneous Nævus from the Parotid Region.

CLINICAL SOCIETY OF LONDON.

Pemphigus; Arsenical Pigmentation; Unusual affection of Cicatrix.—Recovery from Bullet Wound of Liver.—Pulmonary Arterial Reflux.—Cephalhæmatoma over Right Parietal Bone.

THE first meeting of the winter session of this Society was held on the 14th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

DR. HANDFORD reported a case of Pemphigus occurring in a child, aged thirteen, and terminating in incomplete recovery after nearly a year. The limbs, trunk (except parts of chest and abdomen), face tongue, mouth, pharynx, mucous membrane of nose, conjunctivæ, and orifice of the vagina were all affected. The eruption came out in crops, and was accompanied by rise of temperature. Micro-organisms were found in the bullæ which contained pus, but not in those which contained serum. Quinine in large doses was given with benefit, and arsenic. Of the latter fifteen-minim doses of Fowler's solution were given thrice daily, and continued for ten weeks. After this, the skin of the whole body was noticed to be dry, brawny, and darkened in colour. The axillæ, groins, and abdomen were almost as dark as in Addison's disease. The skin looked dirty, but the colour was proved to be due to pigment—deposited chiefly in the rete, but partly in the more superficial epithelium. The arsenic was stopped, and the patient treated by wet-packing, and in a month the skin had resumed its normal, smooth, moist appearance, and much of the pigmentation had disappeared. Also on the hands and feet there were many elongated patches of cicatricial-looking skin, thickened and elevated. These patches were covered with white points, like millet seeds, just beneath the epithelium, and resembling to the naked eye miliary tubercles. They were not tubercular, but consisted of accumulations of degenerating epithelial cells in the deeper part of the epidermis. They disappeared in four or five months. It is possible that this condition also was due to the arsenic. Several coloured drawings and photographs illustrating these conditions were exhibited. A third case of pemphigus was described, in which there was some ground for suspecting implication of the mucous membrane of the intestinal canal. It presented also the atrophied glossy condition of the skin of the hands mentioned in the first case, and which is so suggestive of an implication of the peripheral nerves. No definite affection of sensation or of the reflexes, however, could be discovered, though reference was made to the statement of Dr. Pasquale Ferraro that he had found advanced changes of an atrophic degenerative nature in the posterior horns of the dorsal spinal cord, and also in the peripheral nerves, the ganglia on the posterior nerve roots, and in the sympathetic ganglia. Two further instances of arsenical pigmentation were narrated, and the opinion was expressed that small doses of arsenic (five to ten minims of the liq. arsenicalis) repeated thrice daily for about two months were capable of producing a pigmentation of the skin, chiefly of the abdomen, lower part of the chest, lumbar region of the back, axillæ, groins, and inner part of the thighs. This condition was not necessarily accompanied by roughness and dryness of the skin and disappeared slowly in from one to four months, or rather longer.—Dr. RADCLIFFE CROCKER had seen white spots or specks in one case of pemphigus in the Great Ormond-street Hospital for Sick children; their probable nature was the same as that of milium. He had frequently seen pigmentation follow the use of arsenic even in cases of chorea as well as of recurrent bullous erythema. The pigmentation appeared to be due to an actual deposition of the metallic arsenic chiefly in the deeper layers of the epithelium; the duration of this pigmentation varied from not less than four to even as long as twelve months and perhaps longer. He could not agree that the photographs handed round were representations of pemphigus foliaceus, which is absolutely universal and consists in a continuous eruption of flaccid bullæ.—Dr. GOODHART was interested in the occurrence of high fever in pemphigus, which appeared to be independent of the eruption, and perhaps depended on individual peculiarity or some general condition of body. Pemphigus was undoubtedly controlled by arsenic, but large doses might be required to effect this control, even as much as eighteen to twenty-two minims three times a day. He had also witnessed marked pigmentation frequently as the result of the administration of arsenic.—Sir DYCE DUCKWORTH testified to the value of arsenic in pemphigus, and had seen cases completely cured by its employment though large doses might be required and pigmentation result.

Dr. LEDIARD read a paper on a case of Bullet Wound of the Liver. The case was one in which a constable was shot through the body, at a short distance, whilst pursuing some burglars. The bullet entered the right side of the chest, between the seventh and eighth ribs, a little to the outer side of the mammary line. Deep collapse resulted, during which the bullet was extracted from the right loin, just over the last rib, and two inches from the spine. It is believed that the constable was leaning forward to catch a man in front of him when he received his wound. Jaundice supervened, and on the ninth day the extraction wound in the back discharged a large amount of bile-stained fluid, and continued to do so to a less extent for some weeks. Evidence of air in the right pleural cavity to a limited area was also present, and subsequently an empyema formed and discharged freely a large amount of pus through the bronchi. Elevation of temperature lasted more or less for fifty-eight days, but at the end of three months the patient was convalescent, and has made a complete recovery, being still in the Cumberland police. The course of the bullet was probably through the convex surface of the liver, the diaphragm being perforated twice, and the lung grazed. The presence of bile was ascertained by chemical tests, corroborated by Dr. Walker, of Newcastle, public analyst for Carlisle. The microscope also gave clear evidence of a wound of the liver tissue. The bullet was a large one, and weighed three drachms and a half.

Sir DYCE DUCKWORTH read a paper on a case of Pulmonary Arterial Reflux. The patient was a man aged forty-nine, invalided from the police on account of short-windedness and cough. He came first under care at St. Bartholomew's Hospital in March, 1884, with a history of winter cough for five or six years. He had suffered from several attacks of gout in the feet. He had taken rather freely of beer and rum. His father was a gouty man, and died paralysed at the age of sixty. There was no history of syphilis. His complexion was then dusky, and the chest barrel-shaped.

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There was an increased area of cardiac dulness. At the apex, which was felt in the sixth space in the left nipple line, was a fairly natural first sound and a faint distant murmur. A clear second sound was also heard here. Above the apex and over the whole præcordia a diastolic murmur was heard, loudest over the aortic area. The pulse was jerky and not quite regular. The legs were œdematous. There was no albuminuria. Signs of general bronchitis in the lungs. On one occasion he spat two ounces of dark blood mixed with mucus. The case was regarded as one of "morbus cordis," aortic regurgitation, chronic bronchitis, and emphysema. In November 1885 the patient returned to the hospital under the care of Dr. Gee, suffering from aggravated bronchitis and orthopnœa. The heart's apex was impalpable, and cardia dulness was absent. A diastolic murmur was heard all over the præcordia, loudest over lower end of sternum. The pulse was irregular, 50 per minute, of fair volume and not jerky. The urine contained a trace of albumen. His board was headed, "Aortic regurgitation, with cough and gout." After two weeks he went out relieved. His third admission was to the John ward, in January, 1887, under Sir Dyce Duckworth. The patient was then very dusky, bloated, and dropsical. The jugular veins were turgid. There was much bronchitis, and very little urine was passed. The latter contained one-sixth of albumen. There was orthopnœa and much flatulent distension of the abdomen. Cardiac impulse was felt in the fifth space, half an inch inside the left nipple line. Very limited dulness was made out on percussion. There was epigastric pulsation. At the apex a systolic murmur was heard, also in the axilla or lower angle of left scapula. A diastolic murmur was audible at the apex and base, loudest down the sternum. It was particularly noticed that the sound was defective in the area of the pulmonary artery. The pulse was 78 per minute, irregular in form and volume, and of increased tension. No collapsing or "aortic" quality was noted. Much bronchitis and emphysema. The liver was enlarged. Throughout there was a subnormal temperature. The sputum was copious, not aerated, viscid, and dirty greenish-yellow in colour. An attack of gout occurred in the left great toe and instep. Treatment proved of little relief. Increasing cardiac dilatation and œdema of the lungs supervened. Sphygmographic tracings of the pulse were taken with several instruments, and gave no indication of aortic reflux. The patient lingered, slowly failing, till March 6th. At the necropsy the lungs were found emphysematous and œdematous. Pericardium natural. Heart very large, with much dilatation, especially of right ventricle. The mitral and tricuspid orifices were dilated. The aortic valves were natural. The pulmonary valves were two in number, one large one with much thickened edges, and one smaller one with similarly thickened edges. Between the two was a vacant space showing some roughening at the site where a third valve should have existed. Below this was an aneurysmal pouch which would have held a large hazel nut. The ventricular septum was complete. The viscera showed the usual signs of long-continued obstructive cardiac disease. The heart and a drawing of the parts in a recent state were exhibited. It was probable that this was a case of congenital disease of the pulmonary valves, the heart valves only failing in middle life. Sir Dyce Duckworth remarked that it was perhaps hardly creditable that a correct diagnosis was not made in this case. He had, however, once made a diagnosis of pulmonary regurgitation, which at the necropsy turned out to be aortic reflux, and was thereby made cautious. The physical signs of aortic regurgitation were sometimes more plain in the area of the pulmonary artery, and the most careful auscultators would probably always be cautious in making a diagnosis in these very rare cases. The sphygmograph would perhaps be of the best avail in supporting a suspicion of the disease in any doubtful case.—Dr. BROADBENT considered that a better diagnosis during life could not have been made, and he should certainly have suggested the presence of aneurysm. He asked for further particulars as to the anatomy of the aneurysm of the pulmonary artery.—In reply to Dr. Coupland, Sir DYCE DUCKWORTH said that he could not remember whether the cardiac second sound was heard in the carotid artery or not.—Dr. DOUGLAS POWELL agreed that diagnosis could not be made with certainty, and he said there was difficulty in discovering regurgitation from the arteries in some cases of mitral stenosis.

Mr. TARVIN gave an account of a case of Cephalhæmatoma over the Right Parietal Bone in a boy aged eleven. The cyst formed an enormous tumour that projected some two inches from the surface of the skull; it was surrounded by a wall of thick bone. The cyst was the result of a fall upon the head when the child was six months of age. Mr. Treves described the formation of these cysts in the newly born. The present case is rare, as showing a cephalhæmatoma, the result of injury, that had formed a permanent tumour. It was of interest also in showing that the bone, that is so common about these cysts, had not undergone absorption. So far as reported examples and museum specimens go, the present case would appear to be unique. No treatment was proposed.

MEDICAL SOCIETY OF LONDON.

Psychology of Joking.—Simple Dilatation of the Stomach.

THE first ordinary meeting of the 114th session of this Society took place on Monday, Oct. 17th, 1887.

An introductory address was delivered by the President Dr. HUGHLINGS JACKSON, on the Psychology of Joking; a report of which will be found in another part of our present issue.

Dr. CLIFFORD ALLBUTT read a communication on Simple Dilatation of the Stomach. He pointed out that simple gastro-ectasis, both acute and chronic, and independent of pyloric obstruction, was often overlooked; that indeed many physicians have been disposed to ignore it in an uncomplicated form. Since the publication of his first paper on the subject in 1879 (which was based on an increasing experience from the date of Kussmaul's well-known essay in 1869) he had added greatly to his cases and notes, but he feared with few new results. He found, however, that the malady was not uncommon in advanced stages, and common enough in lesser degrees, both in acute and chronic forms. He urged the great importance of diagnosing the disease, whether as a complication of febrile or debilitating illness, or as a result of prolonged gastric derangement, and as a malady to which infants, youths, and adults were all liable. Without diagnosis proper treatment could not be employed, and such diseases as phthisis thus complicated must go from bad to worse, if not specially treated. In infancy and early childhood this malady might seriously impair nutrition. The more important symptoms of gastro-ectasis in children and adults were briefly discussed, and also the relations of gastro-ectasis to gastric catarrh. The influence of chronic diseases and of gross or injurious habits of feeding in inducing dilatation were next indicated, the results of some of these habits being to produce only the lesser degrees of dilatation; also the influence of general or local nerve failure in allowing ectasis to occur was considered. That gastro-ectasis was commonly associated with great nervous irritability and depression, whether as cause or effect, was undoubted, as was the association of vast and transient distensions with hysteria in women, though in this sex permanent gastro-ectasis was less common than in men. Although fully developed dilatation was not difficult to diagnose, and even to measure, yet lesser degrees required more care and were more difficult. Succussion might not infrequently be obtained in stomachs presumably of normal dimensions, and in some cases the whole stomach might be displaced downwards; therefore, in acute cases especially, the upper stomach boundary should be carefully noted. For treatment washing out was urged as the essential basis of all success, whether for relief or cure. The action of the stomach syphon upon the dilated stomach was to be compared to that of the catheter upon the enfeebled bladder, the mischief in both instances being perpetuated by the retention of decomposed matters in the cavity.—Dr. STEPHEN MACKENZIE advocated the use of Leiter's funnel and tube for washing out the stomach.—Dr. HABERSHON suggested that those cases of dilatation associated with phthisis were probably due to lesion of the pneumogastric nerve. In addition to washing out the stomach, he was in the habit of prescribing carbolic acid and hyposulphite of soda to prevent fermentation.—Dr. C. J. HARE considered an emetic a most valuable remedy in cases of moderate dilatation.—Dr. THEODORE WILLIAMS suggested that these cases should be treated by rectal alimentation in order to ensure rest to the overworked stomach.—Dr. LAUDER BRUNTON thought that in some cases the dilatation was of careful reflex nervous origin. He insisted on the importance of dietetic and medicinal, in addition to mechanical, treatment.

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Reviews and Notices of Books.

Elements of Pharmacology. By Dr. OSWALD SCHMIEDEBERG. Translated by THOMAS DIXSON, M.B. Pp. 223. Edinburgh: Young J. Pentland. 1887.

SCHMIEDEBERG'S views have recently been so largely quoted that we are glad to welcome an English edition of his "Elements of Pharmacology." It is a book of a peculiar type. It is intended to serve as a pharmacological commentary on the second edition of the German Pharmacopœia, and thus occasionally deals with substances not recognised as official in the British Pharmacopœia. The author's plan has been, not to give directions for the treatment of disease, but to describe the actions of powerful agents, to characterise the consequences which may affect the entire organism, and "from pharmacological facts to formulate general rules for the employment of remedies." The precise meaning the author assigns to the term *pharmacology* is the study of the changes in general which are caused in the living organism by chemically active substances, whether these substances are used for remedial purposes or not. This definition is broad enough to include numerous active substances for which at present no therapeutic values are claimed. Indeed, it is suggested, probably correctly, that when a remedy has fallen out of therapeutic use, subsequent experimental researches may prove of value in indicating the advisability of its employment in some totally new directions. Waves of fashion may take up and toss aside new remedies without realising their value, but the pharmacologist working laboriously and methodically may yet find unsuspected treasures in them. Cocaine, in its application as a local anæsthetic, is sufficient proof of the truth of this idea, its value and employment as a tonic having been completely overshadowed as soon as its local effects were discovered.

The introduction is brightly written, although it deals with definitions, with the nature of pharmacological actions, the sources of therapeutics, the choice of remedies upon rational principles, and the classification of pharmacological substances and of remedies. The semi-historical considerations of the sources of therapeutics are written in a light vein of sarcasm, indicating the author's contempt for all that has preceded what he regards as a rational system of therapeutics based upon pharmacological researches. On the other hand, his nationality might be guessed from the gravity with which he asserts that "distilled water, when taken as a drink, does not act as a poison simply because it is changed into a harmless form immediately after its absorption, through mixing with the substances dissolved in the blood and fluids of the tissues." To this idea he reverts later on when (p. 115) he tells us, "Water as such never comes into contact with the living tissue, but becomes transformed into a solution while it is still in the stomach; at all events, it only enters the blood in this form." The introduction is followed by a long chapter on nerve and muscle poisons. This is divided into sections of very unequal length and value; of the strychnine group it may be sufficient to say that we are furnished with a concise *résumé* which does not add materially to our knowledge. The curara group similarly is disappointing in being silent, or almost so, concerning other substances having like properties. In small type we are informed that "many *ammonium bases* cause, along with other actions, a paralysis of the ends of the motor nerves, just as curara does. Whether one or other can replace curara further investigations alone can show." In fact, here we find the keynote of the book. The author appears to wish us to meet in his work with what is *true* rather than with what is *new*, and we may search in vain for recent statements if, in his opinion or in that of the number of younger investigators working under his guidance, the statements are not conclusively established as facts.

Morphine is dealt with at greater length and with a more satisfying result, the explanation of the supposed stimulation of the brain being very pithily expressed as "merely a matter of the disturbance and of the alteration of the equilibrium of the separate functions of the brain. The area for ideation is evidently quite intact when sensory stimuli are already beginning to lose their effect." Concerning the influence of alcohol upon the brain, the author holds that from the beginning no true stimulation can be traced. He regards the phenomena observed as merely "the results of the commencing paralysis of certain portions of the brain. In the *mental areas* the finer degrees of *observation*, *judgment*, and *reflection* are the first to disappear, while the remaining mental functions remain in a normal condition." The section upon nerve and muscle poisons necessarily includes a consideration of a very large number of important remedies. It is followed by a chapter dealing with substances which, through their molecular properties, cause alterations of various kinds at the point of application. Of aromatic and bitter stomachics he remarks that "many are quite antiquated and others quite superfluous," and he is accordingly satisfied with a somewhat bald enumeration. Succeeding chapters deal with the action of water and of saline solutions; chemical cauterisation by means of acids, halogens, and oxidising substances; the compounds of the heavy metals and aluminium as nerve poisons, muscle poisons, and escharotics; and finally, brief space is assigned to the aromatic compounds, digestive ferments and food stuffs, and to remedies acting mechanically and physically, including a consideration of the uses of plasters, ointments, poultices, and fomentations. Throughout the author exhibits a mild scepticism as to the value of purely therapeutic researches; this may perhaps be best illustrated by the following remarks upon nitrate of silver: "This neurotic drug in course of time has had to pass through *great vicissitudes*. While it was recommended most warmly by some physicians, others rejected it just as decidedly. For a time it fell even totally into oblivion, but only to appear once more. At present its use as a neurotic is again on the wane, but will probably increase again, as has always been the case."

Dr. Dixson has performed his part very satisfactorily, the English rendering being clear and idiomatic, and very rarely indeed betraying the fact of translation. Our thanks are due to him for bringing such a valuable work within the scope of a wider circle of students.

The Topographical Anatomy of the Child. By JOHNSON SYMINGTON, M.D., F.R.S.E., F.R.C.S.E., Lecturer on Anatomy, School of Medicine, Edinburgh. Edinburgh: E. and S. Livingstone. 1887.

DR. JOHNSON SYMINGTON has well filled a gap in our Topographical Anatomy. This department of anatomical science has been worked at most extensively and ably by Pirogoff, Braune, Luschka, and others in the adult; but the method of frozen sections has hitherto been systematically applied to the child, in one case only by Prof. Dwight. Dr. Symington has added to our knowledge by presenting us in this work with fourteen coloured lithographic illustrations, all life size, and thirty-three woodcuts taken from sections of male and female children, aged four years and a half, five years, six years, and thirteen years, and has given us a large number of very accurate observations on the position of the various organs and viscera, and the changes which they undergo in the earlier periods of life. The horizontal sections have been taken from a girl six years of age, whilst the vertical sections (both coronal and sagittal) are from children of both sexes and various ages. In

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addition to the illustrations, the work is most valuable for excellent letterpress treating very fully and minutely of the position of structures at all periods of early life, and it is evident that many of the views generally held in regard thereto will have to undergo considerable alteration. For example, Dr. Symington shows that the external auditory meatus is relatively as long in the child as in the adult, when examined in the fresh state in subjects with the entire head frozen; that the spinal cord in the newly born child ceases at much the same point as in the adult; that the child's neck is not relatively short, but that it is higher in relation to the vertebral column than in the adult. The common assumption that the position of the stomach in the child is vertical is also shown to be erroneous, and is proved by figures taken from an infant four days old, and from the girl six years of age. The portion of the book devoted to the position of the pelvic viscera in male children is of great importance to surgeons, and will be carefully studied in view of operations on the urinary organs in early life. Too much praise cannot be bestowed upon the author for the obvious care and industry with which he has pursued his investigation, and the accuracy and fidelity with which he has reproduced its results. Its dedication to Professor Braune is a most graceful compliment to an anatomist who has done more to advance the knowledge of topographical anatomy than any other worker in this special branch. In conclusion, we must add a word of praise for the artist, Mr. J. T. Murray, and for Messrs. McLagan and Cumming, who have printed the plates.

New Inventions.

NEW URETHRAL INSTRUMENTS.

THE first instrument, as represented in Figs. 1 and 2, is what I term the Compound Catheter. Outwardly, as Fig. 1 shows, this instrument is practically the same as the French gum-elastic bougie, but upon referring to Fig. 2 it will be seen that where the stricture is too tight, and will not,

FIG. 1.

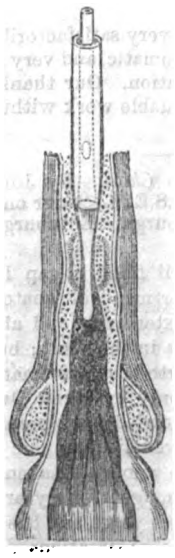
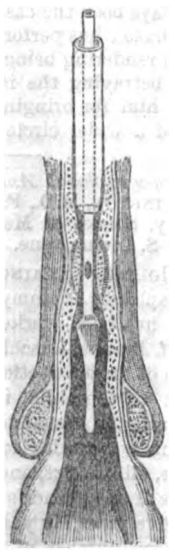
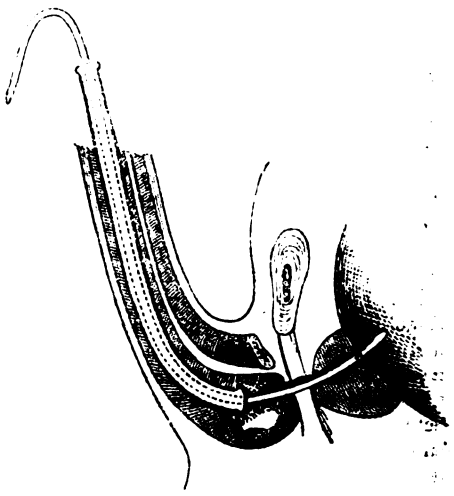


FIG. 2.



or should not, allow the whole instrument to pass, the body or dilated portion can be withdrawn, and the inner or smaller catheter passed on without fear of causing pain to the patient or injury to the mucous membrane. The next instrument, Fig. 3, I call the Catheter Guide or Conductor, and it acts in a double capacity—firstly, for protecting the mucous membrane of the urethra from unnecessary thrusts and stabs, and secondly as a stricture threader. The conductor resembles an ordinary silver bougie—flat, however, at both extremities, with slightly protruding edges; and it contains a central tube capable of admitting a No. 1 and No. 2 catheter, and this is surrounded by a number of smaller tubes for the passage of catgut or fine bougies. Let a stricture be situated where it may, a full-sized catheter can always be passed down to it; the conductor then takes the place of the catheter; this is passed as far as it will go, and its face is pressed gently against the anterior opening of the stricture, in order to dilate it; a long fine catheter, purposely made for the conductor, is then passed down the central tube, and rarely fails to pass through the stricture

FIG. 3.



on reaching it; should it fail to do so, the smaller tubes with catgut can then be worked. Even after failure with all the tubes, we may have the satisfaction of knowing the urethra has been protected from rude treatment, the mucous membrane being saved many a bruise, many a laceration. Failure, however, will not often attend the conductor, if used in a rational manner. A glance at Fig. 3 will possibly serve to illustrate its use. These instruments have been made for me by Messrs. Walters and Co., of 29, Moorgate-street, City. I venture to think that those who may be disposed to try my instruments will not be disappointed with the result. The conductor, especially in intractable cases, will be attended with marked benefit both to patient and operator. E. DISTIN-MADDICK, F.R.C.S. ED.

"A CASE OF URETHRAL CALCULUS OF UNUSUAL SIZE."

To the Editors of THE LANCET.

SIRS,—I have just received the report of the examination of this stone kindly made for me by Mr. Richard Reynolds, of Leeds. As many inquiries have been made as to the composition of the calculus, I hasten to place Mr. Reynolds' report in your hands for publication.—Yours faithfully,

Queen-street, Leeds, Oct. 17th, 1887. W. H. BROWN.

[COPY.]

Report of the Result of a Chemical Examination of a Fragment of Calculus.

"The specimen was of dirty white colour, compact, and of flinty hardness, with a conchoidal fracture. It was composed of ammonio-phosphate of magnesia, and basic phosphate of lime, and these constituents were separated, and their respective presence was determined. From the physical character it may safely be asserted that the phosphate of lime predominated, and the result of the chemical test was consistent with this view. The urine from which the calculus was deposited would doubtless have an ammoniacal character. "RICHARD REYNOLDS."

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THE LANCET.

LONDON: SATURDAY, OCTOBER 22, 1887.

THE reports of the proceedings at the opening of the medical schools in the provinces show that medical education is alive there as elsewhere. At two of the provincial schools we read of new buildings in course of erection; at Sheffield Dr. SINCLAIR WHITE intimated that the munificence of his senior colleagues and the public would before another year provide a new medical school; and at Newcastle-on-Tyne Dr. HEATH, long and honourably associated with the medical school there, said that they were engaged in the erection of a new college, which they expected to be worthy of the city of Newcastle, and as handsome as the Wood Memorial Hall. Apart from such substantial indications of demand for medical education and provision for meeting it, the proceedings were not without interest. Dr. SINCLAIR WHITE'S address was devoted chiefly to the exposition of the importance of sanitation, and was in its way most effective. He maintained that the aims of sanitary science and those of Christianity were practically identical, and that for people sunk in ignorance and depravity "sanitation must precede every other gospel." There was a mine of wealth, he maintained, in fresh air, water, and soap, and the cultivation of temperance. Dr. WHITE did not pretend that the successful inculcation of such principles was an easy matter; he does not expect mere legislation to do everything. He thinks that the Education Department might do more than it does in teaching hygiene in common schools, and he very properly pointed out the ignorance of many highly-educated people on the subject. Instances of this must have come under everybody's notice, and occur daily in the experience of medical men. Common cleanliness is commoner now than it used to be among educated people, though there are still surprising survivals of the opposite kind, and singular instances of ignorance of the virtues of fresh air. But Dr. WHITE'S appeal was in the interest of the poor, in whose straitened homes health and even decency are often impracticable. Arduous indeed is the undertaking of raising the standard of home comfort and accommodation among the people; but all must admit, in view of their tendency to forsake the country for the great towns, that it is urgently necessary, even in the interests of society itself.

A very interesting feature of the opening of the provincial session was the presence of a distinguished London teacher at Owens College and the Yorkshire School of Medicine respectively. It is a happy illustration of the good feeling which obtains between medical schools and teachers. The provinces in this matter, as in many others, set a good example to the metropolis. We sometimes hear plaintive accounts of the prolonged gestation of introductory addresses, and the months of unhappiness and anxiety which they involve to the unfortunate teacher who stands next in succession for this duty. Some of our young surgeons would rather remove a kidney or a cerebral tumour than deliver a simple introductory address. Let the metropolitan schools take a hint from the provincial ones, and ask one of the provincial teachers to address the students. It would give great freshness and novelty to the occasion, and though it would be difficult for any of our provincial brethren to give an address which would exceed the interest of that of Sir JAMES PAGET at Manchester or of Dr. MATTHEWS DUNCAN at Leeds, we venture to say that both these gentlemen would be well prepared to hear from provincial orators sound lessons in medical philosophy or in medical practice.

Owens College may well feel honoured in being the place of such a noble address as that of Sir JAMES PAGET. No student could hear it without feeling his sense of "responsibility to God and man" increased. The modesty with which Sir JAMES contrived to make his mistakes and his defects of observation do duty as a warning to his young hearers would not blind them to the rich wisdom and the rare magnanimity which appeared in every sentence. He may have missed—just missed—the significance of typhoid ulcers and of embolisms, which Sir WILLIAM JENNER and VIRCHOW and KIRKES so happily seized, but the education of his audience will not have proceeded far before they find out how much Sir JAMES has observed which others have overlooked, and how great are his contributions to pathology and practice, and above all to that higher region of professional thought and wisdom in which he reigns so easily and with such universal approval. Not the least important part of Sir JAMES PAGET'S address was that in which he dwelt on the value of private practice as a sphere for observation of facts, histories, and cases extending over long periods of time, and in which successive members and generations of a family of practitioners may take part.

The address of Dr. MATTHEWS DUNCAN is characteristic enough. Its praise of the Leeds school, started half a century since, "by the wise enthusiasm of a few medical men," was well merited. To him evolution is "that charming and valuable theory," but it leaves unsolved the great problems of conscience and responsibility. Continuity is a doctrine of the highest consequence, but it does not exclude forces which are not known to obey continuity. Schools had to provide for average men, but that did not exclude the necessity for individual effort, or hinder the workings of individual genius. His magnification of virtue was worthy of MILTON or of one of the great preachers of his own country. No good was to be expected in a medical school without this. In such a school the teachers would make shabby pupils, and the pupils would grow into mean practitioners. Dr. DUNCAN dwelt on the time necessary for medical education, and suggested that it would soon require five years, which practically is the period taken by the majority of students.

A PARLIAMENTARY PAPER has been recently printed and published containing copies of correspondence, or extracts therefrom, relating to the repeal of Contagious Diseases, Ordinances, and Regulations in the Crown Colonies. It is in continuation of other papers published this and last year, and is a most interesting document. It may be well to explain that soon after the repeal of the Acts in this country despatches were sent to the governors of different Crown Colonies—Ceylon, Hong-Kong, Straits Settlements.

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Labuan, St. Helena, Malta, Fiji, Barbadoes, Jamaica, and Trinidad. In these despatches the various governors were notified that the policy of maintaining similar laws in the Crown Colonies would no doubt be called in question in Parliament, and that, if their respective Governments should be of opinion that the interests of the colony imperatively required the continuance of these laws, the Colonial Secretary wished to be furnished with any special reasons they might have for that opinion. These latter are included in the document alluded to, and, as they give most interesting information from the naval, military, and colonial surgeons, as well as the governors themselves, as to the efficiency of these laws in preventing venereal diseases, we will give them in detail.

From Barbadoes, Dr. F. B. ARCHER, the visiting surgeon to the Contagious Diseases Hospital, reports that the Act has done much good in the past and kept down disease amongst a certain class of prostitutes, but the powers of it are too limited, and it does not touch a very large class of women, who keep open houses and spread disease recklessly. He adds warningly: "I am certain, if the Act is repealed here, there will be a considerable increase of disease." He thus confirms what has been stated by those entrusted with the working of the Acts in this country and Ireland—viz., that its operations must, to be perfectly successful, embrace a wide area. He is confirmed in this conclusion by the Major-General in command of the troops. In St. Helena it appears that the Act, which was passed there in 1865 was allowed to lapse in 1879, and at present there is no law upon the subject. From Malta there comes a general opinion in favour of this ordinance from his Royal Highness the Admiral and Commander-in-Chief in a communication to the colonial surgeon. The Governor, Sir J. L. SIMMONS, urges with great reason that the legislation in Malta is not in any way the outcome of such legislation in England, but that, on the contrary, the existing law, passed in 1861 (three years prior to the first English Act of 1864), merely re-established the practice of inspecting prostitutes, which had been established probably more than 300 years previously. The temporary suspension of the practice in 1859 led to such serious consequences that it was found necessary to pass the Ordinance of 1861, which has been in force ever since. After alluding to statistics, to be given presently, he expresses a strong opinion that, quite apart from the question of the health of the military and naval forces, and looking to the civil population of Malta, the existing law should not be interfered with. Although Malta lies in the route of a great sea traffic, has a garrison averaging 3 per cent. of the total population, in addition to the seamen of the fleet, venereal disease is not prevalent, and bad forms of syphilis are relatively uncommon. The community is so small, and inter-marriage so universal, that any increase in the disease would lead to a serious spread of the infection throughout the community. It would therefore, as Sir J. SIMMONS argues, "be neither politic nor just to force on the Maltese the abolition of a hygienic safeguard which has existed certainly for more than a century, a safeguard which the maintenance by England of a garrison and fleet at Malta renders imperatively necessary in the interests of the Maltese themselves." Surg.-Gen. SINCLAIR gives the following statistics as to the troops under his command. In the year 1884 the Royal Malta Fencible Artillery (strength 374) gave no admission for syphilis. The Duke of Cornwall's Light Infantry (strength 900) arrived from England in December, 1885, with twenty-eight cases of venereal disease, and on Nov. 15th, 1886, they had only one case of gonorrhœa in hospital. The Black Watch (strength 740) arrived from Egypt on May 5th, 1886, with thirty-three cases of venereal disease; on Nov. 15th, 1886, they had no case in hospital. H.R.H. the Naval Commander-in-Chief, writes: "I am very strongly of opinion that in a place like Malta, with a very large garrison and fleet, and with, in addition, a large number of merchant seamen of all nationalities, constantly visiting the port, it is most desirable that the Acts should remain in force." He encloses a report from Deputy Inspector-General SHAW, who concurs entirely in the opinion of Surgeon-General SINCLAIR, and adds: "During my service at Malta I have found that the cases of venereal disease contracted in the island were not only very few in number, but very slight in character. This I attribute entirely to the sanitary action of the police regulations, which, if vigilantly and strictly carried out, render it impossible for a diseased prostitute to ply her trade for any time undetected; and the abolition of those regulations would, I believe, be fraught with evil consequences to the civil community, as well as to the garrison and fleet." Dr. PISANI, the chief Government medical officer in Malta, refers to the fact that the Maltese laws make it compulsory for any person and medical practitioner to report infectious disease within twenty-four hours of its detection to the sanitary authorities for the purpose of isolating them in proper hospitals or at the residence of the patients. He gives obvious reasons why venereal diseases should not be included among these, and urges that the ordinary source of venereal disease—the prostitute—can be well subjected to the measure of medical inspection, which secures early treatment. There is a consensus of opinion among the medical practitioners of Malta in favour of this inspection, and the women subjected to it do not object to it, and have given no trouble. He concludes: "I am convinced that inspection of prostitutes is here imperatively required, and that it should even be made oftener than it is at present."

It must be remembered, too, that the ratio of venereal diseases among the troops and seamen coming from the home ports and disembarking at Malta will now be enormously increased, it being well known that these diseases are as rampant amongst them as they were previously to the passing of the Acts in this country. If men of these classes are landed in Malta, and the prostitutes there are permitted to ply their trade unchecked by medical inspection and treatment in hospital, syphilis in its worst forms will soon become epidemic! It is most important, therefore, that the Government of Malta should in the most determined manner resist any attempt to repeal the existing law. The Maltese know from experience both the benefits of this legislation and the fearful consequences of its suspension in 1859. They have the most valuable of all arguments, the inexorable logic of facts. To ignore past experience, to disregard the strongly expressed opinions of governors, military, naval, and colonial medical officers ast and present, and to inflict

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such evils on the colony as must inevitably result, would be nothing short of criminal.

In Trinidad the Act appears to have been practically imperative, and no medical details are given. From Hong-Kong, which resembles Malta in many respects, being insular, a great maritime highway, densely populated with an alien community, and other circumstances which make comparison with England impossible, comes the same general consensus of opinion in favour of maintaining intact the present legislation. This latter was commenced in 1857, seven years before the English Act of 1864. Previously to that year syphilis in a very severe form constantly prevailed, the type known as the "black lion" being very common. Dr. MANSON, one of the leading practitioners of Hong-Kong, informed the Administrator that the consequences of the suspension of the Act would be: "First, an epidemic of syphilis; second, this would continue until the point of saturation was reached; third, this state of saturation would be maintained until the existing or similar ordinances were reapplied." Inspector-General FISHER reports: "Venereal disease in China was formerly very prevalent among Her Majesty's forces in this command, and was of a much more virulent type and disastrous in its consequences than the same disease as existing in England. The local measures taken here have been of immense benefit, as shown by the smaller number of entries on the sick list and the milder nature of the attack. There is, however, every reason to suppose that the discontinuance of compulsory examination would soon be followed by results as serious as those of old." Dr. J. W. FISHER, Fleet Surgeon, states that in only one case out of all those contracted in Hong-Kong during the present commission has the disease been followed by constitutional effects, showing how wonderfully the more serious forms of syphilis have been stamped out by careful supervision. Speaking of Japan, Dr. FISHER adds: "The lock hospital system, combined with careful examination of all women belonging to the licensed brothels, has simply stamped out the old virulent form of syphilis which was for years associated with the name of Japan." He concludes: "I believe it to be the unanimous opinion of the naval medical officers serving on this station that the abolition or mere temporary suspension of the Acts would be attended with very grave consequences, and I have reason to believe that this is also the opinion of the medical officers of other navies." Similar testimony is borne by Major-General CAMERON commanding in China and Straits Settlements and by Deputy Surgeon-General HUNGERFORD. In addition to all this, it appears that the Acts have virtually suppressed a most horrible form of what amounted to brothel slavery, children being kidnapped and sold for immoral purposes. Mr. MARSH reports that "the women who are infected in this colony are carefully treated in the lock hospital, to which institution they manifest no repugnance after experience of the kind treatment they there receive." Very similarly favourable testimony in favour of the Acts comes from Jamaica, Fiji, Gibraltar, Straits Settlements, and Ceylon; no details are given respecting Labuan. It is much to be lamented that the discontinuance of the compulsory examinations is insisted upon in all except Malta and Fiji, where special circumstances render it imperative that they shall be continued. The Acts have been repealed in Jamaica, six members of the Council protesting against it in a very well reasoned paper. The Governor of Gibraltar (Sir A. E. HARDINGE) urges the continuance of the law, but apparently in vain. In Hong-Kong the brothels are to be still under police supervision and the lock hospital continued on the voluntary principle. We have been obliged to omit many other valuable details, but enough has been given to show the value of these Acts in the colonies as well as at home; and it is interesting to note the perfect agreement existing between the experiences and opinions of those who have had to administer them, both in these kingdoms and in the colonies.

THE question of the influence of scarlet fever hospitals on the neighbourhoods in which they are placed has been more than once brought under notice, and a communication which we have received from Mr. HENRY GODRICH, B.A., points out that the present time is one that is especially opportune for investigating the subject on the same lines that were adopted in the case of small-pox at the Fulham Hospital. We agree with him that such an opportunity ought not to be lost, but the relations of the Local Government Board to our metropolitan fever hospitals are of a sort that do not seem to favour inquiries like this, though urgently demanded in the interests of the community. It will be remembered how persistently the complaints as to the spread of small-pox were ignored, until at last Mr. POWER who apparently had no ordinary duties or responsibilities with regard to Fulham, was deputed to make an inquiry, the results of which finally upset all the views that the Metropolitan Asylums Board and the central authority had so long adhered to. In the case of scarlet fever, we are, it is true, in a somewhat different position, for the inquiries which were made some years back, when the official report on the Influence of Hospitals for Infectious Diseases was issued, went to show that, as regards the houses more immediately surrounding the London Fever Hospital, there had been no marked incidence of scarlet fever, and this although the number of patients suffering from that disease had often ranged from 500 to 900 per annum. But that inquiry did not profess to deal with the subject in the same exhaustive style as was adopted at Fulham, and the number of houses included in the investigation was so limited that protection against scarlet fever by a prior attack may to some extent have vitiated the conclusions drawn. And since that date Dr. TRIPE has brought forward some suspicious facts as to the influence of Homerton Hospital when used for scarlet fever isolation. Taking all these circumstances into consideration, it is only right that the question should be fully inquired into; and it will be obvious to everyone that the Medical Department of the Local Government Board can alone take the matter up in the manner which would be necessary to a successful result. Another point raised by Mr. GODRICH is the need for so constructing infectious hospitals that all infected air leaving the wards shall be effectually destroyed. He states that he originated the idea in a communication to the Kensington Vestry in 1877-78, and that it was only subsequently that it was advocated by Dr. BERTILLON and Dr. BURDON SANDERSON. We have often urged that such an experimental hospital should be erected for small-pox cases, and we still hope that

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the managers of the Asylums Board will not long defer acting on the recommendation of the Royal Commission on small-pox and fever hospitals in this respect. But before there is any need to apply the system to scarlet fever, the public should have information from the proper source as to whether scarlet fever hospitals have, or have not, any power of distributing infection to the neighbourhoods around them by the process of aerial diffusion.

THE Harveian Orator, Dr. STONE, was fortunate in being able to import a really new theme into the annual panegyric of the man whose memory is so zealously and lovingly treasured by the College of which he was so brilliant an ornament. The publication in *facsimile* of HARVEY'S lecture notes on Anatomy, which was undertaken by the College mainly at the instigation of Sir E. SIEVEKING, was put to good account by Dr. STONE, who showed how full of interest these jottings are, and how much light they throw upon the character of HARVEY. The numerous quotations, in their quaint combination of Latin and English, which the orator culled from these manuscript pages, are full of wit and wisdom; and we doubt not that Dr. STONE will be repaid in the assurance that he has revealed to many the treasures of a priceless volume. For it is seldom that we are enabled to be brought into so intimate a contact with the living word as is possible by the perusal of these notes, which bring before the reader the man as he lived, as much as the anatomist and physiologist. But apart from the interest attaching to this exposition, Dr. STONE did not fail to urge upon the attention of the College the value and importance of a study in which he is almost alone in this country—viz., that of physiological physics. He did well to point out the defects in medical education in this respect, and he was by no means too severe in his criticism of the manner in which the University of London fulfils its duty of testing the "preliminary scientific" knowledge of students intended for medical graduation. His suggestion that a course of instruction in this subject should be one of the purposes to which the proposed new building on the Embankment may be put is one which may well be taken into consideration. Nor was the introduction of this topic at all foreign to the main object of a Harveian oration. The mechanism of the circulation may be taken as the root example of animal physics, and Dr. STONE showed by reference to HARVEY'S own words that he was not ignorant of the physical principles involved in the action of the heart, and that he paid much attention to the study of physical science as it existed in his day. With all his keen interest in scientific research, Dr. STONE nevertheless did not withhold an expression of regret at the neglect of classical training. He would fain have revived the ancient custom of delivering the oration in the Latin tongue, and hinted that the neglect of Latinity was depriving medicine of its place among the learned professions. We have no desire to revive an old controversy, but we may venture to differ from a conclusion which implies that culture is indissolubly linked with a more or less profound knowledge of dead languages. In HARVEY'S day Latin was the medium whereby students and teachers in all parts of the civilised world could exchange their ideas. To-day, the *savans* of the different nations speak in their own tongue, and education aims at imparting to each a knowledge of the languages used in other lands, so that the written thoughts can be disseminated in the freshness of their utterance, and not disguised or transmuted by being clothed in a dead language. We are less disposed, then, to agree with the opening sentences of Dr. STONE'S oration than we are with the just remarks he made on the close of his survey of HARVEY'S lectures upon the value of oral instruction. It has been often said that, owing to the multiplication of text-books, the practice of imparting knowledge by means of lectures has become unnecessary. In a few sentences Dr. STONE disposed of this shallow objection; and we commend his remarks to all those who would degrade medical education to the level of a schoolboy's task.

Annotations.

"Ne quid nimis."

THE ANNUAL MEETING OF THE COLLEGE OF SURGEONS.

THE annual meeting of the Fellows and Members of the College of Surgeons is now close upon us. The so-called report from the Council, which will be presented, will be found to consist of the Minutes of the Council meetings that have been held during the preceding collegiate year. With these Minutes, or rather, with the more important of them, our readers are already acquainted, for they have been published and commented upon by us from time to time. Nevertheless, it is desirable that Fellows and Members should make themselves thoroughly acquainted with them in order to appreciate the bearing of what may be said at the meeting. We accordingly recommend an early application to the Secretary for a copy of the report. Of chief interest at present is the attitude of the Council of the College to the Fellows and Members at large. The Council have applied for a supplementary Charter, containing, on the one hand, provisions at variance with the expressed wishes of a large section of the Fellows, and, on the other, entirely ignoring matters which the same Fellows believe would conduce to the welfare of the Royal College of Surgeons, and tend to promote the interests of medical polity and education. As regards the Members and their very natural aspirations to be admitted to some share in College management, the Council also reply with a direct negative. Thus the new Charter, which is now before the Privy Council, ignores the wishes of both Fellows and Members alike. Under these circumstances, it was felt necessary by the Association of Fellows and by the Association of Members respectively to petition against this supplementary Charter, and the matter is still *sub judice*. It appears to us, however, that the annual meeting will be a fit and proper occasion at which the Fellows and Members may again emphasise their disapproval of the course taken by the Council. To this end we hope there will be a large and influential meeting of both provincial and London men, and that the character of the proceedings will be such as to place additional arguments in the hands of the two Associations in favour of the views embodied in their two petitions now before the President of the Council.

THE SANITARY STATE OF CAMBRIDGE.

IT is singularly unfortunate that some of our university towns should lay themselves open to reproach on sanitary grounds, for as centres of learning they should not afford examples of that which can only result from failure to carry out the first principles of health requirements. This time Cambridge is in question, and Dr. Alfred Carpenter, who has

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been there to co-operate with the University in granting certificates in Sanitary Science, can only express his disgust at the extent to which the sanitary needs of the town are ignored as regards sewerage and the filthy state of the Cam. Mr. R. C. Lehmann fully supports the complaints that are made, and it is evident from his statements as to the black, oozy, sewage stuff that is being dredged from the river, that intending Cambridge graduates will have to live on the banks of a filth-laden stream, and to boat in a solution of sewage. Mr. Lehmann throws the blame in the first instance on the Cambridge sanitary authority, who have ever since 1864 ignored their most elementary duty in this respect; and next on the Local Government Board, who after having held two local inquiries, and having then informed the Commissioners that, unless they formulated a complete scheme at an early date, a time would be fixed within which the work must be carried out, appear to have settled down into a condition of inaction. It is a matter of Imperial as well as of local importance, that such a place as Cambridge should free itself from such serious conditions of nuisance as are the result of the want of a proper system of sewerage and sewage disposal, and we can only wonder that those who are interested in the welfare of the town and university do not bring the subject before the attention of the House of Commons.

BERI-BERI AND ANCHYLOSTOMIASIS.

WE have received from Dr. W. R. Kynsey, Principal Civil Medical Officer and Inspector-General of Hospitals, Ceylon, a copy of a report on "Anæmia or Beri-beri of Ceylon." This singular affection, which has received of late years much attention in all parts of the world where it exists, has been attributed to a variety of causes. It is described as occurring under two forms—one which is marked by paralytic symptoms, the other in which a dropsical condition predominates. We published recently a full account of the affection, to which reference may be made for its peculiar characteristics, the most constant and striking of which is the progressive anæmia. There can, we think, be little doubt that the term "beri-beri" is an elastic one, and that more than one essential disease is included under it. Such, indeed, would appear from this fact alone, that its pathogeny has been by some ascribed to a bacterial source, by others to a poison which produces multiple neuritis, and again to the presence of intestinal parasites, such as the tricocephalus dispar (Erni), and the anchylostomum duodenale. Dr. Kynsey is persuaded that, in Ceylon at any rate, beri-beri (which is there of the "wet" or "dropsical" variety only) is none other than anchylostomiasis, more widely known, perhaps, under the various designations of "Egyptian chlorosis," "miner's anæmia," "brick-burner's anæmia," and the "St. Gothard Tunnel disease." The facts adduced by Dr. Kynsey in support of his contention seem to be strong, for he has detected the presence of this parasite in large numbers in all the cases he has examined. Certainly such an explanation is far more feasible than the alternative supplied by Erni in support of the tricocephalus. For, so far as we know, the latter parasite, which is exceedingly common in many countries, does not, like the anchylostomum, injure the intestinal wall and lead to hæmorrhage. The tricocephalus theory of beri-beri may rank with the bothriocephalus theory of pernicious anæmia, with even perhaps less justification. Nevertheless, the inquiry into the effect produced by intestinal worms upon the general health of their hosts is one which has been too much neglected, and the attention that is now being directed to the subject may result in the production of important additions to knowledge. The Ceylon form of beri-beri is free from the paralytic symptoms which are described as occurring from the first in other countries. It may run an acute or chronic course, and death is often appallingly sudden. The severity of the symptoms depends on the number of the parasites present in the intestines, the state of health, and the food. Residence in an infected centre is necessary for the development of the symptoms, the larvæ of the parasite being present in drinking water. If recognised early—viz., the dyspeptic or anæmic stages,—the disease readily yields to treatment; but if neglected until dropsy and cardiac degeneration set in, the prognosis is most unfavourable. Removal from the infected area is essential, and the best remedy for the expulsion of the anchylostoma is thymol, and for the anæmia iron, followed by digitalis or strophanthus. But no treatment avails until the parasites are expelled. The foregoing is the gist of Dr. Kynsey's conclusions. But he has added greatly to the value of his report by appending a translation by Dr. J. Macdonald of the admirable and exhaustive monograph upon "Anchylostomum duodenale and Anchylostomiasis," by Dr. Adolph Lutz, by far the most complete account of the parasite and its effects that has been published. A translation of Erni's article on Tricocephalus dispar and Beri-beri is also appended.

THE ROYAL BERKSHIRE HOSPITAL.

THE memorial, signed by twenty-eight medical men, forwarded to Mr. Benyon, president of the hospital, asking for the appointment of a Fellow, or at least a Member, of the Royal College of Physicians to fill the vacancy caused by the death of Dr. Shea, has been submitted to the Board of Governors, with whom rests the appointment of the candidate selected and approved by the medical and surgical staff. A fact of importance should be recorded in reference to the appointments to this hospital. For many years, we are informed, it has been the custom to appoint to the surgical staff those who are either the descendants of former surgeons, or those who have been pupils to one of the surgeons, or those who have been in partnership with them or their successors. This custom, whether accidental or intentional, has been rarely deviated from for a period of more than twenty-five years, except in the case of minor temporary appointments. The effect of such a custom is to shut out from the hospital able men from among the practitioners of the town and elsewhere, and naturally tends to discourage highly qualified men from becoming candidates when a vacancy occurs at the Royal Berkshire Hospital.

SMALL-POX ISOLATION AT PERTH.

A LIVELY discussion has been going on in Perth as to the propriety of the action adopted by the managers of the General Infirmary in retaining in that institution three nurses who had contracted small-pox in the performance of their duties. The disease having been imported, the patients attacked were removed to the small-pox hospital belonging to the sanitary authority; but the infirmary authorities declined to allow such removal in the case of the nurses, and this action has met with a protest from Dr. Simpson, the medical officer of health. Unless a general hospital has means for isolating small-pox in a completely detached building, with independent laundry, kitchen, and supervision, it is wrong to attempt the treatment of small-pox in such an institution; and the attempt has over and over again led to an extension of disease such as the ordinary patients have no right whatever to be exposed to. Even in the London Fever Hospital, where a separate and detached isolation building is available, the retention of a small-pox patient is never so much as contemplated. The real secret of the action which has been adopted in Perth seems to be that the authority's small-pox

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hospital is not a proper one for the reception of persons holding the social standing which the nursing staff of the infirmary occupy. If so, the authority are to blame, and should forthwith remedy the evil; for it is their duty to protect the public from infection, whatever may be the social standing of those with whom the danger lies.

PROFESSOR BILLROTH.

THE numerous friends of Professor Billroth all over the world will be pleased to learn that his health is thoroughly restored, and that he has resumed his cliniques at the General Hospital, Vienna. On the occasion of his first lecture he received a great ovation. The theatre was crowded with professors and students for a long time before the lecture hour had arrived, and the entrance of Professor Billroth was welcomed with loud and long-continued applause. Dr. Preis then advanced and tendered in the name of his colleagues and the pupils a hearty welcome to the Professor, with an expression of joy at his recovery from so severe and dangerous an illness. In reply, Professor Billroth made some feeling remarks, recalling the time when, twenty years ago, he first taught in that place, with colleagues such as Rokitansky, Oppolzer, Skoda, Demme, Dittel, Hebra, and others, who had all since passed away. He warmly thanked those present for their kindness during his illness, and their reception of him that day. He had not expected to have been there again, but he had been snatched from death by the self-sacrifice and devotion of his colleagues. He spoke of the kindness and love which had been bestowed upon him on all sides, and said that he would devote all his strength to the welfare of mankind, the glory of the old Vienna University, and the prosperity of Austria. He then proceeded to speak of the life work of von Langenbeck, and suggested that, in respect to his memory, the meeting should be closed. After this, Professor Billroth took them over his wards, and operated on a case of double hare-lip.

OUR ARMY.

THE General Annual Return of the British Army for the year 1886, issued from the Horse Guards, shows the average strength to have been 7218 officers, 682 warrant officers, and 195,905 non-commissioned officers and men. Of these, 3556 officers, 441 warrant officers, and 94,060 non-commissioned officers and men were serving at home; and 3662 officers, 241 warrant officers, and 101,845 non-commissioned officers and men abroad. During the year the deaths among the non-commissioned officers and men, at home and abroad, amounted to 2721, or in the ratio of 13·89 per 1000 of strength, being slightly higher than in the preceding year. There were 2789 men discharged as invalids, or 14·24 per 1000, which is 4·51 per 1000 less than in 1885. The total loss from these two causes, therefore, was only 28·13 per 1000. There were 71,786 recruits enlisted, of whom 20,183 were rejected on primary inspection and 2410 on secondary, making a total of 314·7 rejected per 1000 enlisted. In the preceding year it only amounted to 290. Of 38,813 recruits who joined, 26 died and 49 were invalided within three months of the date of enlistment, and 335 were discharged at the end of that period "as not likely to become efficient soldiers," being respectively in the ratios of ·67, 1·26, and 8·63 per 1000, or a total decrease in three months of 1 per cent. Of the recruits who joined, 402 per 1000 were under nineteen years of age, 234 between nineteen and twenty, and 364 were twenty and upwards; this shows the unsatisfactory result of an increase of the younger class of recruits compared with the previous year. As regards the heights of the men passed into the service, the ratio per 1000 under 5 ft. 5 in. was 283; 5 ft. 5 in. to 5 ft. 6 in., 211; 5 ft. 6 in. to 5 ft. 7 in., 192; and 5 ft. 7 in. and upwards, 314. This shows an increase of 16 per 1000 in the proportion at 5 ft. 6 in. and upwards compared with the results for 1885. The chest measurements were—under 34 in., 350; from 34 in. to 35 in., 344; and 35 in. and upwards, 306, which are less favourable than in the preceding year by 5 per 1000 in the first group. The proportion at different weights was—under 120 lb., 187 per 1000; 120 lb. to 130 lb., 374; and 130 lb. and upwards, 439; the last being 20 per 1000 higher than in 1885. There would appear, therefore, to have been a falling off as regards age and chest measurements, but a gain in the heights and weights. It may not be uninteresting to compare these results with the ratios obtained regarding the non-commissioned officers and men serving on January 1st. Their heights were—under 5 ft. 5 in., 102 per 1000; 5 ft. 5 in. to 5 ft. 6 in., 176; 5 ft. 6 in. to 5 ft. 7 in., 206; and 5 ft. 7 in. and upwards, 517; the chest measurements—under 34 in., 72 per 1000; from 34 in. to 35 in., 159; and 35 in. and upwards, 769. No information is given as to the weights of the men serving. In addition to the effective force, the return gives a number of tables respecting the auxiliary and reserve forces. The average strength of the first class of the army of reserve was 44,215, and among them 333 deaths were reported, or in the ratio of 7·43 per 1000; and of the second class the strength was 6028, and the deaths 153, or 24·97 per 1000. The men of the first class were, with a few exceptions, under thirty-five, while the second class were almost all over forty years of age. The death-rate of the Militia, as shown in this return, was only 3·96 per 1000; of Yeomanry Cavalry, 4·46; and of Volunteers, 3·56; but there is good reason to believe that many of the deaths in these branches of the service are not reported, and are struck off the strength as "absentees."

DEATH BY HEART-FAILURE FROM STOMACH IRRITATION.

IF the means of masticating food be wanting, the first stage of the process of digestion cannot, of course, be performed, and this is in itself a great evil; but, as a recent fatal case has shown, actual perils to life from physical causes may arise, and perhaps become disastrously effective. By post-mortem demonstration, it has been proved that an accumulation of unmasticated food taking place in the stomach may so distend the stomach as to press upon and irritate the heart in such manner that, being in a morbidly weak or exhausted condition, its natural function may be arrested and death take place by syncope. It is a familiar fact that a greatly distended stomach may cause "palpitation" and other distressful experiences, and it is not in the least degree surprising to find that the excitation set up may be so aggravated as to produce fatal effects in a special state of the organism. But it is important to notice how this untoward ending is reached, because the attainment of this issue is only a question of degree in the disturbance. The operation from cause to effect is purely one of nerve action, and the *modus operandi* is either completely reflex, in which case the process is exhaustive as regards the particular centre affected, or partially reflex, the circuit, so to say, being broken at the centre, and the force of the peripheral excitation exerting an inhibitory influence on the cardiac or occasionally the respiratory centre. It seems probable that in certain cases there may be spasm of the muscular coat of the vessels of the heart (perhaps the coronary), or of the heart itself, producing either a condition resembling that which is supposed to obtain in some forms of "angina," or arresting the ventricular contraction in systole, or, it may be, by asystole, though this last-mentioned ending is perhaps more commonly reached by inhibition, as in another class of cases. When the excitation caused at the periphery is of a

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nature corresponding with, and in some respects resembling, high tension of an electric current, the stimulus propagated along the afferent nerve trunk may so act on the centre, indirectly perhaps, as to interrupt its action. In this last event death will occur by arrest of the ventricular movement in diastole or arrest of the systole. Or the obstructive or exhaustive action may be upon the respiratory centre with seemingly "asthmatic" symptoms at the opening of the attack, in the course of which death occurs. Happily cases of a fatal issue from peripheral irritation of the nerves are not of very common occurrence; but this renders it the more desirable that those which do occur should be very carefully investigated. The subject of death from "heart disease" is one that greatly needs to be studied in the light of precise pathology.

SIR WILLIAM GULL.

As we announced last week, Sir William Gull was taken ill on Monday, the 10th inst., with right-sided hemiplegia. There was almost total paralysis of motion of arm and leg; tongue, eyelids, and facial muscles quite unaffected; intelligence not appreciably impaired. He was seized when out walking, about noon, and required to be assisted home. Twenty-four hours afterwards his motor power had largely returned; but there remained very considerable sensory paralysis of the whole right side, most marked in limbs and trunk, but quite observable in face, neck, and scalp. Since then, now nine days, his condition has been one of consistent gradual improvement. On the second day there was some slight disturbance, owing to sluggishness in the excretory functions, which, with a little assistance, soon righted itself. When visited by Mr. R. W. Irvine, M.B., of Pitlochry (under whose care he is), on Oct. 18th, at 4 P.M., Sir William was perfectly intelligent, clearly appreciating his own condition. He was taking light nutriment, and an occasional two-drachm dose of brandy-and-water. Functions acting well, and motor paralysis only slightly observable; sensory symptoms more marked. He is kept quite quiet, and all kind inquiries from friends, both by message and in person, are kept from him. The one feature in the case which has been the occasion of special anxiety has been a certain hæmorrhagic tendency. Last year he had hæmoptysis, and, later, profuse epistaxis. At the time of this occurrence he had slight and transient but marked hæmaturia, and in the light of this the brain lesion cannot escape being ascribed to a similar cause. For a week at least to come no attempt will be made to change the present system of treatment—namely, that of strict quiet, lightest diet, and the recumbent posture. It is hoped that by the end of next week, accidents excepted, the patient may safely sit up. He is nursed by his daughter and a nurse from Guy's Hospital.

MICRO-ORGANISMS IN THE AIR.

THE attention which Dr. Percy Frankland has devoted to the examination of the atmosphere for micro-organisms has resulted in a further communication to the Royal Society by himself and Mrs. Frankland, entitled "Studies on some New Micro-organisms obtained from the Air" (*Phil. Trans.*, vol. clxxviii.) This joint memoir is very creditable to the authors. It contains descriptions, with drawings, of the morphological characters of the microbes and their cultures. These include ten species of micrococci, twelve species of bacilli, two of saccharomyces, and an unnamed mould producing a dark-brown pigment. The specimens were obtained from various localities, and the descriptions embrace a few which have been sent to the authors from abroad. It is pointed out that, although from the fact of brilliant discoveries having been made in the etiology of infective diseases the greatest share of attention has hitherto been devoted to pathogenic micro-organisms, yet there is much to be profitably done in the investigation of non-pathogenic forms. Indeed, the part they play in the economy of nature may equal in importance that of the disease-inducing microbes, as instanced in the conversion of sugar into alcohol, the decomposition of nitrogenous matter with elimination of ammonia, the oxidation of ammonia to nitrous and nitric acids, and other natural transformations. There is certainly scope for much original research in this direction, and Dr. Frankland does well to pursue his inquiries into this comparatively untrodden ground.

OUR MILITARY PRISONS.

THE information given in the "Report on the Discipline and Management of the Military Prisons in 1886," regarding the health of the prisoners, is of the most meagre description. In the home prisons the percentage of hospital cases to the daily average of prisoners is stated as follows—Aldershot 18·0, Brixton 50·3, Chester 4·5, Gosport 10·4, Lancaster 0, Taunton 64·3, Glencorse 31·3, Cork 102·3, Dublin 17·7, Limerick 86·8. No information is given as to the diseases which came under treatment, nor is any explanation offered of the very remarkable range of sickness, from Lancaster, where no cases were reported, to Cork, where they exceeded 100 per cent. of the average strength. Nor are we informed whether any deaths occurred, except that in an "extract from the report of the medical officer" of Brixton prison it is stated that three died. The great range in the relative proportion of sick in the home prisons is the more remarkable when compared with the results from prisons abroad. These were—at Alexandria 53·1, Barbadoes 61·1, Bermuda 53·3, Cairo 47·7, Gibraltar 31·5, Halifax 105·5, and Malta 37·6 per cent. The very high ratio in the Halifax prison seems to call for inquiry on the part of the military authorities. With that exception, however, the range of sickness is not greater than might have been expected where the numbers are limited, and presents a striking contrast to that which is experienced—perhaps we should rather say is shown—by the returns of the home prisons; for it seems almost certain that the latter result arises from a want of uniformity in the system of admitting, or of reporting, the cases, rather than from a difference in the incidence of disease.

SEWAGE DISPOSAL.

LAST week the new system of sewage works at Henley-on-Thames was formally inaugurated. As a matter of fact, it has been in existence for some little time, but the ceremony to which we refer was delayed until it was assured that the machinery was in proper working order. Henley had been one of the districts which discharged their sewage into the Thames, and when this could be no longer permitted the corporation had to seek other methods for its disposal. The difficulty against which they had to contend was that of level, but this has been altogether overcome by the adoption of the Shone hydro-pneumatic system, which has been successfully used at Eastbourne. Situated in different parts of the town are ejectors which receive the sewage, and from which it is forced by compressed air into tanks distant about a mile from the houses and at a height of 180 ft. above the ejectors; here it is finally disposed of by irrigation, the solid matters being sold to farmers for manure. The advantages of this method are now well known; it relieves local authorities of all disadvantages which result from their town being situated at a lower level than the land to be irrigated; it is by no means costly, and sanitary authorities are no longer able to plead physical difficulties as reason for delaying the adoption of a proper system of sewage disposal. The cost to Henley-on-Thames has been about £18,000.

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THE BELGIAN MEDICAL FEDERATION AND MEDICAL LEGISLATION.

IN an address recently delivered to the Belgian Medical Federation by the President, Dr. Van den Schrieck, the members were congratulated on the disposition which has begun to manifest itself amongst the medical profession to act on the defensive in the struggle for existence, which is every year becoming more and more severe, and a *résumé* was given of the endeavours made by the Federation to promote a Medical Bill in the Houses of Parliament which should be favourable to the interests of the profession. The points desired were, briefly, the reimposition of a degree in arts as a necessary qualification for entering on medical study; a central or State examination to be obligatory on all, whether possessed of university degrees or not, as well as on all foreign medical men wishing to practise in Belgium; and lastly, the suppression of the examination for the diploma of surgeon-dentist as at present arranged, dentistry to be treated as a surgical specialty. The Federation believed that if these alterations could be obtained the overcrowding of the profession would be stopped, and the character and attainments of its members raised. The President complains, however, that the nature of the changes asked for has not been properly understood in Parliament, even the medical members not seeing their way to urge them on the House. The committee of the House which has had to report upon the Bill is in favour of continuing to allow university degrees to form a qualification to practise, and giving the central examining board only such students to examine as have not taken a degree. The majority of the committee, too, are unfavourable to the proposal to make an arts degree obligatory. According to the Government Bill a complete five years' course in arts will be required, but not a degree. M. Thiriar, the eminent surgeon, seems to have been almost the sole member of the House who expressed views in accordance with those of the Federation, and consequently there seems but little hope that the Medical Bill, when passed, will satisfy that body. M. Van den Schrieck was able to announce that he had succeeded in arriving at a good understanding with the Pharmaceutical Association, notwithstanding the recriminations which have been passing freely of late between the doctors and the pharmacists, and of which we can hardly hope that we have even now heard the last.

THE LATE GEORGE FORDHAM.

THE death of George Fordham has called forth universal praise and commendation of the late jockey. His virtues were the more remarkable since his occupation threw him in the midst of temptation to yield to almost every base and sordid motive. It is saying a great deal of a man that nearly forty years' association with the turf left his character without a stain of dishonour. It is not necessary here to refer to his skill as a horseman. Fordham succumbed to phthisis, from which he had suffered for a long time. A contemporary draws attention to the fact that none of Fordham's relatives were subjects of consumption, and conjectures that the hard life incidental to his profession must have been the cause of his fatal malady. There is every reason to believe this to be the true explanation. Exposure to chills, profuse sweatings, and enforced starvation to get down weight, must in the long run tell their tale save in the most robust constitutions. Had Fordham come of a tubercular stock, he would probably have succumbed in his youth. Constable, and, if we mistake not, Kenyon—notable jockeys in their day,—fell early victims to phthisis, which only overtook Fordham with its "second wave," when he had just started on the downward curve of organic life.

THE CLINICAL SOCIETY.

THERE was a good attendance of members at the opening meeting of the winter session of the Clinical Society on Friday last, when Dr. Broadbent, the President, made a few remarks appropriate to the occasion. He said that it was unnecessary to exhort the members to increase their activity, for already there were numerous interesting papers in the hands of the secretaries. But he thought there would be some advantage to be derived from a bringing together on the same evening of cases of the same kind, or at least to group together cases illustrating similar points of practice, diagnosis, and treatment. In order to effect this purpose papers should be sent in soon, so that the secretaries might carry out the needed classification. In referring to the recently issued volume of the Transactions, the President said he believed it was the first time that the annual volume had been sent out before the opening of the winter session; it was an evidence of the great activity and energy of the secretaries, and would, he hoped, become a precedent. He remarked that the new volume contained the valuable report of the Committee on Charcot's Joint Disease, of which the President was Sir James Paget, and at the latter's special request he took the present opportunity of repeating how much the Society as well as the Committee were indebted to the personal work and intelligence of the honorary secretary, Mr. Bilton Pollard, for the completeness of the report and the promptness with which it had been drawn up.

A FUNGUS IN THE EAR.

DON JUAN SALELLES of Valencia describes in the *Revista de Laringologia Otalgia y Rhinologia* a case of a rare vegetable parasite, *aspergillus flavescens*, obstructing the external meatus of the ear of a young man. After syringing away a quantity of black matter, a smooth glistening substance of a dirty white colour with black spots was seen, which was the mycelium of the fungus studded with dark spores. All attempts to remove this with forceps provoked so much pain that they had to be given up. Glycerine was dropped into the ear, and in two days' time the patient returned in terrible suffering, the dark spores having been developed and forming a large mass. After this had been removed by syringing, alcohol and tannin were introduced, and at the next visit the mycelium was removed by the syringe, the membrana tympani becoming visible. In a month's time the fungus began to reappear, but was rapidly subdued by similar treatment, which was followed up by the daily instillation of dilute spirit for a short time. No further return occurred, and the patient entirely regained his power of hearing. The introduction of the fungus appeared to have been due to the use of some oil of sweet almonds, which had been kept for some time in an open bottle, and which the patient had been in the habit of dropping into his ear along with milk, as he suffered from otalgia.

CREMATION.

A FUNERAL of a somewhat unusual character took place on the 8th inst. at Birstall, a suburb of Leicester, when the cremated remains of the late Dr. Buck of that town were consigned to the earth. The church in which the service was held was decorated for a harvest festival, the burial service itself was choral, and the whole scene was remarkable for the absence of any of the usual outward trappings of grief and woe, though nothing could have been more impressive and solemn. The ashes of the deceased were carried by two friends in a small marble box. Dr. Buck was until two years ago physician to the Leicester Infirmary, and from his scientific attainments and zeal for his profession gave promise of a successful future career. Suddenly, to the

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grief of all who knew him, he was struck down from the work of life by general paralysis. He had taken an active part in the promotion of the Leicester branch of the Cremation Society, and in accordance with his own wishes his body was cremated at Woking Crematory, and his ashes brought for burial to his home, as above stated.

MINERAL THREADS.

AN interesting paper on this subject by Mr. C. V. Boys, Demonstrator of Physics at the Science Schools, South Kensington, appears in the current number of the Journal of the Physical Society of London. Fibres of glass and other elastic materials are applicable to a variety of purposes in physical research, such as torsion balances, the fine lines fitted to the eye-pieces of optical instruments, the suspension of solids in the determination of specific gravities production of diffraction spectra, and the like. Spun glass has often been used for such purposes, but Mr. Boys shows that far finer and more perfect fibres can be obtained. He describes several ingenious modes of preparing such fibres, and has experimented with various materials. Melted resin, Canada balsam, and other viscous substances, when insulated and strongly electrified, shoot out threads of extraordinary tenuity but of little strength; but better results were obtained when light arrows, made of straw and attached to beads of melted glass, were shot from a powerful cross-bow. In this way perfectly uniform threads, $\frac{1}{10000}$th of an inch in diameter, are readily obtained. Still more remarkable results were obtained with rock crystal melted in the oxy-hydrogen blow-pipe. Some of these threads were invisible even with the highest power of a microscope, and must have been less than the $\frac{1}{100000}$th of an inch in diameter. Fine threads of rock crystal seem to be superior to all others. Their strength is equal to that of steel, and their elasticity is enormous. Most other threads are subject to the defect of "elastic fatigue"—that is, they do not return after torsion to their original position. This defect is not found in rock crystal, which will therefore be of great value in torsion apparatus, for which spun glass is useless. Spider lines are coarse compared with the filaments which can be obtained in this way, and the diffraction which they yield is said to be excellent.

TARNIER'S BASIOTRIBE.

TARNIER'S basiotribe, a somewhat complicated instrument which was described by him to the Paris Academy of Medicine in December, 1883, has recently been used in three cases in Professor Kufferath's obstetric wards in Brussels, with, it is stated, very satisfactory results, the application being made with great facility, no splinters penetrating the scalp, and the mothers being all able to leave the hospital on the tenth day.

PELLAGRA IN BADAJOZ.

DR. ANTONIO PONS SANZ, of Fuente de Maestre, writes to *El Siglo Médico* that several cases of pellagra have been observed in the province of Badajoz. During the spring of the year patches of erythema appear on the dorsum of the hands, and sometimes on the neck, which are attributed to the action of the sun. These are sometimes of a dark red, or even of a coffee colour, and are followed by desquamation. Afterwards diarrhœa and other gastro-intestinal troubles make their appearance, with a certain degree of jaundice. These are accompanied by nervous symptoms, amaurosis, want of co-ordination both in the movements and in the thoughts, and sleeplessness. Melancholia supervenes, and the patient not unfrequently commits suicide. As to the etiology of this disease, which is fortunately unknown in this country, being chiefly met with in Lombardy, and which is generally put down to eating diseased maize, Dr. Sanz observes that the food of the people in the province is very rich in proteids, and that they never eat maize, but that the victims of the disease have generally been addicted to drink; he has frequently observed, also, that they were the subjects of a "herpetic diathesis." The best treatment, in his opinion, is arsenic combined with the baths of Alange. By these means he has been able to overcome the nervous symptoms and the sleeplessness.

SCARLET FEVER IN LONDON.

THE number of cases of scarlet fever admitted into the hospitals of the Metropolitan Asylums Board during the week ending Oct. 14th showed a slight increase on the number of the preceding week, 246 and 277 cases being admitted during these two periods respectively. Huts have been erected in connexion with the hospitals at Hampstead, Homerton, and Stockwell, and the Winchmore Hill Hospital has been open a sufficiently long time for some of the patients to be discharged. In all probability the vacancies created by discharges and deaths will provide sufficient accommodation for those who may yet have to seek admission, and the existing hospital provision, with the huts, which are nearly completed, will be found sufficient for the requirements of the epidemic. This, it may be anticipated, will soon begin to decline. The first week in November should show a diminution in the number of admissions, and from that moment the number discharged should greatly exceed that of those received. On Tuesday morning the returns showed that the hospitals contained 2176 patients under treatment, of whom 2052 were suffering from scarlet fever, 113 from enteric fever, and 5 from diseases which were not infectious fever.

DILATATION OF THE STOMACH.

IMMEDIATELY following the psychological address with which Dr. Hughlings Jackson opened the new session, the Medical Society proceeded to the consideration of a common topic in practical medicine. Dr. Clifford Allbutt's paper on Dilatation of the Stomach was thoroughly practical, and was based on a wide experience. It will do good service in directing attention to the frequency with which the slighter, but not less intense, degrees of this affection occur. There is no doubt that under the guise of atonic dyspepsia many cases of this organic affection of the stomach have been concealed; and Dr. Brunton was quite justified in alluding to the curious neglect with which the affections of the muscular walls of that organ are treated, as compared with similar states of the intestine. Much was said of the advantages of Kussmaul's method of washing out the stomach, and perhaps too much was made of the objections offered by patients to the plan. Certainly all those patients who do practise it speak in praise of it; and a few months ago we received a long communication from a sufferer from this malady, who had been treated for a long time by other remedies without avail. At length he was fortunate enough to have this method prescribed him, and his enthusiasm in its behalf was an index of the vast relief it afforded. At the same time Dr. Hare did well to recall attention to the practical utility of a timely emetic, which is of value in cases where the affection has not proceeded too far. Wide as is the experience of Dr. Clifford Allbutt, it may hardly be equal to that of Professor Bouchard, who goes so far as to say that three out of every ten hospital patients have a dilated stomach ("Auto-intoxications dans les Maladies," 1887). Prof. Bouchard, moreover, attributes a multiplicity of ailments to this cause, on the ground that the products of fermentation in the organ have a toxic effect upon the economy. When we say that amongst the ill results of gastric dilatation this authority claims phthis-

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chlorosis, many nervous disorders, skin diseases, albuminuria, rickets, and nodular rheumatism, it will be at once obvious that what some consider as causes he regards as effects. This, perhaps, was most strikingly shown in the case cited by Dr. Brunton of floating kidney complicating gastric dilatation. Dr. Brunton suggested that the gastrectasia in that case might depend on reflex irritation through the splanchnic nerves. His remark that movable kidney and gastric dilatation are not infrequently combined, and that it is the right kidney that is the one most commonly at fault, is strikingly corroborative of Bouchard's statement that 14 per cent. of this gastric affection are associated with movable kidney. He remarks that if the renal ectopia were the cause of the stomach trouble, the latter should be more frequent in women than in men, whereas the reverse is the case; and he attributes the former condition to mechanical displacement during temporary attacks of hepatic congestion, to which he says gastric dilatation specially disposes.

CHARING-CROSS HOSPITAL POST-GRADUATE COURSE.

THIS course of lectures is meeting with considerable support. Already 104 members have joined, and others are entering daily. What is, however, more remarkable even than the quantity is the quality of those who are joining. The members are in large and busy practice or hold important public appointments. They come not only from London itself, but from the country for thirty and forty miles round. With the increasing numbers the interest seems to grow. Questions are freely asked by the members at the close of the lectures, and answered by the lecturers. Every appliance has been provided for the class, and the whole staff as well as the governors and officials of the hospital have lent assistance to the movement. At the ward visits not only are cases shown illustrative of the lecture, but others that happen to be available are also made use of. Last Friday Mr. Barwell, F.R.C.S., showed seven typical cases of Lateral Curvature, and exhibited various appliances for remedying the disease. To-day (Friday), Dr. T. Henry Green, F.R.C.P., lectures on "Albuminuria."

HÆMATOLOGY IN THE NEW-BORN.

THE physiology of the blood of the new-born has not been adequately investigated, and we welcome, therefore, the observations of Silbermann, an abstract of which appears in the *Archives of Pædiatrics*, No. 45. Hofmeier had found that the size of the red blood-corpuscles was very variable; that their form was more spherical than in adults; that they showed no tendency to run into rouleaux; that the white corpuscles are often in greater proportion than usual; that the white corpuscles tend to accumulate in rouleaux, and that they are viscid, deliquescent, and easily destroyed. Silbermann confirms Hofmeier, and also shows in addition that the blood of the new-born contains *shadows*, which are certain delicate pale rings forming the stroma of red blood discs, the colouring matter having been removed. These bodies, first discovered by Ponfick, are found to be more abundant the more disturbed was the child's general condition during the first few days of life. Hæmoglobinæmia induced by this general disturbance does not always lead to hæmoglobinuria; but if it occurs, then, according to Schmidt and his disciples, the circulating blood will contain a relatively large quantity of fibrin ferment, red and white corpuscles having contributed to this result. Silbermann concludes from experiments on frogs, dogs, and puppies, giving results in the blood identical with those deviations met with during the first few days of life in the blood, urine, and liver of infants, that there was a free destruction of red corpuscles, resulting in the liberation of free hæmoglobin. Venous stasis and hyperæmia were found, and attributed to this consequent increase in the fibrin ferment, resulting from excessive destruction of the red and white blood-corpuscles. So it seems that the condition of the blood in the newly born predisposes to disease, and, in the presence of such conditions as asphyxia, omphalitis, syphilis, gastric and intestinal catarrh, and erysipelas, is likely to be of grave importance. It is supposed that the liver would convert the extruded hæmoglobin into bilirubin, and this is perhaps one of the natural functions of the liver, which, for aught we know to the contrary, may also aid in the destruction of the red blood discs as well as in the manufacture of bile. It is possible that this destruction and manufacture are one and the same process. The conclusions of Silbermann are worth repeating, and in this direction: The blood of the newly born shows evidences of imperfect stability in the variation in size of the corpuscles, in the presence of *shadows*, and in being rich in fibrin ferment. These results may be due to liberation of the hæmoglobin, and they may predispose to disease, since all morbid processes involving great destruction of albumen in the circulation are probably very dangerous to life.

THE NEW ENTRIES.

THE following is a list of the fresh entries for the current winter session at the various medical schools from which returns have been received:—

	Entire course.	Special classes.	Prelim. Scien.
University College	69	—	74
St. Thomas's	75	38	—
London Hospital	80	45	—
King's College	37	43	11
Middlesex Hospital	48	35*	1
Owens College	70	21†	37
Newcastle-on-Tyne	33	27	—
London School of Dental Surgery	22	—	—

* Including 7 dental. † Including 5 dental.

FEVER IN BURNRIGGS.

IN this village, which is near Carlisle, typhoid fever is stated to have attacked forty out of a total of some 130 inhabitants; and, as is so commonly the case, when once the disease and death occur, which it is a first duty of sanitary authorities and their officers to prevent, then we suddenly learn of polluted water, insanitary surroundings of houses, stench from nuisances, and just the very things that ought to have been dealt with long before they resulted in such mischief death. And now we hear that, amongst other things, a well has been cleaned. If the well has been polluted by reason of impurities in the surrounding soil, we do not see much good in cleaning it, and then proceeding to let the water into it again from the same source. The case of Burnriggs is typical of much so-called sanitation in rural districts.

RETRO-STERNAL PULSE.

THE clinical physician frequently palpates the supra-sternal fossa with the object of detecting abnormal pulsation in cases of aortic or innominate aneurysm, but to detect any very obvious pulsation is rather a rare occurrence unless an aneurysm is present. It is with some surprise and curiosity, therefore, that we read in the *Revue Générale de Clinique et de Thérapeutique* of Oct. 13th, No. 35, that M. Maurel of Cherbourg has 200 times out of 500 cases detected a pulsation by depressing the integuments above the supra-sternal notch, with the object of palpating the region of the posterior surface of the manubrium. This phenomenon is believed to be due to pulsations of the left

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innominate vein, especially in cases of insufficiency of the tricuspid valve and of excessive venous tension, whether from dilatation of the aorta or not. The author has specially noted this retro-sternal venous pulse in cardiac affections and in the early stage of typhoid fever. M. Cuneo regards this pulse as a sign of aortitis, and aortitis may be of malarial origin.

PHYSICAL CONDITION AND PHYSICAL PUNISHMENT.

EXPERIENCE has abundantly proved that for some offences corporal punishment is a corrective of no small value. The rascals who are periodically sentenced for assaults against the person are known to dread the lash even more than the rigorous discipline of prison life and the forced exercise of prison labour. It is to be hoped that no mistaken philanthropy will rob the law-respecting of that friend of justice, the cat-of-nine-tails. Equally suitable for a younger generation of offenders is the birch, by which authority vindicates its title to their obedience. The Home Secretary is, however, of opinion that this form of chastisement is in some danger of being overdone. It may be so. There are in every social grade feeble children who stand physical punishment badly. It is well to make provision for such, and the recommendations to the Commissioner of Police that the weight of the birch ought to bear some proportion to the age of the child, and that a medical veto should be available to protect the latter if evidently weak. Indeed, we must insist that in all cases of the infliction of corporal punishment on children the opinion of a medical man should always be taken. Sir Charles Warren is, we understand, making inquiries into the subject with a view to determining what modifications are possible in this form of punishment. It must not be forgotten that by far the greater proportion of criminals, young and old, are town-bred, and that the conditions of life in the back slums of a city, in the presence of abounding dirt and discomfort, and the absence of proper food, fresh air, and exercise, do not tend to foster either health or endurance; consequently, while we deprecate the inconsiderate zeal of those who would forego the use of corporal punishment altogether, we readily admit the reasonableness of the precautions above mentioned.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Señor Don Juan Garcia de la Linde, a well-known Spanish writer and clinicist.—Dr. Don Rafael Lasso de la Vega y Chinchon, a well-known practitioner in Seville.—Dr. Don Enrique Amell y Robert, a Barcelona laryngologist.—Dr. Don José Maria Fernandez y Cárceles, a distinguished practitioner in Madrid.—Dr. O. S. Jensen, the anatomist of Christiania.—Dr. Karl Haller, Emeritus Primararzt of the Vienna Hospital, at the age of seventy-eight.—Dr. Emil Szöts, director of the Clausenburg Hospital. — Professor Tsêakovski of Kharkoff, who has recently made a number of valuable observations on the Siberian sore.

NEPHRITIS IN SCARLATINA.

DR. HAZE states, in a report on the scarlet fever cases treated in the Elisabeth Children's Hospital in St. Petersburg during last year, that out of 145 such patients, 19, or 13·1 per cent., suffered from nephritis. This is a rather smaller proportion than the average of several years, tending to show some diminution in the number of kidney affections consequent on scarlatina; for during the years 1871 to 1886, out of 875 scarlet fever patients, 135, or 15·7 per cent., were found to be affected with nephritis.

THE ILLNESS OF THE ROYAL PRINCESSES.

WE are in a position to state that the Royal Princesses of Wales, who are suffering from an attack of measles, are progressing favourably. The disease is, we understand, in each case, pursuing a mild course, and an uninterrupted progress towards recovery may be confidently anticipated.

POISONING BY TOLUYLENDIAMINE.

IN poisoning by toluylendiamine, if the process be a lengthened one and lasting several days, Kiener and Engel have found that the urine, besides being jaundiced, and sometimes yielding hæmoglobin, likewise contains pigment granules, having iron in their composition, and probably derived from hæmoglobin ultimately. The ferruginous pigments deposited in the organs of the animals poisoned by sulphide of carbon led them to experiment on the effects of toluylendiamine. They believe that the iron pigments are more constant indications of the destruction of red blood discs than is either icterus or hæmoglobinuria. In rabbits on which experiments were made, icterus was always wanting; hæmoglobinuria was only observed once, but twice the pigmentary granulations were detected in the urine. In dogs the signs of destruction of the blood globules were not always present.

A WELL-FOUNDED COMPLAINT.

A CORRESPONDENT has directed our attention to the condition of waterclosets in railway stations. We have no hesitation in saying that many of them are a disgrace to those who are responsible for their control. In many instances they are without any external ventilation, and are allowed to be dirty to an extent that shocks those who are compelled to use them. The subject is one that urgently requires the attention of railway directors and of medical officers of health. Bad as they are, they could many of them be improved by the provision of openings for ingress and egress of air, and certainly no difficulty would be found in maintaining them in a reasonable state of cleanliness. If other grounds for urging this matter upon railway officials are required than those of decency, we may plead the serious detriment to health which occasionally results to travellers from their inability or unwillingness to enter offensive premises.

METROPOLITAN HOSPITAL SUNDAY FUND.

WE are glad to be able to record that the total amount received at the Mansion House towards this year's Fund is now £40,433 3s. This sum exceeds the total of any previous year. The financial year closes on October 31st.

CIRCULAR WARDS.

WE hear that Dr. C. Lange and Dr. Oscar Bloch, two well-known physicians of Copenhagen, are now in this country for the purpose of visiting and obtaining a practical acquaintance with the system of circular wards for hospitals. They will inspect the Miller Memorial Hospital at Greenwich, the Burnley Hospital, and the newly completed hospital at Hastings; so that Professor Marshall's prophecy, that this last-named and latest realisation of his idea will be visited even by foreigners as well as by our own countrymen anxious to examine into the merits of the circular system, has speedily become true. Dr. Lange is the active and courteous physician who was secretary to the International Medical Congress at Copenhagen, and, together with Dr. Bloch, has been appointed on a committee of inquiry to report on hospital construction, in view of the intended erection of a new hospital at Copenhagen.

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SIR MICHAEL HICKS BEACH.

IT will be gratifying to the friends of Sir Michael Hicks Beach to learn that the health of the right honourable gentleman has been considerably improved by the change, rest, and treatment he has experienced. At a consultation recently held by Dr. Robson Roose and Mr. Critchett, it was found that the eyes had been considerably benefited, and that the general condition was such as to warrant the belief that, with due precaution, Sir Michael may safely resume his political duties. This result has fully justified the views expressed last March by his medical advisers.

THE SCHOOL BOARD AND SCARLET FEVER.

ACCORDING to a recent police-court report, it would appear that School Board visitors even summon parents whose children are absent from school because they are either themselves ill of scarlet fever or are living in a house where the disease prevails. Nothing could well tend to bring compulsory education into greater disrepute, and visitors should always be required to satisfy themselves that there is no infectious disease in the house of absent pupils before they proceed to enforce attendance.

LÆVO-ROTATORY SUGAR IN THE LIVER.

DR. PANORMOW has found in the liver a sugar-like substance which possesses lævo-rotatory power. He has not succeeded in isolating it. His observations, however, tend to show that Seegen was wrong in thinking that all the sugar in the liver is dextrose.

FOREIGN UNIVERSITY INTELLIGENCE.

Erlangen.—Dr. F. Hermann has qualified himself as *privat-docent* in Anatomy.

Marburg.—Dr. Hans Strahl has been nominated Extraordinary Professor.

Prague.—Dr. A. Obrzut has been granted the title of *Docent* in Pathological Histology in the Bohemian Faculty.

Würzburg.—Dr. Matterstock has been appointed to the Professorship of Medicine, vacant by the death of Dr. Geigel. Dr. Lehmann, assistant in the Hygienic Institute in Munich, has been appointed to lecture on Hygiene, which had been included in the deceased professor's duties. He is to have the title of Extraordinary Professor.

ON the 13th inst., Messrs. Harries jun. and Blakiston, the house-surgeon and assistant house-surgeon to the Salop Infirmary, were shooting rabbits about three miles from Shrewsbury, when Mr. Harries' gun accidentally went off and the charge struck Mr. Blakiston, who was about ten yards distant. The shot entered directly over the sacrum, within an area of six inches, and too deep for extraction. We are sorry to add that symptoms of peritonitis have since declared themselves, and Mr. Blakiston's condition is extremely critical, although during the past three days more hope of his recovery has been entertained than in the earlier part of the week. His temperature and pulse are low, and there is less tenderness and tympanites. Much sympathy is felt for both the sufferer and the accidental inflicter of the injury.

AN alarming outbreak of fever, resulting in a large number of deaths, is reported to have taken place among the British troops stationed in the Kazr-el-Nil barracks at Cairo. The immediate cause is said to be the infiltration of the Nile water in the barrack square. Much regret is expressed that the men were not removed from the infected building and placed under canvas.

PROFESSOR KIRCHHOFF, the celebrated scientist and discover of the spectrum analysis, died at Berlin on the 17th inst. He was born at Königsberg in 1824, and it is now exactly forty years since he went to the University of Berlin as a *privat-docent*. In 1850 he was called to the Chair of Physics at Heidelberg, where, in company with Bunsen, he carried on those researches which at last resulted in the discovery that at once raised him to the first rank of natural philosophers, and opened a new era in the history of chemical analysis. In 1875 Professor Kirchhoff went back to Berlin, where he was made a member of the Academy of Sciences.

DR. B. P. ROOKE, who died at Redhill on the 8th inst., at the advanced age of eighty-six, belonged to the old East India Company's Medical Service, which he entered as assistant surgeon in 1826 on the Bombay medical establishment. He became in due time head of the department, and retired in 1862 as Principal Inspector-General of Hospitals. He served on Lord Keane's staff throughout the Afghan war in 1838-39, was present at the taking of Ghuznee, and obtained a medal. Dr. Rooke was honorary physician to the Queen.

MR. RICHARD BERRIDGE, late of Ballynahinch Castle, Galway, Knowlehall, Bridgwater, and the Cedars, Putney, has by his will bequeathed the sum of £200,000 in trust "for the advancement and propagation of education in economic and sanitary sciences in Great Britain."

THE Government inquiry into the sanitary condition of Bethnal-green was resumed on Wednesday last, when Mr. Shirley Murphy and Mr. Cubit Nichols, the commissioners, commenced their investigations of the state of some of the poorer parts of the district.

THE *London Gazette* of Oct. 18th announces the appointment of James Cecil Phillippo, Esq., M.D., as a Member of the Privy Council of the Island of Jamaica.

A MEETING of the General Medical Council will be held on Tuesday, November 22nd.

PERSONAL REMINISCENCES OF THE LATE PROFESSOR VON LANGENBECK.

WE have received the following sketch of the great surgeon, which has been furnished us by the two surgeons intimately acquainted with him during the period referred to.

It was in the early part of December, 1870, that the writers of these brief reminiscences became intimately acquainted with Professor and General-arzt von Langenbeck. It was in Orleans, and at the period of the Franco-German campaign when the active operations of war were centred in and concentrated around this city. We may briefly recall the state of Orleans at this period. The city had been captured by the Bavarians on Oct. 11th, after four days' very heavy fighting; was recaptured by the French after the battle of Coulmiers on Nov. 9th, when General von der Tann, commanding the Bavarian army, effected a strategic retreat in face of a very superior force, and wisely fell back on the main body of the German army, now closely besieging Paris. Meanwhile, Metz had capitulated on Oct. 25th, and thus set free the armies of Prince Frederick Charles and the Grand Duke of Mecklenburg. These armies, advancing by a series of rapid marches, effected a junction with Von der Tann, when a general advance was again made on Orleans, the three armies marching in separate bodies, the whole forming a huge horseshoe line some sixty miles in extent, its extreme right resting upon Pithiviers, and its left upon Bellegarde and Montargis. After some very heavy fighting

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the city was finally reoccupied by the Germans on Dec. 5th. As a result of this continuous fighting, the city had become crowded with wounded of both armies, and at this date was a very charnel-house. Churches, barracks, schools, convents, railway station, a large number of private houses, and indeed every available building, had been converted into an extemporised hospital. Every preparation had been made for the reception of the wounded, and it was fortunate that this was so, for the severe fighting of the few previous days had made a further demand on the resources of the place. The nurses of the various German and French nursing aid societies, assisted by the Sisters of the convents and by a large staff of lady volunteers, had by this time become familiarised with their work and efficient in their duties. Luckily there was no lack of surgical appliances and dressings, for the volunteer societies of various nationalities, recognising the urgent necessities of the wounded, and regarding Orleans as the base for further military operations, had richly equipped the hospitals, permanent and extemporised, with all needful material. This condition of preparedness put the city more in the position of a capital endowed with permanent hospitals, and permitted of the surgical work being performed in a more scientific, careful, and accurate manner than usually obtains in the history of warfare. The surgical staff was now considerable, for, in addition to the large number of German surgeons, and a few French army surgeons, nominally prisoners, there were volunteer ambulances officered and equipped by men from England, America, Switzerland, Holland, and other countries. At this period Langenbeck arrived amongst us with the head-quarters staff of the 3rd Prussian Army. We, as Englishmen, were much impressed by the marked deference everywhere shown to him by his professional brethren of all ranks and ages, whether by his countrymen or surgeons of other nationalities. From early morning until late in the evening his services were in constant request, both as consultant and operator; he was in demand everywhere, and did not spare himself even at his age. Ever careful, ever jealous of the interests of others, and more especially of juniors, he would only consent to perform operations at the special request of the particular surgeon in charge of the case. His especial skill in the performance of subperiosteal resections was so well known that he was most frequently called upon to perform them. More especially in connexion with these operations his extraordinary capacity as a clinical teacher asserted itself, and soon a numerous and attentive clinique followed him. Our special and peculiar intimacy with him dates from one of these most interesting cliniques. He was performing a subperiosteal resection of the shoulder joint, when, the knives at his disposal being considerably the worse for wear and tear and the rough usage to which they had recently been subjected, turning round to his assistant, he said, "Dieses Messer ist nicht scharf." Fortunately we were able to offer him an English-made scalpel in good condition, an attention with which he was much pleased, and which he never subsequently forgot; for during war time, when instruments are in constant use and there is no one skilled in sharpening, or indeed anything on which to sharpen them, a keen knife becomes of almost priceless value.

Langenbeck, deeply impressed with the importance of the many debatable and moot points in military surgery, facts towards the elucidation of which were constantly coming under the observation of the surgeons around him, urged the desirability of establishing a Surgical Society; it was mainly owing to his intense activity and great personal influence that a "Militair-Aertzliche Gesellschaft" was organised, which held its first setting on Dec. 23rd, within eighteen days of the occupation of the city by the Prussians. Professor von Langenbeck was unanimously elected its president, and Dr. Gaehde its secretary. At its first sitting it was resolved: "That its meetings should take place every week at half-past eight on Wednesday and Saturday evenings; that all German and foreign colleagues be invited to take part in the proceedings, and that each be allowed to speak in his mother tongue." Professor von Langenbeck's introductory address was on the subject of Prophylactic Tracheotomy in cases of Gunshot Injuries of the Larynx, even though there might be no urgent dyspnœa. He was induced to select this subject from the fact that he had seen in the action near Pithiviers, a few days previously, a dragoon who had been wounded in the region of the larynx suddenly die from asphyxia, due to œdema of the glottis, though apparently not dangerously injured; it was a subject in which he had long taken a deep interest, his experience dating as far back as the year 1848. Various other cases were related by those present, amply confirmatory of Langenbeck's experience. Amongst many interesting subjects of discussion the following occur to us:—"Gunshot Injuries of the Hip Joint, and their treatment by Resection"; "Traumatic Infiltration, Hæmorrhagic and Inflammatory"; "Gunshot Injuries of the Knee Joint, and their Conservative Treatment"; Gunshot Fractures of the Thigh, with relation to their early and late treatment and modes of transport"; "Pyæmia"; "The Relative Effects produced by Rifle Bullets"; "Ligature of Arteries"; "Wounds of Pelvic and Abdominal Viscera"; "Hospital Gangrene"; "Epidemic Cerebro-spinal Meningitis"; "On Methods of Amputation." In the discussion on this last subject Dr. Gaehde remarked upon the conservation of the periosteum and upon the advantage of making periosteal flaps as a protective cover for the end of the bone, and as considerably diminishing the risks of osteo-myelitis and of sloughing of the flaps. Various specimens of bullets were brought forward by Dr. Müller as affecting the question of explosive charges, constituting a breach of the Convention of St. Petersburg. Thus it will be seen that the proceedings of the society embraced a wide range of subjects; the discussions were supplemented and illustrated by pathological specimens, drawings, and bullets altered in form by contact with various parts of the body. These enjoyable meetings, continued twice a week until the end of February. Amongst the best remembered names of those attending the society were Dr. Loeffler, Dr. Müller, Dr. Bock (a former assistant of Dr. Frerichs of Berlin, who soon after succumbed to typhoid fever), Dr. von Montmollin of Geneva, Dr. Senator, Dr. Metzler, Dr. Fritsch, Dr. Fuchs, and Dr. Landsberger. We must not omit to mention the great personal share that Langenbeck took in the proceedings of this society, nor that its success was mainly due to the enthusiasm evoked by his presence and example.

It is difficult to estimate the actual number of subperiosteal resections which Langenbeck performed during his stay in Orleans; a day rarely passed for a period of many weeks without his performing an operation on one or other joint. Though often at this time and at a later period conversing with pleasure and pride on the large number of successful resections that he had performed in his various campaigns, he never forgot to award a due meed of praise to Heine, who was the first to demonstrate their value on dogs; nor to Flourens and Ollier, who were the first, or amongst the first, to perform these operations upon the living subject. It must not be supposed from the number of operations performed that Langenbeck was a mere operator, for he never failed to inculcate by precept and example the essential importance of careful after-treatment, continued even for long periods; and was most particular in recording the final result of all cases on which he operated whenever it was possible for him to do so.

At the conclusion of the war, in obedience to the command of the Emperor, Professor Langenbeck made a tour of inspection of the principal hospitals in Germany, permanent and temporary, occupied by the wounded. He very kindly invited us to accompany him as his assistants—an invitation that we gladly and gratefully accepted. Commencing with Strasburg, we gradually made our way to Berlin, visiting, amongst other places, Carlsruhe, Heidelberg, Stuttgardt, Mannheim, Darmstadt, Frankfort, Homburg, Wiesbaden, Mayence, Ems, Rüdesheim, Bingen, Coblenz, Bonn, Cologne, Elberfeld, Düsseldorf, &c. We have before said that Langenbeck was not a mere operator, and this journey with him gave us the opportunity of seeing the extreme interest that he took in his final results. The minuteness and care with which each case was examined and noted proved Langenbeck to have sympathies and interests far beyond the mere mechanical act of operating. It was during this tour that Langenbeck collected much of the material which, later, formed the basis of his Chirurgische Beobactungen aus dem Kriege, Ueber die Schussverletzungen des Hüftgelenks, Ueber die Endresultate der Gelenkresectionen im Kriege. This journey had an especial charm for him, for in almost every hospital in every town he found either an old pupil or assistant glad to welcome him, and whose clinical successes, as seen by us, testified to the excellent teaching of his old master.

Although cheered by the hearty welcome which greeted

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him on all sides, whether by old pupils now occupying prominent positions, by friends of all ranks of society, including numerous Royal personages, who showed him the highest consideration, yet to us, his constant companions, there was the shadow of his great grief, which gradually deepened as he approached his home in Berlin; for it will be remembered that he had lost a favourite son, a promising young officer of the Rifles of the Guards, who had fallen at Gravelotte while gallantly leading his company. Almost immediately after his arrival in Berlin he resumed his hospital duties at the Royal Universitäts Klinikum, where his clinic was crowded. He was soon overwhelmed with private practice; in addition to the number of patients who had awaited his return, large numbers of wounded officers were daily flocking to Berlin to have the benefit of his skill and advice, many of them with wounds of the face requiring more or less repair by plastic operation, a class of cases in which he took especial interest, and in which he pre-eminently excelled. In addition to his private work, he held a class of operative surgery on the dead subject, which was largely attended by students and military surgeons returning from the front; this class was held from 6 A.M. to 8 A.M. The remainder of the morning was devoted to consultations and operations in private. He was due at his clinic at 2 P.M., but arrived half an hour before that time for the purpose of receiving in his private room the visits of private friends, military surgeons, medical men with special introductions, and arranging with his assistants (at this time Drs. Busch, Trendelenburg, and Bose) the order in which the various cases sent to him should be brought forward in the clinic. At 2 o'clock precisely he entered the theatre, wearing a specially made tightly-fitting coat of black material (scrupulously cleaned for each day); here he examined students most carefully, demonstrated the cases, and performed any necessary operation. We know of no other hospital in Europe where richer pathological and operative material was at the disposal of any one single surgeon than that over which the late von Langenbeck then presided.

He was fluent of speech, possessed of sympathetic voice, great charm and impressiveness of manner, with a most intimate knowledge of every detail of his subject, and produced an effect upon his hearers which no pen can adequately describe. As an operator he was in the very first rank, original, bold without recklessness, and of great anatomical knowledge. Of endless zeal and untiring industry, Langenbeck combined in himself all the elements which go to make a good surgeon and teacher, and there are few men who have left a deeper impress on the surgery of their time, not merely by reason of his own individual work, but indirectly through those who were his pupils, and are now so worthily occupying leading positions in the Universities throughout Germany. An aristocrat in appearance, manner, and feeling, modest in demeanour, the trusted friend and councillor of his Sovereign, revered and esteemed by all classes of society, the friend of all and enemy of none, his country will long mourn a loss which will also be felt throughout the empire of surgery.

THE HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.

The new Hastings, St. Leonards, and East Sussex Hospital, situated at White Rock-place, Hastings, was formally opened on the 13th inst., by Mr. Wilson Noble, M.P., in the presence of a large and influential gathering.

The new building occupies the site of the first structure, finished in 1841. It stands immediately opposite the pier, facing the sea, in a warm and sheltered position, and is externally of somewhat striking architectural appearance, being built of red brick, with white stone dressings, and presenting on either wing two massive circular wards, with open-air balconies on top, and central ventilating and chimney shafts. The structure is in four storeys, the basement being utilised as store-rooms, larder, heating chamber, &c., and the entire upper floor being for the domestics and female staff of nurses, containing kitchen, pantry, and offices. All the cooking is done by gas, and the building is heated throughout by hot water. The communication is by electric bells. The ground floor and the second and third floors contain the wards for patients and various apartments for the administration and staff. The accommodation is designed for seventy-two beds, and five cots for children, the total area covered by the new hospital being about 210 feet frontage, and from 50 ft. to 60 ft. in depth. Three circular wards in the eastern wing give on each floor accommodation for twelve patients, and on the western wing there are two similar wards with twelve beds in each. All the newest appliances for the comfort of the patients and the convenience of the domestics have been adopted by the committee of the hospital, and supplied by the builders. The total cost of the structure is about £19,500, and the debt before the day of opening was £3700, which by the collections and subscriptions on the 13th inst. has been reduced by £600. The memorial stone of the new building was laid by Lord Brassey, on Aug. 24th, 1886. Entering the building by the main entrance, through the outer porch, a small entrance hall is reached. In front of this is the main staircase, and close to the staircase is a lift for taking the cooked food from the kitchen to the wards, and other domestic uses. The central portion of the structure on the ground floor is devoted to the administrative department. On the west, facing the front line, is the committee room, a noble apartment, well lighted. Adjoining is the secretary's office. Beyond is the reception hall for the out-patients, with rooms for the physicians and surgeons, and a consulting room. Close to the reception hall is the dispensary, with the dispensing table. All these rooms are admirably adapted for their purpose, and plainly furnished. On the east side of the staircase, on the same floor, is a splint room, a duty room for No. 1 ward, and some cupboards, &c. The apartments for the house surgeon (a bed and a sitting room) are on this floor, facing south. No. 1 ward occupies the ground floor, on the eastern wing, and a description of it applies to all the circular wards in the establishment. Its diameter is 41 ft. and its height 13 ft. 6 in., the ceiling sloping slightly upwards towards the centre, with large windows, and has floor space for twelve beds. Three fireplaces occupy three sides of the sexangled shaft which rises through the various circular wards, built so as to provide ventilation as well as to convey away the smoke from the fires. The heads of the beds are placed to the wall. In the rear of the ground floor, and detached from the main building, is a casualty room for the reception of accident cases; also an operating room. These rooms are reached by the exterior passage from the front street or the rear entrance. There is also a mortuary and a post-mortem room, with closets and other offices for the use of out-patients. On the second floor the south side is occupied with the matron's apartments (bed and sitting room), three small wards, and a men's day room. On the north side is the duty room, linen room, and others. At each end of this floor is a circular ward, approached by an open arcade, thus detaching the ward, when desired, from the main building. This arcade leads to an open-air balcony, facing south, for patients to take the air in warm weather. Opening out of the circular wards, and to the rear, are closets, bath room, &c. A spacious corridor runs along the structure from east to west, connecting the wards at each end. On the third floor is No. 4 ward (east end) and No. 5 ward (west end), fitted up and designed similarly to those below. Close to the entrance to these wards, at each end, is a staircase leading to an open-air platform on the exterior top of the wards, where the patients may rest and walk about, enjoying the sea breeze and the animated scene along the esplanade. On these platforms, in the open air, are five screened seats, placed against the chimney shafts, and well covered in, so as to give protection from wind and rain. The women's day room, the nurses' bedrooms, and the children's ward (for five or six cots) are on this floor. On the fourth floor is the kitchen department. The apartments for the servants and nurses are also on this floor.

Mr. Noble having formally declared the building open,

Professor MARSHALL, F.R.S., President of the General Medical Council, said the English people were proverbially known as a practical people, but yet they had there evidence that they were not altogether destitute of a feeling for the ideal, because only a short nine years ago a circular hospital existed only in idea. In 1878 he had published an original paper on this subject, and now the people of Hastings and its neighbourhood had joined with many others in endeavouring to carry out his suggestions. Here, for a second time in England, a large hospital with circular wards was now opened; and here, in the realisation of his plan, pub-

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tical ladies and gentlemen asked him to come forward and assist them in opening this actual building. The idea of a circular hospital was founded, first of all, on a geometrical notion that would commend itself to everyone. A circular hospital, in the first place, with a certain "run of wall"—to use an architectural phrase—gave them a larger enclosed space to deal with than any other form which might be conjectured. If they converted this "run" into a square, they had a smaller area, and they could not get the same amount of space within a triangular or any other form as in a circular construction. What did that mean? It meant that they had included a certain larger amount of air, and, as that was the very life breath of a good hospital, they had, by adopting the circular form, more air for their sick patients to breathe than they could have in any other form of building included within the same amount of wall. Then, again, the advantage of a circular ward was that it fell away from all surrounding objects, and they had a sweep of air around their building. Round a circular building they would have a freer circulation of air than they would about a square one. Next, in regard to light: in a circular ward they had light all round; and light, as they knew, was one of the most beneficent agents in nature. It had been shown by Dr. Downes, the medical officer of Colchester, that if you placed fluid in glass tubes for the development of bacteria, and in one case covered up the tubes, and in the other left them open and exposed to the sun, whilst the covered ones would develop innumerable bacteria, the others would scarcely develop any, or none at all. Abundant light, therefore, was essential in every ward. They might equal, but they could not possibly exceed, the quantity of light they could get into a building by the circular form. He did not say they could not accomplish a similar amount of light in a rectangular ward, but a circular ward received the light, as a matter of course, from every point, whether direct from the sun or reflected from the clouds. So much, then, for light. Then came the question of ventilation, which was one of the great problems of the scientific man, of the physician, and of the architect. Was there a public building in this country in regard to which they would get everyone to agree that it was a perfectly ventilated building? He knew of none, but the nearest approach to it was in the circular ward, for the simple reason that it was exposed at all points, and whichever way there was a pressure of air, they were sure to receive the advantage. The circular form, without any contrivance or thought of intricate arrangements, distributed the wind, and weakened and modified any great pressure. From without, the currents of air entered at different angles, and with different force at different windows; whilst within, these converging streams were deflected from the internal curved surface and caused whirling movements, the tendency of all being towards the ventilating openings in the centre, to which they were conducted by a slight coving of the ceiling in an upward direction. For ventilating purposes, therefore, the building needed but little subsequent thought; it required certain openings, and the whole process went on automatically and gently by night and day without any complicated contrivances. On the question of artificially heating a ward, it was easy to understand that with a central or a circumferential source of heat, or with both, a circular space could be more equably warmed than an oblong one. Then, again, there was something pleasant about a circle, even in internal appearance and aspect. For several reasons a bay window was a more agreeable thing in a house than a flat one. In a long parallelogram patients were placed near their opposite neighbours, and were doomed to look out upon the same buildings, the same smoke, a constant similarity, a sameness of aspect; whereas in a circular ward, they were further apart, and, if they simply turned their heads, were struck with something fresh and genial. Lastly, let them take administration. Could anything be better than a circular ward in that respect? They had the patients ranged round, and the attendants moving in the centre. Everyone could be seen and heard; the conveyance of medicine and food, of apparatus and dressings, was facilitated; and that was an obviously incidental merit. As he had said, he was addressing a practical people, and therefore they would ask if he could give them any instance of success in regard to the building or working of a circular hospital? The largest building of the kind in England was at Burnley, in Lancashire, and there, after twelve months' experience, everything was found to answer admirably. In support of this statement, he would read three letters which he had received from his friend Dr. Brown of that busy and populous place. He could only say, in conclusion, that he wished success to this undertaking. It would give him extreme pleasure now and then to come and visit the hospital, and see how they were getting on. He prophesied that it would be much visited both by their own countrymen and by foreigners interested in hospital construction. He was delighted to have had the opportunity of being present that day, and of encouraging them, after all the troubles of which he had heard. Excepting here and there little modifications such as experience would dictate to them, they had a fine building, which would do well the work which was required of it. He should wish to add that great credit must be awarded to the enterprise and adaptive ingenuity evinced by the architects, Messrs. Young and Hall, and to the watchful care of Dr. Bagshawe and his fellow committeemen.

Following the ceremony at the hospital, a public luncheon, which was largely attended, was served at the Royal Concert Hall. At this meeting the Bishop of Chichester, with Professor Marshall's concurrence, spoke warmly of the advantages of the open balconies in front of the building, and of the platform with its sheltered seats on the top of each circular tower.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FROM the Calendar of this institution, which has just been published by the Council, it appears that 20,067 qualified practitioners are now inscribed in the College roll—viz., 1116 Fellows, of whom 664 obtained this distinction by examination, 8 were elected as Members of twenty years' standing under Section 5 of Charter 15 Vict., and 2 are *ad eundem* Fellows. There are 17,377 Members and 957 Licentiates in Midwifery (the examination for this licence has been suspended for the last twelve years). The Licentiates in Dental Surgery number 617.

The examiners in Elementary Anatomy and Physiology, appointed in conjunction with the Royal College of Physicians under the Scheme for an Examining Board in England, are elected annually. There have been four examinations during the past year, 685 presenting themselves in Anatomy and Physiology, of whom 528 passed in both subjects, 87 in Elementary Anatomy, and 34 in Elementary Physiology; 36 candidates were referred in both subjects; 64 candidates presented themselves in Elementary Anatomy, 56 of whom passed and 8 failed; 86 presented themselves in Elementary Physiology, of whom 68 passed and 18 failed. The fees derived from candidates for this examination amounted to £3940 13*s.*, the examiners receiving in fees £564 15*s.*

The examiners in Anatomy and Physiology, appointed in conjunction with the Royal College of Physicians under the scheme for an Examining Board in England, are elected annually. They have conducted the "Primary" Examination under the old regulations, as well as the Second Examination of the Examining Board, and have held during the year four examinations, at which 937 candidates presented themselves for examination in Anatomy, of whom 558 passed and 379 were referred; 854 candidates presented themselves in Physiology, of whom 515 passed and 339 were referred. The fees paid for these examinations by candidates amounted to £4713 19*s.* 6*d.*, the examiners receiving in fees £2064.

The Board of Examiners in Anatomy and Physiology for the diploma of Fellow consists of nine members annually elected by the Council from the Fellows of the College, and has held during the past collegiate year two examinations. At these 142 candidates presented themselves, of whom 75 passed and 67 were referred. The fees paid in connexion with these examinations amounted to £1065 15*s.*, the Board receiving in fees £639.

The Court of Examiners consists of ten members elected by the Council from the Fellows of the College (all of whom, however, are members of the Council except Mr. John Langton, Mr. T. Pickering Pick, Mr. H. G. Howse, and Mr. W. M. Baker). They have conducted the Third or Final Examination of the Examining Board, as well as the Pass or Final Examination under the old regulations, and the Pass or Final Examination for the Fellowship. During the year the Court has held two examinations for the Fellowship and

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five for the Membership; at the former there were 58 candidates, 31 of whom passed, 18 being referred for one year and 9 for six months. For the Membership there were 1083 candidates, of whom 267 obtained their diplomas, and 302 passed in surgery only; 143 were referred for three months, 325 for six months, 23 for nine months, and 22 for one year. The fees paid to the Court of Examiners amounted to £6329 16s.; the fees paid by the candidates reaching £12,845 9s. 6d.

The Board of Examiners in Dental Surgery has held three meetings for the examination of 37 candidates, 28 of whom received their diplomas. The fees paid by them amounted to £294, of which the Board received £88. 4s.

The income of the College from all sources during the past year amounted to £35,372 6s. 2d., derived principally, as already shown, from fees paid by candidates for the diplomas of the College—viz., £22,859 17s. Rents from chambers adjoining the College produced £2020 4s. 8d.; dividends on stock, £803 10s. 10d.; from members of the Council and Court of Examiners on their election, £84; election to Fellowship, £10 10s.; sale of stock, £8617 10s.; from trust funds, sale of Calendar and Synopsis, &c., £976 13s. 8d.

The expenditure for the year amounted to £33,742 14s. 7d. (leaving a balance at the bankers of £1742 14s. 7d.), the largest item being for the Savoy Estate, £11,852 11s. 9d.; the next largest amount appears in fees paid to examiners, £9685 15s. Salaries, wages, and pensions for officers and servants of the College in the three departments, library, museum, and office, amounted to £4585 8s. 4d.; taxes, rates, diploma stamps, and insurance absorb the sum of £1901 12s. 5d.; half expenses for Examination Hall, £651 2s. 8d.; under miscellaneous items, extraordinary expenses, alterations, repairs, fuel and light, printing and stationery, about £4000 appears to have been expended.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5312 births and 3151 deaths were registered during the week ending October 15th. The annual rate of mortality in these towns, which had been 17·5 per 1000 in each of the preceding two weeks, rose last week to 17·8. During the thirteen weeks of last quarter the death-rate in these towns averaged 20·4 per 1000, and was 0·5 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 14·2 in Leicester, 14·4 in Oldham, 14·7 in Leeds, and 15·0 in Brighton and in Derby. The rates in the other towns ranged upwards to 23·2 in Bolton, 24·0 in Preston, 24·5 in Manchester, 26·8 in Blackburn, and 27·1 in Plymouth. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 460 and 412 in the preceding two weeks, further declined last week to 382; they included 124 from scarlet fever, 68 from diarrhœa, 50 from measles, 53 from "fever" (principally enteric), 50 from whooping-cough, 29 from diphtheria, and 8 from small-pox. These zymotic diseases caused the lowest death-rates last week in Huddersfield, Plymouth, and Newcastle-upon-Tyne; and the highest rates in Preston, Blackburn, and Bolton. The greatest mortality from scarlet fever occurred in Birkenhead, Manchester, Bristol, Bolton, Preston, Halifax, and Blackburn; from "fever" in Oldham, Nottingham, and Preston; from measles in Derby and Bolton; and from whooping-cough in Halifax. The 29 deaths from diphtheria in the twenty-eight towns included 22 in London and 2 in Wolverhampton. Small-pox caused 8 deaths in Sheffield, but not one in Greater London or in any of the twenty-six other large towns. Only 5 cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease; whereas the number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 2159. The deaths referred to diseases of the respiratory organs in London, which had ranged in the preceding four weeks from 142 to 219, further rose last week to 280, but were 9 below the corrected average. The causes of 72, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Portsmouth, Brighton, and in eight other smaller towns. The largest proportions of uncertified deaths were recorded in Newcastle-upon-Tyne, Blackburn, Sunderland, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·7 and 18·1 per 1000 in the preceding two weeks, further rose to 19·8 in the week ending October 15th; this rate exceeded by 1·5 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·7 and 16·1 in Aberdeen and Edinburgh, to 22·4 in Glasgow and 24·3 in Perth. The 483 deaths in the eight towns last week showed a further increase of 30 upon the numbers returned in recent weeks, and included 80 which were referred to whooping-cough, 23 to scarlet fever, 14 to diarrhœa, 7 to diphtheria, 5 to "fever" (typhus, enteric, or simple), and not one either to small-pox or measles; in all, 79 deaths resulted from these principal zymotic diseases, against 71 and 74 in the preceding two weeks. These 79 deaths were equal to an annual rate of 3·2 per 1000, which exceeded by 1·0 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 28 and 17 in the previous two weeks, rose last week to 80, of which 10 occurred in Glasgow, 7 in Greenock, 5 in Edinburgh, 3 in Dundee, and 2 in Leith. The deaths from scarlet fever, which had been 11, 12, and 19 in the preceding three weeks, further rose last week to 23, and included 8 in Glasgow, 7 in Dundee, and 3 in Perth. The 14 deaths attributed to diarrhœa, of which 5 occurred in Glasgow and 4 in Leith, showed a further decline from recent weekly numbers. The 7 deaths from diphtheria corresponded with the number in the previous week, and included 5 in Glasgow. The 5 deaths referred to "fever," of which 3 were recorded in Paisley and 2 in Edinburgh, showed a further decline from the numbers returned in the preceding two weeks. The deaths attributed to acute diseases of the respiratory organs in the eight towns, which had been 83 and 78 in the preceding two weeks, rose again last week to 83, but were 15 below the number returned in the corresponding week of last year. The causes of 54, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 30·9 and 24·2 per 1000 in the preceding two weeks, rose again to 27·3 in the week ending October 15th. During the thirteen weeks of last quarter the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 19·6 in London and 18·2 in Edinburgh. The 185 deaths in Dublin last week showed an increase of 21 upon the number in the previous week; they included 11 which were referred to scarlet fever, 9 to diarrhœa, 7 to "fever" (typhus, enteric, or simple), 6 to measles, 2 to whooping-cough, 1 to diphtheria, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had declined in the preceding eight weeks from 78 to 29, rose again last week to 36; they were equal to an annual rate of 5·3 per 1000, the rate from the same diseases being but 2·0 in London and in Edinburgh. The 9 deaths attributed to diarrhœa showed a further decline from recent weekly numbers. The 11 fatal cases of scarlet fever, however, showed an increase, and exceeded the number returned in any previous week of this year; the deaths referred to "fever" also showed an increase upon recent weekly numbers. The fatal cases of measles, whooping-cough, and diphtheria corresponded with the numbers in the previous week. The deaths of infants showed a decline, while those of elderly persons were more numerous. Seven deaths from violence, but only two inquest cases, were registered; and 43, or nearly a quarter, of the deaths occurred in public institutions. The causes of 23, or more than 12 per cent., of the deaths registered during the week were not certified.

AT a meeting of the members of the Redcar and Saltburn Local Boards, on the 14th inst., it was decided that it was advisable to provide hospital accommodation for cases of infectious disease occurring in the said districts, and a committee was appointed to find a suitable building or site for a building.

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Correspondence.

"Audi alteram partem."

THE RECENT HONOURS EXAMINATIONS AT THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—You were good enough some months ago to allow me to draw attention in THE LANCET to the new regulations introduced in 1887 with respect to the Honours Examination at the Intermediate Bachelor of Medicine Examination of this University. With your permission, I would now draw attention to the results of the examination in July last, the first under the new regulations. The examinations for honours were in the four subjects of the pass examination—viz., in Anatomy, Physiology, Chemistry, and Materia Medica. The total number of places obtained in the honours list was 18 only, obtained by 13 individuals.

	1st class.	2nd class.	3rd class.
Anatomy	1	1	1
Physiology	2	2	3
Chemistry	1	1	0
Materia Medica	0	4	2
Totals	4	8	6

The places were distributed among the various schools as follows:—University College obtained 7 places; St. Thomas's, 4; St. Bartholomew's, 3; Owens College, 2; London Hospital, 1; Edinburgh University, 1. The other schools do not, I fancy, appear on the list. If we neglect the numbers of those who passed in the second division, as well as those who omitted one of the subjects of examination, we find in the first division 22 names, distributed among the schools as follows:—Guy's, 6; St. Bartholomew's, 4; London, 2·5; St. Thomas's, 2; London School of Medicine for Women, 2; St. George's, 1; St. Mary's, 1; Newcastle, 1; Queen's and Mason's Colleges, 1; University College, 0·5. The disproportion between these numbers and those in the honours list is marked. It is unlikely that those whose names are in the first division were all of them inferior in point of attainments to those who obtained honours. It is much more likely that the majority were afraid to risk being plucked for the chance of getting into the more honourable list. Although naturally wishing that my pupils should obtain honours, I have refrained from urging them to compete under the present conditions, knowing that the medical student, as a rule, cannot afford to be delayed a year by a rejection at his Intermediate Bachelor of Medicine or any other examination which is not absolutely avoidable. I cannot help fancying that others have been similarly influenced.

In bringing this letter to a close, I may add that my dislike to the new regulation is shared by all the teachers (with one exception) with whom I have been in communication on the subject since I wrote to THE LANCET at the beginning of the year, and that they, as well as many students, have expressed hopes that the annoying restrictions will be abolished.—I am, Sirs, yours very truly,

VINCENT D. HARRIS, M.D. Lond., F.R.C.P.

Wimpole-street, W., Oct. 1887.

THE PROTECTION OF LEICESTER BY VACCINATION.

To the Editors of THE LANCET.

SIRS,—In your issue of last Saturday appears a letter from Mr. Bigge on the "Protection of Leicester by Vaccination," in which some reference is made to me. I have neither the wish nor the intention of entering upon a discussion through the press upon this subject, but I desire simply to correct certain misstatements and erroneous conclusions contained in the letter alluded to.

1. "That out of nearly a dozen persons who came in contact with the last case of small-pox here, two only submitted to revaccination." As far as my knowledge goes, the persons who came in contact with this patient after the eruption appeared and it was known to be small-pox were the medical officer to the Union Infirmary, the attendant on him there, myself, the porter at the small-pox hospital, and the two nurses who attended him there; one of these latter had had small-pox; the remaining five persons were all protected by revaccination. A man who had slept on the bed the patient occupied before going to the workhouse, and before the eruption showed itself, was also for safety revaccinated. The sanitary inspector who disinfected the room he occupied &c. was also protected by revaccination.

2. "That the health reports of Leicester prior to 1886 say nothing of the practice of revaccination." Inquiry from the late medical officer of health or from the inspectors would have supplied the information that this was done whenever the persons exposed to infection permitted, but this, like isolation in hospital, cannot be compulsorily enforced.

3. That my 1886 report "has given rise to all the misrepresentation" can be disproved by your Commissioner, whose article was, I imagine, based on much wider data than that.

4. That "the sanitary staff consists of one chief inspector, three sub ditto, one office clerk, and the officer of health. Of this number the chief inspector, one sub-inspector, and the clerk have not been vaccinated since infancy, and the protection must have ceased long ago." The last statement you have dealt with in your remarks. Respecting the staff, I would say the clerk never leaves the office, and has nothing to do with any case of infectious disease, and is an old man upwards of sixty years of age. The chief inspector has only been in office four years, and he himself comes scarcely at all in contact with any of our cases of infectious disease, this devolving upon the sub-inspector in whose district the case occurs. Moreover, he had good cicatrices of primary vaccination. The sub-inspector alluded to as not being revaccinated has been appointed scarcely two years, and has never yet had to do with a single case of small-pox. He has good vaccination marks, but it is more from oversight than anything else he has not yet been revaccinated, which he intends to have done promptly on the first occasion of having to deal with small-pox, but probably before waiting for that. The sub-inspector whom he succeeded, and who had often to deal with small-pox, was *vaccinated* and *revaccinated*. A most important member of the staff has been omitted from the above list altogether—i.e., the man who disinfects all the infected rooms, houses, &c.; he is vaccinated and re-vaccinated.

5. "That the nursing staff at the hospital consists of the matron and two nurses. Of these, the matron has not been vaccinated since infancy; one nurse nineteen years since revaccination; the other revaccinated unsuccessfully, and contracted small-pox immediately after. An experience unique and interesting." To that I would say that the nursing staff consists at present of a matron and six nurses, but at the time referred to I believe we had six or eight nurses. All who at the time had not been revaccinated or had small-pox were then revaccinated immediately on the admission of the case of small-pox. The matron has not been revaccinated since childhood, but she had good cicatrices. Further, when a case of small-pox is in hospital she can scarcely be said to come in contact with it, as the small-pox building and nurses in charge thereof are carefully isolated from the rest of the buildings and inmates. The "nurse revaccinated nineteen years ago" would be revaccinated since puberty was reached, rendering her tolerably safe for life. The reference to the unsuccessfully revaccinated nurse is rather unfortunate for Mr. Bigge's argument. There is nothing unique in a person not revaccinated contracting small-pox. In this case the nurse was on duty at the Oldham Fever Hospital, where no small-pox had been admitted for some time, and several fresh nurses engaged in the interval had not then been revaccinated. A case came in; Dr. Sutton at once revaccinated those who had not been thus protected, but, not being able at the moment to obtain recent lymph, used some that had been in his possession a considerable time, and apparently become inert, for this, both in nurse and a servant, failed "to take," and in a fortnight both were suffering from small-pox. Further, the porter who refused revaccination also contracted it.

6. "That of four nurses since appointed, two only have been revaccinated since childhood." If it is meant since the last case of small-pox was admitted four nurses have been appointed, this is wrong: at least a dozen nurses have come and gone since then; but, having had no small-pox here, the question of revaccination has not been considered by me.

7. "That at the last admission of a small-pox case the

nurse attending was not revaccinated, although an assistant was operated on." The nurse in charge was the one just referred to as having passed through an attack of small-pox at Oldham, and was therefore well protected, the assistant nurse was successfully revaccinated by me before going on duty.

8. "That we have therefore ten persons who were in office at the time the report was made, *four of whom had never been vaccinated*, one in whom the protection had vanished. Of the remaining five, the most recent revaccination was performed two years ago." In the absence of any particulars, by the ten persons here referred to, I take it, are intended myself, the chief inspector, three sub-inspectors, the clerk, the matron, the two nurses who attended the case, and the porter; of these *all had been vaccinated*, and *all who came in contact with the patients were revaccinated.* I am, Sirs, yours faithfully,

HENRY TOMKINS,
Leicester, Oct. 18th, 1887. Medical Officer of Health.

JAMBUL IN DIABETES; SACCHARINE IN DIABETES.

To the Editors of THE LANCET.

SIR,—Mr. Hurry Fenwick's letter induces me to give you the results of the trial I have made of jambul powder in five cases of diabetes since the date of Dr. Kingsbury's letter to one of your contemporaries, used in doses of five grains, generally four times, in two instances three times, daily. All the patients were in the General Hospital under my care. I may say at once that no case was cured, but that all left the hospital more or less relieved by treatment, that all were carefully dieted, and that, besides the routine of diet, they were allowed potash imperial, sweetened with glycerine, to drink, and were in several instances treated by vapour baths. The effects of jambul were tested by maintaining uniformity of conditions in all other respects during the time the drug was employed or its use omitted. There were eight distinct trials in the five cases, five being followed by an increase of sugar and three by a decrease. Its disuse was followed on four occasions by a decrease and twice by an increase.

H. G——, aged thirty-five, was the only case in which the decrease was well marked. On admission he passed 250 oz. of urine containing 9200 gr. of sugar. After being placed on a diet of meat, greens, and gluten bread, and the urine observed for a week, he passed an average of 190 oz. daily, containing 4500 gr. of sugar. He then took 5 gr. of jumbul three times a day for twenty-four days, during which time he passed on an average 140 oz. of urine containing 3500 gr. of sugar. The next week he took no medicine, and the urine fell to 104 oz., containing 2400 gr. of sugar. He was then given 1 gr. of opium twice daily for twelve days, the urine falling to 78 oz. and the sugar to 2000 gr. This patient is still under observation.

In this case there seemed to be an improvement taking place independently of the drug, and which in no way ceased when this was discontinued. The other two instances where its use was followed by a decrease were neutralised by the fact that subsequent trials in the same patients were followed by an increase. Thus, in W. S——, aged twenty-one, the first trial was followed by a decrease, the second by an increase; and in F. M——, aged thirty-one, the first and third trials were followed by an increase, the second by a decrease. The duration of the use of the drug varied from three to thirty-five days. The five trials that resulted in an increase were respectively three, five, thirty-five, twelve, and fifteen days, while the three resulting in a decrease were three, eight, and twenty-four days. As far as possible the conditions were identical, so that if the drug is to be credited in any instance with the reduction of sugar, it must also be debited with its increase in the other instances, and we must conclude that it did more harm than good to my cases. I do not, however, think so harshly of it; I believe it to be a very harmless substance, and incapable of action either for good or evil. It deserves just as little to be regarded as a specific for diabetes as does arsenite of bromine, salicylate of sodium, bromide of potassium, codeine, salicine, boracic acid, or uranium nitrate, each of which has found enthusiasts to believe in it. I discussed the claims of these drugs in a paper published in the *Practitioner* for December, 1886, to which I would refer any reader who desires to know more of my opinions as to the rational use of drugs in diabetes.

One word as to saccharine. A convenient solution for sweetening purposes may be made by using bicarbonate of soda as a solvent, in the proportion of five grains of bicarbonate of soda and ten grains of saccharine to one ounce of water; a teaspoonful is sufficient to sweeten a cup of coffee. In preparing potash imperial for diabetic patients, four grains of saccharine to the pint are sufficient to make it very distinctly sweet. Saccharine is not expensive; I understand it can be sold retail at about 1*s.* 6*d.* a drachm.

I am, Sirs, yours truly,
ROBERT SAUNDBY, M.D. Edin., F.R.C.P. Lond.
Birmingham, Oct. 10th, 1887.

"THE PRESYSTOLIC MURMUR, FALSELY SO CALLED."

To the Editors of THE LANCET.

SIRS,—I have read with considerable pleasure the attack on the auricular systolic murmur, as such, by so eminent a member of the profession as Dr. Dickinson, contained in the first part of his paper, "The Presystolic Murmur falsely so-called." He treats the subject from a physician's aspect; may I be permitted to make a few remarks from an anatomical standpoint?

In considering the causation of the murmur, a comparison is necessary between the normal and the stenosed mitral orifice, more especially with reference to the position of the valves during diastole and beginning contraction. During the diastole of the ventricle blood from the pulmonary veins is gradually filling the auricle, flowing on into the ventricle, lifting up the valves from the ventricular wall, and producing an orifice similar to, though larger than, the stenosed one. The auricular contraction commencing in the great veins forces the blood through this funnel-shaped orifice into the ventricle, the effect of which is the distension of the ventricle and the complete approximation of the valves before the commencement of the ventricular contraction, thus preventing any regurgitation. I am aware that this latter assertion is denied, and that many prefer to regard it as being brought about by the beginning ventricular contraction. In support of what I have stated I may mention the following experiment, well known to your readers:—

The heart being removed from the body, with the ascending part of the arch of the aorta and pulmonary artery, which are tied so as to occlude their orifices, the left auricle is opened, and a stream of water is made to flow through the mitral orifice; the valve segments are then seen to leave the ventricular wall, and gradually to approach each other; the stronger the stream, the more rapid and firm the approximation. Instead of water, I have often, with a like result, used air, by placing the nozzle of a syringe at the mitral orifice and forcing air into the ventricle—this under conditions similar to those existing in the body. If a force, therefore, equal to the auricular contraction can approximate the valves, why is it necessary to assume that these are only approximated by the commencing ventricular contraction?

In applying the above experiment to a heart with a stenosed mitral orifice, I have noticed that such is not closed until a greater force of water is used than is necessary to close a normal mitral orifice. And in stenosis, with a definite ventricular systolic murmur during life, the orifice cannot be accurately closed by such procedures. This being allowed, then, it follows that the auricular contraction will not approximate the thickened fibroid valve segments, or will not completely close the funnel-shaped aperture bounded by the ring of adherent valve segments present in mitral stenosis. The ventricular contraction following, regurgitation through the imperfectly closed mitral orifice results; it is this regurgitation which has been described as of direct mitral origin. Again, as Dr. Dickinson points out, may not the character of the murmur be an additional argument in favour of the ventricular systolic theory? For has it not been described "as running up to the systolic sound," and "increasing in intensity until lost in the systolic sound"? If the mitral valves at the beginning ventricular contraction are not approximated, but become so during its contraction, the orifice will therefore become narrower and, the force remaining the same or increasing, the resulting murmur will increase in intensity, and on the complete approximation of the valves will be followed by the sharp sound

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which, though described as the first sound, yet differs materially from the booming character of the normal first sound. I am, Sirs, yours very sincerely,

Crewe, October 4th, 1887. W. OWEN TRAVIS.

To the Editors of THE LANCET.

SIRS,—By a somewhat remarkable coincidence two men of unquestionable ability and originality have almost simultaneously attacked the commonly accepted belief on the manner of production of the so-called presystolic or auriculo-systolic murmur—a murmur which, curiously enough, is accepted by observers as of all cardiac murmurs the only one the mere recognition of which is absolutely diagnostic of organic valvular disease. Dr. Dickinson in your own pages, and Dr. McVail before the Medico-Chirurgical Society of Glasgow (*Brit. Med. Jour.*, Oct. 8th, 1887), have both asserted their belief that the auricular contraction is incapable of producing the presystolic murmur, which, they say, is really ventricular systolic in its rhythm and regurgitant in its nature; and Dr. McVail has gone into elaborate detail to show its method of production. Now, it seems to me that, without discussing the position further—and there is much room for discussing it,—there is one series of well-ascertained facts which is absolutely fatal to its acceptance. The presystolic murmur as we general practitioners see it—and it is exceedingly common—occurs in the majority of cases in a heart which is perfectly regular in its action and moderate in its rate of contraction, and is thus in a condition favourable to its careful study. It begins *almost immediately* after a faint and perhaps reduplicated second sound, and runs right on to the short, sharp, and loud first sound (or what represents the first sound), and thus it abruptly ends. Occasionally this is followed by an ordinary ventricular systolic murmur; but its existence is of no importance to my present purpose. Then comes the second sound again, in its usual course, and the cycle is complete. Now, if the theory which these observers advance be correct, the ventricular systole commences *immediately* after the closure of the sigmoid valves, and ends only with their closure a second time; for it is clear that, whether there be a characteristic mitral systolic murmur present or not, the completion of the ventricular contraction must be at once followed by the closure of the sigmoid valves, and the production therefore of the second sound. In the extremely brief period, then, which intervenes between the completion of the ventricular contraction and the production of the second sound, *plus* the short period during which that sound lasts, *plus* the very brief interval which elapses before the murmur begins again, we are asked to suppose that there occur, in succession, the cardiac pause, the ventricular diastole, the auricular contraction, and the complete ventricular distension; whilst, on the other hand, the ventricular contraction, which we have hitherto regarded as short and sharp in its character, is drawled out, as it were, during the long presystolic murmur, the occurrence of this first sound, and up to the fraction of a moment before the occurrence of the second sound. In other words, we are asked to believe that all the essential work of cardiac rest, collection of blood in the auricles, and the filling of the ventricles, takes up greatly less than the half of a cardiac revolution, whilst the work of emptying the ventricles into the great arteries takes up far more than the half, and that, too, in the case of a left ventricle, which in uncomplicated cases is undilated and unhypertrophied, if, indeed, it be not actually atrophied. It seems to me, therefore, infinitely more difficult to accept the position which is being now proposed to us, than to believe that the contraction of the auricle is itself the cause of the murmur. How strangely views change on these matters, for not seventy years ago Laennic believed that the auricular contraction was sufficient to explain the second sound, and was, indeed, its cause. There can be little doubt that he not only recognised the presystolic murmur, but correctly connected it with contraction of the mitral orifice, rightly thinking it auriculo-systolic in rhythm, but unfortunately basing his opinion upon the false belief that the contraction of the auricle was the cause of the second sound. But why should it be thought so impossible for the auricular contraction to produce this long rough murmur? If there is a true diastolic mitral murmur, there can be no other possible explanation for it than that the current of blood, accelerated perhaps by the suction power of the dilating ventricles, is thrown into sonorous vibration as it passes over the thickened and roughened cusps of the mitral valve. And if this be so, why should the still more accelerated current of blood forced into the ventricle through a narrowed orifice by the prolonged contraction of a dilated and hypertrophied auricle be unable to produce an audible sound? Indeed, it is not to be forgotten that a murmur, prolonged and even musical in quality, can be produced under circumstances of surprisingly little force or rapidity of current, as is evidenced by the occurrence of the *bruit de diable* in the veins at the root of the neck.

I am, Sirs, yours truly,

Paisley, October, 1887. FRANK SHERAR, M.B. Glas.

"COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE."

To the Editors of THE LANCET.

SIRS,—Dr. Jacob has misapprehended the purport of my letter in your issue of the 8th inst., in which I did not undertake to prove anything, but merely stated that compulsory notification of infectious disease was acceptable both to the profession and laity of Reading, and worked smoothly and well. The question of its value as against disease is a different and larger one, to which the demands upon my time will not permit me to do justice, nor can I, owing to the death of our medical officer of health, under whose supervision our present system has grown up, obtain access to, or deal with, the statistics of the borough, as he, had he been alive, would have done.

1. I much regret that I am unable to give a satisfactory reply to Dr. Jacob's first question as to the influence of compulsory notification on the death-rate from zymotic disease. The reason is that until November, 1875, Reading had no complete system of drainage, and during the past ten years the number of houses connected with that system has been gradually increasing from 2003 in 1876 to 8765 in 1886. Therefore the two factors of improving house sanitation and compulsory notification have been concurrent, rendering it impossible to ascertain to what extent each is responsible for the reduction of the zymotic death-rate from 2·88 per 1000 of the population in the five years 1876 to 1880 inclusive to 1·96 in the next quinquennial period 1881 to 1885, being a reduction in five years of nearly 1 per 1000 living.

2. The notification certificate is a plain statement that, in the opinion of the practitioner, A. B. is suffering from an infectious disease, and specifying the situation of the building, the name of the occupier, and the nature of the disease. The practitioners here feel that they and the medical officer of health have no conflicting interests, and the latter uses his own discretion as to whether he visits the house, sends his inspector, or does neither. Our late medical officer was on the best terms with all the medical men, and would, if he thought it necessary to visit a house, consider the wishes of the medical attendant, and go with or without him, as the latter might prefer. He never interfered unpleasantly, his assistance was constantly requested, and his visits objected to by none. The disinfection and sanitation of the house was, in the case of intelligent and well-to-do householders, left to the direction of their own doctor, who could obtain, if he liked, the services of the officers of the sanitary authority, or have the same carried out by other competent persons. In the case of the poor, disinfection was carried out by the authorities, and both doctors and patients were glad to have it done. In *all* cases, on the receipt of the certificate, a printed notice was sent enjoining isolation for a specified time from the date of the last case in the house, giving particulars as to the disease and its sanitary treatment; direction for proper disinfection of the patient, premises, and clothing; advising medical attendance, and reciting the penalty for the various infringements of the Act of Parliament by infectious persons. It cannot be denied that all this is useful and to the point in tending to make people careful, and so limiting the extension of disease; and without compulsory notification these precautions could not be advocated, and probably would not be adopted. Errors in diagnosis of course occur, and in cases felt to be doubtful it is quite usual for the practitioner to ask the medical officer of health to see the case and give his opinion as to its nature. I have asked dispensary and club doctors, and they assure me that the Reading working classes have no objection to notification, and no dread of

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the assistance, miscalled interference, rendered them by the health officers.

3. I have inquired of the two registrars as to the number of deaths certified by chemists and other unqualified persons. One with an experience of over eighteen years tells me that in all that time he has had none in adults. The other in five years has had one adult death certified by a herbalist. The only exceptions given by both are those of babies, all under one week old and certified by midwives. These are very infrequent. In every case where the death is not certified by a qualified practitioner the registrars invariably communicate with the coroner, who uses his discretion as regards an inquest. I think these facts refute this objection, at least as applied to Reading.

But why should Dr. Jacob require a mathematical demonstration of lessened death-rate through compulsory notification? Attached to zymotic disease is a certain percentage of deaths. In compulsory notification we have a machinery by which the spread of these diseases may be reduced, and therefore, potentially, a certain number of deaths prevented. If preventive medicine be equally with curative a function of the practitioner, I do not think I require stronger ground for my advocacy. Some two or three years ago the late Dr. Shea observed that notifications of diphtheria were coming in from one particular district, and on inquiry found that all the children first attacked attended the same Board school. Inspection showed that the sanitary condition of the school was defective, and the school was immediately closed until the defects were remedied and the outbreak was at an end. This is one out of many instances in which we have been indebted to compulsory notification.

The following extracts from the last report, dated January 1887, by our late medical officer of health, still further illustrate the advantages of this institution:—"No outbreak of epidemic disease has arisen during the year requiring the compulsory closure of any elementary school, but the usual precautions of recording the names of the schools attended is continued, and children from infected houses are prevented from attending Sunday and day schools, or other gatherings. The compulsory notification clause is much needed in the suburbs, where cases often arise that are not notified." "In several instances, upon my advice, the work of needlewomen, laundresses, and other persons was stopped where scarlet fever existed in their houses, compensation to a moderate extent being paid them for the time; and the power to do this was very useful, and to a great extent prevented hardship, for the relieving officer could afford no aid beyond offering 'the house' to the entire family, which would have broken up their home." "Small-pox was very prevalent in the county of Berks, and in adjacent districts last year several troublesome outbreaks occurred. The infection was brought into the borough on four occasions; but the cases being at once removed, and the ordinary precautions adopted on the premises from whence they came, there was no extension of the disease. This was the more fortunate, as the cases arose in very small houses and in two small beer-houses of a very similar class to a common lodging-house." Again, having in view the still further perfecting of his preventive measures he writes: "Scarlet fever was rather prevalent. A mild type existed, and though 236 cases were reported only eight proved fatal. A few were isolated in the cottage. Notification of cases of scarlet fever without the means for isolating them is very much reduced in value. Children from infected houses can be prevented from attending school, certain trades can be controlled, and where scarlet fever prevails the taking in of needlework and washing can be prevented, but the chief means for arresting the disease is wanting if the first cases cannot be removed to a hospital." Dr. Shea hoped that in time he might be able to establish a small hospital for infectious isolation. Lastly: "Notification of disease has proved very useful in several instances during the past year. Since notification has been in force it has worked very smoothly, and without any friction or difficulty. This, I think, greatly arises from the fact that we have in Reading a body of gentlemen practising medicine who have always shown the most perfect willingness to assist in every way in their power in the prevention of the spread of infectious disease."

Such was the opinion of a most unprejudiced and very experienced sanitarian on the value of compulsory notification. In support of my plea for its national adoption I cannot do better than allude to an address on the National Value of Public Health, delivered by Sir James Paget, and published in the journals in June, 1884. In this, he says: "I take it for granted that a large portion of all national welfare is dependent on the work which the population can constantly be doing; or, if I may so express it, that the greater part of the national wealth is the income from the work which is the outcome from the national health." Then after dealing with statistics, he continues: "Thus we may believe that our whole population between fifteen and sixty-five years old do, in each year, 20,000,000 weeks' work less than they might do if it were not for sickness." After calculating this loss to the country in millions of pounds, he remarks: "The losses of work due to sickness among children must be very large. Consider the time which might be spent in good productive work if it were not spent in taking care of them while they are ill." He then refers to losses due to the deaths of those who die young, which he estimates at much more than £2,000,000 sterling per annum. After apologising for making money appear as a motive for doing things for which sufficient motives might be found in charity and sympathy, this eloquent and distinguished advocate, in answer to the question "What more is wanted?" replies: "A larger and more practical recognition of the value and happiness of good national health; a wider study and practice of all the methods of promoting it; or, at least, a more ready and liberal help to those who are striving to promote it."

On the grounds of philanthropy and of political economy, I venture to express the hope that the opponents of compulsory notification may at length recognise that in it we possess a method capable of beneficent results to the nation at large, and in no way inimical to the interests of the medical profession.

I am, Sirs, yours faithfully,

Reading, Oct. 17th, 1887. J. HOPKINS WALTHER.

THE PURGATIVE TREATMENT OF PERITONITIS.

To the Editors of THE LANCET.

SIRS,—I am quite disposed to attribute the success in Mr. Frank Sturges' case to the purgative pills, though I wish to point out that my advocacy of this treatment was confined to the peritonitis following surgical operations—a very different thing from the peritonitis of childbed. In Mr. Sturges' case the purgatives were given before vomiting was established, and they probably therefore got a chance of being effective. To be of any use the purgative treatment must be employed early, before distension has paralysed the intestines, and before incessant vomiting has made every effort to do anything by the stomach of no avail. In fact, I look upon the purgative method rather as a preventive of, or as a method of aborting, peritonitis, than as a way of curing it. This will be quite evident to anyone reading my paper on the subject. Yet very far advanced peritonitis may be cured by this method if the vomiting can be stopped, and this is best done by putting nothing, absolutely nothing, in the stomach for twenty-four or even forty-eight hours, and giving a fairly large dose of morphia by hypodermic injection. But puerperal peritonitis has as its base in very many cases a specific poison, against which purgatives and everything else are powerless. Even opening the abdomen and cleaning it out fails to obtain the large success in puerperal cases which it certainly has, in my hands at least, in suppurative peritonitis which is non-puerperal.

I am, Sirs, yours obediently,

Birmingham, Oct. 15th, 1887. LAWSON TAIT.

PROTECTION BY COMPLETE VACCINATION.

To the Editors of THE LANCET.

SIRS,—It may interest the public to know how completely two children were protected from small-pox by having been fully vaccinated.

I was called to a club patient suffering from small-pox, having taken the disease from his wife. Seeing that the wife, then just convalescent, was nursing a baby five months old who was perfectly well, and who had had but a pimple on its nose, which never proceeded to suppuration, I inquired if the child had been vaccinated, and examined the arms, which bore five large cicatrices each. Observing that I took notes of the case, the mother told me that a friend of her's, who took the disease after visiting her (living in the next house), also had a baby which she was

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nursing, and which had entirely escaped the infection of small-pox. I visited this case, and found that the children had been vaccinated together a month previously at a public institution, by five scarifications in each arm. This child had perfect immunity from the disease; they were both of the same age.

Speaking of the result of vaccination in a family after the small-pox had been introduced into the home, on Sept. 24th, 1875, I was called to a private patient, an elderly gentleman, who had taken the small-pox when travelling in the country. After ordering complete isolation to an upper room in the house on the 26th, I vaccinated the wife, one of the daughters, and the servant; the other two daughters and a son had been vaccinated in the previous February. The wife, unassisted, nursed her husband (by desire). The vaccination in each case succeeded, and no member of the family took the disease.

The former case was fully developed, though not severe. The latter was a severe form of the disease. The wife was the husband's junior by, I should say, at least, twenty-five years.

I am, Sirs, yours truly,

Camden-road, N.W., Oct. 15th, 1887. EDWARD BATE, M.D.

THE SIXTH INTERNATIONAL CONGRESS OF HYGIENE.

(From our Special Correspondent.)

(Continued from page 735.)

Vienna, Oct. 11th.

As the resolutions adopted by the International Congress have not yet been published, it is impossible to form a clear and complete idea of what has been voted. There is, however, in a scattered form, ample evidence of the great amount of work and research that has been undertaken. For a thorough investigation of the opinions expressed and the votes accepted it will be advisable to wait until the publication by the committee of the full report of the Congress.

In respect to the work of the Sections, one of the most original papers read was that of M. Emile Trélat, on the Means of bringing the Heat of the Sun and Proper Light to Dwellings. This is a subject of such vast importance that it must be reserved for a special study. Meanwhile, it may be mentioned that M. Trélat insisted that every wall which did not receive the direct rays of the sun would rot and harbour the germs of disease. To secure this purifying action of the sun during winter, it was necessary that streets running from north to south should be twice as wide as the houses were high. For giving light within the rooms he conclusively proved that windows required to be heightened rather than widened. This led to a lengthy discussion, during the course of which Dr. Knauff of Berlin spoke of the caloric power a centimetre of space receives, and concluded by urging that Venetian blinds should be made to open in vertical instead of horizontal lines. Professor Baumeister urged that the direction of streets was of no importance, for what the house lost on one side it gained on the other. He further attacked the laws of Berlin for making no difference between the rules regulating the building of houses in the centre and in the suburbs of the town. Evidently it was possible to enforce in the suburbs much more severe regulations. Professor Cöhn of Berlin thought a debt of gratitude was due to France for having first introduced measures for the construction of windows in school rooms on scientific principles calculated to save the eyesight of the pupils. It was then proposed to thank M. Trélat for his report, and to proceed to the next subject. Baron de Sazor protested. He demanded that the Congress should establish principles, and should proclaim what was necessary in the first instance. It would be time enough to discuss whether these principles were practical or not when they had been firmly established. In St. Petersburg, which he had the honour of representing, all the new streets were fifteen metres wide, and it was not allowed to build a house higher than fifteen metres. The openings at the back of the houses were also fairly large, and there were rules to ensure sufficient light to the inhabited rooms. M. Trélat replied that rules for the construction of streets likewise existed in France, but they did not suffice to meet the case. The Russian regulations represented but a trivial progress, for the houses were one and a half times as high as the back yards were wide. With respect to the compliments Professor Cöhn had made to the French nation, they were really due to Professor Cöhn himself, for it was his work on Shortsightedness, written some fifteen years ago, which had induced the French Government to protect the eyesight of the children in schools. Baron de Sazor again rose to explain that he only gave details about the rules enforced at St. Petersburg in the hope that the Congress would pronounce a definite opinion that something better was required. In spite of this, the Section came to no decision. Some proposed to adopt M. Trélat's conclusions, others to merely thank him for his paper. In the confusion that resulted it was impossible to say whether either of these two proposals was adopted. No clear and decisive vote seems to have been taken. This was all the more unfortunate as M. de Sazor had evidently a definite object in view. Armed with a resolution from the Congress, he might have brought pressure to bear upon the authorities of St. Petersburg. It is to be regretted that the ability and special knowledge displayed in this discussion should not have brought about a definite conclusion.

The question of Teaching Hygiene in all Educational Establishments was very generally discussed, and the principle adopted. Many members of the Congress, however, did not seem to realise that the great difficulty, especially on the Continent, is to find competent teachers. Many speakers seemed to think that when they proposed to confine this task of teaching to medical men the whole difficulty was solved. But a great number, if not the majority, of medical men, on the Continent at least, have no knowledge of practical hygiene. As an English delegate inquired during the course of the debate, Was the Congress quite sure that even the doctors present knew how to test a soil pipe for leakage, how to direct the construction of drains, and detect the escape of sewer gas?

The debate in the Second Section on Factory Legislation was long and laboured. It was regrettable that Mr. F. H. Whymper, superintending inspector of factories, whose sketch of the working of the law in England formed, with a paper by Dr. Fridolin Schuler, of the Canton Glarus, Switzerland, the basis of discussion, was not present to take part in the votes on the resolutions. It was generally accepted that the local circumstances relating to factories differed so widely that no one general rule could be laid down relating to the amount of air, heat, and light required. In these cases special technical knowledge is necessary, and the method of factory inspection should be such as to admit in consultation those who possess the necessary practical experience. When serious dangers can only be prevented by the total suppression of certain industries—such as, for instance, the use of arsenic or phosphorus,—then such suppression should be the result of an international treaty, and should affect several nations simultaneously. A very excited discussion arose as to the Half-time System. It was generally felt that if the children were allowed to go to work before they had completed their education, this practice would become a means of making them work too early in life. On the other hand, it was objected that the half-time system had given the best results, and that many children would complete their education before the law allowed them to work; this would enable them to waste a year or two in lounging about the streets, to the great detriment of their health and morals. The conflict of opinion rendered it impossible to establish any definite rule on this question. The principle of State legislation for the limiting of the hours of labour, not only for women and children, but for men also, was approved on all sides, and a resolution in favour of an International Eight Hours Bill was almost carried. A ten hours' day was carried by a large majority, coupled with the desire that this should be regulated by an international treaty. The Saturday half-holiday was also approved. Then there was a resolution adopted to the effect that where, as in the piercing of tunnels &c., the employers had to provide food for the workmen, such food should be occasionally examined by independent inspectors. During the course of the discussion it was pointed out that three classes of inspectors were required: doctors for all matters relating to medicine and prophylaxis; specialists, whether doctors, architects, engineers, or others, for difficulties relating to drainage and ventilation of workshops and factories; finally, with respect to the various methods by which unscrupulous employers elude the law, to the detriment of the health of their

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workmen, inspectors should be selected from among the victims themselves. A resolution to this effect was put late in the day, and when the room was nearly empty. It was defeated by 21 against 13; but in the majority there were no less than five manufacturers and several Austrian inspectors of factories. In Austria these inspectors are selected from among the commercial classes. The chairman himself was a factory inspector, and had been formerly employed by a chamber of commerce. Under these circumstances, while the working-class interests were not directly represented, members of the commercial and manufacturing classes, who are keenly interested in checking factory legislation, were present in large numbers, and took a very active part in the debates. This is scarcely fair. The object of the Congress should be to obtain the disinterested opinion of men of science engaged on sanitary reform, instead of having to listen for hours to manufacturers who are doing their utmost to prevent such legislative interference as will, while improving the health of the population, tend possibly to limit the present almost inexhaustible supply of cheap labour. In such matters it is difficult to prevent a collision between economical and sanitary problems; but, in any case, the points at issue should be debated purely on sanitary grounds, and the vote should not be influenced by persons who have their own financial interests at stake. In spite of this alien influence present in the Section, some very strong resolutions were carried by the doctors who assisted. One resolution, for instance, was proposed in favour of assimilating railway servants and private servants to ordinary workmen, with regard to such legislation as affected factories, the hours of labour, &c. This, at the first vote, resulted in a tie of 15 against 15; and at a second trial was carried by 15 to 9. The small number of voters in this Section shows how many members abandoned their work in consequence of the great difficulty of understanding what was going forward, as was mentioned in a previous letter.

In the same Section, Professor Erismann, of St. Petersburg, related how he had examined 100,000 workmen, and found that, on an average, those engaged in textile industries were not as tall as the other classes of workers. Their chest measurement and bodily weight were also inferior. These symptoms of degeneration of the textile workers were more particularly distinct among the spinners. In every respect also they took a longer time to grow. Finally, the lifting power of the hand was not so great as that of workers in other trades.

A Fourth Section was created for the hearing of papers without discussion, and here Professor Reis lectured on Colour-blindness among Railway Servants. He dwelt at length on the mode of examining the sight, and said that in all countries committees of physicians should meet to determine what methods were best, and to see, from time to time, whether these could not be revised. Professor Tessier of Lyons followed with a paper on Diphtheria, in which he expressed a belief that the virus was contained in dust, and that there was an intimate connexion between diphtheria in poultry and among human beings. In the same Section an essay by Dr. G. Treille, professor at French naval schools, on the Acclimatising of Europeans in Tropical Countries, was so warmly approved that the Section decided to reprint and distribute the paper at the cost of the Congress.

The discussion on the Trade in Rags, commenced at the Hague Congress, was resumed in the Third Section. Professor Corfield had prepared a report on this subject. He stated that the questions he had addressed to various interested parties resulted in very unsatisfactory replies. The trade would be thoroughly opposed to the projected packing of rags in a covering soaked in a corrosive sublimate solution. Dr. E. Vallin of Paris and Dr. Finkelnburg of Bonn spoke next. The latter drew a line between dirty linen and rags. He gave details of different cases of epidemics traced to importation of rags, and thought that they more frequently caused outbreaks of small-pox. The proposal to disinfect all rags by heat would cause too great an expense. Dr. Henri Martin, of Paris then read a masterly description of the scientific experiments made in the disinfection of rags. The difficulty had always been to reach the centre of a bale. He remarked that by dividing the bales it was possible to satisfactorily disinfect them at a cost of about £2 for a hundred bales or twenty tons. A long discussion ensued, in which it was suggested that no particular form of disinfection should be approved, as new inventions modified

The Third Section, in which the questions relating to Cholera had been discussed, was so overwhelmed with work that it had to form a sub-section, and here M. Chamberlain, as the representative of M. Pasteur, spoke on the results obtained by Preventive Inoculations against Anthrax. He produced numerous statistical tables. Two German physicians, Drs. Gaffky and Loeffler, formerly Dr. Koch's assistants, challenged these statements; but Dr. Lydtin of Karlsruhe said that good results had been obtained in South Germany by inoculations for the prevention of anthrax. With respect to swine plague, the upshot of the experiments made was not so satisfactory, and scarcely justified the confident recommendation of the process of inoculation. A very animated discussion ensued, and most of the speakers expressed their conviction that the scientific value of the Pasteurian methods could not be doubted, but that for practical application further experiments were necessary.

On the Saturday the Sections were to have terminated their work in the forenoon, but the Third Section met again in the afternoon, and a large crowd of members were present to hear M. Chamberlain on the Prevention of Rabies. He apologised for M. Pasteur's unavoidable absence, due to his indifferent health, and then delivered a most interesting lecture, which, unfortunately, the limits of space render it impossible to reproduce. He remarked that when M. Pasteur commenced his studies nothing was known of rabies. The virus was generally supposed to be in the saliva, but it was ultimately found that certain results could only be obtained by going to the nervous centres. Even then, when the nervous substance was merely injected under the skin, several weeks passed before rabies entered. Then M. Pasteur had the idea of introducing into the brain, by trepanning, the marrow of an animal killed by hydrophobia. By this means the results obtained were absolutely reliable. Illness commenced in fifteen days, and death took place on the twentieth day. Several hundred experiments have proved this. There is never a variation of more than one or two days. In the presence of this double result, the possession of a true virus and a trustworthy effect, it seemed as if a basis of action had been found. M. Pasteur had all along conceived the hope of making a vaccine. Unfortunately, for rabies the same process could not be employed. M. Chamberlain then explained the various phases of research which led to the discovery of a method which could be relied on for attenuating this virus; how a young Alsatian volunteered to submit himself to inoculation, and how, with the success of this experiment, hundreds had come to be treated in a similar manner. It was impossible to say how many lives had been saved. There were no data on which to establish such a calculation. Some authors had maintained that the proportion of deaths from bites of mad dogs amounted to 36 per cent. The very least to be found in books on the subject was 16 per cent., and no one had ever pretended that the mortality was less than 5 per cent.; yet after vaccination the death-rate among M. Pasteur's patients had only amounted to 1·3 per cent. It could not be said how great the reduction in mortality had been, but it was impossible to deny that it was very considerable.

In the discussion that followed, one or two speakers related how they had failed in various experiments to bring about the expected and desired results. Others, on the contrary, expressed their entire satisfaction, and gave figures showing the number of persons who had been successfully treated. Dr. Metschnikoff of Odessa, notably, recognised the great work achieved by M. Pasteur, and proposed the compulsory vaccination of all dogs. M. Chamberlain had no difficulty in replying. He congratulated himself on finding that all parties approved of the principle of inoculation. The proposition to vaccinate all dogs was a proof that the principle was accepted. Some had spoken of negative results. The vaccine might easily be spoilt and other microbes gain admission. Material errors would, of course, produce negative results, and a certain amount of practical experience was necessary. In Paris there had been no failure whatsoever, and abroad many successes. M. Chamberlain explained where and how many errors in experiments had been made which falsified the result; and then concluded, amid the loud applause of a crowded room.

This brought the business of the Congress to a close; but on the following Sunday morning a formal meeting was held in the great hall of the University, when two papers were read: one by Dr. Conradi of Pavia, on the Connexion between Longevity, Anthropology, and Hygiene; the other by Dr. C. T. d'Inama-Sternegg, Royal and Imperial Councillor,

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President of the Austrian Statistical Commission, on the most Remarkable Modifications which the European Populations have undergone during the last thousand years. When the papers had been read, the Congress decided to meet again in London in 1891, and elected a committee, as already mentioned, to organise the next Congress. A few short speeches then ensued. Dr. Mosso recalled the Congresses on the plains of Olympia, when Greece had reached the zenith of its civilisation. It was no longer the little States of Greece that met, but all Europe. The Congress would constitute a page in the history, not of tyrants and men of selfish ambition, but of humanity. In the name of Italy he offered his best thanks to the organisers of the Congress. M. Emile Trélat, in the name of France, spoke in the same strain. Hygiene progressed rapidly; the number of members of this Congress, amounting to 2500, proved the growing popularity of the new science. This result was due to good organisation and to the facilities which the vast building of the University afforded; but the amiability of the Viennese people had, more than all, facilitated the great work. "This soft amenity, which is true strength, had made the success of the Congress."

The name of the General Secretary, Professor von Grüber, was often associated with these speeches of congratulation, and certainly it is impossible to speak too highly of the devotion, the unfailing zeal, and the energy of the General Secretary. Thus the Congress came to an end. It was nearly two in the afternoon when the final cheers were given, and the members hurried away to prepare for the excursion to Buda-Pesth, and the farewell banquet given on the same evening.

In this comparatively brief account of the debates there are many important omissions. Numerous speeches and papers were read and delivered quite as interesting as those to which some allusion has been made. To their authors sincere apology is due, but the laws of measurement and of space are inexorable, and some sacrifices had to be made. It would not, however, be right to leave undescribed the marvellous reception, which lasted three whole days, accorded to the six hundred members of the Congress who went to Buda-Pesth. This most impressive and last phase of the Sixth International Congress will be the subject of a subsequent letter. In the meanwhile, it only remains to add that, under the gallery of the vast courtyard of the University, there was during the Congress a small sanitary exhibition. Here might be seen specimens of school furniture, of warming apparatus, a great collection of statistical charts, and the familiar exhibits of the English Ladies' Sanitary Association and the English Society for the Prevention of Blindness, with Dr. Roth in person to explain to all continental hygienists how the knowledge of sanitary questions was popularised in England. There were also ambulances, cooking stoves, portable hospitals, and many other kindred subjects. In every sense, therefore, the Sixth International Congress must have greatly contributed to spread the knowledge of sanitary questions in Austria and throughout Europe.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

At the Exhibition Theatre here on Saturday evening last, Dr. Meare gave a lecture on "First Aid in Cases of Accident." The lecture was ably delivered and well illustrated. Mr. Waynman Dixon of Sunderland, who presided, pointed out that, although a clause in the new Mines Act renders it compulsory for coal mines to keep on the premises the appliances necessary for giving first help to the injured, yet it is obvious that unless there be at the collieries persons who understand the use of such surgical accessories the provision made by the Act is absolutely valueless. Our ingenious *confrère*, Dr. Wm. Murray, has also been lecturing here on "The Evil Effects of Regular Habits," contending with much point and force that persons suffer in health from the monotony of over-regularity, and that a change is often indicated in the lives of these very regular people when they fall into bad health. Dr. Murray's lecture has given rise to a very brisk newspaper correspondence, but the lecturer's views seem to hold the field. There has been a considerable increase in fever cases in Newcastle; the last fortnight 126 cases have been notified, of which 93 were scarlet fever and 20 enteric. The Tyne Port Sanitary Authority during the last two months had inspected 1192 British steamers, 401 sailing vessels, 242 foreign steamers, and 197 sailing vessels, making a total of 2032. In all, 35 cases of sickness were found on board, and were inquired into and provided for; but two infectious cases were found, which were removed in the launch to the hospital. Only one vessel arrived which had been infected with cholera, and she was fumigated before entering the Tyne. The medical students who were under censure since the opening of the College have tendered an apology to the authorities, which has been accepted, so that they are allowed to pursue their studies this session. I am glad to hear that Dr. Luke Armstrong, whose late illness has been much exaggerated, is likely to very soon resume his professional work.

JARROW.

An unfortunate termination has taken place to a wedding feast at Jarrow, several people—about sixteen in all—having suffered from poisoning after partaking of a cake. So far there has been no death, but dangerous illness has resulted in many cases. The maker of the cake states that the only ingredients she used to "ice" the cake were half a pound of fine white sugar and the white of two eggs. She states that when she made the ice a fortnight ago she ate what was scraped off the edge of the dish, and also a little that dropped off the cake, when she was seized with similar illness to the Jarrow patients. The cake has been sent to the county analyst.

CARLISLE.

The inhabitants of the village of Burnriggs, about six miles east of Carlisle, are suffering terribly from typhoid fever. Thirty-seven cases of the disease have occurred, and four of them have already proved fatal. The sanitary authorities have traced the origin of the disease to a polluted well, which has now been closed. The village consists of about forty cottages, inhabited by between 120 and 130 persons, who for the most part gain a livelihood by working at the paper and woollen works in the neighbourhood. The local papers say that about one-third of the population has been stricken with fever.

Newcastle-on-Tyne, October 18th.

EDINBURGH.

(From our own Correspondent.)

OPENING OF THE WINTER SESSION.

On Tuesday, the 18th inst., the winter session at the University was inaugurated by an address to the students by Principal Sir William Muir, K.C.S.I. On behalf of the Senatus Academicus, which was largely represented on the platform, the Principal extended a welcome to the new comers on their entry into university life; while to the seniors he addressed an earnest appeal to make full use of the passing period of their student life that they might be well equipped for the work that lay before them in the active world in which they must play their part. Sir William then proceeded to review the developments which have occurred in the Scottish University system, and particularly in the University of Edinburgh, during the last fifty years. The growth which has occurred has not been a mere increase of size and numerical strength, but has been fraught with a gradual unfolding of the system of education, which has expanded widely as a whole, and has attained a much higher complexity in each of its parts. In surveying and depicting the main features of the student life of Scottish Universities, the speaker took occasion to compare it with other great centres of learning, and particularly with some of the newly-founded colonial universities. The main distinctive feature was the greater amount of personal independence that obtains here. This within duly guarded limits was a great advantage on the whole; but it had its drawbacks, among which was the fact that it did not imbue undergraduates with that feeling of corporate existence which tended to foster public spirit among them. Several attempts, and so far successful attempts, are now being made in Edinburgh to obviate this want; and these efforts had the Principal's warm sympathy and personal encouragement; in them probably lay the germ of a larger

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system of colleges and halls of residence affiliated to, and under the control of, the University. Although large sums of money were frequently devoted by generous donors to kindred educational purposes, and fine public schools and colleges, such as Fettes' College, were established, it was unfortunate that no endowments had as yet been forthcoming for supplying students with so obvious a requirement as suitable residential establishments under efficient superintendence. When such funds were available he thought we might look for further improvements in our university system.

Edinburgh, Oct. 18th.

DUBLIN.

(From our own Correspondent.)

THE CONJOINT SCHEMES OF THE COLLEGE OF SURGEONS.

THERE will very soon be two Conjoint Schemes in connexion with the Royal College of Surgeons, one with the College of Physicians, and the second with the Apothecaries' Hall. On analysing the regulations of these two schemes, there appears but little material difference as regards the lectures &c. to be attended and the fees to be paid—viz., an additional course of lectures in anatomy, and of seven guineas in the examination fees. The Apothecaries' Conjoint Scheme, however, as it is less expensive, will no doubt prove a formidable opponent to the scheme of the College of Physicians; and, indeed, I should not be surprised, from what I hear, to find very soon that that corporation will withdraw altogether from any combination with the College of Surgeons. The exact date for the first examination under the Apothecaries' Conjoint Scheme has not yet been announced; probably it will be some time in November. Last week candidates were examined for the First Professional Examination of the Colleges of Physicians and Surgeons' Conjoint Scheme. Nearly one-half of the candidates were stopped on the papers, and two-thirds of the rejected failed in Physics alone, or combined with other subjects.

SANITARY CONDITION OF CORK.

Dr. Donovan, medical superintendent officer of health for Cork, in a recent report, states that the number of deaths from diarrhœa for the month and the previous month is unusually high, and the number of cases of typhoid fever is on the increase. This clearly indicates a weak spot in the sanitary condition of the city, which he believes is the general absence of cleanliness. No effort, it appears, has yet been made to carry out some of the suggestions made last year; among others the ventilation of the main sewers for which a sum of £700 was voted. He regrets also to state that the question of the domestic scavenging of the city did not meet with the consideration it observed, and he is of opinion that the city will never be kept clean until its scavenging is taken up by the Corporation, and until Cork is kept clean diseases such as diarrhœa and typhoid fever will prevail.

ALLEGED CURE FOR HYDROPHOBIA.

The treatment adopted by Mr. McGovern, of Legnagrow, co. Cavan, has impressed a large number of observers, and in consequence it is intended to form a committee to examine and report upon the subject.

At a meeting of the Fellows of the College of Physicians this week, Drs. Gordon, Grimshaw, and J. W. Moore were elected representatives of the College on the Committee of Management under the Conjoint Examination Scheme.

Dr. Aquilla Smith has again been re-elected representative of the College of Physicians on the General Medical Council.

Dublin, Oct. 18th.

BELFAST.

(From our own Correspondent.)

THE CONSUMPTION HOSPITAL.

ABOUT two years ago Mr. Forster Green, a wealthy member of the Society of Friends in Belfast, offered to build a special wing for consumptives at the Throne Convalescent Hospital, on condition that the public would raise within one year a sum of £15,000 as an endowment, so that the new building, which would accommodate thirty patients, might not be a burden on the supporters of the hospital. Mr. Green most generously offered to extend the time for the raising of the endowment until the end of this year, and he also promised to contribute himself £1500. The total sum already subscribed or offered is a little over £7000, and a special meeting of the committee and life governors of the Royal Hospital was held last week to see what means could be devised to raise the additional sum. At this meeting it was finally decided to ask Mr. Blackiston-Houston, the Vice-Lieutenant of county Down, to give the Board of Management his assistance. I understand this gentleman attended the weekly meeting of the committee on Saturday, but regretted he was unable to give any help in the matter. To many it would seem, considering the present depressed condition of trade and the great depreciation in the value of landed property in Ireland, that it is well nigh impossible to raise such a large sum as £8000, but I trust that many of the wealthy citizens of Belfast will subscribe, so that Mr. Green's offer will be fulfilled, and a means afforded of relieving some of those afflicted with a disease which is extremely prevalent in Belfast.

HANS FLEMING, M.D.

Dr. Hans Fleming died at his residence in Omagh, co. Tyrone, on Friday, October 7th, in his seventy-fourth year. Dr. Fleming was the second son of John Fleming, Esq., of Ashfield, co. Meath, where his ancestors, who came from Holland, originally settled. Dr. Fleming, who was a Licentiate of the Irish College of Surgeons and an M.D. of St. Andrews, practised first in Balieborough, co. Cavan, and afterwards at Carrickmacross, co. Monaghan; and in both places he was much respected and had considerable success. He was appointed medical officer of the workhouse in Omagh in January, 1857, and held the office until 1885, when he resigned, and was succeeded by his son, Dr. Hans B. Fleming, who is now in active practice in Omagh. During the long period of his life spent in Omagh Dr. Fleming was universally respected. He was most attentive alike to poor and rich, and the immense concourse of the townspeople of Omagh and of the gentry of the surrounding districts at his funeral was a high tribute to Dr. Fleming's great worth.

Belfast, Oct. 19th.

PARIS.

(From our Paris Correspondent.)

ESSENCE OF TANACETUM VULGARIS.

IN the month of March, 1872, M. Peyraud, in his biological researches on the series of essences having isomeric relations, discovered an essence till then undescribed, which resembled in odour that of absinthe (wormwood). It was extracted from a synanthereus, the "Tanacetum vulgaris," which is still known under the names of "worm-herb," "horse-wormwood." This essence had till then been but little studied chemically and biologically. M. Peyraud remarked in his note to the Academy of Sciences at a recent meeting that, after injecting two drops of this essence in the veins of a rabbit, the animal was seized in about twenty seconds with terrible convulsions. It sprang forwards or backwards by bounds, and even upwards, generally falling on its left side. The teeth chattered, the animal bit its tongue, and there was an abundant flow of saliva from its mouth. The sense of hearing was greatly exaggerated. Moreover, when one held a stick near to the mouth of the rabbit, it bit it with such force that the animal could be raised without its letting go the stick. The convulsions lasted, on an average, from fifty to sixty minutes. The limit of the toxic dose scarcely exceeds three or four drops. To the convulsive period succeeded a comatose period of from two to three hours, during which the animal seemed insensible to any species of excitation. Finally the normal state returned, and the next day the animal did not appear to have been at all affected by the violent attack of the day before. After having remarked that the toxic effects of the essence of tanasia approached very little the epileptic type which is observed with that produced by the essence of wormwood, M. Peyraud assimilates them with the rabic type in the following terms: "All the phenomena of rabies are here

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found—hallucinations, convulsions without loss of consciousness, opisthotonos, spasms of the muscles of the pharynx, of the larynx, and of the thorax, abundant salivation, asphyxic phenomena, sensorial excitability, tendency to bite, characteristic hoarse voice, diminution of the power of motion, momentary paralysis, sanguinolent froth from the trachea and the bronchi, subpleural hæmorrhage, sanguineous infarcts of the liver. We believe, then, that we are absolutely in the truth in giving to the tanacetic effects the name of *rage tanacétique, rage artificielle, simili-rage.*"

A PRECURSOR OF PASTEUR.

It would appear from the following note from the "Intermédiaire des Chercheurs et Curieux," cited from vol. i. of the "Traité des Erreurs et des Préjugés" of J. B. Salgues, Paris, 1810-11, that M. Pasteur has had a precursor in his theory of the cure of rabies by the inoculation of an attenuated virus of the same species: "The carnivorous animals, which are susceptible of contracting rabies, are also the only animals capable of communicating it. The innocent species, which live on fruit, herbs, and grain, might be able to receive but do not transmit it, as if nature wished by this happy exception to recompense them for their pacific virtues. This fact is now known to be constant, so that it would perhaps be possible to find in these animals a virus more mild, and to transmit it to the carnivorous species as they transmit the vaccine virus to the species susceptible of small-pox." Thus it may be seen that the above is enunciated as a simple hypothesis; but the idea is not the less singular.

THE ETIOLOGY OF TETANUS.

The etiology of tetanus divides pathologists into two camps. Those on one side admit that, if this malady frequently succeeds a wound, it may also originate without previous solution of continuity and under the influence of divers causes, the principal being cold; hence two forms—traumatic or surgical tetanus, and spontaneous or idiopathic or medical. For the others, the malady is always traumatic; whence two doctrines—that of *dualists*, and that of *unicists*. Professor Verneuil, who read a paper on this subject at the Academy of Sciences last week, entirely rejects the opinion of the dualists, and classes tetanus with microbian maladies, virulent or infectious. The pathological problem, he stated, then reduces itself to discover how and when the penetration of the virus is effected, and what circumstances favour or hinder it. "If, as the ancient unicists thought, penetration is always effected through a traumatic opening, the pathogeny, as simple as the etiology, would allow of only one process—breaking (*effraction*); but as the infection might take place when the solution of continuity of pathological origin, inflammatory or even traumatic, is covered over with a granular membrane, continued and protective, one may believe that the virus had penetrated without violence by a second mechanism, which would admit of a second form—tetanus by absorption. But as certain subjects appear to have no solution of continuity, recent or ancient, internal or external, but have been seized with tetanus by exposure to cold—by lying out, for instance, on a cold field,—nothing could prevent the idea that they had absorbed by the respiratory mucous membrane, or by the skin, supposed to be intact, the tetanic virus of which the soil is at times certainly impregnated; whence a second variety of penetration by absorption without any traumatic or pathological preparation, as occurs with malaria, and, without doubt, with scarlet fever, whooping-cough, &c." The dualism, therefore, the conception of which is combated by M. Verneuil, may be revived, but under another form, and in changing the terms of the problem, that is to say, one will not be able to tell whether the tetanus is medical, idiopathic, essential, traumatic, spontaneous, rheumatic, &c., which, however, is of no practical importance; but one would search with care where and by what process the virus had penetrated, and, if it be desired that their dichotomic division should be preserved, one may admit a tetanus by *effraction* and a tetanus by absorption. In any case, there will be no spontaneous tetanus, as a poison, always identical, playing the part of constant and necessary cause, will always be found.

Paris, Oct. 18th.

THE Duchess of Cumberland on the 15th inst. left the private asylum in which she had been confined since last March. Her Royal Highness is said to be perfectly cured.

THE SERVICES.

THE following arrangements have been made, subject to such modifications as may be deemed necessary, for the embarkation to England of the executive officers whose term of service in India will terminate during the trooping season of 1887-8.—By first troopship, Oct. 15th: Surgs.-Major W. T. Martin and G. Andrew, and Surg. R. R. Elmes. Second troopship, Oct. 29th: Surg.-Major T. M. O'Brien and Surg. E. J. E. Risk. Third troopship, Nov. 12th: Surg.-Major A. H. Ratigan and Surgs. J. W. Beatty and J. R. Yourdi. Fourth troopship, Nov. 25th: Brig.-Surg. R. P. Ferguson and Surg. G. H. Younge. Fifth troopship, Dec. 31st: Surgs.-Major Barker and J. Martin, and Surg. W. A. Morris. Sixth troopship, Jan. 14th: Surgs.-Major W. H. Clemo and O. F. Molloy, and Surg. G. T. Goggin. Seventh troopship, Jan. 29th: Surg.-Major J. P. H. Boileau and Surgs. W. Babtie and R. F. O'Brien. Eighth troopship, Feb. 18th: Surg.-Major J. Wilson and Surgs. J. McLaughlin and R. Fowler. Ninth troopship, March 17th: Surgs.-Major F. Dick and J. C. Dorman, and Surg. H. J. Peard. Tenth troopship, March 31st: Surg.-Major M. D. O'Connel and Surgs. F. P. Nichols and G. U. Brazier-Creagh.

ARMY MEDICAL SERVICE.—We are requested to state that no examination for commissions in the Medical Staff of the Army will be held in February, 1888. We presume this suspension of admissions into the Service is a result of the reduction of the staff consequent on the withdrawal of troops from Egypt.

Dr. Galbraith has been appointed Principal Medical Officer on the Staff at Suakim.

WAR OFFICE.—Army Medical Staff: Surgeon-Major Francis Patrick Staples to be Brigade Surgeon, vice St. John Killery, deceased (dated Sept. 20th, 1887). The undermentioned Surgeons to be Surgeons-Major (dated Sept. 30th, 1887):—John Findlay, M.B., Patrick Aloysius Hayes, William Mawer James.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon G. Bolster, to the *Excellent;* Surgeon J. Bagnall-Oakley, to the *Lizard;* Surgeon H. B. Beatty, to the *Bramble;* Surgeon A. Kidd, to the *Ready;* Surgeon J. Cashin, to the *Mistletoe;* Surgeon H. J. M'Todd, to the *Impregnable;* Surgeon W. C. Speller, to the *Ganges*, temporary; Surgeon W. R. N. Young, to the *Lily;* and Surgeon Horace K. Browne, to the *Royal Adelaide* (to date 18th inst.).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment): Surgeon C. A. Greaves, M.D., is granted the honorary rank of Surgeon-Major (dated Oct. 15th, 1887).—5th Lanarkshire (Glasgow, 2nd Northern): Acting Surgeon E. Kingscote, M.B., resigns his appointment (dated Oct. 15th, 1887).

Medical News.

ROYAL UNIVERSITY OF IRELAND.—The following have obtained the degree of Master in Surgery:

Robert Bryans, David C. Campbell, Robert J. Duffin, William M. Elliott, John Ellison, Robert J. Ferguson, Walter M. Hamilton, Gerald Hickey, William M. Killen, Hugh A. Logan, William M. Lewis, Richard C. Mc Cullagh, John Mc Elwee, Henry L. Mc Kisack, Samuel Matthews, Robert Nelson, D. J. O'Mahony, William J. O'Meara, Francis L. Sealy, John H. Sharpe, Cecil B. Shaw, John J. Shaw, Joseph Stewart, Henry J. Taylor, James Tomb.

The undernamed have passed the examination for the degree of Bachelor of Medicine:—

UPPER PASS DIVISION.—John Campbell, Robert Duffin, *W. M. Elliott, Gerald Hickey, *John J. Lynch, Richard McCullagh, *Henry MacKisack, *Robert Nelson, W. O'Meara, *Joseph Stewart.
* Eligible for the further examination for honours.

PASSED.—J. F. Annesley, Robert Bryans, James Clifford, H. R. Crofton, Francis B. Gahagan, G. R. Gordon, Walter M. Hamilton, W. M. Killen, J. McElwee, Peter McKenna, Samuel Mathews, Cecil B. Shaw, James Tomb.

The examiners have recommended that the following be adjudged to have passed the third examination in Medicine:—

James Gannon, Thomas Gorman, William Kirk, David McGee, Allan H. Mahood, Martin Molony.

COLLEGE OF PHYSICIANS IN IRELAND.—On St. Luke's Day (October 18th) the following office-bearers were elected for the ensuing year:—President: James Little. Vice-President: A. Foot. Censors: Drs. Foot, Nixon,

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McSwiney, and Smyly. Additional Examiners: Drs. G. F. Duffey, J. B. Quinlan, and V. Macan. Examiners in Midwifery: Drs. Horne and Kirkpatrick. Additional Examiners under the Conjoint Examination Scheme:—Chemistry and Physics: Drs. Ashe and W. G. Smith. Materia Medica and Pharmacy: Drs. G. F. Duffey and J. B. Quinlan. Physiology: Dr. Purser. Medicine: Drs. Finny, Foot, Nixon, and Benson. Midwifery: Dr. W. J. Smyly. Hygiene and Forensic Medicine: Drs. McSwiney and Redmond.—Examiners for the Membership:—Practice of Medicine: Drs. McSwiney and Quinlan. Pathology: Drs. Purser and G. F. Duffey. Clinical Medicine: Drs. Nixon and Foot. Examiners for the Diploma in State Medicine:—Chemistry: Dr. W. G. Smith. Climatology, Meteorology, and Geographical Distributionary Disease: Dr. J. W. Moore. Vital Statistics: Dr. McSwiney. Hygiene: Dr. Nixon. Medical Jurisprudence and Pathological Anatomy in Relation thereto: Dr. G. F. Duffey. Professor of Medical Jurisprudence: Dr. Robert Travers.—Representative on the General Medical Council: Dr. A. Smith. Registrar: Dr. J. W. Moore. Treasurer: Dr. A. Smith.

IT is rumoured that typhoid fever has again made its appearance in the Royal Barracks at Dublin.

THE Town Council of Darwen have decided to erect a cottage hospital for that district.

IT is proposed to erect a hospital in the mining division of Redruth.

THE third anniversary of the inauguration of Hospital Sunday at Barnstaple was celebrated on the 16th inst.

On the 17th inst. the first stone of the Jubilee wing of the Northampton Infirmary was laid by Prince Albert Victor.

THE thirteenth annual meeting of the Sanitary Association of Scotland was held at Falkirk on the 14th inst., when several interesting and valuable communications were read.

THE first of a series of eight lectures under the Combe Trust was delivered on the 17th inst. in the Chemical Theatre of the Owens College by Professor Stirling. The subject of the course is the Physiology of Motion.

On the 19th inst., at an inquest held at the Marylebone Court as to the death of Mr. William Holland Baylis, a retired surgeon, evidence was given to the effect that it had been caused by morphia poisoning, and the jury returned a verdict of death from misadventure.

MEDICAL SUPERINTENDENTS' SOCIETY.—The inaugural meeting of the above Society will be held at the Paddington Infirmary, 285, Harrow-road, W., on Wednesday next, the 26th inst. At 3 P.M., Pathological specimens of Joint Disease, and cases of Rheumatism, Hysteria, Rickets, &c., will be shown, after which a paper will be read entitled "Lessons from Infirmary Work."

SPREAD OF LEPROSY.—According to M. Besnier, a member of the French Academy of Medicine, leprosy, far from disappearing by degrees, is spreading rapidly. Since the extension of the French colonial possessions, soldiers, sailors, traders, and missionaries have fallen victims to it in large numbers. M. Besnier, therefore, exhorts physicians in all countries to study the fell disease, in order to find a means of counteracting its ravages, for it has active foci of infection in every part of the globe. The malady is transmitted by a bacillus shaped like that found in tuberculosis. A discussion on M. Besnier's report will shortly take place in the Academy of Medicine.

COLONIAL AID TO UNIVERSITY COLLEGE HOSPITAL.—In response to the appeal from Mr. Berkeley Hill to old University College Hospital men resident abroad on behalf of the rebuilding fund of that institution, a meeting of former students was convened at the Oxford Hotel, Sydney, N.S.W., on June 14th, Dr. P. Sydney Jones in the chair. A subscription was started, the sum of £141 being promised by those in the room, and, according to advices recently received, the total has now reached over £200. Steps are being taken in the sister colonies to inaugurate similar funds, whilst from the interior of West Africa an answer in a tangible form has come to hand, showing that the *alumni*, though scattered, are not unmindful of the benefits conferred by their *alma mater*.

LADY DUFFERIN'S FUND.—The donations made in response to Lady Dufferin's special appeal in connexion with the Queen's Jubilee for further assistance to the National Association for Supplying Female Medical Aid to the Women of India, amount to £1700 received from England, and 478,000 rupees subscribed in India.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The annual business meeting of the members of this Society was held on the evening of Thursday, the 13th inst., in their rooms, 11, Bridge-street, when the following office-bearers were appointed for the ensuing session, 1887-88:—President Edward McMillan, L.R.C.S.; vice-president, John Glaister, M.D.; treasurer, T. F. Gilmour, L.R.C.P.; secretary, James Erskine, M.A., M.B.; editorial secretary, R. A. D. Robb, M.B.; seal keeper, James Hamilton, M.B.; court medical, James Morton, M.D. (convener); James Dunlop, M.D.; J. Stuart Nairne, L.F.P.S.; David Tindal, M.D.; David N. Knox, M.A., M.B.; extra councillors, Drs. J. Brown, D. Couper, and J. Johnstone.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—Sir James Paget, Bart., President, took the chair at the quarterly court of directors held on Wednesday, October 12th. The death of one widow in receipt of £40 per annum was announced, and one orphan had ceased to be eligible for further grants. The death of one member was reported. Applications were read from sixty-three widows, five orphans, and three orphans on the Copeland Fund, and it was agreed that a sum of £1370 10*s.* should be distributed among them at the next court. The expenses of the quarter were £52 14*s.* Among the donations received since the last meeting of directors was one of £100 from "Alpha." It was decided that the centenary dinner should be held next year on October 29th, the anniversary of the first meeting of the Society.

TYPHOID FEVER AT CLUNY.—The educational establishment at Cluny, in France, where teachers in secondary schools are trained, has had to be closed, owing to a serious outbreak of typhoid fever. Just before the summer vacation one or two cases occurred, and the administration immediately broke up the college and the school attached to it, and sent the students and boys to their homes. The harm, however, seems to have been already done, as more than 150 of these young men and boys have been suffering from typhoid fever, several having died from it. On investigation, it was found that the foundations of the building were laid in a mass of infective material, and that the drinking-water was all contaminated. Dr. Rodet, of the experimental pathology department, has succeeded in cultivating typhoid bacilli from several samples of the drinking-water.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOREHAM, W. TODMAN, M.D., has been appointed Honorary Physician to the Mildmay Home for Consumption, Torquay.

BURD, E. LYCETT, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Second Medical Visitor to the Private Asylums of Salop and Montgomery.

COOMBE, RUSSELL, B.A.Cantab., M.R.C.S., L.R.C.P. Ed., has been appointed House-Surgeon to the Devon and Exeter Hospital, Exeter.

COONEY, JOHN EDWARD, L.R.C.P.Ed., L.F.P.S.Glas., has been appointed Medical Officer for the Second District of the Fulham Union.

FERNIE, EDWARD, M.D. Univ. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the Stone Urban Sanitary District.

FOX, RICHARD J., M.B., C.M.Edin., has been appointed Clinical Assistant to the Birmingham Borough Asylum.

MCGEAGH, JAMES PAUL, M.D., M.Ch.Qu.Univ. Irel., has been appointed Medical Officer for the Rural District of the West Derby Union, vice Fitzpatrick, resigned.

MYERS, ARTHUR T., M.D.Cantab., M.R.C.P., has been appointed Physician to the Belgrave Hospital for Children.

PERN, ALFRED, L.R.C.P.Lond., F.R.C.S.Eng., has been reappointed Medical Officer of Health for the South Stoneham Rural Sanitary District.

SHROFF, D. S. C., L.R.C.P.Ed., L.R.C.S., has been appointed Honorary Surgeon to the Royal Alfred Sailors' Home, Bombay, vice J. M. Barbour, M.B., C.M.Glas., resigned.

WILSON, THOMAS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer of Health for the Wallsend Urban Sanitary District, vice Aitchison, whose appointment has expired.

WINGRAVE, THOMAS, M.R.C.S., has been appointed Surgeon to the City and East London Dispensary.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BLACKBURN AND EAST LANCASHIRE INFIRMARY. — Junior House-Surgeon. Salary to commence at £30 per annum, with board, washing, and lodging.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C. — House-Surgeon.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, Sloane-square, S.W.—House-Surgeon and Secretary. Salary £95 per annum, with furnished apartments and an allowance of £20 for coals and candles for the use of the institution.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Registrar and Chloroformist. Salary £30 per annum, with an additional £20 if the post is held for twelve months.

LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY.—Resident Medical Officer. Salary £300 per annum, midwifery and vaccination fees, coals and gas, with house free of rates.

LIVERPOOL INFIRMARY FOR CHILDREN. — Assistant House-Surgeon. Board and lodging in lieu of salary.

NORTH LONDON CONSUMPTION HOSPITAL.—Physician.

OWENS COLLEGE, Manchester.—Bishop Berkeley Fellowships. Value £100 for one year, and renewable for a second year.

ROTHERHAM HOSPITAL.—Assistant to the House-Surgeon. Rooms, commons, and washing, in lieu of salary.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House-Surgeon. Salary £100 per annum, with board and lodging.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road. — Junior House-Physician. Salary at the rate of £50 per annum, with board and lodging.

ST. THOMAS'S HOSPITAL.—Obstetric Physician.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary at the rate of £50 per annum, with board and lodging.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant Physician.—Assistant House-Surgeon. Board, lodging, and washing, but no salary.

TAUNTON AND SOMERSET HOSPITAL. — House-Surgeon. Commencing salary £100, with board, lodging, and washing in the house.

VESTRY OF ST. MARY, Newington.—Medical Officer of Health. Salary £300 per annum.

WEST KENT GENERAL HOSPITAL, Maidstone.—House-Surgeon. Salary £150 per annum, with furnished apartments, coals, gas, and attendance in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

JACKSON. — On the 11th inst., at Garlenick, Grampound, Cornwall, the wife of Louis Pilkington Jackson, L.R.C.P., of a son.

MORTIMER.—On the 2nd ult., at the Royal Naval Hospital, Hong-Kong, the wife of Deputy Inspector-General E. T. Mortimer, R.N., of a son.

PORTER.—On the 14th inst., at Bow-road, the wife of J. F. Porter, M.D., of a daughter.

PIRRIE.—On the 14th inst., at Redcliffe-gardens, South Kensington, the wife of J. M. Gordon Pirrie, M.D., of a son.

MARRIAGES.

CLARK—WOOD.—On the 13th inst., at St. Martin's Church, Dorking, Arthur W. Clark, L.R.C.P.Lond., M.R.C.S., to Louisa Kate, third daughter of Thos. Wood, of Parsonage House, Dorking.

SMYTH—SUTCLIFFE.—On the 11th inst., at St. David's Church, Nass, Ross V. B. Smyth, M.A., M.D., to Emilie Grace, daughter of J. R. Sutcliffe, Hibernian-bank, Nass.

WHEELER—CHALK.—On the 13th inst., at St. Peter's, Dulwich-common, Albert Wheeler, M.R.C.S., to Mary Laura, only daughter of William Henry Chalk, of Barry-road, East Dulwich.

DEATHS.

EVANS.—On the 17th inst., after a protracted illness, at his residence, Bethune-road, N., Evan Evans, M.D.Lond., Staff-Surgeon, R.N., of Finsbury-pavement, aged 66.

JONES.—On the 1st ult., at Port Fairy, Victoria, Australia, Wm. Jones, M.R.C.S.Eng., youngest son of the late Richard Jones, M.D., of Kidderminster, and formerly Surgeon, 2nd R. N. B. Dragoons (the Scots Greys), in his 78th year.

LEFTWICH.—On the 13th inst., at 12, Grove-road, Highgate-road, N.W., Charles Harcourt Leftwich, M.R.C.S., L.S.A., aged 31.

PYNE.—On the 13th inst., at his residence, Royston, Cambs., Richard Pyne, Esq., M.R.C.S.Eng., J.P., for Cambs., aged 82.

TAYLOR.—On the 16th inst., at Lancaster, Harold Gilbertson Taylor, M.D., Assistant Medical Officer of the Royal Albert Asylum, aged 32.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, October 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Treves: The Diagnosis and Treatment of Chronic Intestinal Obstruction. — Dr. B. W. Richardson: Short Note on Methylal (with a specimen). — Mr. Marmaduke Sheild: A case of Acute Glossitis in a Child, complicated by Trismus.

Tuesday, October 25.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

THE PARKES MUSEUM OF HYGIENE. — 8 P.M. Mr. J. F. J. Sykes: General Powers and Duties of Inspectors of Nuisances; Method of Inspection.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. John D. Malcolm: The Condition and Management of the Intestine after Abdominal Section considered in the light of Physiological Facts.—Mr. W. Arbuthnot Lane: (1) On the Mode of Fixation of the Scapula, suggested by a Study of the Movements of that Bone in Extreme Flexion of the Shoulder-joint, and its Bearing upon Fracture of the Coracoid Process; (2) An Undescribed Method by which the Superjacent Weight of the Body is transmitted in a United or Ununited Fracture of the Neck of the Femur through an Acquired Ilio-femoral Articulation, and the Bearing of the Principle involved upon the Surgery of the Hip-joint.

Wednesday, October 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 3 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

HUNTERIAN SOCIETY.—8 P.M. Dr. Port: On Antipyrin.—Dr. Turner: A case of Purpura.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M.—Specimens will be shown by Mr. Lawson Tait, Dr. Edis, Dr. G. Granville Bantock, and others. Mr. Lawson Tait: Three cases of Intra-peritoneal Hæmorrhage in which the condition was due to Ruptured Tubal Pregnancy successfully dealt with by Ligature of the Broad Ligament.—Dr. Bedford Fenwick: On the Use of Blood-testing in Gynecological Practice Council at 8 P.M.

Thursday, October 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ABERNETHIAN SOCIETY (St. Bartholomew's Hospital).—Mr. Sympson: Hæmatemesis.

Friday, October 28.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. J. F. J. Sykes: Nature of Nuisances, including Nuisances the Abatement of which is Difficult.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Sidney Phillips: A case of Stricture of the Bile-duct.—Mr. Barwell: Case of Acute Suppurative Peritonitis (traumatic), Laparotomy and Washing Peritoneum, Recovery.—Dr. Knaggs: Case of Tubercular Peritonitis treated by Laparotomy and Washing-out.—Dr. Kilner Clarke: Case of Tubercular Peritonitis cured by Washing-out the Abdominal Cavity with a 1 per cent. Aqueous Solution of Carbolic Acid.

Saturday, October 29.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, October 20th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 a.m.
Oct. 14	29·85	W.	41	39	...	50	35	·01	Overcast
,, 15	29·94	N.W.	40	37	87	49	35	·05	Bright
,, 16	30·43	N.	47	44	75	52	38	...	Hazy
,, 17	30·63	N.E.	47	45	72	55	43	...	Cloudy
,, 18	30·62	N.W.	45	43	65	53	39	...	Foggy
,, 19	30·52	N.W.	49	45	...	51	44	...	Foggy
,, 20	30·40	W.	46	45	...	...	40	...	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

BIRDS' INSTINCT REGARDING FRUIT.

THE fruit in Chili and other parts of South America is said to have been this year left entirely untouched by the birds, and to have occasioned the death of both sheep and cattle when given to them in large quantities. These observations are referred to in the *Archivo del Pacífico di Medicina y Cirugia* as tending to show that the instinct of birds with respect to the wholesomeness of fruit is, as Michelet remarks in his work on birds, frequently a worthy guide for human beings to follow. It is possible that the difference in the fruit of different years may have something to do with the etiology of outbreaks of cholera.

J. M.—We have nothing in this country comparable with "Schmidt's Jahrbuch," to which "Braithwaite's Retrospect" is the nearest approach.

Mr. F. C. Wood.—The same qualifications are required as for Poor-law appointments—i.e., a qualification in Medicine and Surgery. Under special circumstances one such qualification is accepted.

Dr. Charteris.—Yes.

LARYNGISMUS STRIDULUS.

To the Editors of THE LANCET.

SIRS,—In the kindly notice of my paper, reprinted from the "Archivio de Patologia Infantile" of Naples, "Sul Laryngismo Stridulo," &c., in yesterday's issue, your reviewer says: "We notice that cod-liver oil is not mentioned, which in our opinion should be the practitioner's sheet anchor." Now, here he has evidently overlooked the remarks on page 17 of the paper: "L'olio di fégato di merluzzo a dosi non troppo alte può essere dato; bisogna esaminare le feci, giacchè se l'olio appare gallegiante sopra la superficie, la dose dourebbe essere ridotta." Had I, indeed, omitted to mention so valuable an agent in the treatment of these cases I should have been unworthy of any favourable notice; but, in fact, I not only acknowledged its value, but agree almost entirely with your reviewer's estimate, and I also called attention to a very important point in the precaution necessary during its exhibition of watching the stools; for a long experience has convinced me that, in the majority of children's cases in which this oil is given, a large proportion passes unchanged through the bowels, and is not merely useless, but positively injurious by its relaxing effect. The true plan is to reduce the dose until the oil is no longer visible on the motions.

I trust that, when your reviewer's attention has been called to this, he will withdraw the stricture.

I am, Sirs, yours very truly,

Manchester, Oct. 16th, 1887. W. H. BARLOW, M.D.

WILSON FOX MEMORIAL PORTRAIT FUND.

Third List of Subscriptions.

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T. BARLOW, M.D., 10, Wimpole-street,
WILLIAM GOWERS, M.D., 50, Queen Anne-street, } Hon. Secs.

SWALLOWING A COIN.

To the Editors of THE LANCET.

SIRS,—On reading the note on the above subject by "H. F. S." in your last issue I thought the following might be of interest.

A female child, aged three years, on Dec. 15th, 1886, swallowed two farthings. The next day the patient could only swallow small quantities of food at once, and that with pain, fluids causing more difficulty than solids. The mother was of opinion that one of the coins had stuck in the child's throat; but nothing could be detected, any laryngoscopic inspection being impossible, owing to the great fright of the little patient. Air entered freely into both lungs, but with each inspiration was heard a wheezy sound, more marked when asleep, and still more so when excited. These symptoms persisted, the child could take but little food, became pale and thin, and developed a cough. There were still no physical signs in the lungs, and nothing could at any time be felt externally. On Jan. 24th, 1886, the farthing passed per anum, and all symptoms ceased. The other farthing caused no inconvenience, but was not passed per anum till nearly five months after being swallowed—viz., on May 7th, 1886.—I am, Sirs, yours truly,

J. LANGTON HEWER, M.D., F.R.C.S. Eng.

Brownswood-park, N., Oct. 15th, 1887.

To the Editors of THE LANCET.

SIRS,—I had a similar case to that recorded by "H. F. S." in your last issue, which may interest him and other readers.

I was called on July 2nd of this year to a little girl, aged four years, who had swallowed a new bronze halfpenny. Purgatives were forbidden, and a dry diet prescribed. The bowels acted regularly once a day until July 11th, when the coin was evacuated, locked up in a mass of hard faeces. Thus it took only two days longer to pass than in the case reported by your correspondent. The coin was coated quite black with cupric sulphide. As it was a nearly new bronze one, I obtained another of the same date, and found that the one which had been swallowed weighed a grain and a half less than the other. Of course, the loss of weight goes for very little, as the one may have been slightly more worn than the other; but, as I have observed, they were both new. The child suffered no inconvenience.

I am, Sirs, yours truly,

Oct. 17th, 1887. L.R.C.P.

WELL-TO-DO MEMBERS OF FRIENDLY SOCIETIES AND MEDICAL ATTENDANCE.

Dr. Aldersea.—We are not sorry that this question has been raised in a leading lodge, where the members and the medical officer understand and respect each other, as in this case; and we shall look with interest to the result of their meeting, and with some confidence that it will be good and worthy of the interests concerned.

Rev. Walter Wilson.—We hope shortly to give some information about the various services and posts which are open to medical men. Our correspondent will find a great deal of valuable information in Dr. Dyer's little work, "The Young Doctor's Future" (Smith, Elder, and Co.); also in the introductory pages of the Medical Directory (Churchill).

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—A slight inaccuracy occurs in your report of my case in your last issue, page 759, though it is hardly perhaps worth noticing. The patient was not seen on July 11th by Mr. Fawsitt as reported, but by myself. I was on a visit to Oldham at the time, and naturally took the opportunity of seeing the boy again.

I am, Sirs, yours faithfully,

Southport, Oct. 18th, 1887. JOHN J. WEAVER (late House-Surgeon).

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A BELGIAN MEDICAL AID SOCIETY.

A CORRESPONDENT of a Belgian medical journal complains that a society which calls itself "La Santé" is attempting to obtain medical services for its members for a very inadequate sum. This society appears to correspond to several benefit and insurance societies possessing a medical aid branch which exist and flourish in this country, and against which, as long as they confine their operations to the poor, there is nothing to be said. The tariff of "La Santé" is as follows:—Medical attendance, 3 fr.; confinements, 5 fr.; medicines (from a pharmacist), 4 fr. There would appear to be no restrictions as to the class of persons who may join "La Santé." Notwithstanding the poor rate of remuneration, the prospectus, which seems to have been largely advertised, claims that it has on its staff the *best* doctors, dentists, and pharmacists!

Mr. A. V. Dyer.—Quinine is well known as a uterine stimulant.

FIRES IN THEATRES.

To the Editors of THE LANCET.

SIRS,—"Practice makes perfect"; and the converse is true—nothing can be done well without practice. We initiate our soldiers and sailors into the art of war by sham fights, and why should we not learn to deal with conflagrations in theatres by rehearsing sham fires? If that were done to-night at almost any theatre in the kingdom, I doubt not that we should find that the gas, the escape of which from melting pipes is the real source of danger and sole cause of rapid destruction, could not be turned off at the main; that candles, which ought to light the corridors, so as to obviate darkness and consequent panic when the gas was turned off, were conspicuous by their absence; that the special doors of exit in case of fire were rusted up and could not be opened, or that the man in charge had gone to the seaside with the key in his pocket; that the iron screw intended to shut off the stage from the auditorium would not work; that the fire hose on the stage was useless, and the extincteurs all dried up. It has been so, and will be so until care is taken from day to day to see that everything is in order, so that it may be used on the instant should danger arise. Let the proprietors of theatres announce the rehearsal of sham fires at the close of a performance, invite spectators, or charge, if they please, for admission. Let them show that whatever happened they were prepared to fight the terrible demon the moment he appeared, and that, win or lose in the encounter, there would always be time for the audience to clear out without those ugly rushes which have caused so many deaths. Let the public feel convinced that those who are responsible for such matters had everything in readiness, and were prepared to meet any emergency; that the right men were in the right place, and ready when wanted; that the blazing stage can be instantly shut off from the body of the theatre by an iron screen; above all, that the gas could be turned off in a moment without involving absolute darkness, and we can go to the theatre in comfort, well assured that no harm can come to us, except from our own folly if we join in a senseless stampede for the exit—a stampede which would not occur if the public felt and were thus taught they could sit still or file out in order without running the risk of suffocation or roasting alive. I am, Sirs, your obedient servant,

Oct. 17th, 1887. C. B. T.

P.S.—The volume of gas in a theatre is enormous. I see a recent writer to the *Spectator* states that he has seen a small gas-pipe spring 10 ft., a column of flame which ignited an inch plank in twenty seconds. It was the flames mixed with volumes of escaping and ignited coal-gas which reached the gallery in the Exeter Theatre within five minutes. All theatres should be directly connected with the fire brigades, so that no time may be lost in summoning help; and a couple of baths filled with water placed at the sides, so that if an actress's dress caught fire she could jump in at once. The fire rehearsals should take place once a week, and insurance offices refuse to have anything to do with any theatre in which this was not done.

"CORONERS' INQUESTS."

To the Editors of THE LANCET.

SIRS,—Mr. Gray's experience of coroners' inquests is surpassed by my own. In my last three cases no medical evidence whatever was given, and no post-mortem examination held. The coroner and his twelve jurymen decided in each case that deceased had died from "natural causes." I fancy most medical men would characterise such a decision as rash—if they wished to put it mildly. The first case was that of a young man who, after working in his garden and subsequently playing cards at his club, complained for the first time of illness (headache), started for home, and fell down and died almost immediately; no medical man saw him before death. He was a strong, healthy man twenty-one years of age, and was not suspected of disease. In the second case a middle-aged man left the harvest field, saying he did not feel well, went home, locked himself in his bedroom, and was found dead later. The third case was that of an old man who complained of cramping pains in the body, left his work, was ill all night, and died next morning without medical attendance. The only thing that exercises my curiosity is why coroners require a jury at all, and why they go through the solemn farce and mockery of an inquest when they exclude the only evidence that can decide the question.

I am, Sirs, yours obediently,

Oct. 6th, 1887. COUNTRY DOCTOR.

HELP FOR UNSUCCESSFUL MEDICAL MEN.

An Old Correspondent wishes us to advocate a scheme or institution for the relief of assistants or others who have not been able to save or lay by anything. He observes that the wealth of Sir Erasmus Wilson and Mr. Quain was not left for this purpose. We must remind him that there is an excellent institution in London for the relief of orphans and widows of medical men, and that it is, strangely, unsupported by many men to whose families such a provision would be an unspeakable comfort. Self-help and providence are indispensable in our profession, as in all others.

L.R.C.P. Lond.—If our correspondent is thoroughly acquainted with either German or Latin, he may try almost any German university. If not, he may write to the Dean of the Medical Faculty of the University of Erlangen, where, we believe, an interpreter may be permitted. The University of Liège might perhaps admit an English medical man. Its requirements are much the same as those of Brussels. We cannot say whether an interpreter is allowed. The Dutch university of Arnheim permits its examination for M.D. to be conducted in English. It should be remarked that there is no reason to expect that the examination in any of these cases will be easier than in Brussels.

Interrrogans.—Jeffrey Bell's book in Cassell's series.

"CATARACT OPERATIONS."

To the Editors of THE LANCET.

SIRS,—In your issue of last week a correspondent, "Sapo Mollis," asks for the "usual percentage of success in cataract operations." To answer this question it is necessary to know what is meant by "success"; for it might be applied to all those cases in which the eye is not lost from panophthalmitis following on the operation, or to those cases in which vision is improved in any degree, however small, on what it was previously; or the word "success" may be retained for a still higher standard, and only used for cases in which the patient is enabled to read and write. Dr. C. Schweigger, writing on this point in the "Archives of Ophthalmology," vol. xvi., No. 3, in a paper entitled "The Operations for Primary and Secondary Cataracts," which has been translated by Dr. Cornelius Williams, says: "V. Graefe was accustomed to reckon as a perfect result a case in which V. = $\frac{1}{10}$. This I do not think quite justifiable, since V. $\frac{1}{10}$ is not sufficient for reading and writing;" and he goes on to say that he takes as his standard of success.

"Sapo Mollis" next asks for "the percentage of success from the hands of all operators in the Moorfields Eye Hospital for the last five years." I have only had time to collect the figures for the last four years; they are as follows: Of unselected cases of extraction of senile cataract, in nearly all of which a modified Graefe's operation was performed, there were: In 1883, 225 cases, of which 14 suppurated; in 1884, 241 cases, of which 8 suppurated; in 1885, 264 cases, of which 3 suppurated; in 1886, 285 cases, of which 7 suppurated,—making a total of 1015 cases and 32 suppurations, or 3·15 per cent. If, however, only the last three years be taken, the percentage is much lower; from 1884 to 1886 inclusive, there were 790 cases, of which 18 suppurated, or 2·28 per cent.

To obtain the percentage of cases that obtain useful vision is practically impossible, as so many eyes are lost from different causes after patients leave the hospital. Thus a case that has lost vitreous and been discharged with fair vision, may a few weeks later get a detachment of the retina, or floating opacities in the vitreous, which renders it practically a lost eye; or, again, a case followed by an attack of iritis which has quieted down may have it again lighted up on leaving the hospital, and end in a closed pupil. I certainly think that a percentage of seventy-four that can read and write is a fair average, and not much below that obtained at Moorfields.—I am, Sirs, yours faithfully,

R. TREACHER COLLINS,
Senior House Surgeon, Royal London Ophthalmic
October, 1887. Hospital, Moorfields.

SYPHILIS IN BOSNIA AND THE HERZEGOVINA.

DR. GLÜCK mentions, in a report on syphilis in Bosnia and the Herzegovina, published in the *Przeglad Lekarski*, that hereditary syphilis is very common among the rural population of these provinces, and that it is treated in a very heroic and improper manner. Two chief forms of treatment are commonly practised—the "mild," which consists of making the persons affected smoke cinnabar (sulphide of mercury), and the "strong," which implies the administration by the mouth of mercurial pills. By the way, smoking cinnabar is a well-known remedy amongst Indian hakims for syphilitic ulceration.

New York.—In reply to a query as to practice in the State of New York, we would say that a diploma must be obtained from some medical college in that State. Our correspondent may with advantage refer to Wooton and Winslow's Guide to the Medical Profession (Upcott Gill), or he may write to the Dean of the College of Physicians and Surgeons, New York, who will doubtless inform him of the terms on which an English medical man can be admitted to examination. Most of the other States accept British qualifications.

Mr. F. Treves.—Yes.

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ABUSE OF HOSPITALS BY THE WELL-OFF.

A CORRESPONDENT of the *Bristol Times* asserts, on the authority "of one of the surgeons," that actually one of the Judges lately underwent treatment at one of the great London hospitals, and was cured there, but made no present to the institution. We are slightly incredulous on this subject, though it cannot be denied that in every rank of society there is a strange willingness to get medicine for nothing, or on shabby terms.

M.B. has not enclosed his card.

A CAUTION TO SECRETARIES AND CLERKS OF HOSPITALS AND OTHER CHARITIES.

To the Editors of THE LANCET.

SIRS,—Will you allow me to warn my colleagues against a man who is now calling at hospitals &c., stating that he has been sent by the editor of a well-known "daily" for a couple of reports which the editor wishes to send to two benevolent persons, whom he names, and who are desirous of making donations. After this plausible opening he asks for further papers for similar purposes, which he assures his interlocutor will be most judiciously used by the editor, and having thus increased the interest already aroused, he asks the small sum necessary for postage. The man is fair, between thirty and forty years of age, and, when I saw him, with a beard and moustache.

I am, Sirs, yours faithfully,

Oct. 18th, 1887. A HOSPITAL SECRETARY.

*** We have received a letter to the same effect from the Lady Superintendent of the Hospital for Women and Children, Lupus-street, S.W.—ED. L.

SWALLOWING SPECTACLE GLASSES.

To the Editors of THE LANCET.

SIRS,—With reference to the note in your last week's issue by "H. F. S.," headed "Swallowing a Coin," the following may appear interesting.

A male lunatic swallowed both glasses of an ordinary pair of spectacles at 2 P.M. on Friday, the 14th inst. They were passed together about 8 A.M. on Sunday, the 16th—i.e., forty-two hours afterwards. No inconvenience resulted. Treatment consisted in the liberal administration of puddings made of farinaceous food. I am, Sirs, yours faithfully,

Oct. 18th, 1887. J. B.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Marshall, London; Dr. W. H. Barlow, Manchester; Sir Wm. Roberts; Sir James Paget, London; Dr. A. E. Sansom, London; Dr. J. H. Jones, Wilkes Barré; Dr. T. D. Savill, London; Dr. J. L. Hewer; Dr. Danford Thomas, London; Dr. Alfred Carpenter, Croydon; Mr. Lawson Tait, Birmingham; Mr. Allen, Grimsby; Mr. Bland Sutton; Dr. Gordon Holmes, London; Mr. Laslett, Farnworth; Mr. J. R. Buchanan, Glasgow; Mrs. A. B. Rees, London; Mr. T. F. Gosling, Worcester; Mr. J. J. Weaver, Newcastle; Dr. Bagshawe, St. Leonards; Dr. Leith Napier, London; Dr. F. P. Atkinson, London; Messrs. Fitzroy and Co., Liverpool; Dr. Mears, Newcastle-on-Tyne; Mr. Ledgard, Kirkby Lonsdale; Mr. Papillon, Grantham; Mr. F. C. Wood; Messrs. Sutton and Son, Reading; Mr. C. J. Wright, Leeds; Messrs. Burroughs and Wellcome, London; Mr. E. T. Collins, London; Messrs. Mottershead and Co., Manchester; Mr. Green, Ballycarney; Messrs. Street and Co., London; Dr. Dubouć, Paris; Dr. Turner, London; Mr. Morton Smale, London; Dr. Sainsbury, London; Messrs Rocke, Tompsitt, and Co.; Mr. Harrison, Willowmere; Dr. Tomkins, Leicester; Mr. Munro Scott, London; Mr. A. Pierson, Baloochistan; Messrs. Wright and Co., Bristol; Messrs. Southall Brothers, Leeds; Messrs. Burgoyne and Co., London; Herr A. Saxlehner, Buda Pesth; Dr. Z. H. Evans, Bay City; Dr. E. Batt, London; Dr. T. Oliver; Messrs. Johnson and Co., Lancaster; Dr. J. Finlayson, Glasgow; Messrs. Reynell and Son, London; Dr. Percival Hunt, Gravesend; Messrs. Smith and Son, Manchester; Mr. C. W. Cathcart, Edinburgh; Messrs. Beal and Sons, Brighton; Mr. C. E. Jennings, London; Messrs. Ensor and Son, Dublin; Dr. J. Phillips, London; Dr. Young; Dr. Grange, Old Cumnock; Mr. Blackett, London; Mr. H. D. Buss; Mr. Treat, New York; Mr. H. Godrich, London; Mr. W. Brown, Leeds; Mr. J. H. Walters, Reading; Dr. V. D. Harris, London; Mr. C. B. Abbett, Braintree; Messrs. Shaw, Grantham; Dr. Milburn, Hull; Mr. Crespi, Wimborne; Dr. W. Pasteur, London; Dr. Erskine, Glasgow; Mr. A. Benthall, Southsea; Dr. McVail, Kilmarnock; Surgeon-Major Colbon, Aden; Dr. Wise, London; Miss Moorhouse, London; Mr. St. Dalmas, Leicester; Dr. Dukes, Rugby; Mr. Mayor, Weybridge; Mr. Browne, London; Dr. Steele, Florence; Mr. Turner, Bristol; Messrs. Letts and Co., London; Major Terry, Winchester; Messrs. Rannreuther and Co., Birmingham; Miss Taylor, Hartlebury; Messrs. Livingstone and Co., Edinburgh; Mr. Somers, Birmingham; Messrs. Rothersall and Co., Manchester; Mr. Hoops, Ravensbourne; Messrs. Reynolds and Co., Leeds; Mr. Trotman, Clifton; Mr. Watt, London; Messrs. Pocock and Co., London; Messrs. Ratcliff, Liverpool; Messrs. Maythorn and Son, Biggleswade; Dr. Walford, Ramsgate; Mr. Hawkins, London; Miss Carnie, Chelsea; Mrs. Evans, Stockport; Mr. Tell, Kentish-town; Dr. Waters, Liverpool; Mr. Carnie, Aberdeen; Mr. Patterson, Leeds; Dr. Stanley, Edinburgh; Mr. Freeman, London; Mr. A. J. C. Mitchell, Bonita, U.S.A.; Mr. Barren, Manchester; Mr. Hornbrook, London; Mr. Bennett, Rugby; Surgeon-General Stewart, Lymington; Mr. J. S. Walker, Hanley; Artist, Barron-green; Interrogans; J. B.; Surgeon-Major, Medical Staff; L.R.C.P. Lond.; A Naval Staff Surgeon; A Hospital Secretary; The Director-General of the Army Medical Department; L.R.C.P.; M.B.; R. E.; Music; Superintendent, Clerkenwell; Matron, Royal Infirmary, Bristol; M.D.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Mackay, Esk; Mr. Balding, Royston; Mr. Hardy, Maidstone; Messrs. A. and J. Shaw, Grantham; Mr. Giddle, Scarborough; Messrs. Johnston and Co., Manchester; Mrs. Larmonth, Kentish-town; Mr. Turner, High Wycombe; Mr. Coo, Leeds; Mr. Moore, Silloth; Mr. Davies, New Quay; Dr. Chutison, Blackburn; Mr. Abbot, Sheffield; Mr. Nicholls, Hartest; Mrs. Nicolay, Newport; Mr. Byrt, Bristol; Dr. Maturin, Winchfield; Mr. Bigg, London; Miss Taylor, Clifton; Miss Pinsoff, Folkestone; Mr. Williams, Sunderland; Mr. Marth, Skelmersdale; Mr. Scott, Manchester; Mr. Wardley, Buxton; Mr. Adam Hampstead; Messrs. Bramley, Lisbon; Mr. Halstead, Arundel; M. Smith, Glasgow; Dr. Higginson, Bengal; Mr. Macadam; Mrs. Cunningham, Surbiton; Mr. Coleman, Cardiff; Mr. Grainger; Mr. Pitcher, Stoke Newington; Mr. Booth, Greenwich; Dr. Osborne, Bournemouth; Mr. Davis, Worcester; Mr. Wortnald, Manchester; Mr. Lister, Birmingham; Dr. Ritchie, Oxley; Mr. Brayne, Balham; Mr. Pettinger, Manchester; Mr. Robertson, Grays; Dr. Liveing, London; Mr. Drake, London; Dr. Harding, Whittlesea; Mr. Crassweller; Messrs. Milner, Lancaster; Mrs. Barker, London; Chirurgus; J. N., South Kensington; M.D., Leamington; X. Y.; X. N., London; A. B., Leicester; Alpha, Liverpool; Cantab., Burton-on-Trent; Medicus, Cardiff; Dr. Y. S., Manchester; K. K.; H.; Lux; M.D., Liverpool; P. S.; Surgeon, Buckfastleigh; Secretary, Westminster; Beta; A. R. B., Surbiton; M.D., Birmingham; W. T. R.; Fides, Creston-park; X. Y. Z., Shepherd's-bush; Medicus, Reading; M.D., Crewe; C. H., Cranleigh; H. R. A., London; M. M., Bradford; P. R.; A. R.; B. S. Lichfield; O. M., Peckham; S. K., Grays; A. H., Leeds.

Hastings and St. Leonards News, Newcastle Chronicle, Malta Standard, &c., have been received.

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ABSTRACT OF

A Lecture

ON THE

ANTISEPTIC TREATMENT OF WOUNDS,

Delivered to the Students of the Bristol Medical School on July 12th, 1887,

BY W. J. PENNY, F.R.C.S.,

ASSISTANT SURGEON TO THE BRISTOL GENERAL HOSPITAL.

GENTLEMEN,—Owing to Mr. Keall's temporary indisposition and inability to do so, he has invited me to bring before you the subject of "The Aseptic Treatment of Wounds and Practical Antiseptics." By the former is meant that process by which active ferments are excluded from wounds; and by the latter, not only this method, but also all processes which cause the destruction or retard the development of these active ferments when they have gained access to wounds.

You are all probably aware that the putrefaction of discharges and the various diseases that infect wounds are primarily due to micro-organisms admitted from the atmosphere or other external agency. For all practical purposes we may consider that these micro-organisms reach the wound directly from the outside, though in some rare instances they may reach it through the circulation or some of the various channels communicating with the surface of the body. For putrefaction, besides the micro-organism, which is the essential part, three main factors are necessary—firstly, a material to putrefy; secondly, a certain amount of heat; thirdly, a certain amount of moisture. Each of these factors has a great practical bearing on surgery; in the total absence of either, putrefaction is impossible; but there are certain infectious wound diseases, notably erysipelas and others due to pathogenic organisms—i.e., those which have the power of multiplying in the body—that will develop in spite of the almost entire absence of some of these factors, but, in the present state of our knowledge, we may say never in the absence of their specific micro-organisms. We will now discuss these factors *seriatim*.

The material to putrefy. Any dead organic matter, or that in a low state of vitality, is a fertile hotbed for the development of putrefaction. The lower the state of vitality of a tissue, the more prone is it to putrefy; but it will not putrefy unless the other essentials of the putrefactive process are present. A healthy living tissue—for instance, the muscle or mucous membrane of a strong, healthy man—has a great power of resisting putrefaction in spite of the presence of the essential factors; but lower the state of vitality of the structure by irritant, by injury, or by disease, and then expose it to the same influences, and you are extremely likely to get the process developed. Blood, serum, urine, and other materials formed in the body have a great tendency, when removed from it, to putrefy, and have also this tendency in a lesser degree when still retained in the body, but outside their natural receptacles, if micro-organisms gain access to them. It is, however, an interesting fact that healthy living tissues have not only the power of resisting putrefaction in themselves, but their influence extends in a slight degree to a layer of either of these fluids in contact with them or between their cut surfaces. This is well seen, as Sir Joseph Lister has pointed out, in wounds of the face. In this region, the parts as a rule are freely supplied with blood—consequently in a high state of vitality,—and thus strongly resist any tendency to putrefaction of the fluids between the lips of the wound. This preventive influence does not extend through a very thick layer of lymph or blood; hence the importance of the practical rule: Ensure accurate apposition of the cut surfaces and free escape of discharges.

As regards the second factor—a certain amount of heat. It is found that the temperature of the body—98° to 99°F.—is very favourable to the development of putrefaction. The factor is always present, and cannot be got rid of, except perhaps to a slight extent superficially, by the application of cold to the surface of a wound; this, however, is rarely advisable, at any rate to lower the temperature of the part below that suitable for the development of micro-organisms.

The next factor—a certain amount of moisture—is always present, and cannot entirely be removed. We can, however, do this to a certain degree in wounds, by providing very free drainage, that all discharges may be removed from the damaged or unhealthy tissues. No wound can be inflicted without damaging to a certain extent the tissues involved. The sharper the instrument, and the cleaner the cut, the less damage is there inflicted; but the more contused and torn the wound, the greater is the damage, consequently the lower its vitality, and hence the greater necessity for free drainage. There is also another method of obtaining dryness of wounds, which has been specially recommended by the late Mr. Sampson Gamgee of Birmingham, and that is by the use of dressings with a special absorbent power: prepared wools with all greasy matters removed from them. The open method of treatment of wounds adopted some years ago, and which at that time proved more satisfactory than the dressings then in vogue, to a certain extent fulfilled this condition, by permitting evaporation of the fluid parts of the discharges; the residue, being concentrated, was less fitted for the development of micro-organisms, and the dry crusts or scabs formed a mechanical as well as a chemical obstacle to their entrance. Pasteur found years ago that by concentrating his fluids the development of micro-organisms was retarded. This fact is taken advantage of by many manufacturers, as, for instance, in the preparation of condensed milk. This open method of treatment, I need hardly tell you, was most uncertain in its results. It resolved itself into a race between the evaporation and scabbing process on the one hand, and the development of germs on the other. Among auxillary measures for obtaining dryness of wounds I may mention elevation of the part; this, by causing a slight contraction of the vessels, lessens the blood pressure and effusion in the injured region, and also promotes venous and lymph return. Uniform elastic compression acts in much the same way. Absolute rest prevents disturbance of the blood clots in the vessels, and also lessens the amount of serous effusion.

Now we come to the last and most important—in fact, the essential—factor in causing wound infection and putrefaction in wounds, with their consequences, pyæmia, septicæmia, and such-like diseases: the admission and development of micro-organisms. Sir Joseph Lister's name will be for ever associated with the revolution in surgery occasioned by the recognition of this great principle. The exclusion or destruction of these organisms forms the guiding principle of antiseptic surgery. It matters not what agents are used, consistently with the welfare of the patient, provided the principle is carried out. By measures founded on it hospitals have been changed from hotbeds of infectious diseases to a healthy state where an infectious disease is the exception. Almost all wounds can be treated with absolute freedom from infective wound diseases by carrying out treatment based on this principle, even if all the other essentials of putrefaction are present; but I need hardly say that if you ensure the absence of the other factors you make assurance doubly sure. It matters not how imperfect the drainage, how low the state of vitality of the part, no matter how damaged, even to absolute destruction, if you can prevent the entrance of micro-organisms, or, if they have entered, remove or destroy them in the wound, you can certainly avoid putrefactive changes in it. Attention to other details may also be necessary to ensure rapid healing; but the absence of this one alone will certainly prevent putrefactive changes and septic diseases, and will also allow the dead or damaged tissue to be revivified, the quantity capable of being so depending on the vital powers of the patient. I have over and over again seen masses of tissue destroyed by injury, to all intents dead, gangrenous patches, gradually replaced by new tissue, not broken down and discharged as sloughs, but replaced by new tissue in the same way as a blood clot or piece of catgut in an aseptic wound. As this is a fact which can often be verified in the wards of our hospitals, we are justified, if the parts can be made aseptic, in giving the patient every chance of recovery before resorting to removal of the injured part, knowing that under these circumstances delay is not dangerous. One case I remember particularly, that of a young man whose upper arm was crushed by machinery. The part was severely mangled, the bone splintered, the main artery and

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veins lacerated, the central parts of the biceps muscle torn away, and the whole of the skin of the upper two-thirds of the upper arm destroyed or stripped away from the muscles, except a piece two inches wide at the back. There was absolute loss of pulse in the radial and ulnar arteries. This patient made a most satisfactory recovery with a useful arm. The brachialis anticus muscle hypertrophied to supply the function of the lost biceps. Large portions of skin and other tissues lost their vitality and became gangrenous; they did not, however, break down or come away as sloughs, but were gradually replaced by new tissue. No radial or ulnar pulse was felt at the wrist for more than nine months after the accident. About six months after the accident, during the winter of 1884-85, several fingers of the hand on the injured side became frost-bitten, but ultimately recovered. This is not a solitary case. I have seen and treated many very like it.

Now let us consider how these micro-organisms gain access to wounds. Formerly the atmosphere was considered one of the most active means of wound contamination. In all air, however pure, except perhaps on the tops of some very high mountains, micro-organisms exist, and have the power of causing putrefaction of various fluids, vegetable infusions, &c. In hospital wards, where putrid wounds and infective wound diseases are sometimes congregated, besides the ordinary organisms found in the air, others peculiar to these diseases are present, and have the power of developing in wounds if suitable conditions are present in them. Here are two bottles of urine taken from the same individual fifteen months ago; the same precautions were observed in both, but one of them was afterwards exposed to the air, and you see by its muddy appearance and putrid odour that changes have occurred in it. The other has been kept from the air; here it is, you see, quite unchanged, and as clear as on the day on which it was passed. It was from the results of an elaborate series of experiments like this that Sir Joseph Lister was led to invent the spray, the object of which was to exclude germs by keeping the wound in an antiseptic cloud. The results which followed its introduction were most satisfactory. By a later series of experiments, Sir Joseph found that blood clot, pus, and other fluids were not quite as prone to putrefy from exposure to the ordinary air as vegetable infusions, and also that the inhibitive action of living tissues was a great power in preventing putrefaction. Having thus proved by experiment that the spray was unnecessary, he has, I believe, entirely discarded it. For my own part, I have had such satisfactory results with the spray that I feel loth to dispense with it, especially if there should happen to be an infectious case in the ward, which I am pleased to say is a very exceptional occurrence. I also use it most carefully in operations on large cavities, especially on the pleura in cases of empyema. In these cases large quantities of air are sucked in during inspiration, and it appears to me not at all unlikely that micro-organisms capable of developing might be admitted and lodge in a recess out of reach of lotions. The resisting power in these cases is slight, and the less the resisting power the greater should be the precautions taken to guard against any possible source of contamination Various materials have been used in the spray. Carbolic acid has been the most efficient. Thymol was used, but was a less powerful germicide. Mr. Mayo Robson of Leeds has used a dry spray of eucalyptus. He states that it acts most satisfactorily, is efficient, does not chill the patient, or obscure the field of vision of the operator.

A most important means of preventing putrefaction in wounds, especially if the spray is not used, is free ventilation and avoidance of contamination of the atmosphere by the most scrupulous cleanliness of everything in the room. All excreta should be removed as soon as voided. The drains should be in thorough repair; they should be properly trapped, and ventilated from the outside. To show how powerful a means of preventing wound infection we have at our disposal, I may state that five years ago the drainage and ventilation of the Bristol General Hospital were found to be in a most unsatisfactory condition. Drain smells were prevalent; and at one time, out of 130 patients in the house over seventy had diarrhœa. In spite of this, no cases of pyæmia or septicæmia developed, and only one case of erysipelas, which was traced to infection from an unpurified probe. The dangers of wound infection in this atmosphere, which were very great, were guarded against effectually by strict antiseptic precautions. The intestinal infections, however, necessitated the closure of the hospital, and a complete overhauling of the drains and ventilation, which was carried out in a most liberal spirit by our committee. The results obtained during this insanitary period I watched with interest, and to my mind it afforded a convincing proof of the efficacy of the aseptic system of treatment.

The next method by which germs gain access to wounds is from the surrounding skin, instruments, sponges, and the operator's hands. All unpurified skin teems with micro-organisms, especially in a part where two surfaces of skin approximate each other, or where sweat glands are largely developed, as in the groin, perineum, or axilla. To purify the skin thoroughly, it should be washed with warm water and soap, and after that well bathed with a 5 per cent. solution of carbolic acid. This solution has a great power of penetrating the skin or any greasy materials, and therefore is specially suitable for cleansing purposes. It requires a certain time to act properly. In the regions mentioned it is a good plan to purify the parts an hour or two before operation, and then fasten on a piece of lint soaked in the carbolic solution. The operator's hands and the instruments should be purified, either by prolonged soaking in carbolic, or by first washing with soap and water, and then douched with carbolic. No instrument should be used that has been merely dipped in the carbolic solution. Keummell of Hamburg has shown that a perfectly new instrument, highly polished, is not purified by immersion for two minutes in a 5 per cent. carbolic solution; ten minutes, however, suffice to purify it. Any instruments were purified by first washing with potash soap and warm water, and then immersed for one minute in a 5 per cent. solution of carbolic, or a 1 in 1000 solution of corrosive sublimate. The same remarks apply to the operator's hands. Sponges should be purified after use by soaking and repeated washings in soda-and-water, and after that well rinsed with hot water, and kept in a 5 per cent. solution of carbolic until again required. New sponges, after removal of the sand, should be soaked and washed alternately several times in a dilute solution of hydrochloric acid and soda solution, then well washed in warm water and kept in the carbolic solution. During the operation, or for washing instruments and skin after the initial purification, a 1 in 40 solution of carbolic is sufficiently powerful; stronger solutions cause needless irritation. A lotion of corrosive sublimate, 1 in 1000 or 1 in 2000, is very effectual, and has less tendency to irritate the skin than carbolic acid; besides this, it is cheaper, less volatile, and more portable. For mild antiseptic lotions, saturated solutions of boracic acid and salicylic acid are used. To purify foul sores or sinuses use a solution of chloride of zinc (40 gr., water 1 oz.); or an emulsion of boracic acid, iodoform, and eucalyptus oil. Boro-glyceride is a very useful and mild antiseptic.

Dressings.—The chief points required in a dressing are, that it should be well charged with an efficient antiseptic, which is retained in it at the temperature of the body for a sufficient time; it should be very absorbent, elastic, comfortable to the patient, unirritating to the skin, and cheap. Carbolic gauze is a fairly good dressing; but as carbolic acid is very volatile, it requires to be mixed with resinous material to enable it to be retained sufficiently long in the dressing. This interferes with the absorbent powers of the gauze, causes it to adhere to the patient's skin, and in some cases to irritate it unduly. Eucalyptus gauze has the advantage of being less irritating to the skin than the carbolic; but Watson Cheyne has found that it is less powerful as an antiseptic agent. The gauze deteriorates rapidly by keeping, on account of the excessive volatility of the eucalyptus. Salicylic wool and jute are more comfortable and more absorbent than the gauze, but the powder causes intense irritation of the nose. Sal alembroth wool is very elastic and comfortable, and contains a large quantity of a powerful antiseptic. The sublimated wood-wool wadding is extremely absorbent and comfortable to the patient. Iodoform and borated wools and lint are mild antiseptics, very useful for external superficial sores. For foul ulcers I have found pads of moss litter, either plain or impregnated with boracic acid or iodoform, a very cheap and effectual dressing, keeping the sores dry, clean, and free from smell. Vaseline or lanoline, impregnated with either boracic acid, iodoform, eucalyptus, or corrosive sublimate, make useful antiseptic ointment. Glycerine and carbolic, or carbolised oil, are also used. It makes little difference what form of antiseptic is used, provided it is sufficiently powerful and is intelligently applied in accordance with the antiseptic theory. The protective—a specially prepared oiled silk—

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protects the wound from the irritation of the antiseptic. When used it must be well over-lapped by the antiseptic dressing, and where this cannot be done it had better be dispensed with. A great advantage is that it prevents the dressing sticking to the surface of the wound; its bland, smooth, unirritating surface certainly favours the healing process. The drawback to its use is, that it keeps the wound moist, thus favouring putrefaction if germs gain an entrance. The moist condition causes irritation of some sensitive skins, especially of the feeble skin in the neighbourhood of ulcers. I have recently endeavoured, by using a perforated protective, to keep the dressing from sticking to and irritating the surface of the wound, and at the same time to keep it in as dry a state as possible.

Drainage.—The opening for the escape of discharges should be provided, when possible, at the most dependent part; if not, a certain amount of fluid must accumulate to the level of the opening before it runs off. For large wounds or large cavities indiarubber tubes provide the best drainage; in some cases they should be as large as one's finger. For smaller wounds, strands of horsehair or a strip of protective are sufficient. We must always bear in mind that either of these materials is a foreign body, and should be dispensed with as soon as possible. Retention of discharge is, however, a much greater evil. Each case must be judged on its own merits. As a rule, in a clean-cut wound in healthy tissues, ample drainage is required for the first day; it can gradually be lessened, and entirely dispensed with on the third or fourth. In other cases—as, for instance, a large abscess cavity communicating with diseased spine—the tube may not require to be shortened for nine months or a year. In these cases the indications for shortening a tube are its extrusion by the granulation or contraction of the cavity, combined with signs of repair of the part, and no evidence of accumulation of discharges, such as pain, pyrexia, increased pulse, the formation of a fluctuating swelling, or purulency of the discharge. In some cases special tubes made of metal are required.

To arrest hæmorrhage, torsion or forcipressure should be used for small vessels; for those of the size of the radial or larger arteries catgut had better be employed. The best is the sulphurous acid gut, prepared according to Sir Joseph Lister's directions, by first soaking in chromic acid solution and then in sulphurous acid solution. This is very strong and reliable, and a fine strand can be used for large vessels. If large-sized chromicised gut is used just under the skin, the knot is apt to cause irritation and possibly suppuration. The sulphurous acid catgut is also useful for buried sutures, the object of which is to bring together and keep in apposition the deeper parts of a wound; this prevents the effusion and accumulation of discharges, and sometimes accelerates the healing process. For large pedicles, as in ovariotomy, Chinese twist, a pure silk, may be used after soaking for a quarter of an hour in 5 per cent. carbolic. Strong catgut is also used.

Sutures.—Silk impregnated with 10 per cent. carbolic in bees'-wax is generally employed. Silver wire is non-absorbent and unirritating. Catgut may also be used, and can be left *in situ* until the inner parts of the suture are absorbed. For small wounds, carbolised but otherwise unprepared catgut had better be employed, the external parts can be brushed away in a few days. The sulphurous acid gut will not be absorbed for a month or six weeks. The button suture is extremely useful in bringing the widely separated edges of a wound together; being placed at some distance from the edges, it does not interfere with the healing process. Sutures should never be used to drag the edges of the wound together; the skin contained within them should not be puckered, or that outside them furrowed; both are indications of undue strain, and both retard healing, besides causing pain to the patient as well as the risk of exciting inflammatory disturbance in the neighbourhood. Especial care is required in introducing sutures into damaged or unhealthy tissues; the slightest tension must be avoided; better leave the wound widely gaping.

All dressings should be kept in tin boxes. This prevents any risk of their contamination, and retards evaporation of the more volatile ingredients. It is a good plan to keep a wide-mouthed bottle filled with a volatile antiseptic inside the box with the dressings. The jaconet mackintosh is a convenient application outside the dressings. It prevents the discharges coming directly in contact with and being contaminated by the air, and makes them traverse a long line of the antiseptic before doing so. It also keeps the deeper dressings nicely in place. The drawback to its use is that it confines the perspiration and the more watery parts of the discharges, and thus keeps the wound moist. The elastic bandage fastened lightly round the edges keeps the dressings in contact with the skin, and prevents a large quantity of air being sucked directly into the wound by the movements of the patient. If the elastic bandage is applied tightly it causes pain, and possibly œdema of the distal parts.

To recapitulate the antiseptic or aseptic treatment of wounds: 1. Arrest all hæmorrhage, thus preventing the accumulation of blood clot, the nidus for development of micro-organisms. 2. Remove all foreign bodies, such as dirt, detached pieces of bone or tissue. 3. If foreign bodies or micro-organisms have gained an entrance, purify thoroughly with an efficient antiseptic. 4. Provide very free drainage, in the most dependent part if possible. 5. Bring the parts into accurate apposition, like to like; but carefully avoid tension, especially of the edges of the wound or in damaged or unhealthy tissues. 6. Apply a large dressing sufficiently impregnated with a reliable antiseptic, and very absorbent and elastic. 7. Bandage firmly and evenly to get elastic compression. 8. Elevate the part to lessen the blood pressure and effusion while the vessels are weak from the injury. 9. Give absolute rest; change the dressing as little as possible. Visible discharge is the indication if the dressing is reliable. 10. Attend to the general health and give a free supply of good food and fresh air, in this way promoting the resisting and healing power of the tissues. Recognition of these principles, their study and adoption, are of as much or more importance to a surgeon than a knowledge of anatomy or manual dexterity. By them you take surgery out of the region of chance and make it much more an exact science. If you happen to have an infectious case, let me impress upon you, gentlemen, not to look on it as an unavoidable accident, but recognise it as being due to some mistake in your chain of treatment, to be found out and in the future guarded against. None of us are free from mistakes or accidents; the best surgeon is he who has the least number, who recognises that he is not infallible, but strives to discover his mistakes, and from them learns lessons for his future guidance.

A CASE OF PERNICIOUS ANÆMIA,

APPARENT RECOVERY; RELAPSE; DEATH.

By W. TYRRELL BROOKS, B.A. OXON., M.B. LOND.,
LICHFIELD LECTURER IN CLINICAL MEDICINE IN THE UNIVERSITY OF OXFORD.

MRS. G——, aged thirty-eight, came as an in-patient to the Radcliffe Infirmary, Oxford, on December 27th, 1884. She gave the following account of her illness: About twelve months ago she began to lose blood from the anus. The hæmorrhage only occurred when she went to stool, and the blood was of a bright colour. Until this hæmorrhage set in she had been a strong healthy woman, possessing a good colour, and she attributed the onset of her illness to the loss of blood. The hæmorrhage continued for at least three months, and rendered her very weak. During this time menstruation was regular, but very scanty. She became gradually weaker, and in March, 1884 (i.e., four months after the date of the first hæmorrhage) vomiting set in. The vomiting continued until her admission into the infirmary, ceasing at intervals, but she had not been free from vomiting for longer than four or five weeks at a stretch. No other symptoms were noticed by the patient except gradually progressive weakness and pallor. Menstruation continued regular, but the flow was very scanty.

The woman presented herself for admission complaining of great weakness and of troublesome vomiting. She appeared to be well developed, with an exceedingly pale, sallow complexion. Her conjunctivæ were quite blanched, and her lips of a peculiar light-blue tint. Her general appearance gave the impression of a person who had suffered from profuse hæmorrhage. Though anæmic, she was not emaciated, being, in fact, well covered and inclining to *embonpoint*. There was not any evidence of cardiac enlargement, except, perhaps, slight dilatation. At the apex of the heart and at the third left costal cartilage there was a faint systolic murmur. The pulse was regular, small, and

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frequent (120 per minute). There was a well-marked venous murmur at the root of the neck. Respiration was frequent (26 per minute), but easy, and dyspnœa occurred only on exertion. The chest was very tender on percussion, and she complained especially of great tenderness over the sternum. There was not any evidence of disease of the lungs. The blood was pale, the red corpuscles diminished in number, and devoid of their tendency to run together into rouleaux. There were many red corpuscles of an abnormal shape, some of which appeared more or less flask-shaped. The white corpuscles were not markedly increased in number. The area of splenic dulness was increased, and measured in the mid-axillary line four inches and a quarter, and extended forwards to the anterior axillary line. The area of liver dulness was increased, and extended in the right mammary line from the sixth rib to two inches below the costal margin, whilst in the median line its lower edge reached to within one inch and a half of the umbilicus. The surface of the liver felt quite smooth. The urine was of sp. gr. 1015. The reaction was acid, and there was no albumen. There was not any general anasarca, and no swelling of the feet; but there were distinct hæmorrhages beneath the skin over the dorsal surfaces of the feet. The largest hæmorrhages were about the size of half-a-crown, and there were abundant smaller petechiæ. On ophthalmoscopic examination the fundus oculi presented several distinct hæmorrhages, apparently of recent date. There was not any evidence of neuritis, and the edges of the disc were clear and well defined.

On admission she was treated with ten-minim doses of the tincture of the perchloride of iron, but after a few days it was found that the iron set up considerable irritability of the stomach, and for that reason it had to be discontinued. Shortly after admission petechiæ appeared over both knees, and it was elicited from her that six months before her knees had been black, as though badly bruised. The temperature varied, and was usually normal in the morning and 100° in the evening; occasionally, however, it rose to 101° or 102° at night. She vomited at irregular intervals a yellowish fluid, but rarely any quantity of food. Her tongue was clean and her bowels confined. The menstrual flow was scanty, but regular. Ten days after admission she was placed on five-minim doses of liquor arsenicalis, and on the fourth day after taking this a note was made to the effect that she felt and appeared better. The blood, however, on examination still showed a large number of flask-shaped and other irregular corpuscles, and there was a considerable number of red corpuscles of small size, though of normal shape. A pill containing three grains of sulphate of iron was ordered, in addition to the arsenic mixture, but it had to be discontinued owing to the gastric irritation which it set up. The dose of liquor arsenicalis was increased to eight minims, and after a few days fifteen minims of dialysed iron were added. Shortly afterwards a note was made to the effect that she appeared much better, and that there was more colour in her mucous membranes. The dose of liquor arsenicalis was gradually increased to thirteen minims, and the dialysed iron to twenty-five minims, and on these she was kept until February 25th (i.e., two months from the date of her admission). During the interval the woman had changed for the better in a rapid and striking manner. From being bedridden, she was able to get about the ward, and later on the infirmary grounds. She felt much stronger and could walk without fatigue. Her colour deepened, until she was to all appearance normal in this respect; and the temperature, which for the first four weeks of her stay in the infirmary had usually risen in the evening to 100° F., remained at normal both morning and evening during the remaining four or five weeks before her discharge. The splenic dulness diminished, and on her discharge on February 25th, 1885, the lower limit of liver dulness did not exceed the costal margin. On examination of the blood, the red corpuscles were found to have increased in number and to have a tendency to run together into rouleaux; there were, however, a few flask-shaped corpuscles still to be seen, but these were many fewer in number than on admission. On leaving the infirmary she was sent to the Wingfield Convalescent Home for a few weeks, and she left there apparently in perfect health to return to her home in Staffordshire.

In January, 1886 (not quite a year after her discharge), I learned of the death of the patient. She had remained in good health for some time, and then gradually lost colour and strength, and was one morning found dead in her bed. I was not able to obtain any details of the treatment during the patient's second and fatal illness, but I learned from her friends that her symptoms had practically been the same as those which occurred prior to her stay at the Radcliffe Infirmary, and that the medical man in attendance had certified the cause of death as anæmia.

Remarks.—In recording a case of recovery from a disease the essential feature of which is its fatal termination, very strong evidence is required to demonstrate that the clinical observer has not been misled in forming his diagnosis of the disorder. Obviously, if we consider that pernicious anæmia is the fatal goal of simple anæmia, to speak of recovery from such a condition is nothing more than an Irishism. But however close the resemblance between simple and pernicious anæmia, the clinical distinctions between them are, I believe, sufficient to separate them from one another, and to point to the probability of their being distinct diseases. The record of a case possessing all the symptoms of pernicious anæmia in which there was apparently absolute recovery for a period of several months, but in which eventually relapse and death from the same disorder took place, forms a link in the chain of evidence of the existence of pernicious anæmia as a clinical entity, the termination of which, though frequently fatal, is not necessarily so. That this case presented the essential features of pernicious anæmia is, I think, evident. The patient was of middle age, of large frame, and well covered with fat. Her illness had come on gradually, and had been characterised by progressive debility and pallor which had not been accompanied by any wasting, though they had proceeded almost to extremities. She had had hæmorrhages, both subcutaneous and retinal. Her blood presented the characters which have been described in many, though not in all, cases of pernicious anæmia.[1] This derangement of the blood appeared to run a course somewhat parallel to the disease, the blood becoming more normal in its histological characters, with progression of the patient to convalescence, though even when the patient was apparently convalescent the blood still retained a certain degree of its abnormal character. There was enlargement of the liver, rare in cases of simple anæmia, but not uncommon in cases of pernicious anæmia, and this enlargement disappeared with the convalescence of the patient. There was an oscillating temperature, which fell to and remained at normal when the anæmic condition had been removed. There was marked tenderness over the sternum, which abated with convalescence. Finally, there is the fact that after apparent recovery the patient relapsed in the course of a few months, and died from a disease which all the evidence obtainable showed to be pernicious anæmia. The starting-point of the disease in this case was apparently the hæmorrhage which took place from the rectum, but the cause of the hæmorrhage was not apparent. It was not possible to discover any disease of the lower bowel or genito-urinary passages during the patient's stay at the Radcliffe Infirmary, nor did the history show that there were any symptoms of disease of the bowel or genito-urinary passages when the hæmorrhage first occurred. It is possible that the hæmorrhage was due to the altered condition of the blood, and was an early symptom rather than the exciting cause of the disease. It appears from the history of the case that she had subcutaneous hæmorrhages over the knees about six months after the first occurrence of the hæmorrhage from the bowel. The treatment pursued in the case shows the inefficacy of iron as a remedial agent in the advanced stage of pernicious anæmia, though after the patient had progressed towards convalescence iron was given and tolerated by the patient. Dr. Byrom Bramwell has pointed out that in these cases iron is often not only inefficacious but possibly injurious, and certainly in the stage of profound anæmia in this patient I found it to be so. It is to Dr. Byrom Bramwell that the credit of the successful treatment of pernicious anæmia is due, and from his cases the inspiration of the treatment of the present one was drawn. To Dr. Thomas Harris of Manchester, who was house-physician at the Radcliffe Infirmary during the time the patient was an in-patient there, I wish to offer my thanks for the careful notes made by him, and the deep interest he took in the case.

[1] These characters of the blood in pernicious anæmia have been described by Professor Eichhorst of Jena, Professor H. Quincke of Bern, Drs. Byrom Bramwell, Stephen Mackenzie, Padley, Carington, and others. Dr. Pye Smith relates a case in which the blood was apparently unchanged, and I have also had a case under my care which terminated fatally, in which there was not any change in the shape of the red corpuscles.

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THE DIAGNOSIS AND TREATMENT OF CHRONIC INTESTINAL OBSTRUCTION.[1]

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FOR diagnostic purposes all cases of chronic obstruction of the bowels may be conveniently classified under the four following conditions, which are arranged in the order of the frequency of their occurrence: 1. Fæcal accumulation 2. Stenosis of the colon (due usually to stricture, and preferably to malignant stricture). 3. Stenosis of the small intestine (due usually to conditions other than stricture). 4. Chronic intussusception. From a pathological standpoint this classification would be of little value. The anatomical causes of chronic obstruction are very numerous and very varied, but they do not produce corresponding clinical variations, and do not lead to distinctions in differential diagnosis. Some of the rarer forms of chronic obstruction, such as those due to partial occlusion of the bowel by an enterolith, and some unusual varieties of volvulus, hardly come under the classification just given. The less common of the four varieties may be first dealt with.

Chronic intussusception.—This term is applied to invaginations that have persisted for more than one month. The anatomical form of the disease that is most apt to become chronic is the ileo-cæcal (60 per cent.); that which is least frequently met with in a chronic condition is the ileo-colic (10 per cent.). No form of intestinal obstruction is more difficult to diagnose, and none gives rise to more ambiguous or more varied symptoms. Out of fifty-five cases collected by Rafinesque only a few were suspected to be examples of intussusception, and no less than twenty-seven were the subjects of an absolutely incorrect diagnosis. The following are the main points in the diagnosis:—1. Age. The great majority of the patients are children or young adults, and in such individuals other forms of chronic obstruction are comparatively uncommon. 2. Mode of onset. The symptoms may commence with a distinct attack of acute or subacute intussusception, and subsequently pass on into a chronic form. Unfortunately in about 60 per cent. of the cases the onset of the disease is insidious, and the earliest symptoms are those probably ascribed to indigestion or slight colic. 3. The invagination tumour. This mass has been met with in about 50 per cent. of the chronic cases, but has been mistaken for a fæcal mass or for a new growth in not a few of the examples. When the tumour has reached the rectum, the diagnosis can seldom remain obscure, but this condition has only been observed in 32 per cent. of the cases. 4. Blood in the motions has been recorded in about half of the instances of the chronic form. As regards other symptoms, there is a colicky pain that is always intermittent, is often absent for a long period, and often slight. The vomiting is not pronounced, is very rarely indeed feculent, and was entirely absent in 50 per cent. of the collected cases. It may be induced in the earlier stages, and made worse in the later stages, by food. The bowels may act with perfect regularity, and may respond readily to an aperient. As a rule they are irregular, with a tendency to diarrhœa, and less often to constipation. Meteorism is absent, the abdominal walls are flaccid, coils of bowel are often clearly seen in movement through the parietes, and the patient wastes and becomes anæmic and cachectic. The symptoms are those of stenosis of the bowel, and unless distinct guidance is afforded by the four cardinal features already detailed, the precise diagnosis of chronic intussusception is scarcely possible.

Stenosis of the small intestine.—In the majority of the cases that come under this heading the bowel is narrowed or bent by peritoneal adhesions. It may be actually formed into a loop by such adhesions, or be compressed by them. In other instances a number of coils may be matted together, or the gut may be narrowed by the shrinking of an inflamed mesentery. Actual stricture of the small intestine is not common. This part of the bowel is the seat of a rare form of multiple simple stricture, the precise nature of which has never been fully explained. Other simple strictures have followed injury, operations for strangulated hernia, and ulceration of a specific character. Primary malignant disease of this part of the bowel is comparatively rare. In the matter of diagnosis sex plays no part and age is of little import. Non-malignant stenoses are most often met with about early middle life, while cancer is most usual after forty. The history of the patient is of considerable importance, especially so far as it concerns previous attacks of peritonitis, a history of pelvic peritonitis, abdominal operations, typhlitis, strangulated hernia, definite injury to the abdomen, mesenteric disease, tuberculosis, dysentery, &c. In some cases the bowel may be partly occluded by a foreign body or a gall-stone, or be narrowed by the pressure of a tumour without its walls, or be stenosed by the growth of a neoplasm within its lumen.

The symptoms produced by a narrowing of the lesser bowel are marked by great variations. The onset is usually gradual, and the progress of the affection is apt to be marked by certain more or less acute attacks. Since the contents of the small intestine are fluid, the bowel may become greatly narrowed before very pronounced symptoms are produced. The narrow stricture is, however, very liable to be abruptly closed by a valvular fold of mucous membrane, by a mass of undigested food, or by kinking of the unevenly distended coil. With the occurrence of such a blocking acute symptoms supervene. Such acute or subacute attacks are apt to appear from time to time. The pain throughout the progress of the disease is distinctly intermittent; long intervals of freedom from suffering, extending at first over many days or even weeks, intervene between the attacks. As the intervals between the paroxysms shorten, the attacks become of longer duration. It is evident in the majority of cases that the pain may be provoked by food, coming on within an hour or so of a meal. The attacks become more and more frequent and severe, and when complete obstruction sets in the pain becomes continuous, but with exacerbations. During the earlier attacks of pain there may be nausea. In the more severe attacks the patient vomits. The vomiting is often provoked by food. It is late to be established, is seldom copious, and rarely feculent, except towards the end of an acute obstructive attack. Constipation is a leading symptom in 10 per cent. of the cases. In 40 per cent. there is constipation alternating with diarrhœa. During the more abiding attacks the constipation becomes absolute. Tenesmus is absent; the abdominal parietes remain flaccid, unless peritonitis be present; and in uncomplicated cases there is no local tenderness. Movements of coils of hypertrophied intestine are visible through the parietes. Sometimes, when the trouble is produced by adhesions, a clump of coils of distended small intestine forms a tympanitic swelling, possibly visible to the eye, at some part of the abdomen. Meteorism is absent, except during acute attacks and with absolute constipation. The patient emaciates and becomes worn out by the continued pain and digestive disturbances.

Stenosis of the colon.—This condition is in the majority of cases produced by stricture, and in nearly 60 per cent. of these cases the stricture is cancerous in character. In the remaining instances the narrowing has followed cicatrisation after ulcer, or has been due to compression of the bowel by severe inflammatory changes outside its walls. In other instances, where no distinct stricture exists, the partial occlusion may be due to the bending of an adherent colon, to some rare forms of volvulus (especially of the cæcum), to obstruction by intestinal growths, or by enteroliths, and by the pressure of a tumour without the bowel. In the commonest condition—that of stricture—the situation of the lesion is especially noteworthy. Out of ninety-nine cases (dealt with in my book on "Intestinal Obstruction," p. 286), the stricture occupied the sigmoid flexure in fifty-eight examples. Eighteen times it was found in the descending colon or splenic flexure, sixteen times in the transverse colon or hepatic flexure, and six times in the ascending colon or cæcum. It will be seen, therefore, that the trouble becomes less common with every inch that it is traversed, proceeding from the commencement of the rectum to the end of the ileum. The general symptoms of stenosis of the colon are very similar to those already described in connexion with the lesser bowel, and the same elements in the history of the patient hold good for the two conditions. The course of the disease is irregular, and is associated with paroxysmal attacks. In the matter of differential diagnosis the following points are to be noted. The pain is intermittent and colicky in character, but it is, on the whole, less severe in cases where the colon is involved. The vomiting

[1] Read at the Medical Society of London, Oct. 24th, 1887.

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is less marked, and is indeed often absent. In any instance it supervenes at a later period. It is usually less profuse than is the case in stenosis of the lesser bowel. It never becomes stercoraceous, except after many days of absolute constipation. It will be, moreover, especially noted that the symptoms are usually but little affected by food. The bowels are, as a rule, in a condition of constipation, or this condition may alternate with a spurious diarrhœa. The latter symptom is especially common in cancerous stricture low down. In 15 per cent. of the cases of cancer there was a bloody discharge from the anus. Tenesmus is very commonly present, especially in such cases as are associated with diarrhœa. Aperients often give relief in cases of stricture of the small intestine, but are apt to aggravate the symptoms when the colon is involved. Meteorism is usually pronounced, and often very pronounced. Coils of intestine are visible through the wasted parietes, but this feature is never observed at so early a period as is the case with stenosis of the small intestine; it is, moreover, never so marked. The early appearance of visible coils of bowel is very suggestive of obstruction in the lesser intestine. There is seldom any localised tenderness. The outline of the colon above the stricture can be defined, unless the tympanitis is very marked. Towards the later stages of malignant disease a tumour can be made out in some 40 per cent. of the cases.

Fæcal accumulation.—The most important issues in the differential diagnosis rest with the distinctions between stenosis of the colon and fæcal impaction. It is as great a surgical calamity to perform colotomy for the latter condition as it is to persist in the use of enemata and purgatives in cases of cancer of the bowel. Into the causes of chronic constipation, and the anatomical conditions that favour it or result from it, it is impossible to enter. The subjects are mostly adults, and are generally females. The frequent association of the condition with nerve disease, with hysteria, melancholia, and hypochondriasis, cannot be overlooked. It is well also to bear in mind the deformities of the colon that often attend persistent constipation, and that lead to serious errors in connexion with the diagnosis of fæcal tumours. The cases that cause most trouble to the diagnostician are those in which some temporary mechanical occlusion of the bowel (as by kinking) is effected by the fæcal mass, and symptoms of a somewhat acute character supervene upon the chronic phenomena. In the subjects of this affection there is a gradually increasing constipation, which more and more resists the action of aperient medicines. Unlike the circumstances of stenosis, this constipation may reach a quite extreme degree before any vigorous attacks of colic or sickness occur. The patient's appetite declines, his tongue becomes foul, he is liable to eructations and nausea, he is much troubled with flatulence, and soon becomes languid and depressed. One symptom is of considerable moment: the extreme foulness of the breath that is so often met with in fæcal accumulation is almost unknown (perhaps quite unknown in like degree) in the subjects of stricture of the bowel. As the case advances the abdomen becomes distended. It is rare for coils of hypertrophied bowel to be visible through the parietes, and if such a symptom does appear, it will appear late. As the obstruction becomes more complete the abdomen may become painful. It is well also to note that there is often tenderness on handling about fæcal tumours. The abdominal pain assumes a paroxysmal character, but it is not apt to reach the degree common in stenosis. If vomiting occurs, it appears late, is very scanty, infrequent, and not feculent, unless there has been absolute obstruction for a considerable period. Especially is it to be noted that the symptoms of pain and sickness appear late, and seldom manifest themselves until there is evidence of a distended bowel. One of the most important features in the diagnosis is the fæcal tumour, into the protean characters of which it is not possible to enter. Enemata as means of diagnosis are practically useless. In many cases they do little more than demonstrate the capacity of the rectal pouch. Still less useful is the long tube. This instrument is not only a delusion, it is a snare; and its valuelessness as a diagnostic agent can be well demonstrated on the post-mortem table. In one instance in which the long tube was passed, its point could be felt just above the umbilicus. A medical friend, disregarding the anatomical measurements of the bowel, wished me to believe the instrument had reached the centre of the transverse colon. At the necropsy an impermeable stricture was found at the lower end of the descending colon. The tube had only reached the summit of the sigmoid loop, which can, in a large proportion of cases, be made to reach the umbilicus, and even (in a few instances) the liver. The accumulated fæcal masses may press upon the lumbar or sacral nerves, or upon the iliac or pelvic veins, and so produce a variety of symptoms. When the probability of a tumour can be excluded, these phenomena are of the greatest value.

Upon the matter of *treatment* I can only deal in slight outline. I have discussed the treatment of intussusception in a previous paper, read before the Medical Society.

In dealing with *stenoses of the small intestine*, the most important measure undoubtedly is diet. The patient should be restricted to a diet of the most simple and the most easily digested foods. A primary object is to reduce the solid matter in the bowel to a minimum. The connexion between the acute obstructive attacks and errors in diet is often easily to be traced. The patient should take plenty of liquids, to help to maintain the fluidity of the intestinal contents. Cod-liver oil may also be given with little or no intermission, unless it provokes nausea. Aperients should be avoided when possible. The action of the bowels can be maintained by massage of the abdomen and the occasional use of enemata. The injections should be copious. The acute attacks of pain, with constipation, vomiting, and distension of the abdomen, are met by rest, opium, starvation, and the washing out of the stomach. The latter measure may give more relief than the narcotic. In the case of a lady with stenosis of the lesser bowel following pelvic peritonitis, relief—which appears likely to be maintained—has followed the treatment by diet, &c. Previously to this treatment she had had three attacks of acute obstruction in twelve months, and during the third attack the vomiting had become feculent. If the case becomes steadily worse (as will probably occur with pure stricture) and all milder measures fail, there is no alternative but laparotomy. In this operation adherent or compressed bowel may be set free, and the procedure prove to be of a simple character. This can only occur in the minority of the cases. In examples of stricture the involved segment has been excised, and the divided ends united by Lembert's suture, with perfect success. In some cases of adhesion also a like resection may be called for. One point, however, is imperative. If the operation is performed during the occurrence of an obstructive attack, the diseased segment may be excised, but in no case should an attempt be made to at once unite the divided ends. An artificial anus should be established, and the opening so made closed by a subsequent operation. Such a procedure amounts to little more than an enterotomy, and the success of this operation, as viewed from its comparative mortality, has been clearly demonstrated. Of the many sutures designed for use upon the intestine, the best and simplest is the suture of Lembert.

Into the treatment of *fæcal accumulation* it is scarcely possible to enter. The question is one mainly for the physician. One small point that has, perhaps, not received quite the attention it deserves may be alluded to in passing. The need of a proper proportion of fluid in the intestinal canal must be recognised. In some instances, where very hard, dry, fæcal masses are passed, the constipation would appear to be in large measure due to the lack of sufficient fluid in the bowel. The patient, perhaps, drinks very little liquid. One now and then meets with a lady who is satisfied with one glass of sherry at dinner. Another patient perspires inordinately. A third is a neurotic subject who passes so large a quantity of urine that his condition approaches that of diabetes insipidus. In each instance it would seem that too little fluid remains in the bowel, and the fæces are not of such consistence as to be readily passed along the intestinal canal. If this defect be remedied, a very substantial improvement will probably follow. When actual fæcal impaction occurs, the diet should be limited, and any pain checked by belladonna or opium. As soon as the abdomen ceases to be tender, massage should be commenced and carried out systematically for twenty minutes twice a day. After the rubbing and kneading of the abdomen an enema should be administered. The injection should be copious; it should be given always in the knee and shoulder position, and the best apparatus for the purpose is undoubtedly Lund's instrument. Massage and enemata are the main therapeutic agents. When the bowel begins to clear itself aperients may be employed. For this purpose calomel appears to act admirably when given in doses of from 5 gr. to 10 gr.

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It should be followed by some saline aperient, such as the mistura alba of the hospitals. In the hands of French surgeons extraordinary and excellent results have attended the use of metallic mercury administered by the mouth. The dose varies from 50 grm. to 300 grm. I have tried this metal in two instances, but without the least benefit, and at the same time without ill effect. It is claimed that the mercury, which is passed per anum in a very finely divided condition, acts mechanically. In some of the reported cases over 1000 grm. have been given in successive doses.

In the treatment of *stenoses of the colon* the same general measures are adopted as have been described in speaking of stenoses of the small intestine. Dieting is important, but at the same time its beneficial effects are not so self-evident. The bowels should be kept well open. For this purpose some of the natural aperient waters should be employed and daily enemata made use of. Frequent examination should be made to detect any fæcal accumulation within the colon. In these cases massage of the abdomen is certainly attended by some advantage. As the case becomes worse aperients cease to be admissible, and in the majority of instances the question of operation sooner or later arises. A difficulty now appears as to the proper method of procedure. Inasmuch as the most frequent cause of chronic obstruction is stricture, the usual operation performed for the relief of the patient is colotomy. There may be little difficulty in diagnosing the case as stricture, and still less in indicating its seat. Under such circumstances a colotomy is performed in one or other loin. It is allowed by most surgeons that lumbar colotomy has decided advantages over the inguinal operation. The peritoneal cavity is not opened, the artificial anus is not inconveniently placed, and statistics show that the mortality after the operation is lower. It is claimed that the inguinal opening gives an opportunity for exploration in cases of doubtful diagnosis. This exploration, so far as the colon is concerned, must of necessity be so limited that its value may well be questioned.

Coloctomy is a procedure that has not found much favour with English surgeons. It is difficult, and has been attended by a high death-rate. It is justifiable if the actual stricture is encountered at the colotomy wound. In such a circumstance the removal of an inch or so of the bowel may not add to the gravity of the operation, and if performed early for malignant growth may modify the further progress of the disease. The resection of portions of the ascending or descending colon through an anterior wound is fraught with formidable difficulties. Through such a wound the cæcum or a segment of the transverse colon can be dealt with, but to minimise the risks of the operation a temporary artificial anus should be made. The closure of this by a subsequent plastic operation may not be difficult, but such attempts at promoting union are very unsuccessful in connexion with artificial anus in the loin. Colectomy performed through the ordinary lumbar incision will probably result, under the best conditions, in a permanent fæcal fistula. The absence of a peritoneal covering to the bowel in this situation renders a successful suturing of the gut most improbable.

The main point, however, in the operative treatment of chronic obstruction lies in the question whether colotomy is really the best measure for a particular case. In obscure forms of the condition a surgeon may well hesitate before he commits himself to so decided an operation. He may open the ascending colon in the loin, and find subsequently that the obstruction was at the ileo-cæcal valve. Or a left lumbar colotomy may be performed, and the case prove to be one of fæcal impaction. In other instances the obstruction may prove to have been due to the bending of the bowel by adhesions, or to chronic volvulus, or to enterolith, or to other conditions that may possibly have been relieved by laparotomy, and without the formation of an artificial anus. In all these case of doubt, and they must necessarily be of frequent occurrence, I would strongly advise an exploratory incision in the median line. If the examination proves the case to be one demanding colotomy, that operation may be either carried out at once—and possibly through the median line,—or the peritoneal wound may be closed and a lumbar colotomy performed at a later period. I might quote the following cases as illustrating these two alternatives.

I saw with Dr. Henry Stokes of Highbury, in April last, a lady about fifty years of age who presented the symptoms of chronic intestinal obstruction. There was nothing in her past history that threw any light upon the case. The symptoms had only existed fourteen days. At this time she had been nursing her husband, and her bowels had become irregular. She was seized with slight colic, and took a dose of castor oil. This produced what was considered to be a natural motion, but greatly increased the colic. She at once consulted Dr. Stokes. Previously to this attack she had never had colic, and her bowels had been very regular, with a disposition to looseness rather than to constipation. The patient was kept in bed, and was carefully dieted. The pain was quieted by opium and belladonna, and frequent enemata were administered. When I saw the patient there had been absolute constipation for fourteen days. The abdomen was swollen, and it was evident that there was an obstruction low down in the colon. The cæcum was greatly distended; no hypertrophied coils of intestine were visible through the parietes. The tongue was not much coated; the breath had never been offensive. There had been but little vomiting. The patient was rapidly losing strength. The opium was discontinued for a while; forcible enemata were given in the knee and shoulder position; massage of the abdomen was carried out. The patient became worse under this treatment, and the abdomen much more distended. The case was not sufficiently clear to lead me to commit the patient at once to the serious trouble of an artificial anus. The symptoms were of so recent a date and of such a character as not to accord with the usual phenomena of stricture of the bowel. At the same time, I have met with cases of cancer of the colon where the first evidences took the form of an almost acute obstruction. In one of these the sudden closure of the already narrowed bowel led to symptoms that could scarcely be diagnosed from acute volvulus of the sigmoid flexure. Under these circumstances I opened the abdomen in the middle line, the constipation having been absolute for about eighteen days. I was ably assisted by Dr. Fraser Stokes. A typical epitheliomatous stricture was discovered at the termination of the descending colon. The sigmoid flexure was empty. I should have wished to have closed the abdomen, and performed later on a left lumbar colotomy. The state of the colon, however, prevented this. This gut was extremely distended; the cæcum was enormous, and in several places its peritoneal coat had given way. Perforation of the bowel would have been a matter of not many hours. I therefore brought the cæcum to the parietal wound, to the edges of which I attached it by a row of sutures, none of which, however, opened the lumen of the bowel. I brought all the most damaged part of the gut out of the wound. When the parietal wound had been closed as far as necessary, I punctured the cæcum through one of the rents, and allowed an immense volume of gas to escape. No solid matter was seen. I then clamped the hole in the bowel, and dressed the wound with iodoform. The patient was greatly relieved by the tapping of the bowel. She never vomited after the operation. On the fifth day, the exposed bowel, having become firmly adherent all round to the abdominal wound, was opened by Dr. Stokes. A large quantity of fæcal matter escaped. The patient made a rapid and uninterrupted recovery. When seen six months after the operation, I could detect no mass in the seat of the stricture; the patient looked in excellent health, and had gained flesh. The artificial anus gave less trouble than I should have imagined. Nothing had passed the rectum since the operation.

The second case that serves to illustrate the value of an exploratory incision was that of a married woman, aged twenty-seven, who was admitted into the London Hospital under my care on Oct. 27th, 1886. On admission, there had been absolute constipation for five weeks; the abdomen was greatly distended; the vomiting, however, was slight, and not frequent. From her history the patient would appear to have had some peritoneal troubles after one of her confinements. She had always had difficulty with her bowels, and the present trouble had come on very gradually and with little pain. She appeared to be too young for cancer. Nothing could be felt per rectum that threw light upon the case. She had never had dysentery, and there were no grounds for suspecting a simple stricture. The case might possibly have been one of narrowing or kinking of the bowel by peritoneal adhesions, and to have condemned a young woman of twenty-seven to colotomy for that condition would have been a calamity. I therefore opened the abdomen in the median line, and soon found a carcinomatous

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stricture at the commencement of the sigmoid flexure. I could find no adhesions. As the colon was still in good condition I closed the wound. The operation did not last many minutes. In eight days the median wound was practically healed. I now performed a left lumbar colotomy, opening the bowel at once. Both wounds did very well. The patient recovered rapidly, and was enabled five weeks after the colotomy to resume her household duties.

I have selected these two cases because the trouble was identical in both, but the symptoms induced were as unlike as the limits of the conception of chronic obstruction would permit. One patient was advanced in life; the other was only twenty-seven years of age. In one the symptoms came on somewhat abruptly, in the other gradually. In the more chronic case the distension of the bowel was less than in the case of shorter duration.

Wimpole-street, W.

PARALYSIS OF THE ABDUCTORS OF THE VOCAL BANDS.

By GORDON HOLMES, M.D.,

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(*Concluded from page 804.*)

Pathological Anatomy.—Like all other paralyses, that under consideration may be either central or peripheral, myopathic[1] or neuropathic. When the disease is myopathic the information to be obtained from necropsies is in general sufficiently clear and easily attainable; but in neuropathic cases, owing to the extremely long course of the vagus and the complexity of its connexions, the pathological anatomist has often an almost insuperable task before him when trying to trace out the obscure lesions which may constitute the esoteric origin of the malady.[2] In all such researches, therefore, the physiology of laryngeal innervation must be well borne in mind. The two following facts are the leading ones in this region of inquiry:[3] (*a*) the spinal accessory nerve supplies motor filaments for all the muscles of the larynx (*including* the crico-thyroid) *except* the posterior crico-arytenoids; (*b*) the pneumogastric nerve, before meeting the spinal accessory, contains the motor supply for the posterior crico-arytenoid muscles, and for them only. These, be it remarked, are muscles of organic life, and almost if not wholly removed from the sphere of volition.[4]

Most writers on this paralysis, notably Semon[5] and Rosenbach[6], argue from clinical evidence that in all lesions of the general nerve trunks supplying the larynx the fibres going to the abductor muscles are first affected. Now all neurologists subscribe to the fact that in central or peripheral nerve lesions the extensor muscles are most liable to become paralysed. Hence, if we place the posterior crico-arytenoid muscles in the category of extensors, it will appear that their innervation exhibits the same vulnerability seen in other muscles having analogous functions. At the same time, however, even if this assumption be granted, it carries us but a little way towards explaining the phenomenon, and merely shifts the burden from the shoulders of the laryngologist to those of the general neurologist. But whether the muscles in question can really be set down as extensors is extremely doubtful. The motion of the crico-arytenoid joint is chiefly one of rotation, with the point of rest about midway between the extremes of movement. Thus it seems to depend merely on the mental attitude of the individual whether abduction or adduction be regarded as flexion or extension. Thus, for example, one person may recognise in irregular masses of cloud &c. striking resemblances to various concrete forms which another entirely fails to perceive. In order to settle this matter, further evidence of a more positive kind will have to be discovered, and I can only suggest to observers having facilities for such researches, that something in the domain of comparative anatomy or embryology might be adduced to identify adduction and abduction of the vocal bands with flexion and extension as exhibited in the limbs. In any case, we can accept the general facts without endeavouring to draw a parallel, which can never be complete, owing to the abductors not being within the category of ordinary voluntary muscles.

Franklin Hooper,[7] being extremely sceptical as to the alleged preter-vulnerability of the abductor fibres, has made some valuable experiments on dogs with a view to settling the question. In one instance the recurrent laryngeal nerve was gradually destroyed by chromic acid, but as long as a fibre of the nerve held together electric stimulation produced abduction in the etherised animal. In other cases inflammation was kept up for a week or more by a thread passed through the substance of the recurrent laryngeal nerves. Though some considerable irregularities in the action of the muscles were thereby produced, no decided paralysis of any one set was obtained. On the whole, however, the lesion seemed to influence chiefly the adductors.[8] With a view to refute Hooper, Semon and Horsley[9] have also carried out a careful series of experiments, which show very clearly that the abductor muscles lose their electric excitability long before the adductors. As they remark, "the abductors *die* sooner than the adductors." On the whole, it appears probable that the abductors, as muscles of organic life, and differing somewhat in molecular constitution,[10] are less able to bear any interference with their innervation than the adductors. To the practical mind this will seem a distinction without a difference. Still the preter-vulnerability of their nerve fibres is not satisfactorily established, and it is understood that Hooper is again at work in the endeavour to bring the whole question to a scientific conclusion. From a clinical point of view I think it unlikely that the ground occupied by Semon, Rosenbach, and others will be disturbed.

A further important point for consideration is whether many of these cases are not really due to a *primary* contraction of the adductors. Some writers, especially Krause,[11] are keeping this question well in view during their investigations. Whilst it seems possible that irritation by pressure on the recurrents may impel the adductors into a state of fixed contraction, some experiments by Donaldson jun.,[12] of Baltimore, accidentally suggest a negative to the proposition. This observer, in trying to verify Hooper's observations, found that slight stimulation of the recurrents caused abduction, and strong stimulation adduction, of the vocal bands. Hence, it may be inferred that the mild irritation of pressure by a tumour would provoke continued contraction of the abductors.

With respect to the structural alterations occurring in this disease, a considerable number of necropsies have been obtained in which both neuropathic and myopathic lesions have been discovered. As a rule, in those instances where alterations of the brain or nerves have been noticed the substance of the muscles has also been materially disturbed, but in several cases myopathic conditions alone have been brought to light. Thus, in a case examined by von Pentzoldt[13]

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[1] Myopathic cases may be defined as those in which no distinct nerve-lesion can be discovered or surmised. Some authors who have interested themselves in the neurological relations of this paralysis go so far as to deny the existence of myopathic instances, believing that a neuropathy is always concomitant, however obscure. This is clearly an exaggerated view, and an application of the "nothing like leather" principle. Myopathies are too well recognised in pathology for these muscles to be allowed a logical exemption from disease *per se*.

[2] It must not be forgotten to mention that H. Krause of Berlin believes he has discovered a cortical centre for the larynx in the *gyrus præfrontalis*. "Ueber die Beziehungen der Grosshirnrinde zu Kehlkopf und Rachen" (Zeitschr. f. Anat. u. Physiol, 1884).

[3] It is all the more necessary to dwell on the actual scheme of laryngeal innervation, as it appears to be overlooked by almost all writers on laryngology. Even so recent and comprehensive a writer as Ziemssen (Cyclopædia of the Practice of Medicine, vol. vii., 1875, p. 914) is imbued with the erroneous views of Bischoff and others that the spinal accessory nerve alone furnishes the motor filaments contained in the vagus.

[4] Ordinarily, irritation of the recurrent nerves produces constriction of the glottis: but Franklin Hooper of Harvard (New York Medical Journal, July 4th, 1885) has brought out the interesting fact that when volition is completely abolished it has the opposite effect, and strong abduction of the vocal bands occurs, even when the nerves are completely severed. His experiments have been made on dogs under the influence of ether. They have since been confirmed by several other investigators.

[5] Loc. cit.

[6] Berliner Klinische Zeitschrift, 1880, Nos. 2, 3. Virchow's Archiv, Bd. xcix., 1885, &c.

[7] Loc. cit.

[8] Previously to Hooper, Krause (Virchow's Archiv, Bd. xcviii., 1884) had made some experiments in dogs by subjecting the recurrent nerve to continued irritation for several days, after which he professed to find degeneration of the abductor muscles. His paper, however, is too inconclusive to be regarded as proving anything.

[9] British Medical Journal, Aug. 28th, &c., 1886.

[10] They are supposed to belong to the class of Krause and Ranvier's "red," as distinguished from "white," muscles. See Gritzner, Breslau ärtzl. Zeitsch., 1883; and Simanowski, Getachen klin. Gazette, 1884.

[11] Virchow's Archiv, Bd. cii., 1885.

[12] International Journal of Medical Science, July, 1886.

[13] Deutsche Archiv für klinische Medizin, Bd. xiii., 1874, p. 197.

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the roots of the vagi and spinal accessory nerves were found to be thin and grey, whilst there was grey discolouration of the olivary bodies and adjacent parts, accompanied by marked sclerosis. The pneumogastric and recurrent nerves were preternaturally thin and grey in their whole course, and there was fatty degeneration of the neurilemma. At the same time the posterior crico-arytenoid muscles were of a pale-brownish colour, showing indistinct transverse striation of their fibres, as well as infiltration with fat and yellow pigment. Syphilitic cicatrices existed in the throat of this patient, a female aged sixty-one. In most cases the paralysis, whether unilateral or bilateral, results from the pressure of some tumour on the vagi or recurrent nerves in or near the thoracic cavity. Thus we often find it associated with aneurysm of the arch of the aorta, enlarged bronchial glands, malignant intra-thoracic growths, tubercle in the lung apex, especially the right,[14] bronchocele, &c. In such instances the nerve at the place of lesion may be found thinned to such an extent that it resembles a band of tissue paper, or so embedded in connective tissue that the remains of nerve structure are with difficulty identified. In other cases, whilst the muscles have undergone marked atrophy and fatty degeneration, no alteration in the brain or nerves have been discoverable.

Diagnosis.—The laryngoscopist can scarcely make an error in diagnosing this malady. Ankylosis of the crico-arytenoid joint (a much rarer affection), in which the vocal bands cannot be fully separated, may simulate it; but concomitant circumstances will be almost certain to render a mistake unlikely.[15] Spasm of the glottis, although it causes dyspnœa referred to the larynx by the patient, can scarcely mislead the most unpractised observer, as the narrowing of the glottis is restricted to occasional fits, mostly occurring in the evening. Thus at ordinary times the larynx presents a perfectly normal appearance. Spasm also is almost confined to children, whilst paralysis of the abductors has only once or twice been met with before adult age. Moreover, it must be noted that many persons adopt a very constrained position of the muscles of the throat during laryngoscopic examination, especially on first occasions. Such patients often fancy they must hold their breath whilst the mirror is in the mouth, and sometimes they even close the larynx completely by approximating the ventricular folds to avoid breathing. By custom and a little instruction from the practitioner these difficulties are soon surmounted.

Prognosis.—In most instances of the bilateral form it is a matter of considerable complexity to arrive at a decided prognosis, but the future of a case can seldom be pronounced favourable unless the malady is manifestly due to a recent cold, and there is a clear tendency to rapid amelioration. When the paralysis is caused by an aneurysm, intra-thoracic growth, or other tumour, the general prognosis will usually depend on the nature and curability of the primary disease. The same observation applies to lesions of the nervine centres. But even if the primary malady should be cured, the posterior crico-arytenoid muscles cannot be expected to regain their functions if their innervation has been long enough disturbed for atrophy or fatty degeneration to any extent to have taken place. Again, the question will lie for consideration as to whether tracheotomy may or may not be required. This point is determined mainly by the state of the adductor muscles. Should they be affected by paresis or paralysis of any grade, as mostly occurs in neuropathic cases where the abductor paralysis is merely the most pronounced phenomenon of a general laryngeal paralysis, the stenosis of the glottis is unlikely to attain its maximum, and operative interference may be avoided. In myopathic instances, however, clearly ascertained, we must expect a steadily progressive constriction of the glottis, and tracheotomy must not be deferred too long, as in such a case a mere cold in the throat may so quickly aggravate the symptoms as to bring about almost suddenly a fatal result, unless the windpipe can be opened immediately. As regards the unilateral paralysis, it need only be said that it is of little or no clinical importance with respect to the larynx.

Treatment.—When the paralysis results from lesions extraneous to the larynx, the treatment proper to such disease is chiefly demanded. Thus, we may have to treat aneurysm, goitre, syphilis, or other brain affections, &c. At the same time, if the laryngeal symptoms are urgent, tracheotomy must be performed without delay. It is useless to postpone this operation, even when the primary malady shows a marked advance towards cure; because if, as often happens, the nerve has become involved in a growth of connective tissue, its functions are not in any case likely to return. Nor under any circumstances is a well-marked case likely to become ameliorated so rapidly that tracheotomy, when called for by a high grade of dyspnœa, can be escaped. When the cause has been removed, the best chance of restoring the muscular powers lies, of course, in the application of galvanism. In order to stimulate the posterior crico-arytenoid muscles, the laryngeal electrode must be passed down the back of the pharynx and insinuated into the entrance of the œsophagus. It can then be drawn upwards and outwards on each side from the mesian line over the surface of the muscle, as it lies in the hollow prepared for it on the back of the cricoid cartilage. The process may be repeated several times at each sitting, and the passes should be increased in frequency as the case progresses. Daily applications, or on alternate days, should be persevered in for some weeks, even when the results are negative. For the purpose of applying galvanism in this situation, the round knob which is the regular termination of the laryngeal electrode is not very convenient, and had better be replaced by a somewhat flattened and wedge-shaped extremity. In examples of abductor paralysis of an undoubted rheumatic or simple inflammatory character, warm inhalations, such as the *vapor benzoini* or *vapor pini sylvestris*, will best promote a speedy cure.

Finsbury-square, E.C.

[14] According to Mandl (Gazette des Hôpitaux, No. 135, 1862), out of fifty-two patients affected with tubercle of the right apex fifty were hoarse, whilst of thirty-two persons whose left apex was involved only one had any vocal derangement. Mackenzie (Diseases of the Throat, 1880, p. 446), however, conceives that the vocal troubles in phthisis are mostly the result of general muscular paresis from debility. Although this statement is undoubtedly true as to some cases of aphonia, almost confined to young females, it cannot in the least explain away Mandl's statistics, which point plainly to a unilateral affection of the laryngeal muscles.

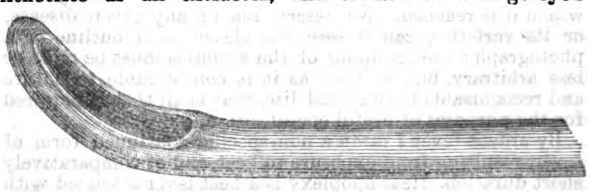
[15] Ziemssen (op. cit.) gives a case, which was not satisfactorily diagnosed until the necropsy; but at no time was it really thought to be paralysis of the abductors.

ON

SUCTION IN THE REMOVAL OF FOREIGN BODIES FROM THE BLADDER.

By REGINALD HARRISON, F.R.C.S.,
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I DO not think the value of this method of removing foreign bodies from the bladder is fully appreciated. Formerly, for the extraction of pieces of bougie, slate pencil, and bodies of this shape, I was in the habit of using the lithotrite as an extractor, and I have published several cases where this instrument proved to be efficient when the foreign substance had not been largely encrusted with phosphates. The chief difficulty connected with the use of the lithotrite under these circumstances is the fact that the foreign body is invariably seized at right angles with its long axis, and that it is necessary to get hold of an end before extraction along the urethra can be effected without damage to the parts. More recently I have discarded the lithotrite as an extractor, and trusted to a large-eyed



evacuating catheter, such as I use for lithotrity, and a rubber wash-bottle connected with it, by means of which I can fill and empty the bladder with a stream of water of considerable force. When we consider that most foreign bodies introduced into the bladder are of an elongated nature before they become nuclei for stony concretions, this method of removing them at once commends itself to us. The evacuating catheters I employ have a large eye, as shown in the annexed illustration. If a rubber bottle is attached to them and a stream of water is forced into and out of the bladder, it will be found, as a rule, that the end

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of the foreign body is sucked into the catheter, and in this way may be withdrawn.

One of my recent cases was a curious one, and was seen in consultation with Dr. Robert Roberts. A middle-aged healthy man, a month previously, passed a piece of bacon rind about two inches in length up his urethra, which disappeared. Not feeling satisfied with this strange exploit, he introduced, a week afterwards, up the same canal, a stiff pig's bristle about five inches in length, which also disappeared. Ten days before I saw him he felt a severe pricking sensation, and at once confessed his indiscretions to his medical adviser. When we saw him in consultation I passed a soft instrument down his urethra, and distinctly felt something in the prostatic urethra, which I pushed backwards into the bladder. As I felt so doubtful as to the man's statement, I employed a small lithotrite, with which I felt something I could not hold. I then passed a large-eyed evacuating catheter into the bladder, and attached a powerful rubber syringe to it, such as I use for the removal of stone fragments after lithotrity. After a few movements of the syringe I felt that I had engaged something in the eye of the catheter, and on withdrawing the latter, the bristle, beautifully coated with phosphates, came with it. Of the bacon rind I neither felt nor heard anything more. These manœuvres were quite easily carried out on my consulting-room sofa without an anæsthetic. Some weeks previously I had removed a piece of gum-elastic bougie (No. 6), three inches in length, in the same way. To commence with, I felt, as the water current was being ejected, the bougie struck against the eye of the catheter with its long axis, and was therefore not caught. I distended the bladder with another syringeful of water (four ounces), when at once the end of the bougie became impacted in the eye of the evacuating catheter, and was withdrawn like the bristle. The additional amount of water permitted the bougie to rotate in the bladder. Still more recently, by the same process, I dislodged a renal calculus which I believe was impacted in the orifice of one of the ureters, where for some weeks it had caused much irritation.

Liverpool.

HEATSTROKE.[1]

BY JOHN ANDERSON, M.D., C.I.E., M.R.C.P.,
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A GREAT deal has been written on the subject of heatstroke; still it has occurred to me that a brief account of my experience in India in this respect might not be altogether void of interest.

If we exclude heat exhaustion, which is simply the result of exertion and fatigue in hot weather, where the sufferer falls down with a freely perspiring and cold skin, and where the phenomena of sun or heat stroke, which I am about to describe, do not ensue; then, I think, the following division will embrace the various forms of the disease: 1st, Ardent Fever; 2nd, Heat Apoplexy; 3rd, Sunstroke. Such a classification seems to me more fully in accordance with the deviation from the normal temperature of the blood; the effect varying not only in relation to the height of temperature reached, but also in relation to the rapidity with which it is reached. No description of any given disease, or its varieties, can possess the clearness of outline of a photograph: the grouping of the varieties must be more or less arbitrary, but so long as it is conformable to nature and recognisable in practical life, that is all that is required for the purposes of useful classification.

By ardent fever I mean a non-specific continued form of fever, resulting from exposure to heat, and of comparatively short duration. Heat apoplexy is a heat fever attended with high temperature, contracted pupils, cyanosis, loss of consciousness, and a marked tendency to death by asphyxia. It more commonly results from the indirect effects of solar heat, or radiated heat, and usually occurs at night, in dwellings or in crowded tents. Sunstroke is a form of heat fever with a very high temperature, contracted pupils, and rapid loss of consciousness, and it is frequently attended with convulsions indicative of perverted action and exhaustion of the nerve centres. Both here and in heat apoplexy there is marked cardiac debility and embarrassment, probably largely due to a paresis of the sympathetic heart centres. In brief, it will be seen that all three of the foregoing are pathologically allied; they are, as it were, so many beads of different sizes and colours united on one and the same thread.

In ardent fever we have commonly portal congestion and increased metabolism of the liver, *plus* the effect of heat on the nervous system. In heat apoplexy we have a poisoned state of the blood resulting from vitiated atmosphere, arrested secretions, with possibly the addition of alcohol, forming in combination the dominating factor; and heat, not direct solar but radiated heat, as the subordinate but determining factor. In sunstroke, we have the direct and dominating factor of solar heat, acting on the cortices and meninges of the brain and spinal cord, *plus*, it may be, a toxæmia as a subordinate predisponent factor.

I would here refer for a moment to the two main sources of animal heat—viz., the muscles, which are the chief source; and the glandular organs, which stand next in order of importance. The muscles of an adult man form nearly half of the whole body weight, and contain about one quarter of his blood. From this, says Foster, "it may be inferred that a large part of the metabolism of the body is carried on in the muscles." Whenever a muscle contracts, heat is given out; and wherever metabolism is, there heat is generated. It is not difficult, therefore, to understand what a seriously predisposing cause to this disease over-exertion is, over and above the nervous exhaustion resulting from fatigue. Of the glandular organs the liver is by far the most important. It contains about a quarter of the whole blood of the body, and we know what extensive metabolism takes place in that organ. It is consequently clear that congestion of the portal system, induced by intemperance in food and drink, is also a powerful predisponent.

Then we have the regulation of the body heat. Of these, the three principal regulators are the skin, the lungs, and nervous systems. The skin is the most powerful; it regulates by means of conduction, radiation, and evaporation of perspiration from its surface. It is obvious that conduction and radiation can reduce the heat of the body but very feebly when the surrounding media are as hot as, or hotter than, the body itself; and when the air is moist and still, as well as hot, evaporation from the surface is reduced to a minimum. In the severe forms of the disease, more particularly in heat apoplexy, we have stertor, and so engorged a condition of the lungs that, on section post mortem, the blood drips freely from the cut surfaces. Hence we may assume that the heat-regulating sources of these organs are seriously impaired. Foster, in his work on Physiology, shows how the vaso-motor mechanism influences the regulation of the body heat. He tells us that a vaso-motor action, which by constricting the cutaneous vascular areas, or by dilating the splanchnic vascular areas, causes a smaller blood flow through the skin and a larger one through the abdominal viscera, will tend to increase the heat of the body. But this observer, while admitting that the influence of the nervous mechanism in animal heat, not only in maintaining the normal temperature, but also in affecting the variations of temperature in disease, can hardly be exaggerated, adds that much requires to be learnt before its exact value can be confidently spoken of. I think, however, I have shown how the sources of heat are increased and the outlets blocked. From this we must have rising body temperature with heatstroke as the result, unless the supply be diminished or the outlets opened.

And now I come to the treatment, and it is chiefly on account of a point that I wish to emphasise in this part of my subject that I have ventured to bring this subject forward.

Prophylactic measures, though perhaps obvious, cannot be passed by unnoticed. People who live, and soldiers who serve, in hot climates cannot get rid of heat; but they can do much to modify it by living in well-ventilated rooms, with a suitable proportion of cubic space and superficial area for each occupant. They can make the still air move by means of fans or punkahs. They can be temperate both in eating and in drinking; and more particularly they can abstain from alcohol altogether, or take it only sparingly and well diluted with water. Alcohol has a powerful deleterious influence, because (1) it increases portal congestion, and (2) it has, whilst in the circulation, a great attraction for water. They can clothe in garments that are light

[1] Read in the Military and Naval Section of the International Medical Congress, held at Washington.

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both in colour and in weight, and loose enough to admit of the freest respiratory movement. Dr. Arnold Hiller, of the German army, in a lecture he very recently delivered to the officers of his corps, laid great stress on the importance of this point; indeed, he regards great heat alone as a subordinate factor to the detention and accumulation of heat brought about by heavy clothing. He also relates some experiments showing the great value of perspiration and its increased effects when assisted by wind. When troops are marching in hot weather, the march should be made at night, or sufficiently early to be completed by 7 A.M. Urgent military necessity is the only good reason for neglecting this precaution. The ranks should be as open as possible, and care should be taken that the men's water bottles are filled before starting. Cold tea flavoured with lime-juice is an excellent beverage for the purpose. Tea and coffee are excellent respiratory excitants, and free from the evil influences of alcohol. The marches should not be too long, and food should be taken before starting and at halting places as safeguards against fatigue.

In cases of simple ardent fever, the initial step in the treatment is to relieve the congested portal system by an aperient, and none is more suitable than a dose of calomel (from two to four grains), followed by such a saline as sulphate of magnesia. Cold sponging of the body or the wet pack lowers the temperature, refreshes the patient, and frequently induces sleep. Quinine, in doses of two or three grains, is indicated, and in my experience has proved efficacious. The bromides of potassium or ammonium are useful. In the Punjab and North-West Provinces of India I have often seen over 20 per cent. of the strength of recently arrived regiments in hospital in the months of April, May, and June from this cause. Here I may incidentally remark that at Peshawur we have two forms of fever differentiated from each other by the seasons of their accession or prevalence. In April and May it is an ardent fever, short in duration and continuous in type, over which quinine exerts no specific influence; in brief, it is the ardent fever of which I am speaking. But in October and November we have a fever of an altogether different type—viz., a malarial fever varying in degree from a simple ague to its most pernicious form, resembling cholera, in which quinine, arsenic, and change of air are alone of any avail.

In the graver forms of heatstroke much more active measures are urgently called for. My practice has been to strip the patient instantly; to lay him on an inclined plane by raising the head of his bed from ten to fifteen inches from the ground; to place him, if possible, in a current of air, and, failing that, to make attendants circulate the air around him by fans or hand punkahs. He should be douched freely, but not suddenly, by pouring cold water in good volume over the head, chest, and abdomen; and the bowels should be quickly cleared by an enema. None of these measures should be omitted. But what I am especially anxious to bring to your notice is the beneficial results obtained by the hypodermic use of quinine in these cases. As far as I am able to ascertain, this is not the general practice of English physicans, whatever it may be with those of this country. Sir Joseph Fayrer, in his able article in Quain's Dictionary of Medicine, incidentally remarks that "this method of treatment has been supposed to give good results by its influence on the vaso-motor nerves and retarding tissue change." And Dr. Roberts Bartholow, in his work on the Practice of Medicine, says: "The subcutaneous use of quinine may also be practised to reduce heat." I venture to think, however, that in quinine so employed we have a remedy of much efficacy in such cases—at least it has proved so in my experience in many instances; and I believe its more general use would be attended by a much lower mortality than that usually recorded in this disease. I have seen patients in a state of coma from heatstroke so far recover in from ten to fifteen minutes after the subcutaneous injection of quinine as to be able to protrude the tongue when desired to do so, and to show by signs or speech that they understood a question put to them. I have a clear recollection of having one morning, when in cholera camp at Mian Mir, without a tree to shelter our tents from the fierce heat of a Punjab sun in July, by the subcutaneous use of quinine, with a fatal result only in one instance, treated fourteen cases of heatstroke. All these cases were of such severity that the patients were insensible. The dose I use for injection is from two to four grains, and this may be repeated at such intervals as may be indicated by the condition of the patient. I have administered a second dose in half an hour after the first, and a third in two, three, or four hours after the second. When we reflect how narrow is the line between life and death in these cases of hyperpyrexia, and remember that with a body heat of even 107° F. there is still time to save life, but that at 111·2° death ensues, it is everything to possess an agent which will control the degree of temperature in a few minutes. I claim for the subcutaneous use of quinine in the treatment of heat-stroke this property.

There are certain precautions that must be observed in this method of administering quinine. 1. The solution must be perfectly clear; it must be filtered if necessary. 2. The salt used must be one that is perfectly soluble in distilled water without the addition of any acid. Such a salt is the quininæ hydrobromas acida. This is a very soluble form; it dissolves 1-6 of water, it is richer in the alkaloid than the sulphate, and it is quite unirritating. Both of these precautions are essential in the hypodermic use of quinine, because some local irritation may follow the injection. I have heard of two cases of tetanus that were alleged to have been caused by the operation. In my own practice no such misadventure ever occurred, and I have used quinine subcutaneously many hundreds of times; for before I became acquainted with the advantages to be gained by treating heatstroke after this method, I had frequent recourse to it in the treatment of obstinate malarial fevers, when quartered in such malarial districts as the Valley of Peshawur, in the north of the Punjab. The addition of morphia to the quinine solution has been proposed as a safeguard, but I never found its use necessary, and of it I have no experience. How quinine acts in the way I have described I cannot tell, but that it has a special effect on the nervous system, particularly the cardiac ganglia and the vaso-motor nerves, seems highly probable, from the rapidity with which the effect follows the injection. I am aware that some eminent authorities—Professor Binz for example—hold that quinine exercises some specific influence on the blood-corpuscles; still, I believe the explanation is rather to be found in its effect on the nervous system.

Since the date of my service in India, several new antipyretics have been introduced; and I understand that antipyrin, for example, has been used hypodermically in America in the treatment of heatstroke. I know that in the British army both antipyrin and antifebrin have been employed in the treatment of ardent fever with very beneficial results, and their use in sunstroke will consequently be indicated.

PENETRATING WOUND OF ABDOMEN WITH PROTRUSION OF INTESTINE; ABSENCE OF SHOCK.

BY J. W. GRANGE, M.B., C.M.

A. N——, aged twenty, a ploughman in robust health, while walking through a field, was attacked by a bull, knocked down, and gored in the abdomen. The bull's attention was then directed to a couple of dogs, the only help at hand, and the man escaped over a hedge. He says that when he rose up his trousers were torn and bloody, and he saw his bowels hanging out, forming a large mass, which he caught in his hands. Supporting them in this way, he walked home, a distance of a quarter of a mile, and up-hill, before he could get any assistance.

As the man lived far out in the country, it was two hours after the injury had been inflicted before I saw him. He was then lying in bed, and did not present any symptom of shock. His face was of a good colour, his pulse strong and steady, and there was nothing in his appearance to indicate that he had met with such a serious injury. On opening his trousers a large mass of intestine lay over the right side of the abdomen, in volume about as much as one could carry in two hands, consisting of about four feet of small intestine and mesentery. The bowel was dull and congested from constriction, but otherwise uninjured. The wound, completely hidden by the overlying bowel, was situated in the right iliac region. It was rectangular in shape, and about four inches long. The opening in the peritoneum, however, would barely admit one finger. After cleaning the bowel from sand and dirt, reduction was tried, but unsuccessfully, as any attempts to replace the bowel sent it into

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the areolar tissue outside the peritoneum. The difficulties of the situation were also increased by a sudden and violent act of vomiting, which covered the protruded bowel with vomited matter; this was evidently caused by the attempt at reduction. The intestine was again cleansed and the wound in the peritoneum enlarged, after which reduction was easily effected, and the wound closed by sutures. A simple cold-water dressing was applied, from necessity, not from choice, and opium freely prescribed. With the exception of a small collection of pus which formed in the abdominal wall, the patient made a good recovery.

This case appears to be worth recording from the fact that a man with such an injury was so slightly affected by shock as to be able to walk a considerable distance without assistance, and also on account of the recovery without the employment of antiseptics. The second and subsequent dressings were of wood-wool, but their application was too late to keep the wound aseptic.

Cumnock, N.B.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

INFANTILE PARALYSIS LIMITED TO THE BULBAR NUCLEI, WITH PERMANENT PARALYSIS OF HALF THE FACE AND TONGUE.

BY W. PASTEUR, M.D. LOND., M.R.C.P.,
PHYSICIAN TO THE NORTH EASTERN HOSPITAL FOR CHILDREN, HACKNEY ROAD.

R. D——, aged two years and seven months, was sent to me in November, 1886, by Dr. Scoresby-Jackson of Walthamstow for an opinion. The mother gave the following account of her child's illness. His health had been excellent up to the end of July, 1886, when he had a sharp attack of "fever," with diarrhœa and sickness. On the second or third day of this attack she noticed some twitching of the corners of the mouth, and carpo-pedal contractions, but there was no "fit." On the following morning the face was drawn to one side, the child was unable to close his right eye, his talk was unintelligible, and when given milk to drink, he made no effort to swallow, but allowed it to run out from the right corner of the mouth. For two or three days life was almost despaired of. On the fourth day there was some return of the power of swallowing, which was completely restored in about a month. There was at no period of the illness any cough or regurgitation after taking liquid food. In six weeks from the date of onset speech was completely recovered, with the exception of a slight thickness of utterance, which still persists. There were never any signs of paralysis of the arms or legs. I may add there was no history of traumatism, diphtheria, or ear disease.

When I saw the child for the first time on Nov. 22nd, his condition was as follows: A strongly built, robust-looking boy, thoroughly spoilt, and quite intractable. There is complete paralysis of all the branches of the right facial nerve, without any naked-eye evidence of muscular wasting. (Electrical examination impossible on account of the child's temper.) The tongue when protruded deviates markedly to the right; its right half seems to be a trifle thinner than the left, but is not wrinkled on the surface. The muscles of the limbs are everywhere well developed. Swallowing is performed normally, and hearing is unaffected. The movements of the eyes are normal; the pupils are equal and active. There has never been strabismus.

At the end of January, 1887, the child could close the right eye rather more completely than when first seen; except for this his condition was unchanged. During repose the paralysis was hardly perceptible, but became very obvious when the child spoke or cried. Dr. Scoresby-Jackson has since written to me that the right side of the face is a little wasted.

Remarks.—The mode of onset and clinical features of this case are so unequivocal that I have little hesitation in recording it as one of infantile paralysis. The remarkable distribution and limitation of the paralysis are quite new to me, and must be very uncommon. I can find no reference to similar cases in any of the treatises and monographs I have consulted on the subject, and several eminent neurologists to whom I related the case had never met with one exactly like it. As regards the original extent of the paralysis I cannot speak with any certainty. It is evident, from a consideration of the early symptoms, that several of the bulbar nuclei were temporarily thrown out of gear; and as the child was kept several weeks in bed, it is just possible that some slight temporary paralysis of the limbs was overlooked. The very small amount of muscular wasting is remarkable, seeing that the paralysis had already lasted fully six months when the patient was last seen.

Queen-street, Mayfair.

THE VALUE OF COCAINE AS A LOCAL ANÆSTHETIC.

BY G. MICHELMORE, M.R.C.S., L.S.A.

So much has been written in THE LANCET lately on the value of cocaine as a local anæsthetic that the following cases in which it was employed may be of some interest. A 20 per cent. solution of the hydrochlorate of cocaine was used in all the cases.

William L—— was admitted into the Tiverton Infirmary on March 22nd suffering from a severe injury to the right eye, which necessitated extirpation. Twenty minims of the solution were dropped into the eye at intervals during the operation, which was painless.

Ann H——, admitted on April 5th for the removal of a fatty tumour on the left shoulder. The surface of the tumour was painted over with the solution, and fifteen minims injected around its base. No pain was felt during the operation.

Richard G——, admitted on July 19th for the removal of the right eye. Cocaine was used in a precisely similar manner as in the first-mentioned case, and with the same results.

Sarah S——, admitted for the removal of an epitheliomatous growth on the bridge of the nose and adherent to the nasal bones beneath. The growth was painted over with the solution, and fifteen minims injected around the base; it was then freely excised, and the parts beneath scraped and swabbed over with a strong solution of chloride of zinc, the patient showing no signs of pain.

Emma V—— required the removal of a finger at the terminal phalangeal joint on account of a bad crush. The finger was painted over with the solution, and ten minims deeply injected. No pain was felt during operation.

The Infirmary, Tiverton.

A CASE OF PEMPHIGUS RECURRING AFTER FOUR CONSECUTIVE LABOURS.

BY OCTAVIUS CROFT, L.R.C.P.L., M.R.C.S.

PEMPHIGUS occurring during pregnancy is mentioned as a rare occurrence. Barnes[1] refers to a case which lasted three months and ended in complete recovery after delivery. In another case[2] it recurred during several successive pregnancies. In all, however, it seems to have disappeared with the termination of the pregnancy. The following case therefore is of some interest from the fact that the eruption on each occasion developed soon after delivery, lasted several weeks, and was entirely absent during pregnancy. It occurred in the outside Maternity Charity of the Leeds General Infirmary.

Mrs. A——, aged thirty-seven. Has had twelve children and one miscarriage. Her husband is healthy, and there is no history of syphilis in husband or wife. Beyond some debility resulting from her numerous confinements she usually enjoys good health. On Nov. 12th, 1886, after a natural and easy labour lasting about six hours, she was delivered of a healthy living child. All went on well for a few days—so well, indeed, that she herself thought she would escape another attack. On the fourth day, however, she felt ill, and in the course of a few hours the eruption broke out. A few blebs appeared first on one arm, which were of various sizes, and contained clear fluid. They subsequently developed in other situations, such as the dorsum of the foot, the back of the neck, and the face. The mucous membranes were not affected. The constitutional disturbance was

[1] System of Obstetrics. [2] Quain's Dictionary of Medicine.

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slight: there were anorexia, restlessness, and general feeling of malaise, but no rise of temperature. General tonic treatment was prescribed, together with full doses of arsenic. The blebs were pricked and dressed with boracic acid and vaseline. Improvement soon took place, but blebs occasionally appeared, and the disease did not entirely disappear until five or six weeks after the confinement. Following the patient's last three previous confinements, she has had exactly similar attacks; they have usually commenced about the fourth day after delivery, and have lasted for several weeks. The first attack lasted ten weeks; the second also about ten weeks; the third lasted fifteen weeks, and was the most severe of all; the fourth and last was the mildest, and accompanied with less general disturbance than the others.

Leeds.

AN UNUSUAL CASE OF MUCOUS CYST.

By F. W GIBBON, L.R.C.P.E., L.S.A., &c.

ON Sept. 9th I attended Mrs. G—— in confinement of a fine healthy female child. The following morning the nurse informed me that the infant had not passed urine, and drew my attention to a "tumour" filling up the vaginal cavity, which she attributed as the cause, especially as she said it came down very much when the child cried. On examining the child, I found a large cystic tumour, about the size of a pigeon's egg, which appeared full of pus; and on manipulating it and pressing it to one side the bladder relieved itself. I was puzzled, first, as to its situation, coming from a space between the clitoris and the meatus urinarius; and, secondly, as to its size and consistence, as it could not have arisen in fourteen hours, the time after delivery. However, with a bistoury I slit it up, and the contents were discharged (pure pus), the tumour disappeared, and four days afterwards the walls of the cyst came away. The child has had no other symptoms.

Tyne Dock, South Shields.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

A CASE OF GASTROSTOMY FOR ŒSOPHAGEAL OBSTRUCTION WITH SUCCESSFUL RESULT.

(Under the care of Mr. M'CARTHY.)

THE following account of a case of successful gastrostomy—successful not only so far as the operation itself was concerned, but also in the relief afforded by it—is interesting; and we hope to be able to publish further details when the case has terminated. Already five months have elapsed, during which the patient has enjoyed comparative comfort, being saved from the dread of impending starvation, and able to make such good use of the opening as to gain flesh and strength. The operation was one specially indicated by the condition of the stricture, which was impassable to even the smallest bougies.

A wharf labourer, aged forty-seven, was admitted on the medical side of the London Hospital, under the care of Dr. Sansom, on April 6th, 1887, for inability to swallow. He said that he had had trouble in swallowing for about ten weeks, but that for the last few days solid food seemed to lodge a little way down his throat, and was then vomited; and that of liquids only a small quantity passed into his stomach, and the greater part was thrown up soon after it had been swallowed. Notwithstanding his assertion that he had lost flesh considerably, he was by no means emaciated, and weighed 137 lb. Examination of the throat, internally and externally, disclosed nothing. His heart was normal, and there was no evidence of thoracic aneurysm. Hepatic dulness extended for two inches below the ribs, and there was increased resistance to pressure in the right half of the epigastrium. All attempts to introduce bougies failed. Even the smallest-sized instrument was arrested about two inches from the commencement of the œsophagus. Nothing could be ascertained from his family and personal history to elucidate his condition. He stated that he had never had syphilis, and there was no indication of that disease. He was occasionally subject to epileptic fits. For three weeks he was fed with nutrient enemata, as any food taken by the mouth was vomited, and many attempts were made ineffectually to pass bougies.

As the man had then lost six pounds in weight, and was becoming very weak, Mr. M'Carthy was requested to accept the case for operation. Accordingly on April 27th the operation was performed. The patient having been anæsthetised, an incision two inches long was made parallel and about three-quarters of an inch internally to the left costal cartilages, the middle of the incision corresponding to the convexity of the ninth cartilage. The skin and fascia having been divided, the skin was drawn inwards so as to expose the sheath of the left rectus abdominis muscle. This was then divided vertically for two inches, and, the muscular fibres having been separated with the handle of the scalpel, the posterior layer of the sheath and the peritoneum were opened vertically for about one inch and a half. Through this opening Mr. M'Carthy introduced one finger and explored the right half of the epigastrium. A hard nodular tumour, about the size of a pullet's egg, could be felt in the upper surface of the liver, but it was quite out of sight. The stomach was then attached to the anterior wall of the abdomen in the usual manner by two rows of sutures round the opening: one of carbolised silk, about three-quarters of an inch from the margin of the opening; and the other of silkworm gut, at the margin itself. The part was then dusted with iodoform and covered with a wood-wool pad.

For four days the patient was fed solely with nutrient enemata. On the fifth day Mr. M'Carthy made a small incision in the stomach wall, and through this, when it had been dilated with a pair of dressing forceps, a soft rubber tube was introduced, and about two teaspoonfuls of egg-and-brandy mixture were injected. The patient at once complained of severe pain in the left shoulder and supraclavicular region, which gradually abated after two or three hours. When the house-surgeon, Mr. Walker, repeated the injection at night, similar pain was felt, but after some days the patient ceased to complain of it. During the ensuing forty-eight hours the patient had five epileptic fits, and then became for some days furiously delirious. It was subsequently ascertained that he had been at one time in confinement for insanity. When the delirium subsided, the patient became very apathetic and his conjunctivæ were deeply jaundiced. The stomach was contracted and irritable, and the patient had a troublesome cough, so that for some time very little of what was injected was retained in the stomach, and nutrient enemata were still requisite. Gradually the stomach became more tolerant of food, and the patient improved so much that by the end of May he was able to leave his bed. He was then weighed, and had lost from the time of the operation 22 lb., weighing only 108 lb. The obstruction in the œsophagus had also diminished, for he was now able to swallow milk, arrowroot, and custard pudding easily. This improvement in swallowing was very temporary, and at present (Oct. 19th) he can only swallow a small quantity of fluid, and this is sometimes immediately vomited. From the end of May his progress has been uninterruptedly good, and his gain in weight considerable, his present weight being 156 lb. His general condition is very good, and his only trouble is some excoriation of the skin round the gastric opening, from leakage of fluid from the stomach.

WORCESTER GENERAL INFIRMARY.

CASE OF PERFORATION OF AN ULCER OF SMALL INTESTINE DUE TO A FALL, ASSOCIATED WITH FRACTURE OF FOUR RIBS BY DIRECT VIOLENCE.

(Under the care of Mr. HYDE.)

THE notes of the case were taken by Mr. T. P. Gostling.

Joseph S——, aged sixty-six, was admitted on Sept. 20th, 1887, at 7.30 A.M. He stated that between 11 and 12 P.M. on Sept. 19th he was walking home from Worcester, a distance of three miles, in the road, and stepped on one side to avoid a carriage. As soon as this had passed he stepped into the road again, and turned half round to look after it, when he

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was immediately struck in the side and knocked down by the pole of a carriage which was following close behind the first. He got up and walked, with assistance, to his house, a distance of three-quarters of a mile. Up to the accident he had been quite well.

On admission, seven hours and a half after the accident, he complained only of pain on breathing in the mid-axillary region of the right chest, and of vomiting brownish fluid. He was quite conscious. The extremities were cold, pulse scarcely perceptible, and temperature subnormal. There was slight bruising of the front of the right shin, side of the right thigh, and of the scrotum. In the line of the right anterior axillary fold, over the third, fourth, fifth, and sixth ribs, there was a slightly marked bruise two inches in diameter. No emphysema was observed in the region of this bruise, but crepitus was extremely well marked. There was no cough. There was no bruising of the abdomen, which was flat, very rigid, and scarcely moved in respiration. Two ounces of urine were drawn off from the bladder; it was quite clear, and contained no blood. Vomiting was almost constantly present, everything given by the mouth being returned at once; the vomit being of a dark yellowish-brown colour, and giving the bile pigment reaction. Attempts to give food and stimulants by the rectum failed, as the injections were at once returned. There was a slight incised wound on the left eyebrow. At about 11 A.M. (twelve hours after the accident) the patient complained of slight pain in the right inguinal region, which was relieved by hot fomentations; but about 8 P.M. this returned, and became severe and general all over the abdomen, and the patient died half an hour afterwards.

Necropsy, fourteen hours after death—Rigor mortis well marked. On the surface of the body there were some slight bruises, as described above. On reflecting the soft parts from the chest, blood was found to be extravasated into the tissues which cover the third, fourth, fifth, and sixth ribs in the line of the right anterior axillary fold, and these ribs were each fractured in two places—i.e., about two inches from the attachment of the cartilages and just in front of their angles. On opening the chest, no adhesions were found on the left side, but there were a few old adhesions between the front of the right lung and the chest wall. Both pleural cavities contained about five ounces each of blood-stained serum, and the bases of both lungs were of a dark-red colour. On opening the abdomen, no extravasation of blood was found in the abdominal wall. The intestines were found to have lost their shiny appearance, and the vessels in them and in the great omentum were everywhere very much congested, especially on the right side, where there was a little fresh lymph between the coils of intestine. The abdominal cavity contained about fifteen ounces of thick yellow fluid, which had a fæcal odour. Before removing the intestines they were examined, and a small oval opening about one-third of an inch across was found in the ileum about six feet above the caput cœcum coli. On removing the intestines and slitting them up, it was found that the edges of the opening were slightly raised, rounded, and smooth, and they did not present the least appearance of having been torn. No other ulcers were found. The liver was fatty, and there were old adhesions between it and the abdominal wall.

Note by Mr. HYDE.—The chief interest of this case is found in the existence of a single small ulcer of the intestine, the base of which had become sufficiently thin to be ruptured by a severe fall, and the very slight symptoms caused by the peritonitis present.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Condition and Management of the Intestine after Abdominal Section.

THE first ordinary meeting of the winter session of this Society was held on Tuesday last, Mr. G. D. Pollock, F.R.C.S., President, in the chair.

Mr. J. D. MALCOLM contributed a paper on the Condition and Management of the Intestine after Abdominal Section, considered in the light of Physiological Facts; of which paper the following is an abstract. The author directs attention to the origin and distribution of the nervous supply of the intestine, and to its influences on the production of peristalsis, of intestinal secretions, and of intestinal gases. He concludes that all the functions of the intestine are under the control of automatic nervous plexuses in its walls, and that these are closely associated with the central nervous systems, but are also affected by all stimulations acting directly upon them. It is shown that stimulation of the motor plexus produces increase of its activity, followed by exhaustion and paralysis of its function in proportion to the severity of the stimulus; but that the influence of the nervous system on the production of secretions and of gases in the intestine is not so well understood. It is suggested that the chemical action of one intestinal secretion on another may be a source of the excessive flatulence of certain diseases, which has not been satisfactorily accounted for, but which "seems to be in some measure connected with defective or deranged innervation." (The above portion of the paper was illustrated by numerous and full quotations.) The author proceeds to show that in every abdominal section the intestine is abnormally stimulated, and the result is compared to that which causes the "after-constipation" of purgatives. Evidence is adduced of paralysis of the bowel after these operations, passing into paresis, and gradually recovering at the end of from four to six days; and it is observed that the excessive development of intestinal gases which occurs at this time is "connected with defective or deranged innervation." The importance of the escape of these gases is remarked on, and the causes of their retention are detailed and considered. Intestinal paresis is shown to be an important factor in the production of obstruction of the bowels in these cases, and a possible sole cause of death with symptoms of obstruction. (Cases were quoted, related, and explained.) The symptoms of obstruction of the bowels after abdominal section and the mode of death from this cause are examined, and the post-mortem appearances are referred to. It is shown that excessive or irritating discharges retained in the peritoneal cavity quickly produce symptoms of obstruction and of peritonitis. The author assumes that a local peritonitis must occur whenever the peritoneum is divided and does not heal by first intention, but he believes that general peritonitis—in the absence of septic influences—is one of the rarest of the primary complications of these operations. Septic peritonitis is described as a combination of peritonitis, blood-poisoning, and paralytic obstruction of the bowels, the intestinal symptoms being considered secondary to the paralysis of the gut induced by the peritonitis. The condition of the mental power and of the urine, and the post-mortem appearances, are contrasted with those in aseptic conditions. In the management of these cases the necessity of having the bowels cleared of all accumulations before operation is insisted on, and the greatest care is advocated in avoiding all unnecessary exposure and manipulation of parts during operation. The importance of securing immunity from infection of any kind is considered paramount; but the stimulating and chilling effects of carbolic acid and of Lister's spray producer are mentioned as dangers. After operation, the necessity for intestinal rest is urged, and the use of opium commended. Treatment of vomiting and abdominal distension by the early administration of purgatives is advised, unless the evidence of peritonitis is distinct; and the explanation is offered that purgatives act beneficially simply by stimulating the exhausted bowel to perform its functions. It is advised that irritation from discharges in the peritoneal cavity should be prevented by means of Keith's method of drainage, and that general or extensive peritonitis, when it does occur, should be treated by drainage, rest, and suitable nourishment administered by the bowel. Treatment of peritonitis by purgatives is condemned as dangerous, irrational, and inefficacious.—Mr. ALBAN DORAN did not think that flatulence was necessarily due to the operative interference, for there were many causes of flatulence, and the mere lying in bed of individuals who were unaccustomed to this mode of life might cause flatulence. Nightmare might occur after ovariotomy, and might be mistaken by the nurse for more serious disturbance; it was largely due to the supine position often adopted by the patient after operation. He considered that opium might be useful, but often tended to produce a feeling of depression accompanied with dyspepsia. Further, the formation of scybala should not be favoured, and opium undoubtedly predisposed to this formation.—Mr. KNOWSLEY THORNTON was in general agreement with the opinions expressed in the paper, which dealt with a most important subject. The flaccid condition of the intestine after the operation was of pretty general occurrence, and the causes were, he believed, as Mr. Malcolm had indicated.

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This flatulence was rather beneficial than otherwise, because the local collection of fluid was prevented. He had strongly been impressed with the power the peritoneum had in dealing with fluid in contact with it, preventing the fluid from becoming septic; the peritoneum could absorb fluid which had not become septic, and without harm resulting. He did not think the condition of the intestines before operation was sufficiently considered by some; the state of the intestine might vary in different parts. Patients often died on the fifth day, and at the end of the thirty-sixth hour; and at one time Mr. Thornton thought that these deaths were due to different kinds of septicæmia, but Mr. Malcolm's suggestions were worthy of careful consideration. A coil of intestine lying in a pool of fluid might become sodden and paralysed, and become a source of septicæmia from the intestinal contents soaking into the collection of aseptic fluid and rendering it septic. The difficulty of differential diagnosis was often extreme between simple obstruction from fæcal accumulation and from incipient peritonitis. A dose of white mixture might save life or might do great harm, but the diagnosis of when to use it was very often extremely difficult to ascertain. He could never recall a single case in which the secondary use of a drainage tube had saved life. The quiet period after ovariotomy, in which the intestines were devoid of air, was a strong argument in favour of Mr. Malcolm's view. He did not concur in Mr. Doran's view of nightmare being necessarily due to the mere supine position.—Mr. CLEMENT LUCAS was inclined to support the views of Mr. Malcolm on the causation of paralysis of the intestines. Such paralysis was observed after lumbar nephrectomy. He had seen cases of death from simple over-distension of the intestine. In one case of hernia in an old man who adopted the supine position, it was found that an oblique position, with the shoulders and head raised, was most convenient for allowing of the escape of gas from the mouth. Obstruction of the bowels, due to tubercular peritonitis, might arise suddenly and cause death. Exposure and injury of the bowels as well as peritonitis were the chief causes of distension of the bowels.—Mr. MERREDITH thought benefit could sometimes be obtained in cases of flatulence by a raising of the lower part of the patient, so as to favour the escape of flatus by the anus. In place of opium he had found injections of twenty drops of tincture of belladonna to be useful in reducing the flatulence. He had found opium to be exceedingly useful in many cases.—Mr. WARRINGTON HAWARD said that many years ago Mr. Travers had drawn a graphic picture of the bad influence of over-stimulation of the nervous system in cases of abdominal operation. The employment of purgatives before operation, by exhausting the nervous energy, might prove of great harm later. He could not help thinking that opium must prove serviceable by giving the bowel sufficient rest to enable it to recover its tone.—Mr. A. E. BARKER asked for an explanation of the occurrence of distension and collapse of bowel—two such opposite conditions. — Mr. MALCOLM, in reply, said that his paper only dealt with the more severe and complicated cases, not with ordinary ones of ovariotomy. The causes of flatulence, he thought, were much wanting in elucidation.

MEDICAL SOCIETY OF LONDON.

The Diagnosis and Treatment of Chronic Intestinal Obstruction.—Notes on Methylal.

A MEETING of this Society was held on Monday, Oct. 24th, Dr. J. Hughlings Jackson, F.R.S., President, in the chair.

Mr. FREDERIC TREVES read a paper on the Diagnosis and Treatment of Chronic Intestinal Obstruction, a report of which will be found in another part of our present issue.—Mr. DAVIES-COLLEY had found a difficulty in diagnosing peritonitis and typhlitis from intestinal obstruction.—Mr. BOWREMAN JESSETT considered the long tube as a diagnostic instrument fallacious; for in cancerous strictures of the sigmoid flexure with a long meso-colon it was not difficult to displace the gut to the right side of the abdomen. He preferred inguinal colotomy, as being not more dangerous, and decidedly more comfortable to the patient.—Mr. BERNARD PITTS had seen a case of chronic obstruction in the small intestine caused by a band. In his experience stricture of the cæcum and cæcal region was much more frequent than Mr. Treves's statistics seemed to show. He referred to a case in which he twice successfully performed colectomy; the first time for cancerous stricture, the second for a recurrence in the glands of the meso-colon. He thought that with lumbar colotomy a better artificial anus was obtained.—Dr. DE HAVILLAND HALL advocated the treatment of stricture of the small intestine by rectal suppositories of beef peptonoids every four hours, the rectum being washed out once daily with tepid water.—Mr. ALLINGHAM jun. had found that with inguinal colotomy patients had sufficient sphincter power, and could keep themselves much cleaner. In some cases of fæcal accumulation he had seen much benefit follow forcible dilatation of the anal sphincter.—Mr. TREVES, in reply, said that the points he relied on in the diagnosis of peritonitis from obstruction were the presence of ascites, the continuous character of the pain, the posture of the patient, the tenderness of the abdomen, the constant and "meaningless" vomiting, the early distension of the abdomen, and the complete absence of visible coils of bowel. He still used the spray on superstitious grounds. The peritoneal cavity was washed out with many quarts of water, and the dressing consisted of a solitary piece of sponge dusted with iodoform, which was kept in place from five to eight days; in addition he washed out the stomach, which markedly improved the condition of the pulse and prevented vomiting. He preferred lumbar colotomy, as being a less fatal operation and more convenient for the patient. In cases of constipation due to painful sphincter, he imagined dilatation might be useful.

Dr. B. W. RICHARDSON read some notes on Methylal. He said that the fluid called methylal, a specimen of which he placed before the Society, was one of the series of chemical bodies which, like nitrite of amyl, methylene dichloride, methyl iodide, the ethylates of sodium and potassium, and some others, was introduced into therapeutics in his reports to the British Association for the Advancement of Science between the years 1863 and 1872. Methylal, which is made by distilling pure methylic alcohol with sulphuric acid and manganese peroxide, has recently been brought forward as if it were an entirely new addition to medicine, whereas it was a substance of twenty years' standing in English medicine, and had been placed by him before the Society, with an experimental demonstration of its anæsthetic effects upon a pigeon, during the year of his (the speaker's) presidency. Methylal was described in the author's first report upon it, in 1868, as a clear fluid of sweet ethereal odour, as of chemical composition $C_3H_8O_2$, of specific gravity 0·855, vapour density 38 (taking hydrogen as unity), boiling point 108° F. or 42° C., and as having the physiological property of producing anæsthesia by inhalation of its vapour, the sleep being gentle and slow, with perfect insensibility. It was remarked also that the substance produced no vomiting or other stomachic disturbance. It was found to render blood of dark colour, and slightly to suspend coagulation, but it did not dissolve the corpuscles, and, left in contact with blood for thirty-five days, it yielded no crystals. Dr. Richardson next related a research, reported in 1869, in which it was shown that methylal could be administered by the mouth with water, or could be introduced into the body by hypodermic injection, under both of which methods its hypnotic properties were produced. He followed this up with an account of the phenomena attendant on a fatal administration of methylal in lower warm-blooded animals, showing that the heart, extremely relaxed, ceased to act before cessation of the breathing in consequence of its distension with blood: it ceased, that is to say, in diastole, a characteristic mode of cessation under all anæsthetics that are of the pure hydro-carbon type. The lungs were collapsed, but of pale-red colour, and the brain, liver, and kidneys were intensely congested. The blood was found fluid, and in one case remained fluid in the vessels for half an hour after death. It was remarked in these researches that in the rabbit the vessels of the ear were intensely congested during the anæsthesia, and that the temperature fell 1° F. through each stage of the narcotism. The author next stated that three years ago, suspecting that the methylal he had hitherto used contained some foreign substance, he asked Mr. John Williams, the well-known operative chemist, to make him a perfectly pure specimen. Mr. Williams did so, but the cost of redistilling to free the fluid altogether of acetone was very great—6s. an ounce for the pure substance. As the author had anticipated, the action of perfectly pure methylal, though similar to that of the common variety in the market, was very much more prolonged and difficult. In 1884-5 he tested pure methylal at Mr. Mavor's Veterinary Hospital in

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Park-street, for the production of anæsthesia on dogs about to undergo a surgical operation. The results were unsatisfactory. They (Mr. F. Mavor and himself) failed to produce sufficient anæsthesia for operation, after half an hour's inhalation of an air saturated with the vapour. A short intoxication alone was produced, with profuse salivation and some coryza, followed by rapid and complete recovery. Trials by the hypodermic method had the same effect. Into one animal thirty-two grammes were injected subcutaneously, with production of drowsiness, but without anæsthesia. The stomach again remained unaffected. Dr. Richardson next brought forward his experience of methylal as a therapeutical agent. He had very often prescribed it in doses of from one to four drachms, combining it for the sake of the flavour with orange flower spirit, and adding water (proportions: methylal, one drachm; syrup of orange, half a drachm; water, half an ounce). Administered in this way by the stomach, it possessed hypnotic and antispasmodic properties of considérable value, and its grand service will lie in the treatment by it of spasmodic and painful affections, such as asthma, angina pectoris, colic, and tetanus. Its chief value will probably consist in its use as a menstruum for other substances of the same therapeutical action. The author has used it in this way with nitrite of amyl in the treatment of angina pectoris, and he exhibited a very ingenious inhaler, invented by Mr. Charles Smith of Brighton, in which a mixture of methylal and the nitrite (ten parts nitrite, ninety parts methylal) was being employed. The vapour given off by this mixture is extremely pleasant. But it is more than pleasant; by the combination the action of the nitrite is less sudden and much more prolonged, a very considerable advantage. Another combination was shown of methylal with pure anhydrous ethylic ether. As the boiling points of these two fluids, their vapour densities and their specific weights are closely allied, and as both contain the same elements, Dr. Richardson thinks they will form an excellent anæsthetic compound, the solubility of their vapours in the blood being considerably greater than when ether is used alone. He had only had one experience of this mixture, but that was extremely favourable. The paper concluded with the following summary:—1. Methylal is hypnotic and antispasmodic. 2. Its action lies between methylic alcohol and ethylic ether; it may be looked on as a volatile alcohol, and resembles closely pure methylic alcohol in action. 3. It can be adminstered by inhalation as vapour, by hypodermic injection, and by the mouth in aqueous solution. 4. It reduces arterial tension, and by local action excites glandular activity. 5. The sleep it induces is not profound unless the dose be excessive; it is quickly eliminated, and leaves no serious effects; it causes no vomiting or stomachic disturbance. 6. A fatal dose by inhalation kills by complete relaxation of the muscular fibres of the heart, leaving the heart distended with blood and the vascular organs intensely congested. 7. It combines with ether, alcohol, amyl nitrite, and many other remedial agents with which it acts in concert, and equalises their action by reason of its own solubility. 8. Its tendency is to maintain the fluidity of the blood, and it may therefore be of service in combination with ammonia. 9. It promises to yield a safe and effective anæsthetic mixture in combination with ether. 10. It reduces the animal temperature, but not to the same degree as common alcohol. 11. Used as an anodyne, it passes out of the body without producing organic injury, when not often repeated. 12. But, like all bodies of its class, it must be given in increasing quantities in order to keep up its effects, and it would soon yield evil as well as good by its habitual use in the community at large.

OPHTHALMOLOGICAL SOCIETY.

Hereditary Optic Atrophy.

AN ordinary meeting of this Society was held on the 20th inst., Mr. E. Nettleship, F.R.C.S., Vice-President in the chair.

Dr. S. HERBERT HABERSHON read a paper on Hereditary Optic Atrophy. After briefly referring to the early cases of hereditary amblyopia reported in the pre-ophthalmoscopic period, he gave a short summary of Leber's description of the disease founded upon the cases of fifty-five individuals in fourteen families. The disease was confined almost exclusively to the male members of the family, appearing commonly at or about the age of puberty. It consisted of a central amblyopia, coming on usually with suddenness, and simultaneously, or nearly so, in the two eyes. The failure of sight progressed up to a certain point a few months or so after the attack commenced, and there remained stationary, without improvement and without manifest deterioration. The fields of vision were never contracted at the periphery, but presented in most cases a central scotoma, more or less absolute. Colour sense was abolished or much diminished. There were no symptoms of any importance. Headache frequently accompanied the attack, but was never severe. Occasional functional disorders of the nervous system were present, and subjective light and colour phenomena were seen. Sight was never completely lost, and was very rarely improved by treatment. The ophthalmoscope revealed the appearances at an early period of a partial papillitis, while in those cases which were observed later there were pallor and incomplete atrophy of the disc. Some cases more recently reported were then briefly described, together with some unpublished cases, one of his own and six of Mr. Nettleship's, which the latter had allowed him to make use of. These added seventy-five individuals to the original number of Leber. Statistics gathered from them showed that the disease was roughly grouped about two periods of life, puberty and that of the decline of the sexual functions. The great majority occurred at the age of puberty, for of sixty-five in whom the age of onset was known, nearly fifty occurred between the ages of thirteen and twenty-three inclusive. In answer to the question "What other diseases of the optic nervous system bear the stamp of heredity?" he compared the group of retinitis pigmentosa and allied affections, contrasting them with Leber's disease. He decided that consanguinity had very little to do with the disease under discussion. All hereditary diseases represented in the histories of the patients or their families were then mentioned, and the question of how far they were prone to produce amblyopia was entered into. Amongst the diseases discussed as to their connexion with optic atrophy were hereditary syphilis, epilepsy, insanity, and spinal diseases, while a special reference to hereditary ataxy was made. Collecting the evidence, he concluded that the hereditary nature of the affection depended on the transmission of a neurotic diathesis (the neuropathic type in which Leber classed the individuals), which left the patients specially prone to any exciting influence which was liable to affect the optic nerve. Exciting causes were looked for which had a depressing influence upon the nervous system in general. The influence of the sexual system was first discussed, and the liability to nervous disorders at the two periods of life represented by the disease was regarded as extremely significant. These influences were more potent in young men than in women, but he had been unable to find any case in which a disorder of vision could be attributed to sexual influences alone, because in most of the cases other common exciting causes (for example, tobacco) were present. An illustrative case of Mr. Nettleship's was mentioned. The more important question of tobacco as an exciting cause was then discussed at some length. In nearly all the families added by him to the previous literature of the subject, one or two of the individuals were smokers. The cases, if isolated and treated as cases of tobacco amblyopia (which they strongly resembled), would be regarded as instances of a bad or stationary type. Very similar cases existed, though rare, among juvenile smokers. Mr. Hutchinson had expressed the opinion that tobacco caused blindness owing to an idiosyncrasy which might be found in several members of a family. He would go further than this, for though when a depressing influence upon the nervous system was present tobacco might act as the exciting cause and induce the well-known form of amblyopia, still something more was needed to explain these non-retrogressive cases. He therefore considered that the evidence pointed to some peculiar inherited predisposition to pathological disturbances of the nervous system, the precise part of the nervous system (the optic nerve) being determined by the kind of exciting influence.

The following living specimens were shown:—

Mr. R. MARCUS GUNN: (1) Peculiar Dotted Appearance of both Retinæ with Retinal Asthenopia, illustrating the retroid condition described by him in the third volume of the Ophthalmological Transactions; (2) Chronic Abscess of Cornea.

Mr. NETTLESHIP: (1) Retinitis in Diabetes; (2) Persistent Hyaloid Artery.

Mr. H. JUKES: Retro-Bulbar Neuritis (?) occurring in a

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young woman who had suffered from rheumatism recently. The blindness came on suddenly on Oct. 1st, and rapidly became worse for a few days, but was now passing away.

Mr. DOYNE: Hæmorrhage into Yellow Spot Region.

Dr. W. J. COLLINS: Central Detachment of Retina in Albuminuric Retinitis. This specimen led to an interesting discussion on a side issue—the prognosis in albuminuric retinitis.—Dr. Coupland and others believed that such detachments of the retina only occurred in cases associated with extensive dropsy, and he regarded the detachment as a dropsical phenomenon.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of the above Society was held on Friday, Oct. 21st, Dr. Alfred Lee, President.

At the first meeting of the session the PRESIDENT delivered an inaugural address, of which the following is an abstract. Having thanked the Association for the honour they had done him in electing him their President for the second time, Dr. Hill reminded his fellow officers that the electorate was this year extended by the amalgamation of the provincial associations of medical officers of health with the parent Society, though when he threw out the suggestion at the last annual dinner he had then no presentiment that realisation was so soon to follow the conception of the project. He heartily congratulated them on the change, because the union of their separate forces must naturally increase their strength and authority and develop their usefulness, while in no way interfering with the action of the individual branches, which now constitute the one body. Power was secured only by unity of action and concentration of effort, and their influence could not fail, therefore, to be more effective in a variety of ways than it had been in the past. The President then went on to indicate some of the directions in which their united energies might be advantageously employed, as, for example, in bringing influence to bear on the Legislature, in order to obtain the passing of new laws and the amendment of old ones affecting the public health, in approaching the Local Government Board, in improving their relation to the public press, in promoting or extending institutions having a scientific object (such as bacteriological, chemical, and other investigations serving to promote sanitary science)—in fact, in a great variety of ways their consolidation into one society, instead of frittering away their energies and resources, could not fail to prove highly advantageous. Dr. Hill mentioned, as a new feature of the Society, the proposed holding of a meeting annually in some provincial town, instead of, as hitherto, having all the meetings in London, and referred to the circumstance that whilst the provincial associations have not been able to see their way to the publication of many highly valuable papers owing to the expense attending it, it was now intended that the most meritorious of the papers read, not only before the Society, but also its branches, should be embodied in the Transactions. The speaker went on to say that it had long been felt that one of the great wants now experienced by sanitarians was a journal of public medicine. At present the abundant material for such a periodical is neither scientifically treated nor readily available, and he thought that under the new conditions of the Society the establishment of such a journal was more feasible than it ever had been, and with the advance of hygienic science much more necessary. Every hygienist had deplored, too, the non-existence of a physiological and pathological institute, properly furnished for the scientific investigation of many questions affecting public health. The subject of bacteriology was one that demanded prompt and thorough investigation; but, to effect this, much time, a properly appointed laboratory, considerable funds, special training, and undivided attention were necessary. A proof of the value of a study of micro-organisms had lately been afforded in connexion with that *opprobrium medicinæ*—autumnal diarrhœa. After alluding to the inquiry which the Local Government Board set on foot some seven years since, in search of the causes which contributed to the great prevalence of this disease, more particularly in certain of our large towns, and paying a graceful tribute to Dr. Ballard, who had charge of the inquiry, the President drew attention to the important results obtained from some bacteriological investigations made last year by Dr. Tomkins, the medical officer of health for Leicester, a town which has for many years suffered unaccountably from diarrhœa. In 1880 Dr. Johnston, the then medical officer of health, failing to discover the cause of autumnal diarrhœa, suggested with prophetic shrewdness that "the more immediate cause will be found, if I mistake not, to consist of fungoid impurities in the air derived from the putrefaction of animal refuse." Dr. Tomkins, pursuing this idea of the origin of the disease in low forms of life, found in his bacteriological examination of the air that in one part of the town a cubic metre of air contained from 60 to 900 germs, while in another part, in the same quantity of air, he found from 2000 to 7000, while the part of the town where this excess of microbes existed was the low-lying and flat portion, with sewers too small, deficient in fall, and constantly liable to stagnant deposits and overflow. In this area, which at a very liberal estimate did not contain more than one-third of the whole borough population, 216, or 84 per cent., of the deaths occurred. But the most valuable feature of the investigation is the production of diarrhœa by the administration of a very small dose of the growths obtained from the air of the contaminated part of the town, and from certain internal organs after cultivation through several generations. Dr. Hill went on to say that there was no doubt that the micro-organisms of sewer air, of rooms, and of drinking water all offer a prolific field of study, which as yet lies almost entirely unexplored. Did not all this show, he said, how great a desideratum an institution would be where such work could be systematically and efficiently conducted? There were many other questions, such as sanitary law and professional ethics, for the solution of which standing committees might be appointed. Dr. Hill next dealt with the important influence exerted on the public health by the generally bad condition of dwelling-houses, both old and new, and remarked that the happiest results would ensue if every sanitary authority would adopt and courageously apply *in toto* the bye-laws recently published by the Local Government Board. Having condemned the principle of the Bill recently introduced into Parliament, by which architects, surveyors, and others, as well as medical officers of health, could certify as to the fitness of a building for occupation, and contended that medical officers of health were the persons best qualified by their special knowledge and experience to do the work, the speaker proceeded to review some of the reasons why sanitary legislation often failed, and said that, though an ardent admirer of local self-government, yet the action of local authorities often needed such a stimulant as could only be supplied by the independent and firm action of a strong and wise central authority. As an illustration of bad local management Dr. Hill cited one recently furnished in a village in the north of England where typhoid fever was said to have appeared in nearly every house, and almost every conceivable nuisance to exist in close proximity to the dwellings. Proceeding to comment upon the groundless objections urged by the prejudiced or ignorant against vaccination, he expressed surprise at the views held by Mr. John Bright, as shown in a letter recently published, and said the final words of the letter—"I would not compel them to submit"—are calculated to do much mischief, coming from one so eminent. The effects, indeed, are already seen. The letter has already been distributed broadcast by the press, and is no doubt effectually working its evil influences. It is, in fact, difficult to feel sure that the anti-vaccinationists may not ultimately gain the day, especially when we bear in mind that the anti-agitators succeeded in removing the Contagious Diseases Act from the statute book. He urged upon his hearers to do all in their power to show the public how groundless was the contention that medical men profited by vaccination; that, on the contrary, they suffered pecuniary loss through the prevention of disease which it occasioned. Turning to the evidence that the sanitary situation of the day compared very favourably with that of past years, the speaker said that, going back no further than 200 years, we find that the death-rate in London was 80 per 1000, whereas now it is less than one-fourth of that amount; this improvement might be taken as an illustration of the general advance which had taken place during the last two centuries. Owing, however, to the impulse given by the terrible cholera visitation of 1832, this advance has been most rapid during the last fifty years, and the many sanitary laws passed during that period, all of which were cited, show that the Legislature has been willing, not merely to keep pace with public opinion, but actually to lead it. Dr. Hill concluded by reminding them that the Public Health Act of 1848 was a permissive one,

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and that proposals to render sanitary legislation compulsory evoked great opposition, partly on the ground that the sanitary staff of that day was all that was needed, and that the salaries of medical officers of health would be simply money thrown away. Whether this was so or not he would leave them to judge by a comparison of the mortality figures of nine of the largest English towns during the ten years previously to 1875—i.e., before the passing of the Public Health Act of that year—with those for the twelve years since that Act came into operation. In the decade 1865–1874 the average death-rate of London, Liverpool, Manchester, Salford, Leeds, Hull, Glasgow, Edinburgh, and Birmingham was 27·8, in the succeeding decade it fell to 24·2, while the average of the last ten years was only 21·5. If the death-rate of the ten years previously to 1875 had been maintained during the following twelve years, the lives of no fewer than 247,346 persons who were living at the commencement of this year would have been sacrificed, while on Dr. Farr's estimate of £159 as the value of the average human life, the pecuniary value of the lives saved in these nine towns during the last twelve years of active sanitation represented very nearly forty million pounds. This takes no account of the enormous amount of suffering that has also been avoided. Sir Spencer Wells had estimated that two millions out of eight millions which the population of the United Kingdom had increased by during the last fifty years might safely be regarded as a very moderate estimate to set down as a clear gain due to sanitation, while he put the utility of sanitary action in a very striking form, by stating that the average duration of human life had risen during the same period from thirty to forty-nine years. Dr. Hill concluded by saying that though there was much ground for congratulation on what sanitary science had already achieved, it would not do for them to "rest and be thankful." Much remained to be done, both by way of improvement, extension, and initiation. The great object to keep in view was cleanliness—clean bodies, air, food, water, and dwellings.

ABERNETHIAN SOCIETY.

THE opening address at this Society was delivered by R. THORNE THORNE, M.B., F.R.C.P., at St. Bartholomew's Hospital, the subject being "Cleanliness in its relations to Health." The nursing staff of the hospital were present by invitation. The following is an abstract of the points dealt with in the address:—

Dirt being matter in the wrong place, and nature having allotted to every form of matter its proper place, such matter, it was held, only becomes hurtful to a man in so far as the well-ordered design of nature was interfered with. In elucidation of this principle the speaker entered at some length into the conditions by which the air of our towns and cities became fouled by crowding of houses on area and of persons in houses, the inhabitants inhaling each other's emanations, until typhus fever became a common and fatal disease amongst the destitute classes subjected to these uncleanly circumstances; and then taking the case of London, he showed how typhus had been practically extirpated as a current endemic fever by the measures that have been adopted during the past twenty years in the demolition of unhealthy property, the opening out of wide streets and other breathing spaces, and the provision of some open space to the front and rear of new dwelling houses. Liverpool taught the same lesson, but in a somewhat different manner; for whilst the typhus mortality of that city had, on the whole, undergone material diminution, the disease still caused a regular annual mortality, and tended to recur in limited epidemics, which constituted a danger to the kingdom at large. It was then shown by quotations from official and other documents how rife the conditions of uncleanliness with which typhus is especially associated still are in Liverpool. Coming next to the need for cleanliness in such matters as water supply and means for the disposal of the solid and liquid refuse of populations, the state of this country with regard to enteric fever at the present date was compared with that which prevailed before modern sanitary works had been carried out in a comprehensive and intelligent manner, and it was shown how great had been the saving of life from this once preventable continued fever as the result of the expenditure of public money in works of sewerage and water supply which had been voluntarily incurred by the people of this country, and which has cleanliness as its principal aim. Applying somewhat the same principles to the subject of house drains, the progress in cleanliness of the air of our hospital wards was discussed, and it was shown how, by means of cross-ventilated lobbies between closets and wards, and by means of an air-break between ward and drain, the sick were now no longer subjected to the inhalation of drain emanations. In the conflict with disease which each sick person is engaged in, the need for the utmost procurable cleanliness of air breathed was urged, and it was pointed out how, in modern hospital construction, it was now sought to attain this object. Coming next to details in connexion with attendance on the sick, the great importance of personal cleanliness was insisted on, and instances were given to show the dangers resulting from the handling of food supplies by those having charge of persons sick from infectious and other diseases. Cleanliness was to be aimed at in every detail, and the conditions under which some departments of modern surgery are carried out were instanced as types of that scientific cleanliness which should be observed in all our dealings with the sick. In conclusion, it was pointed out that nature is remorseless in exacting the penalty of disease and death for any breaches in her laws as to cleanliness; that the innocent suffer with the guilty; that unintentional acts, involving want of cleanliness in points of detail on the part of those devoting their time to the care of their fellows, are as swiftly followed by fatal consequences as is the crass neglect of those who deliberately violate every law of cleanliness by permitting the wholesale accumulation of filth about their dwellings; and that in order to remove such causes of preventable disease, it was above all things necessary to cope with the ignorance that prevailed as to the potency for mischief of dirt in all its forms.

Reviews and Notices of Books.

Zum Gegenwartigen Stand der Cholerafrage (On the Present Position of the Cholera Question). By MAX V. PETTENKOFER. Munich and Leipsic: R. Oldenbourg. 1887.

THE brilliant series of articles upon the subject of cholera by Professor von Pettenkofer, which he has been contributing to the *Archiv für Hygiene*, have been, at the wish of many friends, and to the decided advantage of sanitary workers all over the world, collected into one volume. In its present form this work constitutes, perhaps, the most important addition in modern times to the copious literature on the subject, for it not only makes clear the position assumed by the learned hygienist himself, but contains a full review of all other doctrines, which he has submitted to careful and impartial criticism. Our readers are already acquainted with the conclusions arrived at by Professor v. Pettenkofer, for a short time ago (THE LANCET, vol. ii. 1887, pp. 339 and 386) we published a digest of the articles which constitute the closing chapters of this work. It is therefore only necessary now to direct attention to the earlier portions of the book in order to show how the subject has been treated. In the first place this review is in the main limited to the facts and opinions that have been elicited concerning cholera since the epidemic in Egypt in 1883, and the discovery of the comma bacillus. The debates, conferences, and reports that have been held or made in Paris, Berlin, London, and Rome since that date have furnished a vast amount of material. From these it is possible now to distinguish two main doctrines—viz., that cholera is due to a specific virus having its habitat in India, and capable of being conveyed to other parts of the world by human intercourse; and the other, that cholera may arise spontaneously in any part, from telluric, atmospheric, and individual conditions, such as determine the milder disease, cholera nostras. Those who hold to this latter opinion Prof. Pettenkofer terms the *autocthonists*, while he would apply the term *ephodists* to those who attribute infective properties to the disease. He is constrained, however, to admit that the ephodists are of two classes: those, namely, who consider that cholera is transmitted from person to person (the *contagionists*); and those who consider that

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infectivity is inoperative unless the local conditions are favourable (the *localists*). Professor Pettenkofer himself is a determined localist, whereas Professor Koch is the chief exponent of the contagionist school. The monograph mainly consists in the detailed exposition of the doctrines thus severally held, with the arguments adduced in their support. The autocthonists form a select minority, but they have a powerful exponent in Dr. Jas. Cuningham, who refers the development of cholera to atmospheric and telluric influences. His views are well known; whilst, among others, the late Jules Guérin, in the debates at the Paris Academy, contested on behalf of the spontaneous origin of cholera. Having discussed these doctrines, Professor von Pettenkofer next deals with the contagionists, taking up in turn each of the main propositions in support of their teaching—such as the infection of the healthy by the sick, the excreta as the medium of infection, epidemics in hospitals and barracks as proof of contagion, infection through cast linen, ship cholera, dissemination by human intercourse, and lastly by infection of drinking water. It is needless to say that each of these points is thoroughly entered into; and with regard to some it is shown that too much stress has been laid upon exceptional instances, and with regard to others that a different explanation is forthcoming. Thus, as regards personal contagion, it is clearly shown that doctors and nurses are no more prone to cholera than those who are not engaged in constant attendance upon cholera patients; that the occurrence of cholera on shipboard is paralleled by cases of malaria which are known to occur occasionally under like circumstances; and lastly, that the drinking-water theory—which the Broad-street pump did so much to support—does not necessitate the adoption of the contagionistic doctrine. Turning next his attention to the position of the localists, Professor v. Pettenkofer furnishes a full account of the views which he himself has always been foremost in advocating—the influence of locality, of soil and drainage, and the support to these views derived from the history of epidemics. Besides discussing these subjects, he devotes a section to theories of cholera before entering on the summary, which we have already analysed.

St. Bernard's: the Romance of a Medical Student. By ÆSCULAPIUS SCALPEL. London: Swan Sonnenschein, Lowrey, and Co. 1887.

THE life of the medical student of the present day is more prosaic than it used to be, and less fitted than formerly for the pen of the novelist. The increased stringency of examinations, both preliminary and professional, has done something doubtless to effect this change, but the whole tone and tenour of student life has also vastly improved. It was therefore with pain and disappointment that we read the pages of this latest romance. The author is apparently a man of culture and wide reading, whilst Browning seems to be his favourite writer, if we may judge from the number and variety of quotations from that poet. But the work is not redeemed by these features from being a gross calumny upon medical students and their teachers; upon hospitals and their staffs. As an instance we may take the account given of a certain "Dr. Robert Day," who is readily recognisable from the statement that having been a successful teacher in Edinburgh, he was compelled to eke out a precarious existence in London from the odium incurred through his alleged complicity with the resurrectionists. The thinly-veiled pseudonym affords no disguise; but it is uncharitable, to say the least, to hold up this man, who retained a dignity in spite of his misfortunes, as an atheist and a revolutionary. For this is what his own pupil and friend says in the biography of the anatomist, published in 1870: "Without any outward religious manifestation, K—— was nevertheless a man of high reverence and belief"; and again, speaking of his conversation on high topics, he says, "In his hours of communicativeness, and where more was meant than meets the eye, on matters of revelation the Deistic feeling seemed to predominate in K——'s mind." It is surely not good taste, even in a romance, to so pervert the character of a man who, although not professing an orthodox faith, is here depicted (p. 56) as "an atheist, a dogmatic atheist, interested not merely in denying the God of the Bible, but in proving the existence of any supreme being at all." This, however, is but a small point in the whole, although it may fairly be taken as a sample of the amount of fact (!) which underlies the fiction. Briefly put, the medical student whose life is described is represented as losing his faith by contact with the materialism which springs from anatomical studies; he is drawn away from his high ideals by associating with the students (whose greatest exploits are knocker-wrenching) and with Socialists, male and female, to whom he is introduced by Dr. Day and his daughter. Further, in his hospital experience, he meets on all sides with nothing but callousness and indifference to suffering and a brutal desire on the part of house surgeons (!) to maim their patients without cause, in order to add to their list of capital operations. The physicians and surgeons of St. Bernard's are of the same inhuman type, so that we can hardly wonder at the hero of the tale, who comes to his senses after taking an active part in a music-hall riot, shaking the dust of such an institution off his feet and mysteriously burying himself in Spain for a number of years, until he is discovered by a like-minded young lady, the only daughter of a late physician to St. Bernard's, and possessed of great wealth. She, too, is struck with the inhumanity of the prevalent hospital system, and not only spends her fortune in seeking to supplant this by the foundation of a new order of things, but marries the man who takes a leading part in the new revolution. When to this is added the horrible episode of a physician and lecturer on physiology becoming so brutalised by his vivisections as ultimately to commit wife murder and suicide, enough, we think, has been said to show that the author, in spite of his cleverness, has over-reached himself. He cannot believe that clinical hospitals are as bad as he has depicted them, or that physicians and surgeons are so sunk in depravity as those who figure in his pages; and, what is more, he will not succeed in making any sane person believe it either. The book will serve no useful purpose, for it bears with it its own condemnation.

A Text-book of Organic Materia Medica. By ROBERT BENTLEY, M.R.C.S. Eng. F.L.S. Pp. 415. Longmans, Green, and Co. 1887.

THIS book is described both upon the title-page and in the preface as being systematically arranged, and especially designed for the use of students. It goes without saying that with Professor Bentley's experience of botany the systematic arrangement is fully carried out; indeed, as the botanical editor of the last edition of the British Pharmacopœia, he is essentially the right man to rearrange systematically the facts which we have before (in part) received alphabetically. Of the author's work in this direction it is impossible to speak too highly; his table of contents is in itself a study of botanical arrangement, and well repays the labour it must have cost. The descriptions of the general characters of the plants or parts of plants employed are full and yet clear and concise, the author's experience with several botanical handbooks having given him a power of lucidity which renders his descriptions elementary, and at the same time thoroughly practical and accurate. As a student's text-book however, or at least for medical students, it may be doubted whether the fulness of information does not occasionally pass beyond the limits of desirability—e.g., when we are told that a tree is "frequently

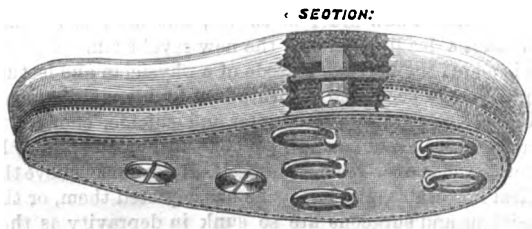
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planted near the Hindoo temples," or that a substance is "imported from the United States in bales, casks, or bags," or that another is "finally packed in hempen sacks, called *bags* or *pockets*, for the market." On the other hand, the official preparations are noticed all too briefly; sometimes the doses are mentioned, more frequently they are omitted; mostly the compositions, even the amounts, of important ingredients like opium, are ignored. The alkaloids present in cinchona barks are enumerated, but no mention is made of their properties or actions. The medicinal properties are given very briefly and imperfectly; citrate and other salts of caffeine are said to be "in some use as nervine stimulants," and no mention is made of their employment for other purposes. The book is well illustrated and carefully printed on good paper. As an interesting work of reference it will be of much service, but as a text-book for medical students it is too unequal, too full in some particulars, too brief in other directions.

New Inventions.

DAW'S TRUSS.

IN consequence of the difficulty in procuring a truss with a pad capable of affording a complete sense of comfort, Mr. Thomas George Daw has invented an improvement in the form of the pad, which enables the wearer to alter the pressure according to his will within the area covered by the pad. The illustration shows the arrangement by which this is carried out, and the pressure may be adjusted to any degree. This is accomplished by screws and projectors fitted between the padding and the pad-plate, the means for turning the



screws being on the outside of the pad-plate. By turning a screw to the left, the projector forces that part of the pad against which it acts outwards, giving it increased pressure. The screws have a fine pitch, giving the projectors the means of delicate adjustment, and offering great stability to the parts projected. This pad can be applied to the ordinary truss spring, and will be found useful in many cases where the ordinary pad is not worn with comfort.

ALLEN'S SURGICAL PUMP.

ONE of the best things exhibited at the American Medical Congress was this invention. It is simple in principle, effective in working, and can be applied to a great variety of purposes. It consists of a piece of india-rubber tubing passed through one and out at another opening in a metal box or case. A handle with a crank movement brings a roller in contact with the interior coil of indiarubber tubing enclosed in the metal case. In revolving, the roller subjects the tubing to pressure, so as to close the calibre of the tube, and in that way a powerful aspirating effect is exerted. By a simple mechanism the roller can be brought into different degrees of contact with the tubing, or, when not in use, altogether set free from it. One side of the metal box can be easily removed, so that the internal mediastinum can be at once got at, and the tubing removed and replaced by a fresh piece as often as necessary. It is easy to see that by the addition of a few details the pump, the action of which can be at once reversed or made to move either way with equal facility, can be applied to numerous purposes. For instance, it can be used with trocars and cannulas in the surgical treatment of empyema, in dilating the urethra or uterus, in transfusion of blood, in cupping, as a lithotrity evacuator, or as a stomach-pump and enema syringe, and so on. The apparatus is difficult to describe without the aid of plates, but the principle of its action seems so simple and certain that we do not see how it can fail to attain the various objects to which it can be applied. One of the delegates to the American Congress brought away a case containing Allen's surgical pump fitted with all the appliances (which are, after all, of a very simple and inexpensive kind) necessary for fulfilling the various objects for which it was designed; he has been good enough to demonstrate its use to us, and we can consequently speak from personal knowledge of its merits. We confidently predict that it will be appreciated in this country as soon as these merits are known; and we may in the meantime recommend any of our readers to obtain one of the cases fitted with the surgical pump in question, together with the other articles accompanying it, and try it for themselves. We do not think they will be disappointed. It can be obtained of Messrs. Chas. Truax and Co., surgical instrument makers, 75 and 77, Wabash Avenue, Chicago, Ill.

DRAKE AND HASSAM'S PATENT BRONCHITIS KETTLE AND FOOD WARMER COMBINED.

OUR attention has been drawn by the patentees to a new bronchitis kettle, which appears to have many advantages over those ordinarily in use. At one side of the steam-generating vessel a round orifice is made, lined with tin, going nearly to the bottom of the vessel. Into this orifice a vessel or saucepan is inserted to hold beef-tea, milk food, or any delicacy required to be kept hot in the invalid's room, without occupying any more space on the stove or necessitating another fire, as the saucepan does not interfere in any way with the steaming powers of the kettle. An important improvement is the telescopic tube, which can be drawn out or pushed back without any loose parts to get mislaid or lost, and the kettle when out of use occupies very little more room than an ordinary one. The vaporising chamber at the extremity of the tube is intended to contain cotton wool saturated with any medicament prescribed, and is so arranged that it does not check the free passage of the steam through it. The kettle is well made, and its cost is moderate. The patentees are Messrs. Drake and Hassam, Churton-street, Belgrave-road, Pimlico.

THE THERMO SAFEGUARD FEEDING-BOTTLE.

THE patent thermo safeguard feeding-bottle, made by Messrs. Pocock, Keevil, and Co., 72, Wandsworth-road, S.W., is chiefly valuable on account of its permitting the temperature of the food to be ascertained by the nurse whenever the bottle is put into use. The thermometer is so embedded in the bottle as to constitute an integral part of it. In addition to the thermometer, the bottle possesses the advantage of being graduated in ounces, so that the precise amount of food administered can be known. There is no objection to the shape of the bottle, which has many points to recommend it. For ourselves, we think it best to abolish the tube and to have as few indiarubber fittings as possible—indeed, the teat should be the only indiarubber portion. The slipper-shaped bottle is the best, despite its being a little awkward to use.

A PASTEUR INSTITUTE FOR RIO DE JANEIRO.—The Brazilian Government has arranged to establish a Pasteur Institute for the inoculation of persons bitten by rabid animals, and has appointed Dr. Pereira dos Santos, a pupil of Pasteur, as director.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 29, 1887.

Now that the vacation is over, and the medical schools are again in full session, the agitation for obtaining degrees for London medical students will soon recommence. We would therefore remind our readers of the present position of this important question, or rather questions, for the two considerations of granting degrees to London medical students and of establishing in London a new university, which shall be modelled on the Scotch and provincial universities, and thus be a true Teaching University, are indissolubly interwoven. The power of granting degrees to London medical students is eagerly desired by almost every medical teacher in London, although there may be some difference of opinion as to the conditions and methods by which this would be best obtained. The two Royal Colleges of Physicians and Surgeons have agreed to ask for this power to be conferred on them, and a representative committee of delegates has held many meetings to consider the desirability and practicability of granting degrees in Medicine and Surgery to persons who have passed the Conjoint Examinations of the two Colleges. A petition has been laid before the QUEEN in Council, praying for a new Charter, a copy of the draft of which we printed in our issue of July 2nd, p. 37. In fact, the Royal Colleges ask to constitute themselves into a University with one faculty only—viz., that of Medicine,—and are silent as to the needs of teachers and students in Arts, Science, and Laws. The demand for a degree for London medical students is to them a purely professional one, and is the only one to which the Colleges have to pay attention, for their concern is with the medical aspect of the question alone. The sufficiency of the Conjoint Examinations, the unrivalled clinical advantages for medical education in London, and the eminence of the clinical teachers are the great grounds on which they ask for this power, and most persons will allow that they form a valid reason for the giving of a degree to a London student on the same terms as his competitor in Scotland or in the provinces can now obtain it. But to the scheme of the Royal Colleges there are a multitude of objectors, some making use of merely selfish arguments, and others treating the question from a wider and more academical point of view. The Irish and Scotch Colleges of Physicians and Surgeons demand a similar privilege if a Charter be granted to the English Colleges. The Scotch Universities, and most authorities on education in this country also, are objecting, either actively or passively, to the granting of degrees by purely professional corporations, and to a one-faculty University. The provincial schools say that they form an integral part of these corporations, and so cannot allow them to give exceptional advantages to students educated in London. Manchester, Birmingham, Leeds, and Bristol send members of Council to both the Colleges of Surgeons and Physicians, and they urge that the students at these provincial schools must be admitted to any qualifications or degrees granted by the corporations on the same terms as those which apply to London medical students. Hence the protests against this power being conferred on the Royal Colleges are very numerous, and come from widely different quarters. The University of London says nothing officially about this scheme, but seems to regard it as one for the institution of an inferior degree, with which they have no concern.

More especially anxious for the formation of a new Teaching University in London, of which they would constitute the most important factors, University and King's Colleges have come together, and have also submitted a draft Charter and a petition to the QUEEN in Council. They ask for powers to constitute a new university, of which they would form the Faculties of Art and Science, whilst all the medical schools in the London district would form the Faculty of Medicine. The representatives of the Royal Colleges might be considered the representatives of the London Medical Schools, or they might be chosen directly from the schools. This project has the advantage of not being opposed from the professional corporation or the single faculty standpoint, and is strongly supported by those interested in the formation of a real Teaching University in London. It has also the sympathy of those authorities on educational progress who believe that proper teaching must be by systematic courses, and that examinations are only an imperfect substitute for real teaching and the personal influence of able professors and lecturers. The University of London, however, dislikes this new movement, and, not wishing to see its two most important London Colleges withdraw from under its wing (although the connexion is at present merely nominal) and follow the lead of Owens College, has asked for opportunity to show cause why the prayer of University and King's Colleges should not be granted. The University of London has departed from its original function and become an Imperial Examining Board, and cannot do anything in the way of uniting or co-ordinating the teaching bodies in London; hence the need of a new institution for this work. As for the multiplication of small universities, which some dread, a new university in London and a university in the midlands are required to place England on the same footing as Scotland and Germany, and, to judge from the short history of the Victoria University, nothing but good would be the outcome of their establishment.

The institutions interested in this movement are so numerous, the conflict of opinion is so great, and the standpoints from which they are argued are so various, that a Royal Commission will probably be required to inquire into the whole bearings of the question. We can but express our regret at the loss of Dr. MOXON and Dr. WILSON FOX and the illness of Sir WILLIAM GULL, who all took a keen interest in the question.

IT goes without saying that an art—or, more accurately, an applied science—which concerns man as a physico-mental organism, must be cosmopolitan. Only in so far as racial peculiarities and topical conditions may modify the development of this organism can there be anything national or local in the character of medicine. Moreover, although there will necessarily always exist a certain amount of

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rivalry between nations, and we are not prepared to say that this competition is undesirable in the interests of progress, nothing like exclusiveness can reasonably exist in reference to a matter which is of general concern. It is always well to try questions of this sort thoroughly, and if we apply a crucial test the wrongfulness of any limitation as regards medicine will be instantly apparent. Thus, suppose for a moment it were possible that the physicians of any one nation should become possessed of a special remedy or process of treatment for the relief of pain or the cure of disease, it would be a crime against *humanity* for them to keep their knowledge secret. The medical sciences and arts stand on a footing which makes them common property. This cannot be said of any other department of knowledge, except perhaps religion; and the same feeling which compels a sincere believer to propagate his faith must make it incumbent on a physician to place the whole of his knowledge at the disposal of all other physicians without regard to place or people. Whatever rivalry there may be must relate to enterprise in the acquisition of knowledge, not to the advantages accruing to its possession. Practically this is generally recognised, but there are, nevertheless, considerations that ought to have weight in reference to the subject in question, and which it may be worth while to suggest.

The fact that medicine is cosmopolitan, in a sense in which universality cannot be predicated of any other department of discovery and progress, implies that not only the science and art, but the profession and great body of practitioners in all countries are *one*. This is true in regard to our cloth as it is true of no other. Even the priest or minister of religion has his shibboleth, and he cannot go far without encountering some other priest or minister who, from his standpoint, is heterodox. The physician cannot find in the wide world any educated practitioner with whom he is not on the common footing of a fellow-student. The only qualification to this statement relates to those who attempt to set up "pathies" or systems. This is why—and the only reason why—the profession sets its face resolutely against any endeavour to introduce the sectarian element into medicine. A man may believe or disbelieve what he pleases, provided only that he does not erect his belief into a "system" or combine with his followers to form a sect. Rational medicine is the outcome of a study of health and disease, and whatever differences of opinion may exist between students or practitioners must be the results of differing degrees of acquaintance with natural facts, or with various phases of the same facts as seen from diverse standpoints. There are different developments of knowledge among us, and special forms of disease are indigenous in certain localities or peculiar to particular races of man; but the differences of view and judgment which arise out of these diversities of the subject do not affect the underlying principles of our science, because we are all studying nature, whose manifestations are, *cæteris paribus*, the same everywhere. Particular views may prevail in certain countries and among special communities, but they are either the effects of isolation, or they are specialities of truth proper to the local conditionings of fact. Although the differences of doctors are proverbial, there is positively no other profession which is so united, or which makes so near an approach to a community of aims and interests as the medical.

The cosmopolitan character of medicine implies much more than international courtesies and friendliness among the physicians of all countries. They are bound together by a common purpose—namely, the relief and remedying of physical suffering; and of late years a new and most potent interest has been superadded, with the aim to eradicate disease. For success in this last-mentioned enterprise, even more markedly than in respect to other of our endeavours, we are dependent on mutual help and sympathy. It is obviously impossible to fight the battle against disease, as a whole, effectively, unless we all unite to further the common object by every means in our power. Nothing but good can result from the cultivation of a spirit of unselfish amity among the physicians of all nations. There must be no jealousy or distrust; no unfriendliness or suspicion of any kind ought to be tolerated. Some may have had advantages in one way, some in another. What one shall chance to lack the other ought to be glad to compensate. Our indebtedness to the industry of the German physiologists, pathologists, and chemists is so great that it cannot but be acknowledged; yet this cannot inspire us with any feeling of chagrin or dislike. On the contrary, it binds us to them as learners to a teacher, and if in our time we can contribute anything to the common fund we are too grateful to be in the least degree elated with our success. To the physicians and surgeons of other nations, the French, the American, the Dutch, the Russian, and others, we are likewise related as recipients, and, possibly, also as the contributors, of knowledge. It must be ever thus, and the sole anxiety should be to increase the obligation on all sides. The great International Debt of science is one that brings nothing but good in its train, and those are the happier and the more prosperous who make the largest investments and are the largest holders. In the interests of science and for the benefit of suffering humanity, it cannot be too widely and practically recognised that medicine is cosmopolitan, not merely as an accident of its development, but as an essential fact and consequence of its very nature as the applied science of health preservation and recovery for man.

THE subject of sea-sickness has recently been receiving special attention, both in this country and in America, our own columns bearing witness alike to the interest felt in the question, and its highly speculative character. It is somewhat singular that although we are the most seafaring nation in the world, and although *mal de mer* is one of the most frequent and most distressing of maladies, we are by no means certain of its pathology, and no plan of treatment hitherto devised has been successful in commanding general acceptance. It may not, however, be without advantage to recall some of the most plausible theories regarding the causation of sea-sickness, and some of the therapeutic measures which have been advocated with more or less confidence.

Broadly speaking, there are but two theories regarding its pathology (each, however, with some modifications in detail), one assigning the malady to gastric irritation, while the other regards some disturbance of the nervous mechanism, whether of the cerebro-spinal or sympathetic system, as its efficient cause. According to the former view, the motion

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of the vessel causes some disturbance of gastric digestion, resulting in nausea, vomiting, and the long train of disagreeable symptoms with which all are familiar. Of those who lean to this theory, some regard the churning up of the contents of the stomach as the essential point, while others suggest that there is relaxation of the pyloric sphincter, and hence a flow of bile into the stomach. In favour of this theory are the facts that many sufferers describe the gastric symptoms as first in the order of time, that pre-existing digestive disturbance or constipation undoubtedly increases the tendency to the affection, that "bilious" people often suffer very severely, that bile is occasionally present in the vomited matter, and that pressure or counter-irritation over the stomach, combined with gastric sedatives, has met with some success in the hands of various practitioners. On the other hand, the objections against regarding sea-sickness as a purely gastric affection are many and weighty. The facts that women suffer out of all proportion to men, and that young children are almost wholly exempt, are difficult of explanation on the theory that mechanical agitation of the contents of the stomach is the efficient cause of the malady. Violent exercise of various kinds must cause an amount of gastric disturbance at least equal to that produced at sea, but nausea and emesis do not ensue. Again, it is not denied by any that nervous apprehension of the malady greatly increases the liability to it, or that it not very rarely occurs during perfectly calm weather at sea. Nervous, excitable women have certainly been known to suffer on shipboard even before the vessel had begun to be in motion. If we inquire carefully into the clinical history of these cases, we shall find that in a very large proportion the first symptoms are commonly cerebral, violent vertigo being one of the most frequent. The above facts are hardly reconcilable with any theory of sea-sickness which professes to explain it as the consequence of mechanical disturbance of the contents of the stomach.

Of the theories of the causation of this malady which refer it to the nervous apparatus there are at least three: first, that it is due to paralysis of the sympathetic system; secondly, that it is due to disturbance of the circulation in the brain-substance; and thirdly, that its true cause is to be sought in some interference of equilibrium in the fluid of the semicircular canals. This last theory, which has enlisted many advocates, draws its support mainly from the analogy of certain symptoms found in MENIÈRE'S disease and cognate affections of the internal ear with those of sea-sickness. Of the two former "nervous" theories it is sufficient to remark that they are not necessarily mutually exclusive, and that, taken together, they account perhaps better than any other hypothesis for the long train of complicated symptoms which unite to constitute *mal de mer*.

Turning to the question of treatment, we find the whole subject in a chaotic condition. Sedatives and tonics of the nervous system, gastric sedatives, stimulants, counter-irritation either of the abdomen or head, pressure over the stomach by pads or stays—these and a host of other measures have been vaunted as specifics by one authority, and in turn ridiculed as wholly worthless by another. Of the drugs recommended with more or less confidence, we may mention bromide of potassium, chloral, chloroform, nitrite of amyl, pilocarpine, strychnine, atropine, caffeine, bismuth, cocaine,—to choose a few out of a list whose length suggests reasonable doubts regarding the pre-eminent virtues of any single medicament. Probably some or all of the drugs mentioned may find their use in combating some of the effects of sea-sickness; but we must have much more definite proof than any yet forthcoming before we can accept any single remedy as in any sense a specific. It is worthy of note that sailors have no favourite remedy for sea-sickness, which they invariably regard as a necessary discipline through which the majority of seafarers must be content to pass. With the enormous experience of the malady which every day affords, it is difficult to believe that the sovereign virtues of any specific—should such be discovered—would long fail to command universal recognition.

If specific treatment is still *sub judice*, there can be no doubt that much may be done by way of relief and palliation. Any dyspeptic symptoms, especially constipation, should as far as possible be subdued before a voyage is undertaken. Efforts should be made to allay undue nervous apprehension. The food taken should be such as the stomach can readily tolerate and assimilate. The sufferer should seek and keep the recumbent position—preferably, if the weather permit, upon a couch or easy chair on deck. Pressure or counter-irritation over the stomach may sometimes be tried with advantage. Ice and dry champagne—part of the undoubted value of the latter being probably due to the carbonic acid which it contains—are useful. If the vomiting become very spasmodic, sedatives may be tried. In the adoption of other lines of treatment the practitioner must be guided by the symptoms present in each individual case.

AMONG the pursuits open to women and highly fit for them that of nursing stands conspicuous. The demand for nursing is one of the demands of the generation. In the time of our forefathers few ventured to indulge in a nurse. Such a luxury was reserved for hospital patients and lying-in women. And even then the nurse was a very different person from what she is now. She was sometimes intelligent and resourceful, tender in touch, a kind of mother where the natural mother was not forthcoming or available. She was sometimes *that*. And sometimes she was altogether otherwise—coarse in manners and in touch ignorant and superstitious, vulgar and intemperate in habits, and rough in speech; given often to heavy and perhaps snoring sleep at those critical hours of the night when fever and delirium and pain do their worst, and the patient needs a watchful friend.

It is strange that society should so long have borne with nurses so uncongenial and so incompetent. In fact, it was afraid of the class, and the fear still survives. Old-fashioned people can scarcely be persuaded even now to trust themselves, especially in the night, with a professional nurse. But things are altering fast. We have heard of an eminent physician, who in the occasional illnesses from which even eminent physicians are not exempt, betakes himself to bed, sends for a good nurse, and so waits patiently till he is better. A large section of intelligent people are beginning to see the wisdom of such conduct. Under the guidance of his medical practitioner it not only secures the best attention to the patient, but it saves the health of other members of the household whose illness would

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involve the most grievous complication of the patient's distress, and fits them the more for daily services in the sick room when the nurse is having her much-needed rest or exercise. People who act so, and are fortunate enough to get a good nurse, find that they have got a veritable friend, and often a lasting one; and the people who act so are becoming more numerous every day. In a remarkably neat little pamphlet before us is an admirable address on the "Duties and Conduct of Nurses in Private Nursing,"[1] by Dr. W. L. RICHARDSON, of Boston Massachusetts, in which the writer tells us that in Boston, with, perhaps, 400,000 inhabitants, on May 13th, 1886, there were 163 trained nurses on the register, and only ten of these were disengaged, and several of these had only just become free. The supply there falls short of the demand. There are in the United States alone more than thirty training schools for nurses, which, it is gratifying to read, took their origin in imitation of the first English Training School for Nurses, founded in honour of Miss FLORENCE NIGHTINGALE in connexion with St. Thomas's Hospital in 1860. Those who are practising, or intend to follow, the calling of nursing should read the Address we have mentioned. If they can receive it, and enter into the spirit of it, the remaining prejudice against trained nurses will soon pass away. We gather that in the United States, or at least in the Boston Training School for Nurses, two years' training is thought necessary. It is curious that, whereas less time is required for medical education than in this country, more is required for the education of nurses. But this is only by the way. What we so heartily admire in this Address is the exposition of the spirit in which the study of nursing and the practice of it should be carried out. The candidate or probationer is to aim at being the best nurse, at learning her work thoroughly, and, when she has done so, at doing it in a spirit of the greatest gentleness and serviceableness, not only towards the patient, but also the members of the patient's household. Part of the prejudice against nurses is due to a certain mechanical routinism with which many nurses go through their duties to the patient, and part to an unsympathetic attitude towards the other members of the household, who have a most natural hesitation in abandoning their nursing duties to a stranger. It is the misfortune of the nurse, unlike the doctor, that she comes into the sick house as an absolute stranger. A really wise and kind nurse sees this, and makes allowance for and soon overcomes the natural prejudices of friends, and even of servants, who are apt to think that a nurse is exacting and unsympathetic towards them. The proof that nurses generally are better trained is in the fact of the rapidly growing appreciation of their class, and the demand for their services. They have little excuse now for being unpopular. The work of FLORENCE NIGHTINGALE, and the devotion of thousands of ladies, of every denomination, to nursing work, invest their calling with a charm which the slightest tact on their part will enhance.

Mr. H. C. BURDETT has announced a benevolent proposal to make the prospects of nurses more comfortable in a financial sense. He does not give us the details on which he proposes to base a system of provision for days of age and infirmity. There can be but one opinion of the desirableness of such a provision if it can be well based. Mr. BURDETT sees in the Women's Jubilee offering and the QUEEN'S views as to its disposal the possible basis of such a fund as will guarantee to certificated nurses beyond the age of fifty a pension proportionate to the contributions which they have made. He would be content with £20,000 out of the £75,000 which her MAJESTY has determined to devote to the benefit of nurses and nursing institutions. It is for nurses themselves, under the advice of actuaries, to say whether a special fund is better than insurance in some ordinary way, as the Post Office or the insurance offices, which guarantee the payment of a sum at a given age on condition of regular payment over a series of years. There seems an extensive desire on the part of nurses to join in a pension scheme of their own. The gracious intention of Her Majesty presupposes an organisation that will command public confidence and, at the same time, represent nurses widely and faithfully. Whatever the organisation the QUEEN may choose as the medium of her bounty, she has already indicated her respect for nurses as a class, in which, as in so many other matters, Her Majesty well represents the public sentiment.

[1] Printed by Field and Tuer, Leadenhall Press, E.C.

THE struggles of administrators of public health legislation are well depicted in DR. ALFRED HILL'S presidential address to the Society of Medical Officers of Health last week. These officers may congratulate themselves on the past, and may regard with satisfaction diminished death-rates and reduction of disease, but they must never rest and be thankful; it is their duty everlastingly to persevere in the work of improvement, and for this there is no finality. Their difficulties are not due to an unwillingness of Parliament to arm those they serve with the powers they would desire, and on this point Dr. HILL was able to cite the numerous measures which had been passed, and which were still being passed, to further their work. Nevertheless there was failure, and the failure arose chiefly from the ease with which sanitary authorities could evade enforcing laws of which Parliament had recognised the importance. Sanitary legislation was always permissive and never compulsory, and it was often impossible to induce the local bodies to give facilities for these laws to be administered in the districts they controlled.

The fault, if there be a fault, is in the fact that health has only recently come to be appraised at any value and that the present generation is only beginning to claim a right to have their lives protected against disease as well as against violence; but this claim having come, it is well to see that the machinery exists which will enable it to demand a sufficient hearing. There is no probability that for many years to come the adoption and enforcement of sanitary laws will be made compulsory: as Dr. HILL himself says, society is not ready for it. Admitting this, it is the more necessary that the bodies which are to control the health condition of districts should be constituted in such a manner as to give reasonable promise that they will perform the duties for which they are appointed; this much devolves upon the statesman, and not upon the health officer. The improvement of areas, and the ensurance of a permanent tenure of office by those whose duty it is to advise local authorities, are absolute essentials for successful work. At

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the present moment the health officer is working under difficulties which are not apprehended by the general public. His liability to removal from office if his views are more advanced or his energy more pronounced than is desired, and the system of his election for a period of two or three years, tend to militate against the freedom of his action and the proper performance of his duties. Even where central control is exercised, it is not always attended with success. England affords but too many examples of the dangers of partial control—of a control which serves rather to deprive local authorities of their sense of responsibility, than to lead them to adopt the course which it is desired they should follow.

Dr. HILL has, however, pointed out another requirement of the health officer upon which the future of public health must largely depend—the education of the officer himself. It is no exaggeration to say that his opportunities for this purpose are in England far behind those of many other European nations. In many cases he begins his duties so imperfectly trained that he has to learn his subject after he is appointed to his district; and it is, indeed, matter for surprise that, under these circumstances, the results to which Dr. HILL could refer have been attained. But, in dwelling on the need for the local officer to possess adequate knowledge, we would desire to go further and claim for the Central Board that its opportunities for studying the etiology of disease should be very largely increased. Our statesmen are not always prepared to recognise that knowledge should precede legislation, and are too ready to consider the inconvenience which may result when such knowledge exhibits their procedure in an unfavourable light. But if there is to be progress in the prevention of disease, if local authorities are to be expected to be more zealous than heretofore and their efforts to be more productive of good, the maintenance of an intelligence department is an absolute necessity. The branch of administration that has until now been engaged in duties of this nature has by the excellence of its work proved the advantage which results from the scientific investigation of disease, but its powers have been more limited than they should be in the future, and it has been crippled by alliances which ought never to have been formed. The health officers who listened to Dr. HILL'S address may well demand that experience gathered from all parts of the country should be placed at their disposal, and that of the districts they serve, and that precise information should be obtained on all points upon which they have to advise their authorities.

Already there are disquieting rumours that an unwise economy is threatening to diminish the prospect of further lessons being learnt. We may still hope that so short-sighted a policy will not be finally adopted, but if it should be found that the rumour is based on fact, we may hope that the health officers of the country, strengthened by the combination they have formed among themselves, and of which Dr. HILL tells us, will not hesitate to use their influence for the prevention of an occurrence so detrimental to the public interest.

DR. T. GRAINGER STEWART, Professor of the Practice of Physic in the University of Edinburgh, has been gazetted Deputy Lieutenant for the city and county of Edinburgh.

Annotations.

"Ne quid nimis."

THE GENERAL MEETING AT THE ROYAL COLLEGE OF SURGEONS.

THE Committees of the Associations of Fellows and of Members of the Royal College of Surgeons have agreed to move the following resolution at the general meeting to be held on Thursday next, Nov. 3rd:—"That this meeting disapproves of the application for a new Charter which, *first*, does not confer electoral powers upon Members of the College and the right to be eligible to sit in the Council in accordance with the resolution passed at the general meeting held on Nov. 4th, 1886—namely, 'That it would conduce to the welfare of the Royal College of Surgeons, and would tend to promote the interests of medical polity and education—(1) if Members of the College were empowered to take part (separately or conjointly with the Fellows) in the election of members of the Council; (2) if Members of the College were eligible to sit in the Council, provided (*a*) that no Member of the College shall be entitled to vote till he have been such member for a period of ten years; (*b*) that no Member of the College shall be eligible to sit in the Council till he have been such Member for a period of twenty years; and (*c*) that not more than one-fourth of the Council shall consist of Members of the College who are not also Fellows;'—and, *second*, which does not provide that no alteration shall be effected in the constitution or in the relations of the College, or in any of its bye-laws, without the consent of the Fellows and Members convened to discuss such alteration in accordance with a resolution passed at the general meeting held on March 24th, 1884, and reaffirmed at the meeting held on Oct. 29th, 1885." In the event of this being carried, it will be proposed that a copy of the resolution shall be sent to the Lord President of the Council by the Secretary of the College, and also that a deputation shall be nominated to wait upon the Privy Council in order to represent the opinion of the meeting.

SIR WILLIAM ROBERTS ON ALCOHOL.

OF all the things that are most "spoken against nowadays, perhaps alcohol is the first. It has been called the "devil in solution." But that does not prevent the medical profession from "giving the devil his due," and accordingly, though it has been extremely careful of late years in the prescription of alcohol, and much given to the curtailment of its use, even when patients thought they were using it moderately, some of our greatest physicians and surgeons have felt constrained to testify in its favour, and to argue that it has, or must have, some virtues, not only as a medicine, but as a drink and as a diet. The latest instance is not the least significant. Sir William Roberts delivered last week, to the Medical Society of University College, an address on Alcohol from the point of view of History and of Natural History. The burden of Sir William's argument was that nations which use alcohol compare favourably with nations that do not. Their achievements are greater, and their rate of mortality is less. The nations which use most alcohol show the smallest death-rate. Sir William said truly that the bad effects of alcohol were obvious enough. They obtrude themselves in every street and on every family. The coarse lesions of excessive drinking are the most obvious things in the dissecting room or the pathological museum. But it is not so easy to be just to the good effects of alcohol. They are not so palpable, but they may be equally actual. It may ward off disease, and it may offer effectual resistance when

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disease invades the frame. It may contribute to a bolder, braver, and more powerful national history. Such an argument is, of course, not new. It recalls the arguments of Sir James Paget, the late Dr. Moxon, and others a few years ago. It is what many think, but what all have not the courage to say in face of a public opinion strongly urged to a different estimate, and strongly supported in such an estimate by high medical authorities. No one will deny, too, the special authority of Sir William Roberts in such a question. At the same time, we are bound to say that there is need for more specific facts on the side of those who tell us that a lower death-rate obtains among the nations that drink hardest. Sir William Roberts himself said, and with obvious truth, that such a statement was not tantamount to saying that the high drinking-rate and low death-rate were to be regarded as cause and effect. Have we any proof that alcohol saves men from any specific form of disease? Some say that it tends to save from tubercular disease; some from cancer; some from infectious diseases. There is a want of proof. But there are actual facts to show that coarse drinking favours death by consumption and death by cholera. And let it be remembered that it is the coarse drinking that characterises, according to Sir William, the nations with the low death-rate. As to the case of malignant disease, we do not recall for the moment any actual statistics. Is Sir William prepared to maintain that the western nations, to preserve their superiority, are to continue to drink in the old quantities? For it is the quantity that he associated in his address with the great results of health and history. We have a great deal of hard work to do before we can determine the *rôle* of alcohol in health and history. We have other great factors to consider—race, climate, sanitation, religion, and morals. Meantime let teetotal dogmatism take note of the weighed words of Sir William Roberts.

ENTERIC FEVER AND HÆMATURIA IN PIETERMARITZBURG.

IN his last annual report to the Pietermaritzburg Corporation, Dr. James F. Allen, the medical officer of health, enters at some length into two subjects of interest. The first is as to the connexion between enteric fever in man and a similar bovine disease. He has before pointed out that there was a disease in calves which resembled enteric fever, and which occurred at the same time of the year as that disease; that there has been a remarkable prevalence of enteric fever amongst cow and dairy keepers, and in the neighbourhood of cowsheds and dairies in Pietermaritzburg; that the disease tended to appear year after year in the dairies affected; and that it attacked those who used cow dung, either as a fuel or for the purpose of laying the earthen floors of their houses. He now quotes the opinion of one of the Government veterinary surgeons, which is largely in favour of the views he has expressed; and he reminds his readers that the description which is given of the calf complaint by this official coincides in almost every particular with that which applies to enteric fever. He next calls to mind the fact that, long before it was ever supposed that diseases such as enteric fever could in any way originate from bovine complaints, it was known that the fever followed the distribution of milk from special dairies, and that as precautions came gradually to be taken, which had for their object the prevention of milk contamination by any faulty sanitary circumstances in dairies, so the spread of disease from this source has been diminished. Such measures of dairy control are certainly needed to prevent the communication of bovine disease to man, and, since one of the ordinary regulations deals with the registration of dairies and the periodical inspection of cattle, their adoption in this and other countries should facilitate the investigation of such sources of danger as Dr. Allen refers to.

Another disease which has been the subject of inquiry is hæmaturia, which is common in the colony generally. Premising that the disease exceptionally attacks boys, Dr. Allen proceeds to give an account of the manner in which the Bilharzia hæmatobia, or other allied distoma or fluke, finds its way into the urinary tract. The children, he asserts, who resort for bathing purposes to the shallow pools of sluggish streams come into contact with the muddy deposits which are the natural habitat of the fluke. Dr. Bilharz noted the existence of the parasite amongst the inhabitants of the Nile Valley, and he believed it got into the body in unfiltered drinking water, and so into the vascular system. Dr. Allen, dealing solely with the facts that come under his own observation, holds that the history of the conditions is entirely at variance with the theory of the vascular system being the habitat of the parasite in the human body. He first asserts that those who bathe are the main sufferers; that swimmers resorting to deep waters are not amongst those mainly affected; and that drinkers of water are not especially attacked unless they are bathers too. And he further alleges that, the breeding beds of the fluke being disturbed by boy wadera, the sack-like receptacle of the prepuce in early life forms a place to which the flukes would readily have access, and in which they would be easily retained until they could enter the opening of the urethra. Indeed he suggests that the presence of the fluke in the waters of the Nile was one of the reasons for the operation of circumcision; and he adds that in certain parts of Africa where the fluke exists circumcision is or has been practised—as, for example, among the Basutos. That practice, he believes, will again have to be generally adopted in a country where bathing is an essential to comfort, if the prevailing hæmaturia, so general a cause of debility in the colony, is to be prevented.

FRENCH MEDICAL ASSOCIATIONS AND MUNICIPAL APPOINTMENTS.

FRENCH provincial medical associations are more apt to take cognisance of alleged breaches of professional etiquette by their members than similar societies in this country. This is as it should be, always supposing that the decrees of censure or expulsion are only pronounced after a careful and unbiassed investigation of the circumstances. Two cases have recently occurred in the Ain Association, which have been the subject of considerable discussion in local journals. In Bourg, the municipal medical inspector of prostitutes having died, the mayor appointed a Dr. X. to act in his place. After nearly a year the municipal functionaries were changed, a different party getting into power, and Dr. X. was, without much loss of time, superseded by Dr. Z., whose political views were in accordance with those of the new corporation. Dr. X. complained to the Medical Association, and notwithstanding the plea of Dr. Z. that he had in no way sought the appointment, and that Dr. X. was only appointed temporarily as acting inspector, the Association, or rather twenty-nine out of the eighty-one members of it, decided to expel Dr. Z. Again, the infirmary authorities of the town of Beliey, after a change in which a fresh political party came to the front, decided to dismiss their two medical officers, MM. A. and B., appointing in their places two gentlemen, MM. X. and Z., whose political views were more in accord with their own. Here the event gave rise to highly polemical discussions in the local press, party feeling running very high. The Medical Association, however, expressed its opinion of the matter by expelling MM. X. and Z. for having made their political views a means of supplanting their *confrères*. In commenting on this matter, a French medical journal remarks that in most

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provincial towns medical appointments are given, as a rule, to the practitioner of the oldest standing, and that in this way they all tend to accumulate in the hands of the same man, with an entire absence of regard to his fitness for any of them. There are, too, a number of appointments given by interest, often to very unsuitable persons, who unfortunately, as a rule, have a prescriptive right to them for life. So that there is a curious contrast between appointments decided by public competition, which are nearly always limited in tenure, and those given by interest, which can be held for life. The writer of the article referred to holds very strongly that all appointments should be given by competition, but he does not indicate how anything like a satisfactory competitive examination or oration could be conducted in a country town every time such an appointment as that of medical officer to the local infirmary or fire brigade happened to be vacant. One thing is very plain, and that is that our system of the Poor-law Board's sanction being required for any change in the medical and other appointments might with advantage be considered, if not actually copied, in France.

COMMUNICABILITY OF DISEASE FROM ANIMALS TO MAN.

THE transmission from the cow to man of scarlet fever and tuberculosis was the subject of the opening address of Professor Hamilton at Marischal College, Aberdeen, in which the lecturer gave an excellent account of the investigations conducted by Mr. Power and Dr. Klein into the relation of a cow malady to scarlet fever in man. He referred also to the observations of Copland, who believed that both the dog and the horse could suffer from the latter affection, and stated that a febrile condition of some kind can be communicated to animals by inoculating them with the blood of persons who are the subjects of scarlet fever. He further expressed the opinion that tubercle could be conveyed to man by means of milk from tuberculous cows. While the possibility of such occurrence cannot be denied, it must be borne in mind that Klein has pointed out that there are certain important differences between bovine and human tuberculosis; and again, Creighton has shown that man occasionally suffers from a form of this disease which resembles the bovine malady, making it probable that by far the greater number of cases are not of bovine origin. Nevertheless, the subject deserves much greater investigation, and certainly every effort should be made to prevent the distribution of milk from tuberculous cows.

SICK BENEFITS IN GERMANY.

IT is well known that the German Government, which much affects vast insurance schemes, has formed sick benefit funds under a comprehensive plan in all parts of the Empire. The benefits guaranteed comprise free medical attendance, payment of wages during illness, and burial money, and membership is made compulsory upon the industrial classes. The system, which did not at first work at all smoothly, is coming, it would seem, into better repute with the people generally; but we imagine that its results in actual work will be somewhat disappointing to its promoters. The following illustrative figures, which have appeared in a report made by the United States' Consul at Leipsic, are interesting under this point of view:—The influence of the system on the relief of the poor is shown by the statistics of Hamburg. The cost of the sick poor who would have been cared for out of the poor rates in Hamburg in 1885, taking the average of the four preceding years, would have been 293,223 days of sickness at 1m. and 34,464 at 75 pfennings; the actual numbers were only 230,123 and 34,254. The saving in this decrease is estimated at 66,257m., or a net saving of 21,673m. The figures of the Leipsig City Hospital lead to a similar result. The cost of treatment chargeable to the poor rate, which was 51 per cent. in 1884, was only 39 per cent. in 1885, and simultaneously the proportion borne by public or private sick funds under the law rose from 8 to 24 per cent. The total number of persons insured under the Act is 4,294,173, or 91·7 per 1000 of the population. In itself admirable, the result does not seem commensurate to the efforts made to achieve it. For example, who among ourselves would have paid any attention whatever to Canon Blackley's scheme of National Insurance if, instead of promising to abolish poor rates, it had promised only to reduce them by 15 per cent, and this at a cost of coercion on a vast scale? The efficient tendance and relief of the sick poor is only a very partially solved problem among ourselves; but the experience of Germany so far does not incline us much to the adoption of the German methods.

THE SALE OF DAMAGED FOOD.

No argument should be needed to impress the fact that food, however simple in kind, must, if it is to fulfil its purpose, be of sound and nutritious quality. Alike with a view to the performance of work and the prevention of disease, the daily bread of poor as well as rich must be such as to satisfy this primary condition; and it is happily one of the certain benefits conferred by free trade that a greatly increased importation of the necessaries of life has done away with every excuse for the fraudulent sale of damaged food. There is, however, a temptation bred of the very abundance of an overflowing market and the competition in trade, which is its outcome, and of this we have daily proof in the seizures of unsaleable fish, fruit, &c., effected by the sanitary authorities. Of the economic side of the question generally we will say nothing; but when we find food which, as lost merchandise, has lain in the ooze of the Thames, recovered and offered for sale, as happened a few days ago, and when substances putrid with decay are successfully foisted upon an unthinking population, we feel that it is time to speak a word for the economy of health. Sanitary inspectors have repeatedly shown a praiseworthy zeal in condemning the wares of unscrupulous salesmen, and have, as a rule, been supported by a judicious application of the law on this subject. It is, however, neither advisable nor requisite that the whole task of detection and exposure should fall to the lot of any body of officials, however efficient. The consumer can, in matters of this kind, do much to protect himself. It is for him to be careful in his purchases, and the more so in proportion to the price which he is called upon to pay. It is, unfortunately, no uncommon thing to find that food of an altogether inferior and even injurious character is offered at the market value of a representative commodity, but it is naturally when the further attraction of cheapness is added that a customer's mistaken thrift is most likely to cost him dear. Fish, flesh, fowl, and vegetable, as supplied by many smaller purveyors, call for very careful selection on the part of a purchaser. He must therefore assure himself that the imported meat, which looks so well at a distance, has not lain too long on the butcher's hands since it was landed in a frozen state. He must remember that fruit, vegetables, and fish are still to be had in an unwholesome condition, though the summer season is over. In particular, we would warn him of the sealed mischiefs which are apt to be enclosed within the covers of carelessly tinned meats and other eatables. The danger of putrefaction associated by many with the latter is not wholly imaginary. There is fortunately available, however, one sufficiently instructive sign of its presence—namely, the convexity of the metal ends, which invari-

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ably results from the outward pressure of putrefactive gases. Allied to if not identical with this subject is that of illegal food adulteration, a form of fraud for the detection of which some technical skill is usually requisite. The protection of the public in this case must therefore largely depend upon the energy of official supervision, and we are happy to think that this power is in fairly active operation. Unfortunately, it has happened at times that vigour in securing conviction has not been adequate, and we are certain that an increased activity of the executive in this direction would not be misapplied.

EXPERIMENTS ON ANTIPYRETICS.

DR. H. A. HARE of the Pennsylvania University has recently published in the *Therapeutic Gazette* (July and August) details of an experimental inquiry upon the action of antifebrin, salicylic acid, and carbolic acid upon animals, with reference to their effect upon normal and abnormal temperature, the concomitant changes in the circulation, and also to determine in what manner their influence is exerted. It will suffice here to reproduce the conclusions arrived at, which are of considerable value. First as to *antifebrin*. This substance is found to produce marked depression of normal bodily temperature, with an occasional fall in arterial pressure. It is singular that antifebrin has but little power in reducing the pyrexia caused by the introduction of pepsin into the blood, which may depend on some organic changes produced by the digestive ferment. The drug reduces normal temperature apparently by influencing both production and dissipation, and in fever it acts by decreasing heat production. *Salicylic acid* slightly reduces normal bodily heat, but has very little influence over artificially induced pyrexia. It has no special influence upon the circulation, beyond a slight increase in arterial pressure, more marked in the normal than in the pyretic animal. In reducing normal temperature it probably acts on both production and dissipation, but it is uncertain and irregular in reducing high temperature, frequently failing to prevent an increase of bodily heat. *Carbolic acid* possesses considerable power in lowering normal bodily temperature, and possesses more influence over pyretic temperature than does salicylic acid. It probably decreases arterial pressure when lowering temperature, and very likely diminishes temperature by affecting both heat production and dissipation. These experiments, although of value in themselves, illustrate the difficulty in inferring therapeutical action from such observations. The type of fever produced in animals by pepsin can hardly be comparable to the pyrexia of disease; otherwise it is difficult to explain why the results above obtained do not wholly accord with clinical experience.

THE HEALTH OF RANGOON.

SOME interesting details concerning the health of Rangoon, Burmah, are to be found scattered in the recent Report on the Working of the Rangoon Municipality. Nineteen acres of land have been obtained for the purpose of erecting slaughterhouses. The mortality for 1886 was 26·6 per 1000. Of 1724 specified diseases, as many as 1240 were fatal attacks from "fever." Measures have now been adopted for providing Rangoon with a proper system of sewerage. No drainage, in its true sense, now exists. Every description of filth is thrown into holes by or beneath the houses, which are no longer built high off the ground, but stand on a damp subsoil, the emanations from which largely poison the air. As for sewage disposal, the river effects this, the deposits in the creeks being washed out by the tides. Since the report, containing extracts from those submitted by Dr. Pedley to his corporation, was issued, we learn that all the needed financial arrangements for the new system of sewerage have been completed, and that the specialities of the Shone system are to be utilised with a view of overcoming the difficulties which attach to the low-lying nature of the ground on which the greater part of Rangoon is built.

EXCAVATING MYELITIS.

HYDRO-MYELIA, syringo-myelia, and peri-ependymal myelitis are synonyms of the excavating myelitis on which MM. Joffroy and Orchard recently read a paper before the Academy of Sciences, Paris (*La France Médicale*, Oct. 11th, No. 119). In two cases which they examined they found evidence of a slow inflammation, and they consequently reject the view that the cavities result from enlargement of the central canal from cystic degeneration of a hæmorrhagic or gliomatous focus. These authors believe that the distribution of the vessels to the centre of the cord explains the anatomical disposition of the cavities. According to them, the course of events is first a myelitis affecting a special site in the neighbourhood of the ependyma, and this inflammation causes an obstruction of the vessels supplying the grey matter around the ependyma, and consequently there results a softening which proceeds to excavation. The formation of the limiting wall to the cavity follows, or is posterior to these alterations, and its pathogeny is therefore the same as that of the wall of ancient foci of cerebral hæmorrhage or softening. This interpretation differs from that of Grimm, who finds in the constitution of this vascular false budding membrane the characters of a tumour the origin of the whole process.

THE LATE EDWARD THRING, M.A.

THE death of the Rev. Edward Thring, who became head master of Uppingham School in 1853, is worthy of notice by us in relation to his courageous and well-remembered conduct in an epidemic of typhoid fever in 1875-76. The school numbered about twenty-five boys when he took charge of it; in his hands the numbers increased rapidly till they reached between three and four hundred. He might have doubled these numbers but that he considered that a head master ought to "know" his boys, and with greater numbers this knowledge would be difficult if not impossible. In the year 1875, during the autumn, a fever epidemic broke out in the town of Uppingham; from the town it spread to the school, and one or two fatal cases are recorded; on Nov. 2nd the school was obliged to disperse. The whole of the school houses and buildings went through a process of disinfection, and the sanitary arrangements were well looked after, and on Jan. 28th, 1876, the school met again. But the sanitary arrangements (drainage, &c.) of the town were so defective, and the fever had taken such hold of the place, that it was impossible to keep the school clear, and after three weeks several of the boys fell ill again. Now arose the question, "What was to be done?" The school could not be kept there, and it might be fatal to disperse it again. The only way out of the difficulty was to temporarily remove the establishment. On March 14th the school broke up for the Easter holidays. The masters went off to inspect different places on the Welsh coast, and, after many failures, they succeeded in finding a place suitable for their purpose. This place was Borth. There they found a good large hotel and a long row of nice houses forming a terrace from the station to the sea; of these they took entire possession. Ten days after, on March 22nd, a special goods train of eighteen trucks unloaded 300 bedsteads, with their bedding, on the Borth platform; the whole of the school furniture was removed, including even the contents of the gymnasium and library. The hotel stables were converted into the school carpentery and the coachhouse into a gymnasium, and a wooden schoolroom, 83 ft. by 20 ft., was erected in

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the hotel grounds. On April 4th the boys assembled in their new quarters, and so the sojourn at Borth began. It was hoped that after the next Christmas holidays the school would be able to reassemble at Uppingham. Sir H. (then Dr.) Acland of Oxford undertook to inspect the sanitary condition of the town, and his judgment was submitted to the trustees of the school, who did not feel safe yet in recalling the school to Uppingham; indeed, they were not able to return until after the Easter holidays, which began on April 10th, 1877. During the stay at Borth in the autumn of 1876 a few cases of scarlet fever occurred; but by taking every precaution the disease was speedily stamped out. On the school leaving Borth, a large demonstration took place, at which some of the leading inhabitants made speeches expressing their sorrow that the school was going away, and their kind feeling of respect for Mr. Thring, the masters, and the scholars.

COLCHICUM IN GOUT.

WHETHER colchicum should or should not be administered is often a question of debate. Dr. Carter of Birmingham gives his own conclusions in the current number of the *Birmingham Medical Review*. He believes that this drug should be avoided in all cases attended with debility and cardiac feebleness, and that its use should be limited to early attacks of a sthenic type, and when the pulse is one of high tension. From the liability of colchicum to depress the system and to interfere with renal elimination, its administration should not be continued for a longer period than is absolutely necessary for the relief of pain. In order to prevent the employment of a larger quantity than is necessary for this purpose, it is desirable to give the drug in moderate doses, repeated at short intervals, rather than in a large single dose. He argues that there is no evidence of the curative influence of colchicum, and thinks, with many others, that, in spite of the relief afforded, it tends to favour recurrence, and that it is safer to avoid its use altogether if this is possible. We are disposed to admit the general soundness of these views; but the evidence in favour of colchicum promoting the development of gout is not entirely satisfactory. Dr. Carter's observations on colchicum as a vascular depressant are rational, and he has found that such dilators of arterioles as nitrite of amyl, nitro-glycerine and nitrite of sodium are scarcely inferior to colchicum in affording relief to gouty inflammations. Veratria, a powerful vascular depressant, is a principal constituent in a well-known nostrum for gout. Besides filling the cutaneous arterioles and swelling the skin, which actively perspires, with lowering of the general blood pressure, colchicum diminishes the function of the sensory nerves, and may in this way tend to relieve pain; the sweating may also aid elimination, and relieve the kidneys from some of their work.

FOREIGN COPYRIGHT.

THE law of foreign copyright has been greatly improved by the Convention which was last month ratified at Berne. By this treaty the authors of "books, pamphlets, and all other writings, dramatic or dramatico-musical works, musical compositions, with or without words, works of design, painting, sculpture and engraving, lithographs, illustrations, geographical charts, plans, sketches, and plastic works relative to geography, topography, architecture, or science in general—in fact, every production whatsoever in the literary, scientific, or artistic domain which can be published by any mode of impression or reproduction,"—will enjoy in respect of their works published in one of the countries now forming an International Union the same right in every other such country which the domestic laws give to native authors in respect of works published within the jurisdiction. Thus, the perplexities incidental to the multiplicity of treatises on the subject of copyright which have hitherto subsisted are replaced by the simplicity of one uniform system of reciprocal acknowledgment of the rights of authorship. One most important alteration which is thus made in the proceedings incidental to a claim of copyright is that it is no longer necessary for this purpose to register a book abroad. Compliance with the formalities required by the law of the country of original publication will be recognised throughout the Union, and a pitfall in the path of the unwary author has thus been effectually and securely closed. Another piece of good news for some among our readers is that the benefits of the Convention are to be extended to the authors of "all works which at the moment of its coming into force have not yet fallen into the public domain in the country of origin." This provision is, indeed, subject to a somewhat indefinite reservation of a right in each country to limit it by special agreement or domestic legislation. The contracting States are Great Britain, Germany, Belgium, Spain, France, Haiti, Italy, Liberia, Switzerland, and Tunis. Thus, the Union is a large one, and makes some important additions to the field open to meritorious authorship. But we still miss the name of the great Republic of the West. How long will our kinsfolk of the United States hold aloof from this act of literary justice?

THE LATE MR. C. R. BLAKISTON.

WE regret to record that Mr. C. R. Blakiston, the assistant house-surgeon at the Shrewsbury Infirmary, who was accidentally shot by his senior colleague, Mr. Harries, died on the 21st inst. from his injuries. After a hopeful day or two, symptoms of spinal meningitis as well as of peritoneal mischief set in, and he rapidly sank. Mr. Blakiston entered the Medical Department of King's College in 1881 as a preliminary science student, but after passing that examination did not proceed with the University course. He held many clinical appointments at King's College Hospital, including that of dresser and senior clerk to Sir Joseph Lister, Bart.; and he was a most able and intelligent surgeon. He was appointed assistant house-surgeon at the Salop Infirmary last year, and performed the duties of that office with great diligence and ability until his unfortunate accident. He was only twenty-four years of age, and his funeral took place at Shrewsbury General Cemetery on the 24th inst.

OPIUM-SMOKING IN CHINA.

IN Mr. Duncan Main's report of the Hangchow Hospital in connexion with the Church Missionary Society for last year, an analysis is given of the eighty-two cases of opium smokers which were treated. The great majority of these were from thirty to fifty years of age, only one being under twenty, and only two over sixty. They seem generally to have commenced the habit in the hope of gaining pleasure, but in a few cases they were impelled to begin smoking opium for the relief of pain. Some had continued the practice for fifteen or twenty years, but the majority only for from two to seven years. They belonged to all classes of society, the shopkeepers and commercial classes appearing to form the majority. In connexion with this subject Mr. Main says: "If those who are ever anxious to minimise and doubt the evil effects of opium smoking on the Chinese could spend a few days in the capital of Chekiang, we fancy they would rapidly come to the conclusion that of the physical ruin, harrowing scenes, beggary, and misery consequent on opium smoking the half has not been told." As to treatment, the opium is cut off absolutely; no routine system is followed with reference to drugs, but symptoms are treated on their merits. Plain food, a room with a lock and key, and kind words are half the cure. To give the patients liberty is a mistake, and to put

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them on their honour is out of the question, as most of them lack all nobleness of mind. To allow them to roam about would mean a keeper for each patient, and he would certainly fail very frequently in his charge.

WORK AT THE HANGCHOW HOSPITAL.

EIGHTY-EIGHT cases of suicide, or attempted suicide, have been treated at this hospital. Opium was the favourite poison, and was used in eighty cases. Some tried mercury, arsenic, kerosine, oil, and salt. One young woman swallowed four gold rings, after cutting them into sixteen pieces. There was one case of hanging, and one of attempted cut throat. A very frequent disease in Hangchow is dyspepsia due to bolting half-boiled rice and vegetables and overloading the stomach. Amongst the list of operations those for entropium, trichiasis, pterygium, and other ophthalmic affections hold a prominent place. An attempt is made to train up students. Here, as elsewhere in China, the great difficulty of teaching anatomy, owing to the impossibllity of dissection, is felt. Thanks, however, to the Wm. C. Jones Fund, an admirable anatomical model, consisting of 2000 pieces, has been obtained, and with this "a very proficient" knowledge of anatomy has been acquired by the students.

LECTURES ON BACTERIOLOGY.

THE fact that the Society of Medical Officers of Health has had under consideration a proposal for the establishment of a laboratory for the study of bacteriology and other experimental methods of research amply testifies to the need there has been for a systematic course of instruction, and for a laboratory for research on this subject. It is only right, therefore, that it should be well known that this want has been supplied by King's College, and we may again draw attention to the fact that the new laboratory which has been constructed during the vacation will be open on November 1st for instruction and for original research. The course of instruction will be similar to that given in Berlin. Professor Crookshank will deliver about fifteen lectures, while the practical course under his direction will consist of daily work in the laboratory for a period of four weeks. The lectures will be given on Mondays, Tuesdays, Thursdays, and Fridays, at 10 A.M They will be illustrated with diagrams and typical preparations, and followed by practical work. Admission will also be given to the lectures without attending to the practical work. The College has thrown the laboratory open to all gentlemen, whether students of other departments of the College or not. The practical courses, in fact, are especially intended for medical officers of health, veterinary surgeons, and senior students, and we understand that special arrangements will be made with those whose duties may prevent their attending the laboratory daily without interruption.

FEVER IN LONDON.

THE number of cases of scarlet fever admitted into the Metropolitan Asylums Board hospitals during the week ending Oct. 21st amounted to 275, being two less than that admitted in the preceding week. Thus far the behaviour of the epidemic has followed the course which might be predicted by the experience of former years. November should show a general decline with a temporary rise, and December a steady decline from the beginning to the end of the month, the average number of cases for the whole year being reached in January. The returns up to 10 o'clock on Wednesday state that during that night there were in the hospitals 2450 patients. On the morning of that day there were 2270 suffering from scarlet fever, and 123 from enteric fever. During the past week 11 cases of enteric fever were admitted into these institutions; all the cases but two occurred in different districts, and one person suffering from small-pox was admitted from Whitechapel. The last was a child aged four years, in whom the condition as to vaccination is not stated.

THE NIGHTINGALE FUND.

FROM the report of the fund of the Nightingale Home, or School for the Training of Nurses, at St. Thomas's Hospital, for the year 1886, it appears there were forty-seven probationer nurses admitted during the year, making, with those remaining from 1885, seventy-eight who received instruction. Of those admitted during the year twenty-three resigned, or were discharged as unsuitable for the work. Ten lady probationers and sixteen nurse probationers were entered in the Register as certified nurses after satisfactorily completing their year of training. After an account of the various appointments obtained by certified nurses, an acknowledgment to medical lecturers and others for their services, and a statement of the branch of the home at St. Marylebone Infirmary, reference is made to the retirement of Mrs. Wardroper from the post of superintendent, which she had held since the formation of the school in 1860. A slight sketch of the history of the Nightingale Home is given, and a strong expression of feeling as to the great importance of the labours of the matron and superintendent during that time, so much of the success being due to her energy and management. Mention is made of the numerous places, not only in England, but throughout the world, to which nurses have been sent. The abstract of accounts shows a balance in hand of £1736 16*s*. Amongst the more serious items of expenditure are—expenses of training hospital nurses at St. Thomas's Hospital, £1439; contribution to expenses of Training School at St. Marylebone Infirmary, £153 5*s*. 6*d*. From this report it is impossible to do otherwise than come to the conclusion that this Nursing Home has done a very great amount of good work during the time that it has been in existence, but it is a question whether its field ought not to be extended, and an offshoot established of trained nurses, whose services should be obtainable for work amongst the upper and middle classes. This has worked well in connexion with other large London hospitals.

POISONING BY FISH.

A SPANISH naval surgeon, Señor Don Antonio Jurado y Calero, writing in a recent number of the *Boletin de Medicina Naval*, describes the serious effects observed on board his ship, the gunboat *Magallanes*, from eating fish caught in the Bay of Buena Esperanza on the south coast of Cuba. No less than twenty-seven of the officers and crew were affected, most of them with gastro-intestinal disturbance of a more or less severe nature, the others with nervous symptoms. Those of the first group presented nausea, persistent vomiting and diarrhœa, followed by coldness of the extremities, small and contracted pulse, and in some cases rigors; afterwards a febrile condition supervened. The men were nearly all able to return to duty within two days. They complained, however, for some time afterwards of irritation of the skin. In the more severe cases there were dilatation of the pupils, marked diminution of sensibility, complete anuria from spasmodic closure of the sphincter of the bladder, and in some cases convulsive movements of the muscles. Those whose symptoms were purely nervous were not attacked till some time later than those forming the first group, and they suffered much less severely, complaining chiefly of cutaneous irritation and headache, also of sleeplessness, which last continued more or less for three or four weeks. In both forms of the affection the termination was accompanied by a cutaneous eruption like urticaria, or in some cases by the appearance of a number of

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pustules on the skin. This, the author thinks, indicates that the proper treatment for poisoning by fish is to act on the skin. Besides, therefore, combating the gastro-intestinal and nervous symptoms with opiates, bromide, &c., he endeavoured to produce diaphoresis by giving lumps of sugar containing twelve or fourteen drops of sulphuric ether, and exhibited an antispasmodic mixture consisting of syrup of orange, lime-flower and orange-flower water, and sulphuric ether. He also allowed the patients to drink hot tea freely.

THE PROGNOSIS IN ALBUMINURIC RETINITIS.

AN interesting discussion was raised as a digression at the last meeting of the Ophthalmological Society on the subject of the prognosis of albuminuric retinitis. Dr. Angel Money, who gave the turn to the discussion, said that in his experience the average duration of life was to be measured by months. This view was supported by Dr. J. Anderson, who had instituted an inquiry in the matter, and came to the conclusion that the longest duration was thirteen months and the average six months. Dr. Stephen Mackenzie did not contest the main issue, but narrated some cases which went to show that life might be prolonged even for years. Indeed, he mentioned one case in which considerable progress towards recovery took place, so that after a time the ophthalmoscopic changes were not very noticeable. Mr. Marcus Gunn agreed with the view that the duration of life was not usually long. Mr. Nettleship considered that if the changes in the eyes were associated with renal disease and pregnancy, then, provided a safe delivery was accomplished, the prognosis was much more favourable than in ordinary cases. Mr. McHardy had seen a case in which the patient lived for many years after the detection of the albuminuric retinitis. Dr. W. J. Collins thought the prognosis more favourable when mere hæmorrhages existed, but less hopeful if other retinal changes had developed.

SMALL-POX ISOLATION AT PERTH.

THE Local Authority of Perth having noted the grounds on which the infirmary directors decided to deal with small-pox in their own institution, and having heard the rejoinder of Dr. Simpson, who protested against such use of a general infirmary in the interests of public health, have decided to send the reports on the subject to the Board of Supervision. Another infirmary nurse has contracted the disease, but all the patients have been revaccinated.

PROPOSED INTERNATIONAL MEASURES AGAINST ADULTERATION.

AMONG the many practical advantages arising from the International Congress of Hygiene recently held at Vienna, we should mention the very active campaign carried forward on an international basis against food adulteration. This grave question was first brought forward by Dr. Brouardel at the Geneva Congress in 1882. He then showed how long it took to discover first the existence of adulteration, and secondly some practical means of easily detecting its presence. Then the law had to be moved in the matter, and often that required more work and time than all the other parts of the process. Meanwhile manufacturers who had able chemists in their service discovered some totally different method of adulteration than that hitherto in vogue, or else simply crossed the neighbouring frontier and there found a law and methods of analysis not conceived for the purpose of checking their particular method of fraud. Thus, under a different government the old practices of adulteration could be commenced over again. Dr. Brouardel strongly urged the necessity of assimilating as far as possible the legislation of all nations on this matter. At the Congress of the Hague, in 1884, it was decided that inquiries should be made as to the law against adulteration in all countries, and consequently for the Vienna Congress Dr. Brouardel was able to present a report giving the result of this investigation. We have thus before us a summary of the laws and decrees against adulteration enacted in Germany, Bavaria, Prussia, England, Austria, Hungary, Belgium, France, Italy, the Turin municipal bye-law, Portugal, municipal law of Lisbon, Roumania, Servia, Sweden, Norway, the separate laws of the twenty-two cantons of Switzerland, and of Canada. The list, it will be seen, is not complete; from Russia, notably, in consequence of complex local legislation, nothing could be obtained. Still, the material collected is international enough, at least for a beginning. It demonstrates unfortunately a considerable inequality of the law in different countries; but, on the other hand, it also shows a general desire to cope with the evil. The first great difficulty is the definition of terms. "Falsification" or "adulteration" is defined in so many ways that, till all parties can agree to give, in all languages, the same meaning to the same word, it will be impossible to proceed in a uniform manner against the abuse the word represents. Nevertheless, and however great the obstacles may be, the problem has to be faced. As we consent to increase the facilities of international intercourse and are ever seeking to interchange the products of different countries, we can no longer remain indifferent as to the laws enforced by our neighbours. If we eat American ham and French butter, we want to know what method of *surveillance* is adopted in those countries to protect us from trichinosis in the former, or from injurious colouring matter in the latter. If we export cotton goods and other wearing apparel, foreign nations have a right to inquire what measures we take to prevent the colouring of these tissues with materials that may produce irritation and sometimes serious disorders of the skin. M. Brouardel's paper was followed by papers from Professor Gabriel Pouchet of Paris, Dr. Angelo Caro of Madrid, Dr. Ferrière of Switzerland, Dr. A. Hilger of Erlangen, and Dr. Hamel Roos of Amsterdam. The cause is therefore well before Europe; and doubtless many opportunities will arise of dealing with the details, as from day to day various grievances are brought to light.

OXFORD WATER SUPPLY.

FOR many years the Oxford water supply was under suspicion, and this both on account of its quantity and by reason of the existence of a cesspool district in immediate proximity to the storage lake. The latter evil has, we believe, been altogether done away with, and now an addition to the service has been made, which will provide the town with four million gallons a day drawn from a spot in the Thames some miles above Oxford. Sir Henry Acland, at the inauguration of the works, contrasted the unsatisfactory state of Oxford forty years ago with that which now prevailed in regard to water service.

VARIATIONS OF VITAL CAPACITY.

DR. THEODOROFF presents, in the form of a graduation thesis, in St. Petersburg, a laborious set of observations on the influence of the time of day upon the vital capacity of the lungs, and on the force of inspiration and expiration. His material consisted of ninety-six healthy men from Livadia, whom he examined twice a day for several consecutive days, and of fifteen individuals belonging to a different locality, whom he examined nine times a day for some time. The instruments used were Hutchinson's spirometer, and Waldenburg's pneumatometer. He found that the vital capacity increases from morning till evening, decreasing again during the night. After each meal, too, there is a special

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increase, followed by a slight decrease; the vital capacity being at its highest shortly after dinner, and at its lowest after getting up in the morning. Thus, from a diagram giving average results, we find the numbers as follows (in cubic centimetres): 8 A.M., 3550; 9 A.M. (after morning tea), 3615; 11 A.M., 3605; 12 noon (after breakfast), 3623; 5 P.M., 3618; 6 P.M. (after dinner), 3631; 9 P.M., 3610; 10 P.M. (after evening tea), 3615. The force of inspiration and expiration follows nearly the same law, the main exception being that evening tea has no effect on the former, and only a slight one on the latter.

THE NEW ENTRIES.

THE following is the number of the students who have entered at the various medical schools which were not included in the list we published last week:—

	Entire course.	Special classes.	Prelim. Scien.
St. Bartholomew's Hospital	140	18	—
Charing-cross Hospital	65	28*	—
St. George's	34	3†	1
Guy's	64	16	15
St. Mary's Hospital	69	30‡	16
Westminster Hospital	20	5†	—
Bristol School of Medicine	22	2	—
Queen's College, Birmingham	40	21‡	9
Yorkshire College, Leeds	41	5	—

* Including 16 dental. † Including 1 dental. ‡ Including 2 dental.

THE NOTIFICATION OF INFECTIOUS DISEASES.

WITH a single dissentient the Metropolitan Asylums Board have passed a resolution urging the Local Government Board to take the necessary steps for the extension to the metropolis of the system of compulsory notification of infectious diseases. The same subject also continues to be discussed in the general press, and Dr. Tomkins, medical officer of health for Leicester, states that eight years' experience there has served fully to disprove the allegations made against the system, and, above all, that relating to a supposed difficulty between patient and doctor owing to so-called violation of confidential relationship. We have so recently expressed our views as to whether the present time is an opportune one or not for further pressing the system by means of any legislative enactment, that we need not refer to the subject further on this occasion.

THE PROTECTION OF LEICESTER BY VACCINATION.

IT is important to fix rightly the responsibility of the state of Leicester. This rests on the guardians, who, by an absurd confusion of duties, are charged with the administration of the Vaccination Acts. *They* are the blind leaders of the blind, and not the sanitary authorities proper.

ADENOID TUMOURS OF THE PHARYNX.

MANY are the evils attributed to the presence of overgrowths of adenoid tissue in the naso-pharynx. They are believed to cause reflex neuroses, to set up various local morbid conditions, to predispose to other diseases, and generally to play such *rôles* as to lead to the conclusion that their existence is very undesirable. M. Coupard believes that in a large number of individuals, especially infants, a simple catarrhal laryngitis takes on a spasmodic character as the result of the anterior existence of adenoid vegetations in the naso-pharynx. And he further opines that many cases of stridulous laryngitis attended with the nocturnal paroxysms of suffocation are due to the presence of adenoid vegetations in the pharynx. These tumours, it is urged, should be removed, for their mere presence entails a chronic catarrh, with difficulty of breathing through the nose, great liability to deafness and aural disease, as well as to the occurrence of other symptoms definite enough in any particular case. Their effects may be fully as injurious, and are in some respects like those due to mere enlargement of the tonsils.

SIR WILLIAM GULL.

OUR readers will be glad to learn that Sir William Gull continues to maintain his ground, and improvement in his power is perceptible. His appetite is fair, he sleeps well, and his spirits are good. He has no secondary trouble or complication. Kind messages of inquiry and sympathy are still kept from him. The following bulletin has been sent to us for publication:—

Sir William Gull continues to make satisfactory progress. He sleeps fairly well; there is little or no rise of temperature, and the power of motion has in a large measure returned. On Monday he was moved in a chair to a larger and brighter room, and seems much benefited by the change.

(Signed) ROBERT IRVINE, M.B.
Urrard House, Pitlochrie, Oct. 26th, 1887. T. D. ACLAND, M.D.

ANIMAL AND VEGETABLE DIETS COMPARED.

DR. BAFTALOVSKI having secured the intelligent co-operation of four medical friends, proceeded to diet them and examine their secretions, in order to obtain information as to the different effects produced by various classes of food on the human organism. With purely animal diet the mean assimilation was 95 per cent., and the nitrogenous metabolism 108·6 per cent.; the extractive matters in the urine being more than when the diet was exclusively vegetable. With vegetable diet the assimilation was 42·5 per cent., the nitrogenous metabolism much less than with animal food, and the extractive matter four times as great as with a mixed diet. With a mixed animal and vegetable diet the assimilation was nearly as high as with the exclusively animal food, being 92·4 per cent.; but the metabolism was considerably less than with animal, but more than with vegetable, food.

OPHTHALMOLOGICAL SOCIETY'S LIBRARY.

THE Ophthalmological Society may be congratulated on the promptitude with which the nucleus of a good library has been formed. A catalogue of the library has been completed, and was presented at the ordinary meeting of the Society last week. Copies of the catalogue may be obtained at the price of one shilling at the Medical Society's rooms in Chandos-street. Already there are nine hundred volumes in the bookcases and on the shelves. All the important ophthalmic periodicals, both English and foreign, are subscribed for by the Society, and the library is probably the best in London for ophthalmoscopic works.

THE SANITARY ASSOCIATION OF SCOTLAND.

THIS Association have held their tenth annual meeting at Falkirk, a town in which, according to ex-Baillie Griffiths, who welcomed them in the name of the magistrates and Town Council, sanitation may be seen in some of its worst forms. Mr. G. D. Mackay gave the presidential address on "Helps and Hindrances to Sanitation," and he was followed by Dr. M'Vail, who complained that the new Scotch Act failed to meet the needs of Scotland. In the first place, as its very name indicates, it applies essentially to burghs and towns, whereas in such matters as enteric fever, scarlet fever, and tubercle, the source of the mischief often lies many miles away in rural farms and dairies. Then, again, it makes no provision for a staff of skilled medical inspectors,

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such as are attached to the central authority in England, and whose work, Dr. M'Vail declared, was widely known amongst all sanitarians. In short, it was felt by the Association that such an Act could only be regarded as a stop-gap, and that it must be supplemented by some more complete and efficient measure.

DISTILLATION OF WATER AT THE AMERICAN EXHIBITION.

AMONG the exhibits at the American Exhibition was an apparatus for the distillation of water, the property of the Hygeia Water Company of New York. The water is first distilled and subsequently aerated, so as to give a little more agreeable taste than is proper to mere pure distilled water. Care is taken, by Professor Tyndall's method, to deprive the air so used of all micro-organisms and other impurities; and some method is also used to destroy such elements in the water itself previously to distillation. The result is a very pure water, which is said to be extensively used in New York in the manufacture of mineral waters &c., and to be very much recommended by the medical faculty there. Of course, our great water supplies should be so pure as to make us independent of particular methods of distillation for ordinary drinking purposes. Would they were so. Meantime an apparatus such as that noticed above is highly important and of great public value.

AXILLARY ADENITIS.

IT is believed by M. Grancher that tubercular diseases of the lungs may through the mediation of the pleura infect the ganglia of the axilla. This peculiarity does not appear hitherto to have attracted much attention, and it is thought that the occurrence of such axillary adenitis may not be rare. The knowledge of these facts is regarded as having much importance, not only from a doctrinal point of view, but also from the standpoint of diagnosis; and M. Grancher advises that henceforth every case of phthisis should be examined for axillary swellings, and, conversely, that every case of axillary adenitis should be examined for the signs of pulmonary mischief.

DIPHTHERIA PREVALENCES.

DIPHTHERIA is prevalent in the village of Tiverton, Cheshire, and also at Thirkleby, near Thirsk. The outbreak in the latter place is a serious one, and it has locally been attributed to the unsatisfactory condition of fold-yards. The subject is worth further investigation, for in numerous instances the association of diphtheria prevalences with conditions under which animals are kept has received some prominence.

ST. PETERSBURG PASTEUR INSTITUTE.

ACCORDING to a report issued by the St. Petersburg Institute for Antihydrophobic Inoculations on the Pasteur system for the first year of its existence—i.e., from July 1886 to July 1887—266 persons have been treated there, 126 being inhabitants of St. Petersburg. From this number 20 must be deducted, comprising those still under treatment, those who did not remain for the completion of the treatment, and those whose wounds were proved to have been inflicted by non-rabid animals. Of the remaining 246 (98 males and 58 females) 7 died. Of those living, 148 had been inoculated more than six months, and 60 more than three months, previously to the issuing of the report.

FOREIGN UNIVERSITY INTELLIGENCE.

Brussels.—At the opening of the session which has just commenced, the ceremony in connexion with which took place at the Hôtel de Ville under the presidency of M. Buls, the Mayor, the Administratem read a report announcing a considerable increase in the number of students. Subsequently, M. Depaire gave a lecture on the more recent applications of Spectral Analysis and the Composition of the Heavenly Bodies.

Prague (Bohemian University).—Dr. J. Hlava has been promoted to the rank of Professor of Anatomy.

THE first number of the *New Zealand Medical Journal*, published in September, has just reached us. It contains some sixty pages of very readable and professionally valuable matter, and a systematic arrangement of the contents of future numbers is promised. The journal is to be published quarterly, the subscription being 10*s.* per annum.

THE Secretary of St. George's Hospital has not yet received official information of the fact that £100,000 has been bequeathed to that institution by the late Mr. M'Calmont, but is of opinion that there is no reason to doubt that the bequest has been made, having been told it on the authority of one of the executors.

IT is announced that for the season the P. & O. steamers will call every week at Gibraltar for Morocco, Granada, Seville, and south of Spain, thus enabling invalid and other passengers who intend wintering in the south of Europe to avoid the long railway journey to those places.

A BILL relating to compulsory vaccination and revaccination will, it is stated, shortly be laid before the Austrian Reichsrath. It is proposed that all children should be vaccinated twice, at the ages of one and twelve.

THE Special Board for Medicine at Cambridge University have elected Dr. Humphry, Professor of Surgery, a member of the General Board of Studies till Dec. 1st, 1890, in the place of Professor Sir G. E. Paget resigned.

Pharmacology and Therapeutics.

DELPHININE.

THE plant Delphinium staphisagria yields, according to M. Vincent Gauthier, four alkaloids, of which the chief one delphinine, occurs as an amorphous powder of yellowish colour and resinous aspect, and having the chemical formula $C_{22}H_{35}NO_6$. It is insoluble in water; dissolves in alcohol, ether, chloroform, and acidulated water. The parts of the plant usually employed therapeutically are the seeds, which contain the great part of the active principles. The seeds have for a long time been employed against psoriasis, and as a vermifuge in the form of powder, decoction, ointment, or infusion. Delphinine is preferably administered in the form of granules or small pills, and the dose should not exceed from 1 to 10 milligrammes a day. Delphinine acts chiefly on the nervous system, and first upon the bulb, next upon the sympathetic. It produces at first a functional excitation, then, by graduated attenuation, a diminution and complete but transient abolition of sensation. The analgesia may, however, persist for twenty-four hours. In order to produce these effects, it acts directly upon the central substance of the nerves. This physiological action on the sensibility of the body is the most important property, and the only one of a therapeutical value. It is said to be preferable to aconitine, because it is so much less toxic. On the motor nerves delphinine has no action in physiological doses, but in toxic quantity the functions of these motor nerves are entirely abolished. Delphinine acts upon the locomotor system, causing incoördination with ataxia, but the contractility of the muscular fibres persists till somatic death. The alkaloid acts also on the heart and sanguiniferous circulation, accelerating the cardiac movements at first, and disturbing the rhythm. Then follows a period characterised by regular

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rhythmical contractions of a large and ample kind. Finally the heart is arrested in diastole. This action of the delphinine is effected through the medium of the bulb and pneumogastric nerves. The variations of the blood tension consist in a transient elevation, followed by an abatement, which becomes more and more marked. Delphinine also affects the respiratory functions, causing a true arrhythmia of the respiratory movements effected by the abdominal, intercostal and diaphragmatic muscles. The respiratory arrhythmia causes an augmentation of the carbonic acid in the blood. When the tetanic spasm has attained its maximum, the lung no longer acts and the animal succumbs from the consequent asphyxia. Delphinine may produce vomiting and diarrhœa. The pupils are first contracted, and afterwards dilated by it. The salivary, biliary, urinary, and intestinal secretions are all increased. In the treatment of poisoning by delphinine artificial respiration occupies the chief place, and this is done to afford time for the elimination of the poison. There is a partial antagonism between strychnine, which affects the sensation differently, and between atropine, which has an opposite effect on the heart, but neither strychnine nor atropine can prevent death by delphinine, unless artificial respiration is practised. The physiological effects of delphinine on the sensitivity of the body indicate its therapeutical employment in cases of neuralgia, and in other diseases attended with hyperæsthesia, as in neuralgia of the trigeminal. As to the mode of administration, the internal employment is preferable to subcutaneous injection on account of the insolubility of delphinine in water. The maximal dose should be one milligramme, repeated every two hours until some of the desired effect is produced. External application can have but little effect, partly because so little is absorbed, and partly because delphinine must produce its effects by acting on the bulb.

MORRHUOL.

There has just been published in Paris by G. Steinheil an interesting clinical study upon Le Morrhuol, the extract of cod-liver oil, by E. Chazeaud, and the chief conclusions at which he has arrived are as follows: Clinical observation has demonstrated in a conclusive fashion the high therapeutical value of morrhuol. It increases the appetite and regulates the digestive functions, increases rapidly the weight of the body, and leads to positive *embonpoint*. The urea discharged in the urine is also augmented. The cough is diminished and finally extinguished, whilst the debility disappears. These excellent results are not confined to cases treated at hospitals, but cases in private practice are equally benefited. Besides tuberculosis, anæmia, rickets, and scrofula (lymphatism) are equally amenable to its beneficent influence. The small size of the morrhuol capsules enables them to be taken with ease by the patient, and nausea and diarrhœa are also prevented. To so many advantages one slight disadvantage must be added, but even this is of rare occurrence—it is the development of acneform spots similar to those produced by iodides. The number of capsules to be taken varies in different cases from two to eight per day, and eight capsules are equivalent to forty grammes of brown cod-liver oil.

HÆMOSTATIC ACTION OF ANTIPYRIN.

Dr. Olikoff writes to the *Russkaya Meditzina* that, having seen in some medical journal that antipyrin possesses hæmostatic properties, he made use of a solution of ninety grains in six ounces of water for inhalation in six cases of hæmoptysis. He ordered five or six inspirations to be taken through the inhaler every half hour or hour. This had the effect of diminishing the hæmoptysis at once, and of rapidly arresting it.

INFUSION OF DIGITALIS.

A Utrecht military pharmacist, writing on the preparation of the infusion of digitalis in the *Nieuw Tydschrift Voor Pharmacie in Nederland*, recommends that only the parenchyma of the leaf should be employed, which, he says, contains about 1 per cent. of digitaline, while the stalks and nerves of the leaves contain only about 0·02 per cent.; the latter also tend to make the infusion gelatinous.

SALOL IN SCIATICA.

Dr. Aschenbach has found that salol taken internally relieves his sciatica better than any other remedy. He first took seven grains and a half, and later on the same day fifteen grains.

HEATSTROKE.

THE following is a report of the discussion that followed the reading of Mr. Anderson's paper, which appears on p. 856.

Dr. E. A. WOOD (Pittsburg, Pa.) said that while the different pathological conditions of sunstroke are important, yet the all-important pathological fact to be considered is the exalted temperature. We find a weak circulation—stimulants will not strengthen it; convulsions—hypodermic injections of morphia may arrest them; a stomach loaded with undigested food—the stomach pump will empty that stomach, and aperients may empty the bowels; and yet when all these things are done the patient is still unconscious, because the great and all-important factor is still there. The rapid oxidisation of the tissues is measured by the thermometer. Now if we begin at the other end and succeed in reducing the temperature, to its near normal standard, neurotic conditions, debility, unconsciousness, and indigestion rapidly right themselves. The all-absorbing consideration in cases of sunstroke is to reduce the abnormally high temperature, and until that is accomplished no other matter is worth regarding. This must be done quickly if we wish (first) to save life, and (second) to prevent unpleasant and lasting consequences to the nervous centres. Common sense would naturally turn to the external application of cold, and that treatment has become universal. Every stitch of clothing should be removed, cold water dashed over the body, ice applied, even ice in the rectum, and one or two assistants should vigorously employ fans to cause greater coldness by rapid evaporations. Dr. Wood was partial to one single hypodermic injection of fifteen grains of antifebrin, as being more rapid and more intense in its effects than quinine.

Dr. W. H. LLOYD (London) confirmed Dr. Anderson's views as to the efficacy of temperate living and good ventilation as prophylactics in the avoidance of heat apoplexy. Heatstroke is not ordinarily a frequent disease in the British navy, but 90 per cent. of these cases occur in the Red Sea in ships passing through the excessively high temperature usual in this region at certain seasons. These cases are, almost without exception, in the persons of cooks, saloon stewards and bakers, and occasionally stokers; rarely is a blue-jacket or a man working on deck a victim. The classes mentioned generally spend much of their time in close, ill-ventillated places, and are often addicted to unwholesome living and alcoholic excess. They are generally a flabby and etiolated class, and are rarely in a high condition of health.

Deputy Surgeon-General MARSTON, C.B. (London), concurred generally with Dr. Anderson and the previous speakers; he dwelt upon the distinction between heat exhaustion and heatstroke and heat apoplexy, which Dr. Anderson had very properly insisted upon. He related some of his experience in India, Egypt, and elsewhere, touched upon the causes and treatment, and especially called attention to the sequela and remote effects of sunstroke and exposure in hot climates—such as abnormal and erratic temperatures, insomnia, loss of "nerve," acute neuralgic headaches and other neuralgias, and occasionally, though rarely, even short attacks of mania. The nerves of special sense are also sometimes affected. Although forms of motor paralyses do occur, they are rare compared with the other forms of nerve lesion. Dr. Marston dwelt upon the importance of using a neutral soluble non-irritating form of quinine, as tetanus is liable to occur after slight punctured wounds and irritants, in hot climates, where there are great diurnal variations of temperatures.

Surgeon-Major LANGRIDGE, while in India, had some experience of the injection of neutral sulphate of quinine. His cases were not those of sunstroke, but were instances of very severe remittent fever accompanied by extremely high temperature. Ordinary remedies, including the administration of large doses of quinine internally, failed to reduce this to any extent. Hypodermic injections daily three or four times were then adopted with great success, and in no case was there a more severe symptom than the occurrence of a slight local induration.

Dr. ANDERSON, in reply to Dr. Wood's remarks, said that he regarded it as a matter of course that all means of reducing body heat, such as ice and cold affusion, would be adopted;

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but he especially drew attention to the subcutaneous use of quinine, because it is the most powerful and rapid agent for this purpose with which he was acquainted. To antipyrin and antifebrin he had referred but very briefly, because he had no experience of these agents in these cases. Referring to the blood-letting spoken of by another speaker, he remarked that such practice was at one time very general in India, and the resulting mortality was so great that it was given up.

BRITISH MEDICAL BENEVOLENT FUND.

THE monthly committee meeting was held on Tuesday last at the house of the treasurer, Dr. Broadbent, and the resignation of Mr. Edward Newton, a member of the committee since April, 1880, was accepted with regret. There were fourteen cases before the committee, and a small balance only at their disposal. Four applications were passed over on account of the amount of income possessed by the applicants, or for some other cause, and three were postponed for further information, and grants, amounting in all to £83, varying from £2 to £18 were made to the remainder. A sum of £5, which had been advanced to a surgeon under circumstances of extreme urgency, after thorough investigation by a member of the committee, was repaid. In the case of an aged practitioner (seventy-one), to whom was voted £10 on consideration that £50 was subscribed privately for his benefit, this has not only been accomplished within the month, but an additional £10 or more has been subscribed, and the coming winter trials made comparatively light for a helpless paralytic, should he survive so long. The available balance was completely exhausted, and the committee is left with nothing in hand to meet the demands of November and December.

REPORT ON SANITARY MEASURES IN INDIA IN 1885-6,

TOGETHER WITH MISCELLANEOUS INFORMATION UP TO JUNE, 1887. (VOL. XIX.)

WE have so recently given, at considerable length, the details respecting the health of the European troops in India during 1885, that it is unnecessary to notice the section of the Report now before us relating to them. The average force of the native troops for the year was 115,486. The admissions into hospital were in the ratio of 978, the deaths of 16·09, and the daily sick, of 32 per 1000 of the strength. The admissions and mean sick were lower, but the deaths 3·87 per 1000 higher than in 1884. The sickness and mortality in the different divisions of the Army were as given in the subjoined table.

	Average strength.	Ratio per 1000 of strength.		
		Admitted.	Died.	Constantly sick.
Bengal Native Army	40,753	1076	14·18	34
Madras Native Army	27,043	675	13·96	26
Bombay Native Army	22,701	1243	26·01	43
Central India Regiments	5,112	700	11·54	19
Punjab Frontier Field Force	10,576	1152	14·50	35
Hyderabad Contingent	6,969	522	7·37	17
Total	115,486	978	16·09	32

This shows the sickness and mortality in the Bombay Native Army to have been much higher than in any of the other divisions. The most healthy force was the Hyderabad Contingent. The unfavourable results as regards Bombay were due to the excessive amount of sickness and high death-rate among the portion of the force in Southern Afghanistan, the admissions having been 2832 and the deaths 100·81 per 1000 of the strength of the troops employed there. Malarial fevers, though less prevalent than in any of the five preceding years, were the chief cause of sickness, having given rise to upwards of four-tenths of the admissions. Diseases of the respiratory system caused the highest ratio of deaths, and next to them fevers. Cholera was less prevalent and fatal than in 1884.

The average number of prisoners in the gaols of India was 82,650; the admissions into hospital were 1014 and the deaths 33·54 per 1000—the former being slightly under and the latter 4·43 per 1000 above the proportion in 1884. In Bengal the admissions were 1060, in Madras 705, and in Bombay 645 per 1000; and the death-rate was 38·40, 17·86, and 33·76 per 1000. Bengal shows a very high proportion of sickness and mortality, and Bombay, while having a low rate of admissions, has a high death-rate. The range in the death-rate was very great, being from 2·52 per 1000 in Salem Gaol (Madras Presidency) to 171 in Julpaiguri Gaol (Bengal). The latter very high rate is attributed to overcrowding, defective ventilation, and very bad drainage outside and inside the walls. The results for Madras are very satisfactory, the death-rate being the lowest on record; its steady decrease during the last six years furnishes strong evidence of the value of sanitary measures judiciously applied. Among the gaol population of India generally, intermittent fever was the cause of 371 admissions per 1000, or upwards of one-third of the whole. Dysentery and diarrhœa gave rise to the highest death-rate, being in the proportion of 11·18 per 1000 of strength, or one-third of the total mortality. Diseases of the respiratory system were fatal in the proportion of 5·01, and cholera of 3·44 per 1000. "When compared with the rates for past years, those for 1885, although still high in many cases, show considerable improvement; but enough has been said to show that in many gaols, especially those of Bengal, much improvement is still required, the nature of which can be readily learned from the disease and death statistics and from the gaol sanitary sheets."

The registration of deaths in India is still so imperfect that the results, as shown by the returns, must be greatly under the truth. For instance, as regards Bengal, it is stated that there is no record of the deaths caused by a cyclonic storm which occurred in Orissa on Sept. 22nd, and which are estimated to have amounted to about 15,000.

From the reports of the Sanitary Commissioners it appears that the questions of water supply and of drainage continue to receive attention, and much good work has been done in connexion with both; but the usual difficulty of inadequate funds greatly retards the progress of the improvements. The acting Sanitary Commissioner for Madras points out "the need for a sanitary engineer qualified to give advice to local bodies with regard to water supplies and drainage," and believes that "if such an authority were available, a great impetus would be given to sanitary works." During the year a new Act, called the Madras Local Boards Act of 1884, was passed. Under it a Board has been constituted in each district whose duty it is to provide "for the improvement of village sites and water supply, for sanitary arrangements during fairs and festivals, for the scavenging of small towns and large villages, for the construction and repair of markets, slaughter-houses, latrines, dustbins, and drains, and other measures calculated to promote the health, comfort, or convenience of the people." If the provisions of this Act are efficiently carried out, they ought to be productive of very beneficial results on the health of the general population of the Presidency.

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AIR SUPPLY OF THE NAVY.

THE half-yearly course of instruction for naval surgeons on their first entry into the service was commenced on Monday, Sept. 5th, at the Royal Naval Hospital at Haslar. The Director-General of the Medical Department of the Navy, Sir John Watt Reid, K.C.B., was present, and welcomed the newly-appointed surgeons, giving them, as usual, a few words of useful advice and encouragement; after which, Surgeon Gilbert Kirker, M.D., R.N., who is appointed to the hospital to assist Fleet Surgeon Walter Reid, M.D., R.N., in the instruction of surgeons, proceeded to give a historical account of the air supply of the navy. By the air supply is not meant the narrower subject of the renewal of the air or ventilation, but the condition of the air as it surrounds and is breathed by the inhabitants of the ship, or, more briefly, the climate between decks. The history of the subject recognises four periods. The first extended from the earliest times until about the middle of the last century. This was the dark age of hygiene in general, when not only were no attempts made to render more healthy the conditions of life, but when the belief existed that to do so would be a profane interference with the workings of Providence. On board ship, from overcrowding, from the emanations from the putrefying bilge water and foul ballast, from sodden decks and the absence of ventilation, the air supply was inconceivably impure, warm, moist, and stagnant. After a four or eight hours' immersion in this foul vapour bath, the men had to go on deck and bear exposure to the elements. It is worthy of being remembered, too, that when the weather was most inclement on the upper deck the atmosphere was most impure on the lower. Striking to the men themselves must often have been the evil consequences of this sudden change, and it may be suggested that the proverbial dread which sailors have for anything approaching movement in the air of their berths is partly a tradition of their calling, handed down from those ancient evil times, and partly acquired by living yet on lower decks, whose atmospheres, though not grossly foul, are still impure. The second period in the history of the air supply of the navy began about the middle of the last and ended about the second decade of the present century. It embraces a time when the country was struggling in many quarters of the globe for the supremacy of the seas, which meant also national existence. By the contest, the energies of our ancestors were strained and quickened, and they at last perceived that the efficiency of the navy depended on the health of its fleets, and this, again, on the sanitary condition of the ships. This was the time of Lind, Blane, and Trotter, when naval hygiene had its birth. And not only was the practice of preventive medicine inaugurated, but the curative part of naval medical work was put on a better foundation, for then the treatment of sick sailors in hospitals on shore was first properly established, and Haslar and Plymouth Hospitals stand as monuments of this important epoch. The changes leading to improvement in the air supply which took place included the introduction of Lepping's frames in the construction of ships, the use of iron ballast and iron water-tanks, less frequent washing of decks, separation of the sick from the healthy, and better methods of ventilation. The endeavours to improve the air supply must have had some effect. At any rate, the work done in this branch of naval sanitation, combined with that done in others, was followed by a decided improvement in the health of the navy. The statistics are far from complete, but the number of deaths on board ship in 1811 as given by Sir Gilbert Blane was 1 in 30·25, against 1 in 8 in 1779. The length of the existence of individual ships was also increased from seven to thirteen or fourteen years. The third period was one of complete repose as regards endeavours to improve the air supply. When the strenuous exertions of the navy had been crowned with success, a spirit of rest seems to have pervaded the service. Few advances in sanitation were made, and many that had been made were forgotten. Sutton's pipes and Hales's bellows found their way to museums, scuttles were seldom put in ships' sides, and the old windsail became again almost the only special appliance for ventilation. The fourth period, which may be dated from about the middle of the present century, is characterised by great changes in the air supply brought about by the introduction of steam and the rapid development of naval architecture. The introduction of steam, as regards the hygiene of ships, was attended by several serious disadvantages. There was more overcrowding, the continuity of the decks was interrupted, the temperature between decks was raised, and less light was admitted. The health of the seamen suffered, and public attention was forcibly called to the subject by an outbreak of a peculiar pulmonary affection in the Mediterranean fleet. To improve the bad condition of the air supply numerous ventilators were proposed, and the old windsail again saw itself surrounded by young assistants. The numerous cowl-and-tube family arose, the ingenious devices of Inspector-General MacDonald were evolved, and Dr. Edmunds' and Perkins' inventions were brought forward and introduced into several ships. A short time after the revolution in the propulsion of ships, the great revolution in their construction—viz., the employment of iron instead of wood—took place. Looking at the smaller number and diminished size of the lateral parts of iron ships, it was at once concluded that they would prove more unhealthy than their wooden predecessors. This hasty conclusion was not, however, confirmed by inquiry, and, altogether, the use of iron in ship construction has operated in the opposite way, and been attended with a lessening death-rate in the navy. The earlier ironclads of high freeboard have now been succeeded by the modern turret and barbette ships with low freeboard. The sanitary history of these ships has yet to be written, but so far they are not looked on as being more unhealthy than the older ironclads; and with regard to the early American monitors, they were most favourably reported on by the Chief of the Bureau of Medicine and Surgery in 1864. In these low freeboard ships the renewal of the air cannot be effected by the forces naturally acting in the atmosphere, and forces artificially generated have to be resorted to. In the English navy, on board ships of this class, rotary fans draw fresh air from the outside, and drive it along pipes to the places to be ventilated. For the escape of the impure air there is provided a system of pipes leading from the inside to the outside of the ships. Generally, these pipes are merely outlets through which the impure air can exert its ascensional tendency, but occasionally the air is propelled along them by fans. In conclusion, we have seen that the air supply of the navy was once inconceivably bad, that it has improved, but that it is still far from what it should be. The problem of ship ventilation is difficult but not insoluble, and probably the solution will not be approached until naval constructors adopt the system of artificial exhaust instead of artificial supply, and decentralise the application of the force, in order to render unnecessary long branching and bending pipes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5752 births and 3502 deaths were registered during the week ending October 22nd. The annual rate of mortality in these towns, which had been 17·5 and 17·8 per 1000 in the preceding two weeks, further rose last week to 19·8. During the past three weeks of the current quarter the death-rate in these towns averaged 18·4 per 1000, and was 1·8 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 15·7 in Norwich, 15·8 in Halifax, and 17·2 in Nottingham and in Salford. The rates in the other towns ranged upwards to 23·2 in Huddersfield, 23·2 in Bolton, 25·4 in Sunderland, and 26·4 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined from 461 to 382 in the preceding three weeks, rose last week to 392; they included 117 from scarlet fever, 62 from whooping-cough, 59 from measles, 56 from diarrhœa, 52 from "fever" (principally enteric), 38 from diphtheria, and 8 from small-pox. These zymotic diseases caused the lowest death-rates last week in Plymouth, Nottingham, and Halifax; and the highest rates in Oldham, Blackburn, and Birkenhead. The greatest mortality from scarlet fever occurred in Oldham, Huddersfield, Liverpool, Blackburn, and Birkenhead; from whooping-cough in Newcastle-on-Tyne, and Leicester; from measles in Cardiff, Blackburn, and Derby; and from "fever" in Oldham, Sunderland and Preston. The 38

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deaths from diphtheria in the twenty-eight towns included 21 in London, 5 in Manchester, and 3 in Brighton. Small-pox caused 7 deaths in Sheffield and 1 in Bristol, but not one in Greater London or in any of the twenty-five other large towns. Only 7 cases of small-pox were under treatment in the metropolitan hospitals receiving cases of this disease; while the number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 2167. The deaths referred to diseases of the respiratory organs in London, which had been 206 and 280 in the preceding two weeks, further increased last week to 370, and were 30 above the corrected average. The causes of 68, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Sunderland, and in six other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Sheffield, Bolton, Brighton, Sunderland, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 17·7 to 19·3 per 1000 in the preceding three weeks, declined to 19·1 in the week ending October 22nd; this rate was 0·7 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·3 in Aberdeen, and 17·8 in Dundee and in Greenock, to 25·6 in Paisley and 34·0 in Perth. The 478 deaths in the eight towns last week showed a slight decline from the number in the preceding week, and included 22 which were referred to scarlet fever, 16 to whooping-cough, 10 to diarrhœa, 7 to diphtheria, 6 to "fever" (typhus, enteric, or simple), 5 to measles, and 2 to small-pox; in all, 68 deaths resulted from these principal zymotic diseases, against 64 and 79 in the preceding two weeks. These 68 deaths were equal to an annual rate of 2·7 per 1000, which exceeded by 0·5 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of scarlet fever, which had increased from 11 to 23 in the preceding four weeks, were 22 last week, of which 10 occurred in Dundee, 7 in Glasgow, 3 in Perth, and 2 in Edinburgh. The deaths referred to whooping-cough, which had been 17 and 30 in the previous two weeks, declined last week to 16, and included 4 in Glasgow and 4 in Greenock. The 10 fatal cases of diarrhœa showed a further decline from recent weekly numbers, and included 4 in Dundee and 3 in Edinburgh. The 7 deaths from diphtheria corresponded with those returned in each of the preceding two weeks; 3 occurred in Glasgow and 2 in Edinburgh. The 6 fatal cases of "fever," of which 3 were recorded in Glasgow and 2 in Edinburgh, differed but slightly from those returned in recent weeks. Of the 5 deaths from measles, 3 occurred in Perth, where also the 2 fatal cases of small-pox were recorded. The deaths attributed to acute diseases of the respiratory organs in the eight towns, which had been 87 and 98 in the preceding two weeks, further rose last week to 120, and exceeded by 32 the number returned in the corresponding week of last year. The causes of 70, or nearly 15 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24·2 and 27·3 per 1000 in the preceding two weeks, declined again to 24·1 in the week ending October 22nd. During the first three weeks of the current quarter the death-rate in the city averaged 25·2 per 1000, the mean rate during the same period being but 17·3 in London and 18·4 in Edinburgh. The 163 deaths in Dublin last week showed a decline of 22 from the number in the previous week; they included 8 which were referred to scarlet fever, 6 to diarrhœa, 6 to "fever" (typhus, enteric, or simple), 5 to measles, 4 to whooping-cough, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 29 and 36 in the preceding two weeks, declined last week to 29; they were equal to an annual rate of 4·3 per 1000, the rate from the same diseases being but 2·0 in London and 2·2 in Edinburgh. The deaths referred to scarlet fever, which had increased from 1 to 11 in the preceding three weeks, declined to 8 last week. The 6 fatal cases of diarrhœa showed a further decline from recent weekly numbers; and the 6 deaths referred to "fever" were within one of the number in the previous week. The fatal cases of whooping-cough showed an increase, while those of measles were fewer than in any recent week. The deaths both of infants and of elderly persons showed a decline from the numbers in the preceding week. Eleven inquest cases and 6 deaths from violence were registered; and 36, or nearly one-fourth, of the deaths occurred in public institutions. The causes of 21, or more than 13 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Deputy Surgeon-General W. Marshall Webb has joined at York from Edinburgh, and taken over the duties of Principal Medical Officer of the Northern District; Surgeon-General Irvine has rejoined at Madras from leave on medical certificate, and has assumed the duties of Principal Medical Officer of the British Troops in the Madras Presidency.

The Greenwich Hospital pension of £50 a year for medical officers, vacant by the death of Deputy Inspector-General J. W. Elliott, M.D., has been awarded to Staff Surgeon John Stewart, M.D.

WAR OFFICE. — Medical Staff: The undermentioned Surgeons-Major are granted retired pay, with the honorary rank of Brigade Surgeon (dated Oct. 26th, 1887):—John Langdon and Henry Jagoe, M.B.

The Queen has approved of the following promotions made by the Government in India:—Surgeon-Major Robert Gray (dated 3rd June, 1887) and Surgeon-Major Joseph Macnaughton Fleming, M.D. (dated Aug. 6th, 1887), of the Bengal Medical Establishment, to be Brigade Surgeons.

ADMIRALTY. — The following appointment has been made:—Surgeon William S. Lightfoot, to the *Téméraire*.

ROYAL NAVAL ARTILLERY VOLUNTEERS (London Brigade).—Cecil Rupert Chaworth Lyster, to be Surgeon (dated Oct. 24th 1887).

ARTILLERY VOLUNTEERS.—1st Fifeshire: John Wilson Moir, M.D., to be Surgeon (dated Oct. 22nd, 1887).

Correspondence.

"Audi alteram partem."

"THE PRESYSTOLIC MURMUR, FALSELY SO CALLED."

To the Editors of THE LANCET.

SIRS,—With your permission, I will first refer to some facts which appear to be inconsistent with the theory that the so-called presystolic murmur is the result of mitral regurgitation, and I will then reply to some objections which have been made to Dr. Gairdner's auriculo-systolic theory.

All observers will, I think, agree that, however intense may be the murmur in question, the sound is heard only at the heart's apex, or in the immediate neighbourhood thereof, and that it is rarely, if ever, audible at the back of the chest. In this respect there is a marked contrast between the murmur of mitral constriction and the acknowledged mitral regurgitant murmur, which, although usually less intense over the heart's apex than the presystolic murmur, is, in the great majority of cases, distinctly audible at the back, near the angle of the scapula, and in the left vertebral groove. This difference is explained by the theory that the presystolic murmur is conveyed forwards to the apex of the heart and the anterior wall of the chest by the onward current of blood from the auricle, while the regurgitant murmur is carried backwards by the reflux of blood from the ventricle. It remains for those who maintain that both these murmurs are regurgitant to explain the unquestionable fact that they travel, by liquid convection, in opposite directions.

I have satisfied myself by numerous careful observations that the murmur of mitral constriction and the thrill which accompanies it precede the impulse of the contracting

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ventricle, and therefore are presystolic in rhythm. With the hand firmly placed on the heart's apex the sharp impulse can be felt to follow and not to accompany the thrill. Again, with a solid stethoscope the harsh murmur can be heard before the short sound and impulse of the ventricular contraction in which it terminates; and thus there is a manifest contrast with the synchronous heaving impulse and the prolonged systolic murmur of mitral regurgitation. In the few cases in which I have noted that a presystolic has been followed by a systolic murmur, there has been a distinct though brief interval between them, coincident with the reversal of the blood stream.

In one carefully observed case of mitral stenosis a soft murmur, commencing immediately after the second sound—therefore diastolic—was continuous with an auriculo-systolic intensification, with the usual accompanying thrill, and this was followed by the short first sound and impulse. In this case the soft murmur attending the passive flow of blood into the dilating ventricle was intensified by the increased impetus imparted to the current by the auricular systole. It is probable that in a large proportion of cases with a constricted mitral orifice, there is imperfect closure of the valve during the ventricular systole and a consequent reflux of blood; and the comparative rarity of a double murmur is probably due to the fact that the ventricular contraction is too sharp and brief to admit of the development of a murmur. On the other hand, it is in the highest degree improbable that when the curtains of the mitral valve have been converted into a rigid funnel, a reflux of blood, supposed to occur at the commencement of the systole, should be abruptly arrested by the close apposition of the segments at a later period. We know from abundant experience how slight a thickening and unevenness of the margin of the mitral curtains suffice to render the valve incompetent—an incompetence which the continuous systolic murmur shows to persist during the whole period of the ventricular contraction. What evidence have we that an undoubted mitral regurgitation is ever abruptly arrested towards the close of the ventricular systole, and that a mitral systolic murmur terminates in a sharp first sound and impulse?

It has been objected to the auriculo-systolic theory of the murmur that in the absence of valves to prevent reflux, the auricular contraction would be insufficient to cause a murmur in a constricted mitral orifice. Now, in reply to this, it is notorious, as has been well remarked by Dr. Shearar at the close of his letter in your last issue, from the easy production of the *bruit de diable* in the veins of the neck, that for the causation of a loud murmur very little force or rapidity of the blood current is required. Then there is evidence that the force of the auricular contraction, passing in a vermicular manner from the veins towards the auriculo-ventricular opening, is by no means small, as was demonstrated more than two centuries and a half ago by our immortal Harvey. He says:[1] "After the heart has ceased to beat, the auricles, however, still contracting, a finger placed upon the ventricles perceives the several pulsations of the auricles precisely in the same way and for the same reason, as we have said, that the pulses of the ventricles are felt in the arteries—to wit, the distension produced by the jet of blood; and if at this time, the auricles alone pulsating, the point of the heart be cut off with a pair of scissors, you will perceive the blood flowing out upon each contraction of the auricles." It should also be borne in mind that, as a result of mitral stenosis, the contractile and propulsive force of the auricle is much increased by hypertrophy of its walls.

It has been objected to the auriculo-systolic theory that it is improbable that a murmur more intense than that associated with most cases of unquestionable mitral regurgitation should be caused by the contraction of a cavity whose walls are so much less powerful than those of the ventricle. To this objection the reply is that the intensity of a murmur depends not solely on the force of the blood stream, but mainly upon the condition of the orifice through which the current is propelled. In illustration of this I need only refer to the fact that in cases of double aortic murmur the diastolic is usually louder and often much more intense than the systolic; yet it is certain that the regurgitant current of blood must be less forcible than the direct onward stream. The difference between the two sounds is explained by the fact that the defective sigmoid valves are in a position to vibrate more readily and audibly under the influence of the regurgitating than of the direct blood stream.

The probable explanation of the comparative loudness of the direct mitral murmur is that during the diastole of the ventricle, the columnæ carneæ being relaxed the thickened curtains of the mitral valve therefore not being dragged upon by the cordæ tendineæ, are thrown, like a flag flapping in the wind, into very audible and palpable vibrations. On the other hand, during the ventricular systole the margins of the mitral segments are so restrained by the contracting fleshy columns and the tense tendinous cords, that the sound resulting from a forcible reflux current is usually less intense than the murmur of mitral constriction.

Dr. Dickinson has satisfied himself, by means of a pin in a piece of cork placed over the heart's apex, that "the so-called presystolic murmur does not precede the impulse of the heart, but begins with it; in strictness it is systolic, not presystolic."[2] He confesses the difficulty of making "two senses work together in exact consent"; but even admitting that Dr. Dickinson's observations are correct, and that the murmur of mitral constriction and the movement of the pin were synchronous, if cardiographic observations are to be relied upon, it is probable that the first vibrations of the pin were caused, not by the ventricular but by the auricular systole. I have no practical experience of the cardiograph, but I learn from the tracings and the description given by Landois,[3] that the first impulse communicated to the button and the first rise in the cardiographic tracing are attributed to the contraction of the auricles. If this be so, it appears not unlikely that Dr. Dickinson's observations, correctly interpreted, contravene his own theory.

In a paper which was published in THE LANCET some years since (May 13th, 1876) I have endeavoured to prove that the auricular systole is directly concerned in the production of three distinct sounds: (1) The presystolic friction sound of pericarditis; (2) the auriculo-systolic murmur of mitral constriction, as first clearly described by Dr. Gairdner; and (3) the first division of the double first sound in cases of obstruction of the systemic or pulmonic circulation.

I am, Sirs, yours truly,

Savile-row, W., Oct. 24th, 1887. GEORGE JOHNSON.

[1] De Motu Cordis et Sanguinis. College edition, p. 29. Dr. Willis's translation, p. 27.

[2] THE LANCET, p. 681.

[3] Text-book of Human Physiology, translated by Stirling. Second edition, vol. i., p. 89.

To the Editors of THE LANCET.

SIRS,—Professor Gairdner has made so admirable a defence of the all but universally recognised rhythm of the auricular-systolic murmur, that it seems quite superfluous for me to make any addition to his lucid statements. And yet, with your permission, I should like to make a few remarks upon some of Dr. Dickinson's statements which seem to require a little explanation.

The great inducement to adopt the ventricular-systolic or regurgitant theory of the auricular-systolic murmur appears to be the difficulty experienced in acknowledging so apparently feeble an organ as the auricle to be the source of so loud and rough a murmur. To my mind, it seems even more remarkable that the ventricle should be supposed capable of producing this loud rough murmur at the first beginning of its systole, when it is acknowledged that as this systole nears its acme and gains in force, the murmur grows less rough, and finally becomes soft and blowing. Dr. Dickinson seems to consider that because the pulmonary vessels are elastic the analogy to a Bramah press fails. But I merely referred to the Bramah press as a well-known illustration of the law that fluid within a confined area presses equally in all directions, and I am not aware that the greater or less elasticity of the containing walls has any power to modify this law. Unquestionably the pulmonary bloodvessels undergo many serious changes through the influence of the increased blood pressure within them, which would not happen if they were made of cast iron; but I do not see that my argument is in any way weakened by this. In relation to this matter, it is also interesting to remember that so long as the intra-pulmonary blood pressure remains high, and the auricle is thus stimulated to extra exertion, just so long does the auriculo-systolic murmur remain loud and rough. But whenever the

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intra-pulmonary blood pressure gets lessened under the influence of tricuspid regurgitation, then the force of the auricular-systolic murmur begins to fail, and in no long time it ceases altogether, the soft ventricular systolic murmur alone remaining.

Again, Dr. Dickinson says that possibly "the auricular contraction may be assisted in moving the blood by the expansile or suction action of the ventricle" (p. 651); and in another place he argues that the murmur of "mitral obstruction must succeed the second sound with an interval," because after the conclusion of its systole there "is a period during which the ventricle waits empty and still, and not until it reopens can the blood enter from the auricle" (p. 695). Now, *Hope* says that the expansion of the ventricle immediately succeeds its active contraction (3rd ed., p. 19), and I know of no modern observations tending in the least degree to invalidate this statement. It follows from this that, if there be a diastolic mitral murmur, it must accompany the second sound and follow it without an interval, running on till the diastolic ceases and the period of rest succeeds. The duration of the diastolic mitral murmur is thus a measure of the amount of stenosis present, and this I have always found to be the case. Neither can the onward movement of the blood by the auricular systolic be aided by the ventricular diastolic expansion, because the latter precedes the former.

Further, Dr. Dickinson objects to the term *continuous* being applied to the double murmur audible at the apex in many cases of mitral stenosis, and composed of the rough auricular systolic murmur, immediately followed by the blowing ventricular-systolic murmur. To this I have no objection; the one murmur runs up to the other; but *continuous* is perhaps scarcely the word to apply to them. The auricular-systolic murmur runs up to, and is continuous with, the ventricular systolic (regurgitant) murmur, in the same sense of the word that the aortic-systolic murmur may be said to run up to, and be continuous with, the aortic-diastolic (regurgitant) murmur, and when the systolic portion of this latter murmur is rough the analogy is very complete. In neither case is there any appreciable interval between the two portions of the murmur, except in certain very rare cases, which may happen to both classes of murmurs. Dr. Dickinson says, "Thus two murmurs, belonging, according to this belief, to different parts of the same act, may be separated by an appreciable interval; while two murmurs, the presystolic and the systolic, belonging to different acts, and made by the blood going opposite ways, may be inseparably blended together. This does not present itself with an air of probability." It will be seen from the foregoing that his quarrel is with physiology and with facts, and not merely with opinions.

I am, Sirs, yours obediently,

Edinburgh, Oct. 25th, 1887. GEORGE W. BALFOUR.

To the Editors of THE LANCET.

SIRS,—May I beg space for a few considerations which I think have an important bearing on the mode of origin of the presystolic murmur, so called?

It has been assumed that the loudness and roughness of the murmur characteristic of mitral stenosis indicate great intensity of vibration, and on this assumption it has been argued that so feeble a structure as the left auricle could not contract with the requisite amount of vigour. I will pass over the fact of auricular hypertrophy, which in many cases of mitral stenosis is so striking (though this of course bears directly on the question of auricular inadequacy), and will simply ask the question, Are the vibrations of the bruit of mitral stenosis actually so intense? Now, in the first place, the roughness of a sound tells us of the amplitude of the component vibrations, not of their intensity; and, in the next place, the loudness of a sound, though *cæteris paribus* a measure of intensity, is not so when "the other things are not equal," and hence is not a measure of intensity applicable to murmurs of different pitch, and (probably) of different mode of origin. A very simple experiment will explain. Let the teeth be shut and the lips simply in contact in their natural position or very gently pressed together; it will then be found that the breath rather sharply puffed out, though without much force, will throw lips and cheeks into loud-sounding vibration. Let the lips now be screwed up into the position for blowing, and the breath driven out with all the energy at our command; the sound produced will be quite different in quality, and in loudness will not compare with the first sound produced. Is loudness in this case a measure of the force expelling the air in the two cases? Perhaps it may be well to observe that on the commonly accepted view of the auricular systolic origin of the presystolic bruit, the conditions under which this bruit arises are not so unlike those under which the lips and cheeks are thrown into loud and coarse vibrations, for in either case a puff of fluid is suddenly projected through an opening surrounded by *relaxed* structures; and, again, that the forcible expiration through the screwed-up lips resembles in its results the blowing murmur of ordinary mitral regurgitation; also that in each case we have a stream of fluid under high pressure issuing from an aperture surrounded by parts *on the stretch*.

I will not dwell further on this point, but will pass to the next consideration. A very constant attendant upon the bruit of mitral stenosis is the thrill. So constant is it that one is compelled to ask the question why this bruit more than others should be so attended? The reasons are, I think, not far to seek on the auricular systolic theory. On this theory we have the left ventricle becoming gradually distended under *low pressure* from the moment of ending of the ventricular systole. Just before the auricular systole begins, we have close under the hand over the area of the apex beat a bag of fluid, its walls but very moderately on the stretch, and themselves in a state of relaxation and at their thinnest. Into this somewhat flaccid bag the sudden contraction of the auricle sends a puff of fluid across the unstretched lips of the mitral valve: conditions more favourable to the production of a coarse, tremulous movement, and to the propagation of the same to the chest wall, I can hardly conceive of; and that a sound like the rumble of mitral stenosis, obviously near the lower limit of the scale of audible sounds, should be so readily appreciated by the hand is at once evident.

In conclusion, let me only contrast with this the receding and hardening and thickening ventricular walls during systole. It will then, I think, become apparent why a bruit of regurgitation, even though other things were equal, should be less frequently attended by a thrill. Different but adequate reasons might, I think, be assigned for the relative infrequency of a thrill in an aortic regurgitation as compared with mitral stenosis.

I am, Sirs, your obedient servant,

Welbeck-street, W., Oct. 18th, 1887. HARRINGTON SAINSBURY.

THE HONOURS EXAMINATIONS OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—Dr. Vincent Harris has done good service in drawing attention to the injustice inflicted on candidates for the Preliminary Scientific and Intermediate M.B. Examinations by the new regulations, which require a candidate to select and compete for an Honours Examination before having secured a Pass. This is a retrograde step promulgated entirely in the interests of the executive, without reference to the uses of the examination. It is a red-tape movement to save time and labour on the part of those who arrange the examinations and those who deliver judgment on the competitors; whilst the effect on the candidates is to cause the most worthy to withdraw from competition, and thus leave the examination an altogether unjust test of superiority. Those who have a large experience in teaching know how difficult it often is to induce the most industrious and intelligent students to compete for honours, because a natural modesty so frequently accompanies true merit. Moreover, those who work hardest often dare not risk (from financial considerations) the chance of rejection. They cannot therefore be even advised to enter for the present Honours Examination; but had they (as under the old regulations) relieved themselves of the anxiety of a pass, they then could with good heart be induced to compete for honours. Is it to be supposed that among the six candidates from Guy's Hospital who took a first division at the Pass there were not those who, as in former years, would have attained to some of the highest positions in honours? The reputations of these men should lie heavily on the heads of those who framed the new regulations, for whatever may have been our misfortunes at Guy's Hospital, the hard work and energies of our students could never have been in question.

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The experimental legislators of the University may have irretrievably damaged the future of some of these candidates, and have set up an inferior standard of merit by excluding some of the most brilliant competitors. Are there not some young men on the Senate who will protest against these signs of senility in our University? If the examiners are overworked, let more be appointed; do not limit competition by framing regulations to hamper those most competent to compete.

I am, Sirs, your obedient servant,

R. CLEMENT LUCAS, B.S., M.B. Lond., F.R.C.S.

Finsbury-square, Oct. 24th, 1887.

To the Editors of THE LANCET.

SIRS,—May I be allowed to add my testimony to that of Dr. Vincent D. Harris in your last issue? As far as I am able to ascertain, the new rule relating to the Honours Examination at the Intermediate Bachelor of Medicine Examination of the University of London is unpopular both amongst teachers and students. For reasons which Dr. Harris mentions the teacher is often reluctant to advise students to compete for Honours. The efforts of the student are, in consequence, less strenuous and his attainments smaller. Should the University authorities undertake this question, a collateral one might also be considered. I believe that at present a candidate may, after failing to pass at one examination, present himself for honours at the next, and perhaps carry off the highest. There are some who think this anomalous.

I remain, Sirs, sincerely yours,

C. B. LOCKWOOD.

19, Upper Berkeley-street, Portman-square, W., Oct. 27th, 1887.

To the Editors of THE LANCET.

SIRS,—Dr. Vincent Harris's letter in your issue of Oct. 22nd shows that of all the medical schools Guy's passed the most men in the first division, and yet had none in the honours list. It was as Dr. Harris suggests—namely, that all these six men preferred trying for a good pass to competing for honours under the present conditions, which the majority of those interested in the matter would like to see abolished.

I am, Sirs, yours truly,

Harley-street, W., Oct. 25th, 1887. W. HALE WHITE, M.D.

THE NEGLECT OF BLOODLETTING.

To the Editors of THE LANCET.

SIRS,—The history of the illness of Sir William Gull, as stated in your last number, may well give occasion to inquire whether the neglect or abandonment of bloodletting is altogether wise. Thus, quoting your account: "The one feature in the case which has been the occasion of special anxiety has been a certain hæmorrhagic tendency. Last year he had hæmoptysis, and, later, profuse epistaxis. At the time of this occurrence he had slight and transient, but marked hæmaturia, and in the light of this the brain lesion cannot escape being ascribed to a similar cause." The rational deduction from this sequence of events is clear. The three or four distinct outbreaks of extravasation of blood at different points of the circulation demonstrate hyperæmia, relative or absolute, and vascular tension. The obvious therapeutical indication is to lower the tension, to reduce the volume of blood. To accomplish this, and thus to anticipate nature seeking relief by dangerous outbursts, the obvious remedy is to let blood. This may be done in one of two ways—(1) by a small derivative bleeding from the arm; (2) by cupping. But venesection and cupping are nearly lost arts; and certain it is that valuable lives are lost in consequence. Bleeding has fallen into such oblivion, not to say under such condemnation, that I suppose it would require, not simply a consultation, but the consensus of a College or a Congress to sanction resort to it. We now have in the sphygmograph a trustworthy aid in the determination of the conditions that indicate the expediency of bloodletting. But this admirable diagnostic instrument is shorn of half its value if its practical teaching is neglected.

I am, Sirs, yours &c.,

[illegible], October, 1887. ROBERT BARNES.

THE GENERAL MEETING AT THE COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—Will you allow us to remind your readers of the approaching general meeting at the College, to be held on Thursday, Nov. 3rd, at 3 P.M. Considering that at the present moment the petition from the Council of the College for a supplemental Charter, and that of the Members of the College for various much-needed reforms unnoticed by the petition of the present rulers of the College, lie side by side, or rather face to face, before the Privy Council, it is of even greater urgency than on previous occasions that the meeting be fully attended. We must remember that it is now no longer a question of internal policy, and one to be arranged by accommodation within the College walls, but one of an appeal to the authorities outside. The Members must show that their interest in this matter is paramount. We have, however, no fear upon this head, for the signatures, amounting to nearly 5000, to the Members' petition warrant us in the conviction that we have the bulk of the profession with us. A brief reference is made in the Council's annual report to its late offer to meet a small number of representatives of the two Associations of Fellows and of Members; but as that offer was rendered nugatory by the proviso that the Council was not prepared to give any effect to the first resolution passed at the last general meeting, the offer was very properly declined, its wording excluding any hope of concession. Other matters are also referred to, such as the refusal of the Council to alter its decision as to the vital matter of co-operation with the Society of Apothecaries, even though the expressed wish of the Members was emphasised by the Medical Council itself; the result is that two complete diplomas are now granted in the metropolis by competing bodies. But as these points will be fully dealt with on Nov. 3rd, we need only now repeat our request that the Members muster on that day in full force.

We are, Sirs, your obedient servants,

WARWICK C. STEELE,
WM. ASHTON ELLIS,
Hon. Secs. Assoc. of Members of the
Oct. 25th, 1887. Roy. Coll. of Surg.

NOTIFICATION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—The subject of compulsory notification of infectious disease having recently occupied considerable attention in the columns both of the medical and public press, perhaps the experience of one who speaks from an actual extended acquaintance with the same may be of some use in arriving at a conclusion upon this subject. And here it should be noted that this is a question in which the public at large are even more interested than the medical profession itself.

If any health authority is to grapple successfully with outbreaks of epidemic disease, the first and most elementary requisite is that they should at once, and with the smallest delay possible, know where such disease exists. Upon this surely all are agreed. Then comes the question respecting which so much difference of opinion exists—i.e., the best way of supplying this information to the authority concerned. Shall it be through the medical attendant, or through the friends of the patient, or both? Practically it must in the great majority of cases come from the medical attendant directly or indirectly. This being so, why complicate matters by introducing a third person, often ignorant, illiterate, or harassed, and only tending to cause delay in the information being received? Surely the medical man is the fittest person, and there is nothing more *infra dig.* in thus reporting than in furnishing the legal certificate of death in fatal cases. But to meet the smaller minority of cases where no medical attendant is called in, the notification should be dual, the responsibility resting equally on the patient's friends as on the practitioner, and then the objection is efficiently met that cases would be wilfully concealed by patients not having any medical attendant at all. Leicester was among the first of the large English towns to obtain these compulsory powers, and the strongest opposition was raised at the time by the members of the profession here. It was asserted that the confidential

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relations existing between doctor and patient would be destroyed, &c. Nine years' experience has served to dispel all these fears, and to-day those who were then amongst the most determined opponents are now its warmest supporters. The dual system is in force, but in practice only the medical man certifies, though the public are kept fully alive to the fact that they also may be called on to notify, and thus the hiding away of cases is prevented. No doubt, where a medical officer of health is also in general practice, there will exist a not unreasonable dislike to notify to a rival practitioner; but in all our large towns, where that official is not engaged in practice, he must be wanting considerably in tact and discretion if any friction arise between him and his professional brethren on this matter.

I am, Sirs, yours faithfully,

HY. TOMKINS, M.D., B.Sc., San. Sci. Dipl.,
Leicester, Oct. 25th, 1887. Medical Officer of Health.

THE DUAL NOTIFICATION CLAUSE.

To the Editors of THE LANCET.

SIRS,—The dual notification of infectious diseases has an important bearing in two directions: first and foremost as to the best way of preventing the spread of infectious disease; and, second, as to the rights of medical men in private practice. The question was raised at the recent Sanitary Congress in Bolton, and a great amount of special pleading and one-sided opinion was expressed by some of the large body of medical officers of health who were assembled at that important Congress. I fear I was considered a *bête noire* for opposing the principle of dual notification. Having been one of the earliest of living sanitarians who advocated the appointment of medical officers of health in every place, long before the majority of those now appointed had any knowledge of sanitary work, and also having brought to the notice of the public through the Social Science Association the absolute necessity for immediate notification to the State official of the presence of infective disease in our midst, are points which should satisfy your readers of my desire to obtain such notification, and also of my belief in the benefits to be obtained from it. Nevertheless I am sorry to see my official brethren trying to obtain that notification by a means which will assuredly fail in its purpose. The truth of my assertion was fully borne out by the experience afforded at the Bolton Congress. Several of the readers and speakers in favour of dual notification, including Mr. North of York, stated that they had never had a notification forwarded to them by the householder, and in Bolton itself it was the exception. In the latter town there is considerable friction between the medical officer of health and his professional brethren upon this subject. In many towns the complaint is made that a large percentage of the cases of death which were registered were uncertified by medical men. In some instances this amounted to 10 per cent. of the actual number of deaths, and Mr. Vacher was very pertinent upon this point in his valuable paper. Yet the medical officers of health are insisting upon dual notification, whilst they allow the law when obtained to be a dead letter as far as one section of the parties to dual notification are concerned. At Bolton the chairman of the Sanitary Committee, evidently animated with a feeling of hostility towards defaulting medical men, makes no effort to put the law in force against the householder, who in that place ignores the law altogether. What is the result? A very large percentage of infectious cases have no medical attendant, and disease spreads in consequence. The action of the medical officers of health all over the kingdom shows that they do not believe in dual notification, and I am in accord with them as to one notification being sufficient. A dual notification is absolutely unnecessary, and those districts in which the local authority pays for the certificate when forwarded by the medical man get the certificate from the medical attendant whether there is a penal clause or not. My view of the matter is this. Let the medical attendant have a right to claim a fee of not less than 2*s.* 6*d.* for the certificate from the local authority. Let the medical attendant have the right to be the agent of the householder in communicating with the medical officer of health, and make it penal upon the householder or guardian if he does not make the communication either by himself or his agent. There will then be an end of all friction between the medical officer of health and the medical attendant. The former will not be able to say of his medical *confrère* that, if he does not send in the certificate, he will put him in the dock at the police-court. As the law at present stands, if the householder fails, and the medical attendant also does not send a certificate, the latter is a *particeps criminis*, and the medical officer of health cannot call him as a witness against the defaulting householder or guardian. If there is no penal clause against the medical man, the medical officer of health can put the practitioner into the witness box, and ask if he did communicate to the proper persons the fact that the case which is the subject of the charge was infectious and should be isolated. If the doctor says "Yes," the case may be established against the defendant; if he says "No, I did not," the medical man publicly acknowledges that he failed in his duty to his patient, and the local press would know how to deal with him. I believe that a few cases of such a character would put an end to all attempts on the part of private persons to conceal disease, and there would be no object in not having medical attendance. It is quite certain that medical men as a class could not be parties to such a desire. If a private practitioner is so little careful of his duty towards his patients and their friends as not to inform them of the danger of infection, he is liable to action by the defendant himself, and public opinion would soon put an end to his private practice. Whilst, if he connived with his patient's friends, an acute lawyer would soon show by cross examination that he was rendering himself liable to prosecution for perjury. It is very important, in the interests of the State and of sanitary progress, that the notification should be real, not nominal. It is a bad principle, though occasionally necessary, to allow a penal clause to be a dead letter, but to assist in obtaining such a clause for the purpose of allowing it to be in abeyance is ridiculous. This is accepted by the medical officer of health as against the householder, and I know it is not put in force against medical men in some districts of the country. Dual notification, as at present carried out, is a farce, for it is not dual. Experience shows that one certificate is sufficient for the purposes of registration—that, indeed, it is better than two. The medical attendant will always act as the agent of the patient if the law allows the payment for the certificate; and it is altogether contrary to justice for a professional rival to have the opportunity of saying of his brother practitioner that, if he does not send in his certificates quickly enough, he will put him in the dock at the police-court. The State has no right to make medical men State officials until the position of the medical man is recognised by the State in a very different manner to that which is accorded to the profession at the present time; and if I were in general practice I should decline to send in any certificate without first obtaining the consent of my employer to that course. As the law is now carried out, dual notification is a farce, and open encouragement is given to large numbers of people to avail themselves of unskilled medical attendance, or to do without it altogether. This is seriously adding to the difficulty of repressing disease. A single notifying clause as against the householder, with another giving the right to a fee for the notifying doctor, would be far more effectual than the dual plan, which is only teaching people how not to do it, and making them disobey the law.

I am, Sirs, your obedient servant,

Croydon, Oct. 14th, 1887. ALFRED CARPENTER.

HEMIPLEGIA DURING THE PUERPERIUM.

To the Editors of THE LANCET.

SIRS,—I beg to respond to Dr. Sloan's request in your issue of the 8th inst. that readers of the paper would record their experience of hemiplegia during the puerperium *sine* valve disease. Ten years ago (in the September number of the *Edinburgh Medical Journal*, vol. xxii., p. 922) I recorded a case of "Puerperal Embolism; Aphasia; Hemiplegia; Recovery." I would refer Dr. Sloan for fuller details to the brief account in the journal quoted; but a synopsis of the case is: "Parturition on April 15th, 1877; good puerperium. Mental worry on May 2nd; sudden loss of speech; faintness; cramp-like pain referred to calf of left leg. The condition of the heart and kidneys normal; no history of rheumatism. (These facts, referring to *heart* and kidney, on May 2nd, from my note-book, do not appear in the published case.) On May 4th patient spoke monosyllabically. May 5th: Kidneys normal; no symptom of metria or septicæmia; right arm paralysed. May 23rd: Speaking better, but not perfectly; sensation of right arm and leg almost normal;

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muscular coördination and power very much restored to arm; leg still almost motionless." My summary of the diagnosis reads: "The continued, prolonged nature of the case" (there was subnormal power in the limbs in the middle of July), "the evident absence of mental disturbance of the higher centres—e.g., those of rational thought,—the implication of the tongue and eye, the gradual development of hemiplegia, the want of the peculiar 'heel dragging' in walking, and the slow, lengthened convalescence, negative such a supposition"—viz., a suggestion previously made of hysterical paralysis; and—"We have here a history of interrupted brain function of the special centre of speech followed by hemiplegia of the right side ..... the left middle cerebral artery had been suddenly occluded, and the consequent train of symptoms indicative of impaired arrested function of the left frontal convolution, of the left corpus striatum, and convolutions in its vicinity, followed."

As illustrating what I esteem a still rarer condition in the puerperal, I would refer your readers to a case of left-sided hemiplegia associated with albuminuria and kidney affection. I believed the paralysis to be of reflex nature; the account is published in vol. ix., p. 122, of the Transactions of the Edinburgh Obstetrical Society. In this case paresis with aphasia and drowsiness came on, on April 26th, 1880. Amaurosis had been noted on April 22nd. A reference to the volume named will show a wholly dissimilar clinical history to the one quoted formerly. "Delivery on May 5th of living but weakly child; no eclampsia; return of muscular power to hand longest delayed. By middle of June patient recovered."

In connexion with the subsequent discussion, to which the late Dr. Angus Macdonald made a most invaluable contribution, he incidentally suggested (p. 192, vol. ix., Trans. Obstet. Soc.) the possibility of embolus or "sand grain" apoplexies as explanatory of the pathology. My friend Dr. Underhill was also inclined to accredit miliary aneurysms or embolism as a likely pathological explanation. My reply on the discussion touched on the further grounds which seemed to me to warrant a diagnosis of "reflex paralysis." The history of two other cases of puerperal aphasia in abstract, with an interesting post-mortem account extracted from the *Allgemeine Medicin Central-Zeitung* (No. 33, 1879), will be found in the *British Medical Journal*, vol. ii. 1879, p. 882. In my paper previously mentioned, I remark: "Both seem to have been due to inflammation. ..... Dr. Lewandowski's case suggests encephalitis, and the other was plainly inflammatory and pyæmic. On post mortem the left anterior convolutions contained a decomposed focus the size of a nut; purulent foci were found in the lungs and uterus, with suppuration of the veins of the ovario-uterine plexus, &c."

Although puerperal aphasia, apart from septic influences, is not common, I believe several cases of simple embolic aphasia during the puerperium are to be found on record. I can conceive no general condition of the blood more likely to predispose thrombosis and embolism than that found in pregnancy. At the same time, temporary absence or late appearance of murmurs cannot always be left out of count in valve lesions, as shown in Dr. Dickinson's very interesting paper on the "so-called Presystolic Murmur" in your present issue, so that some seemingly simple cases might be really complicated by cardiac conditions.

I am, Sirs, yours faithfully,

A. D. LEITH NAPIER, M.D.

Beaufort-gardens, S.W., Oct. 13th, 1887.

"IS CANCER CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—I have read with interest the annotation in your issue of the 8th inst. (p. 727) and Dr. Adam's letter published to-day (p. 766). If cancer were a contagious disease—using the term in its ordinary sense—such examples as those now cited would be very common instead of very rare. There is little doubt that cancer may be reproduced by direct implantation of small portions of the growth upon a suitable nidus (grafting). And the difficulties which attend the conditions essential to this method of propagation is the explanation of the rarity of the phenomenon. Mr. Hutchinson jun. related to me an instance in which a cancerous growth appeared upon the back of the hand, presumably caused by the implantation thereon of a portion of a similar growth from the patient's face. That the glans penis might become the seat of cancer from direct implantation of cells from a cancerous cervix uteri is possible, but the few examples recorded of penile and uterine cancer in man and wife, considered with the rarity of cancer of the penis and the great comparative frequency of uterine cancer, strengthens my belief that if it ever be directly transmitted from one to another individual, the passage of cancer is effected by grafting—the process being comparable to the well-known surgical method of skin grafting. Therefore the interesting case of a member of our profession who, with his two wives, died of cancer, as described by Dr. Adam, should be regarded as a remarkable *coincidence* only. I am, Sirs, your faithful servant,

CHAS. E. JENNINGS, F.R.C.S. Eng.

Upper Brook-street, Grosvenor-square, W., Oct. 15th, 1887.

To the Editors of THE LANCET.

SIRS,—With reference to the question of the contagiousness of cancer, I can mention two cases which somewhat bear out the idea of the possibility of such an occurrence.

In 1883 a man was admitted into the Liverpool Infirmary suffering from epithelioma of the penis. He stated that his wife had died some time before of cancer of the womb, and he thought his complaint was something which he had contracted from her. He had never had any venereal disease. I can distinctly recall to mind the remark of the surgeon whose case it was, that we had no evidence that cancer could be so communicated.

The second case occurred in my practice a few months ago. In March, 1887, I was called to Mrs. E——, and found her suffering from uterine cancer, which had evidently been in existence at least some months; it being, in fact, too late then for any operative interference. This woman's husband had had his entire tongue removed for epithelioma in November, 1885. Both she and her friends were quite unaware of anything being wrong with the uterus. The cancer subsequently grew very rapidly, and she died in July last. The family history on both sides was good.

I am, Sirs, yours obediently,

THOS. G. LASLETT, L.R.C.P. Lond., &c.

Farnworth, Bolton, Oct. 19th.

THE SMALL-POX OUTBREAK IN THE PERTH INFIRMARY.

To the Editors of THE LANCET.

SIRS,—So much has been said and written about the recent outbreak of small-pox in the infirmary here, that it appears due to ourselves, our medical brethren, and the public to send you a short statement of the occurrence, and how it has been dealt with.

The disease showed itself in three female patients lying in the same ward at the beginning of this month. The medical officer in charge, while suspicious as to the nature of the affection and alive to the danger, was not quite sure of the diagnosis. On the 4th, a consultation of the staff was held, and suspicions fully confirmed. The local authority were informed of the outbreak, but their hospital was not in a fit state to receive patients. These were removed the following night, and even then cleaning and other work were still in progress. Next day three nurses were evidently attacked, and another female patient, who had been lying in No. 1 ward, showed suspicious symptoms. Immediate action was necessary. Women only had been seized, but men might be any hour. The outbreak was a mystery, its future uncertain. A large detached building, erected in 1865 for infectious diseases, was seen to be available, and the sufferers were at once taken there. No. 1 (the ward affected) had been cleared of all patients not down with the disease on the day of its discovery, and thoroughly disinfected. All mattresses that had been in the ward were burned, bedding at once steeped in 1 in 20 carbolic acid, then boiled, and afterwards washed. One other nurse was seized with suspicious symptoms eight days after assisting in the removal of her colleagues to the west wing; and a fourth female patient was also attacked, and she too was at once taken there. We are quite satisfied that she has passed through an attack of small-pox, but so extremely mild—eruption only two or three aborting vesicles—that no one would have been justified in sending her to any hospital outside that in which she was serving. Fortunately for such a

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case, our infirmary has always had abundant available space for complete isolation. Three detached blocks provide accommodation for over 100 patients; very seldom fifty, rarely more than forty, patients are in the house at one time. Small-pox nurses were at once obtained from Edinburgh, and the most rigid quarantine enforced.

We were not prepared for such an occurrence; but this only led to a little extravagance in burning bed and body linen instead of washing it. There is a small kitchen belonging to the building, but no trustworthy cook could be had at a moment's notice. All food required, beyond what the nurses could prepare, has been taken to the door and placed in suitable vessels which never leave the infected building. The disease has not spread, and there is every reason to hope that it has been stamped out.

We are, Sirs, yours truly,

DAVID H., STIRLING, M.D.,
Consulting Physician and Surgeon, County and City of Perth Infirmary.
JOHN T. GRAHAM, M.D.,
Visiting Surgeon, ditto.
LEIGH HUNT, M.B.,
Visiting Officer, ditto.

Perth, Oct. 25th, 1887.

VACCINATION AND REVACCINATION.

To the Editors of THE LANCET.

SIRS,—In connexion with the interesting discussion in your columns on the subject of vaccination, I have had a personal experience which perhaps you may consider worth publishing.

I was at a boarding school where there were about 160 pupils. Small-pox appeared; how it made an entry was never very well cleared up. Within about a week thirteen boys became ill, and at the end of that time I myself became so unwell that I was no longer able to keep to my feet, and was removed to that part of the College called the "infirmary," where the thirteen were already isolated. On the same evening everyone—boys masters, and servants, with the exception of those who had been successfully revaccinated or had previously had small-pox—was vaccinated. Whether all these vaccinations proved successful I cannot say. The result, however, I can answer for. Not another case of small-pox occurred from the moment of this general vaccination, although the rest of the 160 boys were subject to exactly the same influences as the fourteen who were attacked, *excepting the revaccination.* Of the fourteen, one died, and the remaining thirteen were all more or less badly marked about the face. I may mention that I had never been revaccinated, and the mark that remained from my first vaccination was scarcely perceptible. This experience has very strongly impressed me with the importance of vaccination or revaccination, as the case may be, even when small-pox has already appeared in a house.

I am, Sirs, yours truly,

ALFRED J. MACNALLY, B.A., M.B., &c.

Kingstown, Oct. 22nd, 1887.

TREATMENT OF SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—I have for some years treated all my scarlet fever cases with, in addition to the ordinary treatment by salines, an application every day of 1 in 20 carbolic oil to the whole of the surface of the body. By this means I have always been able to prevent the disease attacking others in the house, and I have noticed that all cases so treated from the beginning have done well. After the letter of Mr. Arthur Wiglesworth in your paper it occurs to me that the carbolic acid was in part absorbed, and was an important agent in the well-doing of my patients.

I am, Sirs, your obedient servant,

ALBERT BENTHALL.

Southsea, Oct. 14th, 1887.

SPANISH CONGRESS FOR THE PROTECTION OF YOUNG CHILDREN.—A Congress for the Protection of Young Children has recently held some meetings in Cadiz. The questions discussed included the establishment of hygienic schools with medical men as masters, the necessity of modifying the present system of education, the insufficiency of the support allowed by the State for children, and the regulation of the employment of children in factories and workshops.

MANCHESTER.

(From our own Correspondent.)

OWENS COLLEGE.

THE Medical Societies have commenced work again for the winter. On the 12th inst., at the Pathological Society, Mr. Stocks was elected president for the coming year. In addition to the usual pathological exhibits, Dr. Dreschfeld gave a very interesting *résumé* of some experimental work he has been doing, bearing upon the bacterial origin of malignant endocarditis. He concludes that a streptococcus associated with this disease is the true pathogenic organism producing it. The Medical Society held its first meeting on Wednesday last, when several good surgical cases were exhibited. The entries at the College, though not yet complete, show that Owens will again take the lead of the provincial medical schools, and probably not more than two or three of the metropolitan schools will exceed it in numbers. More than ninety students have been entered, of whom seventy have entered for the whole curriculum. Professor Young, the Dean, in his annual report, states that, "while there has been no diminution in the number of those presenting themselves for the degree of the University of London, the number of candidates for the Victoria University degree has largely increased." The appointment of Dr. Ross as joint lecturer on medicine with Dr. Morgan has given much satisfaction to the students. Sir Wm. Roberts and Sir H. Roscoe have been appointed Emeritus Professor of Medicine and of Chemistry respectively. It is in contemplation to present to Sir Hy. Roscoe his portrait, as a token of respect and admiration from those who have been students under him in days gone by. Subscriptions will be received from any old "Owens man" by Dr. Thorpe, Science and Art Department, South Kensington.

THE EXHIBITION.

The success of our Jubilee Exhibition has been unparalleled, considerably more than four millions of persons having visited it. If any of your readers in this district have not examined the beautiful specimens of rare chemicals, alkaloids, and other allied substances, they will do well to do so ere the Exhibition closes. Space will only permit the bare mention by name of the beautiful cinchona alkaloids and barks shown by Messrs. Howard. Lactic acid (sp. gr. 1·21), for use as a caustic, nitrate of aconitine, hydrochlorate of apomorphine, pure atropine, berberine, salts of cafferine, camphor monobromide, tannate of cannabine, chrysarobin, salts of cocaine, colchicine, hydrastine, hyoscyamine, and many other rare and interesting active principles, are shown by Messrs. Merck; whilst Messrs. Christy and Co. have a large collection of the raw vegetable, plant, fruit, &c., from which many of the foregoing are obtained. The chemical student will be interested in the rare metals, selenium and its salts, tellurium, cermanium, indium, gallium, &c., shown by Dr. T. Schuchardt of Germany.

ACCOMMODATION FOR INFECTIOUS CASES.

The proposal to erect a new fever hospital at Hope on ground belonging to the Salford guardians has been vetoed by the Local Government Board, so the corporation will have to look elsewhere for a site. Seeing how large an open space exists at Monsall, where all small-pox cases from Salford are at present treated, it seems a pity that arrangements cannot be made with Manchester to receive all other infectious cases too. Owing to the continued prevalence of scarlet fever, the Monsall hospital has had considerable difficulty in finding room for all the patients admitted there, the total number under treatment at the present time being the largest since the hospital was established. Happily we have but little small-pox, but, seeing how frequent and extensive the communication with Sheffield is, where small-pox is now rife, it will not be surprising if more cases are met with.

If the ship canal scheme has done nothing else, it has wakened up our municipal authorities to take immediate steps to stop the pollution of the Irwell by sewage. Manchester is not only about setting her own house in order, but is taking energetic steps to compel all other offenders to do likewise.

Among the candidates for municipal honours at the ensuing elections for city councillors is one representative of the medical profession. Manchester at present, unlike

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the neighbouring borough of Salford, has no medical man on its Council. A member of our profession would undoubtedly be of considerable service in many departments of corporation work.

Manchester, Oct. 24th.

LIVERPOOL.

(*From our own Correspondent.*)

THE LIVERPOOL MEDICAL INSTITUTION.

THE opening of the forty-ninth session of the Liverpool Medical Institution took place on the 6th inst., when the president, Dr. J. Birkbeck Nevins, delivered the inaugural address. The subject was the sanitary arrangements of four large communities differing widely from one another. These latter were, the camp of the Israelites, Edinburgh, Manchester, and Liverpool. The address was accompanied with illustrations, and was listened to most attentively by a large audience.

THE ROYAL SOUTHERN HOSPITAL.

A vacancy having been caused by the resignation of Dr. Little, one of the surgeons of the Royal Southern Hospital, Drs. Rawdon and Alexander were candidates until recently, when the latter gentleman retired in favour of Dr. Rawdon, who was elected without opposition on the 24th inst. Dr. Rawdon is well and favourably known for his assiduous services as surgeon to the Infirmary for Children, which office he has held for fifteen years past. There will be another vacancy shortly in the surgical staff, to which Dr. Wm. Alexander, visiting surgeon to the Liverpool Workhouse, author of the Jacksonian Prize Essay of 1881 and of the Sir Astley Cooper Prize of 1883, will most probably be elected without opposition.

THE CITY HOSPITALS FOR INFECTIOUS DISEASES.

For some time past the question of providing the necessary hospital accommodation for infectious diseases has been the subject of much discussion, not unattended with acrimony. Formerly provision was made by the parochial authorities of Liverpool, West Derby, and Toxteth, but this being found to be contrary to law, different arrangements had to be made. On the recommendation of the Hospitals Committee, of which Mr. Robert Hamilton (senior surgeon to the Royal Southern Hospital) is chairman, the Netherfield-road Hospital, which had been presented to the city by its former managers, was altered, and fitted up at a cost of £22,000, provision being made in it for eighty beds. The Grafton-street Hospital was also commenced, the accommodation to be seventy-two beds and the cost £41,800, which it is believed will be greatly needed. It will be absolutely necessary to provide a further number of 186 beds if we are to deal satisfactorily with an epidemic of scarlatina such as is now raging in London, and might at any time break out in Liverpool. Of course the cost of the latter must depend upon the site, and the City Council at their next meeting will have before them two alternative plans, one estimated to cost £62,800, the other £101,246. To most medical readers these figures will appear excessive, while those who have had experience of hospitals of this class will know that the expenditure of so large a sum is not justifiable. The original suggested scheme of Dr. Taylor, the medical officer of health, was to have a small permanent hospital, with additional temporary removable wards, to which, however, Mr. Hamilton was opposed. The present juncture is a very serious one; means of isolating cases of fever are urgently needed, but a judicious expenditure of public money is also necessary.

Liverpool, Oct. 26th.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.

THE foundation stone of the new building for the University of Durham College of Medicine, erected from the designs of Messrs. Dunn of Harvard, is to be laid on next Wednesday, Nov. 3rd, by the Duke of Northumberland. The buildings have been in progress for some time, but the foundation-stone ceremony has been unavoidably delayed. This is a pity, as the season is rather advanced for the business. The new College is situated in Bath-road contiguous to Northumberland-street, one of the principal streets of the city. The building, at the same time, is a considerable distance from the Royal Infirmary; but there can be no doubt, in the growing state of the city, the infirmary itself must soon shift its quarters, and it is more than probable that it will also follow in the direction of the Medical School. The anatomical block, it is hoped, will be ready for occupation in January next, and the remaining portion in October, 1888. The buildings will be erected round a central quadrangle, the anatomical block forming the east side; the chief entrance, examination hall, and museum in front; and the residential college the west side. The south side, intended for the extension of the departments of physiology and pathology, will not for the present be erected. The style adopted is Elizabethan. The mullioned windows are carried out in stone, and the walls and dressings in red brick and terra cotta. The anatomical block contains a dissecting-room, 70 ft. long by 30 ft. wide, lighted from the north side by a ridge and furrow roof, and floored with asphalte, so as to be clean, noiseless, and warm under foot. A large locker room and lavatory adjoining are similarly floored. Near by is the anatomical theatre, lighted from above and fitted with special apparatus for demonstration purposes, and the professors' private room. Above is the bone room and curators' work room. Below is a summer dissecting room, a couple of rooms for the department of comparative anatomy, anatomy, and animal pathology, a mortuary injecting room and preparation room, with the heating vaults, &c. There is a large yard, with accommodation for animals suffering from disease. All the interior walls of the block are lined with white glazed bricks. The ventilation is provided for by heated shafts; for warming, hot water coils are fitted throughout. The main front contains the arched entrance centrally under a square tower with oriel windows corbelled out above the archway, and leads through a vestibule to the hall and staircase. Rooms for the registrar and porter are on the right and left. The ground-floor is occupied by the council room, a materia medica room, a smaller lecture theatre, with a dark room attached, professors' rooms, and offices. A spacious oak staircase, with double flight of steps, leads to the upper floor, which contains a library and examination hall, 80 ft. by 35 ft.; and the museum, 60 ft. by 35 ft. The former is of Elizabethan design. In the tower is a smoking room for students.

SUNDERLAND.

The young ladies of Sunderland have held a very successful bazaar in aid of the new Hartley Wing of the Sunderland Infirmary. The bazaar was opened under good auspices, and carried out with spirit.

ALNWICK.

The annual meeting of the Alnwick Infirmary has been held, and the report presented the usual features, with the exception that there had been an increase of 100 in the number of out-patients, owing to an epidemic of measles. The financial position of the infirmary had improved, due, it was said, in a great measure to the judicious and economical management of the matron and the house-surgeon, Dr. A. Scott Purves.

Newcastle-upon-Tyne, Oct. 26th, 1887.

EDINBURGH.

(*From our own Correspondent.*)

THE UNIVERSITY COURT.

AT the last meeting of the University Court a good deal of important business was transacted. A question which has been pending for several months was provisionally settled by the legal opinion of two leading members of the Scottish Bar. This was the question as to which body in the University has the right to elect the representative of the University in the General Medical Council. At the last meeting of the University General Council, composed of Edinburgh graduates, it was claimed that to that body the right really pertained, as representing the University in its widest sense. This was combated by representatives of the Senatus at the last

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General Council meeting, and finally the matter was submitted for decision to the University Court. As they felt a difficulty in giving an opinion on the exact tenour of the provisions of the Universities (Scotland) Act, 1858, dealing with this point, they retained the services of the Dean of the Faculty of Advocates (Mr. Mackintosh) and the Solicitor-General for Scotland (Mr. J. P. B. Robertson). These gentlemen have now presented their finding in the matter; which is that inasmuch as prior to the Act of 1858 the Senatus was the executive body in the University, and since that Act in no way curtailed the executive powers of the Senatus, the duty of electing this representative lies still with them: in no case could this function lie with the General Council, whose office in the University polity is a purely deliberative one. This opinion will probably settle the question for the present, which is in itself a satisfactory result of the discussion; it will probably do good also in drawing the attention of graduates to this and several similar features in the Universities' system that might well be modified in any legislation that may be proposed on the subject, with the object of increasing their voice in the conduct of University affairs. This finding of counsel will be formally reported to the General Council meeting a few days hence, and will probably prove a not very pleasant pill to the democratic element, which is now strongly developed in its constitution. The Court then proceeded to consider some arrangements for teaching in the present session. They confirmed the leave of absence granted to Professor William Rutherford for a further period of six months, and approved the arrangements by which Professor Haycraft will carry on the work of the department during the winter session. The Court also recognised the course of lectures by Dr. D. Noël-Paton at the Royal College of Surgeons as a qualifying course for students attending the University medical curriculum. At the same time the course of demonstrations on Practical Pathology, by Dr. William Russell, was recognised as a qualifying course.

Edinburgh, Oct. 25th.

ABERDEEN.

(From our own Correspondent.)

THE UNIVERSITY.

THE winter session at Marischal College was opened on Wednesday, the 19th inst., when several of the professors delivered introductory lectures. Dr. Struthers chose for his text Recent Medical Legislation, and Dr. Hamilton gave a most interesting lecture on the Transmission of Scarlet Fever and Tuberculosis from the Cow to Man. Professor Cash was introduced to his class on Friday by Principal Geddes, and delivered an able address on Pharmacology and Therapeutics.

THE STUDENTS AND CLINICAL TEACHING.

The students are indignant, and justly so, to find that during the vacation changes have been made in the visiting hours at the Royal Infirmary, which not only limit the time for work at the General Dispensary to less than an hour, but deprive them altogether of the opportunity of taking advantage of the clinical material to be found in the out-patient department and wards of the Hospital for Sick Children. This is surely a great mistake, for anyone who knows the Aberdeen Medical School must acknowledge that the students have always asked, not for less, but for much more clinical work and teaching; and if this new arrangement be continued, a great many of the students will undoubtedly in future spend their fourth year at the Edinburgh and other schools.

HEALTH OF THE CITY.

For the month of September the health of the city was most satisfactory, and, on the whole, it continues to be so, but, unfortunately, we are threatened with an epidemic of scarlet fever. At a meeting of the Sanitary Association of Scotland, recently held at Falkirk, Mr. Cameron, sanitary inspector for Aberdeen, read a paper giving an account of the sanitary work carried out in the city during the last ten years or so. He pointed out that Aberdeen was exceptionally fortunate with regard to its sanitary legislation. Under the Aberdeen Corporation Act for 1881, all new dwelling-houses must have a certain amount of air space at the rear, as well as a prescribed open space in the front, and the rooms must be at least nine feet high. In all new houses and houses undergoing alteration no drains or pipes are allowed to be covered in after they are laid until the smoke test has been applied by the inspector. Then, again, by another clause of the Act medical practitioners are bound to report to the sanitary authorities within twenty-four hours all cases of infectious disease. As a proof of the amount and nature of the work done by the sanitary staff, Mr. Cameron referred to his last annual report, where it is stated that "during the year 2885 nuisances were removed, 3954 notices issued, 568 patients removed to the hospital, and 1532 patients supervised at their homes; 27,000 lb. of meat seized, and over 1900 visits made to cow-sheds, dairies, and milkshops." During the five years 1882-1886 the Town Council had spent in connexion with the health of the city £9281, the amount increasing yearly from £1332 in 1832 to £3041 in 1886, and during the present year £1100 was spent on an addition to the City Hospital, which originally cost £14,000. As a result of all this expenditure &c., Mr. Cameron said that we now have comparative immunity from the ravages of infectious diseases, while the death-rate has fallen from an average of 23·68 per 1000 for the five years 1869-1873, to 19·87 for the three years 1884-1886; and for 1885 the unusually low death-rate of 17·94 per 1000 was recorded. Another striking result is the great decrease in the number of cases of typhus fever, of which in 1882 there were 111 cases; in 1883, 26; 56 in 1884; 11 in 1885, and only 1 case in 1886.

DUBLIN.

(From our own Correspondent.)

CORPORATION GRANTS TO THE DUBLIN HOSPITALS.

AT a meeting of the Dublin Town Council last Monday a sum of £4000 was voted in aid of the Dublin Hospitals. A recommendation of the Finance Committee to the Council that the grants be reduced to £3000 was lost. The Rotundo Lying-in Hospital, which receives only £200, was struck out because the Protestant governors outnumbered the Roman Catholic. As one of the Council very properly pointed out, the Corporation are dispensers of the public funds, and they ought not to allow theological questions to influence them in the matter. I may add that nineteen out of twenty of the inmates of that excellent and well-managed institution, the Rotundo Lying-in Hospital, are Roman Catholics, and it would be as unjustifiable an act on the part of the governors if they refused admission to the hospital of any patient belonging to that religious community.

ROYAL UNIVERSITY OF IRELAND.

Dr. Macswiney has been elected a Fellow in the Department of Medicine. Mr. Walter E. Adeney has been appointed to the vacant curatorship. The Senate have determined to refuse to accept certificates of night lectures, save in the case of medical students registered as such prior to Oct. 1st, 1887, and for lectures attended by them prior to July, 1889.

APOTHECARIES' CONJOINT SCHEME.

On November 4th the governors of the Apothecaries' Hall will elect an Examiner in Practice of Medicine under the Conjoint Scheme between it and the Royal College of Surgeons in Ireland. Candidates for the post must be hospital physicians of at least five years' standing.

SCHOOL OF PHYSIC, TRINITY COLLEGE, DUBLIN.

The introductory address at the opening of the new Medical School Buildings will be delivered by the Rev. Dr. Haughton, F.R.S., on Tuesday next, November 1st.

DUBLIN HOSPITAL SUNDAY FUND.

The annual collections in aid of the Dublin hospitals will be held on Nov. 18th, when collections will be taken up in the various churches in and adjacent to Dublin for this most charitable object. Every denomination, including the Jewish, take part in the good work, with the exception of the Roman Catholic Church, whose members, for some unexplained reason, have hitherto refused to co-operate, although the vast majority of the poor treated in the Dublin hospitals belong to that community.

Dublin, Oct. 25th.

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PARIS.

(From our Paris Correspondent.)

MORPHINOMANIA.

THE post-mortem examination of the bodies of subjects dying from morphinomania is rarely published, so that the following note, which was read by Professor Ball at the meeting of the Academy of Medicine last week, may be of some interest. The author related the case of a patient, a young girl aged sixteen years, who was admitted into the Ste. Anne Asylum in the month of May last, and had gone thither to place herself under treatment with the view of being cured of her pernicious habit, which she contracted from the age of twelve years for the relief of pains attending fissure of the anus. At the time of her admission to the Asylum she used to inject subcutaneously from one to two grammes of the hydrochlorate of morphia per day, and, according to her own desire, an attempt was made to immediately suppress the injections, but on the third day she was seized with such alarming symptoms that Dr. Ball was induced to resort to the hypodermic injections, gradually diminishing the dose of the morphia to only one centigramme per day. To combat the insomnia and agitation which the patient was labouring under, enemata of bromide of potassium and chloral were administered at bedtime, and sulphate of sparteine was injected subcutaneously for the relief of the cardiac symptoms. The treatment lasted forty-two days, and on July 10th the suppression of the morphia was complete, and the patient's health seemed satisfactory. On the morning of the 23rd, however, she was suddenly seized with hysterical and syncopal symptoms, and in a few hours she expired. At the necropsy, the heart was found to be loaded with fat, but there was nothing of any note observed in the other organs. On chemical examination, however, traces of morphia were manifest in the kidneys, spleen, and liver, as well as in the nervous centres. These organs contained an appreciable quantity of morphia, though this result is opposed to the results obtained by the greater part of the authors who have investigated this subject; but after what has been observed in the present case, it appears evident that morphia may sometimes remain a long time in the tissues after having penetrated into the economy, and the presence of this poison in the organs may explain by a sort of auto-intoxication the tardy accidents which are sometimes observed in morphinomaniacs long after the cessation of the abuse of the drug. This would explain how patients of this category succumb in a state of collapse several days after apparent cure. Professor Ball concluded his paper with the remark that, independently of all hypothesis, one practical conclusion may be deduced from the above facts—viz., that cardiac tonics play a most important part in the treatment of morphinomania, and that it is absolutely indispensable to administer either sparteine or some other cardiac medicament, not only during the gradual suppression, but a long time after the complete discontinuance of the drug. Moreover, these facts demonstrate the danger resulting from the sudden withdrawal of the morphia, for if the gradual suppression can of itself expose the patient to serious dangers, it is all the greater reason why the sudden suppression heretofore in vogue should be proscribed.

SMALL-POX HOSPITALS AND INFECTION.

A short time ago a hospital for variolous patients was erected at Aubervilliers, just outside the fortifications of Paris. At a short distance from this place, but within the fortifications, is situated extensive gasworks at La Villette, one of the most populous districts of Paris. Dr. Créquy, a physician practising in that district, in a report read before the Academy of Medicine last week, has drawn attention to the dangers of the proximity of such a hospital to so populous a part of the city, for at the gasworks above referred to there are 1200 workmen employed in summer and 2000 in winter, who, with their families, reside in the neighbourhood of the works. Since the establishment of this hospital several cases of small-pox have occurred among this population, which Dr. Créquy thinks cannot be attributed to any other cause than "contagion at a distance," which in English medical literature would be expressed by the term infection. In the interest of public health, he would therefore demand the closing of this hospital as soon as possible and its removal to some other quarter. He does not pretend to fix the distance at which these hospitals for infectious diseases can be safely established from dwelling houses, but an idea may be formed by considering the distance at which the small-pox hospital at Aubervilliers is situated from La Villette—viz., 230 metres. On the same grounds the author objects to the too-short distance existing between the wards for isolating patients and the main building, which in some hospitals is only 100 metres.

TANACETIC RABIES.

In my letter of last week I communicated a note read by M. Peyraud at the Academy of Sciences on "tanacetic rabies," which the author has also submitted to the Academy of Medicine through Professor Hayem. The note need not be reproduced here, but I may mention that Professor Hayem, in presenting the paper, remarked that in endeavouring to ascertain whether this tanacetic rabies was contagious, his experiments led him to conclude in the negative. He, moreover, observed that he had reason to believe that tanacetic and true rabies had the same antagonist—viz., chloral. M. Colin, the well-known veterinarian, made the remark at the same meeting that there are a certain number of substances besides tanaisia susceptible of determining symptoms similar to those observed by M. Peyraud. According to M. Colin, the symptoms observed are due to a simple excitation of the bulb, and rabies has nothing to do with the tanacetic malady.

Paris, Oct. 25th.

ROYAL COLLEGE OF PHYSICIANS.

A COMITIA of the Fellows of the College of Physicians was held on the 27th inst., Sir W. Jenner, Bart., K.C.B., President, in the chair.

Dr. C. W. Marriott was admitted to the Membership of the College.

A communication from the Colonial Office was read, thanking the College for its memorandum upon the Contagiousness of Leprosy, and stating that any suggestions which the College might make for the further investigation of the subject would, if possible, be carried out. In another communication the Colonial Office forwarded to the College a copy of the report on Cerebro-spinal Meningitis in the Island of Gozo, which had been sent by the Governor of Malta.

Letters were read from the Council of the Sanitary Institute of Great Britain asking the co-operation of the College in the proposed International Sanitary Conference to be held in London in 1890.

Sir E. Sieveking, on behalf of the treasurer, presented the quarterly report of the Finance Committee. It contained a recommendation to the effect that the windows of the staircase in the College building be filled with the armorial bearings of past presidents. The report was adopted, and a committee, comprising the members of the Finance Committee, together with Dr. Munk, was nominated to carry the proposal into effect.

Sir H. Pitman was re-elected a member of the Committee of Management; and the nomination by that committee of Drs. Stevenson, Ballard, Thorne Thorne, and Corfield as examiners for the diploma of Public Health was approved.

Another report from the same committee, requesting that a clause of a previous report, which recommended the recognition of clinical study at the Leeds Hospital for Women and Children, might be cancelled, was also adopted after some discussion.

The President nominated Sir E. Sieveking and Dr. Handfield Jones to be vice-presidents for the ensuing year.

THE HOSPITALS ASSOCIATION.—This Association, according to its third annual report, appears to be attracting considerable support. The scheme propounded by Sir Andrew Clark for increasing the funds of the hospitals is being brought under the notice of the ministers of all denominations and of the representatives of other bodies. The second evening meeting of the fifth session of the Association will be held at the Board-room of the Middlesex Hospital on Nov. 9th, at 8 P.M. Sir Douglas Galton, K.C.B., will preside, and a paper will be read by Mr. Keith D. Young, F.R.I.B.A., on Hospital Construction, to be followed by a discussion.

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Obituary.

HAROLD GILBERTSON TAYLOR, M.D. LOND.

BY the death of Dr. Harold G. Taylor, which occurred at the Royal Albert Asylum, Lancaster, of which institution he was assistant medical officer, on the 16th inst., at the early age of thirty-two, a career of much promise and usefulness was suddenly terminated, to the deep regret of his many friends.

Dr. H. G. Taylor was the second son of Dr. John Taylor, a physician who was for many years in practice at Bayswater; and after having received his general education at the University College School he chose to follow his father's profession, and became a medical student at King's College, London. Here he passed through his curriculum with distinction, gaining the Jelf medal and many other college prizes, and in 1879 he graduated M.B. at the University of London, taking honours in medicine and obstetrics, and the gold medal in forensic medicine. He served the office of house-physician at King's College Hospital, and was subsequently appointed house-surgeon to the Portland Town Dispensary. In 1880 he applied for, and obtained, the post of assistant medical officer to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Dr. Shuttleworth being the medical superintendent. In this position Dr. Taylor's qualities of careful observation, unfailing patience, and exemplary kindness were invaluable in the daily routine of his duties, whilst his scientific attainments enabled him to take an interest in his work of more than routine character. He continued to hold the appointment until his death, and, in fact, may be said to have died in harness, having from a sense of duty deferred his customary autumn holiday in consequence of the outbreak of an epidemic in the institution. Early in 1886 he had suffered from a brief attack of pneumonia, presumably of glandular origin; but from this he speedily recovered, and apparently regained his usual health. Though not of robust appearance, he seldom seemed to ail anything, and it was only on Oct. 10th that he complained of feeling unwell. Symptoms of inflammation of the right lung soon developed, and, unfortunately, pleurisy and extension of the pneumonia to the left side followed. To this complication he succumbed on the 16th inst. He was attended by his friends, Mr. Christopher Johnson and Dr. Rayne of Lancaster, in consultation with Dr. Shuttleworth.

Dr. Taylor was of a somewhat retiring disposition, but by those who knew him his excellent qualities of head and heart were much valued. He had endeared himself both to the staff and the patients of the asylum by his personal kindness, as well as his professional skill, and the esteem with which he was regarded was evidenced by the numerous wreaths and other floral offerings sent for his funeral, which took place at Lancaster Cemetery on the 20th inst. He was a conspicuous example of devotion to duty, and of thorough conscientiousness in all he undertook.

EVAN EVANS, M.D. LOND.,

STAFF SURGEON, R.N.

THE deceased naval medical officer, who was the eldest son of William Evans, surgeon, of Devonport, and grandson of Evan Evans, surgeon, R.N., was born at Devonport on March 13th, 1821. In 1838 he entered the medical classes at University College, London, and in 1842 passed the L.S.A. and M.R.C.S. In June of that year he entered the navy, and served in H.M.S. *Gorgon* in the operations in the River Parana in 1845 and 1846. For these, and especially for the action of Obligado, he was promoted after only three years' service. Later he was attached to the hospitals of Malta and Chatham. In 1853, while still on active service, he passed the M.B. Lond., and in 1855 the M.D. In 1855 he retired from active service and commenced practice in London. Here for more than thirty years he carried on a very extensive practice; but in January, 1886, on recovering from a severe attack of pneumonia, he found it necessary to restrict his work considerably, and at the commencement of this year he was compelled to relinquish it entirely. It was hoped that perfect rest might restore him, at least partially, to health; but it was found that he slowly grew weaker, and on the evening of Monday, the 17th inst., he died, at the age of sixty-six years. All who knew him will bear witness to his single-hearted devotion to his practice, to which one cannot but think he ultimately sacrificed his life.

Medical News.

COLLEGE OF PHYSICIANS IN IRELAND.—At the October examinations the following obtained licences in Medicine and Midwifery:—

MEDICINE.—William Henry Carrington, Henry Thomas Hamilton.
MIDWIFERY.—Henry Thomas Hamilton.

The undernamed have been admitted Members:—

George Plunkett O'Beirne; Stewart Frazer Hamilton, Staff Surg. R.N.

At examinations held in August the following were admitted Licentiates in Medicine and Midwifery:—

MEDICINE.—Thomas Richard John Cowen, William Cremin, Edward Frazer, Eugene Glynn, Richard Joseph Hewitt, Richard Jones, Peter Paul Keane, John Joseph McNabol, Joseph Francis Mannix, Michael Shanley.

MIDWIFERY.—Benjamin Beamish, Thomas R. J. Cowen, W. Cremin, Edward Frazer, Eugene Glynn, Richard J. Hewitt, Richard Jones, Peter P. Keane, John J. McNabol, J. F. Mannix, Michael Shanley.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—At the annual meeting of this College on Oct. 19th the following office-bearers were elected for the ensuing year:—President: Joseph Bell. Vice-President: D. Argyll Robertson, M.D. Secretary and Treasurer: Robert J. Blair Cunynghame, M.D. Librarian: Archibald Dickson, M.D. President's Council: James Donaldson Gillespie, M.D.; Henry Duncan Littlejohn, M.D.; Patrick Heron Watson, M.D., LL.D.; Francis Brodie Imlach; John Smith, M.D., LL.D.; Thomas Annandale; D. Argyll Robertson, M.D. (*ex-officio*); and A. J. Blair Cunynghame, M.D. (*ex-officio*). Representative in General Medical Council: Patrick Heron Watson, M.D., LL.D. Examiners: James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D., LL.D.; David Wilson, M.D.; John Smith, M.D., LL.D.; Joseph Bell; John Duncan, M.D., LL.D.; Robert J. Blair Cunynghame, M.D.; Alexander G. Miller; Peter H. Maclaren, M.D.; Johnson Symington, M.D.; Francis Cadell; James Dunsmure, M.D.; William Craig, M.D.; and Charles E. Underhill, M.B. Dental Examiners: Patrick H. Watson, M.D., LL.D.; Henry D. Littlejohn, M.D.; David Neilson, M.D.; John Smith, M.D., LL.D.; Andrew Wilson, L.D.S.; and Geo. W. Watson, L.D.S. Assessors: Archibald Inglis, M.D.; Sir William Turner; Francis B. Imlach; and D. Argyll Robertson, M.D. Conservator of Museum: Charles W. Cathcart, M.B.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—The following gentlemen have been elected the office-bearers of this Society for the ensuing session:—President: Professor T. M'Call Anderson. Vice-Presidents: Dr. D. C. M'Vail, Dr. Alexander Patterson, Dr. Joseph Coats, Dr. James Stirton. Council: Dr. S. Gemmell, Dr. J. W. Anderson, Mr. A. E. Maylard, Dr. D. N. Knox, Dr. Alexander Robertson, Dr. William M'Ewen, Dr. Edward Macmillan, Dr. A. Wallace. Treasurer: Dr. Hugh Thompson. Secretaries of Sections: Dr. George S. Middleton, Dr. John Barlow, Dr. T. K. Dalziel, Dr. T. F. Gilmour. General Secretary: Dr. William G. Dun.

NEW CHILDREN'S HOSPITAL FOR BERLIN.—A large plot of ground in the See Strasse, Berlin, has been granted for the erection of a new children's hospital.

TRICHINOSIS IN BRUNSWICK.—Although some 200 persons have been suffering from trichinosis in Brunswick, no fatal case has occurred. The epidemic is, it is hoped, now over.

NEW HOSPITAL IN MOSCOW.—The foundation stone of a new building for the University Hospital in Moscow was laid last month; more than 2,000,000 roubles (£200,000) are to be spent on its erection.

BIRMINGHAM MEDICAL MISSION.—The twelfth annual meeting of the subscribers to this Mission was held on the 20th inst., when it was reported that the year began with a balance in hand of £38 and ended with a deficiency of £26. The total receipts had amounted to £137. The number of patients seen at the Mission was 3674, and 350 sufferers had been visited at their own homes.

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GUY'S HOSPITAL UNIVERSITIES' CLUB.—The annual dinner of this club will take place at the Holborn Restaurant on Monday, Nov. 21st, at 7.30 P.M. Old Guy's men, belonging to either Oxford or Cambridge University, who may wish to be present, should notify the same to Mr. A. S. Taylor, Guy's Hospital. Prof. Reinold, F.R.S, will occupy the chair.

THE DRAINAGE OF NORWICH.—The Norwich Town Council, which some years ago expended a sum approaching £200,000 in the construction of sewerage works for carrying off both surface water and sewage proper, decided on the 19th inst. to construct a separate system for the sewage at a cost of £78,000. The present system is rendered defective by the enormous influx of spring water into the low-level sewer. The irrigation system is to be continued, and the old service of pipes will be used for surface water.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The following is the list of officers for session 1887-88:—President: Mr. Keetley. Vice-Presidents: Dr. Campbell Pope, Dr. Alderson, Dr. Owles, and Mr. Gunton Alderton. Council, Mr. Barnes, Mr. Hemming, Dr. Thudichum, Dr. Wells, Mr. R. F. Benham, Dr. Pickett, Mr. Lloyd, Dr. Schacht, Dr. Travers: Mr. H. Percy Dunn, Mr. Swinford Edwards, and Dr. Bullock. Treasurer: Mr. Lawrance. Secretaries: Dr. Clippingdale and Dr. Abraham. Auditors: Dr. Banning and Mr. Leonard Mark.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—At a Council meeting of this Association, held at their rooms, 3, Bolt-court, Fleet-street, on Oct. 20th, the following resolution was carried: "That the Council, having considered the memorial of the Darlington Board of Guardians, and not being at present in possession of sufficient information on the subject, defer taking action until such times as the necessity for doing so arises." The Council are also of opinion that alterations of so sweeping a character need not be feared by either medical or other Poor-law officers.

LITERARY ANNOUNCEMENTS. — A work by Dr. Norman Kerr on Inebriety or Narcomania, dealing exhaustively with its Etiology, Pathology, Treatment, and Jurisprudence, will shortly be issued by Mr. H. K. Lewis. Messrs. Wyman and Sons announce the publication in November of a new illustrated monthly magazine, price fourpence, entitled "Baby, a Magazine for Mothers and those who have the care of Children, being a guide to their Management in Health and Disease." Messrs. Cassell and Company, Limited, announce that with the number just issued the English edition of the *International Journal of the Medical Sciences* will cease to appear.

THE SPANISH CENSUS.—The approaching Spanish census is to be taken on the night of December 31st. Those persons who practise medicine are to state whether they are fully qualified medical men (*medicos*), surgeons, dentists, or bloodletters (*sangradores*). Assistants (*practicantes*) are to state whether they are in a pharmacy or with a doctor, and especially whether they are actually practising. Those who practise medicine, even if they should happen to be from home the night the census is taken, are to put themselves down at their usual residence. Persons who die during the night of the census are not to be mentioned in the schedules; but all born that night are to be included, the words "newly born" being substituted for the name.

THE UNIVERSITY OF MADRID.—On Oct. 1st all the Spanish universities were opened for the winter session. In the Madrid or Central University the chair was taken by Señor Navarro Rodigo, one of the Ministers, a number of celebrated political and learned men, together with a considerable sprinkling of ladies, being present. Strangely enough, those most interested in the sessional work of the University—that is to say, the students—were conspicuous by their absence, the authorities having forbidden them to attend. The address, which has excited a good deal of attention, and has served as a basis for some discussion amongst the professorial staff, was delivered by Dr. Rodiguez Carracido, Professor of Organic Chemistry.

QUEEN'S COLLEGE MEDICAL SOCIETY.—The annual meeting of the above Society was held on Wednesday, October 12th, in the Library of the College. The report amply testified to the increasing interest taken in the meetings, and showed that much good scientific work had been done during the past twelve months. The number of members now amounts to 170, and the average number of attendances at the meetings was 26·4. Although the expenses of last year were unusually heavy, still the financial report possessed a balance in favour of the Society. Dr. Grinling, who as a member has worked most assiduously for the Society since its commencement, was unanimously elected President for the ensuing year. In addition Mr. Haslam was elected Vice-President, Mr. J. Hall-Edwards and Mr. B. W. Housman Hon. Secretaries, and Mr. J. H. Brice Treasurer. The business matters being concluded, Mr. Augustus Clay, the retiring President, delivered an address upon Lateral Curvature of the Spine, which was illustrated by numerous diagrams and highly appreciated.

AT an inquest held on the 19th inst. at Halifax, on the body of a youth who died from injuries received while playing football on the 15th inst., the jury returned a verdict to the effect that deceased was killed by accidentally falling.

INCREASED SEVERITY OF SANITARY LEGISLATION IN ST. PETERSBURG.—The punishment that may be inflicted for transgressing the sanitary laws in St. Petersburg is to be increased to three months' arrest, with a fine of from £15 to £30. On a repetition of the offence, this punishment may be doubled. The punishments for adulteration of food are also to be increased in severity.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—A meeting of the members of this Association was held at Manchester on the 13th inst., when Dr. Sergeant (Bolton) read a paper on the Compulsory Notification of Dangerous Infectious Diseases at Bolton, and the resulting Decrease in the Local Mortality. A discussion followed, in which Messrs. Vacher, Kenyon, and Vernon took part.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—A meeting of the members of this Association was held at Bradford on the 21st inst., Dr. Hime, President, in the chair. After the transaction of some business of a routine nature, Mr. Morley, architect, was introduced to the meeting by the President for the purpose of giving a description of the recent additions to the Bradford Fever Hospital, and upon the conclusion of his communication a desultory discussion ensued, in which Drs. Cameron, Wilson, Roberts, Britton, and others took part. The reading of a paper on School Hygiene, which had been promised by Dr. Hime, was postponed.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAM, JAMES, M.A., M.B., C.M., has been appointed House-Physician to the Western Infirmary, Glasgow.

ANDERSON, JOHN A., M.B., C.M., has been appointed House-Surgeon to the Western Infirmary, Glasgow.

BOREHAM, FRANK S., L.R.C.P.Ed., L.R.C.S., has been appointed Medical Officer for the Hallaton District of the Uppingham Union.

CARSLAW, JOHN H., M.B., C.M., has been appointed House-Physician to the Western Infirmary, Glasgow.

DAVIES, HUGHES REID, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator to the Fourth District of the Hollingbourne Union.

GERVIS, HENRY, M.D., F.R.C.P.Lond., has been appointed Consulting Obstetric Physician to St. Thomas's Hospital.

HOLLINSHEAD, F., M.R.C.S., L.S.A., has been appointed Medical Officer to the Cottage Homes of the King's Norton Union.

JOHNSTON, ALEX., M.B., C.M. Glas., has been appointed Resident Medical Officer to the Barnes Convalescent Hospital, Cheadle, near Manchester.

LANKESTER, FRANK, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House-Surgeon to the National Dental Hospital, Great Portland-street, W.

MCLUNNAN, WM., M.B., C.M., has been appointed House-Physician to the Western Infirmary, Glasgow.

NESS, ROBERT B., M.A., M.B., C.M., has been appointed House-Surgeon to the Western Infirmary, Glasgow.

NISBET, ADAM T., M.B., C.M., has been appointed House-Physician to the Western Infirmary, Glasgow.

OLDERSHAW, JOHN, L.R.C.P. Ed., L.R.C.S., has been appointed Medical Officer for the Second District of the Wolverhampton Union.

PATTISON, E. SETON, M.R.C.S., L.R.C.P.Ed., has been appointed Surgeon to the T Division of the Metropolitan Police.

REID, ROBERT G., M.B., C.M., has been appointed House-Surgeon to the Western Infirmary, Glasgow.

ROBERTSON, WM., M.B., C.M., has been appointed House-Surgeon to the Western Infirmary, Glasgow.

SYMONDS, CHARTERS J., M.S., M.D., F.R.C.S.E., has been appointed Surgeon to In-patients to the Evelina Hospital for Children, vice H. G. Howse, M.S., F.R.C.S.E., resigned.

THOMSON, R. STEVENSON, M.D., has been appointed Dispensary Physician to the Western Infirmary, Glasgow.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C. — House-Surgeon.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser. Salary £100 per annum, with board and residence.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Three Clinical Assistants. Fee for a period of three months, £5 5s.

ROTHERHAM HOSPITAL.—Assistant to the House-Surgeon. Rooms, commons, and washing, in lieu of salary.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House-Surgeon. Salary £100 per annum, with board and lodging.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary £80 per annum, with board, washing, and lodging.

WESTERN DISPENSARY, Rochester-row, Westminster, S.W.—Attending Medical Officer.

WILTS COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ARCHER.—On the 6th ult., at Moonta, South Australia, the wife of R. Kendray Archer, M.R.C.S., of a son.

BRANFOOT.—On the 26th ult., at Madras, the wife of Surgeon-Major A. M. Branfoot, Indian Medical Department, of a daughter.

REYNOLDS.—On the 19th inst., at Limehurst, Stapleton Hall-road, N., the wife of Frederick Reynolds, L.R.C.P., of a son.

ROBSON.—On the 18th inst., at Walkeringham, Notts, the wife of W. W. C. Robson, M.R.C.S., of a daughter.

SIMON.—On the 17th ult., at Singapore, Straits Settlements, the wife of Max F. Simon, M.R.C.S., L.R.C.P.Lond., Resident Surgeon, General Hospital, of a son.

WELLS.—On the 18th inst., at Douglas, Isle of Man, the wife of Primrose Wells, L.R.C.P.Ed., L.R.C.S., of a son.

MARRIAGES.

CORMACK—FILLET.—On the 25th inst., at the Church of the Resurrection, Brussels, by the Rev. J. Jenkins, Dr. Charles H. Cormack, of Vichy, son of the late Sir John Rose Cormack, to Marie, daughter of the late M. Louis Laurent Fillet, of Brussels.

MACDONALD—MELLIS.—On the 19th inst., at St. Columba's, Pont-street, Belgravia, London, by the Rev. Donald Macleod, D.D., William Burns Macdonald, M.A., M.B., of Dunbar, to Laura, youngest daughter of the late John Mellis, M.R.C.S.Eng., of Fraserburgh, Aberdeenshire.

PRUEN—HUTCHINSON.—On the 22nd ult., at the Mission Church, Frere Town, by the Rev. A. Downes Shaw, assisted by the Rev. H. Binns, of Rabai, both of the Church Missionary Society, and on the 23rd ult., at Zanzibar, by H.B.M.'s Acting Consul-General Major MacDonald (Military Attaché, Cairo), Septimus Tristram Pruen, M.D., M.R.C.S., Church Missionary Society, youngest son of the late Dr. Pruen, of Penang, to Constance Helen (Nellie), second surviving daughter of Surgeon-General J. A. C. Hutchinson, Indian Medical Service, retired.

TUKE—BOGGS.—On the 18th inst., at St. Thomas' Episcopal Church, Edinburgh, by the Rev. E. M. Dawson, Incumbent, assisted by the Rev. W. Magee Tuke, St. Bartholomew's, Winchester, John Batty Tuke, M.B., C.M., M.R.C.P.Ed., of Saughton Hall, Midlothian, to Annie Isabella, fourth surviving daughter of the late Robt. Howden Boggs, of Pencaitland.

WEISS—HOOKE.—On the 19th inst., at St. George's, Hanover-square, by the Rev. S. B. Burnaby, Vicar of Hampstead, Hubert Foveaux Weiss, F.R.C.S.Eng., of 11, Hanover-square, second son of Frederic Foveaux Weiss, to Aris, daughter of E. Hooke, Esq., of Geldard House, Bycullah-park, Enfield.

DEATHS.

EVANS.—On the 17th inst., Evan Evans, M.D.Lond., Staff-Surgeon, R.N., of 63, Finsbury-pavement, and 85, Bethune-road, N., aged 66.

MACGRATH.—On the 7th inst., at 32, Colville-terrace, W., Dr. W. M. MacGrath, aged 46. R.I.P.

ROBERTSON.—At St. Thomas's Home, Lambeth, James Robertson, Staff Surgeon, Royal Navy, aged 47.

ROBINSON.—On the 25th inst., Percival John, youngest child of J. H. Robinson, Surgeon, of Bolton. Deeply regretted.

TAYLOR.—On the 16th inst., at Lancaster, Harold Gilbertsen Taylor, M.D., Assistant Medical Officer of the Royal Albert Asylum, aged 32.

TEEVAN.—On the 22nd inst., at Hawkhurst, after an illness of nearly six years, William Frederic Teevan, B.A., F.R.C.S., late of 10, Portman-square, W., eldest son of the late Wm. Teevan, F.R.C.S., of 23, Bryanston-square, W., aged 58.

THOMSON.—At Kenfield Lodge, Ramsgate, Jn. Buck Thomson, M.R.C.S., aged 77.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, October 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. General Meeting. The President, Dr. Hughlings Jackson, will show a patient of his from whose brain Mr. Victor Horsley removed a Tumour more than a year ago.—Dr. Herringham: A Case of Staggering with Atrophy of the Cerebellum.—Mr. Pearce Gould: A Case of Double Osteotomy for Ankylosis of the Hips.—Dr. Sidney P. Phillips: A Cass of Cross Paralysis.—Mr. Herbert W. Allingham: Case of Dislocation of the Hip—Doubtful Case of Charcot's Disease.

Tuesday, November 1.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Dr. Charles Kelly: Sanitary Law—General Enactments, Public Health Act, 1875, Model Bye-Laws.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Specimens:—Mr. Treves: Congenital Cartilaginous Tumour of the Neck.—Mr. Bland Sutton: Spina Bifida Occulta, with Curious Associated Lesions.—Drs. Sainsbury and S. West: Addison's Disease.—Mr. Eve: Relation of Strumous Gland Disease to Tuberculosis, an Experimental Inquiry.—Dr. Wooldridge: On Hæmorrhagic Infarction of the Liver.—Dr. F. C. Turner: Tumour of Spinal Cord.—Mr. Spencer: Compound Comminuted Fracture of Lower Jaw. Card Specimens:—Mr. D'Arcy Power: Submaxillary Gland Removed, with an unusually large Salivary Calculus.—Mr. Spencer: Stump after Chopart's Amputation.

Wednesday, November 2.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Mr. Lowe: A Case of Atresia of the Cervix Uteri with Retention of Menses (Hæmatometra).—Dr. Swayne: Hydrocephalus as a complication of Labour.—Mr. Meredith: A Case of Hæmatometra associated with a Degenerating Fibro-myoma, treated by Supra-vaginal Hysterectomy.

Thursday, November 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ABERNETHIAN SOCIETY (St. Bartholomew's Hospital).—Mr. Gow: Cirrhosis of the Liver.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Buzzard: The Significance and Value of Tendon Reflex, Discussed and Demonstrated from an Elementary Point of View.

Friday, November 4.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Pathological specimens will be shown by Mr. Percy Dunn, clinical cases by Dr. Herringham. Dr. Scanes Spicer: On Obstruction of the Nose and its bearing on Ear and Throat Disease and its Treatment.—Dr. Thudichum: On the Varieties of Aconitin and the Dangers of their Medical Use.—Dr. Middleton: On the Advantages of Venesection of the External Jugular Vein in Cardiac Diseases.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. A. Wynter Blyth: Metropolitan Acts, Bye-Laws of Metropolitan Board of Works.

Saturday, November 5

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, October 27th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 21	30·47	N.W.	43	41	71	53	40	...	Foggy
,, 22	30·62	E.	35	34	...	50	32	...	Foggy
,, 23	30·49	W.	48	45	70	53	34	...	Fine
,, 24	30·01	N.	43	41	78	45	40	·07	Fine
,, 25	30·56	N.	35	33	71	45	32	...	Fine
,, 26	30·55	N.W.	32	...	69	49	29	...	Foggy
,, 27	30·18	S.W.	47	44	...	68	32	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

"NOISES IN THE EAR."

IN reply to the communication on Noises in the Ear from a "Subscriber of Twenty Years' standing" which appeared in a recent issue, "F.R.C.S.," while not claiming for himself the position of a specialist in otology, writes that he has little doubt that the Eustachian tubes of the sufferer are not thoroughly pervious. Should this condition be present our correspondent recommends the use of Politzer's bag. Again, should the tympanum be found on examination to be neither thickened nor depressed and the noise is a beating one, like the pulsation of the carotid artery, most probably hydrobromic acid in doses of three grains will relieve it, or hydrobromic acid combined with three-grain doses of F. arnica montana.

A Doctor of Medicine is thanked. We do not, however, think that any advantage would result from publishing at the present time the replies of our correspondent to the series of questions referred to him. The matter seems for the nonce to have passed the acute stage, but interest in it may not improbably revive in the near future.

One Interested in the Case is referred to a letter on the subject inserted in THE LANCET of Oct. 1st, page 682.

Enquirens should consult a solicitor to whom the receipt should be shown.

A "GOOD LIFE" FOR INSURANCE.

To the Editors of THE LANCET.

SIRS,—The following, which is a copy of a private friend's report to an assurance company before a medical examination was instituted, may interest some of your readers, as showing the kind of evidence available before the services of skilled examiners were called into requisition.

"I have your letter of to-day desiring such information as I can give you respecting the 'constitution and general manner of living' of my friend, Mr. A. B——, of —— street. In reply, I beg to say that I consider his constitution a very strong one. He is a good feeder, and takes his bottle regularly, and on occasion can carry off a couple very handsomely. On the whole I think him a very good life for the office to insure."

The proposer was forty-six years of age; the date of the proposal, 1806. In spite of his regular bottle he attained the age of seventy-four, when he died of dropsy. In these days assurance offices look very charily on men who take considerably less than the liberal allowance of alcohol indicated above. That the proposer was a "good feeder" may account in some measure for the age he attained, notwithstanding the quantity of alcohol he consumed. There can be no doubt, I think, that if a man's digestion is sufficiently good to enable him to enjoy his food he can take an amount of alcohol which would soon terminate the existence of a less robust individual. I am, Sirs, your obedient servant,

Wimpole-street, W., Oct. 21st, 1887. F. DE HAVILLAND HALL.

ABUSE OF HOSPITALS BY THE WELL-TO-DO.

Mr. S. Constable.—Our correspondent's remedy is terribly radical, and withal slightly impracticable, not to say unjust. The public must be consulted as to its consultants, and it is not probable that they would agree to decline the services of leading physicians and surgeons to suit a doubtful scheme for the reform of hospital abuse. They might change their ordinary adviser for one who was more reasonable. Besides, is it the duty of hospital physicians and surgeons to investigate the social condition of patients? This would be an intolerable addition to the exhausting duties of the out-patient department. Were a given physician or surgeon to admit a case into hospital which can well afford a reasonable fee to a less famous but equally competent practitioner, we think there would be just ground for public complaint. We agree that the out-patient departments need reform. A scheme for co-operation with provident dispensaries will shortly be presented, and the public and the profession will expect it to be very seriously considered. But let us put the saddle on the right horse, and not turn our young consultants into detectives of the Charity Organisation Society.

S. S.—The second edition of Huth's "Marriage of Near Kin," just published by Longmans, will give the information.

"THE NAVAL MEDICAL SERVICE."

To the Editors of THE LANCET.

SIRS,—I read the letters in your issue of Oct. 8th and 15th by "Surgeon R.N." and "Another Naval Surgeon," anent the desirability of passing through a course of hospital practice for naval medical officers, after foreign service in small ships, where practical knowledge in professional work becomes decidedly rusty, and am glad to see the same ambitious desire exists now as in my junior days in the service amongst many, if not all, young surgeons, regarding a wish to keep up to the times in a profession where we are always students. The idea is an excellent one, if it could only be carried out; but alas! there is but a small chance for the surgeon, and none as a staff-surgeon, with the growing discontent that now prevails. A roster for foreign and home service should exist. Such a thing is possible for the surgeons' list, but impossible for the next grade in its at present attenuated form. At present, officers returning home invalided or paying off are disposed of in the most haphazard manner. An officer of over thirteen years' service, recently invalided from the Mediterranean station, after a prostrating illness of five months from that most intractable of all fevers, tropical typhoid, within six weeks of his last attack was sent down to Sheerness to join a vessel about to proceed direct to Zanzibar. His health, however, soon became impaired in that fen district, and through special appeal to the Admiralty an order for survey was made out, and he was not allowed to go, to be probably returned amongst the "deeply lamented" of those serving their country on the east coast of Africa. But who was sent in the place of that person? A staff-surgeon who had only been home a few weeks from foreign service on the China station, three hot seasons of which were spent in Hong-Kong. Another staff-surgeon was sent abroad; but a few weeks after return from a commission abroad he unluckily contracted fever whilst on passage to his ship, and died. The staff-surgeon's list was then exhausted, and finally a surgeon obtained the billet. "A Naval Surgeon" can now see that it is out of the question for a naval staff-surgeon to obtain sufficient time for a practical hospital course whilst the list is in such a skeleton condition. Now, as regards the degeneration into mere machines of routine. It was but a short time ago that a young surgeon, fresh from Haslar and full of zeal, doing duty in a harbour ship, went to one of our large naval hospitals to follow up an interesting case sent there from his ship. To his surprise he was looked upon as an intruder, a nuisance, and denied a perusal of the bed-ticket on which was noted the interesting information he sought. With such treatment, and the inevitable disgust of the service that grows on one as we near our twenty years, is it surprising that that zeal which is so characteristic of our young naval surgeon gradually dies out as time goes on, and that, unless he is lucky enough to get more than one home-going appointment, however desirous he may be of keeping up practical work, he cannot avoid becoming a mere machine of routine, disgusted, disheartened, living by, but not in, his profession.

I am, Sirs, yours faithfully,

Oct. 18th, 1887. A NAVAL STAFF-SURGEON.

PRESERVING MILK BY OXYGEN.

A METHOD of preserving milk by injecting oxygen into it in a closed vessel has been proposed and patented by M. Brin.

Mr. T. W. J. Allen.—The specimens are undoubtedly maggots—i.e., larvæ of some insect the ova of which may have been swallowed by the patient. In reference to this subject the late Dr. Cobbold writes:—"In actual practice it is not uncommon to find the larvæ of various species of moths (*Noctuæ*) either in the night-stool or chamber utensil, these for the most part being accidentally introduced. In like manner the maggots of various butterflies and other insects are often passed, having been previously swallowed along with food" (Quain's Dict. of Med., art. Œstrus). Dr. Cobbold says that ordinary purgatives, clysters, and vermifuges, especially turpentine, will usually dislodge them.

Dr. A. W. Stirling.—The paper is marked for insertion.

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"NEW URETHRAL INSTRUMENTS."

WITH reference to the article by Mr. Distin-Maddick which under this heading appeared in our last issue, Dr. D. Campbell Black writes stating that the instrument described by Mr. Distin-Maddick exactly corresponds to the compound catheter of the late Dr. Andrew Buchanan of Glasgow, with the use of which Dr. Black became familiar in the wards of the Glasgow Royal Infirmary considerably more than twenty years ago. Our correspondent strongly deprecates the "inventive propensity" which is now becoming so general, and which he opines serves no good purpose.

Dr. R. Neals.—A visit to the premises indicated would, we fancy, show that the card in question is in the nature of a trade advertisement.

"THE VALUE OF SHORTHAND TO THE STUDENT AND TO THE PRACTITIONER OF MEDICINE."

To the Editors of THE LANCET.

SIRS,—Students of all classes owe a debt of gratitude to Dr. Gowers for his timely and useful suggestions upon the "Value of Shorthand" contained in your issue of the 8th inst. These having been read before the International Shorthand Congress, and copied from your columns into local papers, have been diffused far beyond the ranks of our own profession. There are, however, many busy practitioners, and even students well advanced in their curriculum, who cannot afford the "hour a day for three months," which Dr. Gowers says "will, in most cases, suffice to give the needful dexterity." It may be of some use to those so situated to learn that a modified system of stenography may be acquired with a little practice, which, though it cannot compare with the complete shorthand writing of the present day, is, nevertheless, of the utmost value for most of the purposes to which Dr. Gowers refers. The one I used during my student's days, and which I have found invaluable for daily use ever since, is based upon a system first shown to me by the late Mr. Samuel Smith—then senior surgeon to the Leeds Infirmary,—and which he had utilised for note-taking during his studentship. His method was simply that o omitting vowels and writing only consonants, except in the case of some words beginning with a vowel, where it is often more intelligible to insert it. This plan I combine with a series of shorthand signs for consonants, used by my father before me, which, with the addition of dots for vowels, are useful for short words like of, to, which, has, their, with, &c., and also for terminal syllables like ed, tion, ing, ment, &c. Although, by adopting these means, I cannot quite write at the rate of 100 words per minute, or with anything like the rapidity attained by Pitman's phonography, the writing is at least much more rapid than longhand, and can be acquired with comparatively little practice. It is not equal to a *verbatim* report of a speech or a lecture, but the student can with facility take down in the words of the lecturer sufficient to record the main lines of his subject, and is also able to fill in considerable detail; the advantage being that he preserves for future use simply what is written at the time of the lecture, no transcription from shorthand into longhand being necessary. I possess volumes of notes of a large number of lectures written in this way, to which I frequently refer. The notes merely require to be afterwards "dressed" over and finished off where gaps may have been left, so that the listener might not lose what he could not quite keep up with. And here the first difficulty, I believe, of all shorthand presents itself—viz., that it is easier to acquire the power to write than afterwards to read what has been written. Practice will, however, in time get over this.

Another advantage of my system is that anyone may learn to read what is written if provided with the key to it, without knowing anything of pure shorthand. To the practitioner it is invaluable for the many and varied purposes of memoranda and "preliminary composition" to which Dr. Gowers refers—for secretarial notes, for taking down clinical data at the bedside, or in the consulting-room, for reports of cases in the hospital or in a court of law, for entering abstracts and references in a common-place book, in fact, for innumerable purposes in the clerical work of daily life. I make use of the system freely in the notes from which I lecture, and all abstracts from the writings of others are invariably copied in this form, hence an immense saving in time in anything required for my own use only.

I am, Sirs, faithfully yours,

Leeds, Oct. 17th, 1887. CHARLES J. WRIGHT.

LEICESTER AND VACCINATION.

To the Editors of THE LANCET.

SIRS,—Either through a clerical or typographical error, near the close of my letter published in THE LANCET of Oct. 15th, the word "vaccinated" instead of *revaccinated* occurs in the following sentence:—"We have, therefore, in all ten persons who were in office at the time the special report was made, *four of whom had never been vaccinated.*" As in the preceding sentences I had just stated that these four persons *were vaccinated*, it is obvious to a fair and careful reader that the word should have been *revaccinated*. The elderly clerk referred to passed all through the epidemic of 1872 in close contact with a large number of small-pox patients without contracting the disease.

The above points dispose of all in Dr. Tomkins' letter which does not corroborate what I had already affirmed. Dr. Tomkins' recent appointment to the office he holds probably accounts for some of the discrepancies which have arisen. I am, Sirs, yours truly,

Leicester, Oct. 26th, 1887. J. T. BIGGS.

YELLOW COLOURING MATTERS.

DR. WEYL of Berlin, who has been examining the various yellow colouring matters used for macaroni, butter, liqueurs, &c., reports that dinitrocresol, which is sold as saffron yellow, is highly poisonous, four grains proving fatal to rabbits and guinea-pigs in a few minutes. The so-called "Martin's yellow" and "butter yellow" are quite harmless.

G. L. (Birmingham).—Works on the mission of the medical man are common in French and Italian literature. Probably there is no better picture of what a wise practitioner can do for a simple, confiding peasantry than that drawn (undesignedly) in M. E. Littré's autobiographical sketches. The latest contribution to the subject is the "Bozzetti Patologici: Saggi di Medicina Popolare" of Dr. Nestore Mattioli, in which the author shows how much the physician, particularly in country districts, can achieve for the inhabitants in the way of practical hints as to diet, housing, recreation, &c. The removal of prejudices, many of them superstitious, was Dr. Mattioli's chief difficulty; but the demonstration he was able to give of their fallacy (seconded by the treatment adopted in the little local hospital) had its reward in encouragement to perseverance. Ronciglione, an interesting Etruscan village in the States of the Church, was the scene of his labours.

WINDOW CLEANING.

To the Editors of THE LANCET.

SIRS,—I notice in your issue of the 15th inst. an annotation dealing with window cleaning accidents. I believe that there is still in existence an unrepealed old Police Act which prohibits windows being cleaned from the outside, and that refusal on the part of a servant would not disentitle her from claiming her wages. Could any of your readers favour me with further particulars of this Act? There are several patents in existence for reversible windows, and notably that of Mr. Robert Adams' of 17, Blackman-street, S.E., which appears to be perfect.

I am, Sirs, yours obediently,

Lansdowne-road, W., Oct. 25th, 1887. ARTHUR DICK, F.R.G.S.

To the Editors of THE LANCET.

SIRS,—Having seen in a local newspaper an article taken from a recent issue of THE LANCET commenting on the above subject, I wish to draw your attention to an invention in windows and their fastenings invented by a cabinet-maker of this place, by which the evils mentioned by you can all be avoided. It is so constructed that all pulleys, weights, and cords are dispensed with, and it can be fitted to almost any ordinary kind, size, and shape of window. Opening from the inside, all accidents from outside cleaning are impossible. Especially for hospitals and the sick-room it is an admirable window, ventilation being regulated by means of a screw, which is so adjusted that air is easily admitted without draught and in an upward direction, whilst all shaking and jarring, so distressing to invalids, is avoided. Having seen it in actual use, I am convinced it is the window of the future, and from the simplicity and economy of its construction, I feel sure it will commend itself to those interested in the erection of hospitals and other public buildings, as well as to those who are familiar with the defects of their own badly-fitting, draughty, and dangerous windows. I enclose a circular which will more lucidly explain the mechanical detail of the contrivance.

I am, Sirs, yours truly,

GERALD COLEMAN,

Medical Officer of Health, Hemsworth Sanitary Authority.

Hemsworth, Pontefract, Oct. 24th, 1887.

*** The inventor referred to by Mr. Coleman is Mr. Richard Mason of Hemsworth. We have also received a circular descriptive of, and had an opportunity of personally examining, the Patent Safety Sash produced by Messrs. Lloyd and Co., 37, Great James-street, Bedford-row, W.C. This appliance seems to perfectly achieve the object aimed at, and is comparatively inexpensive, the cost of adaptation to existing windows being of course slightly higher.—ED. L.

HOME FOR INEBRIATES OF LIMITED MEANS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me of a Home licensed under the Habitual Drunkards Act, 1879, where the wife of a working man could be kept for a time for a moderate sum per week? The husband of course is unable to pay anything like the charges for residence in the homes advertised weekly in THE LANCET.

I am, Sirs, faithfully yours,

Huddersfield, Oct. 26th, 1887. DAVID WILSON, M.D.

THE COMMUNICATION OF RABIES.

To the Editors of THE LANCET.

SIRS,—On page 841 of your last issue is a paragraph headed "A Precursor of Pasteur," and the basis of it is that rabies can only be communicated by carnivora, and not by herbivora, when affected by it. As this statement may be accepted by many of the uninitiated, may I point out that it can readily be communicated by herbivora, as has been demonstrated in the late outbreak among the deer in Richmond-park.

I am, Sirs, yours faithfully,

London, Oct. 22nd, 1887. JAMES LAMBERT, F.R.C.V.S.

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ALCOHOLISM AND VICE IN PERSIA.

DR. JABLONOWSKI, who has contributed some sanitary notes on Persia to a Polish medical journal, states that the use of alcoholic liquors (brandy and wine) has of late become greatly extended amongst the upper classes, alcoholism in various forms being now a very frequent affection, as those persons who have taken to drink scarcely pass a single day without becoming intoxicated. This, too, is attended with still greater evils, as during their orgies they give themselves up to vice in revolting forms.

M.B.—We fear our correspondent has no legal claim against the police-court officials. If he was summoned by the relieving officer, who is the representative of the guardians of the poor, he must seek for remuneration for his services from him. It is doubtful though whether he could recover professional fees, as an objection might be raised on the ground that his subpœna was issued in order that he might testify to a simple matter of fact—viz., that he had certified as to the mental condition of a pauper.

Messrs. Engelhard and Co. (Chicago).—We cannot exchange.

PARALYSIS OF THE ABDUCTORS OF THE VOCAL CORDS.

To the Editors of THE LANCET.

SIRS,—Dr. Gordon Holmes has omitted from his list a case of mine published in the *Birmingham Medical Review* for December, 1885, of bilateral paralysis of the abductors in tabes. It is one of the few in which a post-mortem examination is given. It is of interest to mention a case of unilateral paralysis due to goitre in a lady. She has had several attacks, but they have all been of a temporary nature. When the paralysis is present she has nocturnal paroxysms of dyspnœa like croup. The immediate exciting cause appears to be cold, though the pressure of the tumour on the recurrent laryngeal is doubtless the predisposing and persistent condition.—Yours faithfully,

ROBERT SAUNDBY, M.D.Edin., F.R.C.P.Lond.

Birmingham, Oct. 22nd, 1887.

"LARYNGISMUS STRIDULUS."

To the Editors of THE LANCET.

SIRS,—I am obliged to Dr. W. H. Barlow for his letter drawing attention to my mistake. What I intended, and ought, to have said was that the value of cod-liver oil was not sufficiently emphasised. "Può essere dato" (may be given) should read, "dovrebbe essere dato" (ought to be given). Dr. Barlow will find one or two drops of tincture of opium given with the oil very useful in cases where the oil alone causes diarrhœa, as it not infrequently does, even in small doses.

I am, Sirs, yours faithfully,

Oct. 24th, 1887. YOUR REVIEWER.

LINIMENT FOR CLUB USE.

To the Editors of THE LANCET.

SIRS,—Will some correspondent kindly give the formula for really stable and cheap liniment for club use? The various forms of lin. alba are not always free from lumpiness in frosty weather.

I am, Sirs, yours faithfully,

Oct. 25th, 1887. CLUB.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Clifford Allbutt, Leeds; Mr. Sessions Barrett, Huntingdon; Dr. De Havilland Hall, London; Dr. Charlewood Turner, London; Mr. J. Wickham Barnes, London; Mr. Clement Lucas, London; Mr. A. H. Dodd, West Brighton; Dr. Harkin, Belfast; Mr. F. Treves, London; Dr. John Taylor, West Brighton; Dr. Barnes, London; Dr. Saundby; Dr. Hale White, London; Dr. Handford, Nottingham; Mr. J. Pearce, Hillington; Mr. Lockwood, London; Mr. Godson, Birmingham; Mr. Conway, Wetherel; Mr. E. East, London; Mr. C. Hancock; Mr. Loefflund; Mr. Lawday, Liverpool; Dr. Muskett, Hopetown, C.C.; Dr. Glover Lyon, London; Mr. G. W. Eglinton, Dalton-in-Furness; Dr. Frank Pope, Leicester; Mr. Coleman, Hemsworth; Messrs. Alexander and Co., Manchester; Dr. Clippindale, London; Dr. Mansel, Bishop Stanton; Dr. W. T. Law, London; Mr. J. T. Biggs; Messrs. Warren and Co., Bristol; Dr. Tomkins, Leicester; Messrs. Deighton, Bell, and Co., Cambridge; Dr. F. P. Atkinson, London; Messrs. Smith and Son, Manchester; Mr. A. Dick; Mr. Wilkie, London; Messrs. Steele and Ellis, London; Mr. G. A. Carpenter, London; Messrs. Jarvis and Co., London; Mr. E. Ruthers; Dr. Taylor, Scarborough; The Countess of Ashburnham, London; Prof. Crookshank, London; Messrs. Condy and Co., London; Mr. R. Clarke, Burton-on-Trent; Messrs. Keith and Co., Edinburgh; Dr. Campbell Black, Glasgow; Messrs. Russell and Co., Ilfracombe; Mr. Constable, London; Dr. McNally; Messrs. Eason and Son, Dublin; Dr. Little, Iowa; Mrs. Gladys; Messrs. Reynolds and Branson, Leeds; Mr. J. Lambert, London; Messrs. Hewlett and Co., London; Mr. E. H. Owen, Hanley; Mr. Maw; Messrs. Mathews and Co., Birmingham; Mr. R. N. Jones, Swansea; Messrs. Willing and Co., London; Mr. Appleton, London; Mr. Birchall, Liverpool; Mr. Le Page, Guernsey; Mr. Woodcock, Bradford; Mr. Wilson, Huddersfield; Dr. Philpots, Bournemouth; Mr. Gibson; Mr. Pinchard, Taunton; Dr. Feeny, Montreux; Mr. Perkins, London; Mr. Casella, London; Dr. Campbell, Carlisle; Mr. Gray, Walsall; Mr. Morgan, Westminster; Dr. Benthall, Southsea; Dr. Cooke, Sheffield; Mr. T. Cooke, London; Major Teevan; Mr. Brown, Torpoint; Mr. Coates, Sirhowy; Mr. Wardley, Buxton; Mr. Scott, Manchester; P. P.; Lady Superintendent, London; M.D.; Justitia; F. H. W.; Club; J. B. E.; Clematis, Leeds.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Walford, Ramsgate; Mr. Barlow, Birmingham; Dr. MacAdam; Messrs. Hogg and Co., London; Mr. Robertson, Edinburgh; Mr. Hyslop, Church Stretton; Mrs. Thompson; Mr. Berks, Sheffield; Messrs. Macmillan and Co., Cambridge; Mr. Atkinson, Halifax; Messrs. Hampton and Sons, London; Mr. Bowes, Devizes; Mr. Gimlet; Messrs. Richards and Co., London; Dr. Hutchinson, Bedford; Mr. Gant; Messrs. Kilner Bros., London; Mr. Jordan, Birmingham; Dr. Fitzmaurice, Moate; Mr. Jennings, Lambeth; Mr. Martindale, London; Miss Andrews, Jersey; Mr. Jury, Liverpool; Mr. Martin, Crowley; Mr. Wormald, Manchester; Mr. Moullin, London; Dr. Dukes, Rugby; Miss Farrer, Bradford; Mr. Nicholas, Manchester; Dr. Lewis; Dr. Campbell, Shoreditch; Mr. Eschwege, London; Col. Gratam, Bristol; Dr. Gairdner, Ainsworth; Mr. Hughes, Handsworth; Dr. Needham; Mr. Saunder, Manchester; Dr. Pope, Bardesley; Mr. Jones, Southgate; Mr. Finley, Wimborne; Mr. Dutch, Crewe; Dr. Watson, Fife; Messrs. Atkin and Co., Willenhall; Mr. Weymouth, Brondesbury; Dr. Lyon, Houghton-le-Spring; Mr. Buller, Stourport; Dr. Heard; Mr. Mackenzie, South Kensington; Mr. Mason, Charlton; Mr. Ivers, Tunbridge; Mr. Ortell, Carlisle; Dr. Devereux, Tewkesbury; Mrs. Thompson; Mr. Williams, Oxford; Mr. Maitland, London; Dr. Arnold, Portleven; Mr. Evans, Finsbury; Mrs. Thompson, Tottenham; Dr. Pavy; Mr. Reynolds, Alfreton; Mr. Preston, Barnetswick; Mr. Hornibrook; Mr. Griffiths, Chester; Mr. Chandler, Barnsley; Mr. Wilson, Huddersfield; Deaconess Townson, Chester; G. G. P., Coventry; L. M.; Surgeon, Walworth; Brett; Graduate; Scapula; Doctor, Bristol; L. M., Bradford; A. H., Manchester; Z.; M., Manchester; X. N., London; A. P., Carlisle; H., Huddersfield; L. J., Manchester; X. Y. Z., Liverpool; Fides, Great Yarmouth; Æsculatus, Bayswater; F.R.C.S. of Edin.; F. C. W., Liverpool; Dispenser; Veritas; Lancastrian; R. N. D.; X. Y. Z., London; X. Z.; J. F. K., London.

South Australian Register, Newcastle Chronicle, Australian Public Opinion, Manchester Guardian, The Imperial Review (Melbourne), *The Architect*, &c., have been received.

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Inaugural Address

ON

WORK DONE IN SURGERY BY ITS PROFESSORS IN THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

Delivered at the Opening of the School of Surgery, Royal College of Surgeons, Session 1887–88,

BY SIR WILLIAM STOKES, M.D., CH.M., F.R.C.S.,

PROFESSOR OF SURGERY AND EX-PRESIDENT, ROYAL COLLEGE OF SURGEONS, SENIOR SURGEON TO THE RICHMOND SURGICAL HOSPITAL, FORMERLY PRESIDENT OF THE PATHOLOGICAL SOCIETY OF IRELAND, ETC.

MR. PRESIDENT AND GENTLEMEN,—It is not of my seeking that I occupy the position of lecturer to-day; it is by the will of my colleagues that I am here; and although I doubt the wisdom of their choice, I cannot refrain from an acknowledgment of so signal a mark of their confidence. It seems to me there is a peculiar responsibility and importance attached to the opening of this session, as we are, so to say, entering upon a new dispensation. "The old order changeth, yielding place to new." We are now, in truth, ringing out the old system and ringing in the new; and this process is fraught with consequences of the utmost gravity and importance, not alone to the student, but also to this College, the profession, and the public at large. Since the last inaugural address was delivered here a union has taken place between this College and the other medical corporations of Ireland. Hence the student in medicine has now to look forward not alone to sessional examinations, but also to a final one, conducted not as heretofore by one, but by two of the medical authorities. From this union of our College with the other corporations I anticipate the best results. The want of it has too long been a source of weakness to our profession, kindling feelings of mutual jealousy and distrust, and therefore keeping us divided, powerless, and weak; and although in the negotiations between the licensing bodies many feathers have been, and still are, ruffled, and the union not as comprehensive as I trust I may live to see it, still a good beginning has been made, and I look forward with confidence to witnessing a happy reciprocity and overlapping of our work, and an approach made to that end desired by all—unity in the science of medicine.

Although much hostile criticism has been devoted to the new curriculum and the sessional system of examinations—one which with certain students will always remain unpopular,—still, to those who take a far-seeing view of the situation, the merits of both must soon become apparent. As regards the former, I would allude to the accentuation of the necessity for a much larger amount than was hitherto required of what may be called extra-professional education—a wise provision in the interests of the social advancement of our profession,—inasmuch as this is influenced and promoted, as has been well said, not so much by its prominent heroes as by the impulse given by the culture and mental powers of the masses in it.

The sessional system of examination authoritatively emphasises the necessity for abandoning for ever the method that formerly was too prevalent, of leaving till the last few months of pupilage all honest and earnest effort to master a sufficiency of anatomical and surgical details to satisfy the examiners. That system was as discreditable as it was pernicious to all concerned—students, teachers, and examiners alike; and it is amazing how it was tolerated by the authorities for so long a time. You are to be congratulated, instead of being sympathised with, at the extinction of such a system, and upon joining the ranks of our profession when the student in medicine occupies a far different and far higher position in public estimation than formerly was the case, and when the being, so ably satirised by Albert Smith and Dickens, who, fashionably dressed, vaguely "walked the hospitals" in the morning, and, subsequently, in the afternoon was an ardent "fire worshipper" in the dissecting rooms, is no longer to be found. Such a creature exists now, I am happy to say, only in the limbo of a discreditable tradition, and is as completely extinct as the Dodo.

If there are any among you who regret that their lot has fallen on these days, when frequent examination and constant toil, from the beginning to the end of your student career, seem to be essential to success, I would ask you to bear in mind and take comfort in the reflection that your present lot is not exceptional, that similar and frequent testings are found necessary for all who study other arts and other sciences with any hope of success. What would be thought of a student in engineering, or sculpture, or painting, or any other art or science whose proficiency was never tested, and who postponed all real work at those subjects until a few months before he demanded and expected public recognition in them?

It may be said that such examinations during the different stages of your progress are like the tests and exercises of your physical powers in your training for athletic exercises. All of you are, I trust, more or less proficient in these, and know something of the frequent measuring of your powers for your Olympian contests. If such contests are found to be essential to success, is it not important that even greater precautions should be taken to ensure success in the long professional contest in which most of your lifetime will be spent? and especially is it not more so in the profession you have chosen, in which the competitors are so many, and the honours and prizes comparatively few?

In your professional work, however, both as pupils and subsequently as practitioners, you should endeavour not to be influenced solely by the principle of working only for an immediate tangible result, of which Schiller spoke so contemptuously, as actuating what he termed the *Brotgelehrte*, or bread scholars. But first I must guard against the possible assumption that, in referring to this passage of the great writer, I hold that there is anything unworthy in looking forward to the acquisition of professional knowledge as a means of livelihood. Such a doctrine I hold to be preposterous, and only to be classed with poets' dreams; but I would impress upon you that the *Brotgelehrte* principle should not be the sole or even the main motive force in your efforts, as, I am sorry to say, it is with so many. Rest assured that work done for its own sake, irrespectively as to whether the results be tangible and practically useful or not, is, as a rule, the product of minds intellectually as well as morally far superior and capable of greater acquirements than those of persons whose objects are mainly personal advancement and the accumulation of wealth. The nobler class illuminate the path of science with lamps which ever burn with inherent fire; the others are like the lesser stars, which owe their brightness to reflected light.

In this school, as I know by pleasurable experience, the students have been, as a rule, ever animated by the three great motive forces which promote all good things—earnestness, enthusiasm, and honesty in work; and I feel confident that in the coming session you who constitute the class of the school of this College—a school hallowed by so many worthy memories and noble traditions—will not be behind your predecessors in proving yourselves capable of honest effort; determined to be true to yourselves, true to those nearest and dearest to you, who, perhaps, in some instances at great personal sacrifice to themselves, have sent you here to acquire your professional training. One of your main ambitions should be not to be haunted in after life by the disturbing and paralysing spectres of lost opportunities; and so at once grasp the golden grains of knowledge set before you, and, above all, keep records of what you see and what you hear both in hospital and school. Let your motto be—"Nulla dies sine linea." It was said by a distinguished author—Anthony Trollope—that "students should let their work be to them as is his common work to the common labourer. No gigantic efforts will then be necessary. He need tie no wet towels round his brow, nor sit for thirty hours at his desk, as men have sat, or said they have sat." Remember that constancy in labour will conquer all difficulties—"Gutta cavat lapidem non vi sed sæpe cadendo." At once therefore commence to make the most of the precious but irrevocable years of student life—years as fleeting as the clouds in a summer sky, which once gone never can return;

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and ever bear in mind the truth of the old adage: "By the street of By-and-bye one arrives at the street of—Never."

"Gebraucht der Zeit, sie geht so schnell von hinnen,
Doch Ordnung lehrt euch Zeit gewinnen."—*Goethe.*

It has been noted as a peculiarity of our countrymen that they have a tendency to keep feeding their minds on the memories of bygone days, and to devote themselves to the contemplation of the achievements of their predecessors. There may be some truth in the charge; but, though the too frequent indulgence in the practice is certainly to be deprecated, it is at times not only fitting but right to recall the work done likely to endure, and the progress made by those who have preceded us. On the present occasion, however, I shall confine myself to making a retrospect, necessarily a swift and fleeting one, of the chief surgical work accomplished by many of my predecessors in the surgical chair of this College, in which survey I have to acknowledge with gratitude the assistance I have derived from the comprehensive History of the College by my friend and colleague, Sir Charles Cameron. An apology is hardly necessary for taking this course, as the labours achieved by these masters of our art have in so many instances acted as starting points for investigation, and resulted in new departures in our knowledge of surgical pathology, and consequent improvements in surgical therapeutics. While time and subsequent research have led to the rejection of certain views promulgated here, still it must be admitted that the great bulk of the work of our surgical predecessors has been accepted and their doctrines verified; but, irrespective of their acceptance or their rejection, one great good resulted, one precious legacy they bequeathed to us, which was the great and salutary impulse to effort that actuated them—that impulse which we call progress. The history of their work is, in truth, full of inspiring memories and pregnant with far-reaching hopes; and no one who studies it can fail to become sensible of the fact of the great responsibility which is attached to those who follow even "*longo intervallo*" the steps of many of the great surgeons who made this school the arena for their labours.

William Dease, whose statue so fitly adorns the hall of this College, was the first Professor of Surgery here, was an original member of the Dublin Society of Surgeons, one of the most energetic founders of this College, and a distinguished member of the surgical staff of the Meath Hospital and County Dublin Infirmary. He was a wise and philosophic surgeon, whose works, even when read by the light of modern investigation, remain, and are rightly considered, classical. They remain so, not only because they were the works of a conscientious and accurate observer, but also because they were written from, and not for, practice. His works "On Obstetrics," "On the Radical Cure of Hydrocele," "On the Treatment of Venereal Disease," and, lastly, his great work "On Injuries of the Head," would have been more than sufficient to render his name famous. He first recognised and taught the great fact in reference to the late appearance of evidence of cerebral inflammation, and its sequelæ after injuries of the head. In illustration of this pathological fact, noted by Dease, I may briefly recall two notable instances in my own practice in the Richmond Hospital, in one of which cerebral trouble did not become apparent until eight weeks after the receipt of the injury, which was a blow from the handle of a reaping-hook. The patient had gone to the north of England for employment at harvest operations, and sustained the injury during a dispute with some fellow-labourers, who emphasised their arguments by blows. No immediate bad consequences supervened, and for seven weeks after he was able to continue his work. He then returned to Ireland, and shortly after his arrival, and eight weeks after the injury, symptoms of cerebral pressure occurred. In the second case the injury was the blow of a hammer, which was inflicted six weeks before any serious mischief was apprehended. Oddly enough, the injury in both cases was inflicted just over the left temple, and as regards the symptoms also there was the closest analogy. There was evidently brain pressure in both cases, indicated by slowness of pulse, complete motor paralysis, retention of urine, myosis, and complete insensibility, but in both cases an absence of stertorous breathing. I trephined in both instances over the seat of the injury. In the first case the cranial opening was, as in a third case in which I performed the operation of trephining for intracranial hæmorrhage, within a hair's breadth of the source of pressure. Had I in this case the confidence in dealing with it that antiseptic surgery has now given us, I would have made other openings, and doubtless have relieved, and probably have saved, the patient's life. In the second case, in which a cerebral abscess, the result of injury, was diagnosed, and which occurred in my practice in the Richmond Hospital last August, I was more fortunate. The patient, a young man aged twenty-four, at the time of the operation was speechless and unconscious, the paralysis both of motion and sensation complete, together with the other evidences of pressure above noted. He had, in addition, frequent convulsive seizures, confined altogether to the right side, after each of which the insensibility appeared to become, if possible, more profound than before. The patient was clearly *in extremis*. In this apparently hopeless case, assisted by you, Mr. President, and my colleague Mr. Thomson, I trephined over the seat of the injury. On raising the flap, I found that there was a fracture of the outer table of the bone—a small portion of which, about the size of a threepenny piece, was detached. There did not seem to be any depressed fracture. I then applied the trephine and raised the bone, and on finding no evidence of effusion of any kind between the bone and dura mater experienced a veritable pang of disappointment. I then pierced the dura mater with the needle of a hypodermic syringe, and on drawing up the piston again experienced disappointment at getting a negative result. I then passed the needle deeper, but with a like result. I was then about to withdraw it and abandon my efforts to relieve the patient, when I determined, having gone so far, and strengthened by the full concurrence of my colleagues, to make one final attempt to pass the needle down as far as ever it could go. I did so, and my satisfaction was, I need hardly say, intense when, on drawing up the piston, a few drops of pus were apparent in the glass receiver. I then freely opened the dura mater, and, using the needle as my guide, sank the blade of a narrow-bladed bistoury down to the abscess, the contents of which welled up to the surface. I completed the evacuation of the abscess by passing into the cavity a piece of indiarubber tubing, and, attaching one end of it to the nozzle of a glass syringe, succeeded in drawing or pumping up the contents of the abscess. About an ounce and a half of dark grumous pus was in this way obtained. I then washed out the cavity with a warm 1 per cent. solution of carbolic acid, and then, leaving a drainage tube in, replaced the flap and dressed it with sal alembroth gauze and iodoform wool. I need not give, on the present occasion, any further details, but may state that before the patient left the operating theatre his power of speech returned; in less than three hours there was a marked improvement in all the paralytic symptoms, and ultimately the recovery was complete.

The case is remarkable and deserving of record, not only in consequence of the late appearance of the results of inflammatory mischief, but also from the fact of the satisfactory result of the operation, the case being, as far as I am aware, the second in which the operation of evacuating a deep-seated traumatic cerebral abscess was performed; the first in which it was done having been in Dupuytren's celebrated case—probably the most splendid operative effort ever achieved by that illustrious surgeon. The other cases of cerebral abscess from traumatism for which trephining has been performed, have been, as far as I can ascertain, without exception peripheral. The cases above alluded to I mentioned from their being so signally illustrative of Dease's doctrine as to the late appearance in many cases of inflammatory cerebral mischief after cranial traumatisms.

Following Dease, whose death, attended with such tragical circumstances, was a blow to the cause of scientific surgery in Ireland, came one of the most remarkable teachers of surgery that probably ever existed here or elsewhere. I allude to Abraham Colles, whose works hardly need to be enumerated, as they are doubtless familiar to most or perhaps all of you. If asked on what I thought Colles' fame would ultimately rest, I would say, first, the great and salutary revolution which he effected in the treatment of syphilis, and which resulted in the abandonment of the reckless and indiscriminate use of mercury, and the advocacy of the principles that should guide us in the administration of the drug—principles now accepted by modern therapeutists of the very highest authority. In this respect Colles proved himself to be a true pioneer, and clearly in advance of his time. Secondly, the graphic and accurate description of fracture of the lower end of the radius—the one

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which fitly bears his name,—his account of it being all the more remarkable from the fact of his never having had an opportunity of dissecting an example of the injury. And lastly, the enunciation of what Mr. J. Hutchinson has designated "Colles' law"—that, namely, in reference to the immunity which mothers of congenitally syphilitic infants have against infection from their offspring, an immunity not enjoyed by the nurses previously unaffected. As regards his powers as a teacher, no better proof could be given of the high estimate that was formed of them than the resolution which was passed by the College on his retirement from the chair of Surgery. It ran thus: "It was the unanimous feeling of the College that the exemplary and efficient manner in which he has filled the chair of the Theory and Practice of Surgery for thirty-two years had been the principal cause of the success and consequent high character of the School of Surgery in this country." Colles was, as has been well said, "an example to all of what may be achieved by accurate observations and truthful record." With the former, many of them original, his works are replete. Some have undoubtedly been appropriated by others, but, in truth, it may be said of him in regard to his works what was observed of a celebrated French philosopher and jurist, that even "when pillaged by all, he is still rich."

Next in order came a no less eminent teacher, one who occupied a foremost place among the *dii majores* of the surgical profession. I allude to Prof. W. L. Porter, the father of my esteemed friend, colleague, and former teacher, Sir George Porter. Prof. Porter's researches, carried on in the Meath Hospital, on the surgical staff of which he was for over forty years, on aneurysm, on syphilis, and on the diseases of the larynx and trachea, on which latter subject he published a work which must always be reckoned among the surgical classics, justly acquired for him a world-wide reputation; and although to one important doctrine of his, in reference to the inutility of the operation of tracheotomy in croup or diphtheria, exception may, I think, be taken—a doctrine which, having regard to the time he lived in, he doubtless had good grounds for holding and maintaining,—still I feel confident that had he lived and worked during the present era, in which we have the advantage of many additional surgical improvements and appliances that did not formerly exist, he would have modified those views and become satisfied that the operation in the great majority of such cases not only gives great and immediate temporary relief, but that in a considerable proportion of them it is distinctly a means of saving life. This statement is based not alone on the results of statistical research, which show that there have been 26½ per cent. of recoveries in these cases after the operation, but also on the experience I and my colleagues have had in the Richmond Hospital. We cannot, it is true, boast of any lengthened list of recoveries after the operation in these cases, but still there have been some, and doubtless there would have been others if the cases had been available for operation at an earlier date. But in all the temporary relief obtained was most remarkable. As a lecturer Professor Porter was unequalled. His earnest eloquence enthralled his pupils, and his frank and ready appreciation of what he believed to be true was only equalled by his fearless denunciation of, and scathing sarcasm in dealing with, what he believed to be untrustworthy and false. He was, in truth, no "dry-as-dust" a teacher. His hearers were supplied from no ancient eroded cistern or stagnant pool, for he had the power, possessed by so few, of being able to strike the rock from which came the living water.

Associated with Professor Porter was Mr. C. Todd, the father of the eminent physician, Robert Bentley Todd of King's College Hospital, London. Mr. Todd, who was also secretary and librarian to the College, was not a prolific author, but a conscientious and successful teacher, and his papers in the Dublin Hospital Reports—that mine of scientific wealth—are characterised by an essentially practical spirit. With his name must be always associated the introduction in the Richmond Hospital of the pressure treatment of aneurysm, that known as the "Dublin treatment." It was in a case of Mr. Todd's that the treatment first proved successful.

As regards the efficiency of this method of treatment, however, I cannot but think that surgical opinion is destined at no distant period to undergo considerable change, owing doubtless to the diminished risk now attending arterial deligation. In other words, I regard the treatment we have so long justly taken pride in as having originated here as being, to a great extent, deposed from the lofty pedestal on which it has for so long a period fitly rested. In a large proportion of cases I believe it to be not only unreliable as a means of cure, but likely, if persisted in for any length of time, to militate against recovery being obtained when other and surer means of cure are subsequently adopted. In illustration of this I may instance, among others, three examples of aneurysm—one a radial, the second a femoro-popliteal, and the third a popliteal. In all three cases pressure was tried for a lengthened period, and without effect. The failure, in fact, in all was signal.

In the case of the radial aneurysm I subsequently tied the artery—and this, owing doubtless to the too free collateral circulation that was established, was also unattended with success, and eventually I had to excise the aneurysmal tumour, performing the old operation of Antyllus.

The second case was a femoro-popliteal aneurysm, which was under my care so far back as Aug. 17th, 1870. In this case I commenced making pressure on the femoral artery, using alternately Read's and Carte's artery compressors—the former on the groin, and the latter at the middle of the thigh. After four days and nights' continuous pressure no difference was observed in either the size or consistence of the tumour. Digital pressure was also applied for two days, but with a negative result. I then exposed the femoral and placed a temporary ligature upon it, using Porter's clamp. This was removed after fifty hours, but without any satisfactory result, and eventually, the aneurysm having become diffused, I had to amputate the limb. I feel satisfied that, had a ligature been applied to the artery in the first instance, a different result could have been recorded.

In the last case I would allude to—that, namely, of popliteal aneurysm, one which has recently been under my care in the Richmond Hospital—pressure had been intermittently employed for a long period (viz., over three months), and I have no reason for supposing that it was not done with the highest degree of efficiency; but, as in the other cases, the result was unsatisfactory. The case then came under my care, and though urged by some of my surgical friends to continue the pressure treatment, I preferred, having regard especially to the latter having got, as I believe, an ample trial, to deligate the artery. There was immediate and firm union of the wound; no evidence whatever of pus production; but shortly after the operation a very distinct pulsation returned in the aneurysm, which continued for several weeks—so long, in fact, that I began to fear that the operation was not going, as far as the cure of the aneurysm was concerned, to be a success. Eventually, however, the result was eminently satisfactory. In this case, therefore, the pressure treatment not only failed to cure the aneurysm, but owing, as I believe, to the too free collateral circulation that was established as a consequence of the prolonged pressure, the recovery after the operation was distinctly retarded.

The lesson, therefore, to be learned from these as well as other cases that might be adduced, is that, unless some hindrance or contra-indication exist, the surgeon who feels himself competent to perform efficiently arterial deligation and able and willing to perform it in a thoroughly antiseptic manner, should prefer it to, at all events, any prolonged treatment of pressure, or to any of the other numerous eccentric devices that have been proposed from time to time by various persons craving for notoriety and a little ephemeral reputation, and who in this way veil their surgical incompetency under a garb of supposed originality.

Succeeding Mr. Todd came Mr. J. Wilmot, who contributed many able surgical papers to the Dublin Hospital Reports and *Dublin Quarterly Journal*. His fame as a surgical author will mainly rest on his work on "Diseases of the Prostate," in which he was deservedly regarded as a high authority.

The last of the occupants of the Surgical Chair of this school I would allude to is my immediate predecessor, Professor Hargrave, who for a long series of years ably maintained its reputation and prestige. Numerous papers on many practical surgical topics bear testimony to his unceasing industry, energy, and powers of accurate observation, and finally his work on "Operative Surgery"—one too little known and appreciated—fitly placed him in the front rank among his surgical contemporaries.

It will thus be seen that in advancing and elucidating many of the greatest and most important branches of surgery, such as, among many others, fractures, aneurysm, syphilis, injuries of the head, diseases of the genito-urinary organs, of the larynx and trachea, and also in the wide, in

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truth almost illimitable field of operative surgery—subjects which have for so long a time agitated, and are still agitating, the surgical world—the occupants of the chair of Surgery in this school have been original investigators and leaders, whose work has stood the test of time, the most of it being still and likely to continue accepted.

Briefly regarding it, as we only can do on an occasion like the present, work of such rare excellence as has been achieved by our surgical predecessors here cannot but act as a healthy stimulus to further effort, not only on the part of your teachers, but also on your part; for all, teachers and pupils alike, are or should be actuated by the worthy ambition which so largely influenced those who preceded us, which had for one of its chief objects the maintenance of the prestige and reputation of this great and time-honoured College and the Irish School of Surgery. In the present day exceptional difficulties and obstacles doubtless exist in the advancement of our art which did not, at all events to the same extent, hamper the efforts and retard the work of those who went before us. These difficulties still exist, and are likely to continue, until, in more enlightened days, they are swept away with the contempt which they so richly merit. I allude more particularly to the difficulties thrown in the way of the experimental physiologist in these countries, and to the cruel and insensate opposition made to the action of the Contagious Diseases Acts, both striking illustrations of how sentiment may get the better of judgment, and both mischievous products of what has been well termed the *lues philanthropica* — that weak, flabby, boneless, utopian humanitarianism now so prevalent, and that has done so much to sap the judgment, discretion, and good sense of so many men as well as women. You should look upon it as one of your great duties and privileges, in the present as well as in the future, to aid in bringing about that happy era, sure to come sooner or later, when all such opposition and obstacles shall exist only among the traditions of our art, and when, to quote Graves' noble words, "the stream of knowledge, now fed by a thousand new sources, flows along deep and rapid, sweeping away every obstruction, and defying all human opposition." Then the obscuring mists of prejudice and folly will be lifted off the ground and dispersed as by a magician's wand, and the physician and surgeon will not have so often to fold their arms and sorrowfully confess that they can do no more, confess that they stand baffled and powerless in the presence of disease, which perhaps they may have vanquished for a time, but never conquered; then the State will no longer be guilty of thwarting efforts which, if allowed to be made, would, we know, aid signally in stamping out that fell disease which is such a cruel and relentless scourge and curse to humanity, which counts more victims than cholera, small-pox, or yellow fever put together, and which spares neither age nor sex, not even the innocent child unborn.

In your professional life hereafter, if slow to accept new principles and practice, be also slow to reject them. Remember there is nothing so cheap or so nasty as senseless detraction, nothing so vulgar, so stupid and contemptible as an unreasoning scepticism, and that indulgence in either or both has not infrequently brought persons into a position at once melancholy and at the same time ludicrous. I allude more particularly to the hostility that was formerly evinced by "practical" persons to the many instruments of precision now so indispensable to every educated practitioner, and of late years mainly, I regret to say, in the surgical ranks of our profession, to the principles and practice of antisepticism as elaborated by Pasteur and Lister. When we consider how recently we have heard antiseptic practices held up to contempt as little else than a fashionable but essentially ephemeral craze, and its professors and advocates described as persons apparently temporarily afflicted with a form of harmless lunacy, which in time, and with a more extended experience, they may reasonably be expected to recover from, we have a good example of the humiliating position unthinking detractors may eventually find themselves in.

You may be well congratulated at beginning the work of your lives—that which I trust may soon prove to you all a happy toil—at a time in which the advances made and the results obtained have been so great as to justify its being termed the "Golden Age" of surgery, and to prove how rash it was even of so great a surgeon as Boyer, upwards of seventy years ago, to express his conviction and belief that surgery had already attained perfection. In dealing with the present epoch, the historian will doubtless place in boldest relief the revolution that has taken place in the treatment of wounds, one which has been attended with such amazing results, and brought about, not by any chance or inspiration, but by the application of knowledge gained from three of the great sources of scientific wealth—Physiology, Chemistry, and Therapeutics.

As a proof of what we have gained in our power of warding off and disarming what are not inaptly termed "preventable" diseases following wounds, all more or less connected with septic infection, let us briefly glance at some facts connected with comparatively recent wars, for which I am indebted to my friend, Sir William Mac Cormac.[1] In the Crimean war the number of men who lost their lives in the French army was 95,615, of which only 10,240 perished at the hands of the enemy, the remainder succumbing to diseases resulting directly from their wounds. In the American war 95,000 men died from wounds, while 184,000, nearly double the number, perished from septic affections consequent on them. A remarkable change for the better was observed in the Franco-German war. In this campaign 28,282 died of their wounds, while only 12,253 died of preventable disease. But the greatest result of all yet obtained was in the Egyptian campaign of 1882, in which not a single instance of death from pyæmia, septicæmia, erysipelas, or hospital gangrene is recorded.

In fulfilling the task you have laid out for yourselves to accomplish, I trust you will be not merely steady workers, but earnest enthusiasts. I believe that in the study and scientific pursuit of our profession the highest exercises of the mind are required, and the best charities of the heart are elicited. To ensure an honourable success here—by which I mean not so much the acquisition of State honours or wealth, as the sympathy and good opinion of your contemporaries—bind yourselves by a true and exalted line of conduct; be strong, courageous, and stern in resisting all temptations to evil-doing; cherish always the worthy aspiration that your energy in all right and honourable action may not fail, and that you may not, in consequence, fall into that hopeless quagmire of mental stagnation into which so many sink, and from which so few have power to emerge; and, above all, remember that those talents with which you have been entrusted—to some more and to others less—should not be wrongly buried in the ground, but returned with interest to Him to whom you are indebted for them. Let it be your ambition as well as your prayer that you may be ever animated by the spirit of that great and solemn obligation which the philosopher and physician, Hippocrates, the Father of Medicine, required from his pupils—"In purity and holiness I will spend my life and practise my art." Do this, and then

> "Shall inferior eyes,
> That borrow their behaviour from the great,
> Grow great by your example."

Lectures ON PRACTICAL LEGAL MEDICINE.

Being the Post-Graduate Course delivered at St. Mary's Hospital,

BY AUGUSTUS J. PEPPER, M.S. LOND.,
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LECTURE III.

GENTLEMEN,—In the first place let me direct your attention to the post-mortem appearances of the stomach and intestines in certain forms of natural and violent death. It is often very difficult to distinguish the *congestion of the stomach* incidental to disease and prolonged vomiting from that due to irritation of the mucous membrane by poison. In very pronounced cases of either, of course the question is easy of determination, and in these, too, the concomitant signs, together with the history, place the matter beyond doubt. But there are many instances in which, on casual and exclusive observation, a wrong interpretation may be made. I believe, however, it seldom or never occurs that

[1] On Abdominal Section. By Sir William Mac Cormac. Annual Oration delivered before the Medical Society of London, 1887.

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one is unable to arrive at a definite conclusion. Nevertheless, one meets occasionally with a case which at first sight is very equivocal and liable to be misconstrued for want of sufficient consideration of the possible results of physiological and pathological factors. On a previous occasion, when speaking of congestion of the brain, I mentioned a prevalent error—viz., confounding the causes of death with the modes of dying. A similar mistake is sometimes made with regard to congestion of the stomach. Passive congestion or venous engorgement of the stomach is found after asphyxial death, and also when there has been obstruction of the portal circulation. So, too, the veins are filled to repletion when a person has died during active digestion. The force of gravitation causes the blood to accumulate in the large veins in the cardiac end of the stomach, so that the difference in colour at the cardiac and pyloric portions is very marked—so much so that it may excite a suspicion that an irritant poison has been administered; but in irritant poisoning, besides the venous congestion, the mucous membrane is marked by more or less intense capillary injection. There is a diffused or punctate redness of a bright vermilion tint over a dark bluish-black arborescent background. Acute gastritis of extrinsic origin may closely simulate the condition of the stomach when inflamed, as the result of the action of some general morbid state—e.g., the specific fevers. In the latter, however, the injection of the mucous membrane is, as a rule, more evenly and widely distributed; and in one particular affection—typhoid fever—the solitary lymphoid glands are enlarged in like manner as they are in the intestine. This latter sign should not be overlooked. In two instances within my knowledge it furnished a clue as to the ultimate cause of death, which was unsuspected during life. In the first case, a boy aged twelve died somewhat suddenly in hospital from profuse hæmorrhage from the stomach. At the necropsy the mucous membrane of the stomach was injected and the solitary glands were markedly swollen. One of these had ulcerated into a contiguous artery. The intestinal glands showed that the disease was of about eight days' duration. You might ask how could a mistake arise in the investigation of such a case? At the general post-mortem examination one would not be likely to make one; but suppose the stomach had been removed and sent to you for examination, you might not be furnished with the corroborative evidence afforded by the intestine and the mesenteric glands. The second of the two cases above referred to was that of a girl, aged six years, who died in February, 1886, after being attacked with vomiting, which lasted thirty-three hours. Diarrhœa set in eighteen hours before death. The symptoms were singularly like those of irritant poisoning, and the post-mortem signs observed in the stomach seemed consistent with this theory. The mucous membrane was generally hyperæmic, the entire surface being redder than normal. This was most marked in the cardiac portion, for reasons mentioned above. There were groups of capillary extravasations of blood in the mucous and submucous tissues. The solitary glands were enlarged, and the summits of a few contiguous rugæ on the posterior surface were blackened. The recollection of the enlargement of the lymphoid glands seen in the former case led me to surmise that here also I might be dealing with the consequences—primary and secondary—of typhoid fever, and so it turned out to be, for typical enteric lesions existed in both the mesenteric and intestinal glands. From an examination of the stomach alone, I believe it would have been difficult to say that the deceased child had not succumbed to the effects of an irritant poison taken into the stomach. The sequence of events was much as follows: the mucous membrane of the stomach was inflamed from the specific poison of typhoid fever; this was followed by a very natural consequence—persistent vomiting; the vomiting caused serious interference with the gastric circulation—to such an extent, in truth, that the tension in the capillaries led here and there to rupture of their walls, and thus to the punctate extravasations. The black streaks spoken of deserve special mention, because they might have been taken as signs of superficial corrosion of the mucous membrane; but on close inspection it could be easily seen that the epithelial surface was not broken, nor had the membrane lost its natural lustre. This was rendered more obvious by the passage of a stream of water over the area involved. The staining was not due to hæmorrhage, for, although recent, it was quite black; moreover, it was in the form of uniform splashes along the tops of the rugæ. There can be little doubt that some metallic bismuth had been deposited on the membrane after death, when the muscular coat was contracted and the mucous coat thrown into ridges, for to allay the vomiting a salt of bismuth had been prescribed for and taken by the patient. A careful analysis of the contents of the stomach revealed a trace of bismuth. It is interesting to note that in this case—one of suspected irritant poisoning—allowance had to be made for the possible presence of three metals given medicinally—viz., bismuth and cerium as stomachic sedatives, and mercury as an aperient. It was feared that by accident the child might have taken a poisonous dose of a mixture which contained arsenic and iron. Nothing but bismuth was detected. Before dismissing the present inquiry, let me emphasise the fact that capillary extravasations into the mucous membrane of the stomach are frequently caused by the act of vomiting, irrespective of organic changes in the mucous membrane. It is an important matter, and worthy of your best attention. Not seldom I have heard it stated that such extravasations were strongly suggestive of irritant poisoning. Taken by themselves, let me repeat, they are of little forensic value.

I pass now to the consideration of certain features of intestinal lesions that not unfrequently come under the notice of the medical jurist. A person is seized, perhaps unexpectedly and suddenly, with violent vomiting and pain in the abdomen. Nothing is known that can throw light on the case. The usual remedies are given, and fail. Death ensues, say, within twenty-four or thirty-six hours. It is not surprising that suspicions of foul play should arise, and it is your duty to dispel or confirm what before the post-mortem examination was only conjecture. Let me cite to you one or two cases by way of illustration. A strong, healthy, middle-aged man was seized with uncontrollable vomiting, accompanied by griping pain in the abdomen. The symptoms continued with but little variation until his death about twenty-five hours afterwards. An inquest was held, and a post-mortem examination was made by two medical men. They found the mucous membrane of the stomach markedly congested, and a portion of the small intestine so injected with blood that even the outer surface presented a deep crimson colour. Coupling these facts with the symptoms and their pronounced course during life, they came to the conclusion that an irritant poison had been taken accidentally or administered by design, and gave the cause of death as being "congestion of the stomach and peritonitis." I was requested to make a further examination of the cadaver. This was done in the presence of three medical men. I pointed out that the nature of the congestion of the stomach was such as is met with after prolonged vomiting. The veins were full, and there were groups of punctate extravasations, but an absence of general minute injection of the vessels. Moreover, there was no abrasion of the mucous membrane. Then, again, the portion of small intestine that had suffered was not continuous with the stomach, but several feet below it, the intervening portion of bowel showing no abnormal appearance. It was not probable that an irritant poison would affect the stomach and then pass a large section of the bowel unscathed to spend its action on a number of coils below, and there end as abruptly as it had commenced. Fortunately the state of the peritoneum gave the desired supplementary evidence. The mesentery corresponding to the congested bowel was studded with patches of extravasated blood, varying from the size of a hemp-seed to that of a sixpence. All doubt was now dispersed—the case was one of twist of the bowel, a condition explaining each and all of the symptoms and post-mortem signs, phenomena consistent with no other hypothesis. I may remark that the volvulus had been reduced at the first examination, so that I did not actually see it. The case illustrates the way in which facts may be misinterpreted, and shows further how a previous manipulation, though properly conducted, may destroy evidence of the greatest value.

Let me now give you briefly the facts of another case of suspected poisoning, in which death was due to acute obstruction of the bowel from traction on the small intestine by adhesion bands, the result of an attack of general peritonitis of distant date. The deceased was a soldier, aged twenty-four. Prior to his fatal illness he was not known to have suffered from any serious organic disease. It is true he had had syphilis, but this had yielded to appropriate treatment. One morning he was seized with griping pains in the abdo-

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men, vomiting, and great thirst, followed shortly by cramps in the legs. He died exhausted in about eighteen hours. I was not present at the first examination of the body, nor at the first sitting of the coroner's court. The medical men who had charge of the case found the stomach and a portion of the small intestine much congested, especially the latter. They gave an opinion that the deceased might have succumbed to irritant poisoning. I was ordered to make a further investigation by way of post-mortem inspection and chemical analysis. The latter procedure failed to detect any kind of irritant or corrosive poison; in fact, the results obtained were purely negative. A careful examination of the contents of the abdomen left no reasonable doubt as to the cause of death. The congestion of the stomach was not sufficiently pronounced as to render it the probable cause of the violent vomiting and the rapidly fatal course of the symptoms generally. There were numerous peritoneal adhesion bands, concerning which I need only particularise two. One of these was stretched across the sigmoid flexure of the rectum, and had exerted considerable traction on an adjacent coil of intestine. No untoward results had ensued from this; but the second band had constricted a coil of the small intestine to such an extent, that for the length of a foot its lumen had become enlarged to many times its normal size. The mucous membrane in this portion was quite pale, but above it there was intense but uniform congestion, evidently of mechanical origin. There was no corrosion of the mucous membrane, no abrasions, and no hæmorrhages. The limitation of the congestion below was very distinct, as though a piece of cord had been tied round the bowel. I have little doubt that the affected coil of intestine had become suddenly twisted upon the fixed point of adhesion. The congestion from an irritant poison is never so abruptly defined nor so completely and evenly diffused without other abnormal appearances. The mesenteric glands were enlarged and caseous, but there was no evidence anywhere of active tubercular mischief.

Now, one occasionally meets with instances of death from obstruction of the bowels in which the symptoms are mild and of correspondingly long duration. They may be so little marked, in fact, that their cause may be overlooked, and even at the necropsy the signs of obstruction may appear inadequate to explain the death. I refer to the cases of partial strangulation of large herniæ in *old people* with little vital power. The reflex centres do not respond promptly and with energy to the peripheral irritation, but participate in the general subdued tone of the whole nervous system; and at the same time the patient's strength is unequal to support the strain expressed in terms of pain and emesis of moderate severity. I will give you a typical instance which came under my notice in the present year. An aged man had for several days complained of some pain in the stomach, and this was followed by vomiting. He was admitted to hospital, and died eight hours later from exhaustion. During life the house-surgeon disengaged from an inguinal sac about a foot and a half of small intestine, which I found moderately congested, but presenting nothing like the appearance usually found where death has been caused by strangulation of the bowel. Besides this, there had been no difficulty whatever in reducing the hernia by taxis. Previous experience enabled me to affirm that the deceased owed his death to obstruction of the hernial protrusion. The case affords evidence, if it were required, of the necessity of examining all known hernial sites when the abdominal symptoms, however slight, are in any way doubtful.

I will now direct your attention to the consideration of some comparatively rare causes of death which may be overlooked for want of information respecting the actual state of health of persons prior to their sudden decease. In the first place, let us glance at the condition known as *diabetic coma*. It is not my purpose here to analyse in detail and make a differential diagnosis of the peculiar state above indicated, but I may parenthetically remark that faculty-consciousness is not necessarily present, as has been supposed, in all cases. Nor, according to my experience, is it usual for the diabetic halitus to be abolished or perceptibly diminished during any stage of the period of unconsciousness. In short I look upon its presence as the great safeguard against confounding diabetic coma with other forms of insensibility during life, and against falling into error as regards the cause of death. Of course it is quite plain sailing where the malady is known to have existed beforehand, and in such no excuse can be made for diagnostic or forensic blunders. But I want to impress upon you the necessity, when making a post-mortem examination in a case of death from coma concerning which none of the antecedent conditions are known, to note the odour that emanates from the tissues and viscera. You should direct your observation especially to the *brain*, because, in the first place, the peculiar and characteristic smell of diabetes is there well exhibited; and, secondly, inasmuch as it is not masked by other odours such as one meets with in the abdominal viscera. It is scarcely necessary to mention that you should preserve any urine that may be found in the bladder post mortem, and any that may have been voided during the fatal illness of the deceased person. On two occasions I have been able to demonstrate the cause of death of individuals who during life were not suspected of having suffered from any disease. In each case a *sectio cadaveris* had been performed without discovering that the body gave off what appeared to me as the highly marked and characteristic smell of acetonæmia. People, like animals, vary much in their discriminating power of detecting various odours, so we must not expect too much from this means of gathering evidence. We must be on our guard that the smell of acetonæmic tissues is not mistaken for the sweet odour incidental to pyæmia and other less defined pathological states. Even if you suspect death from diabetic coma on the grounds that a peculiar emanation is given off from the fluids and tissues, you will not rest contented with the suspicion, but analyse the urine or cerebro-spinal fluid both for grape sugar and the derivate body alleged to be acetone. Finally, I may add that if a person presumably healthy beforehand is found dying from coma, and if after death no coarse anatomical lesion is found sufficient to explain the event, you should at once note acetonæmia as a possible, nay, even probable, explanation. If neither sugar, acetone, nor any other poison is discovered, it is not unlikely that the deceased succumbed to epilepsy. You know the first attack may prove the last, so that, save for a family history of neuroses, there may be nothing to guide the medical jurist.

A few words with regard to sudden death from *saturnine epilepsy*. It is curious that a body so chemically simple as lead should bring about such curious, I might almost say mysterious, phenomena. There can be no doubt that workers in the metal far more frequently suffer from cerebral symptoms than is generally supposed; and I believe that death is not so rare from epileptiform convulsions of saturnine origin as our text-books on forensic medicine would lead us to believe. It is all very well to teach that lead workers can with ordinary care steer clear of danger; but from observations I have made—and my opinions are corroborated by medical men in charge of lead factories—it is extremely difficult to prevent the metal gaining access to the system. I once heard it sworn in court that over 90 per cent. of the white-lead workers in a particularly well-conducted factory showed the blue line in the gums. In one case I examined the husband of a woman who had fallen a victim to "lead epilepsy." He had been employed for only three months in making litharge, and yet his gums were discoloured almost as much as I have ever seen. This man assured me he had carried out most faithfully all the precautions enjoined by his employers, and which, moreover, were those which the law demanded should be given. In cases of supposed death from saturnine epilepsy, it is necessary to examine the gums, the intestines, and the nervous system, and to make a chemical analysis of the viscera, especially the liver. Just one word of caution about the staining of the gums. Do not jump to the conclusion that because the gums are blue they are necessarily so from deposit of lead. I have known simple post-mortem congestion of the mucous membrane in question closely resemble lead staining; nay, I have seen it mistaken for it. The dark venous hue of the blood is toned down to a steely grey by the thick white epidermis. But you can always avoid error by applying a simple chemical test. The blue line of lead is turned yellow by chromic acid, and hydric sulphide converts the yellow into black. You are told the intestines are found contracted (post mortem) in chronic lead-poisoning. This is not always the case. I have found them free from contraction, but then one may observe the general hypertrophy of the muscular coat of the bowel, and the absence of permanent mechanical obstruction.

There is yet another cause of comparatively sudden death that may be overlooked—viz., *Addison's disease*. In the only case of the kind that came under my notice, the real condition was not discovered at the necropsy.

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The inquest was adjourned for further inquiry, and I was directed to examine the body. I found the suprarenals tubercular, and pigmentation of the skin well marked. The deceased had suffered from general ill-health and progressive emaciation, but the particular affection had not been recognised.

In concluding this lecture, I will direct your attention to a source of danger to life which, so far as I know, has not hitherto been noticed in the medical press. I refer to *poisoning from the use of perchloride of mercury in the form of very weak solutions*—e.g., 1 in 1500 or 2000. I understand that in midwifery practice it is not at all uncommon to employ injections of the strength just mentioned for cleansing purposes, not only as a corrective against septic discharges, but also as a prophylactic. Where the patient is free from organic disease of the kidneys one has little need to fear untoward consequences from the treatment under consideration. I am aware of two cases of death from acute inflammation of the bowels following closely on the injection of very weak mercurial solutions into the vagina shortly after parturition. As in each instance no other cause of the fatal complication could be discovered, there is little doubt that the acute irritative lesions in the intestines were due to the perchloride in the course of its elimination. The action of the salt was concentrated, so to speak, in this particular region by reason of grave renal affection. In one of the two cases I made a very exhaustive post-mortem examination. The whole of the small and large intestine was acutely inflamed. There were thousands of hæmorrhagic patches, punctate and irregular in shape. There were a few minute recent ulcers. The catarrhal congestion was extreme. Lymph was effused into the substance and upon the surface of the mucous membrane. Slight general peritonitis seemed to have started at the middle of the colon, where the intestinal lesion was more marked than elsewhere. The stomach was not affected. The kidneys were in an advanced state of fatty degeneration. No aperients had been administered to the patient, but a solution of bichloride of mercury (1 in 2000) had been injected into the vagina to prevent decomposition of the lochia. Profuse diarrhœa ensued, and continued until death. The body temperature was never raised, and latterly it was subnormal. I was at a loss to account for the ultimate cause of the diarrhœa and its fatal consequences until the circumstances were explained to me by an obstetric physician who was present at the necropsy, and who had witnessed a precisely similar case in his own practice. The lesson to be learnt from the foregoing narrative is—that even a very attenuated solution of a mercurial salt should not be employed as a vaginal injection without first ascertaining the state of the kidneys by an examination of the urine.

ON SIMPLE DILATATION OF THE STOMACH, OR GASTROECTASIS.[1]

BY T. C. ALLBUTT, M.D. CANTAB., F.R.C.P. LOND., F.R.S.

MR. PRESIDENT AND GENTLEMEN,—When your honorary secretary, Dr. Samuel West, invited me to read a paper before the Medical Society, and enhanced this compliment by inviting me to read the first paper of this session, he tempted me with too great a temptation. I frankly admit that I grasped at the honour without duly considering whether I had anything to say which should justify my coming before you thus to occupy your time and attention. My first suggestion, a proposal to read some notes on pneumothorax, I withdrew in a panic as soon as I had read Dr. West's own most excellent essay thereon. My second proposal, which I fulfil by bringing the present paper before you to-night, seemed to be justified by my abundance of cases and notes of gastroectasis. These I have carefully gone over, and find, when it is too late to change my subject, that I have no conclusions to offer you which are not already known. May I hope that if I take you again over facts and doctrines previously known, I take you over a subject not too familiar.

In the course of practice I find that the diagnosis of simple gastroectasis is often overlooked; nay more, that when pointed out the malady is not readily recognised. Indeed, two or three years after I wrote my first paper on the subject in 1879, I was assured by a physician of great eminence that he had not before heard of gastroectasis as a primary malady, and having heard was indisposed to admit the existence of it. My own enlarged experience has, however, not only fortified me in the diagnosis of such cases and confirmed their reality, but has impressed me with their frequency. That which at one time I regarded as a special and unusual clinical phenomenon I now recognise as one of common observation; for gastroectasis, which, in its fully established form, is a prominent and unmistakable malady, enters in less degree into many modes of dyspepsia, debility, and tissue failures, and claims in its degree due recognition and treatment.

To clear the ground, permit me in the first instance to say that the limits of my subject to-night exclude all cases of secondary gastroectasis. Secondary gastroectasis as a result of pyloric obstruction of organic origin, whether cicatricial, invasive, or otherwise, I put on one side, and propose to speak only of simple ectasis due to the predominance of pressure upon the inner surface over the resistance of the walls of the stomach, such pressure not being accumulated by pyloric obstruction. Indeed, it is not necessary to suppose that in such predominance the sum of the pressure upon the internal surface of the stomach is absolutely increased. It is obvious that this predominance could be established if, that pressure remaining the same, the resistance of the walls were diminished. Doubtless you are prepared to hear me say that in the majority of cases of simple gastroectasis this morbid state is more often due to failure of resistance than to excessive pressure within. Two painful cases illustrating this position spring into my memory; they were brother and sister, and both were frail persons. In them also occurred that connexion between phthisis and acute rheumatism, upon which I have often insisted.

A young lady, having passed through rheumatic fever of a somewhat adynamic type, soon afterwards was attacked by acute tuberculosis. The family history was phthisical. Scarcely had the phthisis become very manifest when acute dilatation of the stomach set in, and her latter days were rendered grievous indeed by the suffering which this entailed. Not many months passed by when her brother, a slight young man of about twenty-six years of age, was seized with acute rheumatism. We suspected him of ulcerative endocarditis, so intractable and adynamic was the course of the disease. However, he slowly recovered. But no sooner had he entered upon convalescence than we discovered a large gastroectasis, which miserably delayed his recovery and sapped his nutrition and vitality. Ultimately, I believe, he has attained to some sort of health, but for two or three years the dilated stomach resisted all means of cure, and I have not seen the patient since. These two cases, among many others, illustrate, then, with more than ordinary clearness, the admitted occurrence of gastroectasis, due not to accumulated pressure, nor indeed to any absolute increase of pressure within, but to diminished resistance without.

These two cases were as easy to observe and to describe as they were difficult to treat, because they were extreme cases. That dilatation of the stomach from enfeebled tone occurs in a very large number of weakly persons, or as an item of suffering in a very large number of enfeebling maladies, is an assertion I venture to make from the results of much investigation and inquiry, but is nevertheless one which is as difficult to demonstrate to you now as the extreme cases are easy, because the degrees of it are far less, and because its symptoms have been hidden under generalities like atonic dyspepsia, nervous debility, and so forth. A watchful diagnosis will, however, detect this morbid change amid other signs and symptoms, and deal with it by special means; for it may be found under like conditions from the suckling to the adult, though less often in old age. In all fevers, whether adynamic in type or not, gastroectasis may occur, and often does occur. Where the temperatures run high for some time, it seems probable that even in robuster persons some reduction of the muscular value of the coats of the stomach would occur, and I am in the habit of observing the state of the stomach in the course of such maladies. Thus I often detect degrees of ectasis, be they more or less, and find it desirable to regulate the management of the cases accordingly. Of course, in the vast majority of them recovery takes place readily enough, whether the ectasis be detected or not. Weight at the epigastrium, a rejection of mucus, water, or wind, a retardation of amendment, a caprice or dulness of

[1] Paper read at the Medical Society of London, Oct. 17th.

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appetite, a coated tongue, fretful or low spirits, and, above all, a slackening of flesh, direct us to the stomach, when percussion and palpation confirm the former suspicion. Happily, for other reasons, the dietary in such cases has generally been limited, and thus the labour of the stomach economised. In phthisis the existence of gastroectasis is far more common than is generally supposed. I ought to have taken statistics on this question, which would have been easy enough in chamber practice; as it is, I can only offer you the inconclusive proof of my own undefined experience, and ask you to watch the matter for yourselves. Two of my cases of phthisis treated in Switzerland, and another case treated on the sea, were terribly retarded by higher degrees of dilatation of the stomach. All these cases were otherwise of a very hopeful kind, and two of them have made fair recovery; the third died solely because of the gastroectasis, which thwarted all our efforts to advance his nutrition. In these cases I must say that I do not speak of advanced or prominent dilatation, but of a degree which can be detected by careful examination, and the symptoms of which are chiefly pain, impaired nutrition, and nervous depression. To such persons the dietary of seagoing vessels and of hotels is often very harmful, and their cry of dyspeptic suffering ascends without ceasing.

In infants and young children dilatation of the stomach is constantly overlooked, and I have nowhere seen a proper estimate of this complication of children's maladies.[2] In sucklings the affection is not confined to the hand-fed, but may be found in the breast-fed when the tone of the digestive machinery is lowered. In them abnormal decomposition of food readily sets in, as we too well know—one of the first functional changes being a retardation of the rate of digestion, and a retention of the food three or even four times as long in the stomach as it ought to be there. The epigastrium protrudes and tightens; the stools grow costive, pale, and offensive; the child becomes fretful, rejects sour mucus and altered food, and its flesh falls rapidly. By palpation and percussion a dilated stomach is often found to be present—not as a varying and transitory phenomenon, but as an enduring pathological change,—less difficult to cure than in older persons (for children soon grow out of their maladies), but bad enough to keep the child back for months.

In these and like cases, both in children and in adults, I am anxious to put this before you—that although the gastroectasis may be but one part of a more general malady, or may even be but a by-phenomenon, yet it is always a factor to be counted with, and one to be treated for itself. Catarrh of the stomach is often present, of course, at the same time, and may be a main cause, as it is always an aggravation, of ectasis; yet catarrh may exist (and very commonly does exist) without ectasis, and we ought in all cases to ascertain as far as possible the degree of both or of either. I urge this not only for the rational treatment of such cases on their appearance, but because the gastroectasis may survive the acuter stages and become later the substantial lesion. One very bad case of this kind was brought to me two years ago in a child of three to four years old, born in India, and whose vital powers and nutrition were much enfeebled. In it gastroectasis had presented itself as the main pathological factor. About the same time a boy of ten was brought to me in whom I discovered gastroectasis of the complete clinical type, with all Kussmaul's and Leube's symptoms, and needing persistent washing out. The history was obscure, but there was no definite history of primary catarrh, rather one of neglected ill-health and careless nutrition. In a far-gone case like this the prognosis is very grave, if not despairing; had the condition been recognised sooner recovery would have been certainly secured.

Besides febrile and exhausting diseases, there are other causes of gastroectasis from diminished resistance, the modes of some of them being clear enough, of others more obscure. The clearest of these is gastric catarrh, the tendency of which to weaken parietal resistance is too obvious to detain us. Less easy to explain, though not of the obscurest, are such causes as failing absorption, chronic venous congestion of the stomach, failing digestive secretions, and the like. When absorption fails, we understand that retention of ingesta and their gases, by increasing pressure, adds to the effect of simple yielding of the parietes. In heart disease and cirrhosis of the liver, for instance, [illegible] when venous stasis increases on the walls of the stomach, defective absorption, with delay of fluid, semifluid and gaseous contents, is probably the main cause of the distension of the stomach, which is so troublesome a complication in these cases. In them, although distension be common, troublesome, and enduring enough, yet it rarely passes beyond the first or second degree, which seems to indicate that delayed contents and diminished absorption do not produce voluminous ectasis unless there be a conspiring muscular enfeeblement of the walls themselves. For we know that even in many cases of pyloric obstruction, and of considerable obstruction, the stomach may retain its normal volume or go not beyond a moderate degree of amplitude, and in these we find the muscular coat hypertrophied—hypertrophied sometimes to a measure which indicates an extraordinary sum of pressures upon the inner surface. But owing either to the nature of the patient, or to the course of the malady, which has given time for compensation, or to some causes less understood, the concentric tendencies have not been overpowered. In one case of stricture of the pylorus by scar of ulcer, even after repeated attacks of large, acute and most agonising gastroectasis, the stomach so pulled itself together that on a necropsy some months later the greatly overgrown muscular walls seemed to bound a cavity rather under than over the average volume. This process of retraction could be followed tolerably well during life, and, finally, the small striving sac visible through the emaciated abdomen declared beforehand the revelations of the post-mortem table. Pain and hæmorrhage had dictated a sparing and special dietary for a long time, and thus the acute distensions were prevented. But this by the way, to show what can come about. Of the obscurer causes of failing gastric wall are those classed as nervous. It is said that the stomach may be palsied, or lose much of its nervous life or stimulus, as the limbs may, either by its own isolated misfortune or sharing in a more general stroke. Of direct palsies of the stomach, lighter or heavier, I can tell you nothing; nor do I know much of those indirect submissions of its muscular power which may be explained by loss of innervation, and are thus inessential. We can remember, however, a very large class of cases in which general neurasthenia, or nervous weaknesses or distresses springing from the region of the digestive organs and thence invading and depressing the whole being, are associated with marked gastroectasis; but whether the nerve lesion or the lesion of the stomach be primary is one of those questions which I ought to have been able to justify myself by answering to-night, but which I cannot answer. Suffice it to point out the frequent, nay the common, connexion between gastroectasis and a large and fairly constant group of nervous symptoms and sensations, a group variously called hypochondriasis or hysteria according to its conditions. That under some strange gusts of nervous temper the stomach of a woman, or even of some men, may become distended like a balloon and yet soon collapse again, suffering no permanent injury, is amazing. In these pyloric incontinence probably prevents any permanent injury. The dilated stomach of a so-called hipped man is, however, a graver matter, for in him the organ is often found to be permanently enlarged, and its reduction a matter of difficulty or even impossibility. In some of these cases no doubt the stomach lesion came first and the general misery followed, but in others one strongly suspects that the stomach has yielded because of some defect of innervation more special to itself. The distressing epigastric symptoms in these cases, the tenderness there, and the [illegible] other symptoms tempt us to suspect an affection of the great abdominal nervous ganglia, but our knowledge of their functions and changes is far too rudimentary to justify any such speculations at present.

Thus far have I dealt most slightly with some causes of gastroectasis due to failure of normal resistance. But gastroectasis may be induced, no doubt, by excessive pressure upon the inner surfaces of the organ, even in cases where the pyloric opening is intact. Prolonged or immoderate irritation of the cavity, as by the habits of the common glutton, produces a certain and even a considerable amplitude of that organ. But in a robust and well-fed animal this enlargement is rather a development than a retrogression, and I have no definite recollection of such a case ending in a bad form of the disorder. That which belongs gastroectasis to its graver and irremediable degree is ordinarily at once bulky or coarse and innutritious. Bad cases of chronic gastroectasis not due to exhausting [illegible] are chiefly found

[illegible] Vide Epstein, quoted below.

among the working classes, and in them the malady in its well-marked form is far from uncommon. Miners, engine drivers, piecework ers and the like, men generally of the most respectable and hardworking sort, too often find themselves before middle life with a large gastroectasis. These men have no regular meal hours, and, indeed, for many hours together have no leisure for a meal. If they have time to feed, the meal may consist of some coarse and indigestible stuff, washed down, it may be, with pints of tea. You would not believe me did I tell you the number and capacity of the cans of tea which these men may empty in a day. Thus, the stomach is not only overloaded, but is charged with a solution which in such quantity is directly mischievous to digestion and probably to the stomach itself. Flatulent dyspepsia, unnoticed at first, adds its inflation to the rest, the sufferer fails to understand the evil of his ways, the stomach gets worse, nutrition then suffers and dilatation follows, this result being partly due to the local pressure, partly to irregular functional activity, and partly to general impoverishment of the blood, each factor intensifying the other. The abuse of aerated waters, again, in more than one case, seemed to be the cause of well-marked and obstinate gastroectasis; and I have had reason to think that a vegetarian diet has brought about the same result. I once discovered a gastroectasis of large dimensions in a middle-aged lady of the upper classes, who had consumed inordinate quantities of effervescing waters. She absolutely repelled the very notion of washing out, and she ultimately recovered on dietetic and medicinal treatment. In her, I believe, some atony of the *primæ viæ* existed, as she came in later years under my care for fæcal accumulation in the transverse colon. Dilatation of the stomach is, I think, much less common in women, perhaps because they eat less or eat more regularly; but in them exhausting discharges are a potent cause of the malady, and in them, as in the male sex also, neglected hæmorrhoidal losses may have this effect.

I will now venture to make a few remarks upon the *symptoms* of dilatation of the stomach. And first let me preach this precept urgently—that in all cases of dyspeptic troubles the stomach be carefully mapped out. Even if but temporary dilatation exist, it is important that it should be known and dealt with. A man once consulted me who was in the way of seeing many doctors in his regular engagements, and had been prescribed for by nearly as many with little result. He called upon me, and I found dilated stomach, probably of no long standing. I cut off fluids and flatulent food, and he made a rapid recovery, and remains well. But a dilated stomach may more certainly be suspected if a wearing, aching pain abide in the pit of the stomach, if there be foul or acid eructations and marked emaciation.

Vomiting is not invariable. Some people have not the knack of vomiting; in others the walls of the stomach may be too flaccid to aid in the rejection of its contents; in others, where the stomach is hypertrophied in its mucous and muscular coats, as in gorging eaters, absorption and peristalsis may be fairly good. In such cases physical signs must be sought for. In better-marked cases the vomiting is often thus characteristic—that the stomach rejects its contents, generally voluminous contents, as a pump ejects water; the refuse comes forth in a rushing stream, often without any nausea whatever, and often at tidal intervals, which may be very long, may be as long as two days, but generally are less than that. In such cases we always see a drawn face, a worn and pained expression, and an emaciating body. The patients complain of constant wearing pain about the waist, relieved by the vomiting.[3] The vomit may sometimes be mere catarrhal matter, phlegm and water, and is not then pathognomonic, but it is most commonly what we call in Yorkshire "swill"—i.e., a turbid sour liquid containing remnants of half-dissolved food in a state of active fermentation. It is usually dark in colour, and swarms with sarcinous and other low forms of life. Stir up the materials of a day's meals, add dirty water and catarrhal slime to it, set it aside at a temperature of 100° for a few hours, and thereafter froth it up with a stick, and you will have the foul vomit of gastroectasis. The stomach, like an incompetent urinary bladder, never really empties itself, however vigorous the vomiting, and the fetid remnant carries forward the process of decomposition to all that is swallowed. The physical signs of this state when so complete are clear enough. The emaciated abdominal wall; the sac beneath it, quite perceptible to the hand lightly stretched over the surface, and often to the eye; peristalsis also visible perhaps if the muscular coat be hypertrophied (this more commonly in pyloric obstruction);[4] splashing and succussion areas—all agree in declaring the diagnosis. I have seen on post-mortem examination the stomach dilated to the pubes. But all cases are not so easy. Sounds not to be well distinguished from splashing and succussion may be got in persons not known to have dilated stomachs; in neurotic subjects of borborygmatous tendencies this is not uncommon; but these in the latter are to be got only by kneading, never by shaking or swaying the body with the hands upon the crests of the ilia; the sounds, too, are got with more difficulty, and are not so marked. On the other hand, even in dilated stomach, splashing is often not aroused by the first manipulation, but when once aroused is loud enough, and easy to continue. In neurotic girls false splashing is often to be obtained by causing them to inspire deeply; indeed, I have seen this squashy sound associated with ordinary inspirations in such persons, and in these it will be noticed that the respiration is not so much thoracic as diaphragmatic.

Of percussion I will only remind the observer that the upper line, which in acute or early cases, before the whole stomach is dragged downward, may reach to the fourth or even to the third rib, is at least as important as the lower. If the lower line be below the umbilical, a dilated stomach may, I think, be certified. Whether the percussion sound be metallic, tympanitic, or even muffled, I think, is of no diagnostic value, so that it is often difficult to be sure from the quality of the sound whether we are tapping stomach or bowel. Tapping with a plexameter while the stethoscope is on the stomach is sometimes a help.

Another caution is this—that in certain cases of relaxed gastro-phrenic ligament the whole stomach may be displaced downwards; hence the importance of ascertaining the *upper* line. With all possible care, however, thus far dilatation may not be ascertained or may not be measurable. Hence we have to resort to other physical aids, of which the development of gas in the stomach by the ingestion of effervescing salines is the best known.[5] By this means the area may be mapped out, and as the gas passes away the line of fluid contents may also be mapped out. It must be remembered in the less severe cases that a *displacement* of the stomach *downwards* when filling betrays so far a *dilatation*, as the normal stomach in filling should rotate forward. Leube's sound is well known, and indicates the lower margin of the stomach, either by its perception through the abdominal walls or by its length from the teeth, which Penzoldt says should never be more than one-third of the height of the body. I have not verified this statement. All I can say is that the sound should never be felt below the umbilicus, and if a pint and a half of water (thirty ounces) be injected the dulness should not fall below that point. My judgment upon this sounding is that in thin subjects we rarely need it, and in fatter ones the point is indistinct. Even in these cases, however, if a ball bellows be affixed to a hollow sound a gurgling may be made in the stagnant contents and their site detected, or the viscus distended with air so far as to reveal its size and form. Thiébaut, in an excellent monograph (Paris, 1882), suggests that a plumb-line ending in a lead may be worked through a hollow sound. This I have not tried. Distending gases should be expressed from the stomach before the plummet or sound is used. The elimination of pyloric disease from the diagnosis must depend on other considerations, and must not now detain us. Nor need I detain you with any account of the pathological anatomy of gastroectasis, which is well known. The dimensions of the cavity are sometimes enormous. Blumenthal found the vomited matter alone in one case to weigh 16 lb. A common increase is to about four times the normal cubic contents—i.e., an increase up to about six quarts. Simple dilatations may be quite as extensive as a dilatation secondary to pyloric disease.

As regards treatment, I shall set aside all general and pharmaceutical means, and refer to three main special methods, which are—(1) to cleanse the stomach; (2) to prevent its distension by physical or chemical means; and (3) to combat the prevalent constipation. I must premise that dilatation of the stomach, when it has

[3] Dr. Fenwick, I think, rather underates this pain or distress (Quain's Dictionary).

[4] Peristalsis may sometimes be made visible by rapidly alternating warm and cold currents of water through the stomach by means of the syphon.

[5] Bicarbonate of soda, 6 gr.; tartaric acid, 4 gr.; to be drunk off at once with two tumblers of water.

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reached a well-marked degree, is a most difficult disease to cure. The patient's condition may be made much more tolerable and his nutrition improved; some cases may be ultimately cured; but too often, after all, "prævalebunt fata consiliis." The *constipation* tends to prevent both absorption and the free passage of intestinal contents. It is best overcome by portal purgatives, such as the laxative salines. As the stomach recovers tone the costiveness becomes less obstinate; I presume the bowels then receive more reflex stimulation. The dietary must be strictly limited to such foods as shall not, by bulk or by decomposition, distend the stomach. Meals must be small, if frequent, and must consist of flesh, fish or fowl, and the more digestible and finely divided fats. Dr. Fenwick even recommends cod-liver oil. Farinaceous foods cannot be wholly forbidden, but, owing to their tendency to gaseous decomposition must be greatly restricted. I have always urged that the dietary should be as dry as possible, but I see Dr. Fenwick recommends liquid food. I am sure liquid should at any rate be restricted, and tea, beer, aerated waters and the like, forbidden. Small quantities of pure but diluted spirit are useful. Vegetables must be wholly replaced by a little lemon juice. Milk, I think, is often used too freely in these cases. As the peptic glands are often reduced or obliterated, artificial digestive means should not be forgotten. But all these precautionary means are useless if we drop our food into the foul puddle which the dilated stomach never wholly throws off. Dr. Fenwick, to whose great authority on these questions I am wont to defer, speaks with disappointment and mistrust of the only known means of cleansing the gastric receptacle—namely, Kussmaul's system of washing out. This troublesome and disgusting performance offends the more refined and sensitive class of patients, and in dealing with them the physician is too soon persuaded to lay aside or altogether to forbear the use of the stomach-pump. But gastroectasis is far more common in the less-refined and more roughly-fed members of society. They show less repugnance to the washing-out method, and in them, therefore, its excellent results become more evident. A thorough conviction of the essential value of this treatment in hospital and working-class patients strengthens me in insisting upon its use in all such sufferers. Some patients flatly decline to have anything to do with the process; but in others, less prejudiced, a little practice and use soon brings toleration. A few have thrown up the plan in disgust after a few trials, but so many continue it patiently, in spite of trouble and disgust, as to testify not only to the purifying powers of the method, but to the unspeakable relief which it brings to present distress. To deny the catheter to the palsied stomach seems to me as unreasonable, and in practice is as great a blunder, as to deny it to the palsied bladder. Yet, familiarly as the practice is now known in and around Leeds, I believe it is but little used in English practice generally. My own experience of washing out in dilatation of the stomach has been equalled, perhaps, by few living physicians, and I have never known any ill result from it. Among other cases I may refer especially to the many under our care in the Leeds Infirmary, which Dr. Jacob and Dr. Barrs, now our colleagues, used during their term of residence so assiduously to wash out. I have never seen the cramps or tetany recorded in a few cases of washing out by Kussmaul himself, and again lately by Dujardin-Beaumetz;[6] but it requires, no doubt, great determination and patience to carry out the plan over the necessarily long duration of time required for permanent relief. In Virchow's *Jahres-Bericht* for 1883, Epstein is reported to have obtained great success in washing out the stomachs of dyspeptic infants under one year old. His experience extended over 286 cases, and is published in the *Arch. f. Kinderheilkunde* (Bd. iv., S. 325). He uses a No. 8-10 Nélaton's catheter, and warm water with a little benzoate of magnesia, and relieves catarrh, wasting dyspepsia, &c. As a means of diagnosis, I find that in purely nervous dyspepsia (so called) the stomach between meals contains no remnants of food, no fungi, no excess of hydrochloric acid and mucus, but from this starting-point one may begin to note all degrees of catarrh and ectasis. Plain warm water is, I fancy, all that is required for the ablution, though I generally suggest the addition of a little borax to the wash. In the beginning of treatment, when the contents of the stomach are bulky and lumpy, it is well to use the stomach-pump. It is said that the suction of this instrument may and does wound the mucous membrane. If so, I have never seen any harm from this, nor do I hear that harm resulted in the cases wherein wounds were said to have been made. With a large lateral opening in the tube and careful exhaustion there is practically no likelihood of harm. For subsequent treatment, when the stomach contents are clearer and less bulky, a syphon is simpler, and, moreover, if filled with a reservoir, can be used by the patient himself. The cistern must be placed just above the level of the head and attached to the flow-pipe, and an exit-pipe must be carried to a pail on the floor. By pinching the flow-pipe the patient can easily regulate the flow. As I have already hinted, the œsophageal tube should have a spacious oval opening on the side of it, a little away from the rounded tip. These tubes are foolishly made, as a rule, with the tip perforated by several finer holes. Such tubes block directly, and dishearten both doctor and patient. I have some very intelligent patients who have thus washed themselves out daily for a year or two or more, with unspeakable relief to their sufferings, rapid improvement of nutrition up to a certain point, and a slow recovery of the stomach itself. Other remedial means, such as the use of antiseptic and other drugs and of nutrient enemata, I have not time now to discuss. Of electricity, however, I must say this: that it has greatly disappointed my expectations in whatever mode or however applied. The external application of faradism and of massage to the abdomen are, nevertheless, well worth a trial; though I suspect they have only the value of general faradisation and general massage, or are worthless. A cushion pad, supported by a bandage, should always be worn, and Leube directs his patients to lie as much as possible, and that on the right side only.

[6] L'Union Médical, 1884.

A REPORT OF CASES (SURGICAL AND MEDICAL).

BY J. HARRIS JONES, L.R.C.P. EDIN., L.F.P.S. GLASG.

EXTRA-UTERINE PREGNANCY.

I SUPPOSE it is scarcely necessary to offer any apology for bringing the following case before the profession. The subject of extra-uterine pregnancy has always been one of great interest, and seldom does an opportunity offer itself to a practitioner to watch and treat a case of this kind with such good results as the subsequent history will disclose.

On the night of October 21st, 1885, I was hurriedly called to see M. E——, a married lady, aged about twenty-seven. Upon inquiry, I gathered from her that she had been married a little over six years, but had never been pregnant. Her menses, since their first appearance when she was fourteen, had always been irregular and painful. About two weeks previously to being seen she became "unwell," and, contrary to her usual habit, the flow had persisted ever since. She had been attending to her household duties all along, and had lately been unusually busy at dressmaking, which necessitated her using the sewing machine (a pedal movement one) for several hours daily. She had been compelled to go to bed and send for me in consequence of having been taken with a violent pain low down in the right iliac region. The pain was paroxysmal in character, and made her feel very faint and sick at the stomach. I carefully examined the painful region, but could detect nothing abnormal there save that deep pressure increased the pain. On examination per vaginam, it was noticed that the os and cervix uteri were unusually soft and flexible, but there was neither tenderness nor fulness discoverable in any part. A semi-sanguineous fluid was seen issuing from the wound. A subcutaneous injection of a quarter of a grain of morphia was administered, and turpentine stupes were ordered to be applied over the abdomen. Next morning I called again to see her, and found that she had slept many hours during the night. She was not, however, completely free from pain. Another injection of morphia (one-eighth of a grain) was given, and a mixture containing the oxalate of cerium was prescribed for the nausea. The thermometer in the axilla registered 99·5°. Under this treatment she rapidly improved, and in a few days was well enough to leave her bed, and I discontinued my visits. She was cautioned against taking

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undue exercise, and if the pain recurred she was requested to send for me immediately.

She remained in tolerably fair health until Nov. 17th, when I was again summoned to see her. I found her suffering in a precisely similar manner as before. Her face presented a very blanched appearance, and it was quite evident that she was suffering either from shock, produced by the severity of the pain, or that an internal hæmorrhage was occurring. No evidence of the existence of the latter could be satisfactorily diagnosed. She was treated as before, and advised to remain perfectly at rest in bed. Being of a very active temperament, I found it difficult to keep her quiet; but having explained the evil results that might arise from exercise, she reluctantly consented to remain in her bedroom. I visited her almost daily, and on each occasion carefully examined the painful "side," but nothing abnormal could be detected. The discharge from the vagina was diminishing, and by the 1st of December it had completely stopped. On the 4th of that month, upon percussing the iliac region a heavy dull sound was detected immediately above Poupart's ligament, and palpation revealed the presence of a growth there. Nothing, however, could be learnt from a vaginal examination. The fulness increased in area, and it was not many days before it had ascended a couple of inches above the point first noted. Indeed, after the second week of discovery the fulness became very apparent, and it was easy to recognise that the enlargement was daily becoming more pronounced. Her general health remained good, and, with the exception of nausea and an occasional attack of vomiting, she had little to complain of. I was in much doubt at this period as to the nature of the enlargement, hesitating between an hæmatocele and an extra-uterine pregnancy. I applied the stethoscope to the swelling daily after my first discovery of the growth, but no sound of any kind could be heard over it. On Jan. 15th, at my request, Dr. E. R. Mayer, of this city, saw the case with me, and after making an examination and taking into consideration the condition of the cervix uteri and the existence of a swelling in the iliac fossa, accompanied by nausea and cessation of menstruation, he was inclined to believe that the case might be one of extra-uterine pregnancy, and advised that electricity be tried; and should the swelling eventually prove to be due to a hæmatocele or an inflammatory effusion, the treatment would in either case be appropriate, and perhaps beneficial. Eight days after this consultation, I heard, for the first time, over the growth a distinct blowing murmur. It was not a sharp and an acute sound like that caused by the pulsation of a bloodvessel underlying a tumour, but a deliberate and diffused murmur very much resembling the placental bruit, which I had no doubt it was. Dr. Mayer saw the case with me on Jan. 27th. The blowing murmur was distintly heard by him. Neither of us after this had any doubt as to the patient's condition. Treatment by electricity was commenced, one electrode being introduced into the vagina and the other placed over the tumour. The operation lasted about ten minutes. I pursued this treatment daily, and before and after every *séance* made it a point to listen to the bruit with my stethoscope. I found that the sound was very much intensified after using the battery. After a fortnight's perseverance with this treatment, and finding no appreciable change in the growth, I was about despairing of its utility in extra-uterine pregnancy. The tumour, when electricity was first applied to it, had reached to within an inch of the umbilicus, and had just crossed over beyond the mesian line. The placental souffle was much weaker on Feb. 17th, and was not increased after using the battery. On the 18th no sound of any kind could be heard over the tumour. The battery was not employed after the 17th. After this I contented myself with simply watching developments, hoping that the amniotic fluid would be absorbed, and the fœtus converted into a lithopædion. In this I was disappointed. In the course of a few days the growth appeared to be getting larger and its contents softer. The patient's health rapidly failed, profuse sweating set in, she became feverish and chilly alternately, and had a temperature of about 101°. I was satisfied that the contents of the sac were undergoing maceration, and that the patient was becoming septicæmic. A consultation was held with Dr. Mayer and Dr. G. H. Guthrie, and it was decided that the patient's only chance of recovery lay in the operation of laparotomy and the removal of the offending material. A uterine sound was inserted for about two inches into the womb. Much difficulty was experienced in passing the instrument, owing to the body of the womb having been pushed to the opposite side by the tumour. There was no fulness to be felt in any portion of the vaginal roof. The operation was performed on March 11th, twenty-two days after the death of the fœtus. Drs. Mayer, Guthrie, Davis, and Long very kindly assisted. Ether was used as an anæsthetic, and its administration was entrusted to Dr. Long.

Operation.—The abdomen was washed with a solution of carbolic acid, and I commenced the incision one inch below the umbilicus, and extended it downwards for about three inches and a half, directly in the median line. Considering the emaciated condition of the patient, there was a very thick layer of subcutaneous adipose tissue. After the recti muscles had been reached and separated, the tissues beneath were very much ecchymosed, and it was impossible to recognise any of the structures. The peritoneum, though not recognised as such, was greatly thickened. The sac was clearly exposed to view. It was of a chocolate-brown colour. An incision was made into its lower border and extended in an upward direction for about three inches. It was fully an inch in thickness at its base, but became quite thin towards the apex. Its cut edges were of a dark-brown colour, and looked very much like leather. The hand was introduced, and the placenta, which was on the surface and floating in fetid pus, was readily recognised by its peculiar granular feel. Its edge having been reached, the hand was pushed beyond it, and the fœtus (a male, measuring about ten inches) extracted. The placenta, being already completely separated from its attachments, was taken away immediately after. No portion of intestine was seen, and there was scarcely any hæmorrhage at any stage of the operation. It was feared that the adhesions to the inner surface of the abdominal parietes on the left side of the sac were not very secure, consequently the latter was secured by sutures to the corresponding wall of the abdominal incision. The sac was thoroughly cleansed with a weak solution of carbolic acid, and to prevent the enormous gaping of the wound, two stitches were inserted through the tissues of the abdominal wound and the sac. A glass drainage tube was introduced, and a thick layer of antiseptic cotton was placed over the wound and secured by a bandage.

The patient rapidly rallied from the operation. She vomited freely for several hours. A very spare allowance of iced champagne and milk was given for the first few days. The sac was syringed out night and morning. On the sixth day after the operation a fluid resembling bile was observed in the discharge from the wound, and on the following day white particles were seen mixed with it; these were evidently portions of curd. The bowels were moved spontaneously. It was now suspected that a communication existed between the intestines and the external wound. As the latter granulated from the bottom, a portion of intestine, presumably the jejunum, was lifted into view, and an opening was distinctly seen in it. The bowels continued to act very indifferently for many months, sometimes only once in two or three weeks; occasionally they would act weekly or semi-weekly. The discharge from the opening in the intestine was very great on some days; it was generally of a semi-liquid character, but never fæcal in odour. With this exception, my patient was doing nicely and rapidly gaining in weight. The temperature never exceeded 100° F. after the operation. The sac was rather slow in granulating, and it was fully seven months before the granulations reached to the level of the surrounding skin. The discharge from the intestine diminished *pari passu* with the filling up of the sac. When the abdominal wound had completely healed and cicatrised, there remained for several months a small fistula, which occasionally discharged a little fluid, just enough to slightly moisten the dressing placed over it. At present the patient is quite well, and weighs more than she ever did. Menstruation is regular and painless, and the contents of the bowels have been passing entirely *per vias naturales* for many months.

Remarks.—If this case had been left alone to nature, is it likely that labour would advance to full term, and thus give the attending surgeon an opportunity to deliver a living child by an abdominal incision? This is a question that has repeatedly suggested itself to me. It is of course difficult, and even impossible, to speculate upon the final result of a non-interfering or expectant plan of treatment. The probabilities are that the sac, which was very thin at its apex, would have certainly given way as its contents enlarged, and, judging from its appearance when seen

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during the operation, the rupture would undoubtedly soon occur into the bowels, stomach, or liver. Indeed, I think that the opening seen some days after the operation in the bowel was the result of a commencing erosion. When did conception occur? Was it tubal, ovarian, or abdominal? I think in all probability it was tubal, but that at a very early period the ovum made its escape intact into the peritoneal cavity, and there appropriated for its own use additional investments from the neighbouring tissues. Menstruation had always been very painful to the patient, and much soreness was felt in the right iliac region during her periods. It is therefore probable that a catarrhal affection of the right Fallopian tube existed, and that a denudation of its epithelium had occurred, accompanied, perhaps, by a dilatation or sacculation of the canal; or a stricture of the canal might have existed. Either of these conditions would favour the arrest of the ovum in its downward course to the womb. How did electricity destroy fœtal life in this case? Believing that the bruit heard over the tumour was caused by the circulation of blood in the centre of the placenta—i.e., in that portion where the umbilical cord is attached to it, and where the bloodvessels congregate to form the main trunks,—and observing that the murmur was always intensified after using the battery, I am inclined to think that death resulted from rupture of the over-distended bloodvessels of the placenta; in other words, that a form of placental apoplexy was induced by the current.

(To be concluded.)

CASE OF

TRAUMATIC TETANUS; RECOVERY.

By JAMES MILNER, M.R.C.S.

CASES of the above, terminating in recovery, are sufficiently rare to merit placing on record when they do occur. I therefore venture to publish the notes of the following case:—

T. S.——, aged twenty-seven, a brickmaker's labourer, came to the surgery on June 28th, complaining of stiffness about the jaws and inability to open the mouth, together with stiffness of the right leg, and difficulty in flexing that leg upon the thigh. There was marked risus. Upon inquiry it was found that four days previously—i.e., on the 24th, he noticed that one of the nails of his boot had penetrated the sole and wounded the pulp of the right great toe. The punctured wound which resulted had almost healed, but the parts around were somewhat sensitive. Tetanus was diagnosed, and bromide of potassium in fifteen-grain doses every four hours was prescribed.

On the following morning he again presented himself, stating that the stiffness about the jaws had increased, as also had the difficulty in opening the mouth. Moreover, he complained of stiffness about the back of the neck, with shooting pains down the back. He was ordered to remain in bed, and thirty grains of chloral hydrate were given; the bromide of potassium to be continued as before. Liquid nourishment only could be given, as with the greatest effort the mouth could only be opened sufficiently to allow of an ordinary cedar pencil being inserted between the two rows of incisor teeth. A wooden wedge was secured between the teeth, so as to prevent the jaws closing still further. Seen later, there was found to be marked opisthotonos, the spasms being attended by considerable pain. Chloral hydrate in forty-grain doses was ordered every night, and thirty grains every morning, and the bromide of potassium to be continued as before. The treatment above mentioned was followed out for a week, and every care was taken to remove all sources of irritation to the over-sensitive patient. The room was darkened and kept as quiet as could be, a screen was placed round the bed so as to exclude currents of air, and every other precaution which suggested itself was strictly observed. The case, however, continued to progress unfavourably, and the patient was becoming exhausted. It was now evident that the treatment was almost powerless to control the disease; consequently it was decided to have recourse to surgical interference. Accordingly, on July 6th, a deep incision was made in the toe, around the nail-bed and about a third of an inch from it, so as to divide the nerves leading to the cicatrix as far as possible. Linseed poultices were then ordered to be applied to the toe. On the following day, the spasms were found to be decidedly less in severity and frequency, and day by day they continued steadily to decline, with the exception of one occasion about a fortnight after the incision, when an attempt was made to leave off the chloral hydrate by omitting the morning draught. On this day the spasms were more severe than they had been for some days previously. It was therefore evident that the reflex excitability of the cord was still much above normal, consequently the chloral was recommenced. At this time the patient was troubled by a somewhat violent hiccough, which continued, with very short intervals between the attacks, for some forty-eight hours. After this a steady recovery ensued, and seven weeks from the commencement of the disease the doses of chloral hydrate were gradually diminished, and a week later it was entirely left off, a full week having elapsed since the appearance of the most trifling spasm. The bromide of potassium was continued for another three weeks, during which time out-door exercise was allowed.

With regard to this case, although I do not think the incision alone would have been sufficient to complete the cure, as the spasms increased when, during the course of the disease, an attempt was made to discontinue the medicinal treatment, still I do think that without the incision death must inevitably have ensued, seeing that the bromide and large doses of chloral hydrate seemed absolutely powerless to check the excessive reflex excitability of the cord, whilst the source of peripheral irritation remained.

Hayes, Middlesex.

COMMUNICATION OF SYPHILIS BY TATTOOING.

By GRENVILLE E. MOFFET, M.B. ABERD.,
SURGEON, ARMY MEDICAL STAFF.

THE extreme rarity of this mode of communicating syphilis induces me to publish the following cases. The subject, apart from its etiological bearing, will, I think, have a special interest for military and naval surgeons, when we consider that at least nine-tenths of our soldiers and sailors voluntarily submit themselves to the operation of tattooing.

Case I.—C. M——, a gunner, R.A., aged twenty-one years, was admitted into hospital on Aug. 31st, 1885, with an ulcer over a tattoo mark on the anterior aspect of the left forearm, two inches below the elbow. The ulcer was about the size of a shilling, very painful, with indurated edges and base; it was surrounded with a circumscribed areola of inflammation, and its surface was covered with a scanty puriform exudation. The axillary epitrochlear and sub-occipital glands were indurated, and there was a specific roseolar rash over the chest, back, and arms, accompanied with sore throat.

Previous history.—Patient was tattooed at the end of December, 1884. About the end of March, 1885, he noticed "a small hard pimple" over the site indicated. Beyond being a little itchy this gave him no further trouble, and he thought no more about it. Two months before admission the patient scratched the pimple, and thus converted it into a "sore," which, under his own treatment, gradually increased in size, became very painful, and presented, on admission, the appearances described above. About a week before admission the patient noticed a rash on his body, and felt his throat sore. This man's "medical history sheet" (a document which accompanies every soldier throughout his service) showed two previous admissions for venereal disease (February and April, 1883), but, according to the notes made by the surgeon who treated the patient on both these occasions, the sores were local, soft, and unaccompanied with general induration of glands; but a suppurating bubo followed the first infection. The treatment was also local, and the patient was discharged from hospital after a residence of forty-one and fourteen days respectively.

On the present occasion the treatment consisted in the local application of black wash, and subsequently iodoform, and the internal administration of mercury. The sore healed in about three weeks, leaving a depressed, copper-coloured cicatrix. The rash and throat symptoms had also quite disappeared by this time. The mercury was, however, continued (ten-drop doses of the tincture of perchloride of iron being also given three times a day), till the patient was discharged from hospital on Oct. 3rd.

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CASE 2.—Trumpeter J. G——, aged fifteen years, was admitted into hospital on Sept. 17th, 1885, with an ulcer the size of a sixpence over a tattoo mark on the anterior aspect of right forearm. The ulcer resembled so nearly that described in Case 1 that any detailed description would be merely a recapitulation of what has already been said above. The boy also had a sore throat, and his trunk and extremities were covered with a distinctly papular syphilide, which he only noticed about ten days before admission.

Previous history.—This boy was tattooed in Londonderry by a soldier, on Oct. 12th, 1884, with needles which a few hours previously had been used on other soldiers for the same purpose. His medical history sheet shows no previous admission to hospital. The boy was only twelve years old when he enlisted, so that he could scarcely have acquired syphilis before enlistment. There was no history of syphilis, and careful examination of the penis revealed no marks of sores. In December, 1884, the patient noticed "a small hard lump" over the site indicated, but as it gave him no trouble, he took no notice of it till about six weeks before admission, when it became larger, more painful, and a watery discharge exuded from it, causing a scab to form over its surface. The boy removed the scab as it formed, and dressed the sore with some "salve" which he got from a local chemist, but finding that it got worse every day, he came to the hospital. The treatment was similar to that pursued in Case 1. The ulcer had healed in a fortnight, and the patient was discharged on Oct. 12th, by which time the rash and sore throat had quite disappeared. On Dec. 17th he was readmitted, the rash and sore throat having returned, but under specific treatment both disappeared, and the patient was discharged after a residence of ten days in hospital, with an injunction to return as soon as the rash reappeared, or he felt his throat sore.

CASE 3.—Gunner W. C——, aged twenty-seven, was admitted to hospital on Sept. 25th, 1885, with an ulcer over a tattoo mark below the insertion of the right deltoid muscle. It was about the size of a sixpence, painful, and its surface was covered with a foul-looking slough; its base and edges were not so indurated as in the last two cases, but there was an area of induration in the cellular tissue immediately surrounding it. The axillary and epitrochlear glands were enlarged and indurated.

Previous history.—Patient was in hospital in Dec. 1883, at which time he had three sores on the prepuce followed by a suppurating bubo. The sores were treated locally, the bubo opened, and the patient discharged in twenty-four days. He has not been in hospital since till the present admission. This man was tattooed in January, 1885. The following April he noticed a small hard pimple over the spot, the history of which was very much the same as that of Case 2. It gradually got larger, and became so painful, that he was obliged at last to come to the hospital.

The slough was first removed by poultices, after which the local and general treatment was the same as that detailed in Case 1. The ulcer had healed by Oct. 19th; on the 28th a roseolar rash, preceded by slight febrile disturbance and sore throat, appeared on the trunk and arms. Mercury was discontinued, a saline purgative and warm bath ordered. Two days afterwards calomel baths were begun, and continued every second night till the rash had quite disappeared. The tincture of perchloride of iron was given at the same time, and continued till the patient's discharge from hospital on Dec. 28th.

Remarks.—The only reference to this subject that I have been able to find is in Lancereaux's treatise, where that eminent authority merely alludes to the possibility of communication in this way, and refers to a paper by Petry of Vienna on the Transmission of Secondary Syphilis by Tattooing. There seems little doubt that the disease in the above cases was conveyed during the operation of tattooing through the medium of needles which had been previously used on other soldiers affected with syphilis. The history of Case 2 seems quite clear, but that of Cases 1 and 3 is not, at first sight so evident, owing to the previous admissions for venereal disease. The surgeons who treated the patients at the time state the disease to have been local. In both, the sores were without induration, multiple, followed by suppurating buboes, and, though treated without mercury, were not followed by any secondary symptoms during two years or more after infection. Both men, however, after being tattooed presented, within a given time, all the local signs of syphilis, followed in each case, about five months (?) after the development of the papule, by well-marked secondary symptoms. I think, therefore, that everything is in favour of the view that the disease was communicated by the operation.

There is one point which calls for notice in these cases—viz., the periods of incubation, which seem to have been of rather longer duration than usual. The secondary symptoms also were of a very mild type, and Lancereaux says that "the longer the period of incubation is, the milder are the manifestations of the general infection." It is, however, on the testimony of the patients as to the first appearance of the papules that the determination of the period of incubation hangs, and none of them could give any precise information on this point. Bearing this in mind, and also the possibility of the presence of induration at the points of inoculation *before* it had attracted any notice on the part of the men, I am inclined to believe that the periods of incubation were not prolonged in any of the cases, but rather that the mildness of the general infection was due to the communication of the disease from a secondary lesion, and probably in some degree dependent on the modes of infection.

Gibraltar.

A CASE OF

ACUTE PNEUMONIA IN AN ALCOHOLIC PATIENT IN WHICH THE DELIRIUM OCCURRED CHIEFLY AFTER THE CRISIS.

BY WALTER H. HAW, B.A., M.R.C.S., L.S.A.

A. B——, aged forty-seven, married, a labourer, came into the surgery on the evening of June 3rd, 1887, with the following history. On the evening of May 31st he was exposed to the wet for several hours. On arriving home he went to bed, feeling perfectly well. The next morning, on rising, he had a shivering fit, but did not discontinue his work, in spite of a pricking pain in the region of the right nipple. The next day (June 2nd) the shivering fit was repeated, and lasted for a considerable time; the thoracic pain still continued. On June 3rd he had a third rigor. In the evening of this day he walked briskly into the surgery, but on standing he appeared rather shaky. A history of alcohol was elicited later from his wife, the patient repudiating the idea.

The following are the notes of the man's condition taken at the time:—There is a double patch of herpes about his mouth; one on the right side of the upper lip, and the other in a corresponding position on the lower. Digestive system: Tongue slightly furred, but moist; teeth greatly discoloured; appetite bad; no nausea or vomiting; bowels regular. Vascular system: First sound muffled, second accentuated at the base; no enlargement; no murmur; pulse 120, full, bounding, and compressible; visible pulsation in the arteries of the neck and arms. Respiratory system: Breathing slightly hurried, the inspiratory act not being fully performed. There is cough, with slight frothy expectoration, not rusty, and pain referred to a point one inch below the right nipple. On examination of the chest, nothing abnormal was detected by inspection and the other usual methods, except slight increase in frequency of respiration, and short inspiration. Abdomen normal. Urine febrile, depositing lithates; no albumen. Cutaneous system: Skin dry and hot, but the face is perspiring freely. Temperature 104° F., but the patient says he feels no inconvenience.

The patient was ordered to bed and put on a strictly supporting treatment.

June 4th.—Patient found sitting in front of the fire downstairs. No further rigors. Sleeps and takes food well, and is anxious to get back to work. Temperature 104°; pulse 120; respiration slightly hurried. Bowels acted twice.—5th: Still shaky, but pain in side better. Slept well. Herpes disappearing. No delirium at night. Temperature 105°; pulse 120. Skin of body dry; face moist. Ordered ten grains of sulphate of quinine, to be repeated in four hours.—6th: Slept well. He says that yesterday he dressed himself and went downstairs without any reason. Temperature 104·5°; pulse 132, not so bounding; respiration 22; pulse respiration ratio 6:1. Distinct pneumonic signs are now apparent below the right clavicle, with fine crepitation at the end of inspiration. The consolidation is chiefly in the

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anterior part of the right apex. Lungs apparently normal elsewhere, and the pain in the region of the nipple has disappeared. He says he feels better.—7th: Looks worse; is lightheaded and wandering. Temperature 104·4°; respiration 24; pulse 124; ratio 5:1 nearly. He is quite rational when spoken to, and says he sleeps and takes his nourishment well. Auscultatory signs slightly more distinct.—8th: Looks better. Temperature 102·6°; pulse 114; respiration 24. Lightheadedness more marked, and patient answers at random. Signs at apex clearer. Dulness very marked, and the crepitation less, but tubular breathing is more apparent. Nourishment &c. taken well.—9th: Appears better. Temperature not taken, my thermometer having unfortunately been broken; respiration easy; pulse slightly above normal. Mental condition that of delirium tremens.—10th: Mental state worse, but no sedative was ordered as yet. Temperature and respiration normal.—11th: Mental condition accentuated. Patient was found seated in the doorway, and on being questioned as to the reason, he explained that it was the nearest way back to bed. He also measures the articles of furniture in the room, and is suffering from muscular tremors. Tongue moist and slightly furred. A sedative draught of chloral and bromide was ordered every four hours. Temperature and respiration normal, as also pulse.—13th: After the second dose of sedative mixture a sound sleep was obtained. Looks better, and is quieter. Speaks rationally. The dulness below the clavicle is not so marked, but the crepitation is still distinct, and the vocal resonance is increased. Temperature &c. normal.—24th: Since the above note the progress of the case was uniform, both as regards the mental and the lung condition, and the man is now quite well.

Remarks.—There are, I think, one or two points of interest in this case. 1. The lung lesion was situated in the anterior part of the right apex. This occurs rather frequently in patients who have become debilitated from any cause, and especially in those whose tissues are damaged by alcohol. 2. There were three distinct rigors on successive days. This is, I believe, uncommon in the invasion of acute pneumonia, there being usually, as is well known, one sharp initial rigor, except in the case of children and old people, when this symptom may be, and is usually, absent. The crop of herpetic eruption bore no proportion to the severity of the rigors. 3. The high temperature (104°), with no particular subjective symptoms. 4. It is interesting to note that the mental change and the lung lesion were simultaneous in their appearance on the sixth day of the fever, and seemed afterwards to progress almost *pari passu*, each commencing just before the crisis, continuing for some time, and then gradually disappearing, the delirium being the first to vanish, but probably the sedative given effected this. I think the appearance of the lung lesion directly determined the onset of the delirium, the patient being a robust man, and, in spite of his alcoholic indulgence, being able to withstand the effects of the fever to a certain extent. Thus the pulmonary lesion proved the last straw, and helped to prolong the delirium into the period after the crisis.

Wednesbury.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

"Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

ACUTE PERITONITIS FROM PERFORATION OF AN ULCER OF THE GALL-BLADDER; NECROPSY.—INTESTINAL OBSTRUCTION CAUSED BY STRANGULATION OF A DIAPHRAGMATIC HERNIA; NECROPSY.

(Under the care of DR. ORD.)

ULCERATION of the gall-bladder leading to perforation and a fatal peritonitis is not of common occurrence, and in the following account there are several points worthy of notice. Although gall-stones may be met with at any age, they are rare at twenty-three (out of 305 cases collected by Hein only fifteen were below the age of twenty-five). It will be observed that the perforation was not preceded by any symptoms of the presence of a stone in the gall-bladder; this, however, was the probable cause for the ulceration, though in the majority of published cases there was more than *one* stone. The patient was difficult to control, but was improving under judicious treatment with perfect rest, until the sudden movement which she made on the 26th, when the weak adhesions were probably broken down, giving further exit to the bile, thus starting the acute general inflammation of the peritoneum which terminated fatally on the 28th. The patient with diaphragmatic hernia was in such a condition of collapse on admission that no operative measure was permissible, although such was discussed. There was no history of injury, neither was there history of attacks of gastro-intestinal disturbance as described in some cases; the symptoms developed suddenly and without warning. In this case there was no regular sac to the hernia, and omentum as well as large intestine had passed through an opening of small size. For the notes of the case we are indebted to Mr. H. J. Macevoy, house physician.

CASE 1. *Acute peritonitis from perforation of an ulcer of the gall-bladder; necropsy.*—B. B——, aged twenty-three, single, general servant, was admitted on June 21st, 1887. Family history good. The patient had rheumatic fever eight months ago; had pleurisy in April, 1887, and was treated at Guy's for a month. She states that she went to bed after a late supper, feeling perfectly well, on the evening of June 17th, and was suddenly attacked with severe abdominal pain, increased by movement and pressure. She also vomited almost at once, the first vomit being "dark," the next green. The pain and vomiting have continued up to admission. Bowels well opened on the 17th, not since. There was blood in the urine on the morning of admission, but the patient is menstruating.

On admission, at 7.30 P.M., she appeared to be a healthy, well-nourished girl, with an anxious and painful expression, complaining of abdominal pain and tenderness, and vomiting. Skin cold and clammy about hands and feet; forehead cool and perspiring slightly. Pulse 120, hard and regular. Respirations hurried and shallow. Tongue moist, and coated with thin brown fur. Temperature 99°. Lungs normal. There was a faint systolic bruit at the base of the heart. Abdomen with moderate uniform distension, and moving only slightly with respiration; generally tender (not acutely), especially on the right side; percussion note tympanitic, with the exception of some dulness in both flanks; no thrill; no obvious peristalsis; no tumour felt. Urine: Only a little passed; sp. gr. 1022, acid, one-fifth albumen. A quarter of a grain of morphia every two hours was ordered, and glycerine and belladonna applied to the abdomen.—12.30 midnight: Patient was sick almost constantly up to 10.30 P.M. Less tenderness of abdomen. Pulse 132, tense. Pupils slightly contracted. Ice given to suck. The morphia was increased to one-third of a grain every two hours.

June 22nd.—2 A.M.: No hiccough; no sickness. Flatulence. Rather more restless, and craving for drink.—11 A.M.: Sick three times since 2 o'clock; vomit dark green. Tongue moist; little brown fur. Complains of headache. Pulse 120, full and regular. Temperature 100·6°. Light palpation of the abdomen easily borne. Nutrient enemata given and retained. Nothing by mouth but ice to suck.

23rd.—No vomiting. Tongue moist. Pulse 136. Temperature 102·4°. Urine: Albumen one-half; indigo; no blood. To take one-third of a grain of morphia every three hours only.

24th.—No vomiting. Abdomen: Resonance less tympanitic; moves a little more with respiration; only slight tenderness on right side; none elsewhere. Pulse 132; temperature 102·6°. Tongue rather dry. Increase of albumen in the urine. To have morphia every four hours only; a teaspoonful of milk and a teaspoonful of brandy every quarter of an hour.

25th.—No vomiting. Abdomen not tender, and little less distended; no peristalsis. General appearance improved. Pulse 132. Tongue moister.

26th.—After improving a little during the day the patient was taken suddenly worse at 7 P.M., after swallowing two ounces of milk which she took off her locker. She vomited about two teaspoonfuls of dark-green fluid with coagulated milk, became excited, and struggled in bed. Temperature 102·8°. Ordered one-third of a grain of morphia every two hours instead of every four hours. Pulse 160, difficult to count, weak and thready.

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27th.—Slept badly. Delirious. Subsultus in hands. Abdomen not altered. Temperature 102·2°. Pulse can scarcely be felt. Tongue moist. Urine half albumen.

After this she became more and more restless and delirious, and struggled and shrieked, her delirium taking a maniacal form. She died at 4 A.M. on June 28th.

Necropsy.—On opening the abdominal cavity, several pints of fluid were found in it, stained with bile, light brown in colour, and without fæcal odour. The coils of intestine were glued together, covered with patches of thick fibrin, and much congested. No ulceration or perforation of intestines. The liver was noticed to be attached by recent inflammatory products to the colon, but nothing further could be found until the liver was removed. The gall-bladder was found to be collapsed, and a diverticulum projected from it on the left. On opening it, a black, round, mulberry-surfaced gall-stone, about the size of a large pea, was found in it, freely movable. The upper part of the gall-bladder, where it rested on the under surface of the liver, was the seat of an ulcer with sharp edges, evidently chronic. It was adherent to the liver, and the wall of the bladder appeared to have been destroyed. At one place the adhesions had given way, and an orifice into which the blade of the scalpel might be passed was present, which had evidently given exit to the contents of the gall-bladder. No gall-stone was found free in the peritoneum. The other organs were healthy.

CASE 2. *Intestinal obstruction caused by strangulation of a diaphragmatic hernia; necropsy.*—J. W——, aged thirty-seven, coachman, was admitted on July 7th, 1887. Family history good. The man had been a hard drinker. Has enjoyed good health. Bowels generally regular. He was suddenly seized while lying on the grass on July 1st with severe twisting pain in the abdomen, which caused him to roll about; he vomited repeatedly on the next day, the vomit becoming gradually offensive. The pain has been more or less present up to admission, but the vomiting is less, and not constant after food. Bowels were opened well and naturally on the 1st, then a few scybala were passed on the 6th. Flatus was expelled, however, in the meanwhile.

On admission at 3 A.M. he was noticed to be a robust man, fully conscious and answering questions rationally, but intensely collapsed. Breathing rapid and shallow; forehead and extremities bathed with cold sweat; hands and feet icy cold; face and lips livid. Tongue moist, and covered with thin dirty-white fur. Breath of a peculiar sweet and sickly odour. Temperature 98; pulse 136, weak. Abdomen much distended, especially in its right and upper parts, and perfectly motionless during respiration. Slight dulness in the right flank, but general over-resonance, notably in the left iliac fossa and left hypochondrium. No peristalsis visible; no marked tenderness. Ordered a quarter of a grain of morphia hypodermically every two hours, and a teaspoonful of milk by the mouth frequently.—11 A.M.: The patient vomited some dark-brown fluid, not stercoraceous or particularly offensive, at 8 o'clock. He complains of abdominal pain, but there is no tenderness. Still signs of collapse. Urine: Sp. gr. 1020; acid; trace of albumen. Temperature 101·8°.—1.30 P.M.: A little brown liquid passed per anum, containing some mucus; pain and straining while at stool. After this delirium gradually came on, assuming the form of alcoholic delirium; he became violent, had a fit of convulsions at about 4 P.M., and died shortly afterwards.

Necropsy.—On opening the abdomen, which was greatly distended, no peritonitis was found; but there was enormous distension of the transverse and ascending colon and cæcum, and the bowel in these regions was of a purple colour. The descending colon was collapsed, pointing clearly to an obstruction at the splenic flexure of the colon. The small intestines were of moderate size, and likewise the stomach, which was pushed out of sight by the distended colon. The obstruction was found to be due to the passage of a knuckle of colon with a large mass of omentum through a hole in the centre of the left half of the diaphragm, and to its becoming strangulated. The orifice in the diaphragm appeared very small, and, judging by the character of the adhesions of the gut to it, which were not recent, one would conclude that the hernia had been in existence some time. There was some inflammation of the solitary glands in the large intestine behind the obstruction, but no ulceration. The lower part of the left pleura was acutely inflamed, and much lymph covered the lower lobe of the left lung. From half a pint to a pint of fluid was found in the left pleural cavity. The lower lobe of the left lung was collapsed. Heart, liver, brain, and kidneys healthy. There was no evidence of fractured ribs or other injury which could account for the orifice in the diaphragm.

EDINBURGH ROYAL INFIRMARY.

FOUR RARE FORMS OF DISLOCATION.

(Under the care of Mr. A. G. MILLER.)

THE following are notes of some of the more interesting dislocations which were under treatment when Mr. George Hardyman, M.B., C.M., was resident surgeon, and we are indebted to him for the account.

CASE 1.—P. L——, aged nineteen, a soldier, fell from the Argyle Battery of Edinburgh Castle into Prince's-street Gardens, a distance of about 150 feet, on June 1st, 1887. The tibia and fibula of the left leg were severely comminuted, but there was no compound fracture. There was a dislocation of the right knee. The right tibia and fibula were dislocated outwards, so that the external condyle of the femur rested on the internal facet of the tibia. The internal condyle of the femur was very prominent and easily felt, extending freely beyond the internal ridge of the tibia. The external lateral ligaments were apparently entirely ruptured, while about one-third of the internal lateral ligaments was left unruptured. The dislocation was reduced under chloroform by extension and manipulation with the thumb. The leg was then put up in extension with a weight and pulley. There was great effusion into the joint, which was reduced by means of ice followed by pressure. On June 26th, a posterior and an internal poroplastic splint were put on, and on July 9th the knee was put up in starch. On Aug. 10th, three weeks after he had left the hospital, he was going about without any artificial support, except a starch bandage over the knee.

CASE 2.—A. B——, aged twelve, fell from a height of about two feet forwards on his head. When seen, there was found on the dorsum of the radio-carpal region a prominent well-defined swelling, which on inspection gave the impression that there was a fracture of the lower end of the radius. However, on manipulation the rounded, well-defined ridge caused by the proximal extremities of the carpal bones could be made out. This was easily reduced by extension, and after reduction there was discovered a green-stick fracture of the radius as well. The tendons on the palmar aspect were not ruptured, as happened in another case which has since been brought under notice by Dr. H. A. Thompson. The after treatment gave no trouble.

CASE 3.—A middle-aged man was admitted on Aug. 27th, 1887. He was then cold and unconscious, breathing heavily, with the pupils unequal, one pin's point, and insensible to light. He could be roused with difficulty by a painful sensation sufficiently to utter a grunt. He lived eight hours after admission. He was supposed to have fallen about seventy feet from Arthur's Seat, and to have remained where he fell for some hours, as he was quite wet from rain which had fallen some hours previously. He had what appeared exactly like a fractured humerus at the junction of its upper and middle thirds, but on manipulation it was found that there was a subspinous dislocation. What had appeared to be a doubling up of the humerus was due to the pulling up and back of the humerus, and to the prominence of the contracted deltoid muscle. The humerus lay almost at right angles to the body, the elbow being greatly displaced outwards. The head of the humerus lay on the dorsum of the scapula just below the middle of the spine. Mr. Miller, who saw it, tried to reduce it by the ordinary method—viz., manipulating the head into the subglenoid position, and then up into the glenoid cavity. This failed, so he put his heel into the axilla, and, using it as a fulcrum, with scarcely any force at all elevated the head of the humerus directly forwards, when it easily slipped into position and remained there. On post-mortem examination there was found to be considerable cerebral hæmorrhage, causing death. On reflecting the skin from the right shoulder, there was a considerable quantity of extravasated blood in the cellular tissue of the shoulder, and between the skin and the deltoid muscle, and below the posterior part of the deltoid. The greater part of the long head of the triceps was torn from the scapula, the tendon being intact. The supra-spinatus and infra-spinatus were torn from the greater tuberosity. The tendinous portion of the teres minor was still attached to the greater tuberosity, while the fibres of

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its lower muscular part of attachment were torn. The subscapularis was completely torn from the lesser tuberosity. The whole of the capsular ligament was torn from the humerus, and remained attached to the glenoid cavity. The long head of the biceps was torn out of the bicipital groove. There was no extravasation of blood into the pectoral muscles, but there was some under them in the axillary region. When the shoulder was dissected from the trunk, it was easy to demonstrate why the ordinary subglenoid method of reduction was impossible. The head of the humerus had been dislocated directly backwards and *above* the teres minor muscle, so that when the head was manipulated towards the subglenoid position the teres minor tendon became a band stretching round the neck of the humerus and completely barring its course. The coraco-brachialis was put on the stretch, and, had the teres minor given way, would have become also a band round the neck of the humerus, which would tend to prevent its reduction in a similar manner. The specimen, which Mr. Hardyman dissected for Mr. A. G. Miller, has been presented by him to the Royal College of Surgeons' Museum, Edinburgh.

CASE 4.—On Sept. 28th, M. L——, about seven years of age, came complaining that a vehicle had run over her foot. On examination a mark of bruising was visible on the back of the leg, midway between the lower end of the calf and the ankle joint, the foot having been doubled on itself in an antero-posterior direction. There was also on the dorsum of the foot, in the metatarso-tarsal region, two swellings in the region of that joint. This was not a bruise, and on examination proved to be a dislocation of the first, third, and fourth metatarsals on to the dorsum of the foot. The facets were easily distinguishable. The second and fifth metatarsals were not dislocated; dislocation of the second from its peculiarly strong position would almost seem to be impossible. The third metatarsal bone was inclined also abnormally outwards. There was no crepitus. Mr. Hardyman took a cast of the foot, which shows the features very well. The dislocation was reduced under chloroform, each metatarsal separately, by means of pressure with the thumb downwards with extension, without difficulty. The fourth metatarsal, however, required pressure to keep it in position.

CIVIL HOSPITAL, ADEN.

TWO CASES OF PERFORATING WOUND OF THE ABDOMEN, WITH PROTRUSION OF INTESTINE; RECOVERY. URINARY FISTULA; OPERATION; RELIEF.

(Under the care of Surgeon-Major E. COLSON.)

CASE 1. *Penetrating wound of abdomen, with wound of diaphragm and protrusion of intestine and omentum; recovery.*—Hydra A——, Arab, was admitted on June 10th, 1887. He had first of all killed his concubine, and then stabbed himself in the abdomen with a jambier (a crooked Arab dagger). He was brought a distance of six miles to the hospital. On admission there was a wound of about two inches in length in the left hypochondriac region, which had penetrated the abdomen and also extended into the muscular attachments of the diaphragm, and from which about six inches of intestine with omentum protruded. The wound was enlarged downwards, and the intestines in the neighbourhood carefully inspected. They were found to be unwounded, and the abdominal cavity was carefully washed out with carbolic lotion, the mass returned, and the wound fastened with deep sutures and dressed with iodoform. The man made an excellent recovery, although convalescence was somewhat retarded, owing to suppuration occurring in the wound itself, but which evidently had no connexion with the abdominal cavity. He was discharged on July 16th, 1887, for his trial, when he was sentenced to death.

Remarks by Mr. COLSON.—He again came under my care, but this time in my capacity as superintendent of the gaol, in which it was my unhappy duty, having saved his life, to make the necessary arrangements for taking it on the gallows.

CASE 2. *Lacerated and penetrating wound of abdomen; protrusion of intestine and omentum; removal of foreign bodies; recovery.*—Hasir S ——, Arab, aged fourteen years, was admitted into the Civil Hospital on Aug. 20th, 1887. He had fallen from a tree, and in the fall had struck with the abdomen the broken end of a branch lower down, which had penetrated the walls, from which the intestine protruded. He was carried into Aden in this condition nearly twenty miles. On admission, there was found to be a lacerated wound of the abdominal wall in the right hypochondriac region about three inches in length, from which about six inches of unwounded intestine with omentum were protruding. In the protruding mass was entangled a good deal of the green spiculæ which constituted the foliage of the tree from which he had fallen. These were all carefully picked out, the omentum (which was much bruised and in doubtful condition) was ligatured with silk in three places and removed, the abdominal cavity well washed out with carbolic lotion, and the protruding mass returned. The wound was fastened with deep sutures and dressed with iodoform. For the first two days some anxiety was felt about the boy, as symptoms of peritonitis showed themselves. These, however, disappeared, and he made an excellent recovery, and was discharged on Sept. 15th, 1887. His convalescence was somewhat prolonged, owing to the wound healing by granulation.

CASE 3. *Urinary Fistula, associated with almost complete closure of anterior portion of urethra; operation; relief.*—Mohamed A——, an Arab, from Sanáa, the capital of Turkish Arabia, came to the Civil Hospital for treatment. About a year ago he fell from a tree, and alighted astride on a branch ten feet below. After this accident he was unable to pass his urine through the urethra, but through sinuses situated in the scrotum. On admission (July 30th, 1887) he was found to be a healthy young man, and well nourished. The urethra was quite impervious at a point a little behind the scrotum. No urine could be passed through the urethra, but was voided by two sinuses opening through the scrotum. He was placed under chloroform, and Wheelhouse's operation was attempted. The urethra was found to be quite impervious, and converted practically into a fibrous cord. The operation was discontinued, with a view to observing afterwards whether the urine passed through the wound, and whether any passage was apparent. Three days after he was again placed under chloroform, and the wound—which had commenced to heal, and through which the urine had been freely passed—was carefully inspected. No urethral opening could be detected, and a straight bistoury was pushed in towards the prostate according to Cock's method, and after considerable difficulty a large bullet probe was passed into the bladder. This was allowed to remain *in situ* for some hours, but had to be removed owing to the pain it caused. Almost immediately after this second operation urine began to be passed, not only through the wound, but also the penile urethra. The wound gradually closed, and the urine was entirely passed per urethram, in a stream equal to No. 4 catheter. The urethra still continued quite impervious to a catheter beyond a certain point. The man left on Sept. 12th, well satisfied with the result.

Remarks by Mr. COLSON.—The result of this operation, so far as it goes, is fairly satisfactory. The membranous urethra was practically obliterated, and it was a lost hope to again repair the natural canal. What I was successful in doing was to make an artificial passage in the perineum, which opened into the penile and sound portion of the urethra, and which obviated the former distressing condition.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Cartilaginous Tumour of Neck.—Spina Bifida Occulta.—Addison's Disease.—Experimental Tuberculosis and Struma.—Experimental Hæmorrhagic Infarction of Liver.—Lipomatous Fibro-sarcoma of Spinal Cord.

AN ordinary meeting of this Society was held on Tuesday last, Sir James Paget, Bart., F.R.S., President, in the chair.

Mr. F. TREVES showed a specimen of Congenital Cartilaginous Tumour of Neck, taken from the left side of the neck of a girl aged three. The tumour had the appearance of a foreign body, and raised the skin a quarter of an inch. It had existed since birth. The mass was removed, and found to be a curiously shaped mass of cartilage. It was situate over the sternal end of the sterno-mastoid muscle. It was clear that the mass was in the line of the fourth branchial cleft, and a persistent remain akin to the commoner sinus or fistula. A tag of skin over the same situation was another remnant. The present specimen showed no fistula or tag of skin. Fragments of bone may be found lying

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about this region. In most cases the cartilages are associated with a skin tag or fistula. A fibrous cord extended deeply inwards from the cartilage. The case was unique in the size of the cartilage and in the absence of skin tag or fistula. The specimen of cartilaginous growth published in the *British Medical Journal* was probably not of the same nature, but really a growth in the sterno-mastoid muscle.—Mr. BLAND SUTTON said that he had seen a young woman in whom there was a large mass on each side of the neck about the sterno-mastoid muscle, resembling, and probably representing, a supernumerary auricle. He said Mr. Birkett had described a very similar case in the ninth volume of the Pathological Transactions.—In reply, Mr. TREVES said that he was not aware that Lannelongue's work contained a case of precisely the same nature.

Mr. BLAND SUTTON described a Fœtus with Spina Bifida Occulta associated with several curious Abnormalities. Externally, the fœtus presented a lateral curvature of the spine, talipes equino-varus of the left foot, and atresia ani. On dissection the following abnormalities were found: imperforate pharynx, communication between the trachea and œsophagus; fibrous degeneration of the vermiform appendix; abnormal shortness of the cæcum; absence of the anus, the rectum ending as a cul-de-sac in the prostate, and single kidney. On dissecting the spine, defects were found in the arches of the lumbo-sacral portion, and the central canal of the cord was dilated opposite this point. The spinal cord, which at birth should terminate opposite the second lumbar vertebra, in this fœtus extended to the tip of the coccyx, and ended in a small fatty tumour. On closely examining the spine, a supernumerary half-vertebra was found between the eleventh and twelfth dorsal vertebræ, and a supernumerary half-vertebra of larger size between the twelfth dorsal and first lumbar vertebræ on the right side, thus explaining the tilting of the column to the left. On examining the last lumbar and upper sacral vertebræ a curious fact came to light. Normally the laminæ and spinous processes of a vertebra are formed from two centres of ossification, one for each side, but in these vertebræ it was found that the lamina of each side was composed of two pieces, one representing the pedicles and articular processes, the other the lamina and spine. The bearing of this variation on Neugebauer's view regarding spondylolisthesis was mentioned. The association of malformations of the intestines with syringo-myelocele is something more than casual, and Recklinghausen has described cases of this nature in which gross lesions of bowel accompanied syringomyelocele and spina bifida occulta. These facts serve as additional evidence to support the view that the spinal cord must be regarded as a modified section of the primitive alimentary canal.—Mr. SHATTOCK had recently dissected a similar specimen showing the congenital, not traumatic, solution of continuity of the fifth lumbar vertebra.—Dr. COUPLAND remarked that Mr. Sutton had broken down the commonly accepted distinction between vertebrata and invertebrata.—Mr. BLAND SUTTON, in reply, said that his views would be fully explained in the forthcoming number of *Brain*.

Dr. SAINSBURY read a case of Addison's Disease in which there was a definite traumatic history. The adrenal capsules were unequally affected, indicative of different stages of the disease. The specimens threw light on cases of Addison's disease associated with atrophy of capsules. The specimens indicate the degree to which, subject to fibro-caseous change, atrophy may proceed, and they suggest that some cases described as Addison's disease with simple atrophy may be really examples of the ultimate stage of the fibro-caseous change. It is also suggested that some of the recorded cases of absence of the capsules in association with symptoms of Addison's disease may be examples of extreme atrophy and practical effacement of the organ. The two stages of disease in the capsules are also interesting from their relation with a history of two distinct traumatic records. In cases of apparent atrophy of one or other adrenal, it is thought that the safest method of examination is by cross sections.

Dr. SAMUEL WEST showed specimens of Suprarenal Capsules taken from a lad aged seventeen. Eight months before death the illness began rather suddenly with the usual symptoms. The bronzing was extreme and universal, but less marked in the axillæ and flexures than usual, the legs being most pigmented; the skin over the spines was also coloured more than usual. Congenital and acquired black spots were seen; the latter were watched developing in the skin and mucous membranes. Two or three attacks of twitchings, with some, but not complete, loss of consciousness, were noted at the end of life. The liver was very adherent to the diaphragm, and embedded in fibro-caseous material. General disseminated tuberculosis of the peritoneum was found most marked about the suprarenal capsules, where the fibrous and caseous nodules were larger, and in places calcareous. The pigmentation appeared but one month after the onset of the illness. The local tuberculosis extending from the adrenal disease was very interesting. The microscopical examination was as yet incomplete, but so far no bacilli had been found.—Dr. SAMUEL WILKS insisted on the view that Addison's disease resulted from an essential disease of the suprarenal bodies, and were primarily affected; adventitious affections did not cause the disease. He agreed with the views of Dr. Sainsbury.—Dr. HADDEN contended that so long as the lesion was destructive the kind of morbid process was not an essential condition.

Mr. F. EVE read a paper on an Experimental Inquiry on the Relation of Strumous Gland Disease to Tuberculosis. The author had inoculated rabbits and guinea-pigs from ten cases of strumous glands taken at hazard. No inoculations were performed in the peritoneum, anterior chamber of the eye, or subcutaneous tissue. All the guinea-pigs became affected with visceral tuberculosis, and in four cases the rabbits. In a rabbit, the only one inoculated subcutaneously, a chronic abscess containing tubercle bacilli developed; and a rabbit inoculated from another gland escaped altogether, but this gland had undergone fibrous transformation, and no bacilli could be detected in it. The results of these experiments differed markedly from those of Arloing, who found that while guinea-pigs developed visceral tuberculosis after inoculation with strumous glands, rabbits remained free both when inoculated in the peritoneum and beneath the skin. Arloing, however, only used glands from one subject. He further found that, after tuberculosis from strumous glands had passed through two guinea-pigs, it still did not produce visceral tuberculosis in rabbits. Since the primitive virulence of the micro-organism was not restored by passing it through guinea pigs (which take tuberculosis readily), he concluded that if it is not yet proved that struma and tuberculosis are the work of a distinct virus, yet that of struma, is, perhaps, sufficiently removed from tuberculosis to constitute a distinct variety. The author had repeated these last experiments, and found that rabbits inoculated with strumous gland disease passed once through a guinea-pig developed as acute a tuberculosis as after inoculation with miliary tubercle similarly treated. Specimens were shown for comparison. He could observe no essential difference anatomically between the lesions produced in animals by strumous glands and true tubercle. Tubercle bacilli existed in glands in small numbers, and in abundance in the organs of animals inoculated with glands. After carefully searching two glands and many organs of animals which had been inoculated, he found no evidence that this form of tubercle was the "tuberculose zoogléique" of Malassez and Vignal. The clinically innocent cause of most cases of strumous glands was probably due to the soil in which the organism was implanted, the disease being localised in the glands; perhaps its virulence was slightly attenuated by influences brought to bear in them, but there was nothing to show that, *ab initio*, the virus was a specialised form. The author suggested that the substitution of the term "tuberculous gland disease," "osteitis," &c., for strumous or scrofulous, would remove confusion and tend to a better appreciation of the nature of the disease.—Dr. C. TURNER asked whether the experiments showed that some strumous glands were not tubercular.—In reply, Mr. EVE said that all the cases experimented with proved that the glands were tubercular.

Dr. WOOLDRIDGE showed specimens of Experimental Hæmorrhagic Infarction of the Liver. In human beings such infarctions were of very rare occurrence. The experimental process consisted in injecting a solution of a substance—complex proteid body derived from the thymus and testis—into the jugular vein; the whole vascular system thrombosed in a rabbit, but in a dog complete thrombosis of the portal vein only followed. The animal could also be kept alive for a long time. The liver was filled with hæmorrhagic infarctions if the animal was killed in a few days; but if the animal lived more than a week the clot could not be found. But important structural changes, such as thickening of the capsule and patches of cirrhosis, were found. Sometimes a bleb of blood formed

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underneath the capsule of the liver. Fatty degeneration and infiltration with cirrhosis could be detected. The capillaries were enormously dilated. A peculiar affection of the gall-bladder, in which a thick layer of blood formed round it, was described. A colourless, tenacious mucus also formed in it and extended into the common duct. This might be a mode of origin of jaundice. Cohnheim and Litten had failed to cause infarctions. In his own specimens there was no thrombosis in the hepatic arteries. The process was neither a simple, inert, nor infective one. The chemical changes in the blood induced a slow clotting. He suggested that many chronic inflammations begin as diseases of the blood, and might not be characterised by progressive changes, but that, once started, their progress might be made by a series of catastrophes which might be arrested at any stage.—Dr. NORMAN MOORE thought that in cirrhosis due to biliary obstruction the idea last mentioned would not hold good. On examination of Dr. Wooldridge's specimen, he had failed to see one characteristic of infarct as ordinarily understood. At St. Bartholomew's Hospital there had never been seen a case of hæmorrhagic infarction of the liver. The embolus and the well-outlined boundary were wanting in the specimens shown, and their absence prevented the acceptance of Dr. Wooldridge's specimens as true infarctions. Dr. COUPLAND did not agree with Dr. N. Moore, and thought that the specimens might justly be called hæmorrhagic infarctions. He hoped for great results from this research.—In reply, Dr. WOOLDRIDGE said that he did not know by what other name to call the result as seen in the specimens handed round.

Dr. CHARLEWOOD TURNER showed a specimen of Tumour of the Spinal Cord. The growth formed an oval swelling in the continuity of the cord, of the size of a large olive. It was composed almost wholly of fat, one-half of the transverse section consisting of simple adipose tissue, the other half of the atrophic remainder of the cord infiltrated with fatty tissue. Microscopical examination of sections of the growth showed that the cord at this part was reduced to a network of nucleated fibrous tissues enclosing areas of fat. In the broader tracts of the fibrous growth were the remains of nervous tissue more or less degenerated. There had been a lipomatous growth developed in the pia mater, ensheathing the cord, which had subsequently invaded the medullary tissue. It was regarded as a lipomatous fibro-sarcoma. There was a gradually increasing weakness for twelve years. It occurred in a young woman whose femur was fractured accidentally. In reply to Mr. Bland Sutton, he said that he had not detected muscular fibres in the tumour.

The following card specimens were shown:—

Dr. ANGEL MONEY: (1) Aortic Aneurysm pressing on Left Bronchus, leading to Bronchiectatic Lung; Erosion of Vertebræ; Empyema; Thickened Pleura. (2) Aortic Aneurysm, perforating Trachea. (3) Hæmatoma of Dura Mater in a Chronic Alcoholic.

Mr. EDWARD BELLAMY: Nævoid Tumour of Scrotum.

Mr. D'ARCY POWER: Submaxillary Gland, with large Salivary Calculus.

Mr. W. G. SPENCER: Stump of Chopart's Amputation.

CLINICAL SOCIETY OF LONDON.

Simple Stricture of Bile Duct.—Peritoneal Surgery for Acute Suppuration and for Tubercular Disease.

AN ordinary meeting of this Society was held on the 28th ult., Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

Dr. SIDNEY PHILLIPS read the notes of a case of Fatal Stricture of the Bile-duct without evidence of Gall-stones. A man aged sixty came under his care at St. Mary's Hospital with obstructive jaundice without obvious cause. The patient had had gout, but never syphilis, and for some years had been a very hard spirit drinker. He had never had colic, vomiting, or any symptom of the passage or impaction of gall-stones. There was no evidence of perihepatitis. While under treatment the gall-bladder became gradually more and more distended, and the jaundice more intense. Much cutaneous irritation, with xanthelasma and purpuric blotches on the skin, were set up, and the patient, after five months, died of exhaustion. At the necropsy there was found a stricture of the common hepatic duct, much resembling a "cartilaginous" stricture of the urethra. There was no ulceration or adhesion of the mucous surface, but the stricture resulted from a tough fibrotic contraction of the outer wall of the duct. The gall-bladder was full of clear fluid; the liver simply enlarged from the obstruction in the duct. Dr. Phillips pointed out that this case, though rare, together with three somewhat similar cases recorded by Dr. Moxon, Dr. G. Johnson, and Mr. T. Holmes, contributed towards establishing the fact that stricture of the bile duct might exist without any symptoms of gall-stones. This was important in the diagnosis of the cause of obstructive jaundice, and might also be of service in the treatment, for, seeing the successful results of cholocystotomy &c., it might be possible to give an exit to the obstructed fluid, or at any rate to postpone one danger, that of rupture of the gall-bladder. Dr. Phillips submitted also that it was very probable not only that stricture was set up without *symptoms* of gall-stones, but also that it might arise from causes entirely unconnected with them. In favour of this, stricture sometimes occurred above the cystic duct, and in a position, therefore, where gall-stones would not pass. The absence of symptoms of gall-stones was also a presumption against their having been present; but the main point which seemed to prove that the stricture was not always due to calculi was that in some cases, as in the one he had recorded, the mucous membrane was not abraded, and the stricture was formed by contraction of the outer fibrous coat of the duct. Sufficient cases had not been reported to decide what causes, if not gall-stones, would produce stricture, but possibly long catarrh might lead to stricture of the bile duct as gleet led to stricture of the urethra.—Dr. COUPLAND briefly related a case of chronic jaundice in which a doubtful diagnosis of stricture of the bile duct was made. The case terminated in recovery after the employment of large doses of iodide of potassium; it was reported in full in the *Medical Times and Gazette* of six years ago.—Dr. F. L. BENHAM related a case in a man aged eighty-six who had biliary colic, but no gall-stones and no carcinoma. The hepatic duct was strictured.—Mr. CHARTERS SYMONDS asked what kind of surgical procedure Dr. Phillips would advocate. He briefly mentioned a case of stricture or simple narrowing of the bile duct in a man which had been under his care twelve years ago. Stricture of these parts could, if detected, be dilated.—Mr. MEREDITH spoke of the possibility of successfully cutting down on the enlarged gall-bladder and examining the various ducts and structures in this region, as he had done himself.—Dr. PHILLIPS, in reply, said there was a real danger of rupture of enlarged gall-bladder. He had seen such a case—in which he had recommended opening the gall-bladder for relief of the obstruction—with Dr. Blake of Harpenden. He had only advocated the relief of tension in cases of biliary obstruction, and doubtless the surgeons would prove themselves fully equal to the cure of the cause of the obstruction; but this was not the matter he had in hand in bringing the case before the Society.

Mr. RICHARD BARWELL read a case of Suppurative Peritonitis; opening, washing, and sponging the peritoneum; recovery. The man, aged forty-two, accustomed to drink a good deal, was admitted into Robertson ward, Charing-cross Hospital, on June 24th, 1887. Six days previously he fell and struck the left lower part of the abdomen, but seemed very little hurt. Five days afterwards, he, in stooping, felt severe pain in the lower part of the abdomen; he vomited and passed a little very dark coloured urine. (Absence or presence of blood cannot be verified.) He went to bed; his abdomen swelled; he passed very little urine; vomited after, and sometimes without, taking food.—24th: On admission he was placed in a warm bath; while in it he passed what may, he thinks, have amounted to a wineglassful of urine. At 2 P.M. Mr. Barwell found him with pinched, anxious countenance, pulse small, hard, and quick, and temperature 100·4°; dry skin; tongue somewhat coated; vomiting; abdomen slightly tender, save in the left iliac region, much swollen, very tympanitic, quite down to the pubes; tapping it produced a peculiar thrill not like that of flatulence. A No. 12 catheter brought away no urine, even though passed far back, but the instrument when withdrawn was full of urine deeply stained with blood.—25th: On three catheterisms 10 oz. of urine had been passed, at first with blood, the last sample free of blood, but slightly albuminous, sp. gr. 1022; temperature 89; pulse 130; abdomen most distended. It being evident that the man had a bad type of acute peritonitis, Mr. Barwell opened the abdomen in the middle line below the umbilicus. A large quantity of gas, not of

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feculent odour, escaped. No rupture of any viscus was found, but in its lower part the peritoneum contained a quantity of thick pus; there were no adhesions; parts of the intestines were congested, and the membrane was somewhat thickened. Three sponges passed into the lowest part of the cavity were withdrawn covered with tenacious flocculent pus. A smooth-nozzled glass funnel was then deeply introduced, and the part of the cavity washed out with ten pints of distilled water, temperature 99°, bringing away quantities of pus and flocculi. After sponging, a second smaller washing and sponging was directed to the upper part. The abdomen was then sewn close without any drain. The whole operation, including giving the anæsthetic and dressing, lasted an hour.—26th. During the night and day the patient frequently vomited a brown fluid with darker concreta; pulse rather fuller, 110; abdomen scarcely distended, and tender only in immediate neighbourhood of wound. Lies flat, save for a small pillow under the knees; says he is quite well, and wants to go home.—28th. The vomiting slowly decreased during the night; the bowels acted rather copiously four times. The vomiting ceased and all symptoms passed rapidly away. The rest of the history is merely that of rapid convalescence, the man being very importunate in requesting to be discharged. In his remarks, Mr. Barwell, referring to a paper by Mr. Hancock, claimed for Charing-cross Hospital the first conception of the idea of opening the peritoneum for acute peritonitis.[1] He also pointed out that this operation has been performed fourteen times, though the operator has not always known what was the precise nature of the case; and the circumstances have been very various—ulcers or rupture of some part of the intestinal tract, or of an ovarian cyst. He emphasised the impossibility of draining the lower part of the peritoneum through a wound in the front of the abdomen, and advised that no drainage tube should be here inserted immediately after operation, but that, if distension recurred, the lower stitches should be removed and escape permitted. The presence of a tube which cannot in that position act as a drain might be injurious rather than beneficial. In the female, drainage per vaginam would probably be the most valuable treatment.

Mr. LAWFORD KNAGGS (Huddersfield) related the case of a girl aged sixteen years, with Amenorrhœa of four months' standing, who came under treatment for a left-sided abdominal swelling. Some of the fluid was aspirated, and found of sp. gr. 1027, and to contain albumen, paralbumen, large granule cells, and leucocytes. The diagnosis was ovarian cyst. On July 7th, 1886, the abdomen was opened; the peritoneum, mesentery, and intestines were found covered with myriads of pale pink gelatinous-looking tubercles the size of hemp seeds. The ascitic fluid was removed, and the peritoneal cavity washed out with many pints of warm water. General improvement began from the date of the operation. The catamenia reappeared, and she gained 18 lb. in seven months. In March, 1887, she was very well, and went out to service, but the place was hard, and her health declined. Fifteen months after the operation there was no ascites, nor any evidence of the progress of the abdominal disease. She had, however, lost 8 lb. in weight, had morning expectoration, prolonged expiration over the right apex, and cessation of catamenia since July. The interest of the case was its bearing upon the treatment of chronic tubercular peritonitis. Reference was made to a case of laparotomy for intestinal obstruction recorded by the author in THE LANCET, October, 1886. The patient was the subject of tubercular peritonitis. The obstruction was relieved, and the patient, who at the time was greatly emaciated, is now, after two years and a half, a stout and fairly healthy woman. The historical case of Sir Spencer Wells, in which the patient was alive and well twenty-two years after the operation; a similar one, recorded by Dr. John Homan, of Boston, U.S.A., in which the patient was fat and in good health three years after the operation; three recently recorded cases by Dr. Naumann, of which, however, only one recovered; the remarkable experience of Mr. Lawson Tait, who claimed a uniform success so far as the operation was concerned, and a complete cure of the disease in 80 per cent. of all cases of tubercular peritonitis, in which the abdomen was opened, cleaned, and drained—all spoke to the feasibility and suitability of the procedure. Dr. Bantock had pointed out that after abdominal section there was complete immunity from ascites, whereas tapping was always followed by re-

[1] THE LANCET, 1848, Meeting of Medical Society.

accumulation. Why did laparotomy give such satisfactory results? Possibly, as had been suggested by Dr. Cameron of Huddersfield, by removing the toxic chemical products resulting from the life of the bacilli in the tubercles, and accumulated in the ascitic fluid, the absorption of which no doubt favoured the establishment of disease in other organs. The author thought that in certain cases more satisfactory and rapid results might be obtained in this way than by the methods generally employed. He suggested as the most suitable cases those in which the chief clinical symptom was ascites, and where the disease had not attacked or seriously impaired other organs.

Mr. THOMAS KILNER CLARKE read a case of Tubercular Peritonitis cured by washing out the abdominal cavity with a 1 per cent. solution of carbolic acid. On May 10th, 1887, Ann S——, aged thirteen, presented herself among the out-patients. She complained of loss of appetite, distaste of any food, of swelling of the body, of loss of flesh, and increasing weakness. The case being diagnosed as one of tubercular peritonitis, the patient was admitted into the infirmary with a view to operation. On the 11th she was thoroughly examined, and her condition was briefly as follows. She was pale, thin, and with marked hectic flush on each cheek. Temperature 100·2°F.; pulse 120; respiration 20. She walked with difficulty. Both lungs were sound in front, but posteriorly the left lung was dull over its lower half, with absence of fremitus, while the right was suspicious. The abdomen was distended with fluid, but all the other organs seemed healthy. Her previous and family history were both very good. On May 16th Mr. Clarke operated, opening into the peritoneal cavity in the middle line of the abdomen. He found the intestines pushed upwards towards the diaphragm, and both they and the peritoneum studded with little bodies in size and appearance like boiled tapioca grains. The abdominal cavity was well washed out with about two and a half quarts of a 1 per cent. solution of carbolic acid, and without any sponging out of the cavity it was closed in the usual manner. The case did uninterruptedly well. After the first six hours there was no pain, and the patient was comfortable and contented. The temperature reached 101° on the first two evenings after operation, and otherwise was quite satisfactory. The stitches were removed on the seventh day after operation, and on the fifteenth day the patient, having been fitted with a belt, was allowed to get up. On June 5th she was sent to the convalescent home, where she stayed three weeks, gaining nine pounds in weight and improving in health and strength. She showed herself again among the out-patients on July 6th, and was then the very picture of health. She said she was perfectly well. On again examining her, no trace of fluid was found in the abdomen, while both lungs were perfectly sound.

Mr. FREDERICK TREVES said that other inflamed serous cavities, such as the pleura and the joints, were amenable to extensive surgical interference, and the same general principles of treatment were now being applied to the largest serous sac of the body. Already Truc had collected a series of ninety-seven cases of deliberate surgical interference with the peritoneum, and this numerical statement alone sufficed to show the rapidity with which this treatment had spread. As to the claim of priority of the deliberate treatment of peritonitis by washing out the sac, he could only say that he did not gather from a rather verbose correspondence with Mr. Lawson Tait that that gentleman was the first who deliberately performed the operation of abdominal section for the purpose of healing a case of supposed simple peritonitis. The operation had been done in previous cases as the consequence of a mistaken diagnosis, as in Sir Spencer Wells' historical case of tubercular peritonitis. Then, again, Mr. Luke Hancock's writings show that his conception of the treatment of peritonitis was a utopian idea. Just as the poetical outburst of Addison foretold the origin of the telephone, so in an access of surgical exuberance Hancock had predicted this mode of treatment of the peritoneum. In Mr. Barwell's case six days had elapsed before surgical interference. As a rule, such a time would have seen the termination of the career of many cases of acute peritonitis. Moreover, in Mr. Barwell's case but a small part of the peritoneum appeared to have been diseased. The necessity of thorough washing out was made evident by the reflection that the peritoneum was so large a cavity with so many recesses in which fluid might accumulate. He hoped Mr. Barwell would amend his views as to the use of the drainage tube, for if ever there were a case for the use of the drainage tube, surely it was when the peritoneum was

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the seat of suppurative peritonitis. The principle that underlay the practice was perfect cleanliness. And in some cases he would wash out the stomach if the vomits had been offensive. Next, as to tubercular peritonitis. Kümmell, at the recent Congress of German Surgeons, had collected thirty cases of this disease treated by laparotomy, and others who discussed the paper added six more. Of the whole number six cases ended fatally; twenty-five recovered of the first series of thirty, and only one died of the second series of six. In many cases the operation was done practically by accident on the mistaken diagnosis, as in Dr. L. Knagg's case of encysted peritonitis. Most of the cases occurred in others than young children, and between the ages of fifteen and twenty. It seemed that it was a matter of perfect indifference how the peritoneum was treated so long as it was opened. In young children the treatment was not encouraging. Reference was made to a case of his own in a child fourteen months old; there was so much ascites that the child was almost suffocated by the attendant dyspnœa. At the operation of section peritoneal tubercles were seen. It appeared that the treatment tended to alter the character of the inflammation, and for a time this case did well; but the fatal termination was only averted. Some improvement followed the injection of one pint of a solution of two drachms of tincture of iodine in hot water, at a temperature of 100° F., and for three weeks the child seemed better. At the necropsy general miliary tuberculosis was found. The influence of the ascitic fluid on the growth and nature of tuberculosis was discussed.—Dr. BURNEY YEO, after alluding to the progressive invasion of medical regions by the surgeon, asked for the indications by which the physician might know when the time had arrived for calling in the surgeon. Reference was made to the immense difficulty of diagnosing peritonitis in many cases; for pain and tenderness might be completely absent, and other signs might also be in abeyance.—Dr. GLOVER asked for the evidence of tuberculosis in the cases recorded by Kümmell—Mr. TREVES said in many cases the microscope was used, portions of omentum and other structures being sectionised for examination.—Mr. HOWARD MARSH preferred the employment of a solution of tincture of iodine, 1 per 1000, as the fluid wherewith to wash out the peritoneum. Reference was made to his case of suppuration in the peritoneum published in the last volume of the Royal Medical and Chirurgical Transactions. He related the case of a girl, aged fourteen, with tubercular ascites, treated at first by repeated aspiration, but then unsuccessfully; later he laid the cavity in the peritoneum open, well washed it out with his iodine solution, and with the happiest results. The temperature previously varied from 99° to 103°, but remained normal for ten days after the operation of opening and washing out. Abscesses in the peritoneum, like similar cystic collections elsewhere, should be treated on the same general principle of evacuation, and such cases as the one he just now related would tend to make him an opponent of the aspirator. The recent surgery of the peritoneum in cases of tubercular disease would warrant his saying that cases which before were incurable were now curable by surgical interference. Perforation of the intestine might be prevented by operation, but if the perforation had taken place then there was but little hope of cure; he related a case of perforation of the intestine in six places in illustration of his remarks.—Mr. BENNETT said that the proper time to interfere surgically in cases of tubercular peritonitis could not yet be diagnosed with certainty, and he said this as the result of his experience in two recent cases, in both of which there was apparently every indication for surgical interference; yet in both cases he was not allowed by the parents to operate, and in both cases the children recovered from the peritoneal inflammation. It was difficult to state with certainty in every case whether the diseased products were inside or outside the peritoneum. In one case mentioned the disease was probably retro-peritoneal, and yet if operation had been performed at the commencement of the case he would have had to open the peritoneal sac. Eventually the matter pointed from the iliac fossa, and the abscess being opened recovery speedily followed.—Dr. HERON dilated on the frequency with which patients recovered from strumous—i.e., tubercular—disease of the lymphatic glands, and he also considered that tubercular peritonitis was by no means the fatal disease the surgeons had made it appear.—Mr. GOLDING BIRD instanced the value of mechanical irritation of lupus in the treatment of this disease, and argued that the value of the operative interference with cases of tubercular peritonitis was to be explained on the same principle.—Dr. EDIS argued that cases of peritonitis could exist without any symptoms, and he mentioned two cases of suppurative peritonitis from his own practice, in which there were but few or no indications of this inflammation. He would never drain the peritoneum by way of the vagina.—Mr. MEREDITH considered that it was the mechanical irritation, not the mere washing out, which was of service.—Mr. R. W. PARKER contested the statement that tubercular peritonitis was invariably fatal: on the contrary, recovery was by no means rare. He had been in the habit of contrasting the tolerance of the peritoneum for tubercle with the intolerance of the meninges for the same pathological product. The difference, too, between traumatic and tubercular meningitis was very patent, for recovery was not rare in the former, and was rare in the latter.—Dr. BROADBENT thought that it was too early yet to ask the question when surgical interference should take place. The indications were not yet arrived at. He felt that by surgical measures this form of peritonitis can be cured in some cases more easily and rapidly than by other modes of treatment. He had seen two cases of recovery in children in which at the umbilicus suppuration had occurred. Rapid effusion, too, was not a hopeless sign, for cases might recover after its development. But little allusion had been made by the speakers in the discussion on the pressure of gas in the peritoneal effusion in Mr. Barwell's case, and there were several ways in which to account for its presence.—Mr. BARWELL, in reply, defended his method of treatment.—Dr. L. KNAGGS briefly replied.

MEDICAL SOCIETY OF LONDON.

Double Osteotomy for Ankylosis of the Hips.—Cerebral Tumour.—Cerebellar Ataxy in a Kitten.—Congenital General Elephantoid Condition.—Cross Paralysis.—Charcot's Disease of Hip Joint.

A MEETING of this Society was held on Monday, Oct. 31st, Dr. J. Hughlings Jackson, F.R.S., President, in the chair.

Mr. PEARCE GOULD showed a patient, a young woman, aged twenty-eight, upon whom he had performed the operation of Double Osteotomy of the Femur. When six years old, she was attacked with disease in each hip joint, which slowly ran on to suppuration and dislocation of the head of the femur on to the ilium. When admitted to the London Temperance Hospital, the patient was unable to walk or stand, and each hip was flexed at a right angle to the trunk. On May 12th, Mr. Gould cut down on to each femur, and with a saw divided the bone just above the lesser trochanter—Gant's operation. The wounds healed by first intention. The patient can now stand firmly, and can walk with the help of a stick, and from being a helpless cripple is now able to earn her living as a seamstress.—Mr. C. B. KEETLEY, in cases of ankylosis of both hip joints, recommended excision to be performed on one side and osteotomy on the other.

The PRESIDENT showed a man, twenty-one years of age, from whose right cerebral hemisphere Mr. Victor Horsley had removed a tumour more than a year ago. The patient had been subject to fits, beginning in his left thumb and index finger, since May, 1884; some but slight, others more severe, with loss of consciousness. In such seizures along with double optic neuritis tumour was almost certain, but in the absence of neuritis Dr. Jackson was unable to say whether there was tumour or not. In this case there was no neuritis, but it was certain that there was a persistent local "discharging lesion" or "physiological fulminate," or, to use Horsley's term, "epileptogenous focus." Impressed by the ease, certainty, and definiteness with which Horsley and Beevor produced movements in a monkey's thumb by faradising a certain part of its mid-cortex, he suggested that the corresponding part of the cortex in his patient ("the discharging lesion") should be cut out. Mr. Horsley found and removed a tumour, and thus the operation was thoroughly well justified. But, as had been agreed upon before the operation, Mr. Horsley cut out the centre of the "thumb area." The patient was well rid of his tumour, and although he had had eleven fits since the operation, they had all, with one exception, been slight. Before the operation he sometimes had as many as thirteen severe attacks in fifteen days.—Dr. SAVILL referred to a case in which some

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time after operation fits returned; this, he thought, was explained by cicatricial contraction at the site of removal of the tumour.

Dr. HERRINGHAM showed a Kitten, aged about four months, one of a litter of four, all of whom were affected with a peculiar paralysis. When equilibrium was maintained, the movements of each limb and of the head and neck were normal; but when attempts were made to walk or run, the body swayed over and the cat lost its balance and fell. The diagnosis was failure of development of the cerebellum, based upon a similar case described by Rumpf (*Archiv Psych.*, xvi., 435), and corroborated by post-mortem examination of one of the litter.—Dr. ANDREWS said that under the microscope he found the granular layer of the cerebellum almost absent, and the layer of cortical cells very poorly developed. The spinal cord was normal.

Dr. STEPHEN MACKENZIE exhibited a case of a woman of fifty-nine, with a Congenital General Elephantoid Condition of the extremities, breasts, abdomen, and face. It commenced when she was four years of age with feverish attacks like ague, followed by erythema and desquamation, which were transient, and swelling of the lymphatic glands and subcutaneous tissues, which were permanent. Her father, two brothers, and two sisters were affected. India-rubber bandages had greatly reduced the swelling. The points that he considered particularly worthy of remark were—(1) The condition appeared closely allied to elephantiasis, though the patient had never been out of this country; (2) that it in no way depended on gravitation, though this aggravated the condition; (3) the œdema had not produced anything like the nervous phenomena of myxœdema, showing that "padding of the nerve ends" does not give rise to these symptoms; (4) the heredity of the disease. He thought the condition due to lymphatic obstruction, with consequent overgrowth of tissue.

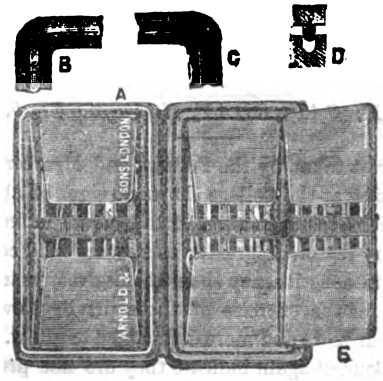
Dr. SIDNEY PHILLIPS showed a case of cross paralysis in a man aged nineteen, who had a blow on his abdomen. Twenty-six days afterwards the right arm and leg, right side of the face, and left external rectus, became suddenly paralysed with partial anæsthesia. Dr. Phillips thought the coincident paralyses suggested one lesion probably situated on the under surface of the left side of the pons or left crus, and pressing on the sixth nerve. There was nothing to support thrombosis or embolism, and no albuminuria; he considered the symptoms due either to a hæmorrhage or to deposit of callus after fracture of the base of the skull.—Dr. HUGHLINGS JACKSON thought the case one of ordinary hemiplegia, with accidental paralysis of the sixth nerve.—Dr. STEPHEN MACKENZIE thought the absence of lesion of the third nerve excluded the crus as the seat of mischief.—Dr. SAVILL suggested hysteria as a cause.

Mr. HERBERT ALLINGHAM brought forward a case of Dislocation of the Right Hip Joint from Charcot's Disease, associated with lightning pains in the legs, Argyll-Robertson pupils, and loss of patellar reflex and of sexual power.—Dr. ANGEL MONEY had noticed an increase of the knee jerk in many cases of rheumatoid arthritis and synovitis. In cases of extreme emaciation from cancer or typhoid fever this reflex was commonly exaggerated; muscular atrophy, therefore, would not explain its absence.

New Inventions.

IMPROVEMENT IN CASES FOR INSTRUMENTS, ETC.

MESSRS. ARNOLD AND SONS of West Smithfield have patented an invention in the construction of cases with the view of rendering them practically impervious to water and damp. The frames (A) are made preferably of metal, one side of the frame being formed with a groove all round, and the other with a projecting tongue, which, when the two frames are brought into contact, fits into the groove of the frame opposite. The frames may be covered with leather, porpoise hide, or other material, according to the use for which the case is intended, whether to hold surgical instruments—for which purpose the invention is particularly applicable—or other things. For the cases or frames of bags, the arrangement of the frames would be the same, with one side hinged. The inventors prefer fastening the top and the bottom together in the cases, by a leather or other suitable loose



connexion. As applied to instrument, toilet, or dressing and other cases of wood, the groove and tongue may be made in the wood frame, or a metal frame may be fitted to the wood. (See sections B C D.)

NEW FORM OF SUSPENDER.

MESSRS. LYNCH AND CO. of Aldersgate-street have sent us an example of a new form of suspender, made at the suggestion of Mr. W. E. Dawson, for use in inflammatory conditions of the testicles, where it is advisable to apply moist applications. The lower part of the net bag is made of mackintosh and prevents the spread of the application to the patient's clothes. It is also accompanied by a form of calico bag for the penis in cases of urethral discharges, absorbent wool being placed in the end of the bag. The suspensory bandage would be improved by the insertion of elastic in the pelvic band.

SHAW'S PATENT HYGIENIC OVER-SOCK.

THIS over-sock is made of chamois leather, fits over the ordinary stocking or sock, and forms a thin and well-fitting covering to the foot, which is not perceptible in the boot or even in the lowest shoe. They are made in all sizes for either adults or children, and well finished. Although of such simple construction, the over-socks will be found most comfortable to those persons who suffer from cold feet, arising either from exposure to damp or from defective circulation. We can speak favourably of these articles from personal experience. They may be obtained from Earle's Fields Works, Grantham.

"IS CANCER CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—The case of M. Duploy, to which you allude in your annotation concerning the contagiousness of cancer in your issue of the 8th inst., and a similar one mentioned in the current number of THE LANCET by Mr. Laslett, give ground for the belief in the possibility of cancer being communicated by one individual to another by actual contact. I therefore venture to allude to another case of a like character. In 1883 a patient of mine, aged fifty-three, died with cancer of the uterus, and I have since been informed that in 1886 her husband, aged fifty-seven, had to submit to amputation of the penis for cancer, of which complaint he died a few months ago.

I am, Sirs, your obedient servant,

Tottenham, Nov. 1st, 1887. E. HOOPER MAY, M.D., F.R.C.S.

AT the meeting of the Cambridge Antiquarian Society, held on the 31st ult. at the University Museum of Archæology, the new President, Professor Alexander Macalister, M.D., delivered an inaugural address on taking the chair.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 5, 1887.

THE interest taken by the Fellows and Members in their annual meeting at the College shows no signs of abatement, but rather seems to be growing. Both by more perfect organisation, and by reason of greater earnestness and cogency of argument, the constituency show themselves, year by year, better fitted for the exercise of those privileges which the Council appear more and more disinclined to allow. In their report the Council again indicate they are not prepared to give effect to the recommendation, passed at the annual meeting of last year that Members as well as Fellows should be eligible to sit at the Council Board, and should also take part in the election of its members. As this determination on the part of the Council appeared to be final, and as they have forwarded a petition to the Privy Council for a Supplementary Charter, entirely ignoring the wishes of the Fellows and Members, the Associations of Fellows and of Members respectively have petitioned the Privy Council against the granting of this Supplementary Charter. Such was the condition of affairs at the time of the annual meeting, which was held on the 3rd inst. There remained no other course but to emphasise, by further resolutions, their disapproval, and the disappointment which is felt by a very large section of the Fellows and Members at the continued and unwarrantable disregard shown by the Council to the wishes of the constituency of the College at large. After the presentation of the report (which was taken as read) and a few introductory remarks from the President, Mr. TIMOTHY HOLMES moved the first resolution, which was seconded by Dr. RALPH GOODING,—

"That this meeting disapproves of the application for a new Charter which, *first*, does not confer electoral powers upon Members of the College and the right to be eligible to sit in the Council in accordance with the resolution passed at the general meeting held on Nov. 4th, 1886—namely, 'That it would conduce to the welfare of the Royal College of Surgeons, and would tend to promote the interests of medical polity and education—(1) if Members of the College were empowered to take part (separately or conjointly with the Fellows) in the election of members of the Council; (2) if Members of the College were eligible to sit in the Council, provided (*a*) that no Member of the College shall be entitled to vote till he have been such member for a period of ten years; (*b*) that no Member of the College shall be eligible to sit in the Council till he have been such Member for a period of twenty years; and (*c*) that not more than one-fourth of the Council shall consist of Members of the College who are not also Fellows;'—and, *second*, which does not provide that no alteration shall be effected in the constitution or in the relations of the College, or in any of its bye-laws, without the consent of the Fellows and Members convened to discuss such alteration in accordance with a resolution passed at the general meeting held on March 24th, 1884, and reaffirmed at the meeting held on Oct. 29th, 1885."

It is noteworthy that not only was this resolution passed with absolute unanimity, but this year there was not even a solitary dissentient utterance. This must be gratifying to those who have so long maintained the struggle for reform, especially when it is remembered that there were present a large number of independent Fellows, that is, Fellows who are known not to belong to either of the Associations.

This first resolution having been disposed of, Mr. TWEEDY moved "That this meeting respectfully request the Council of the College to transmit a copy of the foregoing resolution to the Lord President of the Council." This was seconded by Dr. DANFORD THOMAS, and carried unanimously. It is to be hoped that the Council will manfully accept the suggestion, and, as Mr. TWEEDY hinted, fight the matter fairly out.

It would appear as if the individual members of the Council of the College are personally opposed to any change in the directions indicated in the resolutions which have been brought forward at the various meetings. We think for many reasons that this is derogatory to their own dignity. There is scarcely another body of gentlemen who, disposing of trust or public funds, would not be glad, we should think, of the opportunity of lessening their responsibility and of securing representatives of all classes for the Council, on the lines laid down in the resolutions. A larger Council would in no way weaken the present status of that body; while the presence in it of a limited number of Members of the College would satisfy the natural desire of general practitioners to be directly represented, and to have some voice, through their representatives, in the disposal of the sums of money which are largely derived through and from them.

IN the various forms of inflammatory and degenerative disease to which the kidney is liable there has been assigned by all the more recent authorities a very considerable share to the Malpighian corpuscles. Since KLEBS drew attention to "glomerular nephritis" it is remarkable how the tubular lesions have gradually taken a secondary place. In the current number of VIRCHOW'S *Archiv* (Bd. cx., Hft. 1) Dr. HANSEMANN, one of Professor VIRCHOW'S assistants, contributes an article on the subject, which tends, if anything, to limit the sphere of the changes in the glomerular tufts. His pathological study is based on the examination of 120 cases of nephritis, arising under very varied conditions. He prefaces his account of the results obtained in these morbid specimens by a statement of the normal histology of the Malpighian body, which departs slightly from the usually accepted teachings. BOWMAN'S capsule, which is continuous with the basement membrane of the convoluted tubule, is composed of a single layer of cells, the nuclei of which may or may not be centrally situated. The tubule is not constricted at its termination, but expands rapidly in a funnel-shaped manner; whilst developmentally the capsule is formed directly from the curvation of a tubule, and in the same way the epithelial layer covering the glomerular loop is formed. The space between the capsular and glomerular epithelium is filled with fluid, which, according to Dr. HANSEMANN, can be seen in hardened specimens to be traversed by a fine filamentous network. He does not agree with DRASCH'S division of the glomeruli into a larger set placed centrally and a smaller-sized set placed peripherally in the kidney, the former being multilobed and furnished with a nucleated epithelial investment, the latter bilobed and with a non-nucleated covering. For although it is evident that these bodies vary much in size, there is no such manifest separation in structure and situa-

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tion as DRASCH implies. The glomerular investing membrane is, according to HANSEMANN, merely a layer of cells with scanty nuclei, and cannot, as usually stated, be separated into a basement membrane and endothelium. He also declares that connective-tissue elements are very scanty in the glomerular tuft, being mainly limited to the region of the afferent and efferent vessels; whilst he disputes the statement of BABES that these vessels at their points of entrance and exit are dilated in an ampullary manner, or that such degenerative processes as amyloid and sclerotic changes select these positions for their starting points. The pathological portion of Dr. HANSEMANN'S essay deals in turn with certain questions respecting the *rôle* of the Malpighian body in renal disease, and the replies to these questions are based entirely upon his own histological studies. The first is as to whether these structures take part in every affection of the kidney, and if so, are they attacked simultaneously with or before the rest of the organ? He shows that although in many cases of parenchymatous nephritis, as well as of other diseases, the Malpighian corpuscles are involved, yet that cases do occur in which these corpuscles (even in nephritis) may remain unaffected. In a few instances they are so much affected as necessarily to influence the nutrition of the rest of the renal substance; but it is very rare and quite exceptional to find that glomerular lesions are the first to appear. Another point is as to the part played by nuclear proliferation in the glomerular change. This is always more marked in young subjects, in whom the nuclei are normally more abundant. However, there is undoubted evidence of proliferation of epithelia, more especially of that covering the tuft, besides leucocytal infiltration, which is liable to be mistaken for the former. Further, he denies that the pathological changes —e.g., amyloid degeneration—to which the glomerular tufts are liable afford any evidence that their constituent vessels are provided with a special endothelial lining, as LANGHAUS asserts. On the contrary, he finds that the delicate walls of these capillaries are simply composed of epithelium. In disease of the Malpighian bodies, it would seem that very extensive changes in the direction of swelling, proliferation, and shedding of the epithelial lining of the capsule and tuft may take place without any apparent lesion of the vessels. This of course does not apply to amyloid change, which commences in the vessels. Lastly, in speaking of the relation of glomerular lesions to those of the rest of the kidney, he distinctly discards the doctrine of a primary glomerular nephritis. He quotes COHNHEIM to the effect that it is inconceivable that the several vessels and tubules of the kidney should share equally in the work of secretion, and that inflammation should attack simultaneously all the glomeruli or all the tubules. It accords with experience that nephritis does not involve the whole kidney to an equal extent, or both kidneys in the same degree. And there is sufficient evidence adduced to show that there is no relation between the extent of disease in the glomeruli and that in the rest of the kidney; although it necessarily follows that where a Malpighian body is so diseased as to be functionally destroyed the tubule in connexion with it must be more affected than is the tubule connected with a less damaged glomerulus. In amyloid degeneration, there is, besides the malnutrition induced by interference with blood supply, a probability that the tubule connected with the affected glomerulus atrophies from disuse, being no longer required to fulfil its function. The polyuria of amyloid disease will have, then, to be explained in another way,—but Dr. HANSEMANN does not proffer any such alternative.

THE results of the Contagious Diseases Acts in the colonies have already been given at some length in THE LANCET for October 22nd; but, as was observed at the time, it was necessary to omit much that was interesting from Sir H. T. HOLLAND'S Parliamentary Paper and this deficiency may now to some extent be supplied. We have already dealt with Malta, Hong-Kong, the Straits Settlements, Barbadoes, Jamaica, St. Helena, Labuan, and Trinidad, and now proceed to notice the medical details of the more important districts respecting which these are given. The first is Gibraltar, which, as is well known, is almost insular as regards situation; and from the Governor, Sir A. E. HARDINGE, we learn that the garrison comprises, as a rule, 4600 soldiers. It also appears from the report of Surgeon-General FRASER, the principal medical officer, that there has been a decided increase of venereal diseases among the men of the garrison during the last four years—i.e., since the Acts were first practically suspended and then repealed in this country,—this causing a great importation of disease. The following figures show the ratios of venereal disease in the four years preceding and the four years following the suspension of the Acts:—

Act in Force.

	1879.	1880.	1881.	1882.
Strength of garrison ...	4516 ...	4483 ...	4444 ...	4558
Percentage of venereal disease	8·43 ...	17·19 ...	17·30 ...	20·62

Act Abolished.

	1883.	1884.	1885.	1886.
Strength of garrison ...	4737 ...	4712 ...	4353 ...	4307
Percentage of venereal disease	30·61 ...	28·20 ...	36·20 ...	36·49

This fact alone is sufficiently alarming; but to this must be added the additional one that Gibraltar has always been peculiarly situated as regards what are known as alien prostitutes—those who come from Spain on permits of a day or longer; and as the authorities have only a partial control over them, much disease is spread in this way. There are, in all, sixty-five native and sixty-one alien prostitutes. Out of these no less than thirty-five were admitted into the Lock Hospital in a period of three months and a half, and of these thirty-two were aliens. If, then, the examination of these women is abolished, these diseases will rapidly assume an epidemic form, both among them and the soldiers of the garrison. But even this is not the worst, as Sir A. E. HARDINGE points out: "Moreover if the examination in Gibraltar were dispensed with, all the diseased women compelled to leave Spanish brothels would find their way here either on a daily or weekly ticket. The result would be a state and condition of things that I refrain from depicting." Surgeon-General FRASER observes, in conclusion: "Taking into consideration the numerous points of difference which exist in Gibraltar, compared with other Crown colonies, and the importance of maintaining the health of this important garrison in the most favourable

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state which efforts in this direction can accomplish, I think it does not admit of any reasonable doubt that with this object in view there actually exists a 'special and local necessity' for not only supporting the regulations affecting prostitutes which are already in force, but of strengthening them to a resemblance of what they were before 1883. I would protest most strongly against their abolition, for that would be followed by the most deplorable consequences to the health of the troops, and a considerable increase of expense to the State from increased daily loss of service, as well as from a higher proportion of invaliding from constitutional syphilitic disease which will inevitably follow."

Passing to Ceylon, it appears that the Ordinance there has been in force since 1867, its operations being limited to Kandy (the ancient capital), Colombo, and Galle, at all of which places troops are stationed, and the two latter are the principal seaports. From Kandy Surgeon-Major FITZGERALD writes: "I believe the Act, when properly enforced, to be most beneficial, and that the only objection to it is that it is not, in my opinion, extended over a sufficiently large area to keep women affected with venereal disease out of the reach of the soldiers." Dr. ARCHER, the Brigade Surgeon in charge of troops in Colombo, says, "In my opinion it is most desirable that the Act should continue to be enforced, on account of the great prevalence of venereal disease amongst the troops and the large number of men thereby rendered constantly non-effective. Last weekly sick returns for this station show twenty-eight patients in hospital suffering from these complaints, or very nearly 44 per cent. of the total sick. There can be little doubt that this ratio would be largely increased were the Ordinance abrogated, especially if infected women were not admitted for treatment to the Venereal Hospital." From Galle Surgeon WALLIS reports: "Galle being a small place and thickly inhabited, if the Act were not in force the disease would increase to such an extent that the consequences would be serious both to the military and civil population, whereas at present the few cases that now occur are not of a virulent type, and arise from outside infections." The Executive Council of the colony in giving special reasons why the Ordinance should be continued, conclude as follows: "The inevitable result of repealing the Ordinance would be a large increase of disease among the civil as well as the military population, and probably an increase of crime." The Governor, Sir A. H. GORDON, adds: "I share the opinion of my Executive Council. The circumstances of England and of an island like Ceylon, as regards such legislation, are so widely different that it is difficult to restrain a movement of impatience at the want of power to realise any such difference which appears to characterise the more fanatical supporters of the repeal of these Acts, and indeed too many others, who conclude that whatever may be unsuitable in England is necessarily unfit for existence elsewhere. In the present case the grave physical, moral, and social mischief which will result from the repeal of the Ordinance is patent; while, on the other hand, the circumstances under which the administration of the Contagious Diseases Acts in England has been held to have inflicted hardship and worked injuriously are absolutely non-existent in Ceylon."

It only remains now to see what has been done in the Fiji Islands. Dr. MCGREGOR, the chief medical officer, in a most elaborate report, mentions that the Ordinance was first passed in 1881, since which it has undergone various modifications. It not only provides for the inspection and detention of prostitutes, but also of immigrants arriving in the colony who are suffering from venereal disease. It appears that among the Fijians there was some time previously to the passing of the Ordinance very little venereal disease—so little that they were practically free from it,—while several thousand Polynesian immigrants were being introduced every year, a large number of whom were suffering from venereal disease. Nothing could have been more distasteful to the native chiefs than the extension of venereal diseases among their people; and there can be no doubt that such diseases, if once suffered to obtain a firm hold on the population, would greatly diminish the birth-rate and largely add to the death-rate. Hence the passing of the Ordinance, which has done a great deal of good in preventing the spread of venereal diseases. Dr. MCGREGOR states that the Indian women are greatly disposed to prostitution, and have made many efforts to establish houses of ill-fame in various parts of the islands; these efforts have been effectually thwarted in many instances by the Act. He concludes: "Looking, therefore, at the whole question from the purely sanitary point of view, it must be held that the repeal of the Ordinance would be a calamity; and it is highly probable that the result of such repeal would create great political discontent in the minds of the native chiefs, and convert the present somewhat unfriendly feelings of the Fijians towards the Indians into dangerous dislike." The Governor, Sir C. B. H. MITCHELL, adds: "I should regard the withdrawal of any precautionary measures against the spread of contagious diseases among the Fijians—a race which is even now showing signs of decay, in that the birth-rate scarcely seems to equal the death-rate—as a great misfortune. As there is no public feeling either amongst Europeans, Fijians, Indians, or Polynesians against the existence of these precautionary measures, and as their repeal may, and probably will, seal the doom of a fine race over whose welfare the English Government is specially pledged to exercise a watchful supervision, I trust that the repeal of the Contagious Diseases Acts of Great Britain, enacted as they were for the protection of a people living under totally different conditions, moral, social, and economic, from those obtaining in these islands, may not be followed by a direction to me to pass an Ordinance to abolish enactments the continuance of which is, in my humble judgment, imperatively required in the interests of Fiji."

While it is satisfactory to observe that the Acts are still to be maintained in Fiji, and probably in Malta also, it is to be regretted that their repeal should be insisted upon in Gibraltar and Ceylon, where, as we have seen, their effects have been so beneficial, and their repeal would be so greatly dreaded by those most capable of judging the probable effects.

THE LANCET of Oct. 8th contains a paper by Dr. GOWERS on the Value to the Medical Practitioner and the Medical Student of a Knowledge of Shorthand. Our present issue contains a letter from the same source describing the particular advantages derived by the student from a knowledge of this art, and advising the formation of shorthand classes in the medical colleges. In these days enter-

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prise is increasingly active, and is rapidly pushing the bounds of knowledge beyond what is now known in every department of medicine and the sciences allied to it. There is no fixity in the limits of discovery, and errors even seem to the learner to possess a transferable vitality. The tax on memory and reasoning power is not lightened by their disappearance, but is replaced by the exactions of some substitute fact or theory which claims consideration on the authority of later proof. Whatever, therefore, promises to diminish this exaction deserves to command the attention of learners, and shorthand seems to be one of the conveniences especially fitted to fulfil this function. For the student engaged in the lecture theatre it has, as Dr. GOWERS has said, two principal recommendations. Not only is it in an eminent degree saving of time, enabling the student to understand and appreciate, while he transfers to paper, the utterances of a speaker, and observes his illustrations, but it allows him also to note correctly each essential of a discourse, and to exclude any non-essential padding of rhetoric. Thus, the writer is at the same time in some sort a learner. He leaves the lecture room with a clearer idea of his subject than if he had taken notes in longhand, and he may feel himself to be within a measurable distance of accomplishing the feat of memory attributedto Lord MACAULAY, who, it is said, could redeliver a lecture from beginning to end after having once heard it. It may be claimed as an additional advantage that the opportunity afforded for transcribing the notes thus taken into the ordinary written character implies an exercise of mental revision. This, no doubt, is the case, and if the student can spare time for the double notation so much the better. If he cannot, and can easily read his shorthand notes, his best plan certainly is to rest content with these. We are of opinion that those in his position, as a rule, have little time to spare of an evening for the work of transcribing; but there is doubtless room for some difference of opinion on this point. Clinical teaching is for the student of medicine a matter of the first importance, and the essence of such teaching is to train the faculty of observation. In this department shorthand is particularly useful. During the examination of a case there is much in the necessary exercise of the senses, and in the interruptions of question and answer, to interfere with the taking of notes, which, nevertheless, can hardly be dispensed with. To be able to make a permanent record by means of a few symbols is, therefore, an accomplishment of obvious value. This leads us to remark, in passing, the facility in case-taking which is possessed by practitioners, however busy, who have early attained a mastery of this convenient art. Of this class of men Dr. GOWERS is himself an eminent representative. We have now said enough to show that, at all events as far as prospective benefit is concerned, there is justification for the formation of shorthand classes in medical schools. Nor does there seem to be any reason to dread any serious practical difficulties in the way of such a scheme. Teachers are not far to seek. The course need not be a long one, nor the fees high, while, if (as may reasonably be expected) the number of pupils is considerable, they should quite suffice to repay handsomely the trouble of teaching. It is therefore in every way desirable that an effort should be made to bring within the reach of those attending the various hospitals and colleges throughout the kingdom the evident advantages of that useful system which, it is interesting to recall, had for its earliest founder a member of the medical profession.

Annotations.

"Ne quid nimis."

HONOURS EXAMINATIONS AT THE UNIVERSITY OF LONDON.

WE have received numerous letters from teachers and students complaining of the alterations in the Intermediate M.B. Examination at the University of London. These changes are twofold, and came into operation at the last examination in July. We pointed out at the time that the alterations were announced that they would act injuriously on the candidates, and the letters which we have received unanimously support our contention. There can be no adequate reason for commencing this examination so early in the months of January and July, and having an interim of fifteen days between the written and *vivâ voce* parts of the examination. This arrangement is most inconvenient to the candidates and acts unfairly, and can only have been sanctioned in the interests of the executive. The University appoints assistant examiners to aid in reading the papers in some subjects, and if the number of those selected for this duty are insufficient more should be provided. So far as we can understand, there is absolutely no justification for compelling a candidate, at the time of entering his name for the examination, to choose definitely whether he will take the pass paper, and so forego all claim to honours, or the honours paper, and so risk his chance of a pass. If he were allowed to choose at the examination, with the two papers before him, we should still deem it an unwise innovation, but, at any rate, it would give the candidate a much fairer chance than under the present regulation. Teachers in every school are saying that their best men are afraid to run the risk of electing to be tried for a pass on an honours paper, and we have no doubt that this feeling is widespread, and it is quite intelligible. We question if any labour is saved to the examiners, and, even were it so, the authorities are bound to consider the interests and well-being of the candidates in the first instance. The regulation shows that the Senate has, as we have often pointed out, lost all touch with the medical schools. If the Deans or teachers in those schools had been consulted, a unanimous protest would have been sent in to the Senate, and the authorities would have hesitated to pass these regulations, which seem to us, and to all who are conversant with the examination, to have been made solely for the purpose of lightening the work of the executive staff. We would counsel the Senate to restore as quickly as possible their former regulations. If the number of candidates aspiring to honours requires limitation, a simple regulation that every candidate must gain at least two-thirds marks, or some such proportion, in a subject at the pass, before he can offer himself for honours therein, would do all that is necessary for both examiners and candidates.

VACCINATION IN ITALY.

THE severe visitation of small-pox from which the San Frédiano neighbourhood of Florence has suffered constrains the Società Fiorentina d'Igiene to call loudly for compulsory vaccination. Unlike England, France, and Germany, Italy has no uniform legislation for the prevention of small-pox; the only regulation that the most civilised of her provinces possess against the scourge is this—that children cannot be admitted to school or youths to higher institutions without their having been medically certified as

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having undergone vaccination. But how about the multitude of children who never have an opportunity of requiring this certification—those, in other words, who never go to any kind of school but that of the streets? for it is precisely in this social stratum that the recent outbreak of small-pox in Florence originated, and to which its ravages were almost exclusively restricted. On April 26th last the late Italian premier, Signor Depretis, in the Sanitary Code for the Italian kingdom which he laid before the Senate, made a special feature of compulsory vaccination; and yet there were found public men who combated that provision on the ground that the school certificate of vaccination was sufficient. The epidemic that raged throughout the autumn in the lower quarters of Florence is his justification; and we are glad to see that the Hygienic Society of the city, at the instance of Dr. Boncinelli, adds the weight of its authority to his proposed enactment. Half-measures in matters so important as the public health have had their day; and nothing short of the legislation that protects England, France, and Germany will be tolerated for such a favourite land of foreign sojourn as the Italian peninsula.

INQUESTS ON FIRES.

THE inquest concerning the deaths of four persons killed by the falling of a wall at the recent extensive fire on the premises of Mr. Whiteley, Westbourne-grove, was concluded last week, and, after a prolonged inquiry and the delivery by the jury of their formal verdict, the following rider was added:—"That the present state of the law in regard to fires is most unsatisfactory, inasmuch as it would have allowed the fire at Mr. Whiteley's premises to have passed without any official inquiry but for the fact that deaths arose therefrom; and, further, the jury consider that provision should be made by law for an official inquiry into the origin and circumstances of all fires." We fully endorse the observations of the jury, and consider that the powers which the coroner formerly possessed of holding inquests in cases of fire where no death occurred should be again restored to him. That he had this power in times past is certain; and, further, his power extended to the inquiry of other felonies, such as burglaries and prison breach. Hawkins, in his "Pleas of the Crown," contends that the power of the coroner in those cases was conferred upon him by statute (Edward I.), and was never expressly taken away from him. Some few years ago an attempt was made to establish the authority of coroners to hold inquests in cases of fire, but the question was settled by the leading case of "Regina *v.* Harford," in which Lord Chief Justice Cockburn, in delivering judgment, said: "We have the authority of three of the greatest writers who have expounded and illustrated the law of England for saying that the office of coroner with reference to felonies is limited to cases of homicide on view of the body." Again, Lord Cockburn stayed the coroner for Manchester, who had commenced an inquisition as to a fire, with this judgment: "As to the importance to the public that coroners should have the jurisdiction, there are two opinions. I express none. Some of the coroners in modern times have exercised this jurisdiction, some have not. If they are to exercise it in this and other felonies after the disuse of it for five or six centuries, let it be given them by the Legislature, and not revived by this Court." The late Sir John Humphreys, coroner for East Middlesex, held an inquest at Hackney in respect of a fire where no life was lost. This he did at the special request of the churchwardens and inhabitants of the district, as fires were of such frequent occurrence. The case turned out to be one of arson, but the magistrates refused to reimburse the coroner for the expenses incurred in the holding of the inquest, on the ground that the said inquest was not legally held. By the Coroners Act, 1887, the only Act granting powers to coroners in these matters (4 Edward I.) is repealed. It will be remembered that very recently Sir Robert Fowler and Mr. Hubbard introduced a Bill into Parliament to enable the City Coroner to hold inquests in cases of fire; but the Bill was lost owing to technical objections. Let us hope the City members will return to the charge and recast their Bill in a wider scope so as to include at least the whole of the metropolis, if not extended generally throughout the kingdom. The metropolitan members, as a body, might do far worse than take up this matter on a comprehensive scale when Parliament again assembles.

STRUCTURE OF MUSCLE.

THE Structure of Muscle, one of the most difficult questions in histological research, is the subject of an essay by Mr. C. F. Marshall of Owens College, who gives the following summary of his researches. In all muscles which have to perform rapid and frequent movements a certain portion of the muscle is differentiated to perform the function of contraction, and this portion takes on the form of a very regular and highly specialised intra-cellular network. This network, by its regular arrangement, gives rise to certain optical effects, which cause the peculiar appearances of striped muscle. The contraction of the striped muscle fibre is probably caused by the active contraction of the longitudinal fibrils of the intra-cellular network; the transverse networks appear to be passively elastic, and by their elastic rebound cause the muscle to rapidly resume its relaxed condition when the longitudinal fibrils have ceased to contract; they are possibly also paths for the nervous impulse. In some cases where muscle has hitherto been described as striped but gives no appearance of the network on treatment with the gold and other methods, the apparent striation is due to optical effects caused by a corrugated outline in the fibre. In muscles which do not perform rapid movements, but whose contraction is comparatively slow and peristaltic in nature, this peculiar network is not developed. In most if not all of the invertebrate unstriped muscle there does not appear to be an intra-cellular network in any form, but in the vertebrate unstriped muscle a network is present in the form of longitudinal fibrils only. This possibly represents a form of network intermediate between the typical irregular intra-cellular network of other cells and the highly modified network of striped muscle. The cardiac muscle-cells contain a network similar to that of ordinary striped muscle.

MEANS OF ISOLATION IN LIVERPOOL.

THE position of Liverpool with regard to the isolation of infectious diseases is at present one of extreme difficulty. There is evidence of a commencing increase of scarlet fever; the history of the city is one that gives much anxiety as to typhus at the beginning of a winter which bids fair to be marked by some real privation; and other diseases needing isolation are always more or less prevalent. In the face of these circumstances, it is a deplorable fact that the Town Council are absolutely without means for the reception of infectious diseases other than small-pox, and that, apart from the workhouse hospitals, to which no non-pauper can be legally sent, there is no proper means for protecting the inhabitants against preventable disease. Indeed, Dr. Dawson, in an interview with the deputy medical officer of health as to the need for dealing promptly with some urgent cases, only learnt that it was admittedly an "awful condition of affairs," but that the actual case in question was merely "one of a series." The truth is that Liverpool is suffering from its long postponement of a pressing matter, and although the Cor-

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poration have at last determined to deal in part with the emergency, they still remain unprepared. The Netherfield-road hospital has been taken over by them; but it is in the hands of the builders, who are to adapt it to modern hospital requirements. A new hospital near the docks has been decided on, and the designs have been prepared and assented to, but it is not yet built. So, also, the chairman of the Sanitary Committee is now urging the Corporation to provide a new hospital site in the east of Liverpool. There can be no question at all as to the need for further means of isolation, for that which will be available when the two newly acquired hospitals are finally ready for use can never be expected to suffice for dealing with the current fevers of Liverpool. It is a pity, therefore, that the matter is again postponed; for whilst we fully believe that temporary erections, as a rule, tend to hinder the provision of permanent hospitals, yet it is an unquestionable gain to have even a site ready for such emergencies as may arise. We hope that at the next meeting of the Council measures will be taken to remove the great defect which now attaches to Liverpool in the matter of dealing with infectious disease.

CHOLERA EPIDEMIC AT MALTA.

IN a report upon the cholera which has recently prevailed as an epidemic at Malta, the Lieutenant Governor and Chief Secretary to Government, the Hon. W. F. Hely-Hutchinson, states that between Aug. 1st and Sept. 26th, a period of fifty-seven days, there were 421 cases and 261 deaths, or an average of 7·23 cases and 4·57 deaths daily. The former were in the ratio of 2·64 and the latter of 1·67 per 1000 of the population. The disease was much more prevalent and fatal in the villages than in the towns, and attacked the poorest, worst lodged, and worst fed of the population. Only one case occurred among the British troops. "Those who rest their faith on sanitary measures rather than on quarantine may find confirmation of their views in the following facts: That in the fortified towns, now drained and supplied with good water, the epidemic has been far less severe than in the villages, which are all undrained; that of the villages which have been attacked, those which have suffered most severely are those dependent on surface water collected in tanks; that although no sort of quarantine or segregation beyond a prohibition to enter Zabbar and Zeitum has hitherto been imposed on the British garrison, only one case has occurred amongst the troops; and that, although no quarantine measures whatever have been taken in Gozo against Malta, only one case, and that a doubtful one, has in the course of fifty-seven days occurred in the neighbouring island."

POSTURE FOR SLEEP AND POSTURE IN SLEEP.

IT would seem on the first blush of the matter that the posture for—that is, to favour—sleep must be generally the same as that voluntarily or instinctively assumed during sleep; but a little consideration will make it apparent that this is not correct. It may be granted that, supposing a person to be sleeping lightly and uncomfortably, the posture will be changed half-consciously to one of comfort. It would be more correct to say that it is changed in the endeavour to avoid distress or discomfort; but even the fact that sleep is quieter in the new position will not suffice to prove that this is a better one, because the sleep may meanwhile have become deeper. It is, on the whole, impossible to ascertain either by experience or observation which is the posture most conducive to sleep, and attempts to lay down rules for the guidance of bad sleepers are always arbitrary, generally empirical, and rarely of any practical value. Those who think "anæmia of the cerebrum" is the cause of sleep, and those who think that, though not the cause, a diminution in the quantity of blood in the vessels of the encephalon is a necessary concomitant of sleep, prefer, and recommend, that the head should be higher than the feet; while those who adopt the opposite view, and think passive congestion causes or promotes somnolence, would have the feet raised and the head lowered. The confounding of stupor with sleep may, and probably has, something to do with these differences of opinion. Meanwhile a common-sense view of the subject would conclude that, as there is evidently some change in the blood state when the brain falls asleep, the best plan must seem to be to place the body in such position that the flow of blood through the vessels of the head and neck may be especially easy and free. The way to secure this is to allow the head to lie in a posture and on a level that cannot offer any obstacle to the free return of blood through the veins of the neck, and does not tend to make the blood flow specially in any particular direction, but leaves Nature at liberty to act as she will.

THE LIVERPOOL ROYAL INFIRMARY.

LAST week two very interesting ceremonies took place in connexion with the rebuilding of the Liverpool Royal Infirmary. The first was the discovery and raising of the old foundation stone of the building now in course of removal. It was found in the north-west corner, and there was leaded into it a brass plate bearing an inscription that it was laid on July 27th, 1821, by the then President of the institution, the Earl of Derby, in the presence of Thomas Leyland, Esq., mayor, the two bailiffs of the old Corporation, and many others. The raising of the stone was witnessed by the present President, Colonel A. H. Browne, M.P., Mr. Gilmour, chairman of the committee, Dr. Davidson, Mr. Mitchell Banks, and others. In a bottle in a cavity of the stone were discovered coins of the day and a copy of a local newspaper. The second ceremony was the laying of the foundation stone of the new building by Lord Derby, in the presence of the Lord Bishop of the diocese, the Mayor (Sir James Poole), and a large and distinguished company, among them the professors of the Liverpool University College and members of the medical and surgical staff. In opening the proceedings, the Mayor alluded to the coincidences that the foundation stones of the first infirmary, erected in 1749, as well as that of the building now removed were both laid by ancestors of the noble lord who was now asked to perform a similar service. Colonel Browne then presented to Lord Derby a silver trowel. The foundation stone, of polished granite and bearing the inscription, "Foundation stone laid by the Earl of Derby, K.G., 29th October, 1887—Queen Victoria's Jubilee year," was lowered and declared duly laid by his lordship; after which, the Bishop having offered up prayer and pronounced the benediction, Lord Derby said that when he was asked some time ago to lay the first stone of this building, he accepted the invitation with pleasure, for it was a good work, a useful work, a work of beneficence and of public spirit, and one which conferred benefits on the community far out of proportion to the capital expended or the mere direct aid given. It was no paradox to affirm that the greatest gainers by the existence of hospitals are to be found amongst those who never enter their doors. They are schools of medical science, where a young man learning his business can see in a few months more cases of various kinds than he would be likely to see in the private practice of a lifetime, where he can profit by the teaching and experience of the leading men of his profession, where a high standard of professional feeling and honour is maintained, and where greed and quackery, and all those practices by which low practitioners sometimes

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try to push their way into notice, are discountenanced and put down by the full force of an organised and unanimous opinion. An unhealthy people indicates a decay in the community, and the more we know of former times the more surely we are aware that with the growth of civilisation life becomes on the average not only fuller but longer. Of all men, physicians and surgeons give a larger proportion of their time and knowledge—which is their capital—to the unpaid relief of suffering among the poor. We take that as so much a matter of course that we scarcely give them credit for it, but the fact that we do so is in itself the highest praise.

THE SURGICAL TREATMENT OF PERITONITIS.

THE propriety and value of surgical intervention in the treatment of certain forms of peritonitis formed the main subject discussed at the last meeting of the Clinical Society. The cases which gave rise to the debate belonged to two different categories, and perhaps for that reason the discussion was rather involved. It may therefore be convenient to analyse it on each head. In his successful case of acute suppurative peritonitis, Mr. Barwell was pursuing the practice which was brought before the notice of the Royal Medical and Chirurgical Society by Mr. Treves and Mr. Marsh two years ago, giving rise to an interesting debate on the occasion. For although, as Mr. Barwell said, the priority in conception of this procedure rests with the late Mr. Hancock, the operation itself with the deliberate intent of treating the peritoneal condition was first performed by Mr. Treves. It may now be considered not only a legitimate but a very valuable means of treatment, and one which is sure to become more widely practised. Mr. Barwell's case was also instructive, as the President pointed out, on account of the large accumulation of gas present within the abdominal cavity; which makes it more than likely that the peritonitis had been excited by a perforation of the bowel, perhaps of the vermiform appendix. General peritonitis due to perforation is almost invariably fatal, so that physicians may be justified in having early recourse to the aid of the surgeon, who by incision and drainage can promise a more favourable issue. As to the *technique* of the operation, nothing can be simpler, and it was clearly shown that no better medium for washing out the cavity could be employed than pure water, provided this were supplied in sufficient amount, and the irrigation were as thorough as possible. At the Clinical Society more attention was bestowed upon the subject of tubercular peritonitis, the two cases furnished by Dr. Knaggs and Mr. Clarke of Huddersfield forming the chief topic of the debate. Here we may remark how deep-rooted is the notion that tubercular disease of a serous membrane like the peritoneum is necessarily fatal, and the impression conveyed by Dr. Burney Yeo's questions was certainly to that effect. We may refer all those who still hold to this opinion to a clinical lecture on Tubercular Peritonitis in Children, by Dr. Gee, published in this journal six years ago (THE LANCET, Jan. 1st, 1881), and his statement that "recovery from tubercular peritonitis is common" will be endorsed by physicians who practise in children's diseases. In adults cases of recovery from this disease are less common, but Sir Spencer Wells' celebrated case is a standing refutation of the prevalent pessimistic views which would regard tubercular peritonitis as being as hopeless as cancerous. The debate, however, did good service not only in correcting this impression, but in showing how materially recovery is aided by draining the cavity of its contained fluid. Here, again, a lesson may be learnt from the practice often adopted in the case of children with considerable success—viz., simple paracentesis. Whether irrigation and continuous drainage is superior to paracentesis, which may have to be repeated, experience alone will show; but that the essential thing is to withdraw the fluid so as to allow the affected serous surfaces to come into contact was strikingly brought out in the report which Mr. Treves gave of the recently recorded experience of German surgeons. The measure of success obtained did not seem influenced by the adoption of various methods; the essential point was that the peritoneal sac should be laid open. It would thus appear (as was suggested in the debate) as if the effused fluid were itself a source of danger; but that it is absolutely necessary to "alter the character of the inflammation" by the injection of iodine, carbolic acid, or other irritants is still an open question. Dr. Knaggs and Mr. Clarke are to be congratulated on the result of their bold treatment, which may well be adopted in similar cases uncomplicated by active tubercular disease of the lung or ulceration of intestines. Such cases in the adult are not so very common, and their diagnosis is not always simple; but that the local tubercular process may be quite arrested and the general condition of the patient vastly improved by local drainage (aided, of course, as Mr. Parker pointed out, by general treatment) have been amply shown.

FEVER IN LONDON.

THE number of cases of scarlet fever admitted into the hospitals of the Metropolitan Asylums Board during the week ending October 28th amounted to 268, being seven below the number admitted during the preceding week. Speaking generally, there is no abatement of the epidemic, and this view is confirmed by the experience of the first few days of the present week. On Monday the admissions were sixty-four, and on Wednesday morning the total number of cases of fever in the hospitals was 2561, this being the greatest number that has been under treatment in these hospitals during any period of the epidemic. Of this number 162 were enteric, whilst 25 were cases of other diseases. Huts are still being erected on the vacant ground in connexion with the various hospitals. The cases of small-pox were received from the districts of Limehouse and Whitechapel.

OUR NATIONAL PHYSICAL TRAINING.

IF learning were the sole aim of education, life would shortly become a mere competition between different degrees of intellectual capacity. Such it is and must be in a measure, but such it cannot ever entirely be so long as will and character maintain a ruling influence in the affairs of life. The true purpose of teaching is, therefore, to implant not only a knowledge of facts, but a method of thinking correctly, a balance and soundness of mind, and an aptitude for practically applying what is learnt. All through the world, knowledge and purpose, theory and practice, mind and body, have wrought together wherever the energies of man have come to their highest development and have achieved their greatest success. All methods of education, accordingly, must, in order to attain successful results, aim at producing not merely intelligent but capable men and women. The healthy mind in a sound body is still a primary consideration, and it is in recognition of this principle that we cordially support every endeavour to combine with the mental training of school a due amount of physical exercise. To arrive at this desirable end, however, particular efforts are very necessary in the case of city-bred children, though they may be comparatively needless in rural districts where Nature herself may be said to labour effectively in the cause of recreation. It is, in our belief, advisable not only that children so placed should have the opportunity afforded them of improving their muscular tone, but that they should be directly assisted by some system of training appropriate to the end in view. No elaborate process is needed, but there should be aims

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direct encouragement, including a duly regulated obligation to take part in the exercises and the giving of a few prizes. For adults, who are "but children of a larger growth"—and we do not exclude women,—there is not the same need of systematic training; but for them also the value of regular muscular exercise is hardly less. Happily, the increasing public interest in diversions of this class, and the multiplied variety in which these may be enjoyed, argue well for the future. We note with satisfaction that the Earl of Meath, speaking at Liverpool on the subject, impressed the duty on the School Board authorities and the Government supporting them of making provision for methodical physical training in schools. The suggestion is a very pertinent one, and will not, we hope, fail to receive that attention which it deserves in influential quarters.

CHOLERA IN SICILY.

AN Italian correspondent writes:—"From Palermo I hear that to-day (October 27th) the Minister of Public Instruction has authorised the reopening of the Palermitan University for the winter session, and that by the same authority all the public schools in the city and province will likewise resume work. This he has done on the representation of the Board of Public Health, which is now perfectly satisfied that for the present year at any rate cholera has disappeared from western Sicily. The only sanitary regulation that still remains in force relates to the cemeteries, which will be closed to the public till after All Souls Day, when multitudes of the friends and relatives of the deceased are accustomed to flock to the graves, and often to linger beside them all night in prayer, and in other demonstrations of grief, sometimes ecstatic in its outbursts. As to the rest of the island, sporadic cases of cholera are reported as occurring now in this commune, now in that, but none of these have been officially certified, and it is more than probable that by the close of the month the permission accorded by the Minister of Public Instruction to Palermo and Trapani will also include Catania, Messina, and others of the cholera-visited centres in the east of the island."

THE TELEPHONE IN MEDICAL TREATMENT.

THE very common use of the telephone in the business world affords a sufficient guarantee that, in spite of occasional difficulties, inconveniences, and failures in its working, there remains a substantial balance of advantage. The facilities which it has introduced into the ordinary course of domestic life have also been considerable, though the time is probably yet far distant when even the majority of households will possess the luxury of a telephone communication. In the emergencies of illness, particularly, there is much to be said in favour of this mode of intercourse. It is, above every other, simple, swift, and safe, and must commend itself alike for the expeditious conduct of practice and the treatment of disease. In the management of joint medical practices which cover a considerable area it is very obviously useful. Of its proved value in cases of special urgency, we need say little. A particular interest, however, attaches at the present time to what is probably its latest application. This is its employment as a part of the system of isolation, so imperative in the management of infectious illnesses. We are informed that one of the effects of the recent scarlatinal outbreak in the metropolis has been to establish in some instances an in-door telephone system, which, without the slightest risk of infection, brings a patient, so to speak, within touch of his friends and relatives. Whether this is to be an unmixed advantage must of course depend upon the discretion of those concerned. Rightly used, it may even prove a boon of some considerable curative influence. A certain gain which it confers is of course the comparative leisure allowed to attendants on the sick. There is no answering bells to find out what is needed, the door of the sick-room is less frequently opened, and fatigue generally, as also the risk of infection, is materially lessened. The value of this form of communication in hospitals is obvious. We would suggest its more general adoption were it not that we fear that in many cases the cost might prove a barrier. It would be easy to speak at greater length upon this topic, but it is hardly necessary when the public already recognise, at least in theory, the position of this useful invention among the amenities of life.

BACTERIOLOGY AND PRACTICAL MEDICINE.

THE following interesting survey of the position of bacteriology with respect to medicine is transcribed from the *Centralbl. für Bacteriologie* (No. 18). It appears as an abstract, by Dr. Bujwid of Warsaw, of papers by Dr. Hoyer in the Polish journal *Gazeta Lekarska*. The author, who was the first to commence working at bacteriology in Warsaw, discusses the changes which medicine has undergone by the study of the parasitic origin of infectious diseases, and arrives at the following results:—All researches hitherto undertaken have aimed at learning the excitants of disease; very many of them have been discovered, and many have been profoundly studied, so that the cause of nearly all infectious diseases has been made known; but bacteriology has hitherto confined itself to these limits. Practical medicine in the more limited sense—prophylaxis excepted—has gained very little therefrom, but it may be hoped that the medicine of the future will play quite a different part, in consequence of the deeper knowledge of the various bacteria and their properties. Many purely empirical drugs will be rejected, and in their stead will be employed those which bear directly upon the morbific agent, or which act by strengthening the resistance of the organism. Unfortunately many questions still remain open. We know for instance, very little of the way in which bacteria influence the physiological life of the organism. We cannot as yet determine why many micro-organisms which are introduced into the body in enormous quantities with water, air, or food do not give rise to derangements, or in what manner the really harmful organisms disappear from the blood or organs of some animals. Of great importance for the practitioner are the facts that similar groups of diseases can be excited by wholly different micro-organisms. Abscesses are produced, for instance, by the action of staphylococcus aureus and albus, streptococcus pyogenes, micrococcus tetragenus, and others. Erysipelas following wounds depends not only on the streptococcus erysipelatis of Fehleisen, but also on other streptococci and micro-organisms. Pneumonia is not only excited by Friedländer's pneumonococcus, but also by other bacteria. Two very similar diseases—cholera asiatica and cholera nostras—arise from two very different kinds of bacteria. There are other facts of still greater importance, such as mixed infections. Rosenbach found many very different bacteria in the same abscess. The same is the case with septic infection of wounds. Similarly, as Wiegandt has observed, a kind of streptococcus is occasionally associated with tubercle bacilli. Dr. Dunin has shown that certain complications of typhus depend on the presence of other bacteria &c. When all these questions are solved, then our system of diseases will also be changed; we shall then no longer group them according to symptoms, but causes. There still remain many such questions unsolved. We do not know, for example, upon what depend the different results of experiments on animals when we inject small or large quantities of bacteria. Lastly, we also know very

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little of the reason why individuality plays so large a part in the manifestation of disease. Very interesting but unexplained is a research pursued by Wysskowitsch. He found that bacteria which had no effect on healthy animals excited diseases in other animals whose organism was slightly deranged. Thus injections of staphylococcus excited endocarditis in animals whose heart valves were injured. When all the foregoing and many like problems are solved, then it will become more easy to employ bacteriology in practical medicine, and then we shall learn to estimate rightly the great value of this new study.

BELGIAN JUDGES ON THE VALUE OF MEDICAL SERVICES.

BELGIAN judges would seem to entertain a very poor appreciation of the value of a medical man's time and services, if we may judge by a case that has recently been tried at Louvain. A medical man in country practice, having attended a wealthy old bachelor for some five months before he died, sent in his account to the executors, who disputed it as exorbitant, and so the doctor was compelled to endeavour to recover his fees by an action in a court of law. The account amounted to 1175 francs (£47), which comprised thirty-eight consultations with a Brussels physician at 20 fr. (760 fr.); fifty-six day visits at 5 fr. and five night visits at 10 fr. (330 fr.); medicines, 85 fr. The defendants denied that the visits with the physician were consultations, and they offered 2 fr. for each day visit and 3 fr. for each night visit. The court, however, "considering that the patient lived three miles from the doctor, who was obliged to make visits at definite predetermined hours along with a colleague from Brussels, and that night journeys, especially in winter, are troublesome," decided that "day visits might be equitably fixed at 2·50 fr. and night visits at 5 fr."; so that all that was allowed the unfortunate practitioner was 235 fr. for ninety-four day visits, 25 fr. for five night visits, and 85 fr. for medicines (the only item which was not disputed), so that the total was cut down to 345 fr. (£13 16*s.*)—a magnificent remuneration, indeed, for such an attendance! A cab-driver would certainly expect more for a similar number of journeys.

ENTERIC FEVER AT BURNRIGGS.

ALTOGETHER, some thirty cases and four deaths have occurred during the prevalence of enteric fever at Burnriggs; and it is stated that the disease is due to pollution of the drinking-water. It is certainly discreditable to find that so many outbreaks are brought about by conditions the removal of which should form part of the current sanitary work of districts. But we fear that there are in the Carlisle rural district many spots where sanitary reform is needed, for it is locally alleged as a reason for inspection by the Government that fever of some kind is nearly always present. The only satisfactory feature of the story is the abundant private help that is being given to the sufferers and their families.

METHODS OF PRODUCING CHLORINE.

PROFESSOR J. CAMPBELL BROWN recently exhibited at the Society of Chemical Industry in Liverpool a new form of apparatus for producing chlorine when required for disinfecting and other purposes. Balls of hypochlorite of lime and gypsum are treated with hydrochloric acid, the supply of which is regulated by the pressure of gas in the generator. Dr. Hamburger has used for this purpose a large flask filled with hot hydrochloric acid, into which a solution of chlorate of soda is allowed to drop by means of a capillary syphon.

THE PATHOLOGICAL SOCIETY.

As will be seen from the report in another column, the meeting of the Pathological Society last Tuesday was rich in interesting matter. Mr. Treves added one more to the list of examples of tumour formation on the site of the branchial arches, his case presenting some noteworthy features. Mr. Bland Sutton's case of "Spina Bifida Occulta" was particularly suggestive, not only from the confirmation it gave to Neugebauer's view of the production of spondylolisthesis, but even more from the remarkable concurrence of numerous malformations of the gastro-intestinal tract (including atresia both of the pharynx and of the anus), with defect in the spinal cord. Mr. Sutton held that such association told strongly in support of the view, which he has elaborated in detail elsewhere, of the common origin of the cerebro-spinal axis and the alimentary tract. The exhibition of diseased adrenals from two well-marked cases of Addison's disease by Drs. Sainsbury and S. West elicited from Dr. Wilks the emphatic reiteration of his belief that the affection is an "essential disease of the suprarenal bodies," and not the result of an "adventitious product, like tubercle"; and he claimed as supporting this view the fact that in Dr. Sainsbury's case one of the capsules had undergone almost entire atrophy. Mr. Eve reopened the subject of the nature of scrofula, and related inoculation experiments in disproof of the conclusion arrived at by Arloing that there is an essential difference between the scrofulous and tubercular virus. His suggestion that the terms "struma" and "scrofula" should be wholly discarded from the nomenclature has been practically adopted for many years, most pathologists fully concurring in the tubercular nature of so-called scrofulous lesions; if the old terms are retained, they certainly no longer bear their old significance. Cohnheim, Friedländer, and Koch have done much to break down the distinction; and it is six years since at the London Congress the like doctrine was urged by Dr. Grancher, Mr. Treves, and others. Far more novel were the interesting results related by Dr. Wooldridge of the experimental production in dogs of multiple portal thrombosis by the injection into the jugular vein of a small quantity of a proteid substance, which has the remarkable power of causing coagulation within the body. The effect on the liver was to produce areas of hæmorrhage, which were not unlike "hæmorrhagic infarcts" in other organs, although Dr. Norman Moore questioned the appropriateness of the use of that term in connexion with them. The secondary effects included coagulative necrosis of the hepatic cells, fatty degeneration, and cirrhosis. Dr. Wooldridge stated that his inquiry was still in a preliminary stage, but considered that it pointed to the influence of blood stasis in the production of organic lesions, which may come to have a very wide application.

DRINK LEGISLATION IN AUSTRIA.

THE Austrian Government have, it is stated, introduced into the Reichsrath a strong measure for the prevention of drunkenness. The reason alleged is the alarming deterioration in the physique of young men enrolled for military service, owing to the spread of spirit drinking amongst the humbler classes. It will be interesting to see if the provisions of this measure are accepted. They would be difficult to carry in this country, where freedom even to get drunk is still jealously guarded. Spirit shops are to be closed at five on Saturday afternoon, and to remain so till five on Monday morning. Ordinary storekeepers are not to be allowed to sell spirits, the sale of which is to be restricted to public houses, confectioners, and specially licensed stores. Dealers serving spirits to intoxicated persons are to be liable to arrest or fine. No debt for spirits consumed on the premises

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can be recovered by law if the amount exceeds the value of five litres. The magistrates are empowered to forbid retailers to serve spirits to habitual drunkards for any period up to twelve months. Similar legislation already exists in Galicia. The proposal now is to extend it to all Austria. The preamble of the measure sets forth that it is a direct outcome of the Hygienic Congress. It is a striking illustration of the impotence of our own Parliament that no legislation for the restriction of our enormous drinking habits has any chance of being entertained.

ST. JOHN AMBULANCE ASSOCIATION.

IN the annual report of the English Chapter of the Order of St. John of Jerusalem, a number of instances are given of the valuable "first aid" which has been afforded during the year by men who have gone through a course of instruction in the ambulance classes. Suggestions are offered for the raising of local funds to meet the expenses connected with an extension of the system in the mining districts, where accidents are almost of daily occurrence. Provision is made in the Mines Regulation Bill for stretchers and bandages being kept in readiness. But "to have really efficient ambulances requires not only proper appliances, but also willing workers, and it rests with the men themselves to make the movement thoroughly efficient and successful." There can be no doubt that the instruction which has been given under the auspices of the Society has been in a marked degree useful, and especially in the case of the police and of railway *employés*. The report also gives some details of the work done during the year by the Invalid Transport Corps for the conveyance of sick and injured persons (infectious cases excepted). They rendered valuable aid at the India and Colonial Exhibition and the International Exhibition at Liverpool, and this year they have had a station at the American Exhibition. Briefly, it may be stated that between July 31st, 1886, and July 31st, 1887, 290 invalids have been removed from one place to another by the corps, an increase of 116 over the number conveyed in the previous year. Reference is also made to the services rendered by the corps on the occasions of Her Majesty's Jubilee, the children's Jubilee celebration in Hyde Park, the march past of the Volunteers at Buckingham Palace, the laying of the foundation stone of the Imperial Institute, and the Lord Mayor's Show. The utmost credit is due to the members of the committee for the successful manner in which these works of kindness have been performed.

CHLOROSIS AND HEART DISEASE.

EXCESSIVE anæmia being present, and the heart not being hypertrophied, the diagnosis of the cause of heart murmurs is frequently very difficult. M. Duclos has returned to this battle-field of clinicians, and sums up his conclusions in the following propositions:—IN true chlorosis, no matter the number and site of the cardiac murmurs, the basic murmur is never absent, and is most often systolic. In true chlorosis the carotid murmurs, varied and more or less marked, are always present. In genuine chlorosis the bruits are generally more intense and more extensive than in heart disease, and are markedly out of proportion to the circulatory disturbance; further, the cardio-pulmonary circulation remains free, and any disturbance in it indicates the persistence of a valvular lesion, and generally of the mitral valve. We do not join issue with M. Duclos in the general tone of his arguments, which are sound enough so far as they go; but the most frequent clinical difficulty is not so much the differential diagnosis of severe chlorosis from heart disease, as it is the distinction or discovery of valvular lesion in the presence of less marked anæmia.

VOLUNTARY EARLY CLOSING AND SIR JOHN LUBBOCK'S BILL.

A PAMPHLET published recently by "An Old Bristol Shopkeeper" contains a vigorous protest against Sir John Lubbock's prospective Early Closing Bill, by which 8 P.M. will be fixed as the closing hour for shops in general on every day but Saturday. The author contends that this arrangement would practically cripple the trading opportunities of small dealers, who depend largely upon a late class of customers. He regards as bogus tales the bad effect on health attributed to the present system of shop management, and asserts that what is really ruinous is not the protracted duration of work, but its concentrated intensity, and the mismanagement or waste of leisure intervals in book-reading or exciting amusement, assisted by constitutional delicacy in the individual. He states also that the hard and exacting employer is no true type of his class, as the complaining assistant is not the representative of his; and that shopkeepers are, as a rule, favourably disposed to a voluntary early closing system. We are pleased to see that he is inclined to allow to assistants timely opportunities for physical recreation, and we heartily agree with his general statement that we may easily, but must not, have too much law on the subject. We cannot, however, while fully admitting the shrewd good sense of many of his observations, accept his views as affording a sufficient basis for the settlement of this question. He appears to have suffered but little in his own person from the evils of overwork, and consequently thinks little of them. He does not recognise the fact that the disinclination of shopkeepers to act independently retards very materially the progress of voluntary reform, that some combining stimulus appears to be needed, and that meanwhile assistants, who are comparatively at their employer's mercy, work for excessive periods without option for that employer's advantage, and undoubtedly suffer in consequence, physically and mentally. The case with Sir John Lubbock is not one of capricious law-making, and his measure, when it passes, will, we doubt not, be found to be sufficiently elastic to allow for the satisfactory expansion of trade, while restraining its tyrannical exactions. We agree with "An Old Shopkeeper" that voluntary efforts after improvement must be allowed full justice, but we would also take heed that meanwhile the feverish hurry of trade is not suffered to destroy the health upon which we build our hopes of this and the coming generation.

VACCINATION WITH CALF-LYMPH.

A CORRESPONDENT, writing to the *Echo*, complains that his child was vaccinated at the Animal Vaccine Establishment, and that five weeks afterwards an eruption appeared on the arms and legs. The child was received into St. Thomas's Hospital, where it has subsequently recovered. From inquiries we have made it appears that the child has suffered from an eruption due to bromide of potassium, and this circumstance has been fully explained to the parents, but to this the father makes no reference. The case is illustrative of the kind of efforts which are made by those opposed to vaccination to discredit this operation.

THEATRES AND HOSPITAL SUNDAY.

ACCORDING to a contemporary, the theatres have come to the help of the churches to swell the amount of Hospital Sunday collection in Birmingham. We also noticed that in that liberal town the Jews had arranged to hold a service on the Sunday so as to be in harmony with their Christian fellow-townspeople. Such facts really excite the conviction that great religious instincts are common to classes and creeds that are too apt to regard each other as practically

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opposed. In the theatres the orchestras combined to provide a suitable musical service, and the Rev. Arthur Mursell lectured. Why should London not in this, as in other matters relating to Hospital Sunday, follow Birmingham?

H.I.H. THE CROWN PRINCE OF GERMANY.

WE learn, from trustworthy authority, that the inflammation of the larynx of His Imperial Highness is less in degree and more limited in extent. The voice is clearer and stronger. The general health of the Crown Prince is excellent. His appetite is good. He sleeps well, and takes walking exercise daily when the weather admits. He leaves Baveno this week for Villa Zgirio, San Remo. We hear also that both Prince William and Prince Henry were much pleased with the improvement in the Crown Prince's voice when they visited him on the occasion of his birthday.

SIR R. RAWLINSON ON SANITATION.

SIR ROBERT RAWLINSON turned to good account his opportunity at the municipal banquet given by the Mayor of Stratford-on-Avon. He reminded his hearers that the town had suffered severely from fever in past times, and that it was believed Shakspeare had died from the insanitary conditions surrounding him; and he pointed out that it behoved the residents of Stratford-on-Avon, to which all the English-speaking world came, to make it perfect in all its sanitary arrangements. In England, he said, local authorities were not coerced by a central government; municipal institutions were the foundations of an Englishman's liberty, but it was the more necessary that they should do their best to perfect them. Sir Robert Rawlinson's words should be taken to heart; it is often said that local government is on its trial, and there are many who are too glad to see in its failures reason for altering our method of administration. It is by the exercise of the powers they possess, and by the improvement of districts under their control, that these authorities can best justify their existence.

THE MOXON MEMORIAL.

A MEETING of the committee of the Moxon Memorial was held at the Royal College of Physicians on Tuesday, Nov. 1st, Sir William Jenner in the chair. The treasurer, Mr. Clement Lucas, stated that the subscriptions amounted to £643 8*s.* 6*d.*, and the expenses of printing, postage, and advertising to £32 11*s.* 8*d.*, leaving for the disposal of the committee a sum of £510 16*s.* 10*d.* It was proposed by Sir Dyce Duckworth, and seconded by Mr. Sydney Turner, that £105 should be devoted to the erection of a suitable memorial of Dr. Moxon at Guy's Hospital. It was proposed by Dr. Pavy, and seconded by Mr. Durham, that the remainder of the sum collected (amounting to upwards of £500) should be offered to the Royal College of Physicians to found a Moxon Medal; and it was further suggested that it appeared most appropriate to found a gold medal, to be conferred every third year upon one distinguished for clinical observation and research, whether in medicine or surgery, similar to the Baly Medal in physiology. These resolutions were carried unanimously. After a vote of thanks to the President, the meeting adjourned.

EPIDEMIOLOGICAL SOCIETY.

THE first meeting of this Society for the session 1887-88 will be held at the rooms of the Medical Society in Chandos-street, Cavendish-square, W., on Wednesday the 9th inst., at 8 P.M., when the President, Dr. Thorne Thorne, will deliver the inaugural address, on the Progress of Sanitary Medicine during the Victorian Era.

SIR WILLIAM GULL.

WE are glad to be able to report continued improvement in the condition of Sir William Gull. His strength is now equal to sitting up for a short time daily.

PARENCHYMATOUS NEPHRITIS IN CHILDHOOD.

AUTHORS are not in accord on the subject of the frequency of chronic parenchymatous nephritis in childhood. Many have maintained that the affection is a rare one, and some hold that it is by no means uncommon. Satisfactory statistics on the question are still a desideratum. Baginsky and Ferreira are two of the most recent authors who believe that the disease is not infrequent. The latter considers that diseases of the skin, especially of an impetiginous or ecthymatous character, and involving an extensive cutaneous area, are frequent causes of this form of Bright's disease. The treatment which has proved of most value was the use of astringents of tannin, perchloride of iron, iodide of starch, and diuretic salines, which agents increase the quantity of urine and diminish the albuminuria. Rectal injections of cold water were also employed with benefit; and inhalations of oxygen should not be forgotten, according to Jaccoud and Ferreira.

ST. THOMAS'S HOSPITAL.

AT the Bacteriological Laboratory at this hospital, under the direction of Mr. Ballance and Mr. Shattock, experimental inquiries are still being conducted. It is proposed to remove the apparatus to a larger and more commodious apartment, but no special licence has been granted for experiments on animals. It is now two years since the formation of this laboratory, and much good work has already been done in connexion with it.

PHTHISIS AND CONTAGION.

IN an article in *La Clinique* on the "Contagiosity of Tuberculosis," by MM. Destrée and Slosse, it is stated that from inquiries and observations made in Dr. Desmeth's wards during the present year it was found that, of fifty patients suffering from tuberculosis, contagion could be regarded as an undoubted etiological factor in twelve, heredity in thirty; no cause could be traced in the remaining eight. The two factors, the authors say, are frequently present, and it is difficult to determine to which of them the preponderating influence is to be ascribed.

ARCHANGEL MEDICAL SOCIETY.

WE do not often hear anything of medical matters on the shores of the White Sea. There is, however, a little band of hard-working practitioners in that inhospitable region, who some twenty years ago formed themselves into a Medical Society, which now comprises twenty-eight medical members, twelve of whom are resident in Archangel itself. In the volume of proceedings which has just been published there is an address by the president, Dr. Kosmovski, on the importance of bacteriology to medical statistics, a paper on a sulphur spring of which the town boasts, and a number of statistics of disease in Archangel during the first half of the present year.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Señor Dr. Don Rafael Ariza y Espijo, founder of the Institute of Operative Therapeutics, Madrid, a distinguished Spanish laryngologist, and author of an important monograph on Laryngeal Tuberculosis.—Dr. Leo Zenkovski, Professor of Botany in Kharkoff.

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THE LATE DR. PANTALEONI.

IT is proposed to erect a monument in memory of the late Dr. Pantaleoni of Rome in his native town of Macerata, and it has been suggested that some of his many friends in this country may like to subscribe to it. Small subscriptions, we are assured, will suffice, for names more than moneys are desired. Contributions towards the carrying out of the project may be sent to the Marchesa Alessandre Costa, Macerata, Italy.

FOREIGN UNIVERSITY INTELLIGENCE.

Kiel.—Count Ferdinand von Spee, *privat-docent* in Embryology and Physiological Anatomy, has been appointed to the post of Prosector of the Anatomical Institute, in succession to Professor Pansch, who was lately drowned.

Leipsig.—Dr. Freitag has qualified as *privat-docent.*

THE Vaccination Department in Belgium has issued a circular, addressed to those who use the department's lymph, stating that during the great heat of the summer months this year the vaccinations performed with the calf lymph supplied by it had not been as successful as usual, and that this had been observed in Stockholm, Linz, Elberfeld, and other places abroad, as well as in Belgium. The director thinks that the unfavourable conditions are now past, and is confident that the vaccine he is now able to supply is quite as efficacious as usual. He suggests, however, that in future medical men will do well to avoid as far as possible arranging vaccinations for the months of June, July, and August.

MR. WYNNE E. BAXTER, coroner of the Eastern Division of Middlesex and for the county of Sussex, has forwarded a request to the Lord Chancellor to exonerate him from the latter office. The action is an unusual one, and the decision of the Lord Chancellor will be awaited with some curiosity, for while precedents are not wanting where the freeholders of a county have petitioned the Lord Chancellor to remove a coroner from office, there is no case on record where the coroner of his own motion has adopted a similar course.

IN the Chancery Division of the High Court of Justice on the 28th ult., Mr. Justice North refused to grant an application to strike out the claim in an action brought by several governors of the Glamorgan Infirmary against the committee of that institution, relating to the recent election of an honorary ophthalmic surgeon.

WE would draw attention to the three female scholarships to St. Anne's Society, the nomination of which is in the hands of the Council of the Royal Medical Benevolent College. Application must be made to the office of the College, 37, Soho-square, London, not later than Nov. 7th. Particulars will be found in our advertisement columns.

THERE were 103 members present at Charing-cross Hospital when Mr. Bellamy delivered his post-graduate lecture on Abdominal Surgery. As the class now numbers 125, Dr. Mitchell Bruce will be assisted by three of his colleagues to-day (Friday), when he gives his lecture and demonstrations on Diseases of the Heart.

AT the Clerkenwell Police Court on the 2nd inst., an order was made for the removal to a hospital of three children suffering from scarlet fever. The father of the children, it was stated, was a tailor, and, with the consent of his employer, was still engaged in his trade.

SMALL-POX is reported to be prevailing to an alarming extent in Sheffield. The public fever hospital is full of patients and many are waiting to enter. The corporation have established a convalescent hospital, and are making preparations for the erection of a temporary hospital outside the town.

MR. WHARTON JONES, F.R.S., contributes to the *Irish Ecclesiastical Gazette* of Oct. 15th, a brief notice of the beginnings of the School of Physic in the University of Dublin. The article, which is also published separately, will have interest especially for members of the profession in the sister isle.

M. PASTEUR'S health is said to be still in an unsatisfactory condition, so much so as to necessitate confinement to his house.

DR. BERNARD KRAUS, chief editor of the *Allgemeinen Wiener medizinischen Zeitung*, died on the 28th inst., aged fifty-nine.

IN the current number of *Illustrations* appears an excellent portrait of the late Dr. Wilson Fox, accompanied by a biography.

HEALTH OF CALCUTTA.[1]

FROM the annual report of the health officer of Calcutta for 1886—the first drawn up by Dr. W. J. Simpson—it appears that the death-rate for the year was only 26·4, being lower than any recorded for the last ten years except that for 1880, and 3·1 under the average of the decade.[2] But Dr. Simpson very fairly remarks that this low rate is in a great measure "due to the fact that the population of Calcutta is largely an immigrant one, and for the most part at an age when the chances of life are at their best. The census figures show that more than half the population are in the full vigour of manhood and womanhood, and that the majority, when they become seriously ill, leave Calcutta for their homes." The death-rate of females is higher than that of males, being respectively 33·7 and 22·7 per 1000 living. The mortality of infants under one year is 404 per 1000, and it is stated that one-fourth of these deaths occur "within fifteen days of their birth, and nearly 90 per cent. of these are registered as dying from tetanus." A table in the report shows the deaths under one year to have been 498 per 1000 of Mahomedans, 405 of Hindoos, 175 of Christians, and 380 of other classes. "To be placed against this great infant mortality is the fact that at the Eden Hospital, where ordinary sanitary arrangements exist, the mortality from tetanus is *nil.*"

The ratio of deaths above stated (26·4) is that for the town only; in the suburbs it was 40·5 per 1000, being the lowest ratio in the decade, and 9·1 under the average of the last nine years. The months in which the greatest number of deaths occurred in Calcutta were December, November, October, and January, ranging from 1377 to 1077; and the smallest number was 688 in June. Fevers were assigned as the cause of more than one-fourth of the deaths in the town, the ratio being 7·90 per 1000; cholera furnished 4·25 and bowel complaints 2·90 per 1000. In the suburbs the ratios were by fevers 14·2, cholera 7·3, and bowel complaints 6·6 per 1000. There was no great prevalence of cholera during the first nine months, but in October a very severe epidemic began, and lasted till the end of the year. Of 1741 deaths in the town, 942, and of 1845 in the suburbs, 1022, occurred in the last quarter. "The incidence of cholera on European sailors using this port, and who, when on shore, frequent many of the worst parts of the native quarters, often breathing its foul air, and partaking of drinks diluted not always with hydrant water," was very heavy, the death-rate

[1] Report of the Health Officer of the Town of Calcutta for 1886, and Resolution of the Commissioners recorded thereon. (W. J. Simpson, M.D., health officer, Calcutta. 1887).

[2] A subsequent table states the mortality of 1880 at 26·9 and the average at 30·6, instead of 29·5 but no clue is given as to the cause of the difference between Tables V. and X.

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being as high as 11·1 per 1000. Some details with reference to the parts of the town and suburbs in which the epidemic prevailed are given, with illustrative maps. Only 15 deaths from small-pox occurred during the year. Every precaution was taken to prevent the spread of the disease by vaccinating the unprotected in the neighbourhood and revaccinating a large number of persons who had come in contact with the infected.

Dr. Simpson, in his report, has gone at some length into the subject of the defects in the present system of registration of deaths, the need of new building regulations, the "regulating powers in the Municipal Bill being of such a general character that they admit of nothing practical," the disposal of refuse, the material for filling tanks, the need of systematic inspection of premises, and of systematic inquiry into disease. For the latter purpose it is obvious that an organised sanitary staff is necessary, similar to that which was employed during the prevalence of cholera but subsequently discontinued by the Commissioners on the score of economy. The inspection of food brought to the markets has been carried on successfully, and in October an Adulteration of Food Act was passed, which promises beneficial results. This appears to have been much required, for of seventy-one samples of ghee which were examined thirty-seven were found adulterated. The hydrant water was tested regularly, and found to be of good quality; but it was very different in the case of the tank waters, of which seventy-three were examined, "and all pronounced to be unfit for use of any kind." Notwithstanding all that has been done of late years, for which the Commissioners are entitled to much credit, there is evidently still great need of, and room for, extended sanitary improvement both in the town of Calcutta and the suburbs.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Parish of Lambeth.—Dr. Verdon gives an interesting account, in his annual report for 1886, of the conditions under which mortality has steadily for many years past diminished in the southern parishes of the metropolis, and he points out that the rate for Lambeth last year was 19·2 per 1000. Referring to causes of death, he relates an important circumstance in connexion with St. Thomas's Hospital. A child, having been injured in the Westminster-bridge-road, had to remain for several weeks under treatment in that hospital, when suddenly it was seized with a fatal attack of diphtheria, for which no cause could be ascertained. A month later a boy was taken to the same hospital, and, after partial recovery from an operation he had undergone for hernia, he, too, was attacked with diphtheria, and died. Within a period of eight months seven cases of a like nature received into the hospital for operation or from accident died of diphtheria, and, according to Dr. Verdon, the cause remains a mystery. He, however, is inclined to associate the occurrences with the precipitated filth which at low water is exposed beneath the windows of the hospital; and he presses for some adequate solution of the vexed question of the proper disposal of the metropolitan sewage. Summer diarrhœa was above the average last year as a cause of death, 240 fatal attacks being recorded; and, having regard to the changes which milk so rapidly undergoes, he advises that parents should never feed their children with milk that has not been boiled. We would go further, and urge the same precaution in the case of adults. The current sanitary work of the district shows progress in the removal of conditions favouring nuisance and ill-health. Disinfection is well carried out, and some substantial work was done under the Sale of Food and Drugs Act, penalties and costs having been obtained in twenty-three cases.

St. Luke's.—In this metropolitan district the deaths for 1886 were at the rate of 22·8 per 1000, the birth-rate being 38·3 per 1000. A statement is given as to infectious diseases, and the vaccination officer and inspector of nuisances give the results of the working of their respective departments. Dr. Tarrow points to the need for efficient means of disinfecting and destroying infected articles, and he explains that a house-to-house inspection has been systematically carried out. The report is mainly statistical, and it is interesting for local rather than general purposes.

Wolverhampton Urban District.—Dr. Malet shows in a convincing way the great advantages that have followed on early isolation in the borough infectious hospital of cases of the various specific fevers, and, by comparing the east and west districts of the borough, he is able to show that the east, which uses the hospital most, is the one that has had the greatest immunity from the spread of these fevers, and this although that district presents greater facilities for the extension of an infectious fever than does the west. Diarrhœa was very prevalent in the summer of last year, and Dr. Malet in discussing its cause very wisely sets aside the question of fruit being plentiful as a food. The fact is that fatal diarrhœa is, in most places, mainly prevalent at an age that forbids the notion of fruit being an element of any importance in determining the cause. An air containing emanations from midden-privies or from a soil which has been saturated with sewage and slop refuse is a far more potent cause, and one that needs removal in the interests of more than one preventable disease. The corrected death-rate for 1886 is 21·3 per 1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5699 births and 3808 deaths were registered during the week ending October 29th. The annual rate of mortality in these towns, which had risen from 17·5 to 19·8 per 1000 in the preceding three weeks, further increased last week to 21·5. During the first four weeks of the current quarter the death-rate in these towns averaged 19·2 per 1000, and was 1·2 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·1 in Leicester, 15·1 in Hull, 15·2 in Halifax, and 15·6 in Plymouth. The rates in the other towns ranged upwards to 25·0 in Manchester, 25·1 in Bolton, 26·8 in Blackburn, and 32·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 382 and 392 in the preceding two weeks, further rose last week to 464; they included 138 from scarlet fever, 76 from measles, 68 from whooping-cough, 65 from diarrhœa, 50 from "fever" (principally enteric), 45 from diphtheria, and 22 from small-pox. These zymotic deaths caused the lowest death-rates last week in Leicester, Plymouth, and Halifax; and the highest rates in Sheffield, Birkenhead, and Bolton. The greatest mortality from scarlet fever occurred in Manchester, Bristol, Huddersfield, Preston, and Birkenhead; from measles in Bradford, Blackburn, Bolton, and Derby; from whooping-cough in Wolverhampton; and from "fever" in Derby and Bolton. The 45 deaths from diphtheria in the twenty-eight towns included 31 in London, 3 in Liverpool, 3 in Salford, and 2 in Huddersfield. Small-pox caused 19 deaths in Sheffield, 1 in London, 1 in Bristol, and 1 in Birmingham. Ten cases of small-pox were under treatment in the metropolitan hospitals receiving cases of this disease, showing a further increase upon recent weekly numbers; while the number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 2532. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding three weeks from 206 to 370, further rose last week to 485, and exceeded by 108 the corrected average. The causes of 78, or 2·0 per cent., of the 3808 deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Wolverhampton, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool, Blackburn, Sheffield, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·3 and 19·1 per 1000 in the preceding two weeks, rose again to 22·2 in the week ending Oct. 29th; this rate exceeded by 0·7 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 15·1 and 17·9 Greenock and Paisley, to 24·3 and 25·9 in Glasgow and Perth. The 554 deaths in the eight towns last week

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showed an increase of 76 upon the number returned in the preceding week, and included 26 which were referred to whooping-cough, 19 to scarlet fever, 11 to diarrhœa, 6 to "fever" (typhus, enteric, or simple), 5 to measles, 3 to diphtheria, and not one to small-pox; in all, 70 deaths resulted from these principal zymotic diseases, against 79 and 68 in the preceding two weeks. These 70 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by 0·3 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 30 and 16 in the previous two weeks, rose again last week to 26, of which 7 occurred in Glasgow, 6 in Dundee, and 5 in Edinburgh. The deaths from scarlet fever, which had been 23 and 22 in the preceding two weeks, further fell to 19 last week, and included 9 in Glasgow and 4 in Dundee. The 11 fatal cases of diarrhœa included 4 in Glasgow and 4 in Dundee. The 6 deaths referred to "fever," of which 4 occurred in Glasgow, corresponded with the number in the previous week. The fatal cases of measles, which had risen from 2 to 5 in the preceding three weeks, were again 5 last week, and included 2 in Edinburgh and 2 in Dundee. Of the 3 deaths referred to diphtheria, 2 occurred in Glasgow. The deaths attributed to acute diseases of the respiratory organs in the eight towns, which had risen from 87 to 120 in the preceding three weeks, further rose to 124 last week, and exceeded by 22 the number returned in the corresponding week of last year. The causes of 71, or nearly 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 27·3 and 24·1 per 1000 in the preceding two weeks, rose again to 32·1 in the week ending October 29th. During the first four weeks of the current quarter the death-rate in the city averaged 26·9 per 1000, the mean rate during the same period being but 18·3 in London and 19·1 in Edinburgh. The 217 deaths in Dublin last week showed an increase of 54 upon the number in the previous week; they included 11 which were referred to scarlet fever, 11 to diarrhœa, 9 to measles, 7 to "fever" (typhus, enteric, or simple), 4 to whooping-cough, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 36 and 29 in the preceding two weeks, rose again last week to 42; they were equal to an annual rate of 6·2 per 1000, the rate from the same diseases being but 2·5 in London and 2·2 in Edinburgh. The fatal cases of scarlet fever, which had been 11 and 8 in the previous two weeks, rose again to 11 last week. The 11 deaths from diarrhœa exceeded the number recorded in recent weeks. The fatal cases of measles, which had declined from 13 to 5 in the preceding four weeks, rose again last week to 9; the deaths referred to "fever" and to whooping-cough differed but slightly from recent weekly numbers. The deaths both of infants and of elderly persons showed a considerable increase. Seven inquest cases and 2 deaths from violence were registered; and 64, or more than one-fourth, of the deaths occurred in public institutions. The causes of 31, or more than 14 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Brigade Surgeon Elkington, Grenadier Guards, Chief Medical Officer of the Brigade of Guards, will be placed on the retired list on the 5th instant, under the Age Clause of the Medical Warrant. He will be succeeded as Brigade Surgeon by Surgeon-Major W. R. Lane, of the Scots Guards. Deputy Surgeon-General A. F. Bradshaw replaces Deputy Surgeon-General J. Ferguson in Medical charge at Rawal Pindi.

ADMIRALTY.—The following appointments have been made:—Surgeons John Frederick Bate, John Andrews, and John Eustace Webb, to Plymouth Hospital, for temporary service; Surgeons Edward Ashley Spiller and Edward Henry Meaden, to Haslar Hospital, for temporary service (dated Nov. 1st, 1887); and Mr. John J. M'Nulty, to be Surgeon and Agent at Derkmore.

ARTILLERY VOLUNTEERS.—1st Renfrew and Dumbarton: Surgeon J. W. Taylor is granted the honorary rank of Surgeon-Major (dated Oct. 29th, 1887).

RIFLE VOLUNTEERS.—1st Durham: Surgeon and Honorary Surgeon-Major S. W. Broadbent resigns his commission; also is permitted to retain his rank and to wear the uniform of his Corps on his retirement (dated Oct. 29th, 1887).

THE VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Surgeon and Honorary Surgeon-Major John Hornsey Casson resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Oct. 29th, 1887).—The Manchester Division: Shepherd McCormick Boyd, Gent., to be Surgeon (Supernumerary, dated Oct. 29th, 1887).

Correspondence.

"Audi alteram partem."

"THE PRESYSTOLIC MURMUR, FALSELY SO CALLED."

To the Editors of THE LANCET.

SIRS,—Having endeavoured to prove the correctness of the late Dr. Barclay's explanation of the causation of the "presystolic"[1] bruit, in a paper in vol. vii. (1876) of the St. Thomas' Hospital Reports, and in a communication to the Clinical Society last year (vol. xx., p. 1), I was interested in reading Dr. Dickinson's views upon the subject lately published in your journal. I venture to offer this contribution to the discussion of the subject because I think that something more may be said in support of Dr. Barclay's views, and because I am unable to agree with Dr. Dickinson in one point of his argument. I think the matter can be most succinctly put from this point of view (1) by showing that the physical conditions of the valvular mechanism are such that there must be in cases of mitral stenosis a ventricular systolic bruit, distinguishable or indistinguishable by auscultation, having all the characters of the "presystolic" bruit and the same relations to associated diastolic and systolic bruits, and (2) by pointing out that Dr. Barclay's view is confirmed by clinical observations which show that the "presystolic" period of the ventricular systole is sufficient for the production of an audible bruit, and too great to allow the supposition that a bruit running up to the first sound could be produced by auricular contraction.

1. However perfectly the healthy valvular curtains, with their thin membranous edges, may perform their function, rigid and resistant mitral flaps cannot be brought into contact by the ventricular contraction without some reflux of blood, more or less, according to circumstances. The sound produced by this unavoidable reflux, if audible, would be of progressive intensity until abruptly arrested by contact of the curtains, the sound of valvular tension at the moment of closure being accentuated from delay of the contact of the curtains to a later and more active period of the systole. With rigidity of the mitral valves, the first sound must be preceded by a regurgitant bruit, audible or inaudible to an auscultation, having these characters of the "presystolic" bruit, which are those of arrested reflux. The consideration of another feature of the physical conditions shows that this "presystolic" regurgitant bruit would have the other clinical characters of the well-recognised murmur—i.e., its rough, harsh sound and attendant tremor, its distinction by this character from a succeeding systolic bruit, and its fusion with a precursory diastolic murmur when occurring in association with them. The loudness and harshness of the bruit produced at the mitral valve by the comparatively weak force of the blood stream entering the ventricle or running back through the open valve before contact of the curtains is due to the flaps themselves being held away from the ventricular walls by shortening of the chordæ tendineæ, or by cohesion at the cusps, and being thrown into vibration by the fluid stream passing between them. These valvular vibrations are transmitted by the chordæ tendineæ to the apex of the ventricle, and thence to the part of the chest wall in contact with it, where they may be perceptible as audible and sensible vibration limited to that region. Sonorous vibrations of the valvular curtains set up by the inflowing blood stream may be continued by "presystolic" reflux through the still patent valve, and the bruits of influx and reflux will then

[1] The term "presystolic" is here used as equivalent to "pre-systolic sound."

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be fused in a continuous sound like the vibrations of a fiddle-string under the backward and forward movement of the bow. But when the mitral curtains have been brought into contact their vibrations will be arrested or deadened, and the whistling sound of regurgitation through chinks between the closed valves is due to the fluid vibrations of the issuing blood. Hence the difference necessarily existing between a "presystolic" bruit, whether direct or regurgitant, and a systolic bruit of valvular incompetence. The former may be compared to the musical notes produced in a wind instrument by the vibrations of the musician's lips in the mouthpiece, and the latter to the whistling sound produced in it by an inexpert person forcibly blowing into it through firmly compressed lips. It thus appears to me that a consideration of the physical conditions of the valvular mechanism in cases of mitral stenosis shows not only that Dr. Barclay's explanation of the causation of the "presystolic" bruit is that suggested by its most obvious character, but that in every such case there must be some "presystolic" regurgitation which would, if of sufficient duration, produce a bruit having all the clinical features of that bruit.

2. But there are not wanting clinical observations to show that this "presystolic" period of the ventricular systole is of sufficient duration for the production of an audible bruit in such cases. The slowness and deliberation of the heart's action, and the disproportionate lengthening of the interval between the second and succeeding first sound in such cases, when the patients are quiescent, was especially referred to by Dr. Barclay, and is a conservative adaptation of the heart's action to the impediment to its functions. That this is attended by a notable prolongation of the "presystolic" interval of the ventricular contraction appears from the direct evidence of the cardiograph. Tracings taken by Dr. Galabin and by the late Dr. Mahomed from such cases show an unusually long interval between the elevations corresponding with the auricular and ventricular contractions. But that which affords the most conclusive evidence on this point is the occurrence of a bruit at the base of the heart, having the same character and the same relation to the second sound that the "presystolic" bruit has to the first sound. A slight bruit of this kind may be not very uncommonly detected, and has been described by several authors. In a case of congenital disease of the pulmonary valve I have heard a "prediastolic" bruit as distinct and characteristic as a well-marked "presystolic" apex murmur.[2] But the conditions are far less favourable to the production of an audible bruit by reflux during the closure of rigid semilunar valves by the elastic resilience of a tense arterial trunk, than during the closure of a rigid and stenosed mitral valve by the comparatively slow and deliberate contraction of the ventricle commencing from a state of muscular relaxation. Hence the occurrence of a "prediastolic" bruit from thickening of the aortic or pulmonary valves, which can only be regurgitant, implies the proportionately frequent occurrence of a "presystolic" bruit from arrested reflux through a thickened but not wholly incompetent mitral valve.

Dr. Barclay's views thus appear to me to be founded on a basis of physical fact, and to be established by clinical observation. But the alternative view appears to me to be purely hypothetical. There would appear to be no proof that the auricular systole could produce a bruit having the character and rhythm of the "presystolic" bruit, which seems to me a great difficulty. Nor would there appear to be any direct evidence of the occurrence of the auricular systole in such immediate relation with the first sound in these cases, which I think is inconsistent with the indications of the cardiograph. Nor do I think that there are any clinical facts to support that view, which can be shown to be incompatible with the other.

I am, Sirs, yours obediently,

Oct. 24th, 1887. F. CHARLEWOOD TURNER, M.D.

To the Editors of THE LANCET.

SIRS,—I wish to add what little I can in support of the views that were so brilliantly and thoroughly put forward by Dr. Dickinson, because I believe them to be correct; and, if correct, they must prove eventually of some importance in regulating *treatment*, notwithstanding the fact that mitral stenosis can be diagnosed whichever view of the pathology of the murmur be accepted. For, I think, we may take it that every fact in physiology and pathology (morbid physiology as well as morbid anatomy) ultimately becomes of direct value in regulating the treatment of disease. Originally trained in the Edinburgh school, I was an unquestioning believer in the auricular-systolic theory of the production of the so-called presystolic murmur; but a series of cases that have been under my care in the Nottingham General Hospital during the last few years, and which have been followed to the post-mortem room, have compelled me to change my views; and when I read Dr. Dickinson's article I had for some time had a paper on the same subject in preparation,

When a heart is beating from 80 to 100 or more times a minute, the interval of time between the auricular systole and the ventricular systole forms such a small fraction of a second that several causes may make a murmur coincident with the beginning of the ventricular systole appear presystolic. The carotid pulse is sufficiently delayed to make a murmur accompanying the *commencement* of the ventricular systole appear to precede it, especially in a rapidly acting heart. But when the rhythm is ascertained by the finger applied to the præcordia, there is still room for error. In the majority of cases of mitral stenosis, from the time they are first recognised, and in all eventually, the right ventricle becomes dilated and hypertrophied (eccentric hypertrophy). The left ventricle is pushed further and further backwards and to the left, and is very little, and in some cases not at all, in contact with the chest wall. The cardiac impulse is diffused, and is chiefly due to the contraction of the *right* ventricle. Is the systole of the two ventricles quite synchronous in mitral stenosis, and, if not, which precedes the other? The great frequence of reduplication of the second sound shows that the systole of the two ventricles cannot be absolutely synchronous, though the difference may be so slight that it is not easy, or perhaps possible, to detect it by the ear as a reduplication of the first sound, especially as in the great majority of cases the sounds, which are longer than the second sound, would coincide in a great part of their duration. But I am satisfied that in dilatation of the right side reduplication of the first sound is more common than is often taught. I am aware that in reduplication of the second sound the pulmonary is generally said to precede the aortic, and that this precedence and the accentuation are said to be due to the increased vascular tension in the pulmonary circulation. I am not satisfied that the pulmonary does always precede the aortic second sound in reduplication, and although the increased vascular tension accounts satisfactorily for the accentuation, it can only indirectly make the semilunar valves close earlier or later. Even though the walls of the ventricle by their contraction have not succeeded in emptying the cavity, the contraction must have ceased, and the onward flow of blood ceased before the semilunar valves can close. Therefore the period of closure of the semilunar valves depends primarily on the ventricular systole. In mitral stenosis with dilated and hypertrophied right side, there is some reason to think that when the ventricles are contracting asynchronously, as shown by the reduplicated second sounds, and the prolonged, altered, or reduplicated first sounds, the left ventricular systole terminates before the right. The left ventricle, being, if anything, underfilled, has no difficulty in expelling its contents. The right, being overfilled with blood at increased tension, in labouring to empty itself, takes rather a longer time to complete the process. In such a case a murmur accompanying the commencement of the left ventricular systole might appear to precede the cardiac impulse, which was due to the latter part of the delayed systole of the right ventricle. This would not apply so much to the early stage of mitral stenosis, when the dilatation of the right side is not so great, and when the impulse of the left ventricle is fairly defined.

But I think it is reasonable to question whether in coördinating the senses of hearing and touch there may not be some loss of time in appreciating the latter; that is to say, whether the *sound* may not be conducted through the chest wall, stethoscope, and ear, to the brain in an appreciably less time than the movement of the ventricular systole can be communicated through the chest wall to the finger and along the arm to the brain. In a rapidly acting heart, and especially in the murmur in question, we are dealing with very small fractions of time. Another difficulty that has

[2] Clinical Transactions, vol. xx., p. 1.

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been frequently recognised, but never hitherto satisfactorily explained, is the large proportion of cases in which the so-called presystolic murmur is absent, and the still larger number in which it is only present during the earlier stage. The absence of the presystolic murmur when the stenosis is most advanced, *and while the auricle is still acting well, as shown by the efficient maintenance of the circulation*, is quite inexplicable on the auricular-systolic theory of the causation of the murmur. On the ventricular-systolic theory its frequent absence is more easily explained.

In the first stage of stenosis, when the segments of the mitral valve are still capable of closing without allowing any regurgitation, there is no murmur, but only a prolonged, altered, first sound, due to the thickening of the segments, and possibly to a partial want of synchronism in the sounds produced by the two sides of the heart. In the second stage, while the valve is still capable of closing, but moves slowly and so allows of some reflux at first, the characteristic presystolic murmur mounting up to the first sound is produced. In the last stage, when from increased rigidity or calcification the valve is rendered incapable of closure, only a systolic murmur indicative of regurgitation, and lasting during the whole systole, is produced; and the first sound is absent. A very good example of the latter condition has recently been under my care. The mitral orifice was reduced to a narrow slit, the margins of which were calcified, and so rendered incapable of closing. There was no presystolic murmur or first sound, but the latter was replaced by a loud systolic murmur, quite indistinguishable from that due to regurgitation from dilatation of the mitral orifice.

Before closing, may I point out that considerable hypertrophy, affecting the left side—though to a less degree than the right—is much more common in mitral stenosis than is usually taught. The duration of the disease is, I think, the chief element which rules the amount of hypertrophy. It is in young subjects and in rapidly fatal cases that there is little or no hypertrophy.

I am, Sirs, yours faithfully,

Nottingham, Oct. 20th, 1887. H. HANDFORD.

*** On the above subject we have received numerous other letters, for which we regret we are unable to find space.—ED. L.

THE CONSUMPTION OF ALCOHOL.

To the Editors of THE LANCET.

SIRS,—When I read your notice on Sir William Roberts's observations on the subject of alcohol I thought that the following extracts from a paper by M. Fournier de Flaix might be considered sufficiently important to find a place in your journal.

Of France, M. de Flaix says that "the birth-rate is less and the mortality greater in the departments where the consumption of alcohol is small; that neither crime nor suicide are in proportion to alcoholic consumption. Thus in the Seine-Inférieure the consumption of alcohol is three times that in the Nord; but suicide is only twice as frequent. In the Pas-de-Calais the consumption is twice as great as that of the Nord, whilst suicide is two and a half times less. In the Seine-et-Oise the consumption is one-half less than that of the Seine-Inférieure, but suicide in the former is twice that of the latter." Comparing different nations, he says, "France consumes less alcohol than the United Kingdom; its birth-rate is less, and its mortality, criminality, and suicide rates are greater. Italy consumes very little alcohol; its criminality is appalling (*effrayante*). Spain consumes three times less alcohol than Italy; its criminality is double. Sweden, Denmark, and Norway, with a population of about one-third, consume four times the quantity of alcohol consumed in Italy, and yet the criminality of the former is very small, whilst that of the latter is appalling (*effrayante*). Russia consumes four times the alcohol of France; its birth-rate is almost double. Thus, all the hypotheses are upset: the most vigorous, the richest, and the most moral of the nations are those which consume most alcohol. The prediction that alcohol will destroy civilisation and the human race is not supported by facts. If France, whose vitality is undergoing a crisis, were amongst the nations who consume most alcohol, she would serve as an excellent argument; but the consumption of alcohol by France is moderate, and it has been established already that those parts of France are the most vigorous where the consumption of alcohol is greatest. Alcohol is not, then, a scourge which threatens the European race with the fate of the Oceanic races, inasmuch as the nations who consume most alcohol are the nations whose criminality is least and whose vitality is greatest."

I am, Sirs, your obedient servant,

Eastern Hospitals, Homerton, E., Oct. 29th, 1887. ALEX. COLLIE.

SHORTHAND TEACHING IN MEDICAL SCHOOLS.

To the Editors of THE LANCET.

SIRS,—I have reason to believe that a large number of medical students desire to avail themselves of the help in their work that an acquaintance with shorthand can give them. The desire is certainly a reasonable one on the part of those who have to learn by oral teaching, and whose practical work involves the constant recording of observations. Shorthand enables the student to secure as much as he likes of a lecture, while the limitations of longhand are quickly reached; it enables him to keep up with the lecturer in attention, while longhand is always holding him back; and it enables him to record his observations in one quarter of the time required with longhand, and thus in a given period he can record twice as much, and yet have 50 per cent. more time in which to observe. The last is a very great help in case-taking, and in a competitive examination the student who writes shorthand has a considerable advantage over one who does not. Shorthand can be learned far better and far more quickly from a teacher than by self-instruction. But for students to go to a shorthand class at a distance, almost necessarily in the evening, means a loss of time that is practically prohibitory. I believe that every medical school at the present moment contains enough students desiring to learn shorthand to make it worth while to establish a class, and I would suggest to the authorities of the schools the desirability of ascertaining the extent of the demand, and, if it is considerable, arranging for the means of instruction. The time required for the study is not great. Half-an-hour's work a day will in six weeks enable the student to make use of shorthand in his daily work, and all the time needed for proficiency will be saved at least twice over in a single year. Teachers of shorthand are readily obtained. I shall be glad to give information on this or any other point connected with the subject.

I am, Sirs, yours truly,

Queen Anne-street, Oct. 31st, 1887. W. R. GOWERS.

"PARALYSIS OF THE ABDUCTORS OF THE VOCAL BANDS."

To the Editors of THE LANCET.

SIRS,—Without entering upon numerous other points of controversial nature in Dr. Gordon Holmes's paper on the above subject which has just been published in your columns, I wish to point out one important mistake, and also to state that the list of cases given in the paper is incomplete, and not quite correct in certain particulars.

The mistake referred to concerns the motor innervation of the larynx. The notion that the spinal accessory nerve supplies only the adductors of the vocal cord, but not the posterior crico-arytenoid muscle, is certainly erroneous. Bischoff's and Schech's experiments, which showed that the spinal accessory supplied both the adductors and the abductor, have again been recently confirmed by Professor Horsley. He succeeded, in my presence, in cutting the inner (bulbar) branch of the left spinal accessory of a dog, leaving, as subsequent post-mortem examination showed, the external (spinal) branch of the spinal accessory and the pneumogastric absolutely uninjured. The immediate result of this experiment was complete cessation of all respiratory movements of the left vocal cord, which at once became absolutely fixed in what is commonly called the "cadaveric position." This experiment proves incontrovertibly that the motor fibres not only for the adductors, but also for the abductors, are derived from the spinal accessory.

Concerning Dr. Holmes's tables, I have to say that I have myself published, in greater or lesser detail, not three but eleven cases of bilateral abductor paralysis (Clinical Society's Transactions, vols. xi. and xii.; *Archives of Laryn-*

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gology, 1881 and 1882; Transactions of the Pathological Society for 1882; *Berliner Klinische Wochenschrift*, 1883; St. Thomas's Hospital Reports, vol. xiii.) Besides, I have repeatedly shown illustrative cases before Medical Societies (see, e.g., *Brit. Med. Journal*, April 4th, 1885, p. 701). To what case of mine Dr. Holmes is referring under the heading "Pressure from Catarrhal Thickening" (No. 42 of his list) I cannot make out. I have certainly not published a case under this or any similar title. The heading "Cancer (post-tracheal)" of Case 49 of his list refers, I suppose, to my case of bilateral abductor paralysis, due to probably malignant disease of the thyroid gland, published in the Pathological Society's Transactions. But I am not certain of this. Apart from this, Dr. Holmes's list, although it goes down to nearly the middle of last year, is incomplete. In the first place, he has left out several of the older reported cases already referred to in my own papers on the subject—such as Weber's, Krishaber's, Sajous', Schuberg's, Duvening's (two),—without stating his reasons for doing so. And, further, he has omitted, of more recent instances apart from Dr. Saundby's case, the following:—Ott's second case (*Prager Med. Wochenschrift*, No. 14, 1884), Young's case (*Brit. Med. Journal*, April 26th, 1884), Dehio's two cases (*St. Petersburger Med. Wochenschrift*, 1884, Nos. 26 to 28), Kothe's two cases (*Berliner Klin. Woch.*, p. 734 *et seq.*, 1884), Mackenzie Johnston's case (*Edinburgh Medical Journal*, June, 1885), Ziegelmeyer's case (*Bericht über die Sommersaison, &c.*, Bruchsal, D. Weber, 1885), Koschlakoff's case (*Russ. Med.*, Nos. 1 and 2, 1885), M'Bride's case (*Edinburgh Medical Journal*, July, 1885), T. Solis Cohen's case (Transactions of the American Laryngological Association, 1886), E. Remak's case (*Berl. Klin. Woch.*, No. 25, 1886), Smyth's case (*Indian Med. Gazette*, October, 1886), Landgraf-Martin's case (*Berl. Klin. Woch.*, No. 8, 1887), Felici's case (*Arch. Italiani di Laryngol.*, fascic. ii., 1887), A. E. Garrod's case (St. Bartholomew's Hospital Reports, vol. xxii., 1886), Beschorner's case (*Monatsschrift für Ohrenheilkunde*, No. 5, 1887), Percy Kidd's case (THE LANCET, July 15th, 1887), Ramon de la Sota's case (*Revista Medica de Sevilla*, t. ix., 1886), Kuessner-Wegener's two cases (*Berlin Thesis*, 1887), and Luc's case (*La France Médicale*, No. 15, 1887). Thus no less than thirty-seven cases which have been reported in detail are wanting to make Dr. Holmes's list of published cases complete to date. Amongst the cases I have quoted above are *not* included many which are doubtful, nor the numerous instances in which paresis or paralysis of the abductors has followed tracheotomy in children or extirpation of the thyroid gland. From my own experience I am led to the conclusion that the bilateral affection is not so rare as is generally believed. Between 1876 and the present date I have seen in my own hospital and private practice, and in that of medical friends who kindly invited me to see their patients, nearly thirty cases.

I am, Sirs, yours obediently,

Wimpole-street, Nov. 1st, 1887. FELIX SEMON, M.D.

"WELL-TO-DO MEMBERS OF FRIENDLY SOCIETIES AND MEDICAL ATTENDANCE."

To the Editors of THE LANCET.

SIRS,—In your issue of Oct. 22nd, under the above heading, you mention you would look with interest to the next meeting of the lodge of the Manchester Unity that had summoned me to attend in reply to a charge that I had wanted a fee from one of the members whom I considered the payment of 1*d.* per week was never intended to include. The meeting was well attended and I received a patient and courteous hearing; all was done in order, and resulted in a vote by a large majority that I should withdraw my resignation; and they subsequently carried a hearty vote of thanks and confidence. Several of the members spoke feelingly, and with gratitude, as to the benefit and attention they had received from me in their illness. The question as to increased payment was referred to a future occasion, and the Secretary expressed his regret that, if I was dissatisfied with the remuneration, I had not, in accordance with their rule, made an application in writing to the lodge for an increase of salary, and then it would have been the duty of the presiding officer to give instructions for the subject to be placed on the agenda at the next general meeting, when the matter would be fully considered, as it would require an alteration of the lodge's bye-rules. I am not so anxious about the increase of my salary as the question of higher payments by the *well-to-do members*.

I am, Sirs, your obedient servant,

Oct. 29th, 1887. FREDK. H. ALDERSON, M.D.

*** As we anticipated, the question in dispute between Dr. Alderson and his lodge—the Albion Lodge of the Manchester Unity of Oddfellows—is not likely to endanger that good feeling which has characterised their relations for twenty years. Though he felt it right to proffer his resignation, he was by a large majority asked to withdraw it, and a hearty vote of confidence was passed. The course suggested by the Secretary is a right one. Any dissatisfaction with the remuneration should be carefully stated, and an application should be made to the presiding officer of the lodge for an increase of salary. The matter would then be placed on the agenda and carefully discussed.—ED. L.

THE CONGRESS OF HYGIENE IN HUNGARY.

(From our Special Correspondent.)

Buda-Pesth, Oct. 14th.

WITH a military band on board, and the ship gaily decked with flags, early on the Monday morning 400 members of the International Congress of Hygiene sailed down the Danube for Buda-Pesth. Some 300 more, for whom room could not be found on board, proceeded to the Hungarian capital by train. The large river steamer, with its saloons, its dining accommodation, and its spacious deck, gave the best opportunities for the exchange of ideas, of news, and of criticisms; and the long journey to Buda-Pesth must have greatly contributed to facilitate mutual understanding between sanitary reformers of all countries. Presburg was the first Hungarian town reached; and here the entire population turned out to welcome the Congress. The broad enbankment was lined with dense crowds of people; from masts, balconies, and the roofs of the houses floated innumerable flags; on the pier the Mayor and municipality awaited to present an address of welcome. It was a brilliant and invigorating sight. In a few minutes, however, the steamer started again, followed far by the re-echoing cry of *élien* (the Hungarian "hurrah")! Though it was close upon 11 o'clock when we reached Buda-Pesth, the Mayor and municipality here also were present to greet the members of the Congress with speeches of suitable brevity. A most elaborate programme had been drawn up for the next three days' proceedings, and the wearied members of the Congress were anxious to snatch a few hours' rest. At 7 o'clock next morning the Congress was to meet, so as to visit the Veterinary School and the School of Physiology before 10 o'clock. Both these institutions were greatly admired, the English members expressing themselves in particularly complimentary terms with respect to the Hungarian Veterinary School. The Chemical Laboratory, constructed in simple Italian Renaissance style, cost, taking the florin at its nominal value, £36,613, and the Physiological Institute £41,133. Here, in the rooms for experiments, 200 students can be easily seated; while, covering a superficial area of 2095 square metres, and costing £43,200, there is the School of Mineralogy, Anthropology, Geology, and Botany; and, finally, a library that cost £27,500. All these buildings form but one group, and are conveniently near each other.

Before further describing the great educational and scientific work accomplished at Buda-Pesth, it should be remarked that in 1780 the town had only 23,000 inhabitants. In 1867, while Hungary was still under the domination of Austria, the population of the capital was 183,360; but since Hungary gained its independence, the progress has been so rapid that the population of the capital is now estimated at 450,000, and since 1867 the State has spent no less than £7,000,000 in public works at Buda-Pesth. At 10 o'clock, according to appointment, the members of the Congress, who filled a long line of tramcars, arrived at the Ulloi-street Clinical Hospital and School, a magnificent and luxurious building, which cost £42,800. The adjoining Anatomical

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Institute by itself cost £32,000. These structures were much admired. Though there was scarcely time to make a technical examination, this much at least can be said—namely, that the drainage seemed in proper order, and was infinitely superior to what is generally seen on the Continent. At 11 o'clock the Stefánia, or children's hospital, was inspected, as also the isolation pavilion for infectious cases. The members of the Congress now went on board a steamer and proceeded to the St. Marguérite Island, which is the great pleasure resort of the inhabitants of Buda-Pesth. Here, among trees and flowers, the municipality had prepared a splendid dinner-lunch. A band was in attendance, which played the national hymns of the principal nationalities present, and was answered by cheers from the different representatives. The ladies received presents of flowers and the gentlemen bunches of cigars and cigarettes tied up with ribbons in the colours of Buda-Pesth. Each delegate had also a decoration for his button-hole, bearing the arms of Hungary and the colours of Buda-Pesth, which proved of considerable practical service, as all the members of the Congress were at once recognised by the drivers of the carriages, tramcars, or the guards of the railways specially retained for the use of the Congress; everyone in the town was ready to help or guide those who wore this emblem.

The speeches were of a thoroughly international character. The Prefect, M. Charles Rath, in his opening allocution of welcome, declared that the town of Buda-Pesth would make the greatest efforts to forward scientific progress, and to carry out the wise counsel given by the Congress. M. Kamermayer, the Mayor, drank to Herren Ludvigh, the acting President of the Congress. Speeches now followed in rapid succession, but the allocution delivered by M. Sasvári was the most striking illustration of internationalism. He commenced in Magyar, and, after a few complimentary words to his Hungarian colleagues, assured the Austrian and German guests—himself speaking in good German—that the Hungarians recognised how much their civilisation was due to the Germanic races. Then, speaking in French, he explained that Hungary admired the great French nation, which, marching in the vanguard of progress, had given to the world the highest and most generous ideas. Now, changing from French to Italian, he spoke of the glories of ancient Rome, to be revived at no distant date. Finally, concluding in fluent English, he greeted the brave children of Great Britain, who had borne the banner of civilisation to the uttermost regions of the globe. Here the speech seemed ended, but, recognising among the delegates the dignified features and high turban of the Mahomedan Burgomaster of Serajevo, he again rose, and, in the Servian-Croatian language, hailed the presence of this Oriental functionary as typifying the union of the East and the West for the furtherance of the cause of hygiene. Dr. Roth, in Magyar, and Mr. Adolphe Smith, in French, spoke for England.

In the afternoon the Congress visited the new hospital, consisting of seventeen pavilions and holding 720 beds, and the model slaughterhouse for the town of Pesth. At the latter establishment 236,000 head of cattle are killed during the course of the year. It should be noted, however, that the consumption of poultry is nearly as large as that of ordinary meat.

In spite of these admirable institutions and the magnificent broad thoroughfares, the death-rate of Puda-Pesth is exceptionally high; it amounts to 29 per 1000. This, it is said, is in a great measure due to the fact that 25,000 people still live in cellars. The police have made vain efforts to drive the people out of these unwholesome abodes. The underground dwellings have one advantage, that of being cooler in summer and warmer in winter. The town drains directly into sewers, and these have their outfall into the Danube. The supply of drinking water is taken from the Danube. In spite of the great size of this river and the filtering process to which the water is subjected, this cannot be considered satisfactory, and probably also contributes to the high death-rate.

During the evening the greater part of the members of the Congress went to the opera, which is a model of comfort. There is no crowding, and even in the cheapest places the seats are as large and easy of access as the stalls of an ordinary London theatre. The ventilation was therefore much easier to maintain.

On the following morning the members of the Congress had again to bestir themselves early. The common rendezvous was for 8 o'clock, and a special steamer took us over to Buda to examine the magnificent Turkish baths, the Rudas-Fürdo, for which the town is justly celebrated. We then proceeded again by steamer to Promontor, formerly a Roman settlement, and where the vast caves of Mr. Saxlehner are cut out of the chalk formation several hundred yards deep into a mountain. In this weird place, beautifully illuminated by candles, a luncheon was served on barrels of wine. Caviare, or *pâté de foie gras*, and the excellent wines of the country were consumed with a recklessness that was perhaps not in keeping with the laws of hygiene, but which was the best response to so hearty a reception. On leaving these caves, innumerable carriages were in waiting to convey the members of the Congress over vine-clad hills to the spot where, from seventy wells, the celebrated Hunyadi János waters are collected. This vast establishment was carefully inspected. The waters are mixed so as to maintain them always at the same degree of strength. This is done in two reservoirs holding altogether 100,000 litres. From these the bottle-filling machines are supplied. These receive from each side a tray loaded with twenty-five bottles. In a moment the water drops into the bottles without any being spilt. These waters were discovered in 1863, but it was not till they were analysed by Baron Liebig that they acquired the wide reputation they now enjoy. The waters were then named after the Hungarian patriot, Hunyadi János, who in the fifteenth century defeated the Turks, and whose son Matthias was elected King of Hungary out of gratitude for his father's services. Some persons have stated that the name was meant to describe the waters; it simply recalls a hero whose memory is dear to all Hungarians. The works once examined, some 700 persons sat down to a most magnificent feast, while one of the best Austrian military bands played outside the dining pavilion. After a few words of welcome from M. Saxlehner, the proprietor of the waters, Professor Ludwig, President of the Congress, returned thanks for the hospitality received, and acknowledged the importance of the establishment. M. Jarchow explained that it had always been the proprietor's wish to have an opportunity, such as had now fortunately presented itself, of showing to so many members of the medical profession that no effort would be wanting on his part to warmly acknowledge the support he had received at their hands. Professor Schmidt, in proposing "The Ladies," made a happy reference to the fact that the springs had been discovered by a lady. Dr. Busback, the member for Buda-Pesth in the Hungarian Parliament, Professor Acglave for France, Professor Corradi for Italy, also spoke; and Professor Frankland, who, as one of our best authorities on water, had visited the springs with much interest, responded in the name of England. He said every effort would be made to give the Congress a worthy reception when it met in London; but, in acknowledging the proverbial hospitality of Hungary, he was obliged to confess they would not surpass in England the entertainment they had received that day.

It was now soon time to start again, for the vast establishments of the Red Cross Society at Buda had to be seen. Here the Congress was received by Dr. Emerich Ivanka, the director, and the lady patroness, Countess Livia Zichy, and Madame Bischitz. There are altogether twenty-three buildings belonging to the Buda-Pesth branch of the Red Cross Society. In the event of a war, there would be room for 800 wounded on these premises. Now they contain, among other things, 180 ambulance waggons, including some that served in the recent Servian war. Also there are 200 beds, packed and ready to be loaded on 32 waggons, with all the medical, surgical, and cooking appliances necessary, so as to establish at a moment's notice a hospital in any part of the country. The English delegates, and notably Dr. Mumby from Portsmouth, were much impressed by the preparedness of this establishment. Fears were expressed that in England we should not be so ready to meet an emergency. From this point some members of the Congress went to visit the lunatic asylum at Lipótmező, while others hastened to their hotel to dress for the banquet given that evening by the Hungarian Society of Hygiene. This was the third banquet given on one and the same day.

The Hungarian Society of Hygiene was only founded in October, 1886, and yet it already counts more than 2000 members. There are three sorts of membership: mere adherents, who pay one florin per year and have no right to vote; full members, who subscribe annually three florins; and life members, who pay fifty florins. The Society issues

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a paper, the *Egészség*, which, being translated, means *Health*. There are 200 life members, and out of this number 105 were enrolled by the acting and active President, Dr. Markusovsfky. A few ladies also are members, and the Society gives lectures, distributes literature, brings pressure to bear with respect to vaccination, &c. The banquet they had provided was most elegantly served. It called forth many eloquent speeches, delivered in a great and perplexing variety of languages, and was followed by a ball that lasted until the small hours. Yet the next morning, a little after 8 o'clock, the members of the Congress had to meet at a far distant station, where, in a special train, they were conveyed to Moha, three hours' distance from Buda-Pesth. Here are situated the celebrated Agnes Springs, which provide a very pleasant sparkling dinner water. The heartiest welcome was extended to the members of the Congress, and a good dinner was, as usual, followed by many good and enthusiastic speeches. Mr. Charles Barshall, of the *Revue de l'Orient*, an influential paper published in French at Buda-Pesth, proposed "The Foreign Press," coupling THE LANCET with the toast. He insisted that science had been the father of freedom, and that the present Congress seemed to indicate it would become the parent of peace. The aristocracy of intellect, from thirty different nationalities, had worked in common at the Congress to secure the health and the happiness of mankind. Such harmonious international effort would not only benefit the cause of hygiene, it engendered the hope of general peace. Mr. Adolphe Smith replied for the foreign press, which had always sympathised with the struggles of Hungary. Hygienists loved free air and free water, plenty of both to secure cleanliness and health, whence sprang reason, and with reason knowledge and freedom, the basis on which science was founded. He therefore begged to return the compliment, and drink to the free press of Hungary. Dr. Frankland also spoke in very suitable terms, and when the banquet was over the girls employed in bottling the St. Agnes waters came forward, in their peculiar, neat, but simple dresses, and danced the various dances of the Hungarian peasantry. The greatest animation prevailed, and everyone joined heartily in the amusements of this rural fête till it was time to join the train and return to Buda-Pesth. Thus the Congress came to an end. That same evening and the next morning the members all left, and were scattered once more to all points of the compass. To everyone the memory of the hearty reception afforded will be cherished with feelings of pleasure and gratitude. Much has been learnt, and there was much to enjoy. But the best way of showing our high appreciation of what has been done at Vienna and at Buda-Pesth is to prepare at once for the organisation of the London Congress, so that it may at least be worthy of the precedent triumphantly established in Austro-Hungary.

BIRMINGHAM.

(From our own Correspondent.)

QUEEN'S COLLEGE.

THE council of this College has issued an advertisement announcing that they will at their next meeting proceed to the election of (1) a Professor of Gynæcology; (2) a Lecturer on Operative Surgery. This intimation is conveyed through the medium of a halfpenny evening paper, from which it may be inferred that the council has chosen a wide, if not a dignified, appeal to the masses. It is hardly likely that any response will be made from this source, since it is rumoured that there are candidates whose election is already assured, the routine of advertising being a very formal one.

MUNICIPAL ELECTIONS.

The medical element in citizenship does not hide its favours in this enlightened borough. The recent elections have been conducted in a spirited manner in several of the wards of the town, in one a local practitioner being returned by a large majority. In the administration of local affairs the appointment of medical men gives an important influence on the questions of sanitation and public health. There is always ample work to do, and if time can be found to do it, apart from the cares and responsibilities of practice, there is no reason why the duties of government should not be shared by the profession as well as by other callings.

TEMPERANCE QUESTIONS.

At a conference of the Midland Temperance League, attention was called to the evil effects of drinking at railway stations, and grocers' licences. An energetic protest was raised against the granting of these licences, it being stated that no Act of Parliament had done more to degrade and demoralise the women of the country than that which had granted to grocers power to sell intoxicating liquors. When Imperial politics have become a little more settled, there will probably be time to give more attention to domestic legislation. The subject bears strongly upon the well-being of the poorer classes, and all earnest reformers would be glad to see some amendment in the drinking propensities of the population.

HOSPITAL SUNDAY.

The amount collected on Hospital Sunday reached the sum of £3975 4*s.* 1*d.*, to be this year exclusively devoted to the Queen's Hospital. The highest total received during the twenty-eight years Hospital Sunday has been instituted was in 1878, when the figures stood at £6482.

Birmingham, Nov. 2nd.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

CLOSE OF THE NEWCASTLE EXHIBITION.

ON Saturday last, at night, after a most successful run, our Exhibition doors were closed, never to reopen. The total attendance was nearly one hundred thousand over two millions! while the attendance on Saturday was nearly fifty-five thousand. It is reported that the immense throng left the building with great reluctance, as if anxious to have yet another "look round." It is pleasant to say that this immense concourse, extending over so many months, were always perfectly well conducted, and also that the Exhibition has been a commercial success, paying its way and leaving a surplus, so that when the building is cleared from the "bleak Northumbrian moor," its site will awaken no unpleasant thoughts in the breasts of our many spirited guarantors. There was during last week a most interesting ambulance competition in the Exhibition gardens. The search parties were aided by electric light, and the different modes of assisting and bandaging &c. the wounded were illustrated. The first prize was awarded, and well deserved, by the 2nd Detachment of the South Shields Light Brigade. Dr. Mears of the Newcastle College of Medicine superintended, and organised the competition. At the Ambulance Hospital in the Exhibition grounds, 223 cases have been treated. The hospital was erected by Mr. R. Buckhall of London, and was lent for its purpose by that gentleman. None of the cases treated called for anything beyond minor surgery. The medical direction of the hospital was under Drs. H. Newton and W. C. and C. Wicks.

NEWCASTLE SUNDAY HOSPITAL FUND.

The usual collection was taken in the churches and chapels on Sunday last, and the workmen's contributions on the previous Saturday. The collections were taken under favourable auspices, fine weather prevailing. Boxes were also set up in the Exhibition on its closing day—a happy idea. It is too soon to say much about the comparative amount raised, but the indications are that it will be up to former years.

THE FEVER-STRICKEN VILLAGE.

Although several of the patients who are suffering from typhoid fever at Burnriggs, near Carlisle, are still seriously ill, their condition is not regarded as dangerous; the rest are gradually convalescing, and, as no fresh cases have occurred, it is hoped that the worst has passed, and that in the course of a little time the place may be relieved of the obnoxious title of the "fever-stricken village." The result, the papers say, has been chiefly due to the help which the indigent sufferers have received from the liberality of the public. The medical officers, Dr. Conway, the district medical officer, and Dr. Ross of Wetheral, have been unremitting in their attendance. In the matter of nursing also the Burnriggs patients have been most fortunate.

Newcastle-on-Tyne, Nov. 2nd.

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EDINBURGH.

(From our own Correspondent.)

THE ROYAL MEDICAL SOCIETY.

THE 151st session of the Royal Medical Society was inaugurated last Friday evening by an address by Mr. John Duncan, F.R.C.S.Ed., senior surgeon to the Edinburgh Royal Infirmary. As a former president of the Society, it was natural that Mr. Duncan should be forcibly reminded of the advances that have taken place in medical science generally, and in the development of the Edinburgh school in particular, since his occupancy of the president's chair, a quarter of a century ago. In listening to his interesting and eloquent account of how the world has wagged these twenty-five years, the members of the Society (most of them students of the present *régime*) had abundant cause for satisfaction; for they heard of increased facilities offered them in their studies, of more commodious halls in hospital and school for their reception, and of an ever-widening field of scientific effort in which their life would be spent. In tracing recent advances in surgery, Mr. Duncan drew special attention to the remarkable manner in which the surgery of the body cavities has been developed; on the one hand by improved methods of exact diagnosis and treatment, and on the other by the application to surgery of deductions from the germ theory of fermentation. The changes thus effected have been nothing less than startling, and the future prospects of further advances are now singularly hopeful. In speaking more particularly of the Edinburgh School, and its methods of teaching, Mr. Duncan had many things to say, both good and evil. In comparing the student of to-day with his predecessor of twenty-five years ago, it was noticeable that he conformed much more closely to the type of the whole body of students than did his predecessor, who had much more individuality about his actions and his ideas. Still they could certainly say that now there were fewer of the purely sensual, of those who ate, drank, or slept too much, than was formerly the case. But the man who worked out of proportion, the bookworm, in more or less portentous form, had now become an established fact and a stern reality among them. Mr. Duncan then described in a few happily chosen sentences the types of students of the present day. The aptness and acuteness of his sketches elicited such applause and approbation from his large audience as showed they were well-drawn pictures, and not caricatures of the actual fact. Most valuable to all were his closing remarks, upon the proper proportionate relation of study and relaxation. On both points he can speak with peculiar appropriateness, for he might well claim a high position in both spheres, since his reputation as an athlete and a sportsman is no less well established by a large demonstration of practical results than is that of his position in the world of medical science by the valuable contributions he has afforded to modern surgery.

UNIVERSITY GENERAL COUNCIL.

The statutory half yearly meeting of graduates of the University took place last week, when matters of considerable interest were discussed with a good deal of animation by a very small meeting of the members of the Council. Such is the apathy which pervades this body that at this meeting there were barely thirty present, although there must be several hundred members resident in Edinburgh. The chief business of the meeting was the consideration of the report of the Business Committee on the subject of University Reform. That report detailed many measures of a liberating tendency as desirable features of the next Universities Bill; among them, increased representation of the graduates in the University Court; increased powers to be conferred on the Court as a governing body, in particular the administration of University funds, now solely carried on by the Senatus; and that the Council, and not the Senatus, should elect the representative of the University on the General Medical Council. On each of these recommendations in the report amendments were passed by members of the Senatus Academicus who attended the meeting, and in each case the amendment was negatived by a majority of but one or two votes. This result has been made the basis of a good deal of banter by the *Scotsman* newspaper, which delineates the typical Edinburgh professor as a hopeless anti-reformer and reactionary; and this in turn has led to the publication of two letters from Professor Kirkpatrick, the Secretary to the Senatus, enumerating ten far-reaching projects of reform in various parts of the University polity that have in late years emanated from members of the Senatorial body itself. This discussion, which has been transferred from an academic auditorium to the public arena of the daily press, will probably run the same course that many previous discussions of the same nature have followed: the professoriate will hear a good deal of plain speaking that may be worthy in some degree the careful consideration which it will doubtless receive; but whatever the force or the noise of these winds that may assail it, the University ship will proceed upon an unaltered course, for those who are at present at her helm prefer the canal route of safe precedent to the ocean voyage of Reform, with the dangers that may attend it. But those dangers must be some day faced and overcome if the University is to gain the ocean-haunting freedom and the ocean-like expansion which all her well-wishers desire for her in the future.

Edinburgh, Nov. 1st.

ABERDEEN.

(From our own Correspondent.)

THE UNIVERSITY GRADUATION OATH.

THE Senatus of the University, at a meeting held on Saturday, had before it the recommendation of the University Court in regard to the discontinuance of the graduation oath, and it was resolved to take the matter into consideration at a meeting to be held on Dec. 10th.

THE RECTORIAL ELECTION.

The election of Lord Rector takes place on the 12th inst. Three candidates, Lord Aberdeen, Mr. Goschen, and Mr. John Morley, were at first proposed; but Lord Aberdeen has withdrawn in favour of Mr. Morley as opposed to Mr. Goschen.

THE STUDENTS AND CLINICAL TEACHING.

A deputation from the fourth year's medical students waited upon the staff of the Hospital for Sick Children, to discuss the question of changing the visiting hour at that institution, so that the students might be able to attend both it and the Royal Infirmary for clinical instruction. It was agreed to change the hour from 11 A.M. to 1 P.M., and thus get over the difficulty mentioned in my last communication. At the Royal Infirmary both physicians and surgeons visited formerly at 12 o'clock, but by the new arrangement the former visit at 11 and the latter at 12 o'clock. This arrangement has the advantage of making it possible for the students to visit both medical and surgical wards each day. On the whole, therefore, the facilities for clinical work may now be considered satisfactory.

The Infirmary Jubilee Extension Fund now amounts to £25,813 16*s.* 6*d.*

DUBLIN.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

So far as the Apothecaries' Conjoint Scheme is concerned, only three Examiners will be elected by the College of Surgeons—viz., one in Physiology and two in Ophthalmic Surgery, the existing supplemental Examiners acting in the other subjects, such as Anatomy, Surgery, &c. The first examination for the diploma in Public Health will take place on December 5th and following days. The inaugural address at the opening of the Medical School of the College was delivered on Monday last by Sir William Stokes, Professor of Surgery in the College. The address is published in our present issue. At its conclusion a vote of thanks was moved to the lecturer for his able address, and passed with acclamation.

ROYAL UNIVERSITY OF IRELAND.

The conferring of degrees of this University took place last week, presided over by Lord Emly, the Vice-Chancellor, who, in the course of his address, said that one of the pleasant duties which from time to time fell to the lot

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of bodies such as theirs was to bear public testimony to academic and professional merit existing in other places. They were about that day to enrol among their graduates men whose names were well known in the world of science, of letters, and of medicine. During the visit of the British Medical Association to Dublin last summer it was agreed that they should commemorate that event by conferring upon some few of the most distinguished members of the medical profession from the sister island their degrees in the different branches of the profession to which they belonged. The Senate had resolved to confer the honorary degrees of A.M. and D.Sc. upon Dr. Frederick McCoy, of the University of Melbourne. The honorary degree of Doctor of Medicine would be conferred upon Dr. Richard Quain, and the same degree (*in absentiâ*) on Dr. C. Bastian, Dr. Thomas Grainger Stewart, Professor of Medicine in the University of Edinburgh, and Physician to the Queen in Scotland; Sir Dyce Duckworth, representative on the General Medical Council of the Royal College of Physicians; and Dr. Matthews Duncan. The honorary degree of Master in Surgery would be conferred on Sir Joseph Lister, Mr. John Erichsen, Mr. John Marshall, Sir Thomas Crawford, Director-General of the Army Medical Department; and Mr. Thomas Bryant, surgeon to Guy's Hospital.

SCHOOL OF PHYSIC, TRINITY COLLEGE.

The new buildings, which were commenced about two years since, may now be considered as completed, and were formally opened on Tuesday, the 1st inst., by the Rev. Dr. Haughton, F.R.S., who gave an introductory address. The new building has a frontage of some 120 ft., the northern part of the edifice being intended for the surgical department, and the southern for the chemical. The dissecting-room is 120 ft. long by 30 ft. wide; while in the surgical portion are three lecture theatres, to be used alternately by medical and surgical lecturers. There are also apartments for the registrar and the medical professors, preparation-rooms, and on the upper floor a special surgical museum 80 ft. by 32 ft. wide. The chemical lecture theatre can accommodate 400 students, and will be fitted with all the modern appliances for chemical demonstration &c. The cost of the new buildings has been about £14,000, and the sum, although a large one, will be regarded as very judiciously applied by all who take an interest in the success of the medical school of the University of Dublin.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

The fifth annual general meeting of the Academy of Medicine in Ireland was held on Oct. 28th, in the College of Physicians. It was moved and adopted unanimously that the title of the Academy be changed to that of the "Royal Academy of Medicine in Ireland." It was resolved to amalgamate the offices of general secretary and treasurer, and that the duties of both should be undertaken by the general secretary. Sir Charles Cameron proposed a motion to the effect that the bye-laws 59 and 60 should be so altered as to constitute the existing sub-sections, the chairman of each to be called the president, and the council to consist of six members only, which was adopted unanimously. The office bearers for the session having been appointed, the proceedings terminated.

Dr. Tate, late resident medical officer of the North Dublin Union, has been granted a superannuation allowance of £200 a year. He is suffering from paralysis.

Dublin, Nov. 1st.

BELFAST.

(*From our own Correspondent.*)

THE WATER SUPPLY OF BELFAST.

To those who have lived in Belfast, and who know the great amount of rain which usually falls there, it will seem strange that there should be any scarcity of water. However, the prolonged drought has been so continuous that the Water Commissioners have been obliged to restrict the supply from the reservoirs to four hours daily. Owing to this, considerable inconvenience has arisen at the barracks, the Royal Hospital, and at the workhouse. At the latter place it has been decided to open some wells which for a long time have not been in use; but as one of the guardians stated their situation was near that of an old cholera graveyard, it was decided, before using the water, to have it tested by the borough analyst. All over the north of Ireland there has been a great scarcity of water, and in some of the towns, as Lurgan, this has given rise to considerable inconvenience. During the past few days some rain has fallen, but not sufficient to make any perceptible change in the amount in the reservoirs.

THE LAGAN POLLUTION.

Some time ago, Dr Graham, a member of the medical profession, was returned as alderman for Cromac Ward on the sanitary question. There is to be an election to the Town Council this month, and the Lagan Pollution Committee have decided to run a number of candidates pledged to their programme. Dr. Graham has again been selected as a candidate for the aldermanship, and Dr. Henry Bingham is one of those chosen as a candidate for councillor. The programme of the Lagan Pollution Committee adopted at a recent meeting includes, among other points, the following:—(*a*) The effective and immediate sanitation of the town, with special reference to the purification of the River Lagan, and a thorough investigation of the main drainage scheme in all its incidents, including taxation &c. (*b*) That in view of having the best scheme for the drainage of the town, competitive plans be sought for, and a sum of money be devoted to the purpose from the corporate funds. (*c*) That no undertaking or Bill be promoted involving an expenditure of over £5000 of municipal money until a town meeting be held to consider and approve of the same in accordance with the custom prevailing in English boroughs. The gentlemen I have mentioned have, with others, been selected as candidates for Cromac Ward, the locality in which the Lagan flows. An influential deputation waited on the Town Council on Tuesday, with the view of learning what course the Corporation would propose to adopt, now that the joint reports of the Borough and Harbour Commissioners' engineers had been made. The deputation were listened to most courteously by the members of the Council, and subsequently the report in reference to the matter was read and adopted, from which I gather that it is recommended, with a view of carrying out an improvement of the Lagan so far as is within the Council's powers, if the consent of the Board of Trade can be obtained to the embanking of the ground opposite Ormean Park on the lines suggested by Mr. Salmond (engineer of the Harbour Board), which is estimated to cost about £7500, and if the Harbour Board will dredge the bed of the river, and place the excavated material on the ground to be reclaimed, the Council should contribute a reasonable amount towards the expense of wheeling and levelling the material, and should also complete the embankment. This would be an important part of the work recommended by the two engineers, and probably would lead to other owners of property along the river doing their portions.

NURSES FOR THE SICK POOR.

From a report recently issued by the efficient secretary of the Association for Nursing the Sick Poor, I learn that, through the kindness of a lady and her husband in Belfast, the committee have been able to employ an additional nurse in this most admirable work. There are now nine nurses in all, and through the kindness of the same friends the supply of water beds, air cushions, &c., has been renewed. The generous bequest left by the late Mr. James Lindsay to this Society has been paid over to the trustees; it amounts to £547 18*s.* 10*d.*, including interest.

THE CURE OF HYDROPHOBIA.

About ten days ago several children were attacked and bitten by a dog supposed to be suffering from rabies in the Shankhill district of Belfast. Through the kindness of the public a sum of money was raised, and they were taken to Mr. McGovern, who, it is said, has been very successful in curing, or rather preventing, this disease. His method is still a secret. The children have now returned to Belfast. Considerable interest is being taken in the matter.

ROYAL HOSPITAL.

The winter session was opened on Tuesday by an introductory address, delivered by Dr. Burden, pathologist to the hospital. After welcoming the students, Dr. Burden gave an interesting account of the morbid anatomy and pathology of the spinal cord. He then made some observations on the subject of inflammation, and concluded an

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able address by exhorting the students to uphold and to continue in their future practice the traditions of the Belfast Medical School.

SMALL-POX EPIDEMIC IN LONDONDERRY.

I regret to learn that there has been an epidemic of small-pox in Derry. It would appear that during the past quarter of a year forty-two cases of small-pox were brought under the notice of the sanitary authority. Of these, twenty-one occurred in the District Lunatic Asylum, where there had been five deaths. Of the other twenty-one cases occurring throughout the city, there had been four deaths. A statement of the districts chiefly affected showed that the disease clustered largely in the vicinity of the City Infirmary. There had been two cases in the infirmary, both of which were convalescent. The majority of the other cases had been removed to the City Fever Hospital. Strenuous efforts had been made by the sanitary staff to stamp out the disease. All the medical men in the city were personally waited on by the executive sanitary officer, and requested to give prompt information of any cases of small-pox coming under their notice. A disinfecting chamber was erected at the Fever Hospital. Despite the epidemic of small-pox, it is most satisfactory to learn that the death-rate is 9·5 below the average of the sixteen principal towns in Ireland. It is stated that in all cases of small-pox where the patients had, by the advice of their medical attendants, gone to hospital recovery had ensued, most of the deaths having occurred in private houses.

Belfast, Nov. 1st.

FLORENCE.

(From a Correspondent.)

THE City of Flowers is filling rapidly, and by the close of the month the season will have begun with a brilliancy seldom surpassed in the Tuscan capital. Nothing can be more delightful than the atmosphere in which city and suburb are bathed. The perfection of autumnal weather tempts the most timid valetudinarian to San Miniato and Fiesole—the latter eminence basking in a sun which would be oppressive but for the snow-tipped Apennine, which acts as a refrigerator. Gray's noble outburst—

"O Fæsulæ, amœna
Frigoribus juga, nec nimium spirantibus auris,"

written, as it was, one summer a century and a half ago,—conveys a true description of the pleasure inspired by that lovely hill-resort in the October of 1887. The Arno, well-nigh a gravel-pit in summer, now rolls majestically seaward, strewn with the leaves of Vallombrosa, and heightening the charm of the afternoon drive or walk in the Cascine, on whose thinned foliage autumn has "laid a fiery finger."

The health of the city is satisfactory. No epidemic prevails within its precincts. Weeks ago there was an outbreak of small-pox; but it was strictly local, confined to the denizens of the Borgo di San Frediano, long notorious as in some respects the worst quarter of the city. Even there the cause was not far to seek. The Mercato Vecchio, or old market, in the Ghetto, has had for sanitary and social amelioration to be dismantled, and this was done without adequate provision being made for its unhoused inhabitants, who, accordingly, flocked across the river to the slums of San Frediano. There they were massed together in hovels already overcrowded and squalid, with every hygienic defect. Confluent variola soon declared itself, and filled the healthier quarters with such panic that multitudes of people, both native and foreign, have had themselves revaccinated. The epidemic has now disappeared, bequeathing to the Sanitary Giunta a further task in sedileship—that of knocking down the old city walls between the Porta Romana and the Porta San Frediano, so as to increase the breathing space and facilitate the circulation of the inhabitants.

The Florentine municipality has not been idle in improving the sanitary condition of the city. For years its water supply was not good—mostly drawn from *pozzi* or wells in the immediate neighbourhood of the houses. Most of these are still on tap, but they will ere long be closed, and replaced by the *acqua potabile*, already introduced into all the good houses and hotels. A memoir on "The Well Waters of Florence, and, in particular, on the Municipal Acqua Potabile," has just been published by Signor Napoleone Passerini, director of the School of Agriculture at Scandicci, in the neighbourhood. According to this authority, the *acqua potabile* does not, like that of many of the *pozzi*, contain pathogenic schizomycetes, but, compared with the latter, presents the following characters: 1. It contains a minute quantity of non-injurious organic matter, a quantity less than that of all the *pozzi* waters examined within the city, the *acqua potabile* yielding an average of 0·0633 gr. per litre, while that of the *pozzi* yields 0·334 gr. 2. The *acqua potabile* presents a smaller proportion of saline substances. 3. It is quite free from ammonia in solution, from azotised organic matter, and from nitrous acid. 4. The air dissolved in it possesses a greater proportion of oxygen than all the *pozzi* waters under examination, proving that the former has less organic matter on which oxygen can seize. 5. While, as already stated, it contains no pathogenic microbes, it presents all the characteristics of an excellent drinking water. On the other hand, the best of the *pozzi* waters cannot claim a higher place than that of a tolerable drinking water. The municipality, according to Signor Passerini, has only to persevere in its undertaking, and the water supply of Florence, whether as to quality or abundance, will leave nothing to be desired.

No medical or philanthropic visitor to Florence should omit to see a wonderful specimen of what education can do for the blind, in the case of Gaetano Baldelli, now exhibiting his powers at the Museo Internazionale dei Ciechi (International Museum of the Blind). We are familiar with those similarly afflicted who can read printed letters with their fingers; who, introduced into a room, can, by clapping their hands, tell us how large it is, and whether it contains furniture; who can cultivate flowers and distinguish them from weeds. But what must we say to a blind youth who can measure for clothes, cut them out, and make them up in the latest fashion? Baldelli does this before admiring crowds. In 1884 he received honourable mention at the Turin Exhibition held that year, and King Humbert graciously presented him with a gift, accompanied with expressions of praise and encouragement. In other cities throughout the peninsula, notably Milan, he has given specimens of the proficiency in the handicrafts to which the sightless may be educated; and, if his example is followed, Italy may ere long have a school for the blind not inferior to that of the nuns at Paris. These blind women can execute the most delicate and complicated embroidery, and can communicate to blind novices of their own sex the skill they so admirably exhibit. They can even teach those who can see how to do the most refined lace work. They can recognise the defects of these novices and correct them, breaking their work and remaking it; and all this intelligence and dexterity they show in other not less difficult operations of the milliner or the seamstress. It is believed that the peculiarly spiritual life these good women lead quickens and perfects all the other organs of special sense, and replaces that of vision by something almost like a substitute. But this is a question for accomplished medico-psychologists like Dr. Russell Reynolds, whose address on "Preventive Medicine," published in THE LANCET of October 1st, has, I may mention, been read with much admiration by more than one eminent Italian physician.

Oct. 22nd.

PARIS.

(From our Paris Correspondent.)

THE FACULTY OF MEDICINE.

THE winter session of the Paris Faculty of Medicine will begin on Thursday the 3rd inst., and the following is a list of the lecturers for the Session;—Medical Physics, Prof. Gabriel; Medical Pathology, Prof. Dieulafoy; Medical Chemistry, Prof. Gautier; Surgical Pathology, Prof. Lannelongue; Operative Surgery, Prof. Duplay; Histology, Prof. Duval; Morbid Anatomy, Prof. Cornil; History of Medicine and Surgery, Prof. Labouibène; Medical Jurisprudence, Prof. Brouardel. Clinical Medicine: Prof. G. Sée, at Hôtel Dieu; Prof. Potain, at La Charité; Prof. Jaccoud, at La Pitié; Prof. Peter, at Necker Hospital. Clinical Surgery: Prof. Richet, at Hôtel Dieu; Prof. Verneuil, at La Pitié; Prof. Trélat, at La Charité; Prof. Le Fort, at Necker Hospital. Mental Pathology and Diseases of the Brain: Prof. Ball, at Sainte-Anne Asylum. Diseases of Children:

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Prof. Grancher. Syphilitic and Cutaneous Maladies: Prof. Fournier, at St. Louis Hospital. Diseases of the Nervous System: Prof. Charcot, at Salpêtrière Asylum. Ophthalmology: Prof. Panas, at Hôtel Dieu. Obstetrics: Prof. Du Budin, at the Clinical Hospital.

CREMATION.

In anticipation of the official opening of the Crematory which has been erected in the Cemetery of Père Lachaise, two experiments have been performed in one of the furnaces with the bodies of two persons who died in the hospitals unclaimed by their relatives. The bodies were incinerated in the presence of M. Chassaing, Vice-President of the Municipal Council of Paris, accompanied by other functionaries, the process occupying two hours, and each corpse produced 4 kilogrammes of ashes. Other experiments are to be performed during the week. The Crematory is situated in the north of the cemetery. It has the shape of a parallelogram and is three storeys high, surmounted by two chimneys in white stone. In a report drawn up by Dr. Brouardel, he estimates that the furnaces will be able to consume 4,500 bodies annually, which is about the average number taken from the Paris hospitals each year. The Bill authorising cremation in this country has been passed by the Chamber of Deputies, and it only remains for the sanction of the Senate. Meanwhile inhumation or incineration will be optional; but several generations will probably have to pass before cremation will completely replace inhumation, as, whatever may be the feelings of the French for their fellow-creatures during life, they have great respect for the dead, amounting almost to veneration.

"TANACETIC RABIES."

In continuing his researches on "tanacetic rabies," M. Peyraud read a paper before the Academy of Sciences last week on the preventive action of the hydrate of chloral on this artificial malady and true rabies. He instituted two series of experiments on rabbits and birds by intravenous injections with the essence of tanaisia followed by the subcutaneous injections of chloral. In the first case, after having produced the specific symptoms, he endeavoured to arrest their development by the subcutaneous injections of chloral, and it was thus remarked that when the tanacetic convulsions were established, the arrest of the malady did not take place. If, on the contrary, the animals were previously subjected to the action of chloral, and when they fell asleep or were simply drowsy and a certain dose of the essence of tanaisia was administered, the convulsive effects were not produced, or were produced tardily, and after repeated doses of this essence, when the quantity of chloral was insufficient. From this result the author concludes that if the chloral had not a *curative* action on tanacetic rabies, it evidently had a *preventive* action. The discoveries of M. Pasteur on experimental rabies gave M. Peyraud the idea of studying the two kinds of rabies comparatively, and his experiments led to the following results:—"On the 6th of March, 1887, I inoculated a large black rabbit by the submeningeal method, the rabic virus being taken from a man named Berger, who died six months after the Pasteurian vaccination, of paralytic rabies in Dr. Pitres' ward. This virus was of the third series of inoculation of rabbits. The paralytic rabies of the preceding series always reached the fifteenth day. Six others (*témoins*) were at the same time inoculated with the same virus. All six died from paralytic rabies six months ago, but the black rabbit is still living. It manifested only a slight weakness about the sixteenth day of the inoculation. The rabbit was treated in the following manner:—On the 10th, 11th, and 12th March it was placed under a bell-glass, and subjected during two hours and a half to the action of the fumes of chloral without its falling asleep. On the 13th, 14th, 15th, 16th, 17th, 18th, and 19th March the animal was injected subcutaneously with 10, 20, and 30 centigrammes of a solution of chloral (2 grammes to 250 grammes of water). The treatment lasted ten days, since which time it has not presented any morbid phenomenon, and it is probable that it will not become rabid, as it is now more than seven months since it was inoculated."

MONUMENT TO BRETONNEAU, TROUSSEAU, AND VELPEAU.

On Oct. 30th the monument erected to the memory of Bretonneau, Trousseau, and Velpeau was inaugurated at Tours, the birthplace of these eminent members of the profession. The ceremony took place in the presence of the officials of the town and of that of several members of the Faculty of Paris and of the neighbouring district. Among those present may be named Dr. Louis Thomas, Professor of Clinical Surgery, who presided, Drs. Duclos of Tours, Peter, Verneuil, Brouardel, Léon Labbé, Dieulafoy, Emile Vidal, Constantin Paul, Guyon of Paris, and pupils of these eminent professors. There were also present Dr. Hubert Trousseau, grandson of the celebrated physician, and Dr. Richet, son of the well-known surgeon of that name, who represented his father, as the latter was unable to attend.

Dom Pedro, the Emperor of Brazil, recently attended a meeting of the Biological Society of Paris, at which Professor Brown-Séquard, President, proposed his Majesty for the membership of the Society, and he was unanimously elected.

Paris, Nov. 1st.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: MEETING OF FELLOWS AND MEMBERS.

THE annual meeting of the Fellows and Members of this College was held yesterday (Thursday), under the presidency of Mr. Savory. After a brief statement from the President in reference to the extension and improvement of the College rooms, museum, and library, Mr. T. Holmes proposed, and Dr. R. Gooding seconded the resolution, which will be found quoted on page 920 of our present impression. This was carried unanimously. In speaking to the motion, Mr. Holmes said it was of a rather portentous length, but if ever laid before the Privy Council it would better tell its own tale. The case, he said, stands thus: There are about 1000 Fellows and about 12,000 Members of the College. It was felt to be curious that, with the exception of some twenty-four members of Council, the remainder of this large body corporate should be entirely excluded from all participation in College management; that this small Council should exercise absolute and uncontrollable ownership of the vast influence and wealth of the College of Surgeons. He reminded the Council that, even if the immediate struggle terminated in favour of the Council, it would not be given up, for there were still Parliament and the public to appeal to. He trusted, however, that when the matters in dispute had been submitted to an independent authority, such as the Privy Council, they might not unfairly expect a favourable answer.

On the motion of Mr. John Tweedy, seconded by Dr. Danford Thomas, it was unanimously resolved to respectfully request the Council of the College to transmit a copy of the foregoing resolution to the Lord President of the Council. Mr. Tweedy said he would have been glad to have had their differences settled in that room, but he could not be surprised at the opposition of the Council, and was certainly not disheartened. He recognised the right of the Council to hold to their own opinion; but still he thought, as this was a properly constituted general meeting of the College, which every Fellow and Member was entitled to attend, it was only right and proper and dignified that the Privy Council should be put into possession of the opinion of the meeting; the differences between the Council and the general body of the College were honest, and he for one was perfectly ready to fight them out.

After some discussion on points of order, which the President disposed of, the meeting terminated with a vote of thanks to the President for his courtesy and tact in the chair.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY. The first meeting of the third session of this Society took place on Oct. 26th, in the Faculty Hall, St. Vincent-street. The following gentlemen were appointed office-bearers:—Hon. President: Professor Leishman. President: Abraham Wallace, M.D. Vice-Presidents: J. Stuart Nairne, F.F.P.S.G.; Murdoch Cameron, M.D. Treasurer: Robt. Pollock, M.D. Reporting Secretary: Robert Park, M.D. Secretary: George A. Turner, M.D. Pathological Registrar: Nigel Stark M.B., C.M. Council: J. Marshall, L.R.C.P.E. (Coatbridge); John Glaister, M.D.; W. L. Reid, M.D.; P. C. Smith, M.D. (Motherwell); David Tindall, M.D.; and Skene Keith, F.R.C.S.E. An interesting and learned paper was afterwards read by Dr. Oliphant on the History of Pessaries.

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Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were duly admitted Licentiates of the College on the 27th ult. The name of the medical school is appended in each case:—

*John Hill Abram, Liverpool; Thomas Wilson Aird, London; Henry C. Leffler Arnim, Charing-cross; *Walter J. Bearblock, Guy's; A. Babington Blackie, St. Thomas's; James H. Blomfield, University College; *Daniel Booth, Manchester; C. Carter Braine, Charing-cross; W. H. Breffitt Brook, St. Bartholomew's; *Edgar Browning, St. George's; T. W. Barnett Burn, St. Bartholomew's; *Ferberd R. Buswell, Middlesex; *Harry Johnston Campbell, Guy's; Adolphus Leo Castel, University College; *Samuel John Cole, London; *Beaumont Harry Comerford, St. Georges; R. James Cook, Guy's; Richard Cordiner, London; Percy Vernon Dodd and Arthur Reed Down, St. Bartholomew's; Herbert Edgelow and W. E. Evans, St. George's; *Frank Fawssett, St. Thomas's; *Walter Fisher, Guy's; *Frank E. Gibbens, W. Douglas Gimson, and Nathaniel J. Goodchild, St. Bartholomew's; Charles Greene, Birmingham; W. A. Griffiths, Westminster; F. W. Halliday, Leeds; *Percy Herbert Vickers Hammersly, St. Bartholomew's; Worsley John Harris and W. H. Hillyer, St. Thomas's; Christopher Whewell Hogarth, Guy's; Lionel Norton Hoysted, Charing-cross; C. H. Janes, St. Thomas's; *Ooram Llewelly Stuart James, J. James, and *J. H. B. Jarvis, London; *Frank Lane, London; C. Mortimer Lewis, St. Thomas's; H. W. Lewis, Guy's; Edwin Mellor Light, St. Georges; Charles Armstrong Lumley, Guy's; J. Black M'Ilroy, Westminster; Reginald Martyn, St. Bartholomew's; *Harry Forbes Churton Marvin, University College; C. E. Matthews, St. Thomas's; *W. Mortimer, London; *Berkeley George Andrew Moynihan, Leeds; Charles Pye Oliver, Charing-cross; Frank Pearce, Guy's; *Jeremiah Penny, King's College; G. A. Pratt, University College; *Richard Fairfax Reading, Middlesex; Harvey Rhodes, Manchester; Alex. Bruce Roxburgh, London; David Naunton Ruck, St. Bartholomew's; Bhagat Ram Sawhny, Lahore; *Prideaux George Selby, St. Bartholomew's; Harold Sidebotham, Manchester; B. O'Reilly Somers, Manchester; Matthew Henry Spence, St. Thomas's; W. H. Stevens and *Theodore Mayo Stiles, Bristol; Albert Max Sully, University College; *Shigemichi Suzuki, St. Thomas's; Horace Lawton Swete, London; Edgar Swindells, Manchester; Richard Francis Thomas, Middlesex; *Walter Thompson, Leeds; Robert Straker Turton, St. Georges; *W. H. Vickery, Middlesex; A. H. Ward, St. Georges; Frank Augustus Watkins, *John Houghton White, and Herbert Edmund Winter, St. Bartholomew's; Onslow Arthur Wickham, London; Sidney Wigglesworth, Manchester; *Richard Gerald Wilde, Cambridge and London; Bernard Duncan Zorapore Wright, St. Bartholomew's; Edmund Hasell Wright, St Thomas's; and E. T. Wynne.

* Approved by Examining Board.

ROYAL UNIVERSITY OF IRELAND.—The following degrees were conferred last week by Lord Emly, Vice-Chancellor of the University:—

BACHELOR IN MEDICINE.—Upper Pass.—John Campbell, Robert J. Duffin, W. M. Elliott, Gerald Hickey, John J. Lynch, Richard C. Mc Cullagh, Robert Nelson, W. J. O'Meara. Pass.—J. F. Annesley, Robert Bryans, David Campbell, James Clifford, Edward R. Crofton, Francis E. Gahagan, George R. Gordon, Walter Hamilton, William Killen, John McElwee, Peter McKenna, Samuel Mathews, Cecil Shaw, James Tomb.

MASTER IN SURGERY.—Honours, First Class and Special Prize of £20, Joseph Stewart. Second Class, John McIlwee, Robert J. Ferguson. Pass.—Robert Bryans, David C. Campbell, John Campbell, Robert J. Duffin, W. M. Elliott, John Ellison, Walter M. Hamilton, Gerald Hickey, W. M. Killen, W. M. Lewis, Hugh A. Logan, Richard C. Mc Cullagh, Henry Makisack, Samuel Mathews, Robert Nelson, D. J. O'Mahony, W. J. O'Meara, Francis L. Sealy, John H. Sharpe, Cecil E. Shaw, John J. Shaw, Henry J. Taylor, James Tomb.

MASTER OF OBSTETRICS.—David C. Campbell, John Campbell, W. M. Elliott, Robert J. Ferguson, W. M. Killen, Richard McCullagh, Henry L. Mackisack, Robert Nelson, Joseph Stewart.

The following exhibitions have been awarded:—

FIRST EXAMINATION IN MEDICINE.—First Class: Matthew Ledwith, £30. Second Class: Thomas Donovan, £15.

SECOND EXAMINATION IN MEDICINE.—Second Class: John Hennessy, £20; Thomas McDermott, £20; John Macnamara, £20.

M.B. DEGREE EXAMINATION.—Second Class, £25 each: Henry L. Mackisack, and Joseph Stewart.

SOCIETY OF APOTHECARIES.—The following gentlemen, having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates entitling to practise as Licentiates of the Society on Oct. 20th:—

Beaver, R. Atwood, Alexandra-rd., Waterloo, Liverpool.
Bell, W. Whitmarsh, Fentiman-road, Clapham.
Chaud, Fateh, Assist. Surg., Indian Service, Punjab, India.
Cheatle, G. Leuthal, Vereker-road, West Kensington.
Richard Watson Councell, Victoria-road, Clevedon.
Gilchrist, T. Caspar, Victoria-street, Crewe, Cheshire.
Leicester, Morton Edmund, Chambres-road, Southport.
Marsh, A. Herbert, Manchester-road, Bolton, Lancs.
Parsons, G. Gooden, Middleborough House, Coventry.
Stocks, W. Percy, The Crescent, Salford.

The following gentlemen passed the Surgical portion of the examination during the month of October:—

Abbott, Frederic W., Charing-cross Hospital.
Beaver, R. Atwood, Liverpool School of Medicine.
Bokenham, T. Jessopp, St. Bartholomew's Hospital.
Carter, Ernest, London Hospital.
Clarke, Thomas Henry, Middlesex Hospital.
Coryn, Herbert A. W., Charing-cross Hospital.
Killick, Charles Rowe, London Hospital.
Leicester, Morton Edmund, St. Bartholomew's Hospital.

The following gentleman passed the examination in Medicine only on Oct. 20:—

Spong, Harry, Leeds School of Medicine.

The following candidates passed the examination qualifying them to act as Assistants in Compounding and Dispensing Medicines:—

Aukland, W. Henry.
Colman, William.
Downes, W. Francis.
Evans, Frederic Ernest.
Knott, Percy.
Matthews, John George.
Parish, Alfred James.
Price, Thomas Harry.
Thorne, Henry Courtenay.

APOTHECARIES HALL OF IRELAND.—At a special examination held on Oct. 26th and 27th, the the following received the Licence of the Hall:—

Alexander Stewart.

THE Hospital Sunday collections were made at Brighton and Plymouth on the 30th ult.

A WELL-ATTENDED meeting was held on the 29th ult. at the Mansion House, York, in furtherance of the objects of the Church of England Burial Reform Association.

VICTORIA HOSPITAL FOR SICK CHILDREN.—Arrangements have been going on for some time past to inaugurate a grand fête and festival in aid of the funds of this charity.

AN INTERNATIONAL FIRE, WATER, AND BURGLAR PROOF EXHIBITION is announced to be held in London, early in 1888.

NATIONAL DENTAL HOSPITAL AND COLLEGE.—Mr. Charles S. Tomes will preside at the Annual Students' Dinner on Friday, Nov. 25th, at the Holborn Restaurant.

THE annual dinner of the Glasgow Southern Medical Society was held on the 27th ult., Dr. M'Millan, President of the Society, occupying the chair.

THE annual meeting of the supporters of the Manchester Southern Hospital and Manchester Maternity Hospital was held on the 27th ult., when satisfactory reports were presented and adopted.

AT a public meeting held at Glasgow on the 24th ult. resolutions supporting the proposal to erect a new infirmary to commemorate the Jubilee were unanimously adopted.

THE Committee of the Jubilee Fund now being raised in aid of the Great Northern Central Hospital, in the course of erection in Holloway-road, report the receipt up to the present time of nearly £4000.

SUNDAY LECTURE SOCIETY.—On Nov. 6th Dr. Percy F. Frankland, B.Sc., will lecture at St. George's Hall on "Micro-organisms; their place in Nature, and how to study them," illustrated by diagrams and preparations.

THE inquest upon Hannah and Edward Bowles, who are alleged to have been poisoned at Camberley, has been adjourned for another fortnight. The authorities are very reticent as to the results already obtained from their inquiries.

FATAL FOOTBALL ACCIDENT.—At an inquest held on the 2nd inst. at Princes End, near Sedgley, on the body of a youth who received fatal injuries whilst playing football on the 29th ult., the jury returned a verdict of "Accidental death."

LITERARY ANNOUNCEMENTS.—A translation of Sir Morell Mackenzie's book on the "Hygiene of the Vocal Organs" has just appeared in Germany, from the pen of the well-known laryngologist, Dr. Michael of Hamburg, under the title of "Singing and Speaking." A Dutch translation of the same work, by Dr. G. D. Cohen Tervaert, of the Hague, will shortly appear.—The publishers of *Brain* announce that, owing to the serious and prolonged illness of Dr. A. D. Watteville, it will be impossible to publish Part 39 of that work in October. It has accordingly been decided that instead of publishing Part 39 very much after its proper date, it will be best to issue Parts 39 and 40 together in January, 1888.

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A MEETING of the Association of Municipal and Sanitary Engineers and Surveyors for the Home Counties District was held at Luton on the 29th ult., chiefly for the purpose of inspecting the new sewerage works which were recently completed by the Corporation at a cost of £20,000.

HEREDITY AND NURTURE. — A course of three lectures on the above subjects will, with the permission of the Lords of the Committee of Council on Education, be given at the South Kensington Museum, on behalf of the Anthropological Institute, by Francis Galton, F.R.S., President of the Institute. The lectures will be delivered on Nov. 12th and the two following Saturdays, at 4.30 P.M.

AT the annual meeting of the Governors of the Doncaster Infirmary on the 27th ult. it was reported that the expenditure for the past twelve months was nearly £120 more than that of the previous year. This excess was attributed to the late railway accident at Hexthorpe.

BRITISH HOME FOR INCURABLES.—An Anglo-Danish fête will take place in May next, for the purpose of celebrating the silver wedding of the Prince and Princess of Wales, by rebuilding this institution, a course which has been rendered necessary by the expiration of the lease of the present premises.

WEST KENT MEDICO-CHIRURGICAL SOCIETY. — The following gentlemen have been elected officers and Council for the session 1887-88: — President: J. Brindley James. Vice-Presidents: Peter Horrocks, M.D.; Thos. Moore, F.R.C.S. Council: G. H. Cable, M.R.C.S.; Ernest Clarke, M.D., B.S.; Peter Cooper, M.R.C.S.; W. Collingridge, M.D.; Alex. Forsyth, M.D.; Frederick Moon, M.B.; J. Poland, F.R.C.S. Treasurer: Prior Purvis, M.D. Secretary: H. W. Roberts, M.R.C.S. Librarian: Ernest Clarke, M.D.

A CENTENARIAN.—The death is reported from Constantinople of a man named Dimitrios Antippa at the extraordinary age of 115. The deceased was born at Kephalonia in 1772, and, though in his later years he settled down as a merchant in the Turkish capital, he had passed his earlier days in Paris during the Reign of Terror, having had among his personal friends Marat, Danton, and Robespierre. To the last M. Antippa retained his clearness of intellect.

THE COLLEGE OF STATE MEDICINE.—At a meeting of the council on Wednesday, Nov. 2nd, Sir Joseph Fayrer, K.C.S.I., chairman, the following gentlemen were elected Associates of the College: Francis John Allan, M.D., D.P.H. Camb.; Jas. Richardson Andrew Clark, D.P.H. Camb; Francis H. S. Murphy, M.D., D.S.S.R. Irel.; Robert Sloss Stewart, M.D., D.P.H. Camb.; Francis Harper Treherne, F.R.C.S., D.P.H. Camb.; Alfred H. Twining, D.P.H. Camb.; William Henry Weddell, D.P.H. Camb.; and George Edward Cartwright Wood, M.B., B.Sc. (Public Health) Edin.

"THE FOOD WHICH HAS LAIN IN THE OOZE OF THE THAMES."—On 11th October the steamship *Escurial* collided with the steamship *Georgian* at the top of Greenwich Reach, and received damage. Five thousand packages of currants were wetted with clean salt water only. These were examined by the medical officer of health of the Port of London on Oct. 25th (the day before they were exposed to public sale), and were then found to be perfectly good for food. They were wet but sound, tasting slightly salt only. They required only washing to be perfectly good. They were passed as fit for sale. During the month of October 2000 tins of meat, 54 cases of oranges, 38 barrels of lobster, and 277 tons of beef have been seized by the port medical officer, and destroyed as unfit for food.

TRAGICAL DEATH OF A FRENCH MILITARY SURGEON. A tragical event has just occurred at Lille. A young military surgeon, who had committed some offence, was incarcerated in a disciplinary cell, and, being afraid of the hours seeming long at night, smuggled in a candle, which was contrary of course to the regulations, and lay in bed reading. After a time he must have fallen asleep, with the candle burning. Early in the morning smoke was observed by the non-commissioned officer outside to be issuing from the door. An alarm was raised, and the room entered. The cell was full of smoke from the bedclothes, &c., which had been on fire; and the body of the deceased, who had apparently been first suffocated and then burned, was found lying on the ground.

ON the 27th ult. the Jarrow magistrates fined a man 2*s.* 6*d.* and costs for wilfully exposing his son, who was suffering from scarlet fever, without taking proper precautions to prevent the spread of the disease.

ST. JOHN AMBULANCE ASSOCIATION. — A public meeting was held on the 26 ult. at the Assembly Rooms, Wood Green, Mr. J. R. Fitt in the chair, to advocate the formation of a branch of the above Association. An inaugural address was delivered by Colonel Duncan, C.B., M.P., who pointed out the advantages of instruction in "first aid" to persons of all positions of life, and instanced many cases where such knowledge had been of the greatest value, urging those present not to delay in joining a movement so philanthropic and unselfish in its object. Several local medical men having spoken in support, a resolution to commence classes forthwith was carried unanimously.

THE ROYAL ACADEMY OF MEDICINE IN IRELAND.—The following office-bearers have been appointed for the ensuing year:—Medical Section: President—James Little. Council—M. A. Boyd, J. H. Benson, A. Foot, Samuel Gordon, T. W. Grimshaw, R. A. Hayes, Alex. N. Montgomery, J. W. Moore, C. Nixon, Conolly Norman. Surgical Section: President—Anthony H. Corley. Council—William Colles, C. Coppinger, Kendal Franks, Edward Hamilton, P. J. Hayes, Edward S. O'Grady, W. Thornley Stoker, R. L. Swan, Sir William Stokes, W. J. Wheeler. Obstetrical Section: President—J. R. Kirkpatrick. Council—L. Atthill, Andrew J. Horne, G. H. Kidd, Professor R. J. Kinkead, J. R. Lane, A. V. Macan, T. M. Madden, Samuel Mason, R. D. Purefoy, W. J. Smyly. Pathological Section: President — C. B. Ball. Council — E. H. Bennett, Arthur H. Benson, J. Magee Finney, J. Lentaigne, T. E. Little, A. McKee, J. M. Purser, J. A. Scott, W. G. Smith, J. B. Story. Anatomy and Physiology Section: Chairman—H. Brooks. Council—A. J. Birmingham, H. Broomfield, D. J. Cunningham, F. I. Henston, Edward Ledwich, I. M. Purser. Section of State Medicine: Chairman—C. F. Moore. Council—Sir C. A. Cameron, E. McD. Cosgrave, T. M. Grimshaw, I. W. Moore, John Murphy, Stephen M. MacSwiney. General Secretary and Treasurer: William Thomson.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABRAM, J. H., M.R.C.S., L.R.C.P.Lond., has been appointed House-Physician to the Royal Infirmary, Liverpool.

APPLETON, THOMAS A., M.R.C.S., L.S.A., has been appointed Medical Officer for the First District of the Fulham Union.

ASHBY, ALFRED, M.B., has been appointed Medical Officer of Health to the Borough of Reading.

BALL, JOHN A., M.B.Lond., M.R.C.S., has been appointed Medical Officer for the Hendred District of the Wantage Union.

BEAVER, R. A., L.M.S., has been appointed House-Surgeon to the Royal Infirmary, Liverpool.

BINNIE, J. FAIRBAIRN, M.A., M.B., C.M., has been appointed House-Physician to the Maternity Hospital, Glasgow.

BLOMFIELD, A. G., M.D.Aber., A.K.C.Lond., has been appointed Physician to the Exeter Dispensary.

BLOXSOME, CHARLES H., L.R.C.P.Ed., L.R.C.S., has been appointed Medical Officer for the Second Division of the Third District of the Northleach Union.

CLARKE, W. F., M.R.C.S., has been appointed House-Physician to Guy's Hospital.

DAVIDSON, GEORGE, M.A., M.B., C.M. Aber., has been appointed Assistant Medical Officer to the Govan Poorhouse and Asylum, vice P. H. Walker, M.B., C.M.Glas., resigned.

DELISLE, ALBERT, M.R.C.S., LR.C.P.Lond., has been appointed Junior House-Surgeon to the Torbay Hospital.

DOYLE, HENRY MARTIN, M.R.C.S., L.S.A., has been appointed House-Physician to the London Hospital.

DREW, H. W., M.R.C.S., has been appointed House-Surgeon to Guy's Hospital.

FISHER, T., M.R.C.S., has been appointed House-Physician to Guy's Hospital.

FOX, WALTER, M.B., C.M., has been appointed House-Physician to the Maternity Hospital, Glasgow.

MANBY, E. R., M.B., B.C.Cantab., M.R.C.S., has been appointed House-Surgeon to Guy's Hospital.

MITCHELL, ADAM GANATT, L.R.C.P. Ed., L.R.C.S. Ed., has been appointed Medical Officer and Medical Officer of Health to the Kinnetty Dispensary District of the Parsonstown Union, King's County.

MOODY-WARD, RICHARD, B.A., M.B. Oxon., has been appointed Physician to the Royal Berkshire Hospital, Reading, vice Shea, deceased.

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NICHOLLS, WILLIAM JOHN, M.R.C.S., L.R.C.P., L.M.Ed., has been appointed Medical Officer to the Somersham District of the St. Ives Union.

WILLIAMS, C. L., M.B., C.M.Edin., has been reappointed House-Surgeon to the Royal Infirmary, Liverpool.

WILLIAMS, JOHN H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Llanbyther District of the Lampeter Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF SHEFFIELD.—Medical Officer of Health. Salary £500 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House-Surgeon.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser. Salary £100 per annum, with board and residence.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-inn-road, W.C.—Registrar and Pathologist. Small honorarium.

LINCOLN COUNTY HOSPITAL.—House-Surgeon. Salary £100 per annum, with board, lodging, and washing.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant. Board, lodging, and washing, but no salary.

QUEEN'S COLLEGE, Birmingham.—Professor of Gynæcology.—Lecturer on Operative Surgery.

ROYAL ALBERT ASYLUM FOR IDIOTS AND IMBECILES OF THE NORTHERN COUNTIES, Lancaster.—Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150, with board, apartments, and washing.

ROYAL UNITED HOSPITAL, Bath.—Resident Medical Officer. Salary £100 per annum, with board and lodging.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary £80 per annum, with board, washing, and lodging.

THRAPSTON UNION.—Medical Officer. Salary £50 per annum, exclusive of medical extras and vaccination fees.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Dental Surgeon.

WESTMINSTER HOSPITAL MEDICAL SCHOOL, Caxton-street, S.W.—Lecturer on Physiology.

WILTS COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BROWNE.—On the 23rd ult., at Largo House, Rathmines, Dublin, the wife of Robert Browne, M.D., F.R.C.S.I., J.P., of a son.

GABB.—On the 27th ult., at Copthorne, Guildford, the wife of J. Percy A. Gabb, M.D.Lond., of a daughter.

GOSSE.—On the 21st ult., at Eccleshall, Staffordshire, the wife of Hope Wilkes Gosse, M.R.C.S., L.R.C.P.Ed., of a son.

NICOLL.—On the 31st ult., at Glenarm House, Upper Clapton, the wife of T. Vere Nicoll, M.R.C.S., L.R.C.P.Lond., of a son.

ORMEROD.—On the 23rd ult., at Upper Wimpole-street, the wife of Joseph Arderne Ormerod, M.D. Oxon., F.R.C.P. Lond., of a daughter.

POTTS.—On the 27th ult., at Vicarage-villas, Willesden, N.W., the wife of W. A. Beevor Potts, M.R.C.S., L.S.A., of a daughter.

MARRIAGES.

DAVIES—LLEWELLYN.—On the 1st inst., at St. Paul's, Burdett-road, Hughes Reid Davies, L.R.C.P., M.R.C.S., to Edith Anne, elder daughter of Dr. Evan Llewellyn, of The Limes, Bow.

DAVIS—TOMLINSON.—On the 1st inst., at All Saints', Margaret-street, Cavendish-square, Theodore Davis, M.D., to Emily Alice, widow of the Rev. R. C. L. Tomlinson, and daughter of the late William Dale.

DICKSON—LONGMORE.—On the 2nd inst., at 56, Melville-street, Edinburgh, George William Dickson, M.B., C.M.Edin., of Dunkeld, to Helen, youngest daughter of the late Adam Chalmers Longmore, of H.M. Exchequer, Scotland.

DEATHS.

BENNETT.—On the 25th ult., at Okehampton, suddenly, Frederick Chas. Bennett, M.R.C.S., aged 42.

DEAS.—On the 29th ult., at Exeter, Matthew Ross Deas, M.D., formerly of Kirkleatham, Yorkshire, aged 82.

KERSHAW.—On the 26th ult., at Whitecross-street, E.C., Benjamin Kershaw, M.R.C.S., L.S.A., aged 59.

O'MEARA.—On the 28th ult., at Sheffield, Timothy O'Meara, L.R.C.P.Ed., L.R.C.S., aged 36.

SMITH.—On the 30th ult., at Edinburgh, J. Y. Smith, M.D., Deputy Surgeon-General, retired, Bombay Medical Service.

TEEVAN.—On the 1st inst., at the York House Hotel, Bath, Jas. Teevan, Esq., of 18, Chesham-place, London. R.I.P. Friends will please accept this intimation.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, November 7.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Marmaduke Sheild: A case of Acute Glossitis in a Child complicated with Trismus.—Dr. Bristowe: The Presystolic Murmur.

Tuesday, November 8.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. W. Arbuthnot Lane: (1) On the Mode of Fixation on the Scapula, suggested by a study of the movements of that bone in extreme flexion of the shoulder-joint, and its bearing upon fracture of the coracoid process; (2) An Undescribed Method by which the Superjacent Weight of the Body is Transmitted in a United or Ununited Fracture of the Neck of the Femur through an acquired Ilio-femoral Articulation, and the Bearing of the Principle involved upon the Surgery of the Hip-joint.—Mr. Warrington Haward: A case of Excision of a Tubercular Movable Kidney.

Wednesday, November 9.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

HUNTERIAN SOCIETY.—8 P.M. Mr. Symonds: Obscure cases of Disease of the Cæcum.—Dr. Silk and Dr. Goodhart: Cases of Perityphlitis.—Mr. Fowler: A case of Richter's Hernia.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. H. B. Brady: Synopsis of the British Recent Foraminifera.—Mr. C. R. Beaumont: Metamorphoses of Amœbæ and Actinophrys.

HOSPITALS ASSOCIATION.—8 P.M. Mr. Keith D. Young: Hospital Construction.

Thursday, November 10.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Living and Card Specimens at 8 P.M by Messrs. Hartridge and Silcock and Drs. Mules and Poulett Wells. Dr. Sharkey: (1) Fatal case of Brain Disease with Hemianopia; (2) Note on a previously recorded case of Hemianopia.—Mr. Nettleship: Iridectomy in Relapsing Iritis.—Mr. J. Hutchinson, jun.: On Quiet Iritis.—Mr. Lawford: Congenital Defect of External Ocular Muscles.—Mr. Emrys-Jones (Manchester): (1) An Unusual Complication after Sub-conjunctival Tenotomy of Internal Rectus; (2) Persistent Hæmorrhage in the Anterior Chamber after Iridectomy for Chronic Glaucoma.

ABERNETHIAN SOCIETY (St. Bartholomew's Hospital).—Surgical Discussion: Anæsthetics (introduced by Mr. B. Willett).

Friday, November 11.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—4 P.M. Quarterly Meeting. Meeting of Council at 3 P.M.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Sir Henry Thompson: Enormous Prostate, vesical calculi, free and encysted, urine passed for years by catheter, now by supra-pubic tube, rendering catheterism unnecessary.—Mr. A. F. MacGill (Leeds): Supra-pubic Prostatotomy, with three cases in which the operation was successfully performed for chronic prostatic hypertrophy.—Dr. Gibbons and Mr. R. W. Parker: Removal of Tumour from the Female Bladder by Galvano-cautery, rapid dilatation of urethra, combined with supra-pubic incision.—Dr. Clemow: Case of Hysterical Hyperpyrexia. Living cases:—Dr. Goodhart and Dr. Carpenter: Hereditary Ataxia (a family of three).

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—9 P.M. Mr. Henry Power: On the Relations between the Sexual Organs and the Eye.

Saturday, November 12.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 3rd, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 28	29·74	S.W.	52	51	81	59	46	·07	Raining
,, 29	29·72	S.W.	50	48	85	59	45	...	Fine
,, 30	29·48	S.W.	44	42	79	53	41	·60	Cloudy
,, 31	29·50	S.W.	43	40	77	51	39	·07	Overcast
Nov. 1	29·35	S.	47	44	...	49	42	...	Overcast
,, 2	29·27	S.W.	47	45	80	55	43	·23	Cloudy
,, 3	28·85	S.W.	51	50	...	53	46	·21	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

CAUSES OF BLINDNESS.

DR. SERGIEFF, of the Vlatski province of Russia, who has taken notes of the causes of blindness of 824 persons in his locality, 501 of whom were females, finds that the cause is trachoma or granular lids in 245 cases, disease of the cornea in 129, cataract in 110, small-pox in 112. Injuries accounted for less than 5 per cent. of the cases. Amongst 1176 persons blind of one eye, 222 referred the cause to injury, a large number of these stating that they had met with accidents with the straw during harvest time.

Messrs. Hothersall and Co.—We have no recollection of having made reference to the matter.

Dr. Alexander Harkin.—We regret we have not by us a copy of the number of the publication mentioned.

SWALLOWING ARTIFICIAL TEETH.

To the Editors of THE LANCET.

SIRS,—I notice in recent issues of THE LANCET several interesting cases of the swallowing of coins, &c. Possibly the following case may be of similar interest to some of your readers.

On Friday last, about 8 A.M., I was called to see Mrs. B——, the messenger stating that she had swallowed her artificial teeth. On my arrival she said she was in the habit of sleeping with the teeth in the mouth, and that they comprised the four upper incisors, with a composition-plate fitting half the upper palate. On awaking, she found the teeth in her throat, and was obliged to swallow them. She complained of pain in the epigastrium and between the shoulders. I passed the horsehair probang down the œsophagus into the stomach, and gently moved it about in the stomach, but was unsuccessful in extracting the teeth. I repeated the operation three times unsuccessfully. I then administered an emetic consisting of one scruple of ipecacuanha powder and ten grains of sulphate of zinc in a cupful of warm tea, and directed the patient to eat a few figs, which she did. Having to leave to attend a labour case in an adjoining street, I called about an hour afterwards, and found that she had vomited the set embedded in the figs. During the after-part of the day she complained of the former pain between the shoulders and in the epigastrium, and was unable to lie down. Relief was obtained by ten-drop doses of tincture of opium and hot poultices applied back and front. On calling the next day I found her free from all pain, and to all appearance perfectly well—a happy issue out of her trouble.

I am, Sirs, yours truly,

GEO. W. EGLINTON, L.R.C.P. Ed., &c.

Dalton-in-Furness, Oct. 24th, 1887.

"LEICESTER PROTECTED BY VACCINATION."

Mr. Biggs.—We adhere to our approval of inquiry "by competent and unprejudiced persons." But we did not contemplate the nomination of so many Leicester officials, who, according to our correspondent, believe in vaccination, but certainly have taken up a strongly antagonistic position to the Vaccination Acts. The constitution of such a committee would have to be gravely discussed, and the time for its appointment. As to the points in dispute between Mr. Biggs and ourselves there can be no doubt: That those exposed to small-pox patients in Leicester are protected by vaccination and revaccination, one nurse excepted, in whom revaccination at another small-pox hospital did "not take," and she, almost of course, incurred small pox, and so became protected; that Mr. Biggs in his account of the immunity of Leicester entirely ignored this protective influence, which, according to the overwhelming opinion of the medical profession and of all civilised nations, constitutes the chief security of Leicester, without which all the excellent police arrangements would not avail, as they will not avail for any Leicester man, woman, or child, when they come to be exposed to small-pox either out of Leicester or when it may come into Leicester "like a flood," and not in driblets, as now.

E. H. should apply to the Secretary of the St. John Ambulance Association, St. John's-gate, Clerkenwell.

G. M. O.—At this distance it is impossible for us to discuss the details of a matter which has been the subject of judicial inquiry.

MORE "ROUGH-AND-READY MEDICAMENTS."

To the Editors of THE LANCET.

SIRS,—With reference to a letter of mine that appeared under this heading some time since in these pages, will you kindly allow me to give a few other illustrations in point, and to ask your readers for any or such others of like import as may have come under their notice.

1. Burnet is responsible for the first, and it occurs in his Life (p. 211) of that pious and kindly Anglican bishop, Dr. Bedell of Dromore, of whom it is said that a Catholic priest who knew him well, and respected him accordingly, said at his grave, "O sit anima mea cum Bedello." It runs to the effect that "a few years before his death he (Bedell) had some severe fits of the stone," and that "the best remedy that he found for it was to dig in his garden till he had very much heated himself, by which he found a mitigation of his pain," and this heat acted, no doubt, on him pretty much as a stoup or a warm bath might. The late Mr. Allarton (or, it might be, some other to me now unknown writer) has told a very similar story of the famous Bishop of Meaux, the "Magnus Bossuetius" of my old Gallican tutor, and like stories are, I think, told of others in the same condition.

2. Describing the medicinal remedies or contrivances of the savages of equatorial Africa, Sir Samuel Baker says ("The Albert N'yanza," vol. ii., p. 274) that "the treatment for headache among all the savage tribes was a simple cauterisation of the forehead in spots burnt with a hot iron close to the roots of the hair."

3. Describing the ecclesiastical arrangements of the Russian Church in his day, and with especial reference to the deposition and incarceration in chains by order of the Czar of one of the best of their metropolitans, Baron von Herberstein, says ("Notes upon Russia," Hakluyt Society, vol. i., p. 54) that "one Daniel succeeded him as metropolitan, a man of about thirty years of age, of a large and corpulent frame, and with a red face, who, lest he should be thought more given to gluttony than to fastings, vigils, and prayers, used on all occasions when he had to perform any public ceremony to expose his face to the fumes of sulphur to make himself pale, *and when he had by this means become thoroughly pale* he would present himself in public"! The italics are mine, and I use them to point out a valuable addition, when pallor is the object to be acquired, to our ordinary cosmetic resources, and ask at the same time if this very practice has not been long recommended, *inter alios*, by Terence or Mænander?

I am, Sirs, your obedient servant,

Auriol-road, W., August, 1887. W. CURRAN.

PASSAGE OF FOREIGN BODIES THROUGH THE ALIMENTARY CANAL.

To the Editors of THE LANCET.

SIRS,—The following case may make a pendant to that of "H.F.S." in your issue of Oct. 15th, as showing the opposite rate of speed in the passage of a metallic body through a child.

On Whit Sunday (May 29th), I was startled by a message that a young patient of mine, aged eight months, had "cut his throat." The messenger, who was a foreign gentleman, drew his hand across his throat so that there might be no mistake. I arrived at 1.30 P.M., and found that the mother had been alarmed at seeing some blood coming from the *inside* of the throat, and that at the same time she had missed the screw and clip [enclosed] which was used for the purpose of compressing the tube of the feeding bottle. I appeased her alarm, and next morning at 7.45 the child passed it, open to the full point just as I forward it. A word of warning to mothers to discard these clips would be useful. A knot in the tube, tightened or relaxed according to circumstances, is sufficient.

I am, Sirs, yours faithfully,

Oct. 25th, 1887. J. B. E.

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BURIAL REFORM.

To the Editors of THE LANCET.

SIRS,—Touching this subject, as noticed in your issue of Oct. 15th, and as tending towards full development of the object in view, I wish to raise the following points for inquiry and elucidation.

Among the desired reforms mentioned are: "That the coffin should be of the most perishable and lightest material," and "burial in the plain earth, in conformity with the instructions in the Burial Service—'earth to earth.'" But would not even "compressed pulp" as the material of the coffin in dry earth tend to postpone decomposition? and cannot the coffin be completely got rid of in order that the earth may have full play, and at once, on the body? Are there any valid objections in this country to envelopment of the body in merely some light sheeting, and so interred (simple and primitive), with an additional temporary covering of cloth during transit to the cemetery? Or, if the process of conveyance and religious ceremonies in church require some firmness in the material to conceal from view the outline of the body, could not a wooden coffin be made of separable parts to further these aims, but to be removed after deposition in the grave? Suppose that the bottom of the coffin (of wood or any other temporary firm material), a plank with outline as at present, had at about an inch or less from the edge a thin wooden ridge about three inches high running all round (to keep the upper part *in situ* and prevent escape of fluid from the body), and so forming one part, and the top and sides to form the other, the latter when connected with the former enclosing the ridge and resting on the bottom with a few light iron clamps to retain the two portions firmly together in transit. The body in some light covering could be lowered in this into the grave, and after completion of the ceremonies the upper part (clamps loosened previously) could be drawn up, leaving the body resting on the bottom of the coffin, but free elsewhere for direct contact with the earth. This would deviate but little outwardly from our present system up to deposition in the grave; but beyond this it would thoroughly (the back of the corpse excepted) effect "earth to earth." It would not necessarily entail very early burial; and though an objection might be raised by the friends to the ground falling roughly on the all but exposed body (hardly more unpleasant than the rattle on the hollow coffin), yet a little care in the deposition of the first earth would obviate this natural grievance. The cost would be small, as the upper part of the coffin would be available for any number of burials, while sanitation and transit purposes would be met. The riddance of any kind of coffin seems eminently desirable. What is to be said against the suggestion?

I am, Sirs, yours faithfully,

October, 1887. F. H. W.

REMARKABLE CASE OF LONGEVITY.

To the Editors of THE LANCET.

SIRS,—Should you think the following of sufficient interest, will you insert it in the columns of your journal?

The death is announced of Miss Charlotte Pigot, aunt of the present rector of Whittington, Kirkby Lonsdale, at the Rectory, on Sunday, Oct. 9th. She was born at Alington, in Shropshire, on July 9th, 1785, where her father, Thomas Pigot, Esq., resided, her grandfather being Charles Peplow Pigot, Esq., of Peplow, in the same county. Fourteen years ago, being then eighty-eight years of age, deceased came to the Rectory, as she said, "to die"; but a remarkably vigorous constitution repelled death's attacks, and she lived to this ripe old age in unburdensome cheerfulness. Some years ago deceased lost her eyesight; but every other faculty she possessed up to the very last in a marked degree. The most remarkable feature of this wonderful lady is that she was never confined to her bed for a single day until the last few months of her life, and it was only through the loss of the use of her legs that she ultimately took to bed. Her powers of digestion were most remarkable. Up to the very last her appetite was as vigorous as in the prime of life, eating hard-boiled eggs (ten minutes), pork pie, and Welsh rarebit with the greatest relish, and feeling no evil effects whatever. Her memory, too, was wonderful. On her hundredth birthday she conversed with great avidity upon events that took place in 1795, the particulars of which were present in her mind. She had a room to herself at the Rectory, but always joined the family at meals down stairs. Breakfast was served at 8.30, to which the deceased never failed to put in an appearance; and after the evening meal she would spend the evening with the family until 10.30 in cheerful conversation. Her nephew on her hundredth birthday drove her into the town of Kirkby Lonsdale, which she seemed very proud of. There must be something in the locality of the district which tends to prolong life; for at Heysham, near here, a lady at present survives who is in her hundred and third year. I am, Sirs, yours very truly,

W. H. LEDGARD, L.R.C.P.Ed., M.R.C.S.

Kirkby Lonsdale, Oct. 18th, 1887.

STROPHANTHUS PODS FROM THE NIGER.

To the Editors of THE LANCET.

SIRS,—We have pleasure in forwarding you herewith a specimen pod of an entirely new species of strophanthus from the Niger, just to hand. We have noticed in it that though the pod and seed somewhat resemble those of *S. hispidus*, the foliage, which has also reached us, is quite different. We have so often been asked by medical men to supply samples, that we think it would be of interest to your readers to know they can now obtain pods for materia medica collections.

We remain, Sirs, yours truly,

Lime-street, E.C., Nov. 1st, 1887. THOS. CHRISTY AND CO.

CHEFOO HOSPITAL.

DR. DOUTHWAITE, medical missionary connected with the China Inland Mission, who has a hospital at Chefoo, mentions in a recently published report that though there are a few beds proper for surgical cases, the patients prefer the *k'ang* to any bed. The *k'ang* is a brick platform, six feet wide, raised two feet and a half above the floor, and extending across the room. The top is composed of stone slabs, plastered over with clay, and is warmed by burning grass or other fuel in the flue, which ramifies beneath it. It is covered with straw matting in summer, and padded quilts in cold weather. On these hard, comfortless beds the patients will lie or sit for weeks, quite happy and contented, and really prefer them to the spring mattresses which are provided for those who desire them. One advantage of this arrangement is that the bed can be covered with a clean sheet of whitewash whenever necessary. This necessity arises very often, and the mats the patients have slept on require drenching with boiling water after being used a short time. The reason for this is obvious. The prevailing diseases are those of the skin and the respiratory and digestive organs; but during the spring and summer months remittent fever is most common. "Passion" or anger is, according to the natives, the cause of all classes of disease, from glaucoma to gastro-hepatic troubles. This anger does not cause the people to feel in the least ashamed of themselves, as they consider themselves merely irresponsible victims.

Justitia.—No doubt B earned his promotion by his long tenure as house-surgeon; but the selection of B might surely have been made without any discourtesy to A.

Mr. E. W. Evans.—If the engagement was verbal, and there was no written agreement specifying that written notice must be given, the engagement can be terminated by a proper verbal notice.

Dr. Salvati is thanked for his communication.

VACCINATION AND SMALL-POX AMONGST THE CHINESE.

To the Editors of THE LANCET.

SIRS,—Vaccination in connexion with small-pox having recently been made the subject of some comments in your journal, the following figures may prove of some interest. They are taken from an abstract of a very instructive colonial surgeon's report for 1886, by Mr. P. B. C. Ayres of Hong Kong.

Small-pox Hospital (European), 11 admissions, with one death—i.e., a mortality of 9·1 per cent. Small-pox wards of Tung Wa Hospital (Chinese), 54 admissions, with forty-two deaths—a mortality of 77·7 per cent. In connexion with the European cases it is stated in the report that "most of the cases were of a mild type," but that the Asiatic cases were "mostly of the worst type, unvaccinated, and the majority children." The former set of cases, then, show the work of small-pox amongst what may be taken to be a fairly well vaccinated community, and under skilful treatment; the latter the mortality of the same disease amongst an unprotected race and under Chinese treatment. This question of treatment must, of course, be taken into account in drawing a conclusion. But, on the other hand, it must be remembered that the Europeans are living in, for them, an unnatural climate, and so far would probably be in a less favourable condition of health to withstand the action of the disease than the Chinese, who, in spite of their filthy mode of living and the apparent poverty of their diet—I am alluding to the native labouring classes in European settlements—are a hardy race. It may be mentioned in passing that a few of these Chinese are vaccinated; for it is mentioned in the above report that 2206 successful vaccinations were performed during the year at the Tung Wa Hospital. Judging, however, from my somewhat limited experience on the Chinese coast as ship surgeon, where I had at different times a considerable number of coolies under my charge, the proportion so protected must be minute. In short, after every circumstance has been taken into consideration, the figures given will, I think, be allowed to form an additional argument, if any be required, in favour of the prophylactic efficacy of vaccination.

I remain, Sirs, your obedient servant,

Norland-square, W., Oct. 29th, 1887. ALEX. G. R. FOULERTON.

"ABUSE OF HOSPITALS BY THE WELL-OFF."

To the Editors of THE LANCET.

SIRS,—Here is another authentic case. A married lady, one of my own relatives, without family and spending £70 or £80 yearly on dress, consulted a "lady's doctor" (now deceased), who after a while said she must undergo some surgical treatment, for which he persuaded her to go into one of the largest of the London hospitals to which he was attached. This she did; and was in the hospital several weeks. He made no stipulation that a donation or payment of any kind should be made to the hospital. On subsequently learning these facts and ascertaining that this fashionable lady had positively not made any gift to the hospital, although I know that she and her husband had an income of about £500 a year, I took £10 out of my own pocket and made the husband enclose it to the treasurer of the hospital as an acknowledgment for services rendered and costs incurred. In the above case I think the surgeon was blameworthy for permitting the hospital funds to have been so abused.

I am, Sirs, yours truly,

Oct. 27th, 1887. M.D.

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"ANTIPYRIN IN MIGRAINE."

To the Editors of THE LANCET.

SIRS,—Kindly allow me to send you a notice from Germany about "Antipyrin in Migraine." In your issue of the 15th I read a very interesting case from Dr. Edward Warren-Bey of Paris, of his having treated a lady suffering from migraine with antipyrin very successfully.

May I tell you that in Germany treatment with antipyrin in cases of migraine has been for some time past very successful; that all our medical men prescribe this medicine in migraine. The dose which we give is half a gramme. It is best to give it in the aura, before the attack comes on. For instance, when a patient feels the evening before that she is likely to have an attack the next morning, she should take antipyrin when she goes to bed, and when she awakes the next morning and feels, notwithstanding this, that the migraine will come, she must take a second dose, remaining in bed for one or two hours, and in most cases the attack of migraine will be suppressed. In my own practice I have successfully treated many cases. Antipyrin is not only a very good remedy for migraine, but many practitioners have used it for tabes dorsalis (especially for the pains) with very satisfactory results. The dose in this case would be the same as for migraine.

I am, Sirs, respectfully yours,

Dresden, Oct. 30th, 1887. ARTHUR BERTHOLD, Dr. Med.

"LINIMENTS FOR CLUB USE."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent, "Club," I beg to say he will find the following formula a cheap and useful liniment for club patients: ℞ Sp. terebinth., ʒviii.; liq. ammon. fort., sapo mollis, aa ʒvi.; aquæ, O.iv. Ft. liniment. Dissolve the soap in boiling water; when cold, add the turpentine and ammonium; when mixed it will form on shaking a very nice emulsion without any deposit of soap. Of course, the liniment can be made any strength by increasing or decreasing the ingredients.

I am, Sirs, yours truly,

Andover, Nov. 1st, 1887. S. B. FARR.

*** Other correspondents offer the same prescription.—ED. L.

"HOME FOR INEBRIATES OF LIMITED MEANS."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Wilson's question in your last issue, I can highly recommend the British Women's Temperance Home. The terms are from 7*s.* 6*d.* to £1 10*s.* per week. The Matron, The Mount, Perry-rise, Forest-hill, would answer inquiries.

I am, Sirs, yours faithfully,

New Wanstead, E., Oct. 31st, 1887. ALICE E. G. HAWKES.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Mayo Robson, Leeds; Dr. C. D. F. Phillips, London; Dr. C. W. Dulles, Philadelphia; Dr. Charteris, Glasgow; Mr. Pepper, London; Dr. John Wood, Walsall; Dr. Berthold, Dresden; Mr. Hulke; Dr. Hooper May, Tottenham; Dr. Nos, Tottenham; Mr. Habgood; Mr. Marcus Gunn, London; Dr. W. H. Barlow, Manchester; Dr. R. W. Lowe, Brighton; Mr. F. R. Humphreys, London; Mr. McNicoll, Southport; Mr. J. Milner, Hayes; Mr. Boyd, Ripon; Dr. Grove, Melksham; Mr. Puddicombe; Mr. W. B. Carne, Kingsland; Messrs. T. Christy and Co., London; Dr. Authonisz, Colombo; Mr. F. W. Gibbon, South Shields; Mr. S. B. Farr, Andover; Mr. Jolliffe, Croydon; Mr. Nelson Hardy, London; Mrs. Hawkes; Mr. Jalland, York; Messrs. Leader and Son, Sheffield; Mr. F. G. Heath, London; Messrs. Hopkinson and Co., Nottingham; Mr. R. M. Whitham; Mr. Williams, Tunbridge Wells; Mr. Tobin, Dublin; Mr. Collins, London; Messrs. Brown and Co., Glasgow; Mr. Blaikie, London; Dr. M. Wyman; Drs. Waller and Reid; Dr. Brett, Watford; Mr. A. L. Rose, Hull; Messrs. Clarke and Co., London; Mr. Gem, London; Dr. Saundby; Messrs. Blake and Co., Leeds; Mr. Foulerton, London; Mr. McLintock, Church Stretton; Dr. Collie, London; Dr. Whittle, Brighton; Messrs. Lee and Nightingale, Liverpool; Mr. Lowther, Ventnor; Dr. Smith, New Westminster, Canada; Mr. Mercier, Clayton-le-Moors; Mr. Dawson Burns, Tooting; Mr. T. Pagan Lowe, Bath; Messrs. Macmillan and Co., London; Mr. Dennis, Hartford, U.S.A.; Messrs. Lorimer and Co., London; Dr. Branting, Hawkstay; Dr. Heelas; Dr. T. Wood Hill, London; Mr. Green, London; Mr. Keeley; Messrs. Calvert and Co., Manchester; Messrs. Churchill, London; Messrs. Bennett Bros., Salisbury; Mr. Lewis, Birmingham; Dr. Bond; Mr. Russell, Liverpool; Mr. Huxley, London; Mr. Brown, London; Mr. Brown, Bournemouth; Dr. Walford, Ramsgate; Mrs. Moore, Desengano; Dr. Churton, Leeds; Mr. Owen, Leeds; Mr. Stockings; Mr. Langley, London; Mr. Duschnitz, Vienna; Mr. Ruck, Roade; Major Ormond, Bath; Dr. Finney, Montreaux; Mr. Whitford, London; Mr. Diggins, Lancaster; Messrs. Wotherspoon, London; Messrs. Maclachlan and Co., Edinburgh; Mr. G. W. Stevens, London; Messrs. Wright and Co., Bristol; Mr. Hearson, London; Mr. Lambert; Messrs. Trübner and Co., London; Mr. Corcoran, Rochester; Messrs. Reynolds and Branson, Leeds; Mr. F. Dixon, Kempston; Messrs. Reynell and Co., London; Mr. Smith, Sheffield; Mr. B. W. Evans; Mr. Mayhew, Ipswich; Mr. Townsend, Exeter; Mr. Johnson, Leicester; Dr. John Brown, Cape Colony; Mr. Tunmer, Harrogate; Dr. Duncan, Frome; Mr. J. G. Simpson; Avibus; B. B.; Endymion; E. R., Tunbridge Wells; J. T.; M.D.; G. M. O.; E. H.; Medicus, Holland-park.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Skerritt, Bristol; Mr. Thwaites, Bristol; Mr. Kerr, Glasgow; Messrs. Bell and Co., Edinburgh; Mr. Morton, Kidderminster; Dr. Abbot, Tunbridge Wells; Mr. Ansbrox, London; Mr. Tweed, London; Messrs. Robbins and Co., London; Dr. Rayner, Camberwell; Messrs. MacFarlane and Co., London; Mr. Pace, Newcastle-on-Tyne; Messrs. Woollams and Co., London; Dr Harvey, Bayswater; Dr. Sansom; Messrs. Woolley and Co., Manchester; Mr. Mundy, Hampstead; Messrs. Russell and Co., Ilfracombe; Mr. Bremner, Walmer; Mr. Count; Messrs. Oliver and Boyd, Edinburgh; Mr. Jones, Treherbert; Messrs. Maythorn and Son, Biggleswade; Mr. Borcombe, Lincoln; Messrs. Burgoyne and Co., London; Mr. Manger, Ventnor; Mr. Moring; Messrs. Slinger and Co., York; Mr. Furley, Clerkenwell; Mr. Godfrey, Northampton; Mr. Walford, Aberdeen; Dr. Taylor, Grantham; Mr. W. Anderson, London; Mr. Kershaw, London; Dr. Langston, Rochester; Mr. S. Lawson, London; Mr. Beresford, Belfast; Mr. Hodgson; Mr. Harris, Chatham; Mr. Foote, Cirencester; Mr. Davis, Worcester; Mr. Chote, Brading; Mrs. Irvine, Swindon; Dr. Cooke, Sheffield; Mr. Wormald, Manchester; Mr. Armstrong, Manchester; Messrs. Bullock and Reynolds, London; Mr. Somerville, Edinburgh; Mr. Saunders, Blaenavon; Mr. Reynolds, Alfreto; Mr. Stenhouse, Glasgow; Dr. Tate, Birmingham; Sphenoid, Schaff; F., Halifax; Q. R.; Dr. H., Leeds; M. V., Haverstock-hill; F. G., Norbiton; C. J. S., London; Public Health; E., Liverpool; Matron, Portsmouth; Foxhound; E. S., Long Sutton; Matron, Weston-super-Mare; B.A.; Doctor, Cannes; M. C., St. John's-wood; Secretary, Glasgow; A. T. C., Reading; Secretary, Iver; S. J.; P. S.; Nauticus; H. W.; F. D.; Omega; G. B. W., Hertford; Surgeon, Southampton; G. G. T.; A. B. C.; Medicus, Stamford.

Somerset County Gazette, Retford News, Shields Daily Gazette, York Herald, Guy's Hospital Gazette, Cardiff Evening Express, L'Hygiène Pratique, The Zoophilist, The Land Roll, &c., have been received.

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Post-Graduate Lecture

ON

RHEUMATISM,

Delivered at Charing-cross Hospital,

BY JULIUS POLLOCK, M.D., F.R.C.P.,
SENIOR PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—I am much honoured by having been requested to give the first of this course of lectures at Charing-cross Hospital. I feel at the same time that I have a great responsibility, for in an undertaking like the present a good start is all-important, and anxious as I am to to do my best, and with the keenest interest in the success of the course, my efforts may, and probably will, fall far short of my desire.

Before entering upon the special subject that I have been requested to treat, it is, I think, incumbent upon me to say a few words by way of introduction. There can be little reason to doubt the need of such a course of lectures as this, and the success of a similar plan of teaching in America, in Edinburgh, in Leeds, and in other places, has shown that under proper direction and favourable auspices such a mode of imparting instruction has met with the entire approval of those for whom the lectures are intended. We are, or ought to be, all of us students in the best sense of the word to the end of our lives; and with the vast amount of knowledge to be acquired, with the constant and important advances that are continually being made in pathology, the means of diagnosis, and the treatment of disease, it is quite impossible that the few years of study comprising the medical curriculum should suffice for the acquisition of a complete and final grasp of such vast subjects as medicine and surgery. Seeing, then, how great the advantages of a post-graduate course of lectures must be, it appears strange that such a scheme should not always have proved successful, but a little thought will show how important are certain details in the arrangement of the course, in order that it may meet the requirements of those for whom it is especially intended. A want of proper attention to such details has in some instances led to comparative failure. The lectures must be given at an hour when the busy practitioner is best able to attend. They must be essentially practical in character; and the subjects should be selected by those who desire to learn, rather than by those who are willing to teach. It is also desirable, in order to maintain the independence of the class, that the lectures should be self-supporting, and a moderate fee paid for the course. Another very important point is the hearty co-operation of the whole staff of a hospital in the work of instruction. It gives a higher tone to the task, a variety to the teaching, a lightness to the labour. Under conditions such as these there is every reason to hope that our post-graduate course of lectures may become popular and attractive, and obtain a permanent footing amongst the various means that exist for enlarging our knowledge and increasing our usefulness.

Let me now pass to the subject of my lecture. I have certain drawbacks to contend against to-day, which I do not allude to by way of complaint, but that you may know I have not overlooked them. In the first place, there is little or nothing new to tell you about rheumatism. No fresh light has been shed upon its pathology or treatment during the last few years, and I fear lest what I have to say to you may be "as tedious as a twice-told tale." Then, again, I am badly off in the matter of illustration. My subject is one that does not carry specimens or diagrams. Nor are we able at will to command the presence of a certain number of cases of rheumatic fever in the wards. At the present time there is but one, and he is convalescent. Such are my difficulties, and I am sure you will bear kindly with me. But to proceed. There are two forms of rheumatism, the articular and the muscular; and although they both are known under the common term "rheumatism," they are really, I believe, two separate and distinct disorders, with but little in common except their name. Articular rheumatism, as its name implies, is essentially an affection of the joints, very frequently associated with inflammation of the pericardium, endocardium, and other serous membranes, the structure of which so closely resembles the synovial. There is usually fever and marked constitutional disturbance. The disease, when uninfluenced by remedies, pursues a tolerably definite course, and has a strong tendency to wear itself out in time—say "six weeks," according to the first Dr. Warren. Its main features are those of an acute febrile attack, with local lesions. Muscular rheumatism, on the other hand, is a much more indefinite complaint, affecting the muscles, aponeuroses, and other fibrous structures, rarely accompanied by fever, never implicating the heart, and of very uncertain duration. Both these forms of rheumatism are full of interest, and will repay careful study; but either is a large subject, and it would be impossible to do justice to the two diseases in one lecture, so I propose, if you will allow me, to confine my attention this afternoon entirely to the articular form, which from its greater pathological importance may well claim precedence. This disorder occurs in three well-marked forms—the acute, the subacute, and the chronic. The first two are often spoken of as "rheumatic fever," and I shall not scruple to avail myself of this term to avoid tautology. Perhaps the subacute form, in which the temperature ranges from 99° to 102° F., is that most commonly seen, especially in hospital practice. It differs from the more acute variety simply in degree; all the symptoms are less severe, a fewer number of joints are implicated, and perhaps there is less chance of cardiac mischief. But it is quite as tedious as the acute form, and relapses are not uncommon. In chronic articular rheumatism there is generally no pyrexia, and I believe it is not unfrequently confounded with other kinds of joint disease. It is recognised without difficulty by the number of joints that are affected at the same time, and by the wonderful influence that salicylate of soda exercises over it. I call to mind one case of this chronic form, which came under my notice in the very early days of the salicylate of soda, and in which for nearly a month I tried every remedy for rheumatism that I could think of; at last I used the salicylate of soda and cured my patient in two days.

I propose to pass lightly over the ordinary phenomena of an attack of rheumatic fever, which are probably as familiar to most of you as they are to me; the symptoms of having "taken cold," the more or less pyrexia, the profuse and acrid sweat, the swollen, painful, and tender joints, the occasional metastasis, and the not infrequent implication of the heart, which latter complication, if it be a complication, and not, as some German authorities have held, the very essence of the disorder, are the more likely to occur in inverse ratio to the age of the patient. But there is a remarkable condition that sometimes arises during the course of an attack of articular rheumatism to which I desire especially to call your attention. I allude to what is known by the name of "hyperpyrexia." Now this state of high fever is not unknown in other diseases; it occasionally accompanies typhoid and scarlet fever; it is the very essence of *coup-de-soleil* or sunstroke, and is met with in various diseases of the nervous system; "but it is in connexion with acute rheumatism that it has attracted most attention and is most frequently encountered. Curiously enough, it is not only the more severe attacks of the disease that drift into hyperpyrexia; comparatively mild and subacute cases, which appear to be doing well, will now and then take this remarkable course. The symptoms of hyperpyrexia are very characteristic and well marked. The temperature, which in ordinary cases of rheumatic fever ranges from 100° to 103°F., or thereabouts, without any apparent reason begins to rise, and may ultimately attain the height of 110°, or even more; at the same time the joint affection subsides, pain is no longer complained of, and the patient often expresses himself as better just as the most serious symptoms are coming on. In most cases, but not invariably, the profuse sweating ceases; the skin becomes dry, harsh, and intensely hot to the touch; very frequently a crop of sudamina breaks out upon the neck, chest, and abdomen (which latter symptom I have learned to look upon as a very unfavourable sign); the tongue becomes dry and brown; there is great thirst, with complete loss of appetite; the breathing is rapid, the pulse very quick and generally weak; the patient is tremulous and restless, with a suffused and 'ferrety' appearance about the eyes, delirious at night, but often fairly sensible in the daytime. The delirium is generally of a low, muttering kind, not unlike that of delirium tremens, though occasionally there is some excite-

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ment. Unless the disease takes a favourable turn, or relief can speedily be given, death ensues in a day or two, apparently from mere hyperpyrexia."[1]

The occurrence of hyperpyrexia would appear to depend upon the nervous system being attacked by the rheumatic poison; at least this was the view that I took of it ten years ago, and which has since been abundantly confirmed. Dr. Maclagan says:[2] "Admitting the existence of a thermic centre, whose function it is to control heat formation and prevent undue rise of temperature, we have no difficulty in certain maladies and injuries in attributing the increased body heat to interference with that function. The temperature rises because the reins are slackened. The sequence of events seems to admit of no other explanation. Carrying out this line of argument, we cannot fail to see, not only that the rise of temperature thus induced must be directly as the extent to which heat inhibition is impaired, but that paralysis of the thermic centre, by abolishing inhibition and leaving heat production in uncontrolled possession of the field, must lead to hyperpyrexia. And the more we consider the pathogenesis of febrile heat, the more apparent does it become that impairment of inhibition is a much more likely cause of hyperpyrexia than is direct stimulation of heat production. Heat inhibition remaining unimpaired, tissue metabolism could scarcely cause those very high temperatures which characterise some cases of hyperpyrexia. Heat inhibition being paralysed, there is no difficulty in seeing that the temperature cannot fail to rise, and to go on rising, so long as tissue metabolism and heat production continue. All cases of hyperpyrexia we therefore regard as being probably of neurotic origin—as due to some cause which exercises a paralysing influence on the thermic centre. Pyrexia may result either from increased production or defective inhibition, but marked hyperpyrexia is probably due only to defective inhibition. In the cases hitherto instanced there has been a direct lesion of the nervous centres to explain the paralysis of the thermic centre and the consequent rise of temperature. Other cases there are, however, in which the evidence of paralysis of that centre is equally well marked, in which hyperpyrexia is pronounced, but in which the sequence of events by which it is brought about is not so apparent."

Now what is the etiology—what are the causes of rheumatic fever? These may, very properly I think, be divided into two—"predisposing" and "exciting." This part of my subject has given rise to much speculation and conjecture, and various theories as to the pathology of acute rheumatism have been broached. Is there a special poison, and if so is it introduced from without, as in the case of small-pox, typhoid fever, or ague? or is it manufactured within the body, as in gout or uræmia? Dr. Maclagan has advocated the view that the poison of rheumatic fever is malarious in origin, and although I cannot agree with this, it was a very "happy thought," for it led him to try salicin in the treatment of the disease, and was the means ultimately of introducing the use of salicylate of soda, the value of which is now universally acknowledged. By some authorities the "germ" theory has been entertained, and Professor Pel of Amsterdam, thinks that "it only wants the discovery of the specific micro-organic cause of the disease in the inflamed serous membranes to render the present presumption of its specific origin a certainty."[3] But I do not "cotton" (to use a homely phrase) to the theory that the poison of acute rheumatism is introduced from without. All the evidence appears to me to point to the conclusion that it is manufactured *within* the body. This has been clearly proved to be the case in gout by Sir Alfred Garrod; and Dr. Lauder Brunton has called attention to certain remarkable poisons that are formed during the peptonising of proteids within the living body, which suggests the possibility, to say the least of it, of the *materies morbi* of rheumatic fever being formed during the process of digestion or metabolism. Whether it may be lactic acid, an old idea recently revived by Dr. Fagge, or any other kind of acid, I cannot say. We know that a profuse and acrid sweat accompanies the disorder, and looks like an effort of nature to eliminate the poison; but we also know that no amount of alkalies will neutralise the mischief. Unsatisfactory as it may be, we must, I think, admit that the particular substance the presence of which in the blood predisposes to an attack of acute rheumatism has yet to be discovered.

The liability to rheumatic fever is not the same at all ages. It is amongst the young that the disease is most prevalent, though mere infants do not seem to suffer. Perhaps the most common time of life for an attack is between the ages of ten and thirty, though it may occur in younger and older persons. It is very unusual to meet with a first attack of articular rheumatism after fifty years of age, and even those who have had the disorder ultimately outlive their liability to be attacked by it. Youth, then, must be reckoned as among the predisposing causes of acute rheumatism. A previous attack has been also supposed to increase the liability to the disorder, but about this there is some doubt. The very fact that in course of time the tendency to the complaint is lost would seem to contradict it. Some ten years ago I was the only person who dared to disbelieve the dictum that former attacks predisposed to the disease; but I find now that the late Dr. Fagge, in his work on Medicine, takes the same view. Loss of health or debility in any form no doubt increases the liability to acute rheumatism. It also seems to be inherited, and in some persons there is such a strong tendency to the disorder that the slightest exposure to wet and cold, or to cold only, will bring on an attack, and occasionally no exposure at all can be traced. Other persons are much less liable to rheumatism, and only the most disastrous circumstances will produce the disorder. A large number of the community escape the disease altogether, no matter to what amount of wet and cold they may be exposed. "The most important exciting cause, perhaps the only one worth considering, is exposure to cold, and especially to cold and wet. Sleeping in a damp bed with insufficient clothing, remaining in wet clothes, sitting in a draught of cold air when heated—in fact, getting a 'chill' in any way, will often induce acute rheumatism in those that are disposed to it. Possibly it is the check thus given to the eliminating functions of the skin that determines an attack of the disease. It may be well to mention here that it is wet *and* cold that are so injurious; and if anyone find himself in a damp bed, he may minimise the mischief, perhaps save himself from any harm, by heaping on plenty of clothes, or by getting rid of the sheets and sleeping between the blankets only."[4] In the same way, if we happen to get wet through from any cause, we should keep ourselves warm by sharp exercise until we can get a change of clothing, which ought to be effected at the earliest possible moment.

It is not often that we have the chance of making a post-mortem examination on a case of rheumatic fever during the height of the joint inflammation, but occasionally a case proves fatal from cardiac complications or hyperpyrexia. We then find that the affected joints are more or less vascular, especially about the synovial fringes, and coated with a sticky, altered synovia. Sometimes there is effusion, but more commonly not, because the joint mischief is apt rapidly to subside upon the occurrence of any fatal complications. It is said by Sir Alfred Garrod that no ulceration of the cartilages takes place in true articular rheumatism, even after repeated attacks of the disease; and very rarely, if ever, is pus found in the joints. When a case has proved fatal in consequence of cardiac disease, the post-mortem appearances will be in accordance with the mischief that has arisen during life. When death occurs in consequence of hyperpyrexia, we shall probably find evidence of pericarditis in about half the number of cases. Cardiac complication is not an essence of the high temperature, but only an occasional accompaniment. The post-mortem appearances in hyperpyrexia will generally include a vascular condition of the brain and meninges, a dark and congested state of the lungs; the liver and spleen are friable and easily broken down, and the kidneys usually congested. The blood is tarry and fluid, but the muscles are remarkable for their bright-red colour. These changes, it will be noted, are simply the result of the high fever. The odour of such cases, even when recently examined, is most offensive.

The diagnosis of acute rheumatism is generally so simple and easy that I do not halt here to make any remarks on the subject. The prognosis is eminently favourable as far as the mere issue of the affection of the joints is concerned; but it

[1] Notes on Rheumatism, by Julius Pollock, M.D., second edition, pp. 21 and 22.

[2] Dr. Maclagan on Pyrexia and Hyperpyrexia, THE LANCET, March 12th, 1887.

[3] THE LANCET, Sept. 3rd, 1887, p. 495.

[4] Pollock on Rheumatism, p. 28.

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must be guarded (1) in reference to possible cardiac mischief, and (2) the chance of hyperpyrexia, which latter, however, is but a remote contingency. Heart disease is more liable to occur in children; hyperpyrexia in adults. In the chronic forms of true articular rheumatism the prognosis is very favourable.

I now come to the last and most important part of my subject—the treatment of rheumatic fever. A few years ago this was most unsatisfactory. I have seen alkalies, quinine, blistering, and other reputed remedies tried in a large number of cases, alone or in combination, but without being at all impressed by their value; and well might Sir William Jenner, when President of the Clinical Society, express the doubt and uncertainty with which he used to approach the treatment of articular rheumatism under the old *régime*. But some ten or twelve years ago a new and improved method of dealing with the disorder came into operation; and it is only due to Dr. Maclagan that he should have the credit of having been the first to use salicin as a remedy, which ultimately led to the introduction of salicylate of soda, one of its derivatives. I cannot say that I have had much success with salicin, though I have tried it in a number of cases, but he must be blind indeed who cannot perceive the great value of the soda salt. There may be some doubt as to whether its use shortens the duration of rheumatic fever, but beyond question it robs the disease of some of its most painful symptoms. In a few days, sometimes hours, the temperature is brought down, the inflammation and pain in the joints subside, and the patient is in most cases practically convalescent. It is not claimed for salicylate of soda that it will prevent the occurrence of heart complications, or even hyperpyrexia, but it lessens the chance of either mischief by rapidly reducing the fever. It must also be borne in mind that the drug is not an absolute specific. Where shall we find one? It fails to relieve or cannot be tolerated every now and then. But this is no more than what happens with quinine in ague, or iodide of potassium in syphilis. Salicylate of soda sometimes produces sickness, deafness, tinnitus aurium, and a peculiar kind of cerebral disturbance; but these disagreeable effects quickly disappear on a discontinuance of the drug, and seldom return upon its resumption after a short interval. The salicylate has been charged with producing serious cardiac depression, and even causing sudden death; but the evidence on these points is not very clear, and personally I have never witnessed any such effects. In treating a case of articular rheumatism, the salicylate of soda may be given in doses of ten, twenty, or even thirty grains every two, three, or four hours, according to the severity of the symptoms and the effect produced. Where there is evidence of great acidity, some alkali (five to fifteen grains of the bicarbonate of potash) may be usefully combined with each dose of the salicylate, which is best given in some aromatic water to conceal its somewhat acrid taste. It is important to keep up the action of the drug for some days after the disappearance of the fever, as the premature disuse of it is apt to lead to a return of all the symptoms—a so-called relapse. Towards the close of a case of rheumatic fever, the joints are not unfrequently left rather swollen and painful; it is then that iodide of potassium (internally), and iodine paint (externally) are so useful. When quite convalescent, the patient should have tonics, and especially steel and quinine; and if rheumatic pains linger, the salicylate of quinine, in five-grain doses, three times a day, is often of much service. Other salts of salicylic acid will probably be found useful in the treatment of rheumatism; and lately a new preparation, "salol" has been introduced. It is a salicylate of phenol and has been used a good deal in America, with, I believe, satisfactory results. But it may be asked, What is to be done in those cases of articular rheumatism in which the salicylates are not successful? Well, it is unfortunate when this happens, but we may fall back upon large doses of salicin, upon alkalies, or upon the excellent alkaline quinine prescription of Sir Alfred Garrod. Quinine and bicarbonate of potash are rubbed up together with a little mucilage and some aromatic tincture, in such proportions that each ounce and a half of the mixture contains five grains of quinine (in the form of carbonate) and thirty grains of potash. This dose may be given every four hours for as long as may seem desirable.

Of course, all cases of rheumatic fever must be kept in bed, and properly dieted. The most suitable nourishment in the earlier stages is the usual beef-tea and milk "fever" diet, but to this may soon be added some farinaceous food, eggs, and afterwards fish. Rheumatic fever is a disease of debility, and it is very desirable to keep up the strength of the patient; but in some cases the too early resumption of meat has seemed to be followed by a return of the rheumatism. Further information on this point would be of value. Stimulants are not absolutely necessary, nor often needed, in cases of articular rheumatism; but they may be required at times, and should be administered in accordance with the condition of the patient. The bowels should receive attention, but no active purging is required, especially as the movements necessitated by any action of the bowels are attended with considerable pain in severe cases. On the other hand, opium or morphia, which may well be used hypodermically, is often of great service, alleviating the pain in the joints and allowing the patient to get some sleep. When cardiac mischief arises in a case of acute rheumatism, it should be treated in accordance with the plan adopted in such cases, the consideration of which is outside my subject. I must, however, say something about the treatment of hyperpyrexia, a matter of much interest and importance. It is unfortunate that in this severe condition, where most we want its aid, the salicylate of soda, though it was originally introduced as an antipyretic, should entirely fail. Nor can I say much that is favourable of any other of the reputed febrifuges, such as quinine, antipyrin, &c. In truth, we are driven, in the treatment of hyperpyrexia, to the application of external cold, and although some years ago I expressed a very doubtful opinion as to the efficacy of this method, a further knowledge of the subject has led to a considerable modification of my original views. There is now, I think, no question that the careful and judicious use of the cold bath or cold pack holds out the best chance of saving life in these truly formidable cases. The most important precaution would seem to be that the application of cold should be gradually and cautiously applied so as to avoid shock. This may be accomplished by placing the patient at first in a bath the temperature of which is not much below 80°F., and gradually reducing the temperature until the desired effect is produced. This bath may have to be repeated more than once perhaps, and the use at the same time of injections of ice-cold water into the rectum may be of service. Where a bath is not available, or thought to be undesirable for any reason, the cold pack may be tried. In cases where ice is not used, the patient's body and limbs are wrapped closely in a single sheet, which has been previously wrung out of cold water (temperature 50° to 60°). A blanket is then thrown loosely round him, and he is allowed to remain undisturbed for about half an hour, when the same process is gone through again, and repeated until the temperature is sufficiently reduced. When the ice pack is employed, a hip bath, or other suitable receptacle, containing a few gallons of water, in which some large pieces of ice are floating, is kept by the patient's bedside, and his body and each limb are separately wrapped in pieces of old sheeting which have been wrung out of the iced water, each piece being renewed as often as it begins to feel warm to the hand. No other covering of any kind is put over the patient. In this way the temperature may be very rapidly reduced, and it is necessary to be careful that it is not brought too low. It should not be allowed to fall below 99° F. Amongst many others, two cases have recently been reported which tend strongly to show the value of external cold in the treatment of hyperpyrexia. One is by the late Dr. Carrington, at a meeting of the Clinical Society on Feb. 25th last, and the other by Dr. Frederick Taylor, in THE LANCET of March 12th, 1887.

METROPOLITAN POLICE SURGEONS' ASSOCIATION.—At a meeting held on Nov. 3rd, the following officers and Council were elected for the ensuing year:—President: A. O. Mackellar, F.R.C.S. Vice-Presidents: Thos. Bond, F.R.C.S.; Roderick Macdonald, M.P., L.R.C.P. Treasurer: George B. Phillips, M.R.C.S. Hon. Secretaries: H. Nelson Hardy, F.R.C.S. Ed.; J. H. Waters, M.D. Council: Alex. Forsyth, M.D.; D. S. Downes, L.K.Q.C.P.I.; T. C. Murphy, L.R.C.P.; E. K. Hinchin, L.R.C.P.; S. Mills, M.R.C.S.; Geo. Pearse, L.R.C.P.; J. Hammersley, M.R.C.S.; E. C. Barnes, M.R.C.S.; F. J. Bucknell, M.B.; M. Brownfield, L.R.C.P.; G. E. Yarrow M.D.; W. H. Roots, M.R.C.S. This Association has made a good start, with the entire approval of the late chief surgeon and the present chief surgeon, as also of the Commissioners of Police. It is remarkable that such an association has not been formed before.

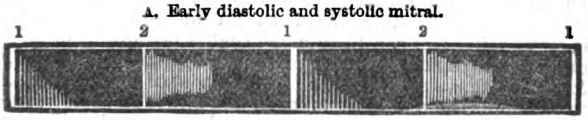
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ON OBSTRUCTIVE MITRAL MURMURS.[1]

BY J. S. BRISTOWE, M.D., LL.D., F.R.S.

OBSTRUCTIVE mitral murmurs are generally regarded, I believe, as presenting two well-marked varieties, of which the one, named indifferently presystolic or auricular-systolic (Fig. C), occupies the latter part of the diastolic period running up to and culminating in the first sound of the heart, while the other is an ordinary diastolic murmur (Fig. A) commencing from the second cardiac sound, and dying away in the course of the diastolic period. These two murmurs may occur independently of one another or in association, and in the latter case the earlier murmur may either die out before the later murmur begins (Fig. D), or the two may meet and blend (Fig. E), so that the whole period of the diastolic silence becomes occupied by a continuous sound.

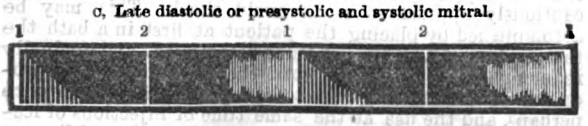
A, Early diastolic and systolic mitral.



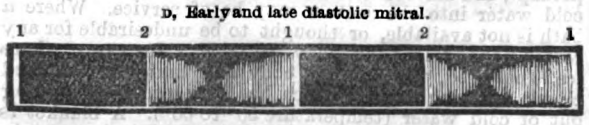
B, Mid-diastolic mitral.



C, Late diastolic or presystolic and systolic mitral.



D, Early and late diastolic mitral.



E, Entire diastolic mitral.



F, Entire diastolic and systolic mitral.



G, Entire diastolic mitral running off from the reduplication.



M, Hæmic pulmonic murmurs.



The so-called presystolic murmur is the more common, the more characteristic, and the more interesting of the two. It commences somewhere in the diastolic period, varies in its duration (being sometimes very short, often much prolonged), is singularly rough in character, and usually increases in power from its origin to its close in the first sound of the heart. Various fanciful, and I think mostly meaningless, combinations of letters have been devised to represent its peculiar quality. It closely resembles the trilled "R," or the sound of a saw slowly worked, and its gathering force and explosive termination in the first sound remind one of the breaking of a wave in the hollow of a rock. It is characteristic of the presystolic murmur that (notwithstanding its roughness and loudness as conveyed by the stethoscope) it is usually audible over a very limited area, the centre of which is a little to the right of and above the apex beat; and is inaudible, or at most very slightly heard, in the axilla, or at the angle of the scapula. So far as I know, this murmur, strikingly characteristic as it is now universally acknowledged to be, was not differentiated from the systolic mitral murmur by the older writers. As a student and young physician, I certainly knew nothing about it, and am sure that I (and I believe all my colleagues) regarded it as systolic mitral. I may add that I have always suspected that one chief ground on which it was formerly taught—that in certain forms of heart disease the pulse at the wrist was sensibly delayed—was this prevailing tendency to confound the two chief mitral murmurs.

The early diastolic mitral murmur, like the murmur of aortic regurgitation, runs off from the second cardiac sound, and tends to die out in the diastolic silence. It may generally be well heard in the mitral area, or in the situation which the presystolic murmur mainly effects. As Dr. Balfour remarks, its seat of maximum intensity is not uncommonly the junction of the left fourth cartilage with the sternum; and it may sometimes be heard here dissociated from its presystolic companion. This murmur is not unlike the murmur of aortic regurgitation, but is generally, I am inclined to think, rather shorter, rather more rough, and more sustained. It is rarely, however, as rough as the presystolic murmur, and I should be inclined to liken its sound to that of the untrilled "R." That it may be confounded with the diastolic aortic murmur, even by presumably competent observers, is certain. Only recently in a patient whom I exhibit this evening, a murmur of this kind, which near the apex blended with a loud presystolic murmur, was heard alone over the cartilage of the left fourth rib, and was regarded as a diastolic aortic murmur by one of my colleagues. And a few years ago I had under my care a patient between thirty and forty years of age suffering from cardiac disease, of which he died, who presented congestion of the face, general anasarca, hæmoptysis, and other phenomena generally present in the later stages of mitral disease, and whose sole local sign of cardiac defect (in addition to the fact of some degree of hypertrophy and dilatation) was a diastolic murmur audible only at the apex of the heart. I came to the conclusion, not without some misgiving, that the symptoms were all due to mitral obstruction. But the post-mortem examination showed that I had been deceived; for the mitral orifice was absolutely healthy, and the aortic valves were contracted and allowed of regurgitation. Of course, it is only those aortic regurgitant murmurs which are inaudible over the base of the heart that can possibly be confounded with diastolic mitral murmurs.

Dr. Dickinson calls special attention to a third variety of diastolic mitral murmur, to which I have also given much consideration, and which, if I recollect right, he considers to be the diastolic mitral murmur formerly recognised by Hope and others. I am inclined to think with Hope that Laennec's diastolic mitral murmur was the murmur of aortic regurgitation, and that his own was either that or the diastolic mitral just described, and not the murmur I am about to discuss. The third murmur occurs isolated in the diastolic period (Fig. B), and for the most part nearer to the second sound than to the first. I believe it is often regarded as a simple reduplication of the second sound. But it differs from the lagging factor of the normal second sound, in the facts that it is of longer duration than the second sound, that it is only to be heard in the region which the presystolic murmur affects, and that it occurs independently of any reduplication of the second sound audible at the base of the heart. The murmur is generally feeble, but varies in duration, and when more than usually prolonged presents obvious traces of the presystolic trill. The rhythmical relations of this murmur and the two sounds of the heart may be represented by a dactyl, of which the first syllable corresponds to the first sound, the second syllable to the second sound, and the third syllable to the murmur. They are better represented if the final syllable of the dactyl be made long instead of short. They may also be aptly represented by the word γεγραφα, which a distinguished colleague of mine used some years ago in illustration of such a case. I do not

[1] Read before the Medical Society of London on Monday, Nov. 7th.

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know what his present views of this special murmur may be, but at the time to which I refer I believe he regarded the case of which he used this illustrative word as one of simple reduplication of the second sound. The case, however, had been under my observation for several years, and several times in the hospital under my care. It was one which I regarded during the whole of this period as an example of obstructive mitral disease, but in which, while the presystolic murmur was never audible, the short murmur following the second sound near the apex and undistinguishable at the base was always present, and in which I was able to trace the gradual enlargement of the right side of the heart, and the consequent development of a regurgitant tricuspid murmur and its permanent establishment.

The three murmurs above described (which might, I think, be conveniently termed the early, the mid, and the late diastolic mitral murmurs respectively) may exist either separately or combined; and in the latter case may constitute a continuous but uneven murmur, beginning from the second sound, ending with the first, and filling up the whole of the diastolic period; so that the acoustic phenomena of the heart as presented at the apex shall consist only of a series of alternate prolonged roars and briefer periods of silence. (Figs. E and F.) There seems to me no reasonable doubt that these three murmurs, although they frequently occur independently of one another (so frequently, indeed, and so characteristically as to demand individual description and separate recognition), are only parts of a potential murmur filling up the whole of the diastolic period; or, in other words, that they are the fitful, and in a sense accidental, roarings of a continuous torrent. This view seems to me to be confirmed (if confirmation be necessary) by two easily observed facts. The one is, that each one of the murmurs is liable to come and go as no other organic cardiac murmur comes and goes, and that they are liable (especially the latter two) to alternate with or to replace one another. The other is that, although the earlier two sounds are often feeble and somewhat indeterminate in character, when they blend with one another and with the presystolic murmur and become louder, they present all that vibratile roughness of quality which is so characteristic a feature of the generally more noisy and obtrusive member of the firm. In the case of the patient already referred to in the adjoining room, and in whom the condition of the prolonged diastolic murmur has varied somewhat from time to time, I observed on one occasion (and those who were with me and examined her will confirm my statement) that the roughest and loudest portion of the whole-length diastolic murmur was its middle half (Fig. F). I have observed the same thing in other cases.

There are one or two matters in connexion with mitral obstructive disease and the murmur it occasions to which I should like to advert.

The condition of the second sound of the heart in these cases has always been a subject of interest and study. It need scarcely be said that in mitral obstructive disease, as well as in mitral regurgitant disease, and indeed in all affections which oppose an obstacle to the transit of the blood from the pulmonary artery to the left side of the heart, and in which consequently the right ventricle becomes enlarged and the pulmonary artery dilated, the second sound over the pulmonic area becomes accentuated, while that over the aortic area either remains unchanged or undergoes enfeeblement. Further, it is generally recognised that in cases of mitral obstruction there is a marked tendency to reduplication of the second sound. As regards the actual or relative enfeeblement of that portion of the second sound due to the aortic valves, it is obvious that if there be such enfeeblement over the aortic area (where this sound is always best heard), there must be proportionate enfeeblement at the extreme apex of the left ventricle, and that occasionally it will be heard with difficulty at that spot. It is said, indeed, that in some cases it becomes inaudible there. No doubt such cases are met with, for one occasionally observes the extinction of the second sound in this locality in other forms of heart disease. But I cannot call to mind any example of mitral obstruction in which I have been unable to detect the second sound at the apex. The only case, indeed, in which it has seemed to me possible to ignore its presence is that in which the enfeebled second sound is lost in the noisy commencement of a prolonged diastolic mitral roar. The reduplication of the second sound is certainly a common accompaniment of mitral obstruction; but it is a very variable phenomenon, and is apt to come and go in the same case. The reduplication seems due to the lagging of the aortic valves. The second sound is of necessity loudest, and its reduplication necessarily most distinct at the base of the heart in the neighbourhood of the valves. Reduplication of the second sound, audible only at the apex, is therefore an impossibility. It is for this reason, amongst others, that the mid-diastolic mitral murmur, which may simulate reduplication and has been mistaken for it, cannot be of pulmonic or aortic origin. But reduplication of the second sound in cases of mitral obstruction is not infrequently audible at the apex as well as at the base; and an interesting example of this fact has been more than once furnished by the patient already once or twice referred to, in whom the second sound is sometimes single, sometimes double, and in whom, when such reduplication is present, the prolonged diastolic mitral roar starts from the repeated second sound, thus leaving the second sound at the apex apparently normal, and allowing of a momentary interval of silence between it and the murmur. (Fig. G.) I believe that this phenomenon is always observable when the second sound is reduplicated, and the mitral murmur is of the early diastolic kind.

The presence of a thrill over and about the spot on the surface of the chest at which the heart's apex impinges has always been recognised as a characteristic accompaniment, not only of the presystolic murmur, but also of the noiseless rush of blood through a contracted mitral orifice. There can be no doubt, I think, that an apex thrill is in a very large proportion of cases diagnostic of mitral obstruction, and that it is generally due to the rhythmic vibrations of the blood entering the ventricle from the auricle, on which also the characteristic rough murmur depends. By most observers it is said distinctly to occur while the presystolic murmur proper is, or should be, in progress and the contraction of the auricle presumably is taking place. Dr. Galabin's cardiographic tracings seem quite to confirm this relation. But when the rough murmur occupies the whole of the diastolic period, the thrill also (as nearly as may be) is equally lengthy; and when the murmur is roughest in the mid-diastolic period the thrill is most marked during the same interval. Yet I am bound to admit that, so far as I can make out the only, or at any rate the most marked, thrill seems occasionally to accompany the ventricular systole. In a case at present under my care in which a hæmic pulmonary murmur is associated with a double mitral murmur, the apex thrill was certainly at one time mainly systolic. But the heart was beating rapidly (over 100 in the minute), and the thrill (as I think the cardiographic tracing confirms) was due to the successive rises and falls which even in health are apt to appear on the broad summit of the excursion representing the cardiac systole.

The association of a true regurgitant or systolic mitral murmur with an obstructive murmur at the same orifice is by no means uncommon. In most cases the first sound of the heart terminates the one and starts the other (Figs. C and F); in other words, a presystolic murmur and a systolic murmur are made continuous by the intervention of the first cardiac sound. Under these circumstances the two murmurs are generally, I believe always, absolutely distinct from one another, both in relation to the apex beat and the pulse, in the quality of their sounds, and in respect of the areas over which they may be respectively best heard. The presystolic sound definitely precedes the apex beat, but runs up to it, and equally definitely precedes the carotid pulse; while the commencement of the other coincides accurately with the apex beat and the pulse. The presystolic murmur is always rough, and generally increases in roughness and loudness until it blends with the first sound; the other, with very rare exceptions, is either musical or blowing and dies away into silence. Indeed, the sudden transition from the one kind of sound to the other is a very striking phenomenon. I admit that occasionally at the apex of the heart a short rumbling murmur is heard about the beginning of the ventricular systole, the exact relations of which it is difficult to determine; and that I am disposed at times to regard such brief murmurs as systolic, at times as presystolic, at times as ill-defined combinations of the two. My belief, however, is that (as the peculiar roughness of such sounds and their comparatively abrupt termination seem to imply) they are really presystolic. Again, the presystolic murmur has before been

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pointed out) is heard over a very small area, and is not only generally audible in the axilla, below the angle of the scapula and at the base of the heart, but often fails to reach even the true apex. On the other hand, the mitral systolic associated with it may not only be heard where the presystolic is also heard, but extends in a greater or less degree into all the districts above specified. It may be recognised in most of them, and often at the apex, without even a trace of its presystolic accompaniment. In a small but interesting proportion of cases the systolic mitral is associated with a true diastolic mitral, as in a patient whom I saw a day or two since in King's College Hospital (Fig. A). In this instance there is a double murmur, best heard in the neighbourhood of the apex, of which the systolic element is prolonged and blowing, not unlike a diastolic aortic murmur, while the diastolic mitral, which runs off from the second sound, is of rougher quality, resembling an untrilled "R," is uniform in power, and ends somewhat abruptly.

I now come to the consideration of that question which Dr. Dickinson has discussed with great felicity of language and undeniable dialectical skill—viz., "*How are the murmurs which accompany and indicate mitral obstruction produced?*" I must confess that to my mind the problem appears to be free from all real difficulty, and that I entirely accept the explanation formulated by Dr. Gairdner many years ago. I believe that all the different varieties of murmur of mitral origin occurring between the second and first sounds of the heart are due to rhythmical vibrations, or (if it be preferred so to express it) to fluid veins, determined by the passage of blood from the auricle through the contracted mitral orifice into the ventricle; and that the reason why the so-called presystolic murmur is more common than the murmurs arising in the earlier part of the diastolic period, and is for the most part coarser and rougher than they, is that, as physiologists teach us, the systole of the auricle immediately precedes the systole of the ventricle and the occurrence of the first sound of the heart, and causes, while it lasts, a specially forcible current from the one cavity to the other. That the earlier diastolic mitral murmurs—viz., those running off from the second sound, and those that are isolated in the mid-diastolic period—are direct, no one, so far as I know, denies, and Dr. Dickinson himself believes. But if such an explanation is regarded as sufficient for murmurs developed from or shortly after the second sound of the heart, why should it not equally apply to murmurs occurring just before, and running up to, the first sound? Surely the fact that the contraction of the auricle at that time renders the flow of blood more rapid than it was before furnishes no intelligible reason for discarding the auricular systole as the principal agent in the production of such murmurs.

The reasons in favour of the view that the presystolic murmur (which is alone in dispute) is determined by the onward flow of blood from the auricle to the ventricle are mainly as follows:—1. It accords with the physiological fact that the contraction of the auricle, to which it is attributed, immediately precedes, and runs on into, the ventricular systole, the very commencement of which is timed by the first sound of the heart, in which the presystolic murmur itself ends. 2. The murmur precedes the arterial pulse, ends with the apex beat, and occupies a time, therefore, in the cardiac cycle, which would otherwise be a time of silence, and a time which we have always been taught to regard as the close of the cardiac diastole. 3. The presystolic murmur does not differ in quality from the diastolic mitral murmurs of earlier period. It is true that the latter are for the most part feebler, but though feeble they are generally characteristically rough, and not very unfrequently they present a degree of roughness which equals or surpasses that of the presystolic murmur itself. 4. All the different kinds of mitral obstructive murmurs are equally characterised by consonantal noisiness, and consonantal want of penetrating power, and thus are always audible over a curiously restricted area. 5. They are not conveyed into the axilla or to the angle of the scapula as systolic mitral murmurs are conducted, and as they would certainly also be conducted were they due to regurgitation.

Among the arguments which are adduced on the opposite side of the question are the following:—1. The force with which the blood is driven into the ventricle by the contractions of the thin-walled auricle is insufficient to cause the roughness and loudness of sound distinctive of the murmur in question. In answer to this, it would seem sufficient to to say that equally loud and rough murmurs may be developed during the earlier part of the diastolic period, when the force of the blood current is chiefly dependent on the suction exercised by the expanding ventricle. But it is a mistake to suppose that the loudness and roughness of the presystolic murmur need much velocity of current for their production. The murmur, as I have before stated, is like a trilled "R," and is made up of coarse vibrations, which follow one another far too slowly to cause a musical note. There is no such forcible escape of air in the production of the trilled "R," as there is in whistling or simply blowing. Rather, the breath escapes in volume, but slowly, past the vibrating barrier. I do not argue that the slower the current the louder should be the characteristic murmur; but I hold that moderate rapidity is best adapted for its production, and that greater rapidity would probably convert the trill either into a musical note or into a noiseless whiff. 2. The running of the presystolic murmur into the systolic mitral murmur (when the two sounds coexist), without any discernible interval between them excepting that due to the presence of the first sound (which, in fact, unites them), is held to prove that the two murmurs must be due to a single action, and consequently to the contraction of the ventricle alone. It is argued that if the former of the two sounds is produced by the contraction of the auricle and during the flow of blood from the auricle into the ventricle, and the second is (as everyone acknowledges it is) caused by the contraction of the ventricle and the reversal of the blood current through the insufficiently protected mitral orifice, there must of necessity be a momentary interval of silence between the end of the presystolic murmur and the first sound of the heart, from which the later murmur starts; just as there is an interval of silence between each pair of respiratory acts, and a momentary pause between the end of a swing of the pendulum and the beginning of the one following, or (to take an even more apposite example), as there certainly is, between the successive elements of a to-and-fro aortic murmur. Such illustrations are valuable as helping to make clear the point of view of those who quote them; but they are of little value in determining the question at issue, unless it can be shown that their conditions are identical with, or analogous to, the conditions of the problems to be solved. I do not think that such is the case here. As I understand the action of the heart, and I believe it is the view which is generally taught by physiologists, the contractions of the auricle and ventricle are not so much an alternate contraction of these two cavities, as they are a rapid peristaltic movement beginning in the auricle and continued without pause into the contraction of the ventricle. If that be the case, even though there be a real reversal of the current between the auricle and ventricle at the moment when, on the cessation of the auricular systole, the ventricle begins to contract, no pause between the two actions is necessitated, and none need be assumed. Even if there were a pause, it might be so short that the ear would be unable to detect it. There is no audible break, so far as I know, in a prolonged, presumably continuous, note on the violin made by a competent player with a to-and-fro sweep of his bow. Nor is it difficult, I think, to utter with the lips a continuous noise determined by alternate inspirations and expirations. No doubt the inspiratory and expiratory sounds must differ from one another in quality; but that does not imply discontinuity in time. 3. It is argued that the presystolic murmur is produced in a period corresponding to what in the healthily acting heart might be termed the early silent stage of the ventricular contraction, or a brief period of contraction immediately preceding the closure of the mitral valves; that, owing to the leisurely closure of the thick and clumsy curtains when mitral obstructive disease is present, this period becomes prolonged, and that while it lasts the blood in regurgitating is a continually diminishing stream until the actual closure is effected with the snap of the first sound. I must confess that this explanation, ingenious as I admit it to be, seems to me altogether gratuitous. I am not aware that there is any sufficient anatomical or physiological basis for any such hypothesis, and it seems to me, as I have already incidentally tried to show, contradicted by the other clinical facts which are associated with the presystolic murmur. If the length of this murmur at the apex be a measure of the time during which the ventricle is contracting upon its contents before the advent of the first sound, it is thought (when obstructive aortic disease is associated with obstructive mitral disease)

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to be also a presystolic aortic murmur. Is any such murmur ever heard? Again, if during all this period the blood is flowing backwards into the auricle, it must also be flowing simultaneously onwards into the arteries, and the radial and carotid pulses (or, at any rate, their commencements) should be coincident with the beginning of the presystolic murmur. But the pulse in these cases, as in all others, is simultaneous with the apex beat and the first sound of the heart. Again, how are those cases to be explained in which, as in that of my patient, the whole interval between the second and first sound is occupied by a continuous roar? Must we assume that the whole of this period, as well as the period of silence, is occupied with the ventricular systole, leaving no room whatever for the diastole? Or must we assume that the cardiac incidents become so much disarranged that the first sound, instead of ushering in the ventricular systole (as it should do), ends it, and that the deposed ventricular diastole has to fit itself to the interval between the first and second sound? I know how these questions might be answered by those who accept Dr. Barclay's views; but the obvious answer involves an admission which is practically destructive of them.

Before concluding my paper, I should like to say a word or two with regard to a murmur, or group of murmurs, which has in many respects a striking resemblance to the group of obstructive mitral murmurs. I mean the murmurs often termed hæmic, which are generally best heard about the sternal end of the cartilage of the left third rib, and which may extend into the contiguous portions of the second and third interspaces, and even be prolonged a little way down the left half of the sternum. The murmurs in question are harsh and rough, not like a trilled "R," but sharper and more scratchy (as I believe the late Dr. Sibson described them). They are so rough in quality, and their roughnesses are so distinct, that they are undoubtedly suggestive of pericardial friction, and are not unfrequently, I believe, assumed to be due to the presence of recent or old pericardial lymph beneath the area over which they are heard. It would be difficult for a tyro not to believe that they are due to organic diseases within or outside the pulmonary artery or conus arteriosus. Their main peculiarity, apart from roughness, is that they tend to occupy the whole of the systolic period. (Fig. H.) In some instances the murmur runs off from the first sound, and dies away, like a systolic aortic murmur does, during the systolic period; in some it occurs mainly, if not alone, during the latter part of the systolic period, and, gathering force in its progress, runs into the second sound, which is usually markedly accentuated; while in some, again (and one of the patients whom I have brought with me exemplifies the fact), the murmur occupies the whole of the systole, running off from the first sound, becoming comparatively feeble in the mid-systolic period, and increasing again in volume as it approaches the second sound. Whether such a murmur is ever due to disease of the pulmonic valve or pulmonary artery I cannot say. But I am quite sure, and have proved it to myself by post-mortem examination and by clinical observation, that in the great majority of cases it occurs in connexion with structurally healthy right ventricles, pulmonary arteries, and pulmonic valves, and that the murmur is therefore a so-called functional murmur. How it is caused I do not pretend to decide. That (although it largely occurs in anæmic persons) it is directly due to altered quality of the blood I do not in the least believe. I should think it is connected with some want of due relation between the quantity of blood expelled from the ventricle in a given time and the size or tension of the pulmonary artery, allowing of the development of coarse vibrations of the contents and walls of that part of the circulatory apparatus over which it is best heard. So far as I can see, the occurrence of prediastolic pulmonic murmurs in cases in which the parts concerned are structurally healthy favours the general belief that presystolic murmurs (which so much resemble them) are direct murmurs arising during the onward flow of blood. I see by THE LANCET of last Saturday that Dr. Charlewood Turner, on the assumption that such pulmonic murmurs are due to organic disease of the pulmonic valves, attributes them to regurgitation occurring at the pulmonic orifice prior to the complete closure of the pulmonic valves and the occurrence of the second sound; and quotes this supposed fact as an additional argument in favour of Dr. Barclay and his disciples' views as to the causation of the mitral presystolic murmur.

A REPORT OF CASES (SURGICAL AND MEDICAL).

BY J. HARRIS JONES, L.R.C.P. EDIN., L.F.P.S. GLASG.

(*Concluded from page 910.*)

Pyo-nephrosis; nephrotomy; cure. — Mrs. W——, aged forty-four years, was seen by me on the 11th of December last. Her health had been very indifferent for years. She complained of severe pain in the right lumbar region, which was generally accompanied by considerable uneasiness in the neck of the bladder. Micturition was frequent and painful, and for the last eighteen months she had been constantly passing "matter" with her urine. About ten years ago, after an unusual exertion, she observed blood in the urine on one occasion. She dates her present illness from that period. A year ago last September she felt a "lump" in her side, which slowly increased in size, and gradually approached towards the middle line of the abdomen. Early last summer she voided a very large amount of pus per urethram, and she thinks that some also escaped from the bowels. This had the effect of considerably diminishing the size of the tumour. Soon after, however, it grew to its former dimensions, and had remained at about its present size for the last six months. She had been under the care of several physicians, and had taken a great deal of medicine. Her disease had been variously diagnosed and treated. When I saw her she had been confined to her bed for about three months. Her complexion was very sallow, and she was greatly emaciated. Upon examination, I discovered a tumour stretching diagonally across the abdomen, commencing on the right side from beneath the floating ribs, and extending to a point two inches below the umbilicus and a little beyond the linea alba. It was deep-seated. When pressed upon, it gave an indistinct sensation of elasticity, but no fluctuation could be detected in it. There was no fulness in the right loin. The ascending colon was recognised by its resonance lying in front of the growth, but instead of following its usual upward course it had been pushed forward by the tumour to within a few inches of the middle line of the abdomen. The urine contained a large amount of pus, and was consequently albuminous. Under the microscope the slide was seen studded with pus corpuscles. The patient and her friends, having been told by previous medical attendants that surgical interference would be of no avail in this case, were much opposed to an operation, but after much persuasion on my part they reluctantly consented to an aspiration, and if the sac refilled they would permit me to cut down upon the abscess. On Dec. 27th, with the assistance of Dr. G. W. Guthrie (who a few days previously had seen the case with me), I inserted a needle at a point a little in front of the anterior extremity of the last rib, and aspirated about six ounces of very thick and foul-smelling pus. The operation gave some relief, and for a few days afterwards the urine was freer of pus and had increased in quantity. It was but a short time, however, before the sac refilled and all the old symptoms returned. On Jan. 4th it was noted that she was rapidly sinking, and that life could exist but a few days longer. Consent was given to perform nephrotomy the following morning. On the 5th the patient appeared to be weaker, and it was feared she might die under the operation. Having secured the assistance of Drs. Guthrie and Long, we decided to operate in spite of all odds.

Operation.—The patient took the ether very badly, and it was with much difficulty that the heart was kept beating until the operation was completed. She was turned on her side and the incision was made a little further from the spine than is generally recommended. It was deemed perfectly safe to do so, as the colon and peritoneum had been lifted several inches forward by the tumour, and I felt that by making it here I should likely strike the edge of the kidney and enter the sac at once. The different layers of muscles were divided upon a director to the extent of two and a half inches. A layer of adipose tissue bulged into the spinal end of the wound, and, after clearing it away, the edge of the kidney and sac was reached. A probe was inserted into it, and pus escaped. The opening was enlarged to the extent of the superficial wound, and the finger intro-

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duced. About ten ounces of pus were liberated. The parts were thoroughly searched with finger and probe, but no stone could be discovered. When my finger was in the pelvis of the kidney (which was now converted into a large sac) the opening of the ureter was distinctly felt. It was patent, but the tissues surrounding it were very much indurated and thickened. The cavity was washed out with a solution of perchloride of mercury (1 in 2000), and a large drainage tube inserted.

The patient for several hours after the operation wavered between life and death, but with the aid of hypodermic injections of ammonia and whisky, and hot bottles applied to the sides and feet, reaction was finally established. She improved very rapidly after this. Vomiting, which had been a constant annoyance before, ceased, and her appetite soon became voracious. The urine voided a few hours after the operation was slightly bloody, but in a day or two it became "clearer than it had been for years." On the eleventh day it did not contain a trace of albumen or of pus. I have examined it on several occasions since, the last time about a month ago, but have never succeeded in discovering any abnormality in it. The wound was washed daily with an antiseptic solution. It has not, however, completely healed. A sinus remains, which has so far baffled every treatment. It gives very little annoyance, and the discharge from it is scanty and watery. Strangely, a polypus was seen growing into it, and I attempted its removal by torsion on two occasions, but each time it broke off and only a portion was removed. On the third attempt I succeeded in completely removing it. It measured about two inches and a half in length, and tapered at its base to a mere thread. This was accomplished about three months ago, and there has been no indication of its return. My patient, I am pleased to say, enjoys good health, and the only discomfort she experiences from the sinus is when the exuberant granulations at its mouth have to be touched with a caustic.

Rectal Tumours of peculiar growth; removal; recovery.—Mrs. H——, aged sixty-three years, had been complaining for the past two years of symptoms very closely resembling those of chronic dysentery. She felt as if the bowels constantly required to be moved, and when she went to stool she could pass nothing but a little blood and slime. The tenesmus and tormina accompanying the act were almost unbearable, and were rapidly exhausting the little strength she had. She did not remember how long it was since she had a natural fæcal passage, but it must have been at least two years ago. She had undergone much treatment for "dysentery and ulceration of the bowels," but had received no benefit, and, instead of improving, she was rapidly growing worse. Her family physician (who had been taken ill and compelled to leave for change of air) had detected several small tumours in the abdomen. They were supposed to be glandular enlargements, and were treated with an iodine ointment. They rapidly disappeared; but one, which was larger than the rest, remained. When I saw her in March last, I could distinctly feel a tumour, apparently about the size of a small orange, situated in the left iliac region, and lying closely to, and on a level with, the anterior superior spinous process of the ilium. It was slightly movable. A few days after, when making an examination with the finger of one hand inserted in the rectum and a finger of the other hand in the vagina, I distinctly felt from the latter opening a round growth lying high up between the rectum and the vaginal wall, which when pressed upon in a backward direction could be faintly touched with the finger in the rectum. The tenesmus continuing had the effect of bringing the growth a little lower. As soon as the former subsided the tumour would recede beyond reach, and could be felt occupying the position previously stated in the abdomen. The constant pain began to tell upon the patient's strength, and I decided to remove the growth as soon as it would come down within reach.

Operation.—On April 23rd, with the assistance of Drs. Mayer and Long, the patient was etherised, and although the tumour was lying high in the rectum we resolved to remove it if possible. Having first thoroughly dilated the sphincter ani with my fingers, the hand was introduced into the rectum, and the growth grasped. Traction was tried, but owing to the friability of the tumour it was not persevered with. The pedicle was felt to be immensely broad and thick, but no pulsation could be detected in it. With the assistance of Dr. Mayer, a needle containing a double ligature of whipcord was with great difficulty inserted through the pedicle, and one half of it was encircled and tied. The other ligature having become displaced, and finding that the hæmorrhage had been insignificant, we decided to leave the remaining portion untied. The growth was easily peeled off with the finger. After its removal it was found to consist of three separate tumours. The largest was about the size of a pullet's egg, the other two were much smaller. Sections of them were made and examined. Under the microscope they appeared to have the characteristics of a myxoma.

There has been no return of the growths. The tenesmus ceased immediately after the operation, and the patient's health rapidly improved. The bowels are now regular, and the fæces are naturally formed. The severe dilatation to which the sphincter was subjected did not impair it in any way.

Purpura Hæmorrhagica Syphilitica occurring in an infant four days old; death.—On April 19th of the present year Mrs. L—— was confined for the third time. Labour was short and easy; but the placenta not coming away, I was sent for to remove it. The child, a male, looked healthy and strong. Knowing that the father was syphilitic, and that the other children had died in infancy, the last one from syphilis, I requested the mother to send for me if she noticed anything wrong with the infant. On the fourth day I was sent for. The child had been bleeding slightly from the umbilicus. Having requested the nurse to divest it of all its clothing, I observed several large purple patches scattered over the chest, abdomen, and armpits. They were unmistakably purpuric. There had been some bleeding from the nose, and the nurse told me that she had observed a little blood on the napkin that morning. Small doses of mercury and chalk and a mixture of iron and cod-liver oil emulsion were prescribed for it. The child continued to grow worse. Fresh purpuric spots appeared, and the epistaxis and melæna increased in severity. The urine on a few occasions was bloody. The child died on the eleventh day.

Remarks.—I have reported this case for two reasons. Firstly, because of the extreme rarity of purpura in so young a child, and, secondly, on account of the doubt which exists in the minds of syphilographers as to the existence of a syphilitic form of this disease. I could assign no cause for purpura in this case, other than that of syphilis, and I think that I have sufficient evidence to justify the opinion that it was an expression of that dyscrasia.

Wilkes-Barre, Pennsylvania.

ON THE ACTION OF CERTAIN DRUGS ON THE CIRCULATION AND SECRETION OF THE KIDNEY.[1]

BY C. D. F. PHILLIPS, M.D., F.R.S.E.

THE following paper, which is compressed to the smallest possible space, is founded on experiments undertaken by me, in conjunction with Mr. Rose Bradford, in the Physiological Laboratory of University College, London.

The evidence at present obtainable from experimental pharmacology as to the precise mode of action of diuretics is by no means satisfactory. The question is a complicated one. Merely to observe the effects of any drug on the urinary flow and the blood pressure is a fallacious method; the important factor, which is omitted, is the effect of the drug on the *renal bloodvessels*. It does not necessarily follow that a drug has the same action on all peripheral vessels, and it is quite conceivable that it may constrict those of one area and dilate those of another. This is particularly true of the kidney vessels, where the flow of urine is not so much dependent on the general blood pressure as on the difference between the renal vessels and those of the body at large. Thus an ideal diuretic would be one that dilated the bloodvessels of the kidney, but constricted all others in the body. On account of considerations such as these, it occurred to Mr. Rose Bradford and myself that it would be well to reinvestigate the action of drugs on the kidney from a rather different standpoint to that usually adopted.

Mosso and others have investigated the peripheral circulation by enclosing a portion of the body, such as the arm or

[1] Paper read at the Ninth International Medical Congress, held at Washington.

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eg, in a rigid vessel filled with fluid and communicating with a delicate registering apparatus, so that any expansion of the limb would, by causing on outflow of fluid, produce a movement of the registering apparatus, which could be recorded graphically on the blackened surface of a revolving drum. Dr. Roy of Cambridge has extended this method to other organs, such as the heart and kidney. In this method the kidney is enclosed in a metal box filled with warm oil, the box being of such construction that no oil is allowed to leak out, and at the same time the structures at the hilus of the organ (vessels, ureter, and nerves) are not injuriously pressed on. This is effected by the box or oncometer being made in two similar halves, and each half having a piece of peritoneum (specially prepared) applied to it in such a manner that the space between the membrane and wall of the oncometer can be filled with oil. The two halves of the instrument are hinged together, and the kidney placed between the corresponding membranes of opposite halves. This membrane, being very flexible, applies itself acurately to the kidney, so that, to use a simile, the kidney placed in the oncometer resembles, for instance, the heart enclosed in the pericardium full of fluid. The heart would represent the kidney, and the visceral layer of the pericardium the delicate membrane of the oncometer; the pericardial sac finding its equivalent in the oncometer, and the pericardial fluid in the oil filling the instrument. It is obvious, then, that if the oil in the oncometer be placed in communication with a recording apparatus, any expansion of the kidney can be readily detected, and recorded graphically in the usual manner. The recording instrument is called by Dr. Roy the oncograph, to distinguish it from the oncometer. Its exceeding delicacy is shown by the fact that the tracing obtained in this manner from the kidney, say of the dog, is practically identical with a simultaneous tracing of the carotid blood pressure; the slight expansions of the kidney caused by each heart beat, as well as those caused by the respiratory undulations of the blood pressure, being perfectly recorded by this instrument. If, now, in the same animal, we record simultaneously the general blood pressure, the expansion and contraction of the kidney, and the excretion of every drop of urine, we can determine the action of any given drug much more completely than before. Our method of experimentation was shortly as follows. The animal (cat or dog) having been anæsthetised with chloroform, or with chloroform and morphia, a cannula was placed in the usual manner in the carotid. The kidney was then exposed, carefully separated from surrounding structures, and placed in the oncometer, this having been previously filled with oil. A cannula was then placed in the ureter, and each drop of urine falling from it was made to break a circuit through an electromagnetic arrangement, so as to make a mark on the recording surface for each drop. Before commencing the actual experiment, the animal was curarised to prevent any movements, and artificial respiration was maintained. Finally, a cannula was placed in the external jugular for injection of the drugs experimented with. In an experiment performed in this way, the blood-pressure curve and the kidney curve remain constant for several hours. The flow of urine is also very constant in its rate in the same animal, but varies in different animals. It is important that the amount of chloroform administered should be constant. This was effected by blowing the air from the artificial respiration apparatus through a bottle containing chloroform.

We will now pass to the action of various drugs, taking first citrate of caffeine. The effects produced by half-grain doses are as follows: 1. On the *blood pressure*. The blood-pressure is first lowered, and then is raised. Both effects are of short duration and slight, especially the rise of pressure. 2. On the *heart*, there is first a diminution in the force of the beats, followed by a slowing, with beats of markedly increased force. 3. On the *kidney*, there is at first contraction lasting two or three minutes, and accompanied by diminution or even arrest of secretion. This is followed by expansion, which (after a one-grain dose) lasts sometimes over half an hour, the flow of urine being simultaneously trebled. The effects on the kidney cannot be the result of the changes in the general blood pressure; this is shown by the fact that they do not occur simultaneously. The effects on the general pressure are slight and last only a few seconds, those on the kidney being measured by minutes.

Another drug which acts in a similar way is ulexin, a new alkaloid obtained from the seeds of the common gorse (Ulex Europæus). It has the objection that in animals the diuretic action is only maintained with doses which would either kill through the respiration or produce violent convulsions. It resembles caffeine in producing first a constriction and then an expansion of the renal vessels, with diuresis. It differs from caffeine in three particulars: 1. It is more powerful. 2. Its effects are more transitory. 3. Repeated doses of caffeine rapidly injected produce contraction only of the kidney, not followed by expansion; but similar excess of ulexin causes only expansion without contraction.

Among other substances that cause expansion of the kidney we may cite dextrose, urea, acetate and chloride of sodium, and probably all the constituents of the urine.

The drugs producing constriction of the kidney are more numerous. Digitalin in doses of $\frac{1}{10}$ gr. causes contraction, which persists for as long as half an hour. It is not easy to decide whether digitalis is a true diuretic, or only exerts its effects through the heart. During the contraction of the kidney, however, the flow of urine is not diminished, as is the case with caffeine, but is generally increased. The explanation seems to lie in the effect on the general blood pressure, digitalin raising it, caffeine depressing it. Spartein, on the other hand, though it acts similarly to digitalin on the heart, general blood pressure, and renal vessels, causes a great diminution of urine; and in disease, its so-called diuretic effect is due to improvement of the general circulation. We have also made many observations with strophanthin and apocynëin; their chief action is on the heart muscle; they produce little or no effect on the peripheral vessels. Both cause a slight temporary contraction of the kidney vessels, but with no definite increase in the urinary secretion. Finally, turpentine, adonidin, and barium chloride all produce marked contraction of the kidney, without diuresis.

In summing up the results, we see that reputed diuretics more commonly produce contraction of the renal vessels than expansion. Further, that expansion is either slight, as by acetate of soda; or, if large, as by citrate of caffeine, is only produced by small and initial doses. The powerful action of ulexin on the respiratory mechanism is a great drawback to its use; one-sixth of a grain was used in our experiments, but one-twelfth of a grain would completely arrest respiration. Then, again, such drugs as produce contraction of the kidney cannot be bracketed together, since, though they all have the same effect on blood pressure, digitalin alone has an obviously diuretic effect. We further see evidence of the truth that the flow of urine is not so much dependent on blood pressure as on the rate of the flow of blood in the renal vessels. It is necessary also to remember that although such drugs as strophantin produce a great increase in the force of the cardiac beats, yet the heart is very much slowed, so that it is possible that the amount of blood sent into such an organ as the kidney in a given time may remain the same, whereas such a drug as digitalis, producing a rise of blood pressure and a contraction of the kidney vessels, may cause an increased quantity of blood to pass through those vessels, and thus it acts as a diuretic. Inasmuch as spartein has not a marked diuretic action, we must also assume that digitalin has some peripheral action on the secretory apparatus of the kidney.

Our results may be tabulated briefly as follows, in three divisions:—

A. Drugs that first *contract* and afterwards *dilate* the kidney. I shall mention two out of this class: 1. Caffeine, in small doses, induces in the stage of contraction a fall of blood pressure; in that of expansion, a slight rise. During the former, the flow of urine may be arrested; during the latter it is always increased, *such increase depending on dilatation of renal vessels.* The possible arrest of secretion during the first stage is special to caffeine, and may be induced by large or repeated doses. 2. Ulexin, one-sixth of a grain, greatly raises blood pressure during the first stage (that of contraction); in the second, expansion is much greater in degree but shorter in duration than under caffeine, and is accompanied by brief but marked increase in urinary flow: the effective dose is limited by its toxic action on respiratory centres. Practically, excess of caffeine induces only the first stage, excess of ulexin only the second.

B. Substances that dilate the kidney, but to less extent and more slowly than caffeine and ulexin, are dextrose, urea, sodium, chloride and acetate, and probably all constituents of the urine.

C. Drugs that contract the kidney without subsequent expansion:—(1) Digitalin, with increased secretion of

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urine—probably resulting from general heightened blood-pressure. (2) Spartein, with diminished secretion—in health at least. (3) Strophanthin causes slight temporary contraction, with no marked increase of secretion. (4) Apocynëin, similar temporary contraction, and no definite increase of secretion. (5) Turpentine, (6) adonidin, and (7) varium chloride give similar results.

In conclusion, it seems to us that the plethysmographic method of experimentation is a valuable one for determining the exact action of drugs on the circulation, and one that deserves more attention than it has hitherto attracted.

Henrietta-street, Cavendish-square, W.

NON-TUBERCULATED LEPROSY WITH LOCAL ASPHYXIA BETWEEN THE ANÆSTHETIC PATCHES.

BY BEAVEN RAKE, M.D. LOND.,
MEDICAL SUPERINTENDENT OF THE TRINIDAD LEPER ASYLUM.

LEPROSY, as is well known, furnishes frequent and typical examples of the various trophic lesions so often discussed in Europe. It is, however, in connexion with the more obscure condition known as local asphyxia, or Raynaud's disease, that I venture to relate this case. It is unique in my experience of leprosy, and derives additional interest from the fact of its occurring in a fair-skinned, intelligent European.

Chevy A——, aged forty-five, born in France, was admitted to the Trinidad Leper Asylum on May 19th, 1883. He had served in the Crimea and in various other parts of the world. I examined him from time to time, and was surprised to find how little progress the disease was making. Beyond localised areas of anæsthesia in the extremities, there was no evidence of leprosy. The anæsthetic skin was at this time of exactly the same colour as the unaffected skin. He was an active man, constantly employed in making boots or in work about the asylum. On returning from Europe in September, 1886, I was, however, struck by a remarkable change which had taken place during my absence. The following are the notes then taken.

Oct. 1st, 1886: The anæsthetic patches are of the normal white colour; all the rest of the skin is of a dusky red. On pressure with the finger the congestion disappears. On drawing the nail across the skin the dark colour vanishes, then reappears, and afterwards a distinct bright-red wheal is observed in the line of the finger. He says the congestion disappears when bathing in the sea. He complains of much pain in the limbs, especially in the palms of the hands. The fingers are anæsthetic, and becoming stiff.—25th: He has been trying friction with gurjun liniment, but says the fingers are stiffer and more painful. The left median nerve was therefore stretched under chloroform. The nerve was found to be thickened. Some juice was collected from the exposed nerve on a cover glass and examined with magenta, but no bacilli were found.—29th: He says there is a sleepy feeling in the palm of the hand in place of the anæsthesia. When tested with the eyes shut, he refers the impact of a substance to one side of the point actually touched.—Nov. 12th: Now that the rain is falling, the colour of the skin between the taches has turned to a dusky reddish blue. He says the fingers feel cold, and that sometimes the skin is almost black during the rains. There is now no change whatever in colour or sensation in the parts supplied by the median nerve operated on.—Feb. 14th, 1887: He has been rubbing the arms with a 10 per cent. solution of ichthyol in olive oil. The dark colour is a little lighter, but there is no change in the anæsthesia.—March 14th: The congestion of the skin is almost gone. Has had dysentery for the last month. Complains of a cold sensation in the abdomen.—April 16th: He has been losing much bright blood from the bowel lately. Is found to have a prolapse of the rectum, with congested ulcerated surface. He was given chloroform, and the lower two inches of the rectum were drawn down and everted. The mucous membrane was cauterised linearly in the long axis of the bowel with a black-hot wire. It was then rubbed over with fuming nitric acid and tannin applied.—29th: Since the operation he has passed a good deal of blood from time to time. This has been checked by injections of nitrate of silver and of opium, and by turpentine by the mouth. The violet colour between the taches on the upper extremities has gone, leaving dusky-red patches.—May 4th: Sitting up; walked yesterday. Had diarrhœa, but no more blood. To repeat turpentine.—6th: Has passed hardly any urine since last night. About four ounces of clear urine, smelling strongly of turpentine, were drawn off by catheter. Burning sensation over bladder.—18th: Has had fever every day at noon lately, which was relieved somewhat by ammonium picrate. Urine high coloured; a trace of albumen. Œdema of hands and feet. Frequent diarrhœa, but not much blood. Looks better in face.—19th: Died at 2 P.M.

The necropsy, next day, showed an enormous liver, weighing 83 oz., and containing five distinct abscesses; the total amount of pus was estimated at from two to three pints. Weight of spleen 18 oz.; simple hypertrophy. Weight of kidneys 9 oz.; cortices somewhat thinned and granular on surface. Aorta very atheromatous. No recent hæmorrhage or ulceration was found in the rectum, the ulcers appearing to be cicatrised; but the rest of the large intestine was invaded by numerous more or less circular and sharply defined ulcers. The median nerves were thickened, but no difference was found between that which had and that which had not been stretched. The right cervical sympathetic and ganglion of the vagus were dissected out, but no change was found. Sections also showed no change under the microscope. Magenta showed numerous cells in the median nerve, staining very dark, and apparently stuffed with bacilli, also some free bacilli. Numerous bacilli, both free and in cells, were found in a scraping from the superior cervical ganglion of the sympathetic.

This case revealed a mass of morbid anatomy, hardly an organ being sound. The condition of the skin, however, is the chief point of interest. The strange feature in the case is the appearance of the congestion between the taches four years after the onset of the anæsthesia. Was this due to a fresh increase of bacilli in the mixed nerves, leading to invasion of the sympathetic fibres? But if so, why is this condition not more common, for the thickened condition of the median is common enough in leprosy, as also the discovery of bacilli in the affected nerves. I thought, therefore, that possibly a dissection of the cervical sympathetic might throw some light on the matter. No naked-eye change was found, but the microscope showed numerous bacilli in a scraping from the superior cervical ganglion. This is in contrast to results obtained in the cerebro-spinal centres; I have failed to find bacilli in brain or cord, nor has their occurrence there, I believe, been recorded. The disappearance of the congestion after prolonged hæmorrhage from the bowel was a point of interest. Whether the connexion was sympathetic or more direct I cannot say. Altogether the case struck me as presenting a remarkable resemblance to the earlier stages of Raynaud's disease, and as being sufficiently obscure and rare to place on record.

Trinidad.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF TRACHEOTOMY.

BY J. CRAWFORD RENTON, M.D. ED,
SURGEON TO THE EYE INFIRMARY AND TO THE DISPENSARY OF THE WESTERN INFIRMARY, GLASGOW.

THE following case presents several points of interest, and is, I think, worthy of record.

J. C——, aged seventeen months, was first seen on January 22nd, 1886, complaining of symptoms of laryngitis, with absence of the typical cough. The child had been ill for six days, the mother stated, but to-day she had observed some difficulty in breathing, which caused her some alarm. Pulse 120; temperature 101°. No cervical swelling, and no exudation on the fauces or tonsils. The usual remedies were resorted to, and were continued until January 26th, when the child had a severe spasmodic attack, with obstruction to the breathing, lasting for half an hour afterwards. Tracheotomy was advised, and in this Dr. Bostock concurred. The operation, however, was delayed, as the child

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seemed slightly better. Mercurial inunction was had recourse to, as we thought it possible that some specific affection of the larynx might be causing the hoarseness and spasms. On January 31st the spasms were more frequent, and there was greater difficulty of breathing. Assisted by Dr. Beatson, I opened the trachea, with immediate relief to the urgent symptoms. There was no swelling about the throat, and no special difficulty in performing the operation. One of the late Dr. Foulis's tubes was used, and the breathing was perfect until the inner tube was inserted, when a spasm immediately took place, so that it (the inner tube) was removed. The child progressed favourably for three days, when suddenly an abscess burst into the trachea and death took place. When the nurse was dressing the child after death, she noticed something sharp and prominent at the left side of the neck, an inch below and to the outer side of the wound, and drew my attention to it. On introducing my finger into the tracheal wound, I found behind it the outline of a foreign substance, not in the trachea, but evidently between it and the œsophagus. Cutting down on the external sharp point, a pin was extracted measuring two inches in length, and from its appearance it was evident that it had belonged to a brooch or safety pin. I was allowed to examine the throat, and found that an abscess existed between the trachea and gullet, which had burst into the windpipe and caused the fatal result. The larynx and trachea were quite healthy, there being no evidence of any affection of the vocal cords.

Remarks.—On explaining the cause of death to the child's mother, she stated that three months previously, while from home, a brooch was found without the pin, which had been broken, and, like many other children, our little patient often put beads, pins, &c., into her mouth, and while in the country she may have swallowed the brooch pin. It is quite possible for a pin to remain in the œsophagus for a considerable time without causing any irritation, especially if it is fixed perpendicularly. Some displacement takes place and an abscess gradually forms, pressure on the trachea causing spasm, which in the present case necessitated tracheotomy; finally the abscess burst and displaced the pin into the position in which we found it. This case illustrates the importance of bearing in mind the possibility of foreign bodies in the larynx, trachea, and œsophagus producing spasm and difficulty of breathing, even where there is no history of such being swallowed to guide us. An examination of the larynx with the laryngoscope might have aided us, but as we felt certain that we were either dealing with an inflammatory or specific affection of the windpipe, we deemed it unnecessary to give the child chloroform for that purpose.

PARALYSIS OF THE ABDUCTORS OF THE VOCAL CORDS.

BY A. LEGGE ROE, L.K.Q.C.P.I., L.R.C.S.I.,
RESIDENT SURGEON, HULL AND SCULCOATES DISPENSARY.

I READ with much interest the paper by Dr. Gordon Holmes in THE LANCET of the 22nd and 29th ult. During the last few weeks I have had under my care at the Hull and Sculcoates Dispensary two well-marked cases of this somewhat rare disease. The first was a man aged forty-five, who complained of marked inspiratory difficulty, which laryngoscopic examination proved to be caused by bilateral paralysis of the abductor muscles. Careful examination of the chest gave negative results. Unfortunately, being pressed for time, a complete history was not then obtained, and the man on being informed of the serious nature of the affection ceased to attend, and has been lost sight of.

The second case, a woman aged fifty-eight, is at present under treatment. She gives a most clear history of an attack of laryngitis twenty years ago, which was shortly followed by difficulty in breathing, most marked on exertion or when she had a cold. This difficulty has remained ever since. Laryngoscopic examination revealed complete paralysis of the abductor muscles; the vocal cords do not separate more than two millimetres on inspiration, and on forcible inspiration are almost driven together by the in-rushing air. Voice unaltered; sonorous inspiration present during quiet respiration, very loud during sleep. No enlarged glands, tumour, or other cause of pressure could be discovered.

This case is of interest on account of the clear history of the great length of time the paralysis has existed without calling for operative interference. The cold from which she was suffering when she first presented herself caused great inspiratory difficulty. This has now passed away, and the respiration is comparatively quiet.

Hull.

CASE OF SUPERFŒTATION.

BY B. G. GODFREY, L.R.C.P., M.R.C.S.

I WAS called on Aug. 17th of the present year to Mrs. H——, aged twenty-nine, to attend her in her fourth confinement. She stated she was seven and a half months gone and had been in pain all night, with considerable loss. On examination I found a three and a half months' fœtus in the vagina, which came away without difficulty. The uterus was large, rising about two inches above the umbilicus, and I could distinctly feel the movement of another fœtus. The placenta did not come away, and all pain ceased. I then left her, as there was no hæmorrhage or pain, and returning in an hour and a half found things *in statu quo*. This state of affairs continued for four days, when the pains returned, and the breech of a child was born before my arrival. I immediately removed the child, still-born, though the nurse informed me that the legs moved after their delivery. The child must have been quite seven months, as the nails were commencing to form and its weight was 4¼ lb. The placenta of the second child came away naturally, but was followed by a great deal of hæmorrhage; there was no sign of a second after-birth attached to it. Traction on the smaller cord failed to detach its placenta, so I introduced my hand into the uterus and removed it piecemeal; it was completely adherent and attached to the upper zone on the right side, measuring about 3 in. across; it was not putrid. All the bleeding immediately ceased, and my patient made an excellent recovery, without a drawback.

Balham.

DISLOCATION OF THE FIRST PHALANX OF THE INDEX-FINGER BACKWARDS.

BY E. M. HARRISON, M.R.C.S., &c.

A DISLOCATION similar to that recorded by Mr. Miller in a recent number of THE LANCET lately came under my observation, and may be worthy of a brief record.

A servant girl came to my surgery one morning, stating that in moving a heavy box her hand had slipped, the palmar surface of the proximal end of the phalanx coming into violent contact with the edge of the box. Since the accident, which happened about a quarter of an hour before I saw her, the finger had been immovable and very painful. There was no difficulty in recognising a backward dislocation of the first phalanx on to the metacarpal bone. This was easily reduced with the thumb of the left hand pressing on the displaced bone and traction on the finger with the right hand.

Willowmore, South Africa.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

TWO CASES IN WHICH THE OPERATION FOR THE RADICAL CURE OF STRANGULATED INGUINAL HERNIA WAS PERFORMED, AN ATROPHIED TESTIS BEING REMOVED AT THE SAME TIME; RECOVERY; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

THE question of excision of an atrophied testis in cases where operation for strangulated hernia is performed must be left to the discretion of the operator. By the removal of the testis and cord the canal would appear to be more effectually blocked, whilst the removal of the wasted and presumably useless organ does not add materially to the severity of the operation. The best kind of suture to be

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used in approximating the pillars of the ring seems doubtful, surgeons still differing as to the advisability of using wire, catgut, or silk.

CASE 1.—R. J——, a bricklayer, aged forty-four, was admitted on May 10th, 1887. For nine years he had had a right scrotal hernia, which had been strangulated two years ago, but was reduced by taxis.

The right half of the scrotum was as big as a man's fist, and very tense; the hernia had been down for fourteen hours, and all the signs of strangulation were present. Taxis having failed, herniotomy was performed. The sac being opened, about two feet of congested small intestine were exposed; the strangulation was divided at the neck of the sac. An atrophied testis was seen at the bottom of the sac. The neck of the sac and the spermatic cord having been separately tied with strong catgut, the testis and the sac were removed together. Four strong wire sutures were then deeply passed through the pillars of the external ring and the conjoined tendon, and the inguinal canal was thus obliterated. The wound was washed with a 1 per 1000 mercuric solution, a drainage tube was introduced, and the edges of the wound were brought together with wire sutures. The patient was kept on iced water for twenty-four hours, and quarter-grain doses of morphia were administered. There were no febrile symptoms. (The epididymis was subsequently examined by the microscope for seminal filaments, but with a negative result.)

On the eighth day the wound had healed throughout, the sutures were removed, and the dressings were left off. The tube had been withdrawn at the end of twenty-four hours. Thirteen days after the operation the patient was allowed to get up, there being a large plug of dense tissue filling up the inguinal canal and surrounding the external ring. On the eighteenth day, however, some pus was detected beneath the scar; this was let out and the dressings were reapplied. On the thirty-fourth day the man was discharged. But at the end of two months he was readmitted, as some suppuration continued. The four deep sutures were therefore removed; two of them were found firmly embedded in fibrous tissue; the two others were loose. The wounds at once healed by granulation, there being a mass of hard new tissue soundly filling the canal and covering the external abdominal ring. The patient was discharged cured, and was directed not to wear a truss.

CASE 2.—F. L——, aged eighteen, was admitted Aug. 16th, 1887. His right inguinal hernia had first appeared suddenly, nine years before, whilst he was pushing a truck. He was greatly collapsed, though the bowel had been down and strangulated only three hours; taxis was unavailing. The details of the herniotomy closely resembled those of the preceding case. An atrophied testis was found in the sac; the neck of the sac and the cord were ligatured separately, and the testis and the sac were removed. The external abdominal ring and the inguinal canal were obliterated by means of sutures, which included the conjoined tendon, together with parts of the aponeurosis of the external oblique, strong chromicised gut being used instead of silver.

After twenty-four hours the tube was removed. On the seventh day the dressings were left off, as the wound had healed completely. On the eighth day the patient was allowed to sit up. On the fifteenth day he was discharged. There was abundant firm material blocking up the canal and surrounding the external ring, but it was not so plentiful as in the last case, where silver sutures had been used. About three weeks after leaving the hospital the man returned to show himself, soundly healed. There was still plenty of hard material in the canal and around the ring. The deep sutures had caused no discomfort whatever, and nothing more has been heard or seen of them.

Remarks by Mr. OWEN.—Not infrequently an atrophied testis is found associated with an inguinal hernia; often such a testis is imperfectly descended, and generally it is of more than doubtful physiological value. It might be considered a good rule to remove such an imperfect gland when operating on a strangulated hernia, as by so doing the surgeon is then enabled completely to blockade the inguinal canal. The strong silver sutures which were used (as advised by Sir Wm. Stokes) demanded subsequent disinterment, whilst those of chromicised gut in the second case served their purpose perfectly. If suppuration occurs about deep sutures, the sooner the deep sutures are removed the sooner the wound will heal.

An important point is that neither of these men was allowed to wear a truss after the operation. If the work of the surgeon has been efficiently done no truss should be wanted; if a truss be applied, its pressure hurries on the absorption of the plastic material which consolidates the weak region, and its application may thus militate against the success of the operation.

I have the pleasure of saying that the second case was operated on by my house surgeon, Mr. J. J. Clarke, whilst I acted as his assistant.

BOROUGH LUNATIC ASYLUM, PORTSMOUTH.

GENERAL PARALYSIS OF THE INSANE; ONSET IN FORM OF STUPOR; APPARENT RECOVERY; RELAPSE, WITH EXPANSIVE DELIRIUM AND SPEEDY DEATH; REMARKS.

(Under the care of Mr. J. D. MORTIMER, Assist. Med. Officer.)

MR. MORTIMER expresses his obligation to Mr. W. C. Bland, medical superintendent, for permission to publish the following notes.

W. J. A——, aged forty-four, married, boiler-maker, was admitted on Dec. 19th, 1885, with the following history. He had always been a steady hard-working man; was secretary of a trade association, and had taken an active part in a recent Parliamentary election. No family history of any neurosis. On Nov. 27th he had fallen, apparently accidentally, downstairs, striking the back of his head. On Nov. 30th, he was first noticed to have a peculiar vacant look, and began to talk and act strangely, expressing an unfounded belief that his accounts were "all wrong," turning out the gas at unseasonable times, &c. He gradually passed into the state seen on admission. He was then described as a tall, gaunt man, bald-headed, with a red beard; face sallow; expression of vacant bewilderment; pupils equal, rather sluggish; tongue slightly tremulous. No definite signs of thoracic or abdominal disease, but pulse small and weak. Totters in walking; knee jerk brisk on both sides. No special rigidity or flaccidity of muscles. When questioned, he stared stupidly, giving no response, except that, when asked if he was in pain, he said his "head was bad," and passed his hand over it. He spoke slowly, but otherwise normally.

Two days after admission it was noted that the man had slept well and fed and dressed himself (but slowly). "Sits motionless and silent, replying to questions tardily and briefly. He generally answers those as to facts correctly, but for some time persisted that the present year is 1865."

Four months after admission there had been no marked change, but he was in all respects rather worse, being more dull and confused, more vacant in look and unsteady in gait, and often "wet and dirty" in habits. From this time (April, 1886) he steadily improved, at first in bodily, then in mental condition. At the end of May he was able to work in the garden, and at the end of June he was in good general health, his pulse and gait being normal and the tremor of the tongue hardly perceptible. He conversed rationally and intelligently, the only noticeable fault being a slight slowness of mental operation.

He was discharged on a month's trial, which he spent in the country, returning apparently well in all respects. He went back to work, and for two months, according to the statements of his wife and of those under whom he served, there were no signs of relapse. He seems, however, to have fretted rather unreasonably at having lost promotion by his absence, and not to have displayed much of his former activity of mind, At the end of this period he became restless and excitable, ordering expensive articles at shops and otherwise behaving insanely. After a few days he was readmitted to the asylum on Sept. 27th, 1886. He was then very boisterous and extravagant, wanting a special train to meet the Prince of Wales, proposing to make a large fortune by raffling watches, &c. His pupils were equal, gait unsteady, knee jerk brisk; tongue slightly tremulous, and there was well-marked hesitation and thickness of speech, which had only been noticed a few days. He continued in a state of acute excitement, often violent and destructive, sleeping but little; and although eating voraciously, he grew very thin and anæmic. On Dec. 1st he had a slight attack of diarrhœa, and on the evening of the 2nd suddenly passed into a state of collapse. No treatment had any effect, and he died on the morning of Dec. 3rd, 1886.

Necropsy, twenty-four hours after death.—Calvaria of normal thickness and density. Vessels of dura mater shrunken. Sinuses contained fluid blood. Arteries at base

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slightly atheromatous. Convolutions flattened and closely opposed. Pia mater tough and anæmic. Decortication well marked over anterior and outer portions of frontal lobes, slightly around fissure of Rolando, hardly perceptible elsewhere. Choroid plexuses deep violet. Much fluid at base of brain and in ventricles. Ependyma granular, especially in fourth ventricle. A small gelatinous clot in right cavities of heart; fluid blood in left auricle; left ventricle contracted. The thoracic and abdominal viscera generally showed nothing noteworthy.

Remarks.—Dr. Mickle states in his work on general paralysis, that in the few cases which set in with symptoms of stupor or pseudo-dementia, "the ordinary motor and sensory signs of general paralysis are either absent at first or are masked," appearing in most cases when the extreme mental symptoms pass off. "But not always; for a marked remission, or apparent recovery, may immediately succeed the acute symptoms, some weakness of the intellectual powers remaining." This case illustrates these statements, and perhaps also the tendency of technically "recovered" general paralytics to break down on return to their ordinary course of life.

LEICESTER INFIRMARY.

CASE OF VOMITING OF GALL-STONES; DEATH; NECROPSY; COMMUNICATION BETWEEN GALL-BLADDER AND DUODENUM; REMARKS.

(Under the care of Dr. FRANK M. POPE.)

L. H——, aged forty, married, was admitted on Sept. 3rd, 1887. Her general health had been fairly good; she had never had jaundice. Two years ago she had an attack of "pleurisy and inflammation of the bowels," and a similar attack six months ago. For the last two years she has had occasional cramping pains in the abdomen. Her present illness began five weeks ago, when during the night she had violent pain in the abdomen, worse about the right hypochondrium. The pain was unrelieved by pressure, and ease was obtained only slightly by a mustard application. The next day she began to vomit, and the pain became less violent. The vomiting has continued at frequent intervals ever since. She states that she is in the fifth month of pregnancy and has had several children.

State on admission.—The patient is a stout woman with a fresh complexion. In the right hypochondrium there is marked tenderness and a sense of resistance, but no tumour. Hepatic dulness not increased. The abdomen is slightly more tender than normally, but nothing more can be made out. There was no abnormal physical signs of heart or lungs. Urine: Sp. gr. 1010; alkaline; contains no albumen or sugar. Tongue furred thinly, and rather dry. Bowels not open for two days. Temperature 98·4°; pulse 70, feeble, regular. She was ordered a bismuth mixture every four hours, and half a grain of opium in pill at the alternate four hours. Diet to be milk, lime water, and ice.

On the day after admission she was still vomiting constantly. The vomit was green at times. No other change. On Sept. 5th, two days after admission, the note was: Last night she had a considerable increase of pain, accompanied with slight convulsions and internal strabismus. She was not unconscious. She had nutrient enemata, with half an ounce of brandy in each, every four hours. Early this morning she vomited two gall-stones of about five-eighths of an inch in diameter, with six or eight facets on each, and several smaller ones. The pain continued. She was a good deal collapsed. Temperature 97°; pulse very slow and small; bowels not open. All food and medicine by the mouth were discontinued, and she had an effervescing mixture with three minims of dilute hydrocyanic acid. On the 6th she was in much the same state, and had vomited a few more small stones. On the 7th the bowels were freely opened, and the motions contained several gall-stones, one nearly three-quarters of an inch in diameter. A few more small stones were vomited. She was taking essence of beef, and a very little milk. After this she slightly improved, the vomiting almost ceased, and she began to take a little more nourishment; but on the 17th she had another convulsive attack and subsequent collapse, from which she was revived by hypodermic injections of ether. The vomiting never entirely stopped, and on the 24th diarrhœa set in, and the nutrient enemata had to be stopped. On the 25th the temperature was 100°, the highest since admission; she was rather delirious, took little food, and the diarrhœa continued. She gradually sank and died at 7.20 A.M. on the 27th, twenty-four days after admission.

Necropsy, thirty hours after death.—Body fairly well nourished. Permission was obtained only for examination of abdomen, on opening which nothing abnormal could be seen; no general peritonitis, no excess of peritoneal fluid. Uterus reaching nearly to umbilicus. On raising the liver the gall-bladder was found to be situated in a circumscribed abscess cavity, formed by the adhesion of the neighbouring organs. The gall-bladder itself was in a sloughy condition, and several ragged openings existed at its fundus; some small stones had escaped into the cavity. There was a circular opening half an inch in diameter, with well-defined edges, leading from the gall-bladder into the duodenum, at about three-quarters of an inch below the pylorus. The common and cystic ducts were patent; one or two small stones were found in the duodenum. The stomach was healthy, and there was no ulceration from the gall-bladder into it. The rest of the abdominal organs were healthy. The total number of stones vomited weighed 170 grains; those passed per rectum 103 grains.

Remarks by Mr. POPE.—This case is interesting for the following reasons. It is an example of an exceedingly rare complication—viz., vomiting of gall-stones. Cases are mentioned by Frerichs, quoting Morgagni, Hoffmann, Portal, and Bonisson. He expresses the opinion that stones may pass from the duodenum to the stomach, but does not seem to have well considered the matter. Murchison, quoting several authors and a few cases of gall-stone vomiting, says that a gall-stone of any size could not pass backwards through the pylorus,[1] and describes a necropsy in which a direct communication existed between the gall-bladder and the stomach. The case I now report proves that Murchison's view was erroneous, and it is, I believe, the only recorded case which shows that a gall-stone may enter the duodenum and then pass backwards into the stomach. The immediate cause of death I consider to be septic absorption, which the patient was too much exhausted to resist.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Mode of Fixation of the Scapula and Fracture of the Coracoid Process.—Some of the Surgery and Pathology of the Hip Joint.

AN ordinary meeting of this Society was held on Tuesday last, Mr. G. D. Pollock, F.R.C.S, President, in the chair.

Mr. ARBUTHNOT LANE read a paper on the Mode of Fixation of the Scapula, suggested by a Study of the Movements of that Bone in Extreme Flexion of the Shoulder Joint, and its bearing upon Fracture of the Coracoid Process. The following is an abstract of the paper:—The author showed that in extreme flexion of the shoulder joint the scapula undergoes a movement of rotation upon an axis whose general direction is obliquely inwards and forwards, and that this rotation is abruptly limited by the impact of the coracoid process upon the under surface of the clavicle. He illustrated the manner in which the frequent performance of this movement under the influence of considerable strain determines in such labourers the development of a coraco-clavicular articulation, the mechanism of which he had already described in the Guy's Hospital Reports, 1886. He then referred to the very great difficulty which is usually experienced in breaking down adhesions between the humerus or scapula, these adhesions being in most cases the result of inflammation. The difficulty arose from the inability to fix the scapula. He showed that the scapula can be firmly fixed by flexing the shoulder joint completely, the coracoid process and clavicle being held forcibly in apposition, and that when the scapula is so fixed against the clavicle the humerus can be rotated forcibly upon its own axis, and can be completely adducted and then abducted very considerably without the humerus being accompanied in its movements by the scapula. In this manner all adhesions between the two bones can be readily

[1] The exact statement of Murchison reads: "The possibility, indeed, of a large calculus passing backwards through the pylorus is very doubtful." Murchison: Diseases of the Liver, 2nd edit., p. 494.—ED. L.

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broken down. He then criticised the statements made by surgical writers that the coracoid process is always broken by direct violence, and referred to two cases quoted by the author of the article on Fractures of the Upper Extremity in Holmes's System to prove the truth of the above assertion, which, he said, showed that the very reverse was true in this case, for the reason that when the shoulder joint is completely flexed it is practically impossible to fracture the coracoid process by direct violence. He also referred to the extreme inaccuracy of published statistics of the relative frequency of fractures of the several bones, and particularly of the coracoid process and acromion. He had never found a single instance of fracture of the coracoid process in the dissecting room, but he had observed that fracture of the acromion occurred more frequently than fracture of any other bone in the body.—Mr. W. ADAMS agreed with the anatomical and physiological conclusions of the author, but he could not concur with the surgical conclusions, for in an ankylosed joint it would not be possible for the joint to be flexed. The difficulty of fixing the scapula was not great. He had never found any difficulty himself in fixing the joint firmly. There often appeared to be plenty of movement, but this was of the scapula, and not really in the joint. In a few difficult cases the ankylosis could not be broken down, and he should recommend that such cases be left alone.—Mr. CLEMENT LUCAS said it was new to him that the coracoid process could be fractured in the way Mr. Lane had described, and the explanation was very easy to understand. He agreed that fracture of the acromion process was more frequent than was commonly supposed. Attempts at flexion of the shoulder would inevitably bring the coracoid process into contact with the clavicle, and so afford the necessary *point d'appui*.—Mr. HOWARD MARSH thought the explanation of fracture of the coracoid as likely to be the true one. He considered that the difficulties of fixing the shoulder joint were not so great as the author had inferred. In breaking down adhesions the use of anæsthetics was most desirable. If the joint be really fixed as determined under anæsthesia, he should advise that the case be left alone, for any temporary improvement was most likely to be followed by increased ankylosis and increase of the joint disease. The acromion may be apparently detached by the chronic rheumatic joint disease.—Mr. LANE, in reply, considered that the changes in the acromion were more frequently due to injury than to a rheumatic process.

Mr. ARBUTHNOT LANE also contributed a paper on an undescribed method by which the Superjacent Weight of the Body is transmitted in a United or Ununited Fracture of the Neck of the Femur through an acquired Ilio-femoral Articulation, and the bearing of the principle involved upon the Surgery of the Hip Joint. The following is an abstract:—In the examination of 320 bodies the author of the paper had found several instances of fracture of the neck of the femur, of which three were ununited and the remainder united. In three out of the small number of these fractures observed, he found that a large proportion of the superjacent weight of the trunk was transmitted to the femur through a new joint which had formed between a strong, dense mass of bone, which projected upwards and inwards from the anterior inter-trochanteric line and the neighbouring portion of the femur and the ilium, immediately beneath its anterior inferior spinous process. The only attribute which was common to these three cases was a very considerable displacement of the head of the femur downwards, which so altered the direction of its articular surface as to render it more or less useless for its original purpose. The most interesting of the three cases was an ununited fracture of the neck of the femur, for in it the whole or almost the whole of the superjacent weight of the body was transmitted through the ilio-femoral articulation which had developed between the callus projecting from the front of the neck of the femur and the anterior inferior spine. He thought that the mechanical principle illustrated by these three specimens, and especially by the ununited fracture, might be applied very happily to the surgery of the hip joint. He referred to the very unsatisfactory results of excision of the hip joint, and showed that, besides the shortening of the limb, the extreme insecurity of the joint resulting from the operation was the cause of its practical failure. If the upper extremity of the femur could be displaced inwards and could be connected to the innominate bone so as to form a new joint similar or identical in character with that which had developed in the three cases of fracture described in this paper, a very useful limb would be obtained, and one that would readily transmit the weight of the body without the assistance of any support, and permit of compensation of the shortening. The difficulties which would be experienced in fixing and retaining the femur in position might in some cases be very great, but not greater than our present facilities of operative treatment would enable us to meet. He also appended to the paper diagrams with short descriptions illustrating the conditions which are usually presented by united and ununited fractures of the femur.—Mr. G. D. POLLOCK asked whether the united fractures of the femur were impacted in some cases or in all.—Mr. A. E. BARKER spoke of excision of the hip joint, and thought that in early cases, where extensive destruction had not taken place, good results might be expected and obtained. He had had cases in which excision was very successful. The incision made by Mr. MacEwen did not divide the capsular muscles at all, nor were any nerves or vessels divided. With this method very satisfactory results were obtained, and the head of the femur rested on the ilium, in the position indicated by Mr. Lane as so favourable after fracture. He thought that Mr. Lane's suggestion would prove a valuable one.—Mr. PICKERING PICK referred to the outgrowth of the buttress of bone from the fractured femur as affording a support through which the weight of the body could be transmitted. Nevertheless, as in a case mentioned, a fracture united by thick fibrous capsule could form an efficient support for the weight of the body.—Mr. WARRINGTON HAWARD considered that in excision of the hip joint there was an essential difference from the conditions that obtained in Mr. Lane's specimen, for in a fracture the head of the bone remained in the acetabulum, whereas in disease of the joint the head of the femur was often dislocated and even removed. In cases of successful excision, in spite of the great shortening, good union and power might result.—Mr. HOWARD MARSH agreed that the operation of excision of the joint was very different now to what it formerly was. Absolutely unjustifiable was it to turn the head of the femur out of a large wound and saw off a large portion of the bone. He usually performed the operation now by an incision through the muscles on the back of the joint, and sawing off merely the head of the bone. The anterior incision might be suitable for the procedure suggested by Mr. Lane, and there ought to be but little difficulty in forming a joint between the head and the ilium.—Mr. BARWELL asked in what proportion of cases the buttresses of bone were found on the femur.—Mr. LANE, in reply, said that in most of the cases the united fractures were impacted; he could not state from memory the proportion of cases with buttresses.

MEDICAL SOCIETY OF LONDON.

Acute Glossitis in a Child.—The Presystolic Murmur.

A MEETING of this Society was held on Monday, Nov. 7th, Dr. J. Hughlings Jackson, F.R.S., President, in the chair.

Mr. MARMADUKE SHEILD read notes of a case of Acute Glossitis in a child, aged six years, complicated by trismus. On its admission into Charing-cross Hospital on the 7th of September, it was noted that the tongue protruded from the mouth, and was enormously swollen. The jaws had closed upon it, and the teeth had ulcerated deeply into the organ, which seemed on the verge of sloughing. The child was quite unable to swallow, and there seemed danger of death from dyspnœa or starvation. The mother stated that the symptoms had come on quite suddenly after an attack of "quinsy." Under chloroform the jaws were opened with a gag, and the tongue freely incised. Free hæmorrhage occurred, and the tongue was rapidly reduced in size. It, however, remained hanging out of the mouth in a paralysed state for upwards of fourteen days. The tetanic contraction of the jaws was marked, and was overcome by the constant wearing of a gag. This was attributed to reflex irritation through the lingual branch of the fifth nerve, and the paralysis of the tongue to a combination of diffuse inflammation of its muscular substance with want of effort to retract it on the part of the child. Ultimately the case recovered perfectly. The efficacy of incisions in acute glossitis was exemplified and dwelt upon, and importance was attached to the possibility of error in the diagnosis of a deeply seated abscess of the tongue simulating glossitis. The best and safest manner of incising the different parts of the tongue was briefly touched upon.—Mr. JAMES BLACK pointed out the danger the lingual artery ran of being wounded in incising some cases of glossitis.—Dr. SIDNEY

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PHILLIPS quoted cases which showed that glossitis and post-pharyngeal abscess followed exposure to foul emanations.—Dr. ANGEL MONEY maintained that the motor portion of the fifth, if not weaker than other nerves, responded much more readily to irritation.

Dr. BRISTOWE read a paper on the Presystolic Murmur, a full report of which will be found in another part of our present issue.—Dr. DICKINSON was glad to find that Dr. Bristowe recognised the murmur described by Hope. He thought it very nearly resembled the aortic diastolic bruit, from which, however, it might be diagnosed by change of posture, the mitral being heard best with the patient lying down, the aortic when standing up. The so-called presystolic bruit was accompanied by a thrill and an impulse which he maintained was due to ventricular systole. In the usual explanation the systole was represented merely by a "snap" at the end of the bruit, whereas he held that the rolling murmur ending with a snap all occurred during ventricular contraction. He explained the "mixed murmurs" (combined presystolic and systolic) by supposing a primary regurgitation through the stiffened valve segments, followed by imperfect closure with continued reflux. He could not conceive how the blood could flow in one direction and then the current should be suddenly reversed without a corresponding break or pause in the murmur.—Dr. SANSOM regarded the murmur as undoubtedly presystolic, though he differed from Dr. Gairdner as to its mode of production. He did not think it was coincident with auricular systole; it often occurred immediately after the second sound. The cause of the reflux of blood into the ventricle was the tension in the left auricle and pulmonary veins caused by the forcible action of the right heart. The snap was caused by the coming together of the flaps of the tricuspid valve. Cardiographic tracings failed to show a proportionately larger systole in mitral stenosis, which according to Dr. Dickinson's hypothesis ought to be the case.—Dr. BURNEY YEO had observed the auricular contractions in a phthisical patient, with retracted left lung; and the harsh presystolic murmur was exactly synchronous with them. There was a distinct interval between the beginning of the murmur and the carotid pulse.—Dr. BROADBENT knew of cases in which there was perfect continuity between the mitral diastolic and the presystolic murmur. He had seen one murmur grow out of the other: the presystolic from being short and running up to the first sound had been, so to speak, prolonged backwards till it began with the reduplicated second sound, and eventually it might even develop into a mitral diastolic only. Dr. Dickinson had said that the snap at one time ended the systole, and at another occurred in the middle of it. With this he could not agree. He declined to accept Dr. Sansom's theory of the causation of the snap because the right ventricle was in the same condition in mitral regurgitation, but then no snap was heard.—Sir DYCE DUCKWORTH said that if the murmur were really systolic it ought to be conveyed to the lower angle of the scapula.—Dr. KINGSTON FOWLER showed a boy of eighteen with double mitral murmur and tricuspid regurgitation. The snap was present despite the tricuspid incompetency. That stenosed mitral valves were in many cases capable of closure was proved by their "facetted" appearance post mortem.—Dr. STEPHEN MACKENZIE had seen a case with well-marked presystolic bruit, in which at the necropsy the flaps presented a roughened auricular surface, but were competent. He referred to Dr. Hilton Fagge's objection: that, if these cases were really due to incompetence, dilatation of the left ventricle should follow.—Dr. BRISTOWE, in reply, confirmed Dr. Broadbent's statement, that the right ventricle was dilated and hypertrophied in aortic regurgitation.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, Nov. 2nd, G. E. Herman, M.B., Vice-President, in the chair.

Mr. BLUETT showed a Hydrocephalic Fœtus. The circumference of the head was twenty-seven inches and a quarter.

Dr. W. S. GRIFFITH exhibited a specimen of Hæmatometra and Hæmatosalpinx, in which a clot was seen extending from the body of the uterus through the Fallopian tubes, and projecting a couple of inches from the fimbriated extremity of one of them. Also a case of Pyometra, which illustrated occlusion of the cervix by pressure of a fibroid. Both these specimens were from St. Bartholomew's Hospital museum.

The PRESIDENT gave notice that a special meeting of the Society would be held on Nov. 23rd, commencing at 8 P.M., for the discussion of the subject of Extra-uterine Fœtation.

Vaginal Tumour.—Mr. GEORGE LOWE described a case in which, during a difficult and painful menstrual period of a girl aged fourteen, a painless tumour the size of a pheasant's egg formed in the left vaginal wall. This proved to be connected with a large tumour filling the pelvis and extending up to the umbilicus. There were no symptoms of constitutional disturbance. On vaginal exploration no cervix could be found, but a small depression high up posteriorly admitted a catheter for two inches. On puncture of the vaginal tumour a dark treacle-like inodorous fluid escaped. The discharge ceased. All swelling disappeared, and the patient recovered.—Mr. HERMAN thought the case was extremely like one of unilateral hæmatocolpos—i.e., double uterus and vagina, one vagina being imperforate, and the secretion of the corresponding uterus accumulating in it, while the patient menstruated through the other. Owing to the relations and characters of the parts being altered by distension, diagnosis was difficult in these cases.

Hydrocephalus as a Complication of Labour.—Dr. J. W. SWAYNE, after pointing out the rarity and dangerous nature of this complication, gave the particulars of seven cases occurring in his own practice, in three of which delivery took place spontaneously, and four required the assistance of art. In one of the former the mother died apparently from rupture of the uterus. This accident proved fatal in rather more than a fifth of the cases collected by Dr. Keith, the cause being the great stretching of the lower segment of the uterus, and the difficulty thus occasioned to the process of retraction over the head. Dr. Swayne laid great stress on an early diagnosis of this complication, and on the extreme danger of an expectant treatment, and pointed out the great importance of reducing the size of the child's head by puncture as soon as a correct diagnosis had been formed. He related cases showing the disastrous results which have arisen from delay or from attempted delivery with the forceps, owing to mistaken desire to save the life of the child.—Dr. GERVIS wished to emphasise the importance of the method of examination by inserting the hand into the vagina so as to make sure of the presence of hydrocephalus before proceeding to operate. He had met with cases of severe injury to the vagina from the forcible delivery of hydrocephalic heads, the condition not having been recognised.—Dr. BRAXTON HICKS advocated the introduction of the whole hand into the vagina for the sake of diagnosis, not only in cases of hydrocephalus, but in all cases of ambiguity, so as to see exactly the want of relation between the head and brim.—Dr. GALABIN mentioned a case which he had lately seen. The diagnosis was difficult, owing to the slight development of the cranial bones and a comparative absence of hair on the scalp. The bimanual method, with the introduction of the whole hand into the vagina, easily revealed the large size of the head. In moderate degrees of hydrocephalus in which the bones were highly developed and the sutures widened, he had found the nature of the case revealed by the blades of the forceps being widely apart when applied and easily slipping off.—Dr. PLAYFAIR said that, while he fully endorsed all that had been said as to the importance of the subject of the paper, he must take exception to the statement that it had been insufficiently treated in modern text-books. In his own work it had been fully considered, and he had pointed out the precise dangers and advocated the same rules of treatment as the author of the paper. Suspicions of intra-uterine hydrocephalus might be aroused by the peculiarly violent, almost tetanic, pains which result from the vain efforts of the uterus to make the presenting head engage the pelvis. When from the experience of former labours or actual measurement the dimensions of the pelvis are known to be normal, and the head refuses to enter the brim in spite of violent pains, the patient should be thoroughly anæsthetised and a complete exploration made with the hand in the vagina. This would certainly lead to a recognition of the difficulty, and possibly to the prevention of disaster by early puncture of the head.—Dr. BOXALL thought that in certain cases podalic version was advisable after evacuation of the fluid, though in the majority of cases it was unnecessary. In cases like that which Mr. Bluett had shown, the head was enormously dis-

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tended, and the bones at the vault widely separated. If the base of the skull is brought down first, the bones of the vertex will fold together like a parachute.—Mr. JOHN PHILLIPS had met with two cases of hydrocephalus, one presented by the head, the other by the breech. The former was complicated by hydramnios. The diagnosis was easy after rupture of the membranes, and perforation was followed by an easy labour. He found that 7·5 per cent. of the total cases of hydrocephalus were complicated by hydramnios. In difficult cases, when the breech presents, he thought that the plan recommended by Tarnier, to cut into the spinal column as near the neck as possible and draw off the fluid by means of a catheter, was a good one.—Dr. GRIFFTHS stated that it would conduce to the certain determination of the cause of frequent presentation of the breech in cases of hydrocephalus if those who met with them would take the specific gravity of the hydrocephalic fluid. The specific gravity of the fœtus was stated to be 1055, and of the liquor amnii 1010 to 1015, while that of the fluid which was drawn from the head of the fœtus shown by Mr. Bluett was 1010. This difference would amply account for the floating of the head to the top of the amniotic fluid, especially early, when the fœtus is mobile in the uterus. If the disease attacked the head when it was less movable in the uterus, the head, naturally dependent, might remain so.—Mr. HERMAN spoke of the value of external palpation. By this means he thought it was easy to identify the head, and roughly judge of its size. A German writer, Brühl, had directed attention to what he called "Eindruckbarkeit" of the fœtal head—i.e., the extent to which it could be pressed down into the pelvis with the hands, and he (Mr. Herman) believed this measure was of service in forming a prognosis as to the ease or difficulty of labour. If applied in cases such as those under discussion the presence of a condition entailing difficult or impossible delivery would be at once recognised.

A Case of Hæmatometra associated with a degenerating Fibro-myoma, treated by Supra-vaginal Hysterectomy, was related by Mr. W. A. MEREDITH. The patient, aged forty-six, had been subject to a large abdominal tumour for many years. In April, 1883, the patient, who had up to that date suffered from severe menorrhagia, was seized with pleurisy, and was confined to bed for eight weeks. Menstruation ceased from that date. She suffered from abdominal tenderness and severe attacks of spasmodic pain in the tumour, till she was admitted into the Samaritan Hospital in December, 1886. The abdomen was then occupied by an enormous semi-solid growth, which was diagnosed as a uterine fibro-cyst. The vaginal portion of the cervix uteri was soft and unenlarged; its canal was occluded. The tumour, with both ovaries and tubes, was removed by supra-vaginal hysterectomy on Dec. 17th, 1886, and the patient returned home quite well six weeks later. The tumour consisted of an enormously distended uterus, with a degenerating fibroid in its anterior wall. A cavity in this growth communicated by a large oval aperture with the uterine cavity, both were filled with altered blood. The posterior wall of the uterus was greatly hypertrophied. The entire mass weighed 15 lb., and must originally have contained at least 5 lb. of blood. The complete and persistent retention arose from some cause effecting sudden occlusion of the cervical canal, probably inflammatory in its origin, and rendered permanent by partial rotation of the elongated uterine cervix during the patient's confinement in bed in 1883. The specimen demonstrates a somewhat rare incident in the life history of uterine tumours.—Dr. GALABIN thought that one of the points of interest in Mr. Meredith's case was the bearing of such on the question of uterine distension with either blood, pus, or mucus without absolute obliteration of the cervical canal. The rule was that in actual stenosis of the canal the uterus became hypertrophied to overcome the obstruction, and was not dilated. He had met with exceptions to this rule. In one instance pyometra in an old woman was the result of retroflexion, and was cured by emptying frequently by digital pressure.—Dr. GERVIS had seen many cases of dysmenorrhœa in cases of fibroid uterus connected with more or less stenosis of the cervix, but no case of actual atresia. In a case of large interstitial fibroid which he removed by supra-vaginal hysterectomy last year, the interior of the tumour was found to be in a state of necrosis, and he would like to know if Mr. Meredith had often found this condition in fibroids, and whether there were any symptoms indicative of its occurrence. In Dr. Gervis's case there had been none.—Mr. HERMAN said that we ought not to base conclusions as to the effect of obstruction to the exit of fluid from the uterus on inferences drawn from cases like the present one. The question as to the effect of flexion was one of fact to be settled by observation. Some said that dilatation of the uterus was the result, others said there was hypertrophy, but no specimens existed that showed either dilatation or hypertrophy, cases in which the uterus was fixed or which had undergone senile atrophy being excepted.—Dr. HORROCKS thought the case threw light on some cases of fibro-myomata in which, years after the climacteric, uterine hæmorrhages occurred. He suggested that the hæmatometra might be due to breaking down of the tumour which opened into the uterine cavity.—Mr. MEREDITH replied.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Oct. 19th, Mr. Lawson Tait, F.R.C.S., in the chair.

Odontoma.—Mr. JORDAN LLOYD exhibited a rare specimen of odontoma, removed from the upper jaw of a man nineteen years of age. It measured 1¼ in. long, 1⅛ in. across, and 1 in. deep, and weighed 247 grains. The specimen is probably unique, as no such case can be found previously recorded. The tumour had been diagnosed "necrosis" prior to removal. On section it showed most characteristically the arrangements in irregular lamellæ of dentine and other dental tissues. The mass was lifted out of its bed with an elevator. The tumour occupied the site of the second and third upper right molars.

Rodent Ulcer.—Mr. EALES showed a man, aged seventy-three, on whom he had operated, removing the upper and lower eyelids, eyeball, and orbital contents on the left side, for rodent ulcer of eight years' duration, which had involved the lids and commissures, together with the conjunctiva and cornea of the left eye, freely. The specimen was also shown, together with microscopic sections of the same, which exhibited the characteristics of rodent ulcer.

Raynaud's Disease.—Dr. SUCKLING showed a strumous-looking girl, aged twelve, who was suffering from symmetrical gangrêne of the fingers and toes. When two years old she was bitten by a rabbit on the right forefinger, and three months after this the fingers began to be blistered, and since that time she has never been free for a month, always having a sore finger or toe. She suffers from paroxysmal attacks of inflammation in the fingers, accompanied with severe pain. The terminal phalanges with the distal half of the middle phalanges are lost in the fore, ring, and little fingers of both hands, the fingers being swollen, red, and ulcerated at their extremities. The thumb is inflamed and the terminal phalanx is necrosed. There is no anæsthesia and no pain. The skin of the legs is bluish and thin, and ulcerated in several places, the slightest injury causing an intractable ulcer. The terminal phalanx of each little toe has been necrosed. The knee-jerk is present; the plantar reflex lost. The condition of the extremities is always worse in cold weather. There is no history of struma in the family, but the girl herself is weakly and ill-nourished.

Ulcerative Endocarditis, with Congenital Malformation of the Heart.—Dr. SUCKLING also showed the heart of a girl, aged sixteen, in whom during life he had diagnosed ulcerative endocarditis. She was admitted into the workhouse infirmary seven weeks previously to her death, and on admission was found to be very anæmic and thin, with pyrexia of a markedly remittent nature, reaching 102° to 104°F. at night, and falling to normal in the morning, with profuse sweats. A loud systolic bruit was present over the pulmonary area, and the spleen was slightly enlarged. At the necropsy stenosis of the pulmonary orifice was found, with an incomplete ventricular septum. The left ventricle was dilated, and extensive ulceration was present at the apex, the wall being very thin in this situation. The right ventricle was hypertrophied; infarctions were present in the kidneys, and the spleen was large and very soft. The presence in this case of the pulmonary systolic bruits, though not due to ulcerative endocarditis, enabled this diagnosis to be made, for without the murmur this would have been very difficult, if not impossible.

Plum-stone impacted in Bronchus.—Dr. SIMON showed a plum-stone that had been impacted in the right bronchus of a boy aged six. On opening the trachea the stone was at once coughed out.

Suppurating Ovarian Tumour.—Mr. LAWSON TAIT showed a suppurating ovarian tumour that he had recently successfully removed.

Ovarian Cysts.—Dr. MALINS showed two pedunculated

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ovarian cysts that he had successfully removed from a patient aged fifty-six.

Dr. MALINS read a paper on Varicose Veins in the Broad Ligament.

The following office-bearers have been elected for the ensuing session:—President: Mr. Ross Jordan. Ex-President: Mr. Lloyd Owen. Treasurer: Mr. Garner. Members of Council: Dr. Savage, Dr. Simon, Mr. Eales, Mr. Ker, Mr. Chavasse, Mr. Priestley Smith, Mr. Wm. Thomas, Mr. A. Clay, Mr. Bennett May, Mr. Jordan Lloyd, Mr. Messiter, and Mr. Harmar. Secretaries: Dr. Suckling and Mr. Haslam.

Reviews and Notices of Books.

A Course of Elementary Practical Histology. By WILLIAM FEARNLEY. London: Macmillan and Co. 1887.

THIS book, which forms one of the excellent series of manuals for students, differs from other text-books of practical histology in many respects. It gives a complete list of the necessary apparatus, a new classification of the structures required, and much fuller detail in the various methods of preparation and mounting than is to be found elsewhere. Every process laid down in the work has been personally tested, and the course is a most thorough and complete one, and can be carried out even without the aid of a teacher, although of course not so satisfactorily and readily as if he were present. Mr. Fearnley begins at the beginning by describing what kind of a room should be chosen for a private histological laboratory, and then urges the necessity of an index of its drawers and shelves, and a diary for the details of the daily work. A good description of the microscope and of the necessary apparatus for measuring, drawing, and photographing objects then follows; and the next chapter is devoted to reagents and minor operations, such as cleaning cover-slips and slides, ringing slides, cell-making, &c. Teasing; irrigating; applying gases, vapours, and heat; injecting; dissecting; hardening and softening; embedding; section-cutting; staining; dehydrating and clearing; and mounting, follow in due order, and are most methodically and minutely described. The amount of detailed description given by the author can only be appreciated by those conversant with the book and the processes referred to. A list of the materials to be collected, and of the animals from which they can be most readily obtained, and how they should be prepared, completes the first part of the book, and to this part no words of commendation can be too strongly applied. The second part also, so far as concerns the arrangement for filling in the particulars respecting any preparation, is suitable enough; but the paragraphs relating to the definition of terms are quite out of place, and unnecessarily increase the size of the book. Writing out definitions from Quain, Klein, Schäfer, and Purser is a tedious task; it has nothing whatever to do with practical histology, and the book would be the better for the omission of the space alloted page after page to this defining of terms. Considering that Mr. Fearnley is engaged in general medical practice, it is certainly most creditable to him that he should have found time to work out the various processes and methods, and to describe them so admirably and with such praiseworthy detail. In another edition we would suggest that if a reference to pages as well as to paragraphs were given, it would be a further improvement.

A Treatise on the Animal Alkaloids: or the Ptomaines and Leucomaines Chemically, Physiologically, and Pathologically considered in relation to Scientific Medicine. By A. M. BROWN, M.D. With an Introduction by Professor ARMAND GAUTIER. Pp. 182. London: Baillière, Tindall, and Cox. 1887.

THIS is a very unequal book. The avowed intention of the author is to submit to the scientific student in England an introduction to the study of the animal alkaloids, and it is frankly admitted that the task would have been impossible without the encouragement and aid of continental workers in this department. From the introduction by M. Armand Gautier we realise the magnitude of the task undertaken — viz., "to give a stimulus to investigations new and fruitful in the elucidation of a question the most essentially humane — the cause and mechanism of life, health, and disease." The existence of ptomaines and leucomaines, and their deleterious actions, have only been brought into prominence within recent years, and it may still be doubted whether their composition and their effects have been sufficiently worked out to lead to any very practical result beyond establishing a word of warning for medico-legal experts engaged in investigating cases of supposed criminal poisoning. Some of the chemical terms appear in a form which may send scientific investigators to the original text for information. As examples, it may be sufficient to point to the frequent recurrence of "sulphurated" and "phosphorated hydrogen," "anhydrid carbonic," and "alcohol absolute." The work is divided into three sections, dealing respectively with the cadaveric alkaloids or ptomaines, the vital alkaloids or leucomaines, and the relation of the vital or physiological alkaloids, the leucomaines, to scientific medicine. The first two sections, although they give numerous classifications and definitions, are far from satisfying. Oversights occur in the revision of the proofs; for instance, on page 40, in consecutive lines we find "Schmiedelberg" and "Schmiedberg." In the third section, however, a notable improvement occurs, both in the correctness of technical terms and in smoothness of diction, and here we glean the author's own views, which are certainly of a controversial character. Stated briefly, they assert a belief in the revival of the doctrine of "humoralism" as the basis of rational medicine. "What M. Gautier has been showing, and shows so admirably, is simply that the school of the past and the school of the future will be found to mutually support each other, and further, that humoralism, if you will, so far from being vanquished, has been only stolidly refurbishing its arms and reinspecting its resources; whilst pangermism has been exhausting its energies in sensational demonstrations of bacterial surprises and bacillar blunderings." The pages in which these views are elaborated are full of interest, although we feel disposed to take leave of the book with the author's concluding words: "Let us wait for a little, and we shall see more."

OUR LIBRARY TABLE.

Middlesex Hospital Reports.—The annual report of the cases treated in this hospital for the year 1885 presents the general features which have distinguished its predecessors, but a few changes have been made with the intention of diminishing its size and cost of production. The general table of diseases has been prepared as in previous years, but with this exception all tabular matter has been excluded. Dr. Pasteur, who is responsible for the report of the medical department, gives a general synopsis of the cases of enteric fever, a summary of each case of malignant disease treated in the medical wards for the year, and a detailed account of some instructive cases under the heading "Selected Cases of Unusual Interest." In the report of the surgical department Mr. Roger Williams adds to the number of cases of cancer which have been fully analysed from 1882 (making over 800), and his general report is exhaustive and complete. The third part of the volume is occupied by the pathological report of Dr. Kingston Fowler, and contains a brief record of 283 post-mortem examinations of medical and surgical cases. These records are not merely of interest in themselves, but are important for future reference. It would be a good thing if our metropolitan hospital reports were

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more available for reference and the plan adopted more uniform.

The Quarterly Journal of Microscopical Science. Edited by Professors RAY LANKESTER, THISELTON DYER, E. KLEIN, H. MOSELEY, and ADAM SEDGWICK. New Series, No. 109, Vol. XXVIII., Part 1. London: J. and A. Churchill.—This part contains the following memoirs:—1. The Anatomy of the Madreporaria, Part 3, by G. H. Fowler, with Plates 1 and 2. 2. On the Anatomy of Mussa and Euphyllia, and on the Morphology of the Madreporian Skeleton, by H. C. Bourne, with Plates 3 and 4. 3. On the Intra-ovarian Egg of some Osseous Fishes, by Robert Scharff, with Plate 5. 4. Observations on the Structure and Distribution of Striped and Unstriped Muscle in the Animal Kingdom, and a Theory of Muscular Contraction, by C. F. Marshall, with Plate 6. 5. On the Fate of the Muscle-plate, and the Development of the Spinal Nerves and Limb Plexuses in Birds and Mammals, by A. M. Paterson, with Plates 7 and 8. 6. Note on the Ciliated Pit of Ascidians and its relation to the Nerve Ganglion, and the so-called Hypo-physial Gland, and an account of the Anatomy of Cynthia Rustica (?), by L. Sheldon, with Plates 9 and 10. 7. The Tongue and Gustatory Organs of Mephitis Mephitica, by Frederic Tuckerman, with Plate 11. 8. On the Quadrate in Mammalia, by Dr. G. Baur. 9. On the Hæmoglobin Crystals of Rodent's Blood, by W. D. Halliburton. 10. An Easy Method of obtaining Methæmoglobin Crystals for Microscopic Examination, by W. D. Halliburton.

The Journal of Physiology. Edited by MICHAEL FOSTER. Vol. VIII., Nos. 3 and 4. August, 1887. Cambridge: Cambridge Scientific Instruments Company's Works.—The following contributions are contained in this part. 1. Phillips and Bradford on the Action of certain Drugs on the Circulation and Secretion of the Kidney; Plates 4 and 5. 2. W. D. Halliburton on Muscle Plasma. 3. H. Sewall: Experiments on the Preventive Inoculation of Rattlesnake Venom. 4. A. Haig: Variations in the Excretion of Uric Acid produced by administration of Acids and Alkalies; Plate 6, Figs. 1 to 3. 5. I. Ott and C. Collmar: Pyrexial agents—Albumen, Peptone, and Neurin; Plate 6, Figs. 4 and 5.

A Manual of Physiology. By GERALD YEO, M.D., Professor of Physiology in King's College. Second Edition. Pp. 668. London: J. and A. Churchill. 1887.—We are glad to see a second edition of this excellent manual. Professor Yeo is engaged in teaching, and therefore well knows what is required by the student. The work contains a considerable amount of histology, and is illustrated by many woodcuts. The purely physiological part is thoroughly worked up to the knowledge of the present day.

Conversation Lessons on Prompt Aid to the Injured. By HENRY WEBB. With 47 Illustrations. Pp. 122. Bury: W. S. Barlow. 1887.—*First Aid to the Injured: the Ambulance Pupil.* By a PUPIL of the St. John Ambulance Association. Pp. 46. London: Crosby Lockwood and Co. 1887.—We are by no means sure that the form of question and answer adopted in the first-named of these books is the best adapted for imparting instruction. It would appear, however, that the men attending the ambulance lectures delivered at Bury by Mr. Webb represented to him that they would understand and remember them better if the text-books were arranged in that form, and especially in view of the examination which followed. In compliance with the wish thus expressed Mr. Webb prepared the present handbook, which appears to have been carefully compiled, and will doubtless prove useful not only to the persons for whose instruction it was intended, but also to those on whom the examination of ambulance classes may devolve. The book has the advantage of a copious index. "The Ambulance Pupil" is another addition to ambulance literature. The instructions are given plainly and concisely. The book is of a portable size and form, and seems well adapted to the use of the class for whom it is intended. Like the one just noticed, it has a good index. In the directions for the treatment of "alcoholic poisoning" (drunkenness) we miss a very necessary caution against placing the patient on his back—a position which, if he became sick, would be very liable to give rise to suffocation.

Wintering Abroad. By Dr. ALFRED DRYSDALE. Second Edition. Pp. 63. London: Virtue and Co. 1887.—The object of this work appears to be to recommend the Riviera in preference to all other places as a winter residence for invalids, and Mentone as the best of all the winter stations. We cannot say that it adds anything to our knowledge on these subjects. The very brief notices of "the different winter stations for the benefit of those who are wholly ignorant of the subject" can scarcely be of much use in aiding them to form an opinion as to the most suitable winter residence.

Health Maps. A complete series of prescribed Exercises of the Body for daily use for maintaining the Health in a state of integrity, for correcting any tendencies to Functional Irregularity, and for resisting the Encroachments of Disease. By ANNA L. ARNTM. Five Groups. London: Swan Sonnenschein, Lowrey, and Co. 1887.—In the introduction to the maps the authoress says: "There is an intermediate state of health, which is far more common than is supposed, and which may best be designated by the term 'negative health.' It is a condition in which one can neither lay claim to being actually ill, nor assert with truth that one is 'quite well.' .....It is to minimise the chances of break-downs, to keep at bay this negative, and perpetuate the positive state of health that is the object of these maps." Without endorsing all that is said respecting the special application of the different groups of exercises, we may say that the figures show very clearly, by means of dotted lines, the manner in which the various exercises are to be performed. The Health Maps would, in our opinion, prove very useful to those entrusted with the care and education of children, by showing how a course of useful calisthenics may be efficiently carried out without the aid of any apparatus.

Modern Gymnastics (Elementary). By A. ALEXANDER. Containing over 200 Illustrations by G. RUSHFORTH. Pp. 140. London: Philip and Son. 1887.—This work is intended as a guide to the members of the National Physical Recreation Society who cannot avail themselves of professional teaching. It consists of a series of gymnastic exercises to be performed with the usual appliances to be found in a gymnasium. The words of command for the instructor and the directions for the pupil are given for each movement, with an illustration showing the position of the pupil, and a musical accompaniment, deemed, we presume, appropriate to each exercise. We are disposed to think that some of the more advanced exercises, especially with the double bar-bells, the clubs, the bars, and the trapeze, ought not to be undertaken by delicate persons except under medical advice and careful supervision, and in all cases care must be taken not to attempt too much or to continue the exercises too long at a time.

The Physicians and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements for 1888. John Smith and Co., London.—This Visiting List is now entering upon its forty-second year of successful publication, a proof that it is appreciated by those for whose use it is intended. Several new tables have been introduced and the older ones have been rearranged and extended. To those practitioners who have not as yet made themselves practically acquainted with the advantages and conveniences of this publication, we can cordially recommend its use.

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ROYAL COLLEGE OF SURGEONS.

ON Thursday afternoon, Nov. 3rd, the annual meeting of the Royal College of Surgeons (of which a brief account was given in our last issue) was held in the theatre of the College, Mr. Savory, President, in the chair. There was a crowded attendance of Fellows and Members.

The PRESIDENT announced that the new room at the top of the College was advancing towards completion, the enlargement of the library would almost immediately be commenced, and very shortly the extension of the museum would be taken in hand. These additions would of course increase the current expenses of the College, and a large portion of the Erasmus Wilson legacy would be invested to meet them. The work of the Conjoint Examining Board in the new hall was carried out to the satisfaction of both Colleges.

The report was taken as read.

Mr. HOLMES moved: "That this meeting disapproves of the application for a new Charter, which, *first*, does not confer electoral powers upon Members of the College, and the right to be eligible to sit in the Council, in accordance with the resolution passed at the general meeting on Nov. 4th, 1886—namely: 'That, in the opinion of this meeting, it would conduce to the welfare of the Royal College of Surgeons, and would tend to promote the interests of medical polity and education (1) if Members of the College were empowered to take part (separately or conjointly with the Fellows) in the election of members of the Council; (2) if Members of the College were eligible to sit in the Council, provided (*a*) that no Member of the College shall be entitled to vote till he have been such Member for a period of ten years; (*b*) that no Member of the College shall be eligible to sit in the Council till he have been such Member for a period of twenty years; and (*c*) that not more than one-fourth of the Council shall consist of Members of the College who are not also Fellows; and, *secondly*, which does not provide that no alteration in the constitution, or in the relations of the College, or in any of its bye-laws, shall be effected without the consent of the Fellows and Members convened to discuss the same, in accordance with a resolution passed at a general meeting held on March 24th, 1884, and reaffirmed at the meeting on October 29th, 1885.'" He said the length of the resolution was due to the fact that if the meeting desired it to be laid before the Privy Council it would to a certain extent tell its own tale. There had been such frequent opportunities of discussing the matter in hand amongst each other in the presence of the Council, who were kind enough to listen to their arguments, that it was perfectly unnecessary for him to go into the merits of the question. The College consisted of 13,000 or 18,000 Members, of whom 1000 were Fellows and the rest simply Members. The calculations seemed to vary. The Calendar gave the number as about 17,000, but gentlemen who had gone into the subject said that an enormous number of them were dead and had not been struck off the list, and that the real number of Members was nearer 12,000. However that might be, it appeared to be the opinion of the Council that it was perfectly just and equitable that the 1000 Fellows should have no power in the College at all except to vote for members of the Council, and that the balance of 17,000 or 12,000 should have nothing to do with the College at all—that the College should be to them of no more value or importance than if they were not Members. He considered that that was unjust and inequitable, and that opportunities ought to be given for discussing the matter with some competent and impartial authority, in the hope that things might be set right. (Cheers.) The College had acquired enormous influence, and had lately become possessed of very considerable riches. It was not right and just that all this influence and all these riches should be used by the twenty-four members of the Council for purposes on which the Fellows and Members were not to be consulted at all, which might be according to their wishes or the direct reverse. As he said before, the Members were eager for any opportunity that could be given them of arguing the matter before any competent authority, which they hoped would set it right. They must remember, however, that in whatever way things might go in the coming struggle between the Council and its constituents before the Privy Council, if that struggle terminated in their favour it did not necessarily imply that the thing was at an end. (Hear, hear.) They had two Associations, one of Fellows which was formed originally for the purpose of obtaining some alteration in the method of the election of president and also in the method of voting. The alteration in the method of electing the president was still in abeyance, but of course that Association would attend before the Privy Council and urge its views upon that subject. Besides that, the Association of Fellows joined with the Association of Members in recommending that the Members should have the power of voting for members of the Council, and it also joined with them, although by a smaller majority, in recommending that the Members should have some admission to the Council Board. He should allow the Association of Members to speak for itself, and it would, he believed, be able to show to the authority which was to grant the Supplemental Charter that they had a very strong case indeed; but he quite allowed that before an authority such as the Privy Council the influence which they might bring to bear might possibly prevail. If so, then they must turn to Parliament, and then they might feel certain that the perfectly reasonable and moderate contentions which they put forward would prevail, and that they would before long obtain the alteration which they wish to make in the Charter of the College. Certain circumstances had taken place since the last meeting, and were recorded in the report, upon which he wished to say a few words. In the first place, the resolution which had been recited in the one which he had just submitted to the meeting was the first that was passed at the meeting on Nov. 4th, 1886; and the second was: "With a view to give effect to the recommendation in the foregoing resolution, the Council is requested to empower certain members of its body to meet and confer with the representatives of the Association of Fellows and of the Association of Members." That was met by the Council with a reply, which a little surprised the Members generally, to the effect that although the Council were not prepared to act upon the recommendation contained in the first resolution carried at the meeting of Fellows and Members, the Council were prepared to act upon the second resolution so far as to appoint a small committee to confer on the subject of the first resolution with representatives appointed by the Association of Fellows and the Association of Members. That meant that although the Council would not do anything, at the same time they would tell the Members how not to do it. (Laughter.) That appeared to be so distinct a refusal that the Members did not think it worth while to spend their time, or the much more valuable time of members of the Council, in any such proceeding, and therefore the following answer had been returned: "That considering the Council had laid down as a condition of conference that it is not prepared to give effect to the recommendation contained in the first resolution, no useful purpose is likely to be served by a conference on the subject with the representatives of the Associations of Fellows and Members, but if the Council will withdraw this condition, both Associations will be happy to appoint delegates to meet the Committee of the Council." The object of the Members was to discuss the matter to see whether the terms were in any way unreasonable; and if so, to vary them, and, in fact, to let some business be done. The object of the Council was to do nothing at all but to pay the Members the empty compliment of spending half an hour in talking to them. A still more remarkable result of the meeting of Fellows and Members last year was referred to on the tenth page. The Council then issued a circular to the Fellows, in which these two questions were asked them: "In your opinion should Members of the College be allowed to vote for Fellows as members of the Council? In your opinion should Members of the College be eligible for seats on the Council?" He thought it was a very great pity that these questions were formulated in such very general terms, because they allowed men who held the same opinions to answer in perfectly different ways. He was himself an ardent supporter of both propositions—that Members should vote for members of the Council, and that Members should sit on the Council; but he could not have answered those questions with a simple affirmative, and he was not in the least degree in favour of the Members swamping the Fellows, as they must do if they were allowed to vote promiscuously. (Cheers.) Again, he was not in the least degree in favour of members of the Council swamping Fellows of the College. He could perfectly recognise that one of the great uses of the College was educational, and hitherto that had been almost the only function which the College had performed. In all

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educational questions he thought the voice of the Fellows ought unquestionably to be heard, and therefore he could not say that it was desirable to answer that second question with a naked "Yes." He thought it would have been better if the proposals that had been made had been submitted to the judgment of the Fellows, although that of course could not be considered final. The Fellows were the people interested, and it was surprising to him that the judgment of the Fellows was not far more strongly against those two propositions than it really turned out to be. The number of circulars sent out to the Fellows was 987, of which twenty-one seemed not to have arrived at their destination, so that 966 Fellows were consulted by post. In return to the first question of the Council 419 Fellows voted "No," which was very considerably below the majority required; 276 actually voted "Yes"; while 260 did not take the trouble to vote at all, and therefore could not have any powerful objection to the question asked. That made 536, which was a very great majority of the Fellows. He therefore thought he was entitled to say that the majority of the Fellows had no objection to entrust the vote to the Members under such conditions as would not swamp them in their own College. (Cheers.) At any rate, it could not be said that even in the judgment of the Fellows the proposal which was carried at the meeting was in any way negatived. However, the Council, he supposed, thought that they had the sanction of their constituency, and they accordingly went on to lay the Draft Supplementary Charter before the proper authorities, but before they did so the Association asked them to meet and discuss the Draft Charter. It could hardly be said that at the meetings held hitherto anything had been discussed, except among the Members themselves. The Members talked, and the Council acted. (Laughter.) The Council, however, replied that they "do not think it expedient to convene a general meeting of the Fellows and Members to consider or discuss the proposed Draft Charter, as the subjects to which it relates have already been submitted to meetings of the Fellows and Members." It was true that the subjects had been submitted to the meetings, but whether they had been approved or not was another matter. The first provision of the Draft Charter was a very necessary one: "To enable the College to hold 'lands, tenements, rents, and hereditaments,' of annual value not exceeding £20,000, instead of £2000, as by present Charter." It seemed funny that the £2000 a year included the premises in which that meeting was held, and the partnership with the College of Physicians put them in possession of another—whatever it was. (Laughter.) Still no person would think of taking any pettifogging objection to the position in which the Council now found itself. The third provision was to empower the Council to elect to the Fellowship Members of twenty years' standing, not exceeding ten each year, on the payment of the fees required for the Fellowship examination. That appeared to be the same proposal that was protested against most strongly by the Fellows and Members. It was on the motion of one Member, seconded by another, that the general meeting said the first method recommended by the Council for widening the basis on which the Fellowship was obtained tended to lower the academic status of the diploma, and that in the interest of surgical education it was not advisable. The proposal in the Supplementary Charter tended directly to lower the academic status of the Fellowship, and ought to be protested against by every person who had the interest of surgical education at heart. The only other provision of the Supplementary Charter of any real importance was the one giving the Fellows power to vote by voting papers. One or two other matters were so remarkable that he could not pass them over when recommending the resolution. The first was the behaviour of the College in the matter of the Society of Apothecaries and the new conjoint examination. The last meeting of the Fellows and Members respectfully urged upon the Council the advisability of an arrangement for combination with the Apothecaries' Society as well as the College of Physicians, but that strong expression of opinion was only worth the breath expended upon it. The Council went on to do just as it pleased. Then the General Medical Council requested them to reconsider their policy, but the College replied in that highty-tighty, mind-your-own-business style which was so agreeable when applied to other people. That was the masterful way in which the Council of the College managed business. That state of things ought not to be permitted to continue. Matters so important to medical education and to the status of every medical practitioner in the kingdom ought not to be settled by private bodies in that way; the opinion of the profession ought to have some weight, and ought to be elicited in some way. Similar observations might be made with regard to degrees in medicine, which was one of the most thorny subjects connected with the profession. That was a matter on which the medical public ought to be consulted. How would the granting of those degrees affect men at present in practice? The only other thing he would notice was the large accession of property which the College had lately received and was expected to use for the benefit of the profession. Nobody charged the Council with anything like corruption; but there, again, they claimed to be the absolute masters of that large fund. That large accession of wealth would not make the College in the least degree more apt in the defence of the interests of the general practitioners who formed the bulk of the Members, in the amendment of the laws, nor in the abatement of any of the other crying abuses. All those matters would have to be submitted to the judgment of some impartial authority. He was very sorry it should be so—sorry to say that the Council was not in harmony with a large proportion of its members; but there was no question that such was the case. No attention whatever had been paid to the humble, respectful representations that had been made to the Council, and the Members therefore had no choice except to see whether they could not win in what had now become a simple fight. For his own part, he had no doubt as to how that fight would terminate, however long it lasted. It was not consistent with everything else that went on in this country at present to suppose that a great institution such as the College was could be entirely given up to the uncontrolled management of two dozen gentlemen (cheers), however adequately they performed their duties, and that all the rank and file should be entirely excluded. He moved the resolution with all possible confidence that it would prove acceptable to the meeting, and he trusted that they might be able to impress the Privy Council so strongly on the subject that the Supplementary Charter would be sent back for reconsideration. (Loud cheers.)

Dr. RALPH GOODING, in seconding the resolution, said he did so with pleasure mingled with sadness: pleasure, because he was raising his voice for the promotion of the welfare and future progress of the College; and sadness, because of the utter indifference of the governing powers of the institution to the crying evils and the marked indignities which had been heaped on their constituents for more than half a century. They had not only failed to redress those evils, but were now actually seeking to perpetuate them. In the report two matters were principally dealt with. In the first place, they were asked to approve of the expenditure of some £50,000 or £60,000 in additions to the College premises. That might be right or wrong, but when they found that the cost of the new dwelling house alone was estimated at something like £10,000, and that equal accommodation could readily be procured at less than one-fifth of that amount, they might fairly infer that the subject was open to discussion. Were they to conclude that consulting surgeons living in the atmosphere of metropolitan hospitals, and carrying on their profession in a West-end square or thoroughfare occupied by the aristocracy, were more competent to deal with building operations than many other Members of the College? For his own part, he believed that the leaders of the profession would do well to look for advice in such matters to the general Members who lived in the suburbs and provincial towns. The admission of Members to the Fellowship by election meant one thing and one thing only—the sale of the diploma to the highest bidder; but they were pledged to resist to the utmost any proposal which in any way might detract from the value of that academical distinction. The College was the *alma mater* of the Members, but they had been driven from their surgical home. However, they did not despair; they had a natural longing to return, and were filled with the deepest aspirations to succeed to the privilege of their surgical birthright by undertaking their fair share of the responsibility of the government and direction of the College. He trusted that the meeting would mark its sense of the justice and rectitude of the course put before them by unanimously voting for the resolution. (Loud cheers.)

Mr. GEO. BROWN thought the Council had not exercised good judgment in opposing the reasonable demands that had been put before them. They could no more control the

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movement than they could stop the advancing tide, and they would again fail as they had done in their attempt to snuff out the Apothecaries' Company. In the latter case they would neither listen to the meek voice of the Members nor to the request of the General Medical Council. The result was that they had been hoisted on their own petard, and now they had a competing body whose examination would bear favourable comparison with that of the College, and whose qualification was more than equal to their own. (Laughter.) He wished to ask the Council through the President if on this occasion they would deign to do what they had never before done—attempt to reply to some of the remarks that the Fellows and Members had made. For whom did they hold the great funds that had been bequeathed to the College—for themselves, or in trust for the members? That was a pertinent question, and one that was entitled to a reply. He maintained that they held them in trust, and therefore the Members should have a voice in the disposal of those funds.

Surgeon-Major INCE said he most cordially agreed with the action of the Council in the matter of the Society of Apothecaries ("Hear, hear!" and "Oh, oh!"). He had no desire to cry down that Society; he presumed that most of those present were licentiates of it; but they were something besides, they were professional men, and he hoped something more than tradesmen. ("Question") No one would deny that the Apothecaries' Society was essentially a trades association. (A voice: "That may be, but they are gentlemen.") Wherever they had a mercenary, a commercial spirit, it must be incompatible with the spirit of a noble profession. ("Oh!") He believed there was no canker in the profession so growing and fatal as greed for money. On public grounds it was most essential that the Apothecaries' Society and the conjoint examination should be kept apart. The great want of the poor was cheap, but good, sound medical advice. (Cries of "Time.") With regard to the resolution proposed and seconded so ably, he wished to say that just in proportion as he was satisfied with the action of the Council in connexion with the Apothecaries' Society, so he was dissatisfied with their conduct with reference to the resolution. They were acting most unwisely, not only in the interests of the College, but in reference to their own interests as well. Every member of the Council must feel that the demand of the Members must be quickly answered. He cordially supported the resolution, and regretted the lamentable action of the President and Council.

The motion was carried almost unanimously, only one hand being held up against it.

Mr. JOHN TWEEDY proposed: "That this meeting respectfully requests the Council of the College to transmit a copy of the foregoing resolution to the Lord President of the Council." He said such a resolution would formerly have been out of place, but it now became in order because the Council had sent a petition to the Privy Council asking for a supplementary or renewed Charter, which did not contain any provisions which many Members who were deeply interested in the welfare of the College felt should be included in it. He would have been very glad if the difference of opinion had been settled in that room; but when he remembered how slowly political changes took place, he neither regretted nor was disheartened at the continued opposition of the Council. The executive body had come to an opinion that a certain policy was right; the general body of the Members had come to the opinion that an opposite policy was right. Year after year they had tried to settle the differences, but could not. Now the appeal was to an independent authority, and he felt that that appeal should go in a dignified way from the meeting. It was only right and just that the meeting should respectfully ask the Council to send a copy of the resolution to the Privy Council. The general body of Members were in opposition to the Council, but not in the least hostile to it. There was a fair difference of opinion, and he was quite willing to fight it out. (Cheers.)

Dr. DANFORD THOMAS said he wished to say a word regarding what the Association of Members had been doing in the interval between the last meeting and the present one. The Council had taken the question into consideration, and had consulted the Fellows. On taking the Medical Directory, which they believed to be a correct statement of those who belonged to the College and other bodies in connexion with the profession, it was found that while the College Calendar gave them 17,000 Members, in the Directory they could only discover 12,000 who were registered. Of that 12,000, something like 7000 resided out of the United Kingdom, and they had received replies from 4665, all signing the petition to the Privy Council Those had now been sent in, and were now in the custody of the Privy Council. The Association had approached the Privy Council, and had been received courteously and assured that no petition from the Council would be considered until the prayer of the Members and Fellows had also been considered. (Cheers.) He could conceive that there had been legal difficulties as to the Council giving them any direct affirmative answer. They were acting upon their Charter; they were elected by Charter under the rights which were conferred upon the Fellows in the Charter; and, standing upon their strict legal position, they thought they could not have granted the Members any rights until they had altered their Charter. The Council could, however, have put in a clause in their own petition which would have given the Members the privileges they asked for (cheers), but they had not thought fit to do so. The Association of Members would be represented by counsel at the meeting of the Privy Council, and also by deputation, and he hoped in that way the Council would be prepared to meet them favourably before the Privy Council. He had much pleasure in seconding the resolution.

Dr. ALDERSON thought it most important that they should take steps to have their views represented in the proper quarter. Last year a resolution was carried asking the Council to allow the Apothecaries' Company to join in granting a conjoint diploma, but it was perfectly useless. It was nothing to the Council to see the great number of dispensaries that were established, but it was a great thing to those Members who had to suffer from them, and also to the public who had forced upon them a number of unqualified and ignorant men. No doubt some of these dispensers held the diplomas of the College, but they must be taught not to act in a way that was injurious to the great body of Members and was also prejudicial to the public weal.

Sir JOSEPH LISTER, who was received with loud cheers, said he feared that what he was going to say would not seem at all acceptable. With reference to whether the resolution would be likely to be acceded to by the Council, it must be distinctly understood that, so far as the individual members of the Council were concerned, they must hold themselves perfectly free to discuss that question when it came before them as a Council. (Cries of "Oh, oh.")

Mr. JOHN TWEEDY said, as mover of the resolution, he did not of course wish it to be implied that any answer was to be given at once. He understood that the Council were present more in a complimentary way, and that the President was simply there to report the wish of the meeting to the Council, and then in proper course it should be considered and decided upon. (Cheers.)

The PRESIDENT said he thought it was quite understood.

The resolution was then put, and declared to be carried unanimously.

Mr. ERNEST HART said that every duly constituted meeting had a chairman, and in this case it had also a secretary. He asked, as a point of order, whether it was not the absolute and customary duty of the president or chairman of any meeting and its secretary to transmit to any authority any ordinary document which in that capacity they were requested to transmit.

The PRESIDENT ruled that Mr. Hart was entirely in the wrong. This was a meeting called to consider the report of the Council. It was not within the province of the meeting to take action of this sort. The Council was the executive body of the College, and it was their duty, and their duty alone, to take action of this kind. The resolution itself was perfectly in order, and it would be considered by the Council.

Mr. ERNEST HART moved that the resolution already passed be placed in the hands of the Chairman of that meeting and of the Secretary, with the request that they would as such transmit it to the Privy Council.

The PRESIDENT said that he could not put the resolution, because it was not within his province or the scope of his authority to do this without bringing it before the Council.

Mr. JAS. DAY asked when the Members would know what action the Council were going to take in the matter.

The PRESIDENT said he would take care that the resolution was brought to the notice of the Council with the least possible delay. The Council had certain prescribed times for meeting. How long the subject would take in deliberation he could not say, but Members could obtain any information that was required by applying to the Secretary.

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Dr. PROSSER JAMES asked, with reference to the point of order just raised, whether this was a meeting of the Royal College of Surgeons of England or not, and also whether the President of the meeting was President of the Royal College or simply of the Council?

The PRESIDENT said these questions were easily answered, but they did not touch the point at issue, which was simply this—that the Council was the executive body of the College, and it was for the Council to determine their action with regard to this request, which had been most properly put to them.

Dr. JAMES.—And a meeting of the whole body of the College has no authority?

The PRESIDENT.—Certainly not of that kind.

Dr. JAMES.—No authority after it has passed a resolution to say what shall be done with that resolution?

The PRESIDENT.—Certainly not. (Laughter.)

Dr. COLLUM called attention to the statement in the report which recommended that No. 38, Lincoln's-inn-fields, now let in chambers and producing an annual rental of £368, should be pulled down and converted at an expense of £3000 or £4000 into a residence for the conservator. He thought the better plan would be to give that gentleman an extra £100 or £150 a year to find his own residence instead of practically adding £600 a year to the expenditure of the College for that purpose. The residue could be utilised in scholarships for the profession and for the sons of poorer men. The income of the College was £35,000 a year, derived from diplomas and fees. Last year the Members paid £22,859, while the contributions of the Fellows of the College on the Council was only £84. The examiners and the Council received £9685 15*s.* last year for their services, and that was why it was the Members were kept out. (No, no.) There was scarcely a Member of the College of Surgeons who could not influence more or less a member of Parliament (Hear, hear), and he hoped that everyone would endeavour to do so. The Marquis of Hartington lately said: "The Government under which we now live is as near an approach to a pure democracy as exists anywhere. The House of Commons practically controls the Government, the House of Commons is elected by the people. It is in the power of the House of Commons to displace the Government, and it is in the power of the people at no distant date to displace the House of Commons." He hoped that each Member of the College would address his member of Parliament and request him to appeal to the Government on this subject (Hear, hear), and then the matter would soon be settled.

On the motion of Mr. BRINDLEY JAMES, seconded by Surgeon-Major INCE, a vote of thanks was passed to the President, and the proceedings were brought to a close.

MEDICAL HISTORY OF THE EUROPEAN TROOPS IN THE BOMBAY COMMAND DURING 1886.

IN the report by W. A. Thomson, M.B., Surgeon-General, Bombay, upon the health of the European troops in the Bombay Command during 1886, the average strength for the year is stated to have been 11,000. The admissions into hospital were in the ratio of 1488, the deaths of 12·73, the invalids sent to England of 28·09, and the constantly sick of 73·98 per 1000. Compared with the results for 1885, there has been a slight increase in the admissions, but a very marked decrease in the deaths, amounting to nearly one-half. This remarkable reduction in the mortality does not, however, appear to have been the result of any alteration in the health conditions of the troops in the Presidency, but of the transfer of Quetta, at the end of the first quarter of 1886, from the Bombay to the Bengal Command. If the force at Quetta be deducted from the returns of both years, the death-rate in 1885 will be 12·49, and in 1886 14·16 per 1000, exclusive of the deaths of invalids on their passage home, thus showing an increase of 1·67 per 1000 in the latter period. There has been a decrease of about 1 per 1000 in the invaliding, and an increase of 7 per 1000 in the constantly sick. The admissions ranged between 1102 at Kirkee and 2387 at Asirgarh, and the deaths between 3·87 at Ahmednagar and 30·30 at Ahmedabad. The most fatal disease among the troops was enteric fever, which gave rise to one-third of the deaths; the admissions by it were in the ratio of 12·2, and the deaths of 4·18 per 1000. The stations at which it was most prevalent were Karachi, Deesa, Nasirabad, Poona, and Mhow. Deesa furnished the largest number of deaths. Aden, Satara, Asirgarh, and Indore were the only stations at which no case occurred. The months in which it was most prevalent were May, July, September, and October; the greatest number of deaths occurred in September. At none of the stations could the disease be traced to any specific cause. At Poona the medical officer "thinks the most probable source of the disease was 'the effervescing and sherbet drinks produced at the shops kept by natives,' and from impure water." At Karachi, although no defects were found in the barracks and their surroundings to account for it, the Principal Medical Officer says: "Much remains to be done to perfect the sanitation of Karachi. ..... At present it is simply 'honeycombed' with cesspools." The cases of enteric fever occurred chiefly, though not exclusively, among the young soldiers and the recent arrivals in India. Bombay enjoyed nearly an exemption from cholera, only 4 cases having been admitted, of which 3 died, and there was also a death at Karachi out of hospital. Two of the fatal cases occurred at Deolali, and one at Quetta, and the other admission was at Indore. Malarial fevers were the cause of one-fourth of the total admissions, but of only one death. With the exception of Quetta, which, as before stated, was occupied for three months only by Bombay troops, they were most prevalent in the Mhow division, and next to it in Sind.

There were 7 suicidal deaths recorded, and 1 homicidal. Of the former, 6 were by gunshot and 1 by hanging, by means of a piece of "puggree," while confined in the cells at Aden for drunkenness. The homicidal death was that of a private of the 2nd Lancashire Fusiliers at Nasirabad, who was shot by a comrade while trying to disarm him.

The death-rate of the officers was 8·29, of the non-commissioned officers 22·79, and of the privates 12·54 per 1000 of strength; and the invaliding was 44·20, 42·84, and 28·69 in these grades respectively.

Early in 1887 certain lock hospitals which had been closed were reopened, "and already the influence of these institutions is observable in the diminished admissions to station hospitals for venereal diseases. Sanction has also been awarded by the Government of India to the establishment, for the first time, of lock hospitals at Hyderabad and Satara," and it is anticipated that they will have an important influence in reducing the proportion constantly sick of the troops.

"PARALYSIS OF THE ABDUCTORS OF THE VOCAL BANDS."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Felix Semon, I beg to state that I had no intention of exhibiting a table of all cases published. The standard writers (Mackenzie, Ziemssen, &c.) on diseases of the larynx have not considered it necessary to include any similar table in their account of this important disease. Having collected more than double the number given by Burow in detail, I decided that this amount was quite sufficient for my purpose. I am extremely sorry that Dr. Semon's cases did not happen to come to hand amongst those sixty. Had they done so, I should assuredly have published them inpreference to many of the others. A considerable number of the instances I met with were omitted on account of insufficient detail.

Amongst the innumerable experiments on the subject of laryngeal innervation, those of Claude Bernard, in refutation of Bischoff, have always seemed to me incontrovertible; nor can I easily consign them to oblivion. Since, however, Professor Horsley's skilful experiment has finally satisfied Dr. Semon, the matter certainly demands attentive reconsideration.

Let us set another experiment by Bernard beside this one of Prof. Horsley. In a kitten five weeks old *both* spinal accessory nerves are cut. The animal becomes voiceless, but is otherwise unaffected for two days, when both recurrents are severed. Instantly it dies from occlusion of the glottis. Does not this seem to prove incontrovertibly that the vagus has a motor power not derived from the spinal accessory? In the face of such conflicting evidence I do not think Dr. Semon's expression "certainly erroneous" at all justifiable. I am, Sirs, yours obediently,

Finsbury-square, E.C., Nov. 8th, 1887. GORDON HOLMES.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 12, 1887.

WE have repeatedly drawn attention to one of those evils incidental, shall we say, to a somewhat over-ripe civilisation, with which the public mind is becoming increasingly prone to divert itself. This is the practice of self-medication—a practice which we are assured will make but little headway among a rational and simply living population, in spite of the copious fair speech of those who foster it, while it is denounced as it should be by the common voice of the medical profession. Faith in the reason, nay in the very instincts of mankind, and in the better judgment of our professional brethren, forbids us to doubt that this disguised enemy of health will eventually stand forth as a revealed imposture. This consummation is, however, the hope of an enlightened future. Meanwhile the possibilities of present mischief cannot be ignored. That these are not hidden from the majority of practitioners we are well aware, as also of the fact that many intelligent persons outside our own calling have a general sense of their existence, though the feeling is by no means as widely diffused as it ought to be. We are particularly conscious, however, of what, at all events, appears to be a very imperfect perception of these possibilities on the part of some medical men.

A feature in the recent development of literature has been the appearance of popular journals of a quasi-medical character, and the practice on the part of some of our lay contemporaries of devoting a part of their columns to the details of medical treatment. The function of these periodicals consists in an endeavour to enlarge the sphere formerly occupied by the time-old, though we cannot say time-honoured, agency of nostrums. They assume to administer, not medicines indeed, but medical advice to the public, one and all, for one penny! There is little concern for the greatly varying condition of the great army of patients—for the pulse which throbs in one and flickers in another, for the whole heart or the maimed heart, for the sound or loaded kidney, for the bloodvessels, whether they be well-nigh invulnerable in the vigour of untried youth or decaying at the brain after a life's worry. None of these things matter: the chloral, the colchicum, or the opium goes down all the same; there is the rest or the horse exercise, the full or the light diet at choice (the patient can have which he chooses, for he must know what is wrong with him), and the proprietor and the publisher are the gainers. This is what we may call the likeness in plain clothes of the newest departures in journalistic literature. Thus displayed, perhaps it may shock some, and the fact that it has not hitherto awakened more generally a natural instinct of caution is simply due to a wide-spread misunderstanding of its true meaning. If this be true of the public generally, is it remarkable that it should be in some measure true of a limited number of medical men, and—we say it with much regret—of some whose intellectual grasp and whose high sense of professional honour might have saved them from what is seen on its exposure to be so great an error? But here, again, we are certain there has been misunderstanding. The members of our profession are sometimes accused of a want of business capacity, and the accusation is partly true. Particularly is it likely to be true of those who are by their very scientific eminence debarred somewhat from the concerns which constantly occupy the purely practical man. It may be that we are to trace in this fact the cause of the regrettable indiscretion which has appended to the literature in question the nominal sanction at least of reputable practitioners. Such men would never commit themselves to such a course with their eyes open. It is to our mind far more probable that, having regard to the fact that certain general principles and certain details of hygiene or common-sense domestic management may be freely expounded without risk of misconception, they have allowed themselves to be announced as public instructors in medicine and surgery. Their distinct intention is doubtless to stop at the limit they assign themselves, but they forget to question whether this is also the design of the lay editors who solicit their literary assistance. Yet this matter is an all-important one, and there is no guarantee that they will be able to stop in their present course. There is also another consideration to which we wish to direct attention. It is this. The ground which is to be covered by the new teaching is no neglected field. It is already supervised by careful and competent visiting practitioners, not a few of them equally skilful in diagnosis and successful in the execution of practical detail. Is it wise to substitute for the care of these acute observers, working on the spot, the comparatively mechanical action of oracular dicta delivered through the popular press? We are certain that it is not, but that here we have a proceeding related, and not very remotely, to the practices of the nostrum system, and, like them, of more than doubtful advantage to the public. Let us, in conclusion, make one other suggestion, which, if it should wound, is not, we hope, too late to exercise a curative purpose. It appears to us that certain names, towards which we feel as medical men a brotherly attachment, have gained nothing, and have given nothing towards the honour of our common profession, by being found printed with ample fulness of description on broad sheets intended for universal distribution. Here, beyond question, we have advertisement on an extensive scale, and prejudice is evidently done to others equally qualified for public recognition, but deterred by a sense of justice and professional propriety from accepting it under these conditions. We cannot but think, however, that in many cases, where names and explanatory directions have been published with the same liberal disregard of professional usage, the practitioners have not been consulted in the matter.

In the foregoing remarks we have endeavoured to intimate what we conceive to be the true line of action to be adopted by medical men in the face of tendencies which, however permissible in commercial life, are incompatible with the safe and honourable conduct of medical practice. The temptation to fall in with such tendencies is, we grant, in the present age of fierce competition and general depression, considerable. We would strongly counsel, however, that

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the temptation should be resisted The reward of patience will be richer when it comes, and almost any reform in existing arrangements, with a view to affording a practical outlet for professional energies, would be preferable to a system of popular prescription which too often combines the chance treatment of disease with a form of open and precise advertisement.

IN the present day we have become so accustomed to rapidity of execution in most matters that we can well imagine that, owing to the delay in its publication, the report of the Cholera Commission sent to Spain two years ago by the Royal Society and the Association for the Advancement of Medicine by Research may be received with less interest perhaps than it merits. It is true that nearly a year ago the Commission made a preliminary report to the Royal Society, and the delay in the issue of the complete report, which appears as one of the pamphlets of the Association,[1] is explained by the desire of the members to incorporate the results of a subsequent inquiry on the subject, conducted by Dr. SHERRINGTON in Italy in 1886. As this addition makes an important correction in the general result, it is not altogether to be regretted that Drs. ROY, GRAHAM BROWN, and SHERRINGTON have taken time before submitting their conclusions to criticism. The general impression gained on reading the report is that it has been drawn up with candour and painstaking care, but that its results are disappointing, and, indeed, somewhat barren. It cannot be said to have advanced our knowledge of the pathology and etiology of cholera; but for all that it is worthy of careful attention, since it deals with the subject in a spirit of impartiality, which is too often absent in similar inquiries.

The report opens with a brief sketch of the researches upon micro-organisms and cholera, from KOCH'S discovery of the comma bacillus onwards, the support accorded that discovery by VAN ERMENGEN, NICATI, and RIETSCH, and the adverse conclusions of KLEIN and GIBBES. Whilst admitting the fact that the introduction of the comma bacilli into the intestine of guinea-pigs is to produce diarrhœa and often death, it is held that the disease so produced, which is accompanied by free development of the bacilli in the canal, is not identical with cholera; at the same time it is not septicæmia. This statement forms, as will be seen, the groundwork of the conclusion arrived at by the Commission with respect to the position of the comma bacillus in the disease. Before adverting to this it will be convenient to follow the investigations which were made by the Commission in Spain, whither it was sent to reconcile if possible the contradictory views put forward by KOCH and his followers on the one side and Drs. KLEIN and GIBBES on the other. Post-mortem examinations were made on twenty-five cases, at the shortest possible interval after death, and with all due precaution to avoid external contamination. Nothing of importance was added to our knowledge of the morbid anatomy and histology of the disease; although it is curious that whereas in Spain the intestines very rarely presented evidence of ulceration and catarrh, in Italy ulceration and sloughing were very frequently met with. The absence of signs of catarrh in most cases is adduced as evidence that this is not an essential part of the choleraic process; and further that the intestinal flux is not due to irritation of the mucous membrane, but to hyper-secretion similar to that produced in MOREAU'S experiment of section of the mesenteric nerves. Hence it is inferred that the cause of cholera, if an organised ferment, is more likely to be found in the mucosa itself or its nerves than in the intestinal contents. Naturally the greatest interest attaches to their researches upon the micro-organisms met with in this disease. Comma bacilli were found in the fluid and mucous flakes in all cases, with the exception of six or seven; and although it is possible that a more extended search would have revealed their presence in these cases, yet it is noticeable that in the majority these organisms were decidedly sparse, and certainly not in excess of other microbes. These other organisms included a small diplococcus of especially frequent occurrence, and "numberless varieties" of straight bacilli. Cultivations on the methods of KOCH also confirmed the fact of the scarcity of comma bacilli, which even KLEIN and GIBBES had found to be more constantly present than this Commission has. The same departure from KOCH'S results was obtained in their examination of the mucosa itself; for their "results confirm fully those of STRAUSS and KLEIN as to the absence of any comma bacilli in the mucosa of the lower or other parts of the small intestine in the great majority of cholera cases"; and no confirmation was obtained of KOCH'S statement of the number present in the mucous membrane bearing any definite relation to the acuteness or severity of the attack. It is plain, therefore, that, on the grounds adduced by KOCH, the Commission cannot accept his inference on the causal relation of the bacillus to cholera.

Another branch of this inquiry was with respect to the method of protective inoculation introduced by Dr. FERRAN of Valencia. Dr. FERRAN himself was not seen, but several specimens of his culture fluids, which had been sent by the Spanish Government to Aranjuez for the inoculation of soldiers, were examined for micro-organisms. They did not contain the peronospora-like bodies described by FERRAN, but were impure cultures of various forms of bacilli and micrococci. With admirable justice the reporters admit that these cultures may have been contaminated after leaving Dr. FERRAN'S hands, but it is quite evident that they are unable to rely upon the accuracy of his observations, whilst they do not hesitate to point out the risk of septicæmia to which those inoculated with these impure cultures were liable. As regards the other microbes discerned in cholera (the straight bacilli of EMMERICH and of KLEIN), the results of this inquiry are quite negative. EMMERICH'S bacillus was not discovered by following his methods, and it is concluded that it is a septicæmic form accidentally present in certain cases.

So far, then, the inquiry seemed to issue only in a failure to confirm previous observations; but the considerations above adduced upon the probable seat of the virus led the Committee to a diligent search for evidence of the presence of a micro-organism in the mucous membrane. Granules stained red by fuschin, like the nuclei cells, were observed in this tissue, but no significance was attached to them until they happened to be detected in the kidney of one case, in

[1] Kolckmann, price 6d.

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the lymph space outside the membrana propria of one of the tubuli contorti. The granules there seemed to be nodal swellings in a fine filamentous network or mycelium. By adopting other methods they went back upon their specimens, and eventually demonstrated the presence of this or some allied structure in every one of the twenty-five cases. That it could not have been introduced by accidental contamination after death was evident from the depth at which it occurred, and the fact that some of the examinations were made immediately after death; and the precautions adopted were such as to preclude such contamination. The first opinion as to the nature of this parasite—viz., that it belonged to the chytridiaceæ, which Mr. GARDNER had believed—has been modified by that gentleman, who now thinks that it is an involution form of some bacillus. But its precise significance remains in doubt. In not one of the specimens obtained in 1886 in Italy could it be found, so that those who may have thought that herein lay the cause of the disease are doomed to disappointment. Hence it is that the investigation has been comparatively barren; but, singular to state, it has not materially weakened the position of the comma bacillus. For in their "conclusion" the investigators state that not only is it a distinct species, but that it is distinctly related to cholera. (There is an unfortunate omission of the word "not" in a passage relating to this on p. 19.) For although their inquiry has led them to discard the idea that it is the direct cause of the disease, they cannot regard its presence as either harmless or accidental. They suggest that it does bear a causal relation to the premonitory diarrhœa, and is therefore an indirect cause of cholera, to which such diarrhœa disposes. Yet even this qualification is further qualified by an expression of regret that their inquiries in Spain "had not advanced sufficiently far to convince us that KOCH'S comma bacillus was not the direct and only cause of cholera," and that they therefore did not study the micro-organism of the dejecta from cases of premonitory diarrhœa.

THE benefits which have been conferred upon the English people during the fifty years the QUEEN has ruled over this country have been during the present year the subject of universal attention. The Empire has prospered and grown, the necessaries of life have been rendered more available for all, and there has been a steady advance in the social improvement of the people. Perhaps the public health administration, which has had its birth in this period, has been more instrumental in fostering this social improvement than any other power which has been in force. Work such as that undertaken by the late Lord SHAFTESBURY, and which aimed at the promotion of cleanliness of mind as well as of body, had its natural outcome in the scientific study of the means of preventing disease. The admirable address which Dr. THORNE THORNE, the newly elected President of the Epidemiological Society, delivered on the 2nd inst. places forcibly before the profession, and we hope before the public, the great gain that has accrued to the population from our better knowledge of the etiology of disease and of the requirements of life.

Dr. THORNE properly claimed for our system of registration of causes of mortality that it was the beginning of preventive medicine. Until it was possible to know with some precision the proportions in which the population died from different diseases, the effects of conditions inimical to life could not be appreciated. To the admirable development of that system at Somerset House, and to the accuracy of the reports which emanate from that department, we are indebted in no small degree for the progress of which Dr. THORNE was able to give account. It made possible to be known the duration of life in country districts and in large towns, and has given opportunity for the local circumstances which gave rise to an undue mortality to be accurately studied.

England may without boasting claim that she has taken the lead not only in gaining knowledge of the conditions which are concerned in the production of particular diseases but that she has also been first in modifying her laws and in creating a public health administration in response to this teaching. Dr. THORNE took as an illustration of the benefits which had been conferred on the community by these changes the reduction in the death-rates from certain special diseases. Fifty years' experience of small-pox had provided data by which the extent of the usefulness of vaccination might be better defined. The Vaccination Acts passed in Queen VICTORIA'S reign had led to a vast saving of life, and especially of child life, and these had especially protected those who are unable to guard their own interests. "Fever" had been found to consist of at least two different diseases—typhus and enteric fever; the former largely due to the crowding of people in houses and of houses on a site where air and light were shut out; the latter mainly due to excremental pollution. Each required its special means of prevention, and these had been applied with astonishing results. London had spent fourteen millions of pounds in the improvement of unhealthy areas, and among the results might be cited the almost complete disappearance of typhus from the metropolis. Enteric fever had enormously diminished, and this had been brought about through the adoption of methods which the new knowledge showed to be necessary. Further investigation had indicated the different channels by which disease could be disseminated; BALLARD and MICHAEL TAYLOR had demonstrated the part that milk could play in the diffusion of enteric and scarlet fever; POWER and KLEIN had shown how milk-scarlatina had its origin, and had proved the urgent need for human and veterinary medicine to work together for the saving of human life; BUCHANAN had taught that phthisis, the scourge of the British Isles, was chiefly dependent upon conditions of soil which could be removed. These are but a few examples of the additions to knowledge which the work of the last fifty years has produced. Not least in importance must be reckoned the development of a system of precise investigation, which will confer in the future even greater benefits than those experienced in the past, and to the perfecting of which the new President of the Epidemiological Society has conspicuously contributed.

Dr. THORNE, at the conclusion of his address, not unnaturally touched upon the complaint of some that the country is already over-populated, and that the saving of life which was being effected was already creating difficulties which must increase as time went on. To this he had a sufficient reply. Preventive medicine aimed not only at the reduction

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of death-rates, but at the diminution of disease; the result, he said, of applying its principles to public health operations had conduced to individual and national prosperity, to greater enjoyment of life, and to capacity for greater power for remunerative occupation. There is, indeed, no question that happiness is brought to the greater number by the diminution of disease and death; and it may be said of the Victorian era that in this period the work necessary to effect this object was first seriously undertaken by the State.

IT is not amiss at this early stage of the session of our various Medical Societies, metropolitan and provincial, to suggest one department of medical knowledge to which they do not make so many contributions as is desirable. The little attention that is given in our Societies to therapeutics, including the action of medicines, is remarkable, and is not a little to be regretted. For one thing, surgery has a large share of the time and attention of our Medical Societies. Dr. BURNEY YEO, at the last meeting of the Clinical Society, humorously complained that the great cavities of the body, in which the physician used to see a safe domain for the exercise of his art and the operation of his prescriptions, were being invaded one by one by the surgeon. The brain had gone over to his care, the thorax was not safe from his interference, and now even the abdomen was threatened with surgical procedures which would supersede and eclipse the more indirect and mysterious methods of the physician. There is a considerable amount of truth in this view. But the physicians are not so discredited after all. It is by their careful diagnosis and their discriminating pathology that cases are defined and the line of treatment is indicated. The surgeon in such cases is, as it were, the complement of the physician, who sees in aspiration or laparotomy a more ready way of removing the consequences of inflammation than by the old antiphlogistic and absorbent routine. But after allowing fully the brilliant part played by surgery even in the cure of internal diseases, hitherto left almost solely to physicians, it is surely true that physicians too readily abandon the Societies to the surgeons, and refrain with much modesty from discussions on the medical aspect of therapeutics. It is impossible to deny that therapeutics has undergone a very great development of late years. The action of drugs is better understood, and so is the action of foods. But if we look into the Transactions of our great Societies for any contribution on the action of medicines, we shall look almost in vain. Take, for example, the last admirable volume of the Clinical Society's Transactions: there is but one paper of a conspicuously therapeutical kind, and that is the work of a surgeon. Mr. TREVES describes a case of glandular disease in a patient over sixty. Numerous enlarged glands occupied both sides of the neck, from the jaw to the clavicle. Mr. TREVES might have taken his knife to remove them. But instead of taking his knife, like a surgeon, he took his pen, like a physician. He prescribed arsenic, and the tumours vanished. He was as confident that he had removed the disease with arsenic as if he had removed them surgically. His words were: "I think it would be safe, quite safe, to infer that the cure was entirely due to the arsenic"; and in support of his contention he adduces evidence of the curative effect of arsenic in certain malignant or quasi-malignant gland tumours from a striking paper by Dr. KOBEL of Tubingen. Of fifty-nine such cases, seventeen were cured. The action of the same drug has been the subject of a very suggestive communication to the same Society during the present session by Dr. HANDFORD of Nottingham. Dr. HANDFORD brings out strongly some effects, hitherto little regarded, to be obviated if possible, and which constitute a subject for careful and continuous consideration.

There is evidence, on all sides, of life and activity in therapeutics. Surely it should find more expression and discussion in our Medical Societies. So much is this defect felt in some quarters, that a new Society is being constituted, to devote itself solely to therapeutical questions. Would it not be much better to use the Societies at present existing, which abound in men rich in knowledge of the action of drugs? Some of us can remember that the Clinical Society, in particular, was started to be, above all things, therapeutical. Sir THOMAS WATSON emphasised the necessity for such a direction of its work in the Inaugural Address which adorns and initiates the Transactions. The Society has well justified its existence, but scarcely in this particular direction. It has not yet realised the mission prescribed for it by Sir THOMAS WATSON, "to bring up the therapeutic departmental of medicine to a nearer level with those other parts which are strictly ministerial and subservient to this." Surely every Medical Society should have a Therapeutical Committee, whose special function it should be to take note of the action and uses of medicines, and the forms in which their best effects might be attained and their deleterious action minimised. At any rate, such a function should be cultivated by a Society whose formation excited in the mind of Sir THOMAS WATSON a belief "that it will hereafter be spoken of as the starting-point of a vast and solid improvement in that which is our special office in the world—the scientific and intelligent exercise of the divine art of healing."

Annotations.

"Ne quid nimis."

THE ANNUAL MEETING AT THE ROYAL COLLEGE OF SURGEONS.

THE annual meeting of the Fellows and Members of the College on the 3rd inst., of which we give a report elsewhere in our issue, in years to come will be memorable on account of the unanimity which characterised the proceedings, and that, too, notwithstanding the presence of many independent Fellows and Members—that is to say, of Fellows and Members not affiliated with either of the Associations. Not a single voice was raised in defence of the *status quo*, behind which the present Council so stolidly shelter themselves. Another circumstance of considerable interest was the impatience manifested by the meeting during the speeches of one or two speakers who wandered from the subject matter of the meeting. On such occasions as the annual meetings it is quite impossible to discuss details. Broad and general principles only can be adequately advanced, and these must be placed in the hands of the ablest men that can be secured for the purpose. Nothing but harm can result from individual attempts to discuss large questions such as those now at issue. Those who would discuss these questions should join one or other of the

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Associations, and regularly take part in their meetings, which can be held as often as may be desirable, or until some general principle acceptable to a large majority has been established. This impatience was in marked contrast to the attention with which Mr. Holmes' incisive summing up of the questions at issue, and the conduct of the Council in ignoring all suggestions made to them from without, was listened to by the meeting. Almost by the time this comes to our readers the deputations from the Associations of Fellows and of Members will have been duly received by the Lord President of the Council, and we shall wait the result of these conferences with great interest. It is difficult to believe that the struggle can end otherwise than in a manner favourable to the Members. As Mr. Holmes said, it was neither just nor equitable that the 1000 Fellows should have no power in the College at all, except to vote for members of the Council, and that the 12,000 Members should have absolutely nothing to do with the College. The College exercised enormous influence, and was now possessed of very considerable riches. It was not just or proper that this influence and all these riches should remain under the sole control of twenty-four members of Council. Mr. Holmes' speech is worthy of very careful perusal; his arguments appear to us quite unanswerable, and we cannot doubt that they will receive every attention at the hands of the Lord President of the Council.

FEVER IN LONDON.

THE epidemic of scarlet fever in the metropolis shows a trifling decline, the number of cases admitted into the Metropolitan Asylums Board hospitals during the week ending Nov. 4th being 265, or 3 less than during the preceding week. The number of admissions also up to Wednesday last gives rise to the belief that this decrease may continue, since on Monday 46 cases were admitted, compared with 64 on the same day of the preceding week. There are, however, a greater total number of cases of fever in the hospitals than at any period of the epidemic, there being 2535 cases of scarlet fever, 127 of enteric fever, and 26 persons suffering from other febrile diseases. Two cases of small-pox were removed during last week to the hospitals from the districts of Rotherhithe and St. George's-in-the-East. This disease is, indeed, showing a tendency to spread which may well give rise to some anxiety. On Thursday of last week there were as many as ten patients suffering from small-pox under treatment in the hospital ships. During that week one death occurred from the same malady at Bristol, one at Birmingham, and nineteen at Sheffield, where there is a considerable epidemic. Small-pox is therefore showing some signs of becoming generally diffuse, and this occurring at the present period of the year makes it more probable that the extension will continue.

PHYSIOLOGICAL ACTION OF CHROMIUM.

DR. HEINRICH PANDER, of Dorpat, publishes an account of some researches he has made on the physiological action of chromium. The compound which he found to answer best was the double lactate of chromium and sodium. Chromic acid and its salts produced both acute and chronic symptoms, salts of chromic oxide causing only chronic or, at most, subacute forms of poisoning. The chromic acid compounds were found to be a hundred times more toxic than those of chromic oxide. The acute forms of poisoning show themselves by the disturbance of the respiration and of the central nervous system; chronic forms affect the skin and also the mucous membranes when air containing finely divided chromic oxide is allowed to come into contact with them. The heart's action was not directly affected by any of the preparations. The chief as well as the earliest morbid changes appeared in the kidneys under the form of parenchymatous nephritis, followed by the interstitial form; also in the gastro-intestinal tract, where inflammation, ecchymoses, and swollen follicles were found. There were also morbid appearances in the blood and the spleen. In chronic cases the spleen was shrunken and the hepatic parenchyma had a cloudy appearance. Chromium was found to be absorbed both when given hypodermically and also when administered by means of the gastro-intestinal tract, at least when soluble compounds were employed. Chromic acid preparations were absorbed with great rapidity, both by the skin and the stomach. When in very small quantities chromic acid and its salts were reduced to chromic oxide. The elimination of chromium took place mainly by the kidneys, but also to some extent by the liver and bowels. Death was caused in acute cases by arrest of respiration and disturbance of the central nervous system; in chronic cases by morbid changes in the blood, the kidneys, and the digestive tract. Dr. Pander was unable to find any indication as to the value of chromium as a therapeutic agent.

VICTORIA UNIVERSITY AND THE YORKSHIRE COLLEGE.

AT a meeting of the Court of the Victoria University on the 3rd inst., the application of the Yorkshire College, Leeds, to be admitted as a College of the University, was discussed on a report from the Council. For admission it is necessary that full provision for instruction in Arts, Science, and Medicine should be made to the satisfaction of the Court of the University, and as the curriculum of the Yorkshire College did not completely fulfil the requirements of the Council on the Arts side, Professor Adamson practically moved the rejection of the application. We are pleased, however, to say that broader and wider counsels prevailed, and, on an understanding that the curriculum in Arts would be extended, the application was accepted. The fusion of the three northern Colleges and Schools of Medicine into a Northern University is now complete, and the history and progress of the University since its foundation show clearly that nothing but good has resulted. A remarkable impetus has been given to the higher education in the north of England, and the anticipation of those who expected a downward rivalry in degrees from the "branding of its own herrings" by the new University has been completely falsified. We question if degrees are given on fairer terms or on a more honest and thorough curriculum than at the Victoria University. The combination of external examiners with the professors and teachers in the University has worked thoroughly well, and has led to no friction. The success of the Teaching University of the north of England is a good omen for those who urge the formation of institutions on the same lines for London and for the Midlands.

THE SANITARY CONDITION OF BETHNAL GREEN.

THE public inquiry into the sanitary condition of Bethnal Green, ordered by the Home Secretary, was continued this week by Mr. D. Cubitt Nichols and Mr. Shirley Murphy, the Commissioners appointed for this purpose. Evidence was given by Dr. Bate, the medical officer of health, by the surveyor, sanitary inspectors, and a member of the Sanitary Committee, as well as by Dr. Louis Parkes, who had been engaged in the inspection of the district on behalf of the Mansion House Council on the Dwellings of the People. The Commissioners have also visited many of the localities which were the subject of complaint, and are still continuing their inspections. Associated with them in these duties are two vestrymen, who have been appointed by the Vestry of Bethnal Green at the request of the Home Secretary.

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THE ROYAL BERKSHIRE HOSPITAL.

THE election of a physician to the Berkshire Hospital took place on Tuesday, Nov. 1st, in the presence of an unusually large assembly of the governors of the hospital, brought together by the interest excited in the election by the publicity given to it in our own columns and in those of the local press. It is the privilege of the medical and surgical staff of the hospital to select from among the various candidates and recommend the two most eligible to the governors. This accordingly was done. The two candidates selected were Dr. Burgess and Dr. Moody Ward. On the day of the election it transpired that Dr. Burgess had retired, and that Dr. Moody Ward was the only candidate remaining. It was, however, announced at the meeting that the medical staff did not consider him eligible. One of the governors, who is known to take a great interest in the hospital, proposed that the election should be postponed. It is difficult to reconcile the action of the medical staff in recommending Dr. Moody Ward as one of the two most eligible candidates, and, when his election was rendered inevitable by the retirement of the other candidate, in pronouncing him ineligible for the appointment. Their inconsistency was at once evident to the governors present. An amendment was proposed by one of the vice-presidents and seconded by another, that the meeting should proceed to the election of Dr. Moody Ward. The Secretary was directed to read this gentleman's testimonials, and his claims to the appointment were considered unimpeachable by a large majority of the governors. He was therefore elected in opposition to the recommendation of the medical staff, but, we believe, to the satisfaction of the large body of practitioners who interested themselves in the election.

THE FORGOTTEN WORTHIES OF MEDICINE.

A VOLUME might be devoted to this theme, and one of its most interesting chapters would be descriptive of the heroic life and death of Eusebio Valli. That gifted Tuscan physician, whose anticipations of Pasteur's prophylactic treatment of rabies have already been noticed in THE LANCET, met his death at Havana in circumstances which do honour to himself and to his calling. From his Oriental experience with the plague, he had convinced himself that inoculation might be extended to yellow fever—as, indeed, it has quite lately been by Dr. Freire at Rio de Janeiro. In 1815 he was acting as ordinary physician to the Military Hospital at Dijon in France, and, with the sanction and aid of King Louis XVIII., he set sail on December 14th of that year for America to put his theory to the proof. Arrived at Philadelphia, he had an interview with the celebrated Dr. Moore, who warned him against the attempt; but Valli made the characteristic reply: "Believing in the contagious character of yellow fever, I propose to inoculate myself with the perspiration of the moribund from that disease, and also with the bile taken from their dead bodies, modifying the poison with the selfsame reagents I employed in my experiments on the plague of the East. If it is inscribed in the Book of Fate that I am to fall a victim in this great ordeal, my death will not be without honour." In 1816 the yellow fever did not visit North America, so Valli set out for Havana in quest of patients suffering from the malady. He presented himself to the public health authorities of that city, and they so far approved his design as to nominate two physicians, Dr. Antonio Machado and Dr. Romay (who afterwards wrote his *éloge*), to be his assessors. On September 20th, 1816, he was conducted to the Hospital of St. John the Divine in Havana, and there he found a patient from yellow fever *in articulo mortis*. Valli watched the aspect of the sufferer—the black sanious blood oozing from his mouth and from other parts of his body; and, having felt his pulse, he withdrew. He returned next day to the bedside of the patient, now a corpse. Then, before proceeding to inoculate himself with the vomit and the bile, he put on the nightgown of the deceased, saturated as it was with perspiration, and rubbed it well over his back, breast, and abdomen. He had not long returned to his abode when the first symptoms of the peculiar malaise supervened. On the evening of the next day, September 21st, he sent for Dr. Romay, who found him pale as death, his strength gone, the life rapidly ebbing. He could pronounce only a few broken sentences, interrupted by long-drawn sighs. He said: "My fate is irrevocable; I am dying." Everything that his medical friends could do for him was done; but, after lingering in a comatose state till the third day from his seizure, he expired (September 24th). The Sociedad Económica of Havana, in grief and admiration for their guest, caused his portrait to be hung in the public library of the city, an honour up to that time accorded to but two members of the Society, and they also had inscribed on his tomb an epitaph, still read by the stranger in the cemetery of Havana, and of which the following is a translation:—"To God, the All-good and Almighty. Here lies Doctor Eusebio Valli, victim to his love for mankind; the Economic Society of Havana solicits for his memory the prayers of the pious. Anno Domini 1816." A descendant of Valli's, the Cavaliere Giuseppe Valli, advocate, has recently been at pains to collect all the papers and documents relating to his illustrious kinsman, and to weave them into a suitable memoir—mainly by the help of Spanish and other foreign coadjutors, his compatriots, by their neglect of the good and great physician's name and memory, having long incurred the reproach now launched at them by his latest biographer *Nemo propheta in patria sua!*

DISEASE IN PILLOW-STUFFING.

TRADE, we know, has always had its tricks, and with most of those who practise them it matters little whether they are or are not as harmless as they are profitable. If goods look well from the outside, and if they sell well, questions relating to their internal quality and their real value are too often settled by reference to that convenient rule of doubtful equity—*caveat emptor*. The principle of this adage was probably never quite a fair one. In all cases requiring technical knowledge, and their name is legion, it must allow the dealer a distinct advantage over the purchaser. We must remember also that the former may himself have been deceived. It is not he who is primarily responsible for the hidden faults of quality by which the most cautious buyer may be defrauded. It is the maker, who, with his eyes open, provides for a cheap market not only cheap and inferior but essentially bad material. Let us quote an example. A correspondent, whose letter we publish in another column, writes to expose the dangerous but common practice of stuffing pillows with rags and scraps of clothing of every variety and degree of dirtiness. He suggests with much force that some of those outbreaks of fever which arise from time to time in schools and families from no apparent source, domestic or external, may be traceable to this dishonest and filthy custom. The maxim wherein cheap and nasty are interchangeable terms, is fitly illustrated by our correspondent's description, and the remedy for the evil he denounces is largely in the hands of the public. In part, also, it is within the power of the sanitary authority. The agents of that body must, and constantly do, destroy what they can of unwholesome bedroom litter in houses where fever has been prevalent. If they will exert their discreetly unsparing zeal for cleanliness wherever, among rich or poor, the tradesman's heedless trick is planting the seeds of disease, we may expect to see some change for the better at least in one false custom of our time.

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PROGRESS OF THE METROPOLITAN OPEN SPACE MOVEMENT.

BELIEVING as we do that if London is to remain at all tolerable as a place to live in for four or five millions of people open spaces must be not only kept but created, we notice with great satisfaction the progress of the scheme for the extension of Hampstead Heath. The adjoining parishes of Hampstead and St. Pancras have given or promised £50,000; the Metropolitan Board of Works have voted £152,500; and £50,000 will be forthcoming from the City of London Parochial Charities Fund under special Parliamentary powers obtained last year. As the amount required for purchasing and laying out the 265 acres is £305,000, it is necessary that £52,500 shall be given by the public. Already half of this sum has been advanced. The inhabitants of Hampstead and Highgate have subscribed liberally. The Duke of Westminster and the Duke of Bedford give each £3000. The Baroness Burdett Coutts is one of eight donors of £1000. It is inconceivable that this great scheme should fail for want of £25,000 more. London must not be behind the provinces in such matters. Another space of thirty acres for the public has been saved at Kilburn. It has been presented by the Ecclesiastical Commissioners to the Corporation of the City of London to be maintained as a recreation ground for ever. So far so good. But can nothing be done by legislation to restrict the wholesale building of superfluous houses and the multiplication "of long unlovely streets" where fields at present contrive to preserve a precarious existence? Babylon, with little more than a fourth of the population of London, consisted of nine-tenths of fields, parks, orchards, and gardens. London is very much the reverse of this, and it is high time that some restriction was put on the merciless invasion by bricks and mortar.

DAIRY PRODUCE.

THE commanding importance of all questions relating to our food supply lends special interest to an able article upon Dairy Produce which appears in the current number of the *Quarterly Review*. The writer shows by the collation of statistics that the dairy farmers of the United Kingdom had, ten years ago, suffered themselves to be sadly surpassed by foreign competitors, and that even at the present time their enterprise leaves much to be desired. Within the last decade, however, it would seem that considerable leeway has been made up; yet the extent to which this important industry is neglected among us may be collected from the fact that the proportion of milch cows in the British Isles is one cow to 9·2 per head of population. The corresponding proportion is one to 2·2 per head of population in Denmark, one to 3·1 in Sweden, one to 4·3 in the United States, and one to 5·2 in France. In fact, Great Britain takes her rank among the very poorest nations in respect of dairy stock. It is not surprising to learn that an industry so much neglected is often conducted on very unscientific methods. The ill success of many dairy farmers is by the *Quarterly* reviewer attributed to their ignorance—ignorance respecting which he remarks that it is "of the worst possible form: the lack of knowing their ignorance. So," he continues, in pursuance of this theme, "they continue to make butter in dairies that are close to muckhills or pig's courts, or that contain meat and other things which contaminate milk." So much for the dairy process; but the milk before it reaches the dairy is sometimes subjected to treatment of which he gives the following vivid and horrible description: "We have seen milk set for cream in the living room of an Irish cabin, full of peat smoke (which makes butter bitter), and redolent of the odours of cows, pigs, and poultry kept in the place; and we have seen it set in the bedroom where a whole family slept; in some cases, indeed, the milk is set under the beds. It is impossible that even tolerable butter can be made under such conditions, and as the small farmers of Ireland are so hospitable that they will entertain their domestic animals in their dwellings, and will raise cream there too, even when they have separate buildings better suited for both purposes, the establishment of butter factories in that country is the most hopeful means of speedy improvement in butter-making." That such treatment should impair the market value of the products is not only easily intelligible, but also matter for sincere congratulation. The unwary consumer, who is liable in this way to share the perils of a squalid habitation, is in any case much to be pitied, and it is a matter of great moment to him that some substantial inducement should be held out to the producer to avoid such insanitary processes in his manipulation of an article of food. It is not alone in the direction of cleanliness that the dairy farmer is now exhorted to mend his ways. Much has been done of late to accelerate and improve the process of extracting the cream from the milk by means of a centrifugal separator. Upon the whole, the *Quarterly* reviewer makes it abundantly plain that there is great room for improvement in the processes of the manufacture of milk products, and we cordially join in wishing all success to institutions like the Glasnevin Agricultural Training Institution near Dublin, and the Munster Dairy School near Cork, which are doing something at least, and something considerable, as we are fain to believe, towards promoting a general advance in these directions.

THE LATE DR. BERNARD KRAUS.

IN the death of Dr. Bernard Kraus on the 28th ult., at the age of fifty-nine, an energetic worker has been removed from medical journalism. He was one of the founders, and has been throughout the editor, of our contemporary, the *Allgemeine Wiener Medizinische Zeitung*, which is now in its thirty-third year, and which has throughout been characterised by independence and enterprise. Amongst the distinctive features of this journal have been the reports which are given every week of the clinics of the leading physicians and surgeons in the General Hospital, and the very extended and accurate reports of medical associations and congresses, at which Dr. Kraus himself was a constant attendant. In them the late editor took a great interest, and one of his special claims to recollection is his elaborate report on the London Hygienic Exhibition of 1884, made at the request of the Commune of Vienna. He was also author of a work on Medicine, which attained two editions. His fatal illness was short and unexpected. Symptoms of intestinal obstruction had been complained of for about a fortnight, and colotomy had to be performed on Oct. 26th. The cause of the obstruction proved to be chronic peritonitis.

TUBERCULOSIS, HUMAN AND BOVINE.

DR. A. G. YOUNG, Secretary to the Board of Health for the State of Maine, has prepared a report which is of considerable importance, as summarising the information which is available as to bovine tuberculosis and its relation to tubercle in man. He regards the etiological unity of animal and human tuberculosis as established, and appears inclined to adopt the views of Johne, to the effect that we can no longer doubt the possibility of the transmission of tuberculosis from animals to man through the consumption of flesh and milk of animals thus diseased. This is a subject which calls for even more extended observation than it has received; but in the meantime it is at least advisable not to use, for human food, the products of animals suffering from tuberculosis.

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If there is substantial danger, it would appear to attach much more to milk than to the flesh of the implicated animals; for, though it cannot be asserted that the interior of ordinary joints is, during the process of cooking, raised to a temperature always sufficient to destroy the tubercle bacillus, yet the cooking of meat does tend materially to reduce the danger. If it were possible to induce people only to consume milk after it has been boiled or otherwise cooked, the danger with regard to that article of diet would be reduced to a minimum. Tuberculosis is by no means an uncommon disease in cows, and it has hitherto been felt that the condemnation of the meat of such animals must, in the interests of cheap food supplies, be limited to those instances where the disease is extensive in amount or in an advanced stage. With regard to milk, we must largely trust to the inspection of cowhouses and dairies, which has now been inaugurated in this country, and which will, we hope, before long, eliminate from amongst those cows which supply milk for human consumption any that are obviously suffering from tuberculosis.

LARGE LEGACIES TO HOSPITALS.

IT is gratifying to see indications that munificent charity is not dead yet, and that out of the heaps of money which accrue to some men, and which seem only fit for generous distribution in favour of less fortunate classes, splendid donations arise. We congratulate St. George's on being the object of such a well-deserved legacy—£100,000—the third of the sort, making it now one of our well-to-do hospitals, though still not independent of annual subscriptions to the amount of several thousand pounds. Let us hope that the turn of the other hospitals will come soon. Our great hospital system presupposes men like Guy, and cannot be maintained with petty subscriptions. One of our contemporaries takes the occasion of this legacy to indulge in some criticism of the expenses in wages and salaries in St. George's Hospital, and asks if £7440 is not a large sum to pay in wages and salaries for "so small a hospital." The criticism will no doubt be considered by the authorities of the hospital. Meantime, it is only fair to say that St. George's is not a small hospital; but that on the Hospital Sunday list it comes next in number of beds to St. Thomas's, and that it compares favourably even with the London Hospital in the cost of mere management.

ANTIPYRIN IN SEA-SICKNESS.

OUR Paris correspondent writes:—"The Société de Biologie has devoted part of its last two sittings to the discussion of the different means recommended for the relief of sea-sickness. A note was presented by M. Hantz on the best way of administering cocaine, and received without any expression of opinion. M. Dupuy said that sea-sickness was more severely experienced by dyspeptic subjects, and particularly those who had dilatation of the stomach. In eleven cases he had given antipyrin in doses of from two to three grammes for a few days before embarking, and the patients had all informed him that they had been free from sickness. M. Dastre said he had instituted a series of experiments upon animals, imitating as closely as possible the movements of 'pitching' and 'rolling.' He had found that there was an incredible displacement of the abdominal viscera, which strike against the diaphragm and cause the gastric uneasiness. The body struggles with these displacements by means of muscular contractions, and the respiratory rhythm accommodates itself to them. Professor Brown-Séquard remarked that this theory of visceral displacement was very old, and one which he had been able to verify in his frequent passages across the Atlantic. It was evidently the view entertained by Wollaston, who recommended Arago to place a pad over his stomach when he crossed the Channel. M. Maurel had no doubt as to the influence of the stomach, but thought the cerebral shock also played a part in the determination of the symptoms, inasmuch as the sickness always occurs when the boat is going down, never when it is being lifted up. The best preventive was lying on the back. Beyond the statement that sea-sickness is associated with dilatation of the stomach, and the hope held out by M. Dupuy that in antipyrin we now possess a remedy for it, there was nothing new in the views expressed by the different speakers. I have referred, however, at some length to the subject, because my own seafaring experience has been somewhat extensive, extending over intervals during the last fifteen years, and including some kind of trial of every new drug recommended. Until a month ago the plan I always recommended was to take bromide for some days before going on board, and, if discomfort was felt notwithstanding, the dorsal decubitus was to be adopted. This, together with champagne, is generally what the Transatlantic captains advise. In a recent trip to New York I tried two other remedies. The surgeon of the ship recommended me tincture of capsicum, and I had also taken a supply of antipyrin. As far as one case goes, the result of the antipyrin was most satisfactory, and I can to this extent endorse the experience of M. Dupuy. The capsicum was also serviceable as a palliative, for several persons who had taken it continued to ask for it, but it did not arrest the sickness like antipyrin. A fellow passenger who suffered from dilatation of the stomach with *clapotement* was not sick at all."

PUBLIC HEALTH IN VICTORIA.

FROM the annual report recently issued by the Central Board of Health of Victoria, it is evident that useful work is in progress for the promotion of public health in the colony. The township of Elmore is especially referred to as needing active supervision; it is said to be in a discreditable state, and to favour the spread of such diseases as enteric fever. When this is the case as regards any town, it is quite evident that there is fault somewhere; for the conditions favouring that disease are, above all others, essentially removable. First it is the duty of the sanitary officials to point out where the mischief lies, and to indicate the remedies needed, and then the authority themselves have responsibility for acting. Action is about to be taken to secure proper control of dairies and slaughtering places, and an effort to deal with the failure which has heretofore taken place is to be made by the issue of stringent instructions for the local officials. Some of the health officers are at present miserably remunerated, and those who are responsible for this must also in large measure be held responsible for the unhealthiness and death which result from a failure to secure proper supervision of the conditions under which the people live; for it is well known in every branch of life that the amount of work which can properly be expected of a paid official is indicated by the remuneration attached to his office.

EFFECT OF FARADISATION ON URINARY NITROGEN.

DR. P. A. VALTER has experimented on three patients suffering from chronic hepatic disease by faradising the skin over the region of the liver twice a day for some days, and estimating the urea and other nitrogenous compounds excreted in the urine before and during the faradisation, the diet being alike all through the observations. The conclusion he arrived at was that faradisation has some trifling effect on the excretion of nitrogenous matter by the kidneys, this being slightly increased.

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THE MIDDLESEX AND HERTS COMBINED SANITARY DISTRICTS.

THE difficulties of medical officers of health are well illustrated by the event which has followed a recent action of the Barnet Rural Sanitary Authority. This board, anticipating some alteration in their district, determined to reappoint Dr. C. E. Saunders as medical officer of health for one year instead of for three years, as determined upon in the other districts of the combination. The Local Government Board, having endeavoured to induce the Barnet authority to reconsider this decision, finally assented, but thereupon informed the other authorities that they must separately appoint Dr. Saunders, there being no provision in the order for the continuance of the combination hitherto existing after the secession of one of the authorities named therein, and because much delay would occur before the necessary steps could be taken for the constitution of a fresh combination. It is a distinct misfortune that this combination has ceased to exist, and it certainly is very much to be regretted that the nature of the order should require this step to be taken. Dr. Saunders has rendered considerable service to the combined district, and the public would be sufferers if any circumstance should tend to break his continuity of office. As a matter of fact, he has, we believe, been re-elected for each district separately, but events such as this have a disturbing influence, and are calculated to depreciate the public health service in the opinion of the profession. The duties and responsibilities of a medical officer of health are sufficiently onerous without his being subjected to vexations of this kind.

PREVENTION OF INFECTIOUS DISEASE.

A CORRESPONDENT, writing to one of our daily contemporaries, states that he has often seen clothing destined for the use of Government servants and for those in Her Majesty's naval and military services being prepared in the same room where lay a child stricken with scarlet fever, and on one occasion he found thousands of circulars being folded by the desquamating hands of a child who had suffered from that complaint. He calls attention to the work of the Westminster Sanitary Aid Association, where a few ladies have arranged to send a "visiting woman" to all cases of scarlet fever notified to them by medical men, and he speaks of the success which has attended these efforts in inducing parents to send their children to hospital. Where due discretion is used, this method is calculated to prove of great value in checking the spread of contagious disease, and might well be adopted in other districts.

ASSURANCE FRAUDS.

THE recent disclosures in connexion with various assurance frauds are rather disquieting, since they show the comparative ease with which certain needy members of the medical profession may be induced to take an active share in a dishonest proceeding. The now famous Von Scheurer fraud would have been an impossibility but for the active co-operation of a French medical man, who supplied, at the moment when he was wanted, a patient dying of consumption, who could be taken charge of and buried under the name of Von Scheurer. Of the unsavoury ramifications of the case it is needless to speak; they belong rather to courts of law than to us; but we cannot pass over in silence a case which so strongly affects professional credit for truth and honesty of purpose. Assurance companies repose great confidence in the skill and probity of medical men; they are consulted as to the value of the risk incurred in each individual case, and their reports are justly considered as being confidential and faithful records of the results of their observations. They are appealed to once more when a claim is made, and again, by simple statement of fact, they give information which ordinarily tends only to the confirmation of the validity of the claim, but now and then they may give some unconscious word of warning which helps to detect an attempted fraud. The value of the information thus given, and its importance to the companies by whom medical referees are employed, should render them doubly jealous of any act which must tend to shake the feeling of unquestioning confidence hitherto reposed in them. In every calling there are unworthy members, but their proceedings, such as those recently brought prominently before the public in these assurance frauds, while they call for condemnation from all honest men, must rouse the strongest indignation in those whose good name is likely to be affected by the dishonesty of members of their own profession.

THE NATURE OF TETANUS.

DR. SHAKESPEARE, pathologist to the Philadelphia Hospital, read a paper upon Tetanus before the Section of Pathology at the International Congress, in which he related a series of experiments consisting in inoculations of rabbits with material obtained from the medulla and spinal cord of a horse or a mule which had died of traumatic tetanus. The inoculations were based on the methods adopted by Pasteur in rabies, and included injections beneath the cerebral dura mater, as well as subcutaneous and intermuscular injections. He concluded from these researches that traumatic tetanus of the horse and mule is sometimes, if not always, an infectious disease, transmissible to other animals, and therefore possibly to man; and that the virus, elaborated and multiplied during the progress of the disease, is capable of reproducing the disease in other animals by inoculation beneath the dura mater. The virus is contained in the medulla and spinal marrow, and, like that of rabies, is capable of attenuation by exposure to dry air at a temperature of summer heat. It also resembles the rabic virus in producing more intense effects when inserted beneath the cerebral dura mater than when injected subcutaneously or between muscles. Dr. Shakespeare reserved conclusions as to the prophylactic effect of inoculations of the attenuated virus, and pointed out that his results, in connexion with those of Nicolayer, Rosenbach, and others, suggested forcibly the dependence of traumatic tetanus, both in animals and man, upon the action of a specific infectious virus, and the probability that man may acquire the disease from animals—notably the horse.

CHOLERA IN SOUTHERN EUROPE.

IT is now some time since regular returns were received as to cholera either in Sicily or in Malta. As regards Messina, there was still a daily cholera mortality up to the close of the first week of October, fifty-five deaths occurring during the week, but only five of them took place during the last two days of that period; and since then no news has been received. It may therefore be hoped that the epidemic as such is at an end, and that the authorities will utilise the coming winter in taking such action as shall be necessary to prevent any recurrence of cholera next summer. As regards Malta, no daily bulletin has now been issued for over a month; but this does not mean that the epidemic has ceased, for during several of the past four weeks the weekly record of deaths has reached, or even exceeded, a total of forty. But during the last fortnight a distinct diminution in the number of fatal attacks set in, and it is sincerely to be hoped that those who are responsible for the sanitary administration of the island will find themselves soon free to decide whether they had better devote their

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energies to the development of a quarantine system which has utterly failed them during the past year, or whether they should not consent to learn, as the result of experience derived from the differing incidence of the disease on their healthy and unhealthy areas, that the surest method of prevention is not to close their doors against that which can certainly make its way through, but rather so to improve the sanitary state of the island that any imported infection will fail to find in their midst such filth conditions as are essential to its development and spread.

BIOLOGICAL WORK OF THE SCOTTISH MARINE STATION.

THE fourth part of the Journal of the Scottish Meteorological Society contains a paper by J. T. Cunningham, giving an account of the work done during the past three years in the Scottish Marine Station. A portion of this work was done in the Firth of Clyde, in the vessel appropriately named the *Ark*, and part in the *Medusa*, at Granton, Millport, and elsewhere. The results are highly satisfactory. Mr. Henderson has discovered forty-four new invertebrates not previously known to occur in the Firth of Forth, and one which had not previously been found in British waters. Mr. Henderson also, in conjunction with the Rev. Canon Norman and Mr. John Murray, issued a list of the Decapodous and Schizopodous Crustacea. Mr. Cunningham himself has paid much attention to the anatomy and histology of the Chætopoda, and also to the reproduction and development of the fishes of the Firth of Forth, especially of the hag-fish. He has likewise obtained and published much information of a practical kind concerning the herring fishery, and made experiments on the spatting of oysters. Researches in marine botany have been carried on at Granton by Mr. John Rattray. A list of the papers published is given. Altogether, the results of the three years' work have been very satisfactory indeed. Many naturalists have availed themselves of the opportunities here afforded them for original work for periods of varying duration.

THE SPREAD OF LEPROSY.

THE question raised by Archdeacon Wright in the columns of *The Times* of Monday last is one of considerable importance, and quite worthy of the attention which our contemporary bestowed upon it. At the same time it may be hoped that it will not lead to any attempts at legislation by panic. To the question, Is leprosy increasing in this country? no doubt an affirmative reply would be the correct one. But that such an increase depended on contagion could not be answered in so positive a manner. For it is now fairly well established that as regards contagiousness leprosy stands in the category of such diseases as syphilis and tuberculosis, which are transmissible for the most part only by inoculation. The apparent increase of leprosy in modern Europe is not due to contagion, but to the vastly improved facilities of human intercourse with foreign countries. For, apart from a few cases of the inherited disease, leprosy, in this country at least, is only met with amongst those who have contracted it in centres where it is indigenous. The recent reply of the College of Physicians to the Colonial Office indicated to what extent the State might legitimately interfere in infected districts; and the suggestion of the College that leper asylums might well be founded and maintained by the State meets the case of our colonies. The further suggestion made in *The Times* as to registration is one which cannot be carried out until notification of infectious disease is made compulsory, however desirable it may be in theory. We would, however, emphasise the importance of further investigation into the nature of the disease as a duty devolving upon the Government of an empire which contains so many subjects who are afflicted with it; and in this, unfortunately, England does not appear to advantage in comparison with Norway. Perhaps now that public attention has been called to the matter, the Government will once more seek the aid of the College of Physicians to carry out such an investigation.

HEALTH OF THE CROWN PRINCE.

WE learn by telegram from San Remo that H.I.H. the Crown Prince was progressing satisfactorily until a few days ago, when a new growth was observed lower down in the throat. This growth, we are informed, looks malignant, but of course it may only be inflammatory. A portion of it will probably be removed and sent to Professor Virchow for examination. A later telegram announces that, owing to slight œdema of the orifice of the larynx, no laryngoscopic operation can be undertaken at present.

ORGANISED INQUIRY CONCERNING ILLICIT PRACTICE IN BELGIUM.

THE Belgian Medical Federation decided at its recent annual meeting to endeavour to obtain as much information as possible concerning infractions of the laws protecting medical men by illegal practice, whether by pharmacists or by other unqualified persons. The inquiry, which it is proposed to extend over a couple of years, is to be entrusted to the various local medical associations. These will doubtless accumulate an immense mass of documentary matter, which will be submitted to a central committee for examination and analysis. When this committee has achieved its task, it is hoped that so strong a case may be made out for more stringent legislation that the Chambers will accede to the almost universal demand amongst medical practitioners for more adequate legislative protection. It was pointed out during the discussion at the meeting of the Federation that great care would have to be exercised in dealing with the information obtained so as to avoid publishing the names of informants. The Antwerp Medical Society has, it seems, got itself into considerable trouble through taking up a case of illicit practice, of which information had been given by a person who thought it his duty to bring the circumstances before the Society, but who by no means relished seeing his name brought into a controversy which was subsequently carried on in the political newspapers on the subject, comments being, of course, made which were anything but complimentary to him. Medical men will, of course, refuse information to the associations unless they have a guarantee that this kind of thing is out of the question and that their communications will be treated as confidential. An amusing instance of evasion of the medical laws was cited by M. Kops, where a gentleman who took to doctoring people asked for no money payment, but requested a licence to shoot over his patient's estate!

GERMAN ENTRANCE EXAMINATION FOR MEDICAL STUDENTS.

AN important alteration is proposed in Berlin regarding the qualification for admission to the University of medical students. Hitherto all have had to pass the *abiturienten* or maturity examination at a *Gymnasium* or classical school, so that every German medical student has been obliged to prove an acquaintance with Greek. Now, however, the authorities have decided to admit after Easter, 1888, students who have passed the final or *abiturienten* examination in the *Real-Gymnasia* or non-classical schools. In these, Latin is of course taught, but not Greek. They correspond, in fact, to the "modern" or "civil and military" departments of our own public schools.

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TREATMENT OF GLAUCOMA IN SPAIN.

DR. OSIO, the eminent Madrid ophthalmic surgeon, communicates to the leading Spanish medical journal an article on glaucoma, in which he urges his medical brethren most forcibly to pay sufficient attention to eye diseases so as to diagnose this formidable malady, which is, he says, "mathematically curable" by operation if taken in time. He draws a graphic but mournful picture of a patient, in whom this affection has commenced, applying to a practitioner, who orders leeches, and then, when the severe pains come on, gives hypodermic injections of morphia and prescribes the inevitable bromide of potassium, and, above all, unconscious of or indifferent to the universally admitted fact that atropine favours the development of glaucoma, instils drops of liquor atropiæ. Besides all this, perhaps he tries insufflations of calomel and drops of nitrate of silver or borate of soda. It is a wonder, Dr. Osio thinks, that eyes treated thus do not burst.

THE ANATOMICAL SOCIETY.

AT the next meeting, to be held on Tuesday, Nov. 22nd, at University College, at 5 P.M., the following papers are to be read:—Sir William Turner, (1) "Variations in the Hippocampus Major and Eminentia Collateralis," by Robert Howden, and (2) "A Metallic Body in the Spinal Canal," by David Hepburn. (3) "Minute Anatomy of Clarke's Column in the Spinal Cord of Man, the Monkey, and the Dog," by Dr. Mott. (4) "The Arteries at the Base of the Brain," by Professor Bertram C. A. Windle. (5) "Note on the Functions of the Sinuses of Valsalva and Auricular Appendices, with some remarks on the Mechanism of the Heart and Pulse," by Mayo Collier. Various specimens and methods will also be shown and demonstrated. This youthful Society gives promise of a useful and vigorous career.

TUBERCULAR ULCERATION OF THE TONGUE.

DR. L. V. ORLOFF, of the Princess Helena Pavlovna Clinical Institute, gives an account in a St. Petersburg medical journal of a case of tubercular ulceration of the tongue, the nature of which, though there were slight signs of pulmonary phthisis, was definitely decided by microscopical and bacteriological examination. The importance of this latter means of diagnosis is pointed out by Dr. Orloff. Tubercular ulceration of the tongue, when primary, as it sometimes is, might in this way, if diagnosed and treated, perhaps be prevented from being followed up by the pulmonary affection. Some experiments were made in order to test the possibility of direct communicability by inoculation of rabbits' tongues with the secretion from the ulcer, but only negative results were obtained.

FOREIGN UNIVERSITY INTELLIGENCE.

Bologna.—Dr. Pietro Albertoni, Professor of Materia Medica in Parma, has been appointed to the Professorship of Physiology.

Göttingen.—Professor H. Schwartz, Director of the Obstetric Clinic, has announced his intention of retiring at the end of the winter session.

Messina.—Dr. Francisco Coppola has been appointed Professor Extraordinary of Materia Medica.

Naples.—Dr. Luciano Armani, Extraordinary Professor of Pathological Histology, has been promoted to the rank of Professor.

Prague (German University).—Dr. Siegmund Mayer has been raised to the rank of Professor of Histology.

Santiago (Chili).—Dr. Landwehr, Assistant in the Physiological Institute (Department of Medical Chemistry), Würzburg, has been appointed to the Professorship of Physiology.

SPEAKING at Portsmouth, on the 3rd inst., on the abolition of the Contagious Diseases Acts, Sir George Willes, Commander-in-Chief at that port, stated that a disgraceful condition of things had been the result of the abolition. It was, he remarked, no use to hope to get the Acts passed again; but matters would get worse and worse, so that it was frightful to contemplate what the condition of things would be ten years hence.

THE *Gazette* of Tuesday announces that the Queen has been pleased by warrant under Her Majesty's Royal sign manual, to reappoint Sir Thomas Jamieson Boyd, Knight, to be Chairman of the Fishery Board for Scotland; and James Cæsar Ewart, M.D., Regius Professor of Natural History in the University of Edinburgh, to be a member of the said Board.

DEPUTATIONS from the Association of Fellows and the Association of Members of the Royal College of Surgeons will to-day (Friday) be received by the Lord President of the Council, and will lay before him their reasons for opposing the Supplemental Charter sought by the Council of the College.

WE beg to direct the attention of our readers to the exhibitions at Epsom College to be competed for next month. The successful candidates, who must be the sons of medical men, receive board and a first-class education for thirty guineas a year. Any detailed information will be given by the Rev. the Master, The College, Epsom.

THERE is no diminution in the epidemic of measles at Derby, and the sanitary authority have issued circulars to the medical men practising in the town to report cases coming under their notice, in compliance with the local Act for the Compulsory Notification of Infectious Diseases.

THE Corporation of London on Tuesday decided upon giving such Parliamentary notices as will enable the Fire Inquest Bill to be extended to the whole of the metropolis if necessary.

BY the initiative of some of the senior students, a society has been instituted at the University of Aberdeen under the title of the Students' Medical Association.

AMONG the recent promotions to the rank of Chevalier of the Order of Leopold is that of the able editor of our Belgian contemporary, *Le Scalpel*, Dr. A. Festiaerts.

THE Morton Lecture is to be delivered by Sir James Paget, Bart., F.R.S., at the Royal College of Surgeons, at 3 P.M. to-day (Friday).

MR. JAMES TEEVAN, F.R.C.S., who ten years ago was a well-known West-end surgeon, died last week at Bath.

QUEEN'S COLLEGE, BELFAST.—The following are the Scholarships in Medicine for 1887-88:—Anatomy and Physiology: J. M. Hall. Therapeutics and Pathology: R. W. Haslett, B.A.; Robert Wilson, a prize. Third Year Medicine: James M'Connell, B.A. Second Year Medicine: H. T. Heron, B.A.; J. A. Browne, B.A.; J. S. Morrow, B.A., a prize. First Year Medicine: Robert Montgomery, literary; T. B. Pedlow, B.A., science. Dunville Studentship: J. M. Hall; H. L. Atkinson, B.A., a prize. Andrews Studentship: Alexander Jamison, B.A.; C. E. Shaw, M.A., M.D., a prize; J. S. B. Larmour, B.A., a prize. Porter Scholarship: W. W. Haslett; J. A. Stewart, a prize. Sullivan Scholarship: James Robinson. Sir Hercules Pakenham Scholarship: J. C. Rowan.

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SCOTCH INTRODUCTORY LECTURES.

UNIVERSITY OF GLASGOW.

THE winter session of the medical department of the University of Glasgow was opened on the 25th ult. The introductory address was delivered by Professor P. A. SIMPSON, who, after a brief glance at the changes that have occurred in the University since 1874, when he last addressed some words of welcome and encouragement to the students at the commencement of a winter session, proceeded to discuss at length the subject of the various channels which are open to medical graduates when they leave their university. With regard to emoluments, their profession was not, he said, one in which the realisation of a fortune was to be looked for. A fair competency was all that could be expected. The prize to be won in the medical calling did not consist of bank-notes, but in the inward satisfaction of having to some extent contributed to the extension of medical knowledge, as well as to the alleviation of human suffering. The navy offered for a young medical practitioner a career which befitted an educated gentleman. Prof. Simpson then strongly deprecated the abolition of "relative rank" in the Army Medical Staff, and advised his hearers not at present to join that branch of the services. Dealing with the question of the proportion of medical men to the population, he dwelt upon the large increase that had taken place in the number of practitioners in this country in recent years, and suggested the colonies as offering to the young medical graduate in quest of a suitable locality for his future home a sphere of usefulness much larger than was at the present time to be found at home. He was very far from being in favour of a medical career for women, holding as he did that by frame, temperament, and mental constitution woman was not well adapted for medical, far less for surgical practice; but he did not think that the members of their profession should do more than exercise a private influence against the destination of young women to the medical profession. Medical practitioners had ample opportunities of supplying information concerning the nature of a medical student's career, the difficulties and dangers of the profession, and so of tempering this unfortunate enthusiasm. But it was never, he thought, the office of their profession to lead the van of any crusade against the admission of women into their ranks. Such opposition was sure to be decried as akin to trades unionism, and it was difficult to refute the charge, however untrue. They might honestly say that the opposition of their profession to the admission of women was disinterested, and was solely to prevent injudicious women from embarking on a course which must prove injurious to them. As to the wisdom or folly of women adopting medicine as a profession, let women themselves be the judges. So long as they contented themselves with schools of their own, and desisted from clamouring for that abomination—viz., mixed classes,—they had no ground for complaint, but should rather wish them god-speed.

ANDERSON'S COLLEGE.

DR. EBEN. DUNCAN, in his address, referred to the subject of the affiliation of the medical schools of the city, and said he saw no difficulty in devising a scheme which would safeguard the interests of the present professors of the University. Anderson's College would soon have new premises, and what could be more to the advantage of medical teaching, and tend more to the advancement of University interest, than the inclusion of Anderson's College as a college of the University and the recognition of its teachers as the professors? When they had the Royal Infirmary Medical School, a younger school with the great advantage of proximity to a great hospital, also quite willing to lend a helping hand, why should the University, admittedly short-handed in teaching powers and in class-rooms, refuse the assistance which the governors of that school were now offering? He had heard only one reason against it, and that reason was that the present University professors, with their endowments, their splended buildings, and the prestige of their positions, were afraid to be exposed to the chances of teaching with younger men, who would have nothing to attract but the energy and the ability with which they conducted their classes. For that reason, it was said, the professors would strenuously oppose any reform. But, in answer to any such opposition, might it not be justly argued that if, in spite of all the advantages which the senior professors in the College at Gilmore-hill would continue to possess, even after the affiliation of both Anderson's College and the Royal Infirmary School of Medicine, they could not retain their students, then it was certainly highly in the interest of the students and in that of the public that they should lose them. The only interest which the public or the Government could legitimately have was that the student and the University should get the benefit of the best brains of the best teachers. If they could induce the Government to combine the medical schools of Glasgow into an individual teaching faculty of medicine, with their advantages they should be able to place Glasgow in the foremost place, and not only maintain but increase the reputation of their country as a great seminary of medical science.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.

DR. NEWMAN, who delivered the introductory address at this institution, took as his subject the correlation of medical studies, especially in their relation to scientific study. The mutual relationship, he said, which existed between the different branches of medical education were very apt to be lost sight of, partly on account of the arrangement of the curriculum of the students. Their general education and part of their scientific education were separated from their medical studies by the artificial barrier of an examination. So also were their elementary studies, as distinguished from the more advanced. It was common, he said, in addresses such as that which he was offering to speak of medical science, but he wished to state that medicine was not a science. If placed among the sciences it would be among the very lowest, whereas among the arts it occupied a high position indeed. If they studied, and imagined that by doing so they were scientific men, they were greatly mistaken. Medicine was far too incomplete. There were no great laws which could apply to it. It occupied, to his mind, very much the same position that the chemistry of the alchemists did. It was destined, no doubt, at some time to occupy a place amongst the sciences, but at present it was in an undeveloped and embryonic state. But medicine rested upon a number of very important sciences, and it was apt, because these sciences assisted it, to be called itself a science. The great advantage that a student had from a scientific training was that, before he entered the medical profession, not only was he taught the effects of science, but he also learned the scientific method. In his study of medicine the student was to apply this method, and by so doing to endeavour to elevate his art into the position of a science. In closing, he asked the students to remember that whatever was a real advantage to themselves was a direct advantage to some of their fellow-men. On this point the medical profession might be said to differ from all other professions. The amount of true success depended on the motives with which they entered. To those who adopted medicine as a trade—and it was the lowest of trades, for it trafficked on the ills of their fellow-men—it was neither satisfactory nor remunerative, although it might elevate them from a position of obscurity, and afford an opportunity of being associated with gentlemen. To those who entered it to study an interesting branch of human knowledge it opened a wide field for scientific inquiry. To those who pursued it with a desire to advance the healing art by exact and scientific methods, inspired with a desire to alleviate the sufferings of their fellow-men, it was a noble profession, and deserved well of all, since it was intended for the indiscriminate benefit of all.

PARKES MUSEUM.—The Right Hon. the Earl of Meath has consented to give the opening lecture of the forthcoming winter session at the Parkes Museum, Margaret-street, Regent-street, W., on Nov. 17th, at 5 P.M. His lordship has chosen for his subject "The Importance of Open Spaces." The winter programme of lectures is unusually full, and bids fair to be most attractive. Amongst the lectures we notice one by the chairman on "Smoke and Fog"; by Dr. Frank Payne on "Plagues, Ancient and Modern"; by Prof. E. M. Crookshank on "The Germ Theory"; and one by Mr. A. S. Murray on "The Physical Training of the Greeks and Romans."

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5713 births and 3800 deaths were registered during the week ending November 5th. The annual rate of mortality in these towns, which had steadily increased in the preceding six weeks from 16·2 to 21·5, was last week 21·4. During the first five weeks of the current quarter the death-rate in these towns averaged 19·6 per 1000, and was 0·9 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 12·7 in Hull, 13·2 in Brighton, 14·9 in Leicester, and 16·2 in Huddersfield. The rates in the other towns ranged upwards to 27·6 in Oldham, 29·1 in Preston, 30·7 in Bolton, and 31·0 in Halifax. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 392 and 464 in the preceding two weeks, further rose last week to 466; they included 144 from scarlet fever, 77 from diarrhœa, 75 from measles, 60 from whooping-cough, 57 from "fever" (principally enteric), 32 from diphtheria, and 21 from small-pox. These zymotic diseases caused the lowest death-rates last week in Leicester, Hull, and Huddersfield; and the highest rates in Bolton, Preston, Oldham, and Sheffield. The greatest mortality from scarlet fever occurred in Norwich, Blackburn, Oldham, Birkenhead, Salford, and Preston; from measles in Birmingham, Blackburn, Bradford, Bolton, and Derby; and from "fever" in Derby and Sunderland. The 32 deaths from diphtheria in the twenty-eight towns included 19 in London and 3 in Manchester. Small-pox caused 21 deaths in Sheffield, but not one in London or any of the twenty-six other large provincial towns; the 13 cases of small-pox under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease showed a further slight increase upon recent weekly numbers. The number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 2692 at the end of the week. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding four weeks from 206 to 485, further rose last week to 506, and exceeded the corrected average by 115. The causes of 74, or 2·0 per cent., of the 3800 deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, Sunderland, Preston, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Oldham, Leicester, Huddersfield, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·1 and 22·2 per 1000 in the preceding two weeks, declined again to 20·6 in the week ending Nov. 5th; this rate was 0·8 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 15·1 and 16·1 in Leith and Edinburgh, to 24·0 in Dundee, 25·9 in Perth, and 29·1 in Paisley. The 515 deaths in the eight towns last week showed a decline of 39 from the number returned in the preceding week, and included 26 which were referred to whooping-cough, 14 to scarlet fever, 8 to diarrhœa, 6 to "fever" (typhus, enteric, or simple), 6 to diphtheria, 6 to measles, and not one to small-pox; in all, 66 deaths resulted from these principal zymotic diseases, against 68 and 70 in the preceding two weeks. These 66 deaths were equal to an annual rate of 2·6 per 1000, which corresponded with the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 30, 16, and 26 in the preceding three weeks, were again 26 last week, of which 10 occurred in Glasgow, 4 in Greenock, 3 in Edinburgh, and 3 in Dundee. The deaths from scarlet fever further declined last week to 14, from 23, 22, and 19 in the preceding three weeks; 9 occurred in Glasgow, 4 in Dundee, and 2 in Edinburgh. The 8 deaths attributed to diarrhœa showed a further decline from recent weekly numbers, and included 5 in Glasgow and 2 in Edinburgh. The 6 deaths referred to "fever" corresponded with the number in the previous week; 3 were returned in Paisley and 2 in Edinburgh. Four of the 6 deaths from diphtheria were returned in Glasgow; and of the 6 fatal cases of measles, 2 occurred in Glasgow, 2 in Dundee, and 2 in Perth. The deaths attributed to acute diseases of the respiratory organs in the eight towns, which had increased in the preceding four weeks from 87 to 124, further rose last week to 131, and exceeded by 13 the number returned in the corresponding week of last year. The causes of 57, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24·1 and 32·1 per 1000 in the preceding two weeks, was 31·0 in the week ending November 5th. During the first five weeks of the current quarter the death-rate in the city averaged 27·7 per 1000, the mean rate during the same period being but 19·0 in London and 18·5 in Edinburgh. The 210 deaths in Dublin last week showed a decline of 7 from the number in the previous week; they included 19 which were referred to scarlet fever, 8 to "fever" (typhus, enteric, or simple), 6 to measles, 5 to diarrhœa, 2 to whooping-cough, 1 to diphtheria, and not one to small-pox. Thus, the deaths resulting from these principal zymotic diseases, which had been 29 and 42 in the preceding two weeks, were 41 last week; they were equal to an annual rate of 6·1 per 1000, the rate from the same diseases being but 2·6 in London and 1·6 in Edinburgh. The fatal cases of scarlet fever, which had been 8 and 11 in the previous two weeks, further rose last week to 19; and the deaths referred to "fever" also showed an increase upon recent weekly numbers. The deaths from diarrhœa, measles, and whooping-cough showed, however, a decline. The deaths both of infants and of elderly persons exceeded the numbers returned in the previous week. Four inquest cases and 3 deaths from violence were registered; and 59, or considerably more than one-fourth, of the deaths occurred in public institutions. The causes of 32, or more than 15 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

"THE PRESYSTOLIC MURMUR, FALSELY SO CALLED."

To the Editors of THE LANCET.

SIRS,—I wish it were possible for me to notice in detail all the valuable communications which my humble paper has called forth, but I must confine myself to some, hoping so to select as to bring into consideration all the more important points.

Dr. Gairdner refers to a feature of the "auricular-systolic" murmur as having been overlooked by myself and others. The murmur, in his view, "may appear to be prolonged out of, or even quite through, the period of rest, being in this last case necessarily associated with a degree of the ventricular-diastolic murmur presently to be described. •Its essential character, however, is preserved in every case, as above defined, and as represented in the diagram." In this diagram (in "Clinical Medicine") the sounds are indicated by vertical lines, the murmur by shading which reaches from the second to the first without a break, though not evenly, for it is lower in the middle than at either end, mounting steeply towards the first sound. Thus we have a murmur which begins while the ventricle is in the undoubted act of opening, which can be made only by a current which sets inward, because there is none in the other direction, and yet this is continuous with the murmur the auricular source of which is disputed. Dr. Gairdner does not see how this observation can be reconciled with the view I have presented. Neither do I. If the so-called presystolic murmur is continuous without break, pause, or change of tone, is all of a piece, with that which begins immediately after the second sound, then the two are one, both are auricular-systolic, and my contention falls to the ground. But I have never recognised such a murmur. I have heard not infrequently a soft apex murmur in the diastole close upon the second sound, the old mitral diastolic, and I have known this to be followed by the characteristic note of the so-called presystolic, but never without a break. Dr. Gairdner suggests to me, as the only course open, to explain the

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supposed single murmur as two; this suggestion I adopt, not with any intention of warping facts to suit a controversial purpose, but as representing the evidence of my own ears. I may be wrong, and am the more likely to be so since I am opposed to an auscultator of Dr. Gairdner's proved skill and experience; but my conviction is as I have stated it. I have heard, not often, for such cases are rare, but as I have thought clearly, the old mitral diastolic followed after an interval by the so-called presystolic; but the murmurs to my ear have always been separate in time and different in character. Dr. Gairdner, indeed, "is not indisposed to admit with Dr. Balfour that the diastolic element of this murmur is softer, as a rule, than the presystolic; and that it may also occur in some cases where the latter is indistinct or perhaps even absent."[1] Dr. Gairdner admits the existence of these cases "with some difficulty," for to admit them is to admit the old mitral diastolic murmur and mark a distinction between it and the so-called presystolic. The difference between Dr. Gairdner and myself on this point is but of small, and I hope lessening, dimensions; it is nothing more than the halt of a stammerer, or a hyphen between two syllables; but it implies much.

To take another particular which relates to the continuity of murmurs. In presenting the general conception of the "presystolic" tune, and while disputing its meaning describing the sounds involved according to common acceptance, and as I thought correctly, I spoke of the so-called presystolic murmur as "running up to the systole, as being united to the systolic sound without separation, and as being *inseparably blended with the systolic murmur, should there be one.*" I was here referring, not especially to Dr. Gairdner, but to the presystolic creed as generally held. How common a clinical experience is it for a murmur which has been under discussion as to whether presystolic or systolic to be satisfactorily settled as a presystolic running into a systolic. How often it happens (and here I speak for myself) that a so-called presystolic and an undoubted systolic are associated, variously interchanging, sometimes more of the one, sometimes more of the other, but never separated by any definite demarcation. I need scarcely recur to my purpose in insisting on this fusion in repute and in fact. The argument is simple. I say it is impossible for an auricular systolic to mix with a ventricular systolic, for the blood is going different ways. The so-called presystolic thus mixes, therefore it is not auricular. Dr. Gairdner here protests against admitting this mixture of murmurs. But in the oft-quoted "Clinical Medicine" (p. 557), in speaking of the various combinations of murmurs, he says: "It is not unusual to have an auricular systolic and a ventricular systolic murmur combined as in the figure; *they may even appear to be so combined as to constitute but one murmur:* you will commonly, however, be able to detect the first sound in the middle of this murmur, splitting it, as it were, into two." (The italics are mine.) The diagram represents the supposed two murmurs by continuous shading, through the densest part of which a line passes to indicate the position of the first sound, but no interval is represented. Again, Dr. Gairdner says, in speaking of combinations of murmurs, "The greatest degree of difficulty" in distinguishing them "is when the normal sound is merged in the murmur, as it often is when an auricular-systolic and a ventricular-systolic are combined," and then Dr. Gairdner goes on to explain that the distinction rests on a difference of tone between the former and latter part of the combination, the former represented by repeated *r's*, the latter by repeated *f's*. Dr. Balfour also gives a figure[2] similarly constructed to Dr. Gairdner's, which is designed to show "a diastolic murmur separated from the succeeding presystolic murmur by a pause, while *the auricular-systolic murmur passes directly into a ventricular-systolic one.*" (The italics are mine.) The diagram shows a space between the shadows which represent the diastolic and the presystolic murmurs, while the presystolic shadow is continued into the following systolic, though a line through its densest part marks the position of the first sound. I quote these descriptions of Dr. Gairdner and Dr. Balfour in the belief that they are absolutely correct as representing what is heard, apart from any differences of opinion as to what the murmurs should be called, and how explained. What I doubt is not whether the murmurs so mix, but whether the two which so mix are made in opposite directions. But now Dr. Gairdner insists with more emphasis on the separation of these murmurs than on their union. This involves, as will be seen, an important admission. "I have been at the utmost pains to show," says Dr. Gairdner, "that these two murmurs are never thus inseparably blended, that they always preserve their exact separate rhythm, and are sharply demarcated from one another, either by the first sound remaining clear and definite (as it usually does) between the two, or by an abrupt change in the character of the murmur itself, marking, as it were, an interval between them (though the interval may be too brief to appear *soundless* to the listening ear)." Even now we have not got to an interval, but only to an interval "as it were." But at least there must be a sharp demarcation of some sort, in the absence of which I gather that Dr. Gairdner would not allow the murmurs to be of opposite kinds. I can only rejoice that so great an authority should concur with me on so important a point as the necessary separation of an auricular-systolic from a ventricular-systolic murmur. I shall henceforth hold with increased tenacity to the belief that a murmur which runs into, or coalesces with, an undoubted systolic is not presystolic, but only falsely so called. We have here a test which will, I think, be decisive against many murmurs which have hitherto passed as auricular.

I will take Dr. Balfour's letter next, for part of it is answered by what I have already said in reply to Dr. Gairdner. To take Dr. Balfour's points in their order: He thinks it "remarkable that the ventricle should be supposed capable of producing this loud rough murmur at the first beginning of its systole, when it is acknowledged that as this systole nears its acme and gains in force the murmur grows less and actually becomes soft and blowing." I thought the murmur, as a rule, began feebly and gathered strength as it went on—a mode of proceeding which might be expected, presuming it to be of ventricular origin. Again, in referring to the time of the mitral diastolic murmur, I had spoken of a period after the conclusion of the systole during which the ventricle "waits empty and still." This is not important for the purpose of the argument, but Dr. Balfour spies an error and quotes Hope to the effect that "the expansion of the ventricle immediately succeeds its active contraction," and, adds Dr. Balfour, "I know of no modern observations tending in the least degree to invalidate this statement." Let me refer Dr. Balfour to the well-known text-book of physiology by Dr. Michael Foster, fourth edition, pages 149 and 154, where he will find evidence that "the ventricle continues contracted after its contents have entirely left the cavity," and that the time for which it does so has been the subject of measurement. And now Dr. Balfour, by way of giving me the *coup de grace*, being already sore wounded, takes up anew a point which has already been dealt with by Dr. Gairdner. Says Dr. Balfour: "Dr. Dickinson objects to the term *continuous* being applied to the double murmur audible at the apex in many cases of mitral stenosis, and composed of the rough auricular-systolic murmur, immediately followed by the blowing ventricular-systolic murmur." Here I am a little misinterpreted. I do not object to—in fact, I commend—the use of the term *continuous* as applied to the so-called presystolic and the undoubted mitral regurgitant murmurs. I think the term represents the fact. What I do object to is the inference that of the two murmurs thus continuous, one goes one way and one another. This argument appears to have told, if I may judge by the efforts made to escape from it. Dr. Balfour explains: "The auricular-systolic murmur runs up to, and is continuous with, the ventricular-systolic (regurgitant) murmur, in the same sense of the word that the aortic-systolic murmur may be said to run up to and be continuous with the aortic diastolic (regurgitant) murmur, and when the systolic portion of this latter murmur is rough the analogy is very complete." Does Dr. Balfour really mean this? Does he ask us to believe that the so-called presystolic murmur is no more united with the undoubted systolic than are the opposed aortic murmurs with each other? Has Dr. Balfour never heard the double aortic murmur likened to the noise of a saw, or known it to be mistaken for the double rub of pericarditis? Has he ever heard the apex combinations in question so likened, or has it ever seemed to him to resemble the noise of pericarditis? Is it not going rather too far to say, as in the passage I have quoted, that the analogy between the murmurs in question is, in certain circumstances, "very complete." This appears to present a change of front; I welcome it as indicating a weakness of position. At any

[1] See foot-note on page 782. [2] Diseases of the Heart, p. 119.

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rate, on this point we are agreed—if two apex murmurs are virtually inseparable, we are no longer to call one auricular and the other ventricular. Dr. Balfour tells us, in conclusion, "that it will be seen from the foregoing that" my "quarrel is with physiology and with facts, and not merely with opinions." I really do not see it "from the foregoing," which consists chiefly of what I have referred to; but when Dr. Balfour says I quarrel with physiology and facts, does he not really mean "with physiology and facts as interpreted by Dr. Balfour"? If he means this, and he cannot well mean otherwise, I am with him.

Dr. George Johnson points to the difference in conduction between the murmur of mitral constriction and that of acknowledged regurgitation as evidence that the currents which make them are in different directions; one murmur, as is well known, is nearly limited to the apex, the other is heard at the back. The fact has often presented itself to my mind, with this as possibly its explanation. The regurgitation with the so-called presystolic is through a small hole, and necessarily of small volume; it is not likely to carry its murmur so far as the copious gush which goes through the uncontracted opening. Dr. Johnson has satisfied himself that the murmur of mitral constriction precedes the impulse of the contracting ventricle, and is therefore presystolic in rhythm. I can say nothing to this, excepting that my observations have led me to a different conclusion. It has been objected, says Dr. Johnson, that "the auricular contraction would be insufficient to cause a murmur in a constricted mitral orifice." I never said so; on the contrary, I gave examples of murmurs thus produced. But I endorsed Dr. Barclay's words, that this force was insufficient to produce "one of the loudest and roughest murmurs ever heard in disease." This opinion I adhere to. It is true, as Dr. Shearar and Dr. Johnson say, that a considerable murmur like the *bruit de diable* in the neck may be made with little force or rapidity of current, but neither is the murmur connected with anything which suggests force to the touch; it is *vox et præterea nihil;* but the "presystolic" is associated with powerful movement, as the impulse and thrill testify. Where this murmur has been intense, I have sometimes been struck after death with the small amount of hypertrophy of the auricle; not what one would have expected had the murmur been auricular. I am aware, as Dr. Johnson has pointed out, that the cardiograph has been supposed to indicate that the first movement of the ventricle is coincident with auricular contraction; but the auricular part of the movement is small, probably inappreciable except by the machine, and not likely in any circumstances to be magnified into the long and rising impulse which keeps time with the "presystolic" murmur.

I had hoped to have replied separately, as their value demanded, to all the communications which have presented views contrary to my own; I regret that this has become impracticable, but I think I have omitted no essential objection. Neither need I refer in detail to those who have concurred with me, but will be content with acknowledging in general terms the important support I have received.

To conclude, let me hold up to view a common so-called presystolic murmur which begins gradually and ends abruptly, like something which expends its force against an obstacle, a steam-engine which rolls up against buffers. Its rumbling tune is all of one sort, and I presume that no one will now maintain that the beginning and the end of it belong to contrary murmurs. It is therefore all ventricular or all auricular. If auricular, what has become of the systole of the ventricle? The action of the heart, like the Government of the Queen, must be carried on. On the auricular theory there is no time for the ventricular contraction unless this laborious piece of work is comprised within the brief knock or snap which immediately follows the movement the nature of which is in question. This is short allowance. This snap is immediately or almost immediately followed by the second sound, with which the ventricular systole obviously terminates. Assuming, on the other hand, that the tangible impulse and rolling murmur are ventricular, how well the theory holds together. The idea of ventricular contraction suits the snap which comes at its end, presuming this to be made by the shutting of the mitral valve, together with tension of the chordæ tendineæ. That the short sharp sound is of this nature is borne out, as I think I have shown, by the post-mortem appearances; it must necessarily come at the end of the ventricular systole, because the flaps are rigid and must come together only slowly and when the ventricular walls are approximated. I therefore end as I began, with the belief that the so-called presystolic murmur is one of mitral regurgitation. Dr. Gairdner allows that there are mysteries about the "presystolic" murmur as he views it. From my point of view I see nothing mysterious about it.

If I have spoken emphatically, I trust I have said nothing to imply want of respect for the great authorities whose views I have presumed to criticise. If there is any truth in what I have urged, it must add value and permanence, because it supplies explanation, to the great clinical guide which we owe chiefly to Dr. Gairdner. The points of difference must be settled by further observation rather than by argument; this belief, at least, we may all share, and may agree to address a final appeal to the independence, experience, and wisdom of the future.

I am, Sirs, yours truly,

Chesterfield-street, W., Nov. 1887. W. HOWSHIP DICKINSON.

"IS CANCER CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—This interesting question, which THE LANCET has put before the profession, will find many ready to accept the belief, upon mere analogy, that cancer is contagious. There are those who have been for years diligently searching for the germ which may have excited the cells of a part to such excessive abnormal action; and these observers have been at times ready to state that they had procured a distinctive organism. There is something so temptingly inviting in the idea that a cancer is a human oak-gall—that what the penetrating animal diplolepeis excites in the oak may possibly have its prototype in the ravages of some minute vegetable organism in man. Moreover, the growth excited by the bacillus of tubercle gives further support to such credence. I do not profess to approach the subject from any but a clinical aspect, and I can see that a mass of evidence must be collected before any true decision can be arrived at upon such data. Experiment affords a much more promising field. It has been tried, but with little success, owing probably to difficulty of proving a suitable nidus, and perhaps, too, from the inoculations having been made with the cell results rather than with the cell causes. This, however, I would suggest to such operators: that, as cancer is a disease of age, the oldest animals procurable would probably be its most ready recipients. Since THE LANCET put the question on Oct. 8th there have been three cases published in which cancer of the womb in the wife was associated with epithelioma of the penis in the husband. It is an interesting coincidence, but we have no evidence that the cancers were of the same type. If it were shown, for instance, that in the woman the growth was a colloid cancer of the body of the uterus, would that entirely invalidate the idea of contagion when the husband's growth is known to be epitheliomatous? We now, in explaining the well-recognised heredity of tubercle, are fain to believe that in a particular type of the human species Koch's bacillus finds a peculiarly appropriate soil. Will the individual and the part attacked explain the form of cancer? Besides the three cases referred to, one of your correspondents has put forward a case of cancer of the womb in the wife associated with epithelioma of the tongue in the husband. If, however, it may come about that some one germ may produce different forms of cancer in different individuals, modified also by the part attacked, then cases occurring in persons living together will become of great interest and importance, apart from direct inoculation.

The following curious instance of three different forms of cancer, occurring in three individuals living together in the same house, may some day receive an explanation other than that of mere coincidence. In 1881, and again in 1883, I operated on a gentleman suffering from rodent ulcer of the eyelid and forehead. He is still living, but with a return of the growth. In 1884 I operated on his wife for scirrhus of the breast; and during the past week a partner, who has always lived in the same house with them, has come under my care with epithelioma of the tongue. I would not suggest that there is of necessity anything more than accidental association between these cases, but the coincidence is the more interesting in that there is no blood relationship between them. Before one has learnt to attribute the ravages of

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cancer to the introduction of some external virus, one must have regard to the more apparent contributaries to its outbreak; and if asked as to these, I should give, in order, age, syphilis, melancholia, gout.

I remain, Sirs, yours truly,

R. CLEMENT LUCAS, B.S. Lond., F.R.C.S.,
November, 1887. Senior Assistant Surgeon to Guy's Hospital.

To the Editors of THE LANCET.

SIRS,—The subject of the possible contagiousness of cancer has now been discussed in your columns for several weeks, but perhaps yet another illustration of its probable occasional conveyance from one individual to another may be worthy of mention.

Some few years ago I was consulted by a married man respecting an irregular nodule which had appeared beneath Poupart's ligament on one side. This growth gradually increased and extended itself upwards into the iliac fossa, developing into an ordinary malignant tumour. The patient died at a not very distant date. There was no disease of the penis. Some few weeks later the wife of this patient consulted me for uterine symptoms of some considerable duration, and on examination I found her to be affected with extensive cancerous disease of the os uteri and vagina. She also died in due course. I had at the time, and have now, little doubt that the case was one of infection, and that the malignant groin tumour of the husband was due to absorption of the discharge from the wife's uterus; but whether through a temporary abrasion or through unbroken skin I could not tell. Such discharge doubtless contains the freed nuclei or nucleoli of the cast-off cells, and it is quite reasonable to suppose that these minute bodies may be capable of absorption under favourable circumstances, and so induce new growth in the spot where arrested.

In this respect this case would differ from those in which secondary cancer is implanted, or communicated by abiding contact with adjacent tissue, examples of which latter are occasionally seen in cancer of the peritoneum.

I am, Sirs, yours obediently,

Norwich, Nov. 8th, 1887. PETER EADE, M.D. &c.

REFORM AT THE COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—The crowded state of the general meeting held on the 3rd inst. is one proof the more, if proof were needed, that the medical profession is fully alive to the momentous issues at stake between the Council and the great mass of the corporation of the College. The Members are showing that they feel the responsibility of their position as constituent parts of "*one body politic and corporate*." Such a spectacle of overflowing benches can never have been even dreamt of four years ago; and yet it is less than that space of time since the pebble was first cast whose ever-widening rings of undulation have spread to the outer boundaries of this mighty sea. To yourselves the Members of the College owe a debt of gratitude for this encouraging demonstration, for without the aid of the medical press our own toil and our own efforts must have taken many a weary year in bearing fruit.

There were two special points of interests in last week's meeting that call for notice. The first, the noteworthy fact that one member of the Council, Mr. Willett, broke the accustomed statuesque repose of that group of silent figures by holding up his hand in favour of the first resolution. The second, that Sir Joseph Lister destroyed the illusion of the theatrical *mise-en-scène*, by addressing himself to the meeting; for hitherto the President alone had condescended to parley with us.

If anything, the action of the Council was more unconstitutional than usual, for, having called a general meeting of the *corporation* (we persist in calling the College by its chartered name) to receive, and presumably to discuss, its annual report, it refused to submit to the meeting the resolution sent in duly by Mr. Pollock, and maimed that of Mr. Tweedy. Moreover, the Chairman of the meeting (for every such meeting *must* have a chairman) declined to transmit a resolution carried at the meeting to the authorities to whom he was bidden by the meeting so to do. This was but another instance of the weakness of the tactics chosen by that august body, the Council of the Royal College of Surgeons of England. With a bad hand to play, it always selects the most disastrous cards to follow with, and seems blind to the consequences of insisting that clubs are trumps, whatever the turn-up card may have so far forgotten itself as to be.

We pass over for the present the magnificent way in which the Council is spending the Erasmus Wilson bequest; £50,000 seems but a trifle for it to squander, unheeding and ill-advised. But the day of reckoning must come ere long, and the Members will then demand why, in the very face of a movement destined speedily to alter the constitution of a governing body, that body makes haste to dispose of property the trust of which is drawing near its term.

However, events are now crowding towards an issue, and almost ere your journal is in the hands of the profession the Privy Council will have received (on Nov. 11th) two deputations in opposition to the form of Supplemental Charter prayed for by the Council of the College, the one deputation coming from the Fellows of the College, the other from its Members; and we may add that we have the promise of the attendance and support of two or three prominent members of Parliament, who will, should the case pass on to a still higher Court of Appeal, watch vigilantly over our interests there. The matter has passed out of the hands of the College Council now. The laity has heard of our struggle, and no longer can the voice of the Members be stifled under the pillow of obstruction. We are, Sirs, your obedient servants,

WARWICK C. STEELE, } Hon. Secs. Assoc.
WM. ASHTON ELLIS, } M.R.C.S.

Grosvenor-road, S.W., Nov. 9th, 1887.

ON CARBOLIC ACID AS AN ANTIPYRETIC.

To the Editors of THE LANCET.

SIRS,—The important letter of Mr. Wiglesworth on the treatment of scarlet fever by carbolic acid has interested me extremely, and induces me to mention a few observations which I have lately made with the same drug, and the publication of which I have only hitherto deferred in hopes of adding to their number before taking that step.

The first case to which I shall refer, although a solitary one of its kind, appears to show that the acid is a decided and effective antipyretic. A healthy primipara was seized on the third day after delivery with rigors and pyrexia, which persisted for several days, in spite of the administration of quinine &c., and vaginal injections of solutions of carbolic acid and perchloride of mercury. On the eighth day, when the temperature in the axilla was 103·4°, I determined to apply strong carbolic glycerine (equal parts of the acid and glycerine) to the cervix uteri. A good many years ago some successful cases were described by Dr. Peter Eade, in THE LANCET, in which the cervix was smeared with this strong preparation, and I had already adopted this treatment in one previous case, which ultimately recovered. In that case, however, which occurred in the practice of a midwife, the symptoms were comparatively mild, and the application was not followed by any direct and marked effect on the temperature, and was repeated daily for a considerable time before the recovery of the patient was assured. I had little hope that an application so evanescent in its effects would be of much avail in the present case, and I determined to leave the acid in contact with the cervix for a considerable time, besides applying it to the fundus of the uterus. Accordingly, after passing an ordinary sound wrapped thickly round with cotton wool saturated with the medicament to the fundus, I left two pledgets of the same medicated cotton in the vagina and in close apposition to the cervix. These were passed through a speculum and had threads attached to them. Half an hour afterwards I was hastily summoned to see the patient, who was said to have become very weak. I found her in a state of partial collapse, with cold extremities. Pulse slow, but not weak; temperature in the axilla subnormal, —97·6° F. I instantly withdrew the plugs and administered a stimulant, and she soon rallied. It was quite clear that the carbolic acid had been absorbed in considerable quantity, and that it had exercised a decided antipyretic action; and, further, that, like other antipyretics, it had manifested a liability to produce symptoms of collapse. Next day I found the patient comparatively cool; temper-

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rature 100·2°. I applied the medicament to the fundus and cervix as before, but did not leave any in contact with the latter. During the following two days she remained so well that I did not repeat the application, but on the third day the temperature had again risen to 103°. A cautious application to the cervix on this and the following day of only one minute's duration sufficed to check the pyrexia effectually and finally, and the patient made an excellent recovery.

Both Wood and Bartholow state that carbolic acid has been extensively used in diphtheria, scarlet fever, &c., but with disappointing results. It seems, however, to have been used only with a view to an antizymotic action, and probably in doses much too small to exercise an antipyretic influence. Both authors cite the results obtained by Emil Erls, who found that in mild putrid poisoning in animals the acid very much diminished the fever heat. After my experience of the above case, I felt a strong conviction that to produce an effective antipyretic action with the drug it was only necessary to administer it in sufficient doses. Two cases of typhoid shortly afterwards occurred in my practice, in children of one family, the first of which, however, I did not see till the case was well advanced. In the second case —a boy of fourteen years—the following notes were taken: On Aug. 3rd, several days from the commencement of the fever, the pulse was 120; respiration 28; temperature 104·6°. Ordered four grains of carbolic acid (in the form of carbolic glycerine, suitably diluted) every four hours, equal to twenty-four grains in twenty-four hours. On Aug. 5th, when the patient was next visited, and at nearly the same hour of the day as before, the temperature was 102·6°; pulse 110. On the 7th the temperature had fallen to 99 7°, and the pulse was 96. The patient had taken the acid regularly, and there was intense carboluria, the urine becoming so dark when rendered alkaline and exposed to the air that it required dilution with twice its volume of water before it became translucent in an inch test-tube. The drug was now discontinued for two days, and on the 9th the temperature had risen to 103·2°; pulse 108. He was again ordered three grains of the acid every four hours (eighteen grains in twenty-four hours), and on the 11th he felt much better, the temperature being 101·6°; pulse 94. He made a good recovery, and throughout the case he was remarkably comfortable, generally showing a tendency to somnolence after each dose of the acid, and presenting a marked contrast to his sister, who had gone through the fever before him.

Simultaneously with the above case I had under observation another boy of the same age, whose temperature, in spite of the administration of the same doses of the drug for several days, remained steadily at 103·2° and 103·4°. On examining the urine, however, there was not the slightest carboluria, and great was the surprise of patient and nurse (an indulgent sister) when I told them that the former had not taken a drop of the medicine, and that both had conspired to deceive me.

I have obtained beneficial results from the acid in other conditions attended with pyrexia, and can say that I have never seen a bad symptom from its use. In a severe case of erysipelas, with great pain and sleeplessness, it seemed to have both an anodyne and hypnotic influence, a good sleep being generally secured by a dose of five grains at bedtime. If seems to me that it would be of some importance from a scientific point of view to test more thoroughly than has yet been done the antipyretic action of carbolic acid before having recourse to the more complex substance, salol, whose efficiency in the same direction probably depends on the 38 per cent. of phenol which it contains.

I am, Sirs, yours truly.

Partick, Glasgow, Oct. 10th, 1887. ROBERT KIRK, M.D.

VENTILATION OF THE BEDS OF THE SICK.

To the Editors of THE LANCET.

SIRS,—In the Cambridge (Mass.) Hospital there is an arrangement for the ventilation of the beds not generally known; it is so effective that I wish to describe it. Beneath each bed is a ventilating tube of about eight inches diameter, fifty square inches area, leading directly through the floor to a foul air trunk, beneath which it communicates with the main ventilating chimney. About 2000 cubic feet of air an hour is thus drawn from beneath each bed. This ventilating tube is connected with the bed above by a four-inch pipe of tinned plate, with a proper cover and joints, which passes around the side or foot of the bed and into it beneath the clothing. This pipe is lengthened with one of the same size of pasteboard or other substance, a non-conductor of heat, reaching to any part of the bed. By this simple means foul air is removed as fast as formed, the bed kept free from odour, and the patient's body is no longer surrounded with contaminating gases. As the air presses inwards through the porous bed-clothing none escapes into the ward. Further, a two-inch flexible pipe is adjusted to that just described, and slipped over the hollow handle of the bed-pan when in use, carrying off odour from that also. In the same hospital similar means connect the beds in the private wards with the chimney of an ordinary fireplace, up which the pipe reaches about four feet to ensure a good draught with a moderate fire; the part in the chimney is of black iron. The advantages of such an arrangement in cases of sloughs, foul ulcers, cancers, and in fevers with frequent fæcal dejections, are obvious. It may be supposed that the passage of air through the bed would cool it too much. Practically it does not; probably the quantity of air passing is about the same as in beds ordinarily at the same temperature of the room, but in a different direction.—I am, Sirs, yours truly,

Cambridge, Massachusetts, U.S. MORRILL WYMAN, M.D.

VACCINATION.

To the Editors of THE LANCET.

SIRS,—The correspondence which appeared a few weeks since on the subject of vaccination induces me to send you a piece of evidence, which I have not seen recorded, but which, if borne out by the experience of others, forms a further proof that the protection afforded by vaccination varies in degree according to its character—namely, that a child vaccinated by one insertion can on the eighth day be further vaccinated from its single vesicle in three or more places; whereas if an attempt be made with a child having three vesicles at the same period to produce a fourth, it will not be successful. I have verified these experiments many times, under the first conditions with universal success, but always failing under the latter. One other fact worthy of mention is that, in cases in which fresh insertions are successfully made on the eighth day, the new vesicles mature a day or two earlier than in ordinary primary vaccinations, while the progress of the first vesicle towards scabbing is somewhat retarded.

I am, Sirs, yours truly,

Old-street, E.C., Nov. 7th, 1887. G. E. YARROW.

QUEEN'S COLLEGE, BIRMINGHAM.

To the Editors of THE LANCET.

SIRS,—My attention has this day been called to a paragraph in the letter of your Birmingham correspondent of Nov. 5th. From what he there says, it is obvious that the "halfpenny evening paper" to which he refers forms his sole reading, since the advertisement mentioned appeared according to general custom, in all the daily papers of this town, morning and evening, as also in the *British Medical Journal* and in your own advertiser. This misrepresentation coming from a special correspondent is quite inexcusable, and shows a very obvious animus against this College. I may add that the election of no candidate is "assured" until the council has confirmed it, as your correspondent ought, from past experience, very well to know. I trust that you will do me the favour of inserting this letter in your next issue, as the insinuations made against this College are both unfounded and unwarranted, and are likely to damage its reputation if not promptly contradicted.

I am, Sirs, yours faithfully,

BERTRAM C. A. WINDLE, M.A., M.D.,

Nov. 9th, 1887. Prof. of Anat. & Hon. Sec. Queen's Coll.

AN UNSUSPECTED DANGER.

To the Editors of THE LANCET.

SIRS,—A few days since, a lady, the head of a first-class school, showed me a large heap of filthy rags, cloth, and rubbish which had been taken from the inside of a number of bolsters and pillows, which had been unpicked for the purpose of the periodical cleaning and remaking which all

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the school bedding undergoes—a laudable process, which is, unfortunately, not too common. The rubbish consisted of the most heterogeneous materials, and included portions of filthy coarse black serge, apparently parts of soldiers' old coat sleeves, pieces of dirty greasy silk dresses, old worsted braid from the borders of women's gowns, soiled linen rags, and coloured calico, even nuts and walnut shells and pieces of crinoline wire! The bedding in question was bought new a few years ago of an expensive and respectable upholsterer. The woman who was employed to do the unpicking works usually for the trade; she informed the lady that the practice of stuffing bedding &c. with dirty rubbish and rags was very general, and that few mattresses and bolsters contained only the material of which they were supposed to consist. May not this dirty and dishonest custom be—nay, is it not almost certainly—the cause of many of the mysterious and otherwise unaccountable outbreaks of infectious disease in schools and families? The practice is at once so filthy and so dangerous that it is high time public attention should be called to it, that it may be as far as possible guarded against, or, at any rate exposed.

I am Sirs, yours truly,

Folkestone, November, 1887. CHAS. E. FITZ-GERALD.

LIVERPOOL.

(*From our own Correspondent.*)

HOSPITAL SUNDAY AND SATURDAY.

THE annual meeting in connexion with the Hospital Sunday and Saturday collections took place on Monday, at the Town Hall, the Mayor, Sir James Poole, presiding. The committee, in their annual report, lamented a considerable decrease in the receipts compared with those of last year. The number of church and chapel collections was 312, realising £6029, against £6217 last year; the amount received in the Hospital Saturday boxes reached £2851, against £3135 last year. The amount distributed by the committee this year was £8750 in addition to £185 voted last year to the Hospital for Women, but held in abeyance; this was forwarded to the treasurer of that institution. What is much needed is greater effort on the part of the working men. By systematic and regular contributions of a halfpenny per week an enormous addition might be realised. Owing to peculiar circumstances Liverpool has felt the depression of trade probably more than any other city; this is the explanation of this decrease.

THE HOSPITAL FOR WOMEN.

The following considerable additions and improvements have lately been made in this hospital. A large operating theatre has been provided, two new wards have been opened, and a day room for patients has been furnished through the kindness of two members of the Ladies' Committee, whilst additional dormitories and a day room for nurses have materially increased the comfort of the hospital.

INTERESTING ABDOMINAL SECTION.

The following very interesting case recently occurred in the practice of Dr. Macdonald of Walton. The patient, believing herself to be six months pregnant, sent for Dr. Macdonald on account of abdominal pain and tenderness, with general prostration. Dr. Grimsdale was consulted. Both he and Dr. Macdonald, believing the source of the almost fatal hæmorrhage to be the ruptured sac of an ex-fœtation, advised operation as the only apparent chance of the patient's survival. Dr. Briggs, surgeon to the Hospital for Women and to the Lying-in Hospital, assisted by Drs. Macdonald and T. B. Grimsdale, opened the abdomen and released from among the intestines and behind the omentum a large quantity of fluid and clotted blood, which had been poured out from the upper portion of the ruptured sac. The sac contained a six months fœtus, which was removed, and both the peritoneal cavity and the sac were drained by glass tubes. The pregnancy, tubal in the first instance, had expanded the left broad ligament, and finally ruptured, at the unusually late period of the sixth month. The progress so far, up to the twenty-seventh day after operation, has been satisfactory.

THE NORTHERN HOSPITAL.

Monday was an unusually busy day at the Northern Hospital, there being, in addition to the ordinary patients, a large number of accidents, several of a very severe nature. Of the latter, one was that of a baker, who by a fall had sustained a concussion of the brain and fractured arm; a labourer falling from the roof of a house sustained a fractured thigh; and a man, seventy-one years of age, sustained a serious wound of the head, by falling from the quay into a boat. These were all taken to the hospital in an ambulance.

Liverpool, Nov. 8th.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

NEWCASTLE COLLEGE OF MEDICINE.

THE foundation stone of the University of Durham College of Medicine was laid here on Nov. 3rd by his Grace the Duke of Northumberland, Lord-Lieutenant of the county, with the usual ceremonies. A description of the building has already appeared in THE LANCET. The luncheon, which took place afterwards in the Assembly Rooms in this city, was certainly the most important medical gathering I have ever seen in the north, and was at once a brilliant and representative meeting. Great praise is due to the committee and secretaries for the excellent arrangements made to provide for about 300 guests. The historical statement read by Mr. H. E. Armstrong on the occasion was of much interest, but must be condensed here. The first medical school in Newcastle was begun in 1832-3. The credit of this beginning is entirely due to Mr. (afterwards Sir) John Fife. After a removal to larger premises in 1834, it was recognised by the University of London and the Royal College of Surgeons of England. This school was fully equipped, and had a fairly prosperous career until it was pulled down to make way for some railway extension; so that again the school had to shift its quarters, and after some changes in its constitution it was in 1852 united to the University of Durham, and the premises known as Neville Hall became its abode. From this time the work of the College has increased greatly, as the figures show that the school of Sir John Fife's foundation has from a commencement of ten students or so recently come up to an average of two hundred. Again the demands of the railway company have turned the College out, and compelled them to erect this new building. It was mentioned that the tenure of office of the present President, Dr. Heath, as well as two members of the staff, Drs. Gibson and Gibbs, had extended over an uninterrupted period of forty years. In preparing the statement, the thanks of the College were given to Dr. Embleton, whose aid was most valuable, who had filled the position of lecturer from 1839 to 1872, and who during many years ably filled the offices of Reader in Medicine of the University and Registrar of the College. The Duke of Northumberland, the Dean of Durham, and the Mayor and Sheriff of Newcastle spoke at the luncheon, but the address of the President (Dr. Heath) was the speech of the occasion; broad, suggestive, and always eloquent, he set forth with much acumen the utility of a College of Medicine in a large community, and showed the value to the public health of proper investigations in animal pathology, and their value to the agriculturalist, and believed that the purely scientific chairs in the new College should be endowed. He pointed out in a most practical manner that what they were now doing would cost £25,000, but to complete the College to its full extent, with residential halls, would require another £25,000, or £50,000 in all. He said the College of Medicine had never hitherto asked any help from the public or from Government. It had been completely self-supporting, and now he was quite sure that his colleagues were prepared to raise upon their own responsibility a considerable sum; but he hoped that in this important matter they should not be left without some measure of support from the public. They had already had some encouragement from some of their members. They had received from Dr. Gibbs of this city the munificent donation of £1000, and he thought it only fair to say that

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as Dr. Gibbs was no longer a lecturer, it made the gift the more generous, as he received no emolument from the College.
Newcastle-on-Tyne, Nov. 8th.

EDINBURGH.

(From our own Correspondent.)

THE UNIVERSITY LORD RECTORSHIP.

LAST week the Marquis of Lothian, K.T., who holds the office of Secretary for Scotland under the present Government, was elected without opposition to the post of Lord Rector of the University, in the room of the late Lord Iddesleigh. The duties of his three years' tenure of office are to preside at meetings of the University Court, to appoint an assessor to a seat at the same body, and to address the undergraduates, his constituents, at least once during the time he acts as their representative. An uncontested election for the office has been a very rare occurrence, and is in striking contrast to the active party warfare now in progress in Aberdeen University, where Mr. Goschen and Mr. John Morley are candidates for the vacant Rectorship, and in Glasgow, where the rival claims of Lord Rosebery, Lord Lytton, and Professor Max Müller are actively canvassed among the electors. Lord Lothian's unanimous election is no doubt largely due to his position as chief minister for Scotland, and to the fact that, during his tenure of the Scottish Secretaryship, he has won golden opinions from all classes of the community by the energy and ability with which he has discharged the duties of his office. As the probable author of the next Universities Bill, great things also are expected of him, and there is no doubt that his well-known moderation will give him a chance of succeeding to general satisfaction where others would inevitably fail.

PARTIAL AMPUTATIONS OF THE FOOT.

A largely attended meeting of the Medico-Chirurgical Society was held on Nov. 2nd., at which an important surgical paper was read by Mr. C. W. Cathcart, discussing the question, "Should Partial Foot Amputations be Abandoned?" As a text for his paper Mr. Cathcart exhibited two cases of partial amputation of the foot, a Chopart and a Lisfranc, along with one of amputation at the ankle joint (Syme), and commented on the marked superiority of the first two over the last in that greatest desideratum, facility of progression. As stated by Mr. Cathcart in his paper, the question seems to be narrowed to one of mechanical expediency between different schools of artificial limb makers. Mr. Cathcart has put the leading firms in the witness box by addressing them a series of questions on the subject; and as their evidence is far from unanimous, he has proceeded to investigate the whole matter *ab initio*, and has come to a conclusion wholly in favour of the partial amputations. Beginning with an account of the physiology of progression, based on the researches of the Webers and those recently published by Marey, Mr. Cathcart drew attention to the enormous value in progression of the ankle joint proper as retained in Chopart's amputation, and of the inter-tarsal joints as preserved by Lisfranc's operation—advantages to a patient of so practical a value in ensuring his stability as to outweigh completely the greater neatness claimed for the artificial foot fitted after Syme's amputation. Mr. Cathcart reiterated the dictum of the older surgeons, that where operation is performed for trauma, that method which saves the greatest extent of tissue consistent with the vitality of the stump is in every case to be emphatically preferred. After a short discussion, in which Mr. A. G. Miller and Professor John Chiene both homologated the opinions stated in his paper, Mr. Cathcart replied with a brief acknowledgment of the careful attention with which he had been heard.

THE PRESIDENT'S VALEDICTORY ADDRESS.

Professor T. Grainger Stewart then delivered his valedictory address to the Society at the close of his two years' tenure of the presidential chair. He reviewed the work done by the Society during the last two years, and took a general survey of the present position of the profession in Edinburgh. In speaking of the Medico-Chirurgical Society itself, the retiring President took occasion to note the many recent gaps in its foremost ranks occasioned by the visitations of death. In a few sympathetic sentences he spoke of the deeply lamented loss of such men as the late Dr. Angus Macdonald, Dr. Rutherford Haldane, Mr. William Brown, Dr. John Bishop, Dr. Dunsmure, Dr. Sidey, and Dr. Cumming, paying a generous tribute to the professional eminence, the geniality, and the public services of each, no less than to the loyalty with which each had striven in his own sphere to hold high the standard of professional integrity, and to assure it its high prerogative as a noble calling. In turning to review the present position of the profession in Edinburgh, Professor Stewart dealt with four aspects of the subject, each of cardinal importance. As guardians of the public health, as advisers of the general public in their most personal and private affairs, as investigators of the causes and preventives of disease, and as teachers of a rising generation of medical men—in all these relations he inquired into the present condition of the school, and though he found much ground for congratulation in the inquiry, yet on the many points where he encountered the opposite, he did not hesitate to unmask the evil and suggest measures for its reform. Professor Stewart is succeeded in the presidency of the Society by Dr. John Smith, Vice-President of the Royal College of Surgeons, and Surgeon-Dentist for Scotland to Her Majesty the Queen.
Edinburgh, Nov. 8th.

DUBLIN.

(From our own Correspondent.)

IRISH PRISONS BOARD.

DURING the year ending March last eighty-five inmates of local prisons were certified to be insane, of whom only six were considered sane on admission to the various local prisons. The medical adviser of the Board has already drawn attention to the unfavourable influence on the lunatics of their committal to prison instead of direct to the asylum. In seventy-nine out of the eighty-five of the cases admitted to local prisons during the year no reasonable doubt could be entertained respecting the insanity of the prisoners committed. The medical officers of the local prisons with justice frequently record their surprise that cases of manifest insanity should be sent to prison. The water supply of Maryborough Prison has occupied much attention during the past year. This prison stands on a somewhat lower level than that occupied by the County Infirmary, and is separated from it by a public road, while the existing arrangements in the infirmary for the disposal of excreta are not of a satisfactory character. On one occasion during the past year enteric fever occurred in Maryborough Prison and the Board's medical adviser entertained no doubt that it arose from pollution of the wells by percolation through the gravelly subsoil of water from a watercourse passing from the infirmary in the vicinity of the prison. The deaths in local prisons for the year amounted to nine, six of which were due to pneumonia. Seventy-seven prisoners were released on medical grounds, but some of the alleged causes seem trivial enough—viz., abscess of ear, hernia, enlarged cervical glands, piles, bone in throat, &c.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At a meeting of the Council held on the 3rd inst., Dr. C. H. Robinson was elected an Examiner in Physiology, to examine candidates for the Conjoint Examinations held by the College and the Apothecaries' Hall of Ireland. Dr. Hayes has been elected by the Apothecaries' Hall an Examiner in the Practice of Medicine for the Conjoint Scheme between it and the College of Surgeons.

BRITISH MEDICAL ASSOCIATION: DUBLIN MEETING.

The subscriptions to the Reception Fund of the Dublin meeting of the British Medical Association held last August, amounted to £1501 10*s.*, and the expenditure to £1442 11*s.*, leaving a balance in hand of £58 19*s.* A meeting of the subscribers will be held on Wednesday, the 9th inst., to determine how this surplus shall be disposed of.

DUBLIN HOSPITAL SUNDAY FUND.

The annual collections in aid of this Fund will take place on Sunday next, the 13th inst. Last year a sum of £4158 0*s.* 3*d.*

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was collected, being a decrease of £310 5s. 5d. as compared with the year preceding. Since the establishment of the Fund in 1877 no less than £53,089 8s. 10d. has been obtained, and £49,334 2s. 6d. distributed among the various hospitals participating in it.

MEATH HOSPITAL, DUBLIN.

The introductory lecture at the opening of the winter session was delivered by Dr. A. Foot on Monday. On the same evening a dinner for the reunion of old students and governors took place at the Shelbourne Hotel, presided over by Sir George B. Owens, M.D.

ROYAL HOSPITAL, DUBLIN.

It is rumoured that this institution will shortly be closed, and a new barracks erected on the North Circular Road near the Phœnix Park.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

The opening meeting of the Pathological Section of the Academy was held on the 4th inst., when Dr. Ball, the President, gave an inaugural address, in which he referred to the necessity of pathological research, and of establishing a pathological institute. Dr. Finny exhibited an hour-glass contraction of the stomach, and Dr. E. H. Bennett detailed a very interesting case of phlegmasia alba dolens, and exhibited the parts affected.

DEATH OF DR. J. VALENTINE BROWNE OF GALWAY.

An eminent surgeon, one well known in the west of Ireland (Dr. J. Valentine Browne), died last week at his residence, Prospect Hill, Galway. The deceased filled the chair of Surgery in the Queen's College, Galway, and was surgeon to the County Galway Infirmary. He was also an Examiner in Surgery in the Royal University of Ireland. He was greatly esteemed, and the utmost sympathy is felt for his family in their sad bereavement.

Mr. Henry Quinn has left £200,000 to be expended in charitable purposes in Newry.

Dublin, Nov. 8th.

BELFAST.

(From our own Correspondent.)

THE BELFAST DISTRICT LUNATIC ASYLUM.

WE understand that at their next monthly meeting a very important matter will have to be decided by the governors of this asylum. The population of the districts to which the Belfast Asylum belongs—co. Antrim, Carrickfergus, and the borough of Belfast—is about 450,000, and it is calculated that some 800 or 900 patients must be provided for in the Belfast District Lunatic Asylum. The present accommodation is, in this building, for 550. As in other parts of the kingdom, insanity has been found here to increase concurrently with the increase of the population. The question before the Board has been how to secure the additional accommodation. There are now 560 patients in the house, in addition to eighty others at Ballymena Workhouse, a sort of off-shoot of the Belfast Asylum for harmless patients. It is apparent, then, that the existing accommodation, which is for 550 patients only, at the Belfast Asylum is overtaxed, and this in the future will not be diminished. Three plans have been suggested to get out of the difficulty. It has been proposed to enlarge the asylum within its present grounds; but Dr. Nugent, Lunacy Inspector in Ireland, has reported that it would be "inexpedient to make any further additions to the Belfast Asylum, inasmuch as the number of inmates to the extent of the grounds—viz., ventilation, exercise, and occupation—would be disproportioned, and these factors, together with day-room accommodation, form an important feature in the care and treatment of the insane." Again, it has been suggested to build a new asylum to accommodate 300 patients; but to erect and furnish thoroughly such a structure would cost £30,000. A third plan is to utilise a workhouse, which might be done for £4000 or £5000. A decision will have to be made on these questions by the governors next month.

THE ROYAL UNIVERSITY.

We understand that the Royal University has recognised the Belfast Ophthalmic Hospital and the Ulster Eye, Ear, and Throat Hospital as institutions from which certificates of attendance by students will be received.

THE BRITISH DENTAL ASSOCIATION.

A meeting of the Belfast dentists was held in the Royal Hotel on Friday, under the auspices of the Irish Branch of the British Dental Association. We learn that the annual meeting of the Association is to be held in Dublin towards the end of August, 1888. The honorary secretary of the Irish Branch, Mr. Pearsall, was present at the meeting, and explained the objects and aims of the Association, and advised all who were not already members to join the Association. We understand that all present promised to do their utmost to make the meeting a success, and those who were not already members promised to join the Association.

Belfast, Nov. 8th.

EGYPT.

(From our own Correspondent.)

SANITARY DEPARTMENT.

THE work of sanitation is slowly progressing in spite of much passive resistance and an empty exchequer. During the past summer a monthly periodical called *El Salia* (Hygiene) has been started by the Government as a useful means of spreading sanitary knowledge among the native doctors. It consists of thirty-two pages of closely written Arabic character, and at present 500 copies are sold every month at 1s. each. It contains translations of papers from English and French journals and original articles by a committee of supporters. This publication does not in any way interfere with its native colleague, *The Cure*, which treats of matters purely medical and surgical. Five dispensaries have lately been established in provincial towns, and eight others will shortly be opened. These supply a long-felt want, and gratuitously give medicines to the poor, while the Government charges small sums to rich patients. There are now nine Englishmen in the sanitary service, all hard-working sanitary officials. It is three years and a half since the first Englishman was appointed to this department.

HEALTH OF THE BRITISH TROOPS.

The strength of the troops in Cairo and its desert suburb of Abbasiyeh is to-day 3600, with a sick-rate from all causes of 380, or 10·5 per cent. The sick are made up of 144 simple continued fever cases, 45 enteric, 13 scarlatina, and 178 venereal and other diseases. The scarlatina cases are all very mild, and include one officer, and are only of interest because the disease is very rare in Egypt. There is no evidence to show that these cases can have had the disease transmitted to them from England by letters or other articles by post. The enteric patients, like those always to be seen in this country, occur among young soldiers less than twenty-four years of age. The simple continued cases are greatly in excess of the ordinary rate, and account for the general high percentage. They come chiefly from the Welsh Regiment, which has had a sick-rate during October varying from 10·3 to 16·5 per cent. This is partly due to the regiment having previously suffered from malaria at Mauritius and the Cape of Good Hope, and partly because the Kasrel Nil barracks have been inundated by the exceptionally high Nile. The regiment has now been placed under canvas in the desert, and it is confidently expected that the fever will at once disappear. The Royal Engineers, occupying the same barracks, have had a sick-rate during October of from 5·3 to 10·1 per cent. The Cheshire and 7th Fusilier Regiments, which are in the Citadel barracks, presumably removed from all damp and malaria, have yet had sick-rates varying from 6 to 11 and from 5 to 10 per cent. The 20th Hussars, who occupy barracks at Abbasiyeh, surrounded by the healthiest desert air, have had an October sick-rate of 2·5 to 5 per cent. only. But it may be mentioned here that the Egyptian army, numbering 1500 natives, all quartered at Abbasiyeh, had only six cases of simple continued fever admitted to hospital during September, while in October the number has been raised to thirty-eight. The Cheshire Regiment is under orders for Rangoon, and will be relieved by the Rifle Brigade, who are at once to be quartered in camp on the Mokattam heights above the Citadel. In Alexandria the strength of the detu-

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pying force is now 1028, with a sick-rate of 91, or 8·8 per cent. The Yorkshire Regiment there has had during October a rate between 8·3 and 11 per cent. There are now only two cases of enteric and fourteen of simple continued fever; nearly all the remainder are made up of venereal disease and prickly heat.

THE NILE INUNDATION.

Last year there was a very fairly high Nile, as judged by its maximum at Cairo, but this year it rose four feet higher, and remained at this alarming level for a whole month, beginning on Sept. 21st. It has now subsided eight feet, and is continuing to fall at the rate of more than two inches a day. The last very high Nile was in 1878, when it rose even two feet higher than this year, but on that occasion it broke its banks in several places, and only remained at its maximum for two days.

SIMPLE CONTINUED FEVER IN CAIRO.

The civilian population, both European and native, has been suffering since the middle of September from a fever, lasting from three to six days, commencing with pains in the head, back, and muscles, but not in the joints. The temperature seldom rises higher than 102°, but is occasionally seen for one night at 103°, and in very rare cases 104°. The tongue is coated white, and the bowels are undisturbed. Patients complain of nothing but lassitude, so long as they lie still, but suffer from muscular fatigue and neuralgia if they continue to work. The malaise is ushered in sometimes by vomiting, but not by rigors. The liver and spleen are not enlarged, and it is doubtful whether quinine can shorten the attack. Antipyrin relieves the feverishness and other symptoms. There is no eruption, but a few of the white patients have an erythematous flush, chiefly on the face and chest, but to be seen also on the trunk and limbs, never lasting more than two days. There have been no deaths, no relapses, no remissions, and no hæmorrhages. The weakness left by the fever is much greater than would be expected from so mild an attack. Most observers agree that there is no evidence in favour of contagion, but one Greek doctor maintains that he has seen cases of wives contracting it from husbands, and children at the breast taking the disease from their mothers. On the other hand, there are many cases of one partner of the conjugal bed not taking it from the other. The fever is undoubtedly due to excessive Nile infiltration, aided probably by the insanitary subsoil of the town's cesspools. There are no grounds for believing that this fever is analogous to dengue as known in India and America, though dengue occurred as an epidemic in Cairo in 1880, and is said to have been sporadic on the Suez Canal ever since. The fever is already abating, and does not attack recent arrivals in the country, though it has not spared those Europeans who spent the whole summer in Egypt.

Cairo, Nov. 1st.

THE SERVICES.

MR. FITCH, Surgeon on H.M.S. *Sphinx*, on the East Indian Station, has been invalided, and sent to England suffering from intermittent fever contracted recently at Kurrachee.

WAR OFFICE. — Grenadier Guards: Brigade Surgeon Arthur G. Elkington has been placed upon retired pay, with the honorary rank of Deputy Surgeon-General (dated Nov. 5th, 1887); Surgeon-Major W. R. Lane, Scots Guards, succeeds to the appointment of Principal Medical Officer of the Brigade of Guards by the retirement of Brigade Surgeon Elkington, but will retain it only until September next, as he himself will then have to retire for age.

ARMY MEDICAL STAFF.—Surgeon-Major Espine Charles Robert Ward, half-pay, has been granted retired pay (dated Oct. 28th, 1887); and Quartermaster and Honorary Captain William Amphlett Moss is granted retired pay, with the honorary rank of Major (dated Nov. 5th, 1887).

ADMIRALTY.—The following promotion has been made:—Staff Surgeon Frederick McClement, M.D., to be Fleet Surgeon in Her Majesty's Fleet (dated Oct. 25th, 1887).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Northumberland Fusiliers:—Duncan Stewart, Gent., to be Acting Surgeon (dated Nov. 5th, 1887).

VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Surgeon Adam Watson is granted the honorary rank of Surgeon-Major (dated Nov. 5th, 1887).

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of the College, held on Thursday, Nov. 10th, the Minutes of the last meeting were read and confirmed.

Two Members were removed from being Members of the College, and called upon to return their diplomas, as required by Clause 5, Section xvi., of the Bye-laws.

The appointment of Pathological Curator was deferred.

The President reported the result of the meeting of the Fellows and Members, and read the resolutions carried at the meeting (*vide* our report of the proceedings, p. 967). After the reading of the first resolution, it was proposed by Mr. Sydney Jones and seconded by Mr. O. Pemberton, "that Members of the College of a certain standing should be empowered to take part in the election of members of the Council." After discussion, Mr. Durham moved and Mr. Lawson seconded: "The previous question—that this motion be not put, and that the Council do proceed to the next business."

After the reading of the second resolution the following motion was passed:—"That the Council accede to the request contained in resolution No. 2, carried at the meeting of Fellows and Members of the College on the 3rd inst.; and in forwarding resolution No. 1, passed at the meeting, the Council desire to state that they have repeatedly and fully considered the several points mentioned in the foregoing resolution, but do not propose to ask for any change in the terms of the Charter for which they have applied to the Privy Council."

A letter was read from Mr. C. Heath resigning his appointment as member of the Court of Examiners. The resignation was accepted, and the vacancy is to be filled up at the ordinary meeting in December.

A letter was read from Mr. Wilde, reporting the transfer into the name of the College of the several stocks forming the residue of the estate of the late Sir Erasmus Wilson.

The consideration of Mr. Hutchison's motion of Aug. 4th was postponed.

Obituary.

W. F. TEEVAN, F.R.C.S., B.A. LOND.

IT is with deep regret that we chronicle the death of Mr. William Teevan at Hawkhurst, on Oct. 22nd, at the age of fifty-three. Forced suddenly—in the very prime of life and vigour of work, with fame and fortune already within his grasp—to withdraw from the ranks of his profession, he lingered for six years, awaiting the termination of a career which was as melancholy in its completion as it was brilliant in its commencement and course. Educated at University College, London, he held, after taking the Fellowship of the College of Surgeons and the B.A. Lond., the House Surgeoncy and the Assistant Demonstratorship of Anatomy to the Hospital. Joining the West London Hospital, he applied himself zealously to clinical and operative surgery. His first important publication was stamped with that thoroughness which was the characteristic mark of his after-work. It was an experimental inquiry into the causation of fractures of the skull, and his conclusions were based upon the effects of shot wounds of the skull-cap. This he published in a *brochure* entitled "The Causation, Diagnosis, and Treatment of Fractures of the Internal Tables of the Skull." Other works of an original character followed, but his appointment to St. Peter's Hospital for Urinary Disease in 1866 lent a new direction to his energy. His contributions gained for him a deservedly high opinion in the estimation of the profession, both at home and abroad, and his name and opinions are often quoted by our continental and American *confrères*. The most important are "Lithotomy," "The Dia-

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gnosis and Treatment of Stricture of the Urethra," "The Treatment of Stricture, Enlarged Prostate, and Stone" (Lettsomian Lectures, 1880), and "Incontinence after Lithotomy in Children."

Whilst suffering from, and with the certain knowledge of, an incurable disease, he took an able and active part in the Medical Congress of 1881, but in 1882 aortic mischief compelled him to relinquish his practice, and he retired to Folkestone. In 1883 the terrible trial of loss of sight was superadded to his sufferings, and just before the end his reason became affected.

Mr. Teevan was ever alert to receive and to test innovations, ever ready to strike out fresh lines of practice himself, and unbiassedly to publish his results. A man is known by his surroundings, and we have often estimated the care, thought, and thoroughness of Mr. Teevan's work by examining his well-filled shelves of well-thumbed books. We have often appreciated the notes, memoirs, and apposite comments which mark Mr. Teevan's collection of the literature of urinary surgery of this century. His museum of instruments was of extreme interest. It was his hobby. It contained his failures and his successes in invention. His out-patient department had many visitors. His explanations of difficult cases were sound, terse, and lucid. His kindness to his patients was proverbial; his generosity great. Many are the tales of monetary help and kindly sympathy which have reached the ears of his co-workers. A brilliant operator, a loyal colleague, a genial friend, Mr. Teevan has passed away prematurely, leaving behind him a personality to imitate and regret.

ROBERT GREENHALGH, M.D.

DR. ROBERT GREENHALGH, whose death took place somewhat suddenly at his residence in Cavendish-square on the 7th inst., received his professional education at the Middlesex Hospital, and afterwards studied at Munich and Vienna. In 1842 he became a member of the Royal College of Surgeons of England, and in 1859 a member of the Royal College of Physicians of London, having previously, in 1853, taken the degree of M.D. at the University of St. Andrews. Some time ago Dr. Greenhalgh was compelled, through bronchial asthma and other physical ills, to retire from practice, though he saw a few old patients even within a few weeks of his decease. For many years he held the offices of Obstetric Physician and Lecturer on Midwifery at St. Bartholomew's Hospital, and also numerous honorary posts, amongst others that of Consulting Physician to the Samaritan Hospital for Women and Children. In 1844 Dr. Greenhalgh was President of the Medical Society of London.

We have received from a correspondent the following particulars of his last illness: "Dr. Greenhalgh had been at home after a recent sojourn at Tunbridge Wells for about fourteen days. During this time he had been well enough to come downstairs, and had not suffered more than was usual with him at this time of the year from his bronchial asthma. On Monday, Nov. 7th, however, his breathing became very difficult, and during the afternoon he seemed much exhausted. At 7 o'clock his dinner was taken to him in his own room, and he was able to eat some of it. He then lay down, thinking to get some sleep, and so he passed away. His daughter, who was with him, sent for Dr. Ferrier, who lived next door, and he came immediately, to find Dr. Greenhalgh dead, soon after 8 o'clock on the Monday evening."

THE LATE DR. WILSON FOX.—Mr. Francis George Heath, editor of *Illustrations*, having forwarded to Her Majesty a copy of the November issue of that magazine, containing a portrait (never before published) of the late Dr. Wilson Fox, has just received the following message from Sir Henry Ponsonby:—"I am commanded by the Queen to thank you for the copy of *Illustrations* containing the memoir and excellent portrait of Dr. Wilson Fox."

MEDICAL MAGISTRATES FOR MIDDLESEX.—William Adams, F.R.C.P., Tower Lodge, Regent's-park-road, and Maurice Davis, M.D., Brunswick-square, have been placed upon the Commission of the Peace for the County of Middlesex and the City and Liberty of Westminster.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations for the diploma of Member, were, at a meeting of the Council on the 10th inst., admitted members of the College:

*Abram, J. Hill, L.R.C.P.Lond., Carter-street, Liverpool.
*Anderson, G. Reinhardt, L.R.C.P.Lond., Westborne-villas, West Brighton.
Adams, Gerald Wheatly, L.R.C.P.Lond., Greek-st., Stockport.
Arnim, H. C. Leffler, L.R.C.P.Lond., Hinde-street.
Atkinson, Guy C. Barlow, L.S.A., Danby Parsonage, Grosmont.
Baxendell, Arthur, L.S.A., Rose Hill, Denton, Manchester.
*Bearblock, W. J., L.R.C.P. Lond., Stoke-terrace, Devonport.
Blackie, A. Babington, L.R.C.P.Lond., Bierska-road, Clapham.
*Booth, Daniel, L.R.C.P.Lond., Wall-street, Ripley, Derbyshire.
Braine, Charles Carter, L.R.C.P.Lond., Maddox-street.
*Browning, Edgar, L.R.C.P.Lond., Clarendon-sq., Leamington.
Bullock, T. Warren, L.S.A., Spring-grove, Isleworth.
*Buswell, Ferberd R., L.R.C.P.Lond., Ladbroke-grove-road.
*Campbell, H. J., L.R.C.P.Lond., Brackley, Bexley-rd., Erith.
Capes, Robert, L.R.C.P.Lond., Canbury House, Kingston.
Carnall, Edward, L.S.A., Fowey, Cornwall.
Castel, A. Leo, L.R.C.P.Lond., Osnaburgh-st., Regent's-park.
Challenor, W., L.S.A., Bismark-road, Highgate.
Cheatle, G. Lenthel, L.S.A., Vereker-road, West Kensington.
*Cole, Samuel J., L.R.C.P.Lond., Bery, Haitland, North Devon.
*Comerford, Beaumont Harry, L.R.C.P.Lond., St. George's-road.
Cotes, Digby Francis Baynes, L.S.A., Penton, Swindon, Wilts.
Daniel, E. Clement Sephton, M.B.Edin., Brampton, Hunts.
Davis, William, L.R.C.P.Lond., Manor-road, Brockley.
Dixon, C. Henry, L.R.C.P.Lond., Abingdon, Berks.
Dodd, P.Vernon, L.R.C.P.Lond., Petherton-rd., Highbury-new-pk.
Evans, W. Norman, L.R.C.P.Lond., Thurloe-road, Hampstead.
*Fawsett, Frank, L.R.C.P.Lond., Fairlight, Hampton Wick.
Finnicane, Morgan Ignatius, L.S.A., Wilton House, Southsea.
*Fisher, W., L.R.C.P.Lond., Erfurt Lodge, Greenwich.
*Gibbens, Frank Edward, L.R.C.P.Lond., Hunter-street.
Gilchrist, T. Casper, L.S.A., Victoria-street, Crewe, Cheshire.
Gilford, Hastings, L.R.C.P.Lond., Beech-grove, Redhill,
*Gimson, W. Douglas, L.R.C.P. Lond., Witham, Essex.
Goodchild, Nathaniel J., L.R.C.P.Lond., Sidney House, Highgate.
Griffiths, W. A., L.R.C.P.Lond., Redgrave-villas, Victoria-road.
*Hammersley, P. H. Vickers, L.R.C.P.Lond., Bridge House, Leeks, Staffs.
Hemming, Claude Philip, L.S.A., Highfield, Bishop Waltham.
Hemming, John J., L.S.A., Concrete House, Swindon.
Hillyer, W. H., L.R.C.P.Lond., Ellerslie, Balham-park-road.
Hinde, F. R. Berthon, M.B., C.M.Ed., General Hosp., Nottingham.
*Hogarth, Christopher Whewall, L.R.C.P.Lond., St. Lawrence-rd.
*James, C. Henry, L.R.C.P.Lond., St. Thomas's Hospital.
*James, Coram Llewellyn Stuart, L.R.C.P.Lond., Windsor-road, Forest-gate.
*Jarvis, J. H. E., L.R.C.P.Lond., Barron-hill-place, Ashford.
Lancaster, E. le Cronier, M.B., B.S. Oxon., Wharton-road, West Kensington-park.
*Lane, Frank, L.R.C.P.Lond., Fairholt-road, Stoke Newington.
Ledward, Milton Prentice, L.S.A., York-st., Cheetham, Manchester.
Lewis, Charles Mortimer, L.R.C.P.Lond., Henfield, Sussex.
Lewis, H. W., L.R.C.P.Lond., Doddington-grove.
Littig, Lawrence W., M.D. Pennsylvania, Davenport, Iowa.
Mc Carthy, Ibar Ausbert Orva, L.R.C.P.Lond., Imborough-road.
Martyn, Reginald, L.R.C.P.Lond., Falkland Park, Torquay.
*Marvin, H. F. Churton, L.R.C.P.Lond., Agate-rd., Hammersmith.
Matthews, C. E., L.R.C.P.Lond., St. Thomas's Hospital.
Morse, F. Batho, L.S.A., Gerard-street, Soho.
Mortimer, W., L.R.C.P.Lond., Richmond, Cape Colony.
*Moyniham, Berkeley G. A., L.R.C.P.Lond., Millgarth-st., Leeds.
Parker, W. Turnour, L.S.A., Lillie-road, Fulham.
Pearse, Frank, L.R.C.P.Lond., Marquess-road, Canonbury.
*Penny, Jeremiah, L.R.C.P.Lond., Combe, Crewkerne, Somerset.
Plummer, H. Beddoes Wetherell, M.B.Durh., Whitehouse, West Hartlepool.
*Reading, Richard Fairfax, L.R.C.P. Lond., Middlesex Hospital.
Richardson, Alfred Ernest, Kibworth, Leicester.
Roxburgh, Alex. Bruce, L.R.C.P. Lond., New-street.
*Selby, Prideaux George, L.R.C.P. Lond., Koroit, North-park, Croydon.
Scott, Kenneth Mackenzie, M.B., C.M. Ed., Raine-park-road, Edinburgh.
Sidebotham, Harold, L.R.C.P. Lond., Church-street, Hyde, Cheshire.
Spencer, Matthew Hy., L.R.C.P. Lond., Park-road, New-cross.
*Stiles, Theodore Mayo, L.R.C.P. Lond., Woodland Bank, Bristol.
Stocks, William Percy, L.S.A., Oldham Infirmary.
*Sully, Albert Max., L.R.C.P. Lond., The Colony, Burnham.
*Surzuki, Shigemichi, L.R.C.P.Lond., Lambeth Palace-road.
Swindles, Edgar, L.R.C.P. Lond., King's-road, Clapham-road.
Thomas, Richard Francis, L.R.C.P. Lond., Dunraven, Treherbert.
*Thompson, Walter, L.R.C.P. Lond., East Rigton, Bardsey, Leeds.
Trechmann, M. Lincoln, M.B., C.M., Norton Lodge, Stockton-on-Tees.
*Turton, Robert Straker, L.R.C.P. Lond., Halsey-street.
*Vickery, William Henry, L.R.C.P. Lond., Kingsbridge, South Devon.
Walcott, Thomas, M.B., C.M. Ed., Northumberland-street, Edinburgh.
Ward, Arthur Henry, L.R.C.P. Lond., Stafford-place.
Watkins, Frank Augustus, L.R.C.P.Lond., Stowe Park, Newport, Mon.
*Whitehurch, Henry Frederick, L.R.C.P.Lond., Chetwynd-road, Highgate-road.

* Candidates under the Regulations of the Examining Board in England.

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*White, John Houghton, L.R.C.P.Lond., Welbeck-street.
Wigglesworth, Sidney, L.R.C.P.Lond., Albert-road, Southport.
*Wilde, R. Gerard, L.R.C.P.Lond., Westbourne, Emsworth, Hants.
Wright, Bernard Duncan Zorapore, L.R.C.P.Lond., Kildare-terrace.
Wright, Edmund Hasall, L.R.C.P.Lond., Springfield-road, St. John's Wood.
Wynne, Edwd. Thos., L.R.C.P.Lond., Argyle-road, Kensington.
Ziemann, Herrman Peter, Purborough-road.

* Candidates under the Regulations of the Examining Board in England.

The following gentlemen having passed the necessary examinations were at a meeting of the Council on the 10th inst. admitted Licentiates in Dental Surgery:—

Ackland, Robert, Southernhay, Exeter.
Badcock, John Henry, Tottenham-court-road.
Colyer, J. Frank, Hazeldene, Thurlow-park-road, West Dulwich.
Goard, Thomas Arthur, Portland-square, Plymouth.
Jones, Albert Sidney, Bridge House, Stamford.
Kendall, William Henry, Chapel-street, Warwick.
Miller, Frederick Tayler, Baron's-court-road, West Kensington.
Morley, Charles Reginald, London-road, Derby.
Picton, Henry, Annandale, Rossiter-road, Balham.
Saul, Barnett Bendet, Hereson, Ramsgate.
Smith, Arthur Hopewell, Lindon House, Boston, Lincolnshire.
Stoner, Harry John, Western-road, Brighton.
Wakefield, Stanley Bennett, Bevan-villas, Lower Richmond-road, Putney.

VICTORIA UNIVERSITY, MANCHESTER.—On the 4th inst. the degree of Bachelor of Medicine was conferred on the following gentlemen:—

Bury, Frederic Charles, Owens College.
Robinson, Frederick Gardner, Owens College.

NEW COTTAGE HOSPITAL.—Mr. J. W. Maclure, M.P., has decided to erect and equip a cottage hospital for Hulme.

LITERARY INTELLIGENCE.—A new work, entitled "Tätowiren: Narbenzeichnen und Körperbemalen," by W. Joest, is about to be issued in Berlin by Archer and Co.

VACCINATION GRANT.—Mr. Ernest S. Medcalf, public vaccinator, Steyning Union, Hove, has received the Government grant for successful vaccination.

HEREDITY AND NURTURE.—The proposed course of lectures by Mr. Francis Galton on this subject at the South Kensington Museum is unavoidably postponed.

EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL.—The Earl of Meath has consented to take the chair at the ninth festival dinner of this charity, to be held at Willis's Rooms on Thursday, the 24th inst.

MEASLES.—An epidemic of measles prevails in several of the villages and hamlets of East Kent. At Boughton a large portion of the juvenile population are attacked.

THE DENTAL HOSPITAL OF LONDON.—The Annual Dinner of the staff and past and present students will be held on Saturday, December 3rd, at the Holborn Restaurant, under the presidency of George Gregson, Esq.

TWO deaths from hydrophobia have just occurred at Bradford. During the past two years the police authorities of that town have, under the dog regulations, destroyed more than 2000 animals.

A FRENCH photographer has shown that the light emitted by the glowworm is possessed of actinic properties sufficient to produce a distinct photographic image of the holes in a cardboard box in which one of these animals was crawling about.

ROYAL SOCIETY.—Amongst the names recommended by the President and Council of the Royal Society for election into the Council for 1888, at the anniversary meeting on the 30th inst. are those of Sir W. Bowman, Prof. D. Ferrier, and Dr. A. Gamgee.

FORMING part of the Lord Mayor's Procession on Wednesday was a company of the Volunteer Medical Staff Corps, which, like other portions of the pageant, would have appeared to better advantage had the weather been more favourable.

SANITARY REFORM IN TURKEY.—A reduction of the sanitary dues on shipping, with certain quarantine reforms, having been decided upon in Constantinople, an international committee has been appointed to draw up the new tariff and rules.

MEDICAL SCHOLARSHIPS.—The Entrance Scholarship, of £125 at St. George's Hospital Medical School, open to the sons of medical men, has been awarded to Mr. R. G. Turner. At the University College, Liverpool, the Holt Tutorial Scholarships, value £100 each, have been awarded to Mr. W. Thelwell Thomas and Mr. Randall Leigh.

THE prospectus of the forthcoming International Exhibition to be held at Brussels has been issued. The exhibits are divided into forty-nine classes, amongst which are the following:—Scientific Instruments, Medicine and Surgery, Chemistry and Allied Industries, Pharmacy, and Foods.

THE Association of Public Sanitary Inspectors entered upon the fifth year of their proceedings on the 5th inst., when a large body of members attended at the Westminster Town Hall to hear the inaugural address of Mr. Hugh Alexander, the chairman of the Council for the ensuing year.

CENTENARIANS.—On the 5th inst., Mrs. Michael of North Somercotes, Lincolnshire, attained her hundredth year, and on the same day was recorded the death of Mrs. Margaret Brace at the age of 104 years.—On the 6th inst., Mrs. Rees, living near Llandovery, celebrated her hundredth birthday.

LEAMINGTON AND WARWICK HOSPITAL. — The foundation stone of the new sanitary hospital for the Warwick Joint Hospital Board was laid at Heathcote on the 7th inst. by the Mayor of Leamington. The site contains about six acres and has cost about £1200. The hospital, which will provide accommodation for twelve patients, six of either sex, will, it is estimated, cost nearly £7000, including the necessary administration buildings.

THE UNITED GUYITE CLUB OF 1868.—The nineteenth annual meeting of this club was held at the Holborn Restaurant on Wednesday, Nov. 2nd, when Mr. G. S. Elliston of Ipswich took the chair. As next year will be the twentieth anniversary of the foundation of this club, the chairman expressed a wish, which was unanimously adopted by those present, that in 1888 every member should be present at the annual dinner, and it was further suggested that each member should bring a friend who had been educated at Guy's Hospital.

MEDICAL MAYORS.—The following members of the medical profession were elected mayors on the 9th inst.:—Alderman J. B. Stedman, Godalming; Alderman David Thompson (second time), Launceston; Alderman Clubbe, Lowestoft; Mr. W. Nettle, Liskeard; Major Adam Wilkinson, Shaftesbury; Alderman John Jones, Wrexham; Dr. Colmer, Yeovil; Mr. G. Booth, Chesterfield; Mr. William Rhodes (re-elected), Bridgnorth; Mr. J. C. Macaulay, Honiton; Alderman Samuel Farrant (re-elected), Taunton; and Mr. C. E. Baker (re-elected), Tenterden.

SMALL-POX IN SHEFFIELD.—The outbreak of small-pox in Sheffield has assumed serious proportions; as many as 100 fresh cases occur each week, and as the hospital accommodation is inadequate, it has been decided to erect temporary buildings a few miles outside Sheffield to accommodate eighty cases, these being in addition to the two existing hospitals. At the meeting of the Town Council on the 9th inst. it was decided to close the lending departments of all the free libraries in the town, to prevent the spread of the disease by means of infection brought by books.

BOOKS ETC. RECEIVED.

BARRIE, GEORGE, Philadelphia; CROSBY LOCKWOOD & SON, London.
Autobiography of Samuel D. Gross, M.D. &c. With Sketches of his Contemporaries. Edited by his Sons. In 2 Vols. pp. 407+437.

BELL & BRADFUTE, Edinburgh.
Medical Diagnosis: a Manual of Clinical Methods. By J. Graham Brown, M.D., F.R.C.P.Ed. Third Edition. pp. 380, Illustrated.

BRYCE & SON, Glasgow.
Our Children: a Guide to Mothers. By Robt. Bell, M.D. pp. 232, 2s. 6d.

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CAMBRIDGE UNIVERSITY PRESS.

Elementary Chemistry. By M. M. Pattison Muir, M.A., and Charles Slater, M.A., M.B. pp. 368.

Practical Chemistry: a Course of Laboratory Work (companion work to the above). By M. M. Pattison Muir, M.A., and Douglas Carnegie, B.A. pp. 224.

CASSELL & Co., London, Paris, New York, & Melbourne.

The Natural History of Cow-pox and Vaccinal Syphilis. By Chas. Creighton, M.D. pp. 160.

CHURCHILL, J. & A., New Burlington-street, London.

Illustrations of Clinical Surgery. By Jonathan Hutchinson, F.R.S., LL.D. Fasc. XX. and XXI. 6s. 6d. each part.

Contributions to Clinical and Practical Medicine. By A. T. H. Waters, M.D., F.R.C.P.Lond. pp. 195.

The Saliva as a Test of Functional Disorders of the Liver. By Samuel Fenwick, M.D., F.R.C.P. pp. 78.

CLARENDON PRESS, Oxford.

Lectures on Bacteria. By Prof. A. De Bary. Second Edition, improved. Authorised Translation by H. E. F. Garnsey, M.A. Revised by I. B. Balfour, M.A., M.D., F.R.S. pp. 193, with 20 woodcuts.

CLOWES & SONS, Charing-cross, London.

Accidental Injuries, their Relief and Immediate Treatment. By James Cantlie, M.A., M.B., F.R.C.S. Twelfth Edition, revised and enlarged. pp. 162, Illustrated. 1s. 6d.

GILL & SONS, Warwick-lane, London.

A Complete Picture Gallery of the Animal Kingdom, in which 735 woodcuts, arranged systematically, Illustrate all the Commoner Forms of Animal Life. pp. 120. 8s.

Fairy Life and Laughter. By Isabel Lawford. pp. 96, with 85 Illustrations. 3s. 6d.

KEGAN PAUL, TRENCH & Co., Paternoster-square.

Animal Megnetism. By Dr. A. Binet and Charles Féré. pp. 378. 5s.

LEUZINGER & FILHOS, Rio de Janeiro.

Atlas des Maladies de la Peau. Par le Dr. Silva Araujo. Fasc. 1, 2, and 3.

LIVINGSTONE, E. & S., Edinburgh.

The Students' Handbook of Chemistry. By H. L. Greville, F.I.C., F.C.S. Second Edition. pp. 488.

LONGMANS, GREEN, & Co., Paternoster-row, London.

The Marriage of Near Kin, considered with respect to the Laws of Nations, the Results of Experience, and the Teaching of Biology. By Alfred H. Huth. Second Edition, revised. pp. 475.

A Short Manual of Surgical Operations. By Arthur E. J. Barker, F.R.C.S. pp. 423, with 61 Illustrations. 12s. 6d.

Transactions of the Clinical Society of London. Vol. XX. pp. 377, Illustrated.

Euthanasia, or Medical Treatment in Aid of an Easy Death. By Wm. Munk, M.D., F.S.A. pp. 105. 4s. 6d.

Experimental Chemistry for Junior Students. By J. E. Reynolds, M.D., F.R.S., &c. Part IV.: Chemistry of Carbon Compounds, or Organic Chemistry. pp. 384, with Illustrations. 4s.

MARCUS WARD & Co., Farringdon-street.

Teneriffe and its Six Satellites, or the Canary Islands past and present. By Olivia M. Stone. In Two Volumes. pp. 477—457. Illustrated.

PENTLAND, YOUNG J., Edinburgh.

Medical Electricity. By Roberts Bartholow, A.M., M.D. Third Edition, enlarged and improved. pp. 304, with 110 Illustrations.

A Manual of Treatment by Massage and Methodical Muscle Exercise. By Jos. Schreiber, M.D. Translated by W. Mendelson, M.D. pp. 285, Illustrated.

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By Samuel W. Gross, A.M., M.D., LL.D. Third Edition, thoroughly revised. pp. 172, with 16 Illustrations.

A Compend of Human Anatomy. By S. O. L. Potter, M.A., M.D. Fourth Edition, revised and enlarged. pp. 247, with 117 Illustrations.

Maternity, Infancy, and Childhood. By J. M. Keeting, M.D. pp. 221.

Outlines for the Management of Diet. By E. T. Bruen. pp. 135.

The Nursing and Care of the Nervous and the Insane. By C. K. Mills, M.D. pp. 147, Illustrated.

The Life and Recollections of Doctor Duguid of Kilwinning. Edited by J. Service, L.R.C.S. & P.Ed. pp. 287.

Manual of Clinical Diagnosis. By D. Otto Seifert and Dr. Friedrich Müller. Third Edition, revised and corrected. Translated by W. B. Canfield, A.M., M.D. pp. 173, Illustrated,

SCOTTISH TEMPERANCE LEAGUE, Glasgow.

Her Only Son. By the author of "Nelly's Dark Days." pp. 109, Illustrated.

The Adviser: a Book for Young People. pp. 104.

SHAW & SONS, Fetter-lane, London.

The Public Health Act, 1875, annotated, with an Appendix. By W. G. Lumley, LL.M., Q.C., and H. Lumley, B.A. Third Edition, with Additions, by W. Patchett, Q.C., and A. Macmorran, M.A. pp. 1305. 32s. 9d.

TREAT, R. B., New York.

A Practical Treatise on Diseases of the Hair and Scalp. By G. T. Jackson, M.D. pp. 356, with Illustrations. $2.75.

A System of Gynæcology. By American Authors. Edited by Matthew D. Mann, A.M., M.D. Vol. I. pp. 789, with 3 coloured and 201 Engravings.

TRÜBNER & Co., Ludgate-hill, London.

A Short Practical Treatise on the Nature, Causes, and Treatment of Cholera. By Deputy Surg.-General H. W. Bellew, C.S.I. pp. 204.

Women and Work. By Emily Pfeiffer. pp. 186.

Alassio: a Pearl of the Riviera. By Dr. Jos. Schneer. pp. 80.

Cholera and Water in India; by M. C. Furnell, M.D., F.R.C.S. (Churchills).—Grand Canary as a Health Resort; by Mordey Douglas, L.R.C.P., &c. (Churchills).—Digestion and Indigestion; by De Quintin. 2s. 6d.—The Ambulance Pupil (Crosby Lockwood & Co.).—The Otophone; by J. A. Maloney, D.C.—The Horse in Sickness, and how to Treat him; by John Cookram (Upcott Gill).—Report of the Chapter of the Order of St. John of Jerusalem, 1887.—Transactions of the Medical and Chirurgical Faculty of the State of Maryland, 89th Session. Des Progrès accomplis sur la question de la Rage; par le Dr. Duboué (Masson, Paris).—Ueber die antiseptische Wirkung des Iodoforms; von Dr. M. T. Schnirer.—How to Play the Fiddle; Second Edition; by H. W. and G. Gresswell.—The English Meat Supply; by A Farmer (Bates, Grace-church-street). 3d.—Index Medicus, Vol. IX., No. 9.—A Letter to the Right Hon. Lord Aberdare, Chairman of the Managing Committee of the Hospital for Sick Children; by Charles West, M.D.—Surgical Relations of the Ileo-cæcal Region; by J. Mc F. Gaston, M.D.—Story of a Blind Mute; by C. Macculloch (Gemmell, Edinburgh).—A Note on Indo-European Phonology; by D. B. Murdoch, L.R.C.P., &c. (Trübner, London). — Magazines for November: Good Words (with Christmas Number, "While Golden Sleep doth Reign"); Sunday Magazine (with Christmas Number, "Little Snow Flakes"); Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Scribner's Monthly.—The American Journal.—Histoire des Progrès de la Laryngologie; par Dr. Gordon Holmes; traduit par le Dr. Calmettes.—Die Geschichte der Laryngologie; von Dr. Gordon Holmes; aus dem Englischen übersetz von Dr. Otto Koerner.—La Responsabilità del Governo nella Salute Pubblica. — Notes on Dental Surgery; by J. Smith, M.D., LL.D. (Maclachlan and Stewart, Edinburgh).

Births, Marriages, and Deaths.

BIRTHS.

BULL.—On the 7th inst., at St. Oswald's House, Stony Stratford, the wife of Wm. H. Bull, F.R.C.S., of a daughter.

CRAWFORD.—On the 2nd inst., at St. John's-park, Blackheath, the wife of Sir Thomas Crawford, K.C.B., Director-General, Army Medical Department, of a son.

LAMB.—On the 15th ult., at River View, Ashton-on-Ribble, Lancs., the wife of Hugh Lamb, M.R.C.S., L.R.C.P.Lond., of a son.

MORRIS.—On the 9th inst., at Gordon Lodge, Charlton-road, Blackheath, S.E., the wife of Clarke J. Morris, M.R.C.S., of twin daughters.

TEACHER.—On the 29th ult., at 5, Newington-road, Edinburgh, the wife of Charles C. Teacher, M.B., C.M., of a son.

WARBURTON.—On the 31st ult., at Wiesbaden, the wife of G. A. Warburton, M.D., of a son.

WIGMORE.—On the 31st ult., at Twerton-on-Avon, Bath, the wife of J. Wigmore, M.D., of a son.

MARRIAGES.

COLET—MACLEAN.—On the 2nd inst., at Bombay, by the Rev. Dr. Mackichan, of the Free Church College, Clement C. Colet, M.B., M.S., Professor of Physiology in the Medical College, Lahore, to Mary MacLean, of Heathfield House, Hampstead-heath.

DAVIES—LLEWELLYN.—On the 1st inst., at St. Paul's, Burdett-road, Hughes Reid Davies, L.R.C.P., M.R.C.S., to Edith Amie, elder daughter of Dr. Evan Llewellyn, of The Limes, Bow.

TAYLER—RODWAY.—On the 2nd inst., at St. Mark's Church, Bath, George Christopher Tayler, M.D., to Maria Louisa, eldest daughter of the Rev. E. J. Rodway, of Weston-super-Mare.

DEATHS.

BROWNE.—On the 30th ult., at his residence, Heathwood, Leighton Buzzard, William Browne, M.D., late of The Friary, Lichfield.

GREENHALGH.—On the 7th inst., at Cavendish-square, Robt. Greenhalgh, M.D. (late of Grosvenor-street), in his 69th year.

HALE.—On the 2nd inst., at Cavendish-place, Brighton, Robt. Douglas Hale, M.D., aged 71.

JACKMAN.—On the 2nd inst., at 114, Brixton-hill, William Thomas Jackman, M.R.C.S., &c., eldest son of Thomas S. H. Jackman, L.R.C.P.Lond., of Stoke Newington, N., in his 34th year.

PITT.—On the 27th ult., at London, William Pitt, Surgeon-Major, Bengal Army, retired list, aged 72.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANNACKER, ERNEST, M.D. Berlin, M.R.C.S., L.R.C.P.Lond., has been appointed House-Surgeon and Resident Obstetric Assistant Surgeon to St. Mary's Hospital for Women, Manchester, vice Donald, resigned.

CARLETON-JONES, GUY, M.R.C.S., has been appointed Assistant House-Accoucheur to King's College Hospital.

CARTER, R. T., M.R.C.S., L.S.A., has been appointed House-Surgeon to King's College Hospital.

CHEATLE, G. L., M.R.C.S., L.S.A., has been appointed House-Surgeon to King's College Hospital.

CHILCOTT, ARTHUR E., M.R.C.S., has been appointed House-Surgeon to St. Mark's Hospital, City-road.

EWENS, G. F. W., M.B., M.R.C.S., L.R.C.P., has been appointed Ophthalmic Clinical Assistant to King's College Hospital.

GIBBARD, T. W., M.R.C.S., L.S.A., has been appointed House-Surgeon to King's College Hospital.

GRIFFITHS, WALTER S. A., M.B., F.R.C.S., M.R.C.P., has been appointed Obstetric Physician to In-patients at the Great Northern Central Hospital, vice G. C. P. Murray, M.D., deceased.

HENSLEY, A. E., M.R.C.S., L.S.A., has been appointed House-Physician to King's College Hospital.

JACKSON, ALLAN HESLOP, M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer to the Lowestoft Hospital.

PHILLIPS, EDWARD ENGLAND, L.R.C.P. Ed., M.R.C.S., has been re-appointed Medical Officer of Health for the Rochford Rural Sanitary District, Essex.

RILEY, ROWLAND J., has been appointed Obstetric and Ophthalmic House-Surgeon to the Queen's Hospital, Birmingham, vice M. W. Oldham, L.R.C.P.Lond., M.R.C.S.

SHANN, WILLIAM ARTHUR, M.B.Cantab., M.R.C.S., L.R.C.P.Lond., has been appointed Medical Officer to the Lowestoft Hospital.

SMART, WM. HERBERT, M.A. Cantab., M.B., M.R.C.S., has been appointed House-Surgeon to the Royal Hants County Hospital, Winchester, vice O. Ewart, resigned.

STEPHENS, R. I., L.S.A., has been appointed Physician Accoucheur's Assistant to King's College Hospital.

WALFORD, EDWARD, M.D. Univ. Dur., S. Sc. Cert. Cantab., has been appointed Medical Officer of Health for the Cardiff Urban and Port Sanitary Districts, vice Paine, resigned.

WALTERS, F. R., M.D., B.S.Lond., F.R.C.S.Eng., has been appointed Physician to the North London Consumption Hospital.

WARD, H. P., M.R.C.S., L.S.A., has been appointed Assistant House-Physician to King's College Hospital.

WARE, GEORGE STEPHEN, M.R.C.S., L.R.C.P., L.S.A., formerly House-Surgeon, has been appointed Casualty House-Surgeon to the Middlesex Hospital.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary £120 per annum, increasing by £10 per annum to £150, with furnished apartments, board, and attendance.

BOROUGH OF SHEFFIELD.—Medical Officer of Health. Salary £500 per annum.

BOSCOMBE PROVIDENT INFIRMARY, Bournemouth. — Resident Medical Officer. Salary £60 per annum, with board and residence.

HANGLETON HOSPITAL, HOVE.—Medical Superintendent. Salary £50 a year, with additional fees.

LINCOLN COUNTY HOSPITAL.—House-Surgeon. Salary £100 per annum, with board, lodging, and washing.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum, with apartments, board, and attendance.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Physician for Out-patients.

PARISH OF LIVERPOOL.—Assistant Medical Officer for the Workhouse, Brownlow-hill. Salary £30 per annum, with apartments, rations, and additional sum of £20 for examining applicants for out-door relief.

PARISH OF ST. MARY, Islington.—District Medical Officer. Salary £100 per annum, with such extra medical fees as are defined by the Orders of the Local Government Board.

ROYAL ALBERT ASYLUM FOR IDIOTS AND IMBECILES OF THE NORTHERN COUNTIES, Lancaster.—Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150, with board, apartments, and washing.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, Strand, W.C.—Assistant Surgeon.

THRAPSTON UNION.—Medical Officer. Salary £50 per annum, exclusive of medical extras and vaccination fees.

WALLASEY DISPENSARY.—House-Surgeon. Salary £120 per annum, with furnished apartments, coals, and gas.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W. — Honorary Dental Surgeon.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 10th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Nov. 4	28·98	S.W.	49	46	83	57	45	·62	Fine
,, 5	29·54	W.	42	41	...	52	40	·14	Foggy
,, 6	29·41	S.W.	51	48	82	54	41	·20	Fine
,, 7	29·49	N.E.	45	44	...	51	42	...	Hazy
,, 8	29·78	E.	50	48	65	52	45	·33	Overcast
,, 9	29·95	E.	49	48	...	49	47	·15	Raining
,, 10	29·84	E.	47	46	...	49	46	·41	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

MEDICAL OFFICERS OF HEALTH AND GENERAL PRACTITIONERS.

Dr. Stewart.—A medical officer of health has no right in virtue of his office to visit patients suffering from infectious or other diseases, unless with the consent of the patients, or of those who represent them during their illness. There are occasions when it may be most desirable, and even necessary, for a medical officer of health to visit a patient, in order that he may advise his authority correctly; but these occasions are not ordinary ones, and when they arise it is of the utmost importance, both for the maintenance of the proper status of his office and the credit of his profession, that he should act in harmony with the medical attendants of the sick, on whom he is also necessarily dependent for valuable assistance. The current duty of a medical officer of health in the case of infectious sickness does not involve examination of the patient; it can be performed by accepting the diagnosis of the medical attendant, and by then seeking to discover the local circumstances favouring the sickness, and advising as to the best means of prevention.

A CORRESPONDENT, whose signature is undecipherable, but which appears like "*E. A. Stanford*," is referred to a paragraph in our last issue.

Mr. Lambert.—If samples be forwarded, they will have attention in the usual way.

SYPHILIS FOLLOWING TATTOOING.

To the Editors of THE LANCET.

SIRS,—At page 911 of your last issue, Mr. Grenville Moffet states, with reference to several cases of syphilitic infection following the operation of tattooing, "the only reference to this subject that I have been able to find is in Lancereaux's treatise &c." To those interested I would beg to point to Sections 1640:6 of both Medical Digest and Appendix, where several cases are noted; one paper published in THE LANCET nine or ten years ago, recording fourteen victims of syphilitic infection occurring in the practice of a celebrated tattooer.

I am, Sirs, your truly,

Boundary-road, N., Nov. 5th, 1887. RICHARD NEALE, M.D.Lond.

*** Much time and some of our space would often be saved if correspondents would consult Dr. Neale's valuable Digest in reference to the occurrence or record of pathological events.—ED. L.

COTTAGE HOSPITALS.

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly inform me where I can obtain copies of the rules of cottage hospitals, which I require as a model.

I am, Sirs, yours truly,

Great Yarmouth, Nov. 5th, 1887. ARTHUR WM. BLAKE, M.I.N.A.

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THE GROWTH OF THE COCA TREE IN ASSAM.

THE *Monthly Magazine of Pharmacy* is informed by Mr. J. Buckingham, of Amgooria, Assam, who is now making a set of experiments on coca growing on his plantations, that the plants are all healthy, and have borne berries. He has gathered a small quantity of the leaves, and has had them dried and prepared like tea-leaves are for the market. This news is not unsatisfactory, as it is understood that at Darjeeling, where Mr. Hamstead of Seeyok and other planters have endeavoured to raise coca plants, the experiments have all resulted in failure, and this is generally attributed to the fact of the climate being too cold at certain periods of the year. It is quite possible that coca leaves raised in the East Indies, the plant being a native of the West Indies, may not possess the same valuable properties as those now used for the extraction of cocaine, but the experiment was certainly justifiable after the experience gained with regard to the cinchona tree, also transplanted from the West to the East, and yielding abundance of alkaloids in the Nilgheery Hills, if not elsewhere.

Alpha.—We think our correspondent can only recover against the person who requested his services; but he had better consult a solicitor.

C. E. M.—We cannot take the responsibility of recommending any particular work of a legal nature.

Mr. J. Abbott.—The address of the hon. secretary, Mr. A. G. Bateman, is 67, Longridge-road, S.W.

THE LOCAL APPLICATION OF CONDY'S FLUID IN SYPHILITIC GLOSSITIS.

To the Editors of THE LANCET.

SIRS,—The following case will perhaps prove interesting to readers of THE LANCET.

I was summoned to attend a man apparently about the middle period of life who presented the following appearance:—The lips were much swollen, and the mouth was quite full of a red ulcerated mass (from which unhealthy, malodorous pus was oozing), which on inspection proved to be his tongue. He was barely able to speak, and could with great difficulty swallow small quantities of liquid only. On closer examination I detected several deep fissures both on the under surface and dorsum, having indurated edges from half a line to a line in breadth. Offensive pus was welling up from the bottom of these fissures. One extended from within half an inch of the tip of the tongue for an inch and a half backwards, being nearly three-quarters of an inch deep. Another, on the right side, near the edge, ran parallel with the first, but was not so long or deep. A third extended downwards and backwards from the left side to the under surface. There were others smaller, some evidently healing, and more just beginning to ulcerate. The man complained of pain and soreness over the whole of the tongue and neck, but I could find no evidence of glandular involvement. He also suffered from "dyspepsia tonique," but was otherwise quite healthy. He informed me that he had been under several medical men, who invariably prescribed mercurials with tonics and applied solid nitrate of silver to the ulcers (some even recommended removal of a portion of the organ). This line of treatment was usually followed by alleviation of pain after some time and reduction of size, the fissures gradually lessening in number and extent, but no cure or permanent improvement. I prescribed Condy's fluid as a lotion, directing the patient to wash out the oral cavity every four hours with it, and gave the usual stomachic remedies. I called again in two days, and was much gratified to find the tongue appreciably diminished in size, the pus no longer offensive, but lessened in quantity, and that the patient could swallow fluids with greater ease. After an equal interval the patient felt much better; the dyspepsia was relieved, and at the end of ten days I noticed some of the fissures beginning to close, and could find no fresh ones. In three weeks all the fissures had healed, except the large central one and the one going downwards towards the under surface. These were, however, greatly reduced in size and depth, there being no marginal induration. At the end of two months he considered himself cured, and stopped the lotion, but in a fortnight after had to apply to me again, as an ulcer was beginning to appear far back at the root of the tongue. I ordered the same remedy as before, with like satisfactory result. He now always uses the lotion whenever any prodromal symptoms, such as pain or tumefaction, warn him. There has been no relapse for the past eight months. For diet I gave as much new milk as he could take, also meat juice, with one bottle of stout per day. I wish to add that I ceased to administer medicine of any sort after subduing the gastric trouble, though there was an obscure history of primary hard sore, but no secondaries, some fifteen years before.

I am, Sirs, yours faithfully,

Ferns, Co. Wexford, October, 1887. G. GREENE.

ETHER IN MIDWIFERY PRACTICE.

To the Editors of THE LANCET.

SIRS,—It fell to the lot of Dr. Rumboll and myself to deliver a primipara, aged thirty-four, by forceps after a ten hours' labour, during which much chloroform and ether were given. The child was apparently lifeless. Artificial respiration was kept up perseveringly by Dr. Rumboll, and the thorax was sharply slapped and sprinkled with hot and cold water, but with little result. We then injected ether subcutaneously, and improvement commenced. I do not see this use of ether mentioned in the midwifery books at my disposal.—I am, Sirs, yours truly,

Melksham, Nov. 2nd, 1887. S. GROSE.

WANT OF AN ASYLUM FOR INCURABLES IN LYONS.

DR. AUGAGNER of Lyons, editor of *La Province Médicale*, pleads for the establishment, by the local authorities, of a hospital or asylum for incurable cases, especially those suffering from cancer where an operation is impossible. He points out the miserable condition of such persons, who are necessarily discharged from ordinary hospitals after a few days' stay, these institutions being, of course, bound to reserve their beds for patients for whom something can be done. On going over the registers of the male patients of the Hôtel Dieu in 1886, Dr. Augagner found that 97 of a total of 6009, or 1·61 per cent., had been discharged as suffering from incurable cancer after a stay in hospital of from one to twenty-four days. Some few of these poor creatures are provided for by charitable religious institutions; but though the blind and the insane, and some other classes of incurables, have asylums to which they can go, the cancerous, who are perhaps the most to be pitied, have scarcely any refuge, and something more is, Dr. Augagner thinks, incumbent on the authorities than a small contribution to one of the charitable institutions alluded to, which is all that as yet they have been persuaded to grant.

Mr. John Wood.—It is not professional to advertise in the way described the price of advice and medicine either in one possessed of the qualifications of the Edinburgh corporations or of any other medical authority. Common law does not regulate professional conduct, but the bye-laws of the respective professional corporations.

Mr. J. Newlands Maclean.—It is usual to get 10*s.* 6*d.* for each attendance at the police-court. At each police-court there is usually a scale of fees, including medical fees, drawn up according to the instructions of the Home Secretary, by reason of the statutory power he possesses. Our correspondent cannot recover "unavoidable expenses" whilst attending assize.

F.R.C.S. & L.R.C.P.—The corps no longer exists. It was disbanded some years ago, and a local mounted police raised to replace it, the appointments to which are made by the governor.

PASSAGE OF FOREIGN BODIES THROUGH THE ALIMENTARY TRACT.

To the Editors of THE LANCET.

SIRS,—Several communications having been recently made to THE LANCET respecting the passage of foreign bodies through the alimentary tract, I think the under-mentioned case, which has lately been under my observation, possesses sufficient interest to be also recorded.

In June last a child, aged two years and a half, whilst playing with money, swallowed a shilling, and as it lodged in the throat the father endeavoured to get it back by the aid of his fingers; but failing to do so, he made use of a reverse method of treatment, managing to push it down with his index-finger, and a constant look-out for the passage of the foreign body was kept up. The shilling was not, however, passed, and four months elapsed, during which time the child became thinner, was irritable, and subject to many attacks of vomiting and bleeding at the nose. In October he had a violent attack after a meal, and with it brought up the lost shilling, which was much discoloured and corroded. From that day the child has rapidly regained its usual health and strength. I am, Sirs, faithfully yours,

Wisbech, Nov. 8th, 1887. WILLIAM GROOM, M.D. Cantab., &c.

"POISONING FROM THE USE OF SUBLIMATE SOLUTIONS."

To the Editors of THE LANCET.

SIRS,—In his third post-graduate lecture on "Practical Legal Medicine" Mr. Pepper in his concluding remarks wishes to draw attention "to a source of danger to life which, so far as I know, has not hitherto been noticed in the medical press. I refer to poisoning from the use of perchloride of mercury in the form of very weak solutions—e.g., 1 in 1500 or 2000." I would venture to draw Mr. Pepper's attention to a very able and interesting article read by Dr. Dakin before the Obstetrical Society of London on Dec. 1st, 1886, in which the author draws attention to the dangers of mercurialism in lying-in women. The article, which is entitled "Mercurialism in Lying-in Women undergoing Sublimate Irrigation," appears in full in the Obstetrical Transactions for the year 1886, vol. xxviii., pp. 261–307, while an abstract of the same appears in THE LANCET of Dec. 11th, 1886. The original article in the Obstetrical Transactions is well worth the careful perusal of all who are not acquainted with it, as it is, I venture to believe, a most valuable contribution to our knowledge of the subject.

I am, Sirs, your obedient servant,

Nov. 9th, 1887. H. T. R.

WATER-TIGHT CASES.

To the Editors of THE LANCET.

SIRS,—Messrs. Arnold and Sons are evidently not aware that their "new" invention, described in your pages of Nov. 5th—viz., water-tight cases—was made by us, and exhibited at the Philadelphia Exhibition, 1876, and for which we obtained a medal. Our case, however, is superior to Messrs. Arnold's, in that the projecting tongue is made of cork, which, being pressed into the groove, makes a much better joint than two pieces of metal can possibly do.—We are, Sirs, yours truly.

Great Portland-street, W., Nov. 5th, 1887. MAYER AND MELTZER.

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THE LATE EDWARD THRING, M.A., AND THE OUTBREAK OF TYPHOID FEVER IN UPPINGHAM SCHOOL, 1875.

MR. ALFRED HAVILAND, in reference to an article which appeared in our issue of the 22nd ult., states that the fever first broke out in the school, and that it was not until thirty cases, with three deaths, had occurred amongst the boys that the disease appeared in the town. Mr. Haviland also states that it was owing to his objection that the school did not return to Uppingham immediately after the outbreak was checked.

Eudymion.—Yes, fairly strict. Under the circumstances described, it is very probable our correspondent would not be passed.

Mr. Maule.—No.

"SEA-SICKNESS."

To the Editors of THE LANCET.

SIRS,—In the numerous able articles which have appeared in THE LANCET lately on the above subject, I notice that an occasional feature of the evil is not noticed—viz., diarrhœa. During my experience at sea I met with three cases in which this was the prominent symptom, being unaccompanied by vomiting, although there was the usual vertigo, &c.

The first case was that of a chief engineer of long standing, who invariably in very rough weather suffered from a feeling of malaise with slight watery diarrhœa, which ceased with the bad weather. His appetite was good, urine rather lessened in quantity and clear. The only drug which had any effect on the diarrhœa was belladonna in large doses. His bowels were quite regular at other times.

The second case was a gentleman, aged twenty-five, who suffered from profuse watery diarrhœa with loss of appetite and a feeling of general depression whenever the sea was at all rough; no vomiting. Drugs were of no use.

The third case was a lady, aged thirty-three, single, who suffered so much from looseness of the bowels on any more than ordinary motion of the vessel as to be confined to her cabin for the greater part of the voyage (nearly two months). She was quite prostrate during each attack, took no food, and felt great dizziness on attempting to rise. Respiration was accelerated (about 20). She had no vomiting, and off the ship enjoyed good health. She was relieved by effervescing drinks (champagne), and was kept on a light diet when able to eat at all. Astringents had no effect, bromide of potassium seeming to be most useful. In port or during very calm weather she was quite well.

I think the theory of the churning motion of food in the stomach causing the attacks of vomiting is untenable: for (1) we get vomiting when the person has taken no food for some time before the attack; (2) a full stomach often stops the vomiting; (3) the continuance of the vomiting long after the stomach is empty; (4) the occurrence of vomiting in a perfect calm, and, as you mentioned in an able leader in THE LANCET of the 29th ult., the cases occurring before the vessel starts; and (5) cases in which the vomiting comes on without any sensations referable to the stomach at all—i.e., purely cerebral vomiting, several cases of which came under my notice, the affected persons having a good appetite and feeling quite well, with the exception of the sudden painless attacks of vomiting, which came on in bad weather at any time, lasting generally only a few minutes, and the ejected matter being, except after a meal, only colourless fluid. My theory is that sea-sickness is due to an unstable condition of the brain cells, chiefly affecting the neighbourhood of the vomiting centre in the medulla, and generally accompanied by hyper-vascularity of the brain. How this is caused by the ship's motion, and to what extent it is affected by the mental condition of the affected person, I will not attempt to explain. But the facts that the vomiting centre in the medulla, which transmits its impulses to the stomach, mainly by vagi and splanchnics, is in close relation to the respiratory centre; that we generally, if not always, find the respiratory movements increased in frequency during the attack; that we have generally increased blood supply to brain, as evidenced by throbbing of carotids, &c.; that the premonitory symptoms are usually vertigo, dizziness, &c., in a greater or less degree; and that all drugs which have any effect on the sickness are either cerebral or vascular sedatives—seem to point to the above theory being correct.

The cases of diarrhœa I ascribe to brain impulses passing to Auerbach's plexus (which governs the motion of the intestine), Meissner's plexus (which governs the secretion), and to the splanchnics (which greatly regulate the vascular supply of the intestine), and altering their normal functions.

As to treatment, I found no drug a specific, each case requiring treatment on its own merits. The only remedies which seemed universally applicable being rest in the recumbent posture (head to bow of vessel if possible), plenty of liquid, easily digested food, when it could be taken, and the free use of effervescing drinks (such as champagne).

I am, Sirs, yours truly,

R. MUSGRAVE WHITHAM, M.B.Ed.,
November, 1887. Late Surgeon, Ocean Steamship Company.

To the Editors of THE LANCET.

SIRS,—On reading the article on sea-sickness in your issue for Oct. 29th, I was reminded of a letter I had seen some time ago in one of the medical journals, in which the writer gave it as his opinion that the sea-sickness was caused by the movement of the boat throwing the intestines forward against the abdominal wall, and thereby suddenly stretching the sympathetic nerves. I do not see this particularly mentioned as one of the causes you give. It seems to me, however, a very plausible theory; for that position which is most favourable for a person to assume to prevent sickness—viz., lying on the back—is one which would, by causing the stomach and intestines to rest on the posterior wall of the abdomen, hinder any tension being put upon the sympathetics. I have known many people subject to sickness who could make a short passage by sea and avoid sickness during the voyage by lying all the time on the back. There are people also who feel sick when riding in a carriage with their backs to the horses, or seated the same way in a train; and I think it likely this may be explained by the above theory. Again, it is not improbable that the good effects of cocaine and the bromides may arise from their sedative action on the sympathetic system.

I am, Sirs, your obedient servant,

Banstead, Nov. 1st, 1887. WILLIAM HABGOOD.

"ANTIPYRIN IN MIGRAINE."

To the Editors of THE LANCET.

SIRS,—I am glad Dr. Berthold has alluded to the great value of antipyrin in migraine. My attention was first directed to this use of the drug by a paper by Professor Khomyarkoff and Dr. L'voff which appeared in the *Vrach* of Dec. 19th, 1885 (see abstract in THE LANCET of Jan. 30th, 1886); and, as far as I know, the credit of first suggesting antipyrin for the cure of migraine belongs to these Russian physicians. Since that time I have employed it with very great, though not invariable, success. Sometimes the first dose of fifteen grains has acted "like magic" within twenty minutes. In one inveterate case of periodically recurring migraine where the pain affected a single spot on the right parietal bone, the scalp over which used to become very tender, I was able for many months to give up morphia injections, antipyrin arresting the attacks almost entirely. In this case, however, there have been one or two attacks which no amount of antipyrin would relieve. In other cephalalgias which cannot be described as migraine, I have found antipyrin useful. Its employment in headaches and neuralgias due to ophthalmic affections was pointed out by Dr. Katsauroff (*Vrach*, No. 7, 1886; also see THE LANCET, April 10th, 1886). In many headaches of nervous, and in some which appeared to be of rheumatic origin, I have found antifebrine or acetanilide, in doses of from five grains to ten grains, very effective. I have not, however, been able to satisfy myself that it equal to antipyrin in true migraine. It would be of advantage if it were so, as it is far cheaper than antipyrin.

I am, Sirs, yours truly,

Woolwich Common, Nov. 7th, 1887. THEODORE MAXWELL.

COMMUNICATION OF RABIES.

To the Editors of THE LANCET.

SIRS,—In your issue of Oct. 22nd I notice that your Paris correspondent refers to "a precursor of Pasteur," and in your issue of the following week Mr. Lambert points out that herbivora can communicate rabies, but does not say to which class of animals. It may be of interest to some of your readers to learn that M. Reynault has caused rabies in sheep by inoculation from rabid sheep, also that Prof. Nocard of Alfort, in a letter to me last summer, stated that he had often given rabies of the horse to the dog, sheep, and rabbit by inoculation of the saliva. Prof. Duguid, of the Privy Council Office, informed me last summer that paralytic rabies was communicated to rabbits by inoculation of the medulla from rabid deer in Richmond-park, and also that true rabies was induced in a dog by a similar inoculation.

I remain, Sirs, your obedient servant,

Edinburgh, Nov. 8th, 1887. W. OWEN WILLIAMS, F.R.C.V.S.

"CHANGE OF AIR."

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly inform me where is to be found any good account of the reasons why "change of air" is of benefit?

I am, Sirs, faithfully yours,

Southport, Oct. 31st, 1887. EDWARD DAY MCNICOLL.

A Registered Practitioner, but never a Rejected Student.—We are unable to agree with our correspondent in his facts and inferences, whilst his proposals are surely quite impracticable. Examiners differ, no doubt; but there can be no question that in every one of the points referred to the examination system has vastly improved, and that, as a rule (with the fewest possible exceptions), those who pass and those who are rejected deserve their fate. No useful purpose will be served by publishing the letter.

Z.—We propose to publish an article on the question in an early number.

Dr. Myrtle.—Very soon.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Windle, Birmingham; Dr. Dickinson, London; Dr. Bristowe, London; Sir P. Bade, Norwich; Dr. Lindsay Steven, Glasgow; Messrs. J. Dewar and Sons, Perth; Prof. Owen Williams, Edinburgh; Messrs. Colnaghi and Co., London; Messrs. A. and J. Shaw, Grantham; Mr. Reginald Harrison, Liverpool; Dr. W. Fraser, Ashburton; Dr. Jas. Oliver, London; Dr. Groom, Wisbech; Mr. Lockwood, London; Mr. Biggs, Leicester; Mr. Young, London; Mr. J. Dixon, Kempston; Mr. Frask; Mr. F. Collins, London; Mr. Snell, Sheffield; Messrs. Harrison and Brass, Elgin; Mr. Fitzgerald, Folkestone; Dr. Battiscombe, St. Mary Cray; Mr. Cathcart, Edinburgh; Dr. Delvaille, Bayonne; Mr. Lawson

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LETTERS, *each with enclosure*, are also acknowledged from—Mr. Lambton, Rochdale; Mr. Brown, Westgate-on-Sea; Mr. Williams, Tunbridge Wells; Mr. Jury, Liverpool; Mrs. Benet, London; Messrs. Mackie and Co., Edinburgh; Mr. Williams, Birmingham; Mr. Atkinson, Long Sutton; Mr. Robinson, Stockton; Mr. Lowthian; Messrs. Bennett Bros., Salisbury; Mr. Hamilton, St. Ives; Mr. Webster, Shepherd's Bush; Mrs. Brown, London; Mr. Johnston, Glasgow; Messrs. Wyleys and Co., Coventry; Mr. Harrison, Stafford; Mr. Woodcock, Bradford; Mr. Guest, Melsonby; Messrs. Brown, Glasgow; Messrs. Down and Co., London; Dr. Jones, Tonypandy; Messrs. Wood and Co., New York; Mr. Paine, Worthing; Mr. Carter, London; Messrs. Savory and Moore, London; Mr. Wormald, Manchester; Messrs. Rocke and Co., London; Mr. Lace, Bristol; Mrs. Curry; Mr. Jackman, Stoke Newington; Mr. Jackson, Workington; Mr. Teacher, Edinburgh; Mr. Hunt, Manchester; Mr. Thomas, Pwllheli; Mr. Stenhouse, Glasgow; Miss Burnes, Salisbury; Mr. Lamb, Preston; Mr. Coltman, Leicester; Miss Croft, London; Mr. Oliver, Pendlebury; Mr. Lloyd, London; Mr. Gray, Walsall; Mr. Penny, Clifton; Messrs. Boulton and Paul, Norwich; Mr. Ormond, Newton-le-Willows; Messrs. Brown and Co., London; Mr. Barham, Spitalfields; Messrs. Wright and Co., Bristol; Messrs. Shaw, Grantham; Mr. Burgess, Manchester; Mr. Foote, Cirencester; Mrs. Rowcliffe, Cranleigh; Mr. Jones, Liverpool; Mr. Huggins, Malvern; Dr. Tunmer, Harrogate; Mr. Graham, Devonport; Mr. Dean, London; W. F., Southport; M.D., Kineton; A. W.; L., Coventry; Viator; T., Bath; Q. R.; L. M., Hull; M.D., Kennington; Edin.; X., Helensburgh; B. M., Lincoln; Secretary, Hartlepool; J. M. C., Birmingham; L. M., Hemel Hempstead; V., Bootle; M. J. S.; Lady Superintendent, Burton-on-Trent; Fides, New Cross; H. L.; X. Y. Z., London.

Hebden Bridge Times, Oldham Standard, Naturalists' Monthly, Liverpool Courier, American Grocer, Moncton, N.B., Daily Transcript, &c., have been received.

Medical Diary for the ensuing Week.

Monday, November 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Sir Andrew Clark: On Fæcal Anæmia.—Mr. A. Pearce Gould: On Estlander's Operation and Thoracoplasty.

Tuesday, November 15.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Report of Morbid Growths Committee on Dr. Jacob's Tumour of Skull. Specimens:—Mr. Spencer: Compound Comminuted Fracture of the Lower Jaw.—Mr. Eve: Central Fibro-sarcoma of Tibia, with Extreme Cystic Degeneration.—Mr. Bland Sutton: Inguinal Hernia in Monkeys.—Dr. Charlewood Turner: Cystic Growth in Supra-renal Capsule and Brain.—Dr. Hale White: Congenital Syphilis producing Lardaceous Disease.—Dr. Dawson Williams: Hydronephrosis.—Mr. Hutchinson, jun.: Adenoma Mammæ, with Supervention of Scirrhus.—Mr. Mansell Moullin: (1) Separation of Upper Epiphysis of Radius; (2) Fracture through Lower Epiphysis of Femur, with Bony Union.

Wednesday, November 16.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Drs. Herman, Champneys, and John Williams: Extra-uterine Gestation. No specimens will be shown, except such as illustrate the subject of the meeting.
SOCIETY OF ARTS.—8 P.M. Opening Address by Sir Douglas Galton.

Thursday, November 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
THE PARKES MUSEUM OF HYGIENE.—5 P.M. The Rt. Hon. The Earl of Meath: The Importance of Open Spaces.
HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. Knowsley Thornton: Oöphorectomy.

Friday, November 18.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Dr. W. N. Thursfield: Pasteur's System of Preventive Treatment of Hydrophobia.

Saturday, November 19.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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The Morton Lecture

ON

CANCER AND CANCEROUS DISEASES.

Delivered at the Royal College of Surgeons of England on Friday, Nov. 11th, 1887,

BY SIR JAMES PAGET, BART., F.R.C.S.

MR. PRESIDENT AND GENTLEMEN,—We may safely believe that Mr. Morton, in generously founding this lectureship, entertained the hope that it might lead to some distinct practical utility, perhaps even to the finding of a method for either the prevention or the cure of cancer and cancerous diseases. I hardly need say that we have none yet. Where or how may we hope to find one? We are bound to search everywhere and in all ways; but in one lecture I can speak of only one way, and it shall be that which seems to me the most hopeful. I think that we may justly hope to find a remedy in the constant careful study of the likeness of these diseases to others of which we already have means of useful treatment. We may be the more hopeful because the nearest likenesses of cancer and cancerous diseases are to two other groups of diseases concerning which there have been, in recent times, very useful additions to our knowledge. In one direction we have their likeness to the simple or innocent tumours, in the surgical removal of which the risk of life has been diminished, even while the range of operating has been increased; and in the other direction we have their likeness, which I believe to be much more intimate, to some of the specific and micro-parasitic diseases, a group in which there has been progress towards both preventive and remedial treatment. It is of this last relation that I propose especially to speak; and I shall try to show that it indicates the method in which cancer and cancerous diseases should be studied more thoroughly than they usually are.

Let me say that I purposely speak of "groups" of diseases. I would not attempt to define what shall be called tumours, whether innocent or cancerous, or what diseases shall be called specific. I would rather undertake, if it were necessary, to show the inaccuracy or insufficiency of any definition yet given. Definitions, if they are to be more than convenient helps to arrangements, belong only to sciences more exact than pathology can yet be. It is better, at present, to think of diseases as in groups with borders that are not clearly marked: or as of nations with ill-defined frontiers, and with inhabitants intermingling and even intermarrying. We may find typical examples of diseases as of peoples; it will be from such examples that I shall take my illustrations; and these typical examples we may describe and may call them by distinct names; and these names are convenient for nomenclatures and for registration, for indexes and catalogues; but we must use them very cautiously in the real study of pathology.

Cancer and cancerous diseases agree with the simple or innocent tumours, such as the fatty tumours and overgrowths, the fibrous and fibroid, the simply cartilaginous, and the like, in that they are all growths, structures growing with some degree of likeness to the natural structures of the body, especially of the part in which they are placed, but growing as if with a self-possessed power of maintaining and increasing themselves. With all tumours alike, this growing is so far dependent on external conditions as is that of the natural structures; but it is not, as theirs is, in evident adjustment to the plan of other parts, and is not subject to the general control which in health keeps each part in useful association and concurrence with every other.

This peculiar method of growing, purposeless, and, as one may say, selfish, is characteristic of both innocent and cancerous tumours, and it seems to indicate a very close affinity between them. It is rarely seen in any other disease than these, and some specific diseases to which I shall again refer. It is in some measure imitated in the cheloid growths of scars, and in the excessive callus sometimes formed in the repair of fractures; but these usually after some time cease to grow, even though they may show no sign of dying or degeneracy.

Another indication of the relation between the innocent tumours and the cancerous appears in that it is impossible to mark any fair boundary line between them. Between such as may be deemed typical examples of each—say a common fatty tumour and a cancer of the rectum or of the tongue—there seems no likeness, except that they all grow after the manner I have spoken of. In all the rest of their life-histories it would be hard to find two diseases more unlike, and yet the space between them and between all the innocent tumours and the cancers is filled with examples of intermediate forms; with sarcomata in all degrees of structural likeness to the one or the other, and with less or more of the characters of malignancy, the degree of malignancy usually corresponding with the degree of unlikeness to the natural structures. But this gradation is, as I have said, only what we find in all groups of diseases; and if, on the one side, we cannot exactly define innocent tumours from cancerous, so, on the other, we cannot define them from the many forms of mere overgrowths which are not distinctly purposive, such as fatty growths about the neck, enlarged prostates, thyroid glands, and the like.

The resemblances between the innocent tumours and the cancerous may seem to indicate so close relation that they ought to be regarded as of essentially the same nature. But I believe that an unlikeness indicating differences yet more essential may be observed in them, and it is expressed in our calling them severally innocent and malignant growths. Malignant is nearly synonymous with cancerous; and though the name is sometimes treated with disrespect, as being figurative and without scientific meaning, yet as an expression of certain qualities shown in the method and course of the diseases to which it is applied it is neither unfit, nor, I think, unmeaning. For the qualities which the name "malignant" indicates are far more distinctive, more surely diagnostic, of this group of diseases, than are the minute structure and chemical composition of the diseased parts, or even than the method of their growing; and in this is an example of what we must hold in the study of all diseases, for pathology is a part of biology, and not derived chiefly from the study of anatomy and chemistry.

The life-history of diseased parts and growths; the shapes that they assume; their construction; their changes as they grow, develop, or decay; the modes in which they extend, or ulcerate, or die; their products; their influence on adjacent and on distant parts, and on the whole economy—all these things, in so far as they are not dependent on evident structure and locality, are true signs of essential variation of material composition. They are the signs of the very nature of the diseases in which we observe them.

It is thus with morbid as it is with natural structures, and, indeed, with all living organisms. The characteristic shape, construction, and manner of life and work of each species, or even of each individual, indicate natural qualities and affinities more specific, and of which the manifestations during life are more distinctive, than are any others that we can discern. I would, therefore, not discard the name "malignant." It tells with emphasis, yet not falsely or with exaggeration, the general biological character of the whole group of cancers and cancerous diseases, and it may keep us in mind that it is by these biological characters more than by the histological or the chemical, so far as these can as yet be discovered, that their affinities to the innocent tumours on the one side and to the specific diseases on the other, may be judged.

In indicating the relations between the cancers and cancerous diseases and the specific diseases, I shall assume, as I did more than thirty years ago, when I was lecturing here on this same subject, that we usually mean by specific diseases those in each of which the phenomena of common diseases—that is, of such as might be produced by various injuries or external irritations in any healthy person—are modified in some constant and definite manner which gives them what we call specific characters. Every year's study since that time has made it more probable that what was then scarcely more than theory is now a sure general truth—namely, that each specific disease is due to the influence of a distinct morbid substance on some part or parts at which the characteristic signs of the disease can be and are manifested. Two conditions must coincide in each: the one general or

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diffused in morbid material in the blood; the other local, in some part with which this material produces disease.

I use this vague term "morbid substance" on purpose that I may not pretend to definition or exact description. The reasons are, indeed, constantly increasing for the belief that each of many specific diseases is due to morbid changes produced directly or indirectly by a distinct species of minute parasite, a microbe, a bacillus, or some other vegetable of lowest organisation, yet specific—as specific as any of the species much more highly organised. I believe that micro-parasites, or substances produced by them, will some day be found in essential relation with cancers and cancerous diseases. Mr. Ballance and Mr. Shattock have, indeed, lately failed to find any; and if, in such a question as this, negative evidence could prove a negative, certainly theirs might make us hopeless. I would not be so, especially if workers so earnest and so skilful as they are will continue the search; but for the present it will be best to use such terms as morbid material, virus, or specific material, which, I think, we may be sure are at least not erroneous.

The specific diseases which we believe and generally know to depend on morbid materials in the blood are very numerous—the eruptive fevers, many of the diseases of the skin, tetanus, hydrophobia, ague, and many more. They may be vaguely arranged in groups, each of which may include those which are most nearly alike; and the group by which the conformity of cancers and cancerous diseases may be tested is one that includes, as its chief members, syphilis, tuberculosis, glanders, leprosy, and actinomycosis, each of which is known to have a distinct micro-parasite. Let me point out their most important general agreements. And, first, let it be observed that they are included by Virchow among tumours, under the name of granulomata; and I doubt whether they can be justly excluded from the list for any reasons which would not equally justify the exclusion of many of the cancerous diseases. Certainly, a tuberculous mass such as one may find in the brain, or a syphilitic gumma in a muscle, or, still more, an actinomycosis in the jaw, has more of the general characters of a tumour than any rodent ulcer has, or many cancers of the lip or tongue. It is at least evident that all these specific micro-parasitic diseases are, in their several measures and in some of their forms, morbid growths and self-maintaining. All agree in this general character; they differ from one another in that each has a definite, characteristic, and diagnostic method of growing, as shown in its shape and in its substance, both tangible and microscopic, and in its relations to the structures which it involves. In these respects they differ from one another about as much as any of them do from cancer.

Besides, in all these diseases, as in the cancerous, the morbid growths are prone to special modes of degeneration, of partial decay, and of death; and then they all tend to ulceration, each with a characteristic method, shown in the shape of the ulcer, the structure of its boundaries, and its mode of affecting the parts on which it encroaches.

And all the cancerous and the others alike are at some time infective; some by inoculation, all by invasion of adjacent parts, or by the transmission of materials, through lymph-spaces, lymphatics, or bloodvessels, to parts far off.

Now I venture to hold that likeness in characters so significant as these is evidence enough of essential likeness and of close affinity in all the diseases in which they are observed; and, therefore, that as we know that in tuberculosis, syphilis, leprosy, and the rest, there is for each a specific morbid material in the blood, so we should believe that there is at least one in cancer and cancerous diseases. The fact that it has not yet been found is not sufficient to prove that it does not exist.

We should observe here the same rule as we do in other groups of specific diseases. For example, among specific fevers, so-called, there is a similar general likeness, and they are regarded as a separate group or genus, call it what we will; and in this group there are many different fevers, each of which, though in many things like the others, has special and diagnostic characters, chiefly in the places, whether skin or glands or any others, in which it shows its local characters. Of many of these fevers, we know that each is associated with a different morbid material in the blood, a micro-parasite or whatever it may be; of the rest, we do not know this, but we do not doubt it; we are as sure of it as of anything in pathology not certainly known. So may we be, I think, that cancer and cancerous diseases are specific in the same sense as are those other diseases to which I have shown their general likeness. There are some unlikenesses between them: cancer cannot be inoculated, it is not contagious; but these are negative. I believe that there are no positive generic unlikenesses; and as to the differences among them, the diseases that are certainly specific do not differ more from cancer than they do from one another.

Let me note also one more likeness among all these diseases—namely, that, as we see them in practice, we cannot but observe degrees of conformity to what may be regarded as the typical forms of each. Just as I said that there are all degrees of transition from the innocent tumours to the cancerous, and to the mere overgrowths that are hardly abnormal, so are there all degrees of less or more malignancy. And, similarly, we may trace all gradations from the typical tuberculosis, through the less or more of scrofula, to what some call mere delicacy of health; or we may trace syphilis till we doubt its existence, or guess at it in some combination with scrofula or gout.

But now that I may illustrate the influence of different kinds of virus in the production of morbid growths, let me point to some of those occurring in plants.

The whole study of tumours may, indeed, find admirable illustration in vegetable pathology. For example, I think that some of the best evidences, even nearly the proofs, of the truth of Cohnheim's explanation of the origin of tumours, at least of the innocent ones, from portions of germinal tissue remaining undeveloped, may be seen in some of the xylomata or woody tumours which may be found on trees, especially on beeches and cedar-trees; for in these it is often evident, and always probable, that they have grown from buds, or "sleeping eyes," as they have been called, which have remained for a time dormant, inactive, enclosed within normal structures, and then have, as it were, awakened and grown, after a manner of their own, with good woody tissue, but separate and purposeless. Our museum has specimens of such tumours—oval or nearly spherical masses of hard wood, well defined, concentrically laminated, either lying just beneath the bark of the branch or trunk in which they have grown, or nearly separated and cast out. Some of them, like polypi or exostoses, have pedicles continuous with the proper wood of the tree, and some have little outstanding twigs or branchlets, outgrowths from the buds in which they themselves had their origin.

And if these and the vast number of growths of the same kind observed in plants may illustrate the apparently spontaneous production of the innocent tumours from germinal structures delayed in their development, so may galls illustrate the influence of a virus in exciting morbid growths. They may, indeed, illustrate both the conditions requisite for the manifestation of a specific disease—the specific morbid material and the part appropriate to its morbid influence.

Of these galls, which may fairly be called heterologous growths, as the xylomata may be called homologous, there are more than a thousand forms already known, and each form is produced by a different material, a different specific virus, as we may safely call it, inserted by a different species of insect in a leaf or some other part of a plant. The very nature of the virus which is usually inserted with the insect's egg is, I think, unknown; but so constant are its properties, and so exactly defined, that the specific characters of each insect are not more invariable than are those of the galls which it has made to grow. As we may describe the specific characters of each insect, so may we those of its appropriate gall; and so may we, therefore, speak of each form of gall as due to a specific virus. This is especially seen when different kinds of virus are inserted in similar textures, as when one finds three or four different galls produced by as many different insects on the same leaf.

The oak leaves which I have here show these facts well. I am indebted for them to Mr. Rolfe, of the Royal Gardens at Kew. Here are, as he has written, ten branchlets of the common oak, and their leaves bear, altogether, ten different forms of galls produced by ten species of insects; two, three, or four forms being on each leaf.

The only variation shown is in some spangle-galls formed on the leaf of a variety of the common oak, which are distinguished by their purple colour, but not by any apparent difference of structure.

Many of the galls are small, and may seem to you comparable with mere pustules formed of little more than disturbed natural structures; but they are not so; they are all outgrowths, in evident continuity with the natural

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structures, yet different from them—often very different. All this is more plainly seen in the larger kinds of gall, each with its well-defined characteristic shape and construction, and its minute structures differing from the healthy structures with which they are continuous as widely as do cancerous structures from those of the parts in which they grow. And it may be observed that in all, whether small or large, the specific differences are marked by shape and pattern and other large characters more than they are by any minute structures as yet discerned.

I will not be tempted to go further in this intensely interesting field of pathology. I wish I could provoke some to pursue it, some who would study it pathologically with the same care and skill as Mr. Rolfe and others have studied it, as a part of natural history. It must suffice now to have shown in it how certainly each of a large number of morbid growths, each as heterologous, each as specific as that seen in any cancer or cancerous disease, is produced by the influence of an appropriate specific virus.

There is, however, one point more which I must mention, for it may help to show that even a well-defined virus can produce its appropriate disease only in some exactly appropriate place or texture. Each insect, with an instinct as unfailing as any natural law, deposits its egg and its virus in the leaf or other part of the very plant in which the right kind of gall can be formed. Each virus requires, as we may say, a susceptible and fitting place and substance; and this is a fact confirming what we believe in the case of many specific diseases, and, as I venture to say, in the cancerous. The two conditions must coexist—the specific material, microbe, virus, or whatever we may name it—in the blood, which will carry it to every part, and the one appropriate part, texture, or place in which this material can produce the disease.

Now this part may be so small or so ill-defined, it may seem so absolutely limited, as to give to the cancer when first found an appearance of being a merely local, a wholly local, disease; especially as the general health may be undisturbed. It may be called local in the sense that it is the only one locality in which it can be formed, but the analogy of the specific diseases gives reasons for believing that it would not have occurred in this place unless there were a specific material in the blood, which was carried to it; even as a gall would not form without the insect's puncture. And the like is evident in many specific diseases in which the presence of a morbid material in the blood is most certain.

For example, tetanus is due to a well-ascertained bacillus, and in the blood this, or some material produced by it, is carried to every part; but it seems harmless to all till, after, it may be, some considerable time, it affects some portion of the spinal marrow.

In hydrophobia there is a specific virus, inoculable, probably a microbe; it is everywhere diffused in the person or animal in whom it has been inserted; it is in the saliva, and, it is said, may pass even to the fœtus in a pregnant woman, or the milk of one suckling; and thus it may be during a period of good health, but at last it produces definite disease at the appropriate nervous centre.

In the sequelæ of fevers, where we cannot reasonably doubt that morbid materials remain in the blood, it is only in certain parts that diseases may be manifested. Thus, after scarlet fever it may be only in the tympanum or the lymph glands; or, after typhoid fever, in some cases only, in portions of the periosteum; in others, only in a testicle or in a small portion of one vein, or of the spinal marrow. These last are, indeed, very illustrative cases. After all the signs of typhoid fever have passed away, when the convalescence is established and all the waste and damage of the disease are being repaired—while thus, in respect of general nutrition, the health might be deemed above its average, we may find an acute inflammation of one portion of the periosteum of one bone. It is surely an evidence that that one portion was the only portion of the body in and with which the something in the blood could generate disease. It seems the more evident in the fact that sometimes the periostitis has appeared symmetrically on both the tibiæ. The two portions of periosteum symmetrically placed were identical in composition, as symmetrical pieces of the body often are; therefore both were similarly disturbed; no other part being exactly like them, no other was disturbed. In all the body nothing was susceptible of the disease except these two pieces.

Such facts as these deserve very thoughtful study, as evidences of the exceeding fineness of the differences among different parts of what seems to us the same structure. If a diseased process—say a syphilitic eruption—is evident on one portion of skin and not on another, it is an evidence that these two portions are not exactly alike. Whether the difference be in structure, or in composition, or in relation to the nerve force it may not be possible to tell; but there is a difference; they are not exactly alike, though they may appear so to every test but those of disease. The evidence is of the same kind as that by which a chemical test determines the difference of two solutions; only the test in pathology is far more delicate.

Now these considerations have a definite bearing on the question of localisation of cancer. There may be the appearances of perfect health; some have even thought that cancer is due to a kind of overflow of health; and, certainly, there is no greater fallacy than to think that, in its early stages, it is indicated by a cachexia; yet, with all this general health, the specific morbid material may be in the blood. If there be in the body a part, however small, which is susceptible of cancer, this may become cancerous; but we may fully believe that, if this one part had been as insusceptible as all the rest, the morbid material would have remained in the blood harmless and unobserved. Such things are sure in some of the specific diseases. Syphilis may reappear after years in which no sign of it could be found; or malarial fever may be for years dormant, till, with some accidental disturbance of the health, it may be renewed with its specific characters unchanged. In both cases we must believe that some morbid material remained inactive and apparently harmless in the body.

In a large number of instances we have, I think, no knowledge of the reason why the evidences of any specific diseases naturally appear in one part of the body rather than another; no knowledge of the reasons for the different powers of resistance or self-maintenance in different parts. We cannot tell why small-pox is especially manifested at the skin, or typhoid fever in Peyer's follicles, or tertiary syphilis in a piece of periosteum or muscle. But in all specific diseases, and in cancers more than in any, parts are rendered apt to become the seats of diseases after injury, or in degeneracies, especially those produced by long-continued irritation. Thus cancer increases in frequency with the advance of age and of senile degeneration. Its frequency in the breasts and the uterus before old age coincides with what may be deemed their early senile changes, when they cease to be capable of their proper purposes. So, too, all cancerous diseases are apt to form in parts congenitally defective; and still more they follow injuries, sometimes very quickly. More commonly still they appear in parts that have long been the seats of some "irritation," as we call it, as in the scars of burns, or in syphilitic tongues or gums, or cheeks irritated by bad teeth, or in lips irritated by pipes, or tongues by hot tobacco smoke. Similar to these are the soot cancers, and the petroleum cancers, and those of the abdomen and thigh, which are seen in Cashmir, in consequence of wearing a hot brasier over these parts.

Now, all these facts have led to our speaking of parts "becoming cancerous," and the term has, I think, been by some taken as implying that the beginning of a cancer is altogether local, and that the textures of a part may, as it were, of themselves, or through some common irritation or degeneracy, or in the course of syphilis or other diseases, change themselves and become cancerous—change, that is, their whole nature and mode of life from that which is common to that which is specific, or from one specific method to another. But this is far from being a fair deduction from the facts; for all these irritations and degeneracies are in many persons ineffective, and the facts observed are quite consistent with the much more probable belief that these degenerative changes only make the parts less able to maintain themselves, less able to resist the invasion of any morbid material in the blood which is brought into contact with them.

Here is, indeed, another likeness of cancer and cancerous diseases to the chief specific diseases. An injured part may become the seat of syphilitic disease, but this can be only in a syphilitic person; or of tuberculous disease, but only in a tuberculous person; or of gout in one gouty; and even small-pox may be confluent at an injured part, though discrete at every other. Thus, in diseases recognised as specific, in those that certainly have a specific morbid material in the blood, we recognise a local injury or irritation as making a part susceptible, or apt for the manifestation of the specific morbid changes. So should we think

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when cancerous disease appears in such an injured or irritated part; and if we are to speak of such parts as becoming cancerous, it should only be with the understanding that they are becoming likely to be the seats of cancer if there be the other conditions required for that disease.

Really, to suppose that any previously healthy part could of itself, or in direct consequence of any ordinary change affecting it alone, so definitely alter its method of life, its shape and structure, its manner of growing and degenerating, as to become cancerous; and, still further, to suppose that all parts, however unlike in health, could change themselves into likeness as cancers—all this would be to assume more than can be matched in all the range of sure pathology or of natural history.

And the difficulty is not diminished by observing that the change is wrought in embryo structures. Embryo cells or protoplasms can no more of themselves change their destination, or by any common force be driven further from it, than any complete structures can. In so far as the destiny of germs and other embryo structures is not absolutely determined by inheritance, it is determined by their environment; they may be assimilated by force of the structures next or near them, and if these structures be cancerous the embryo structures may become cancerous; but to assume that such shapes and modes of life as we see in the tuberculous, the leprous, or the cancerous diseases, can be self-assumed by embryo structures or by protoplasms, is scarcely less than to assume that an embryo gland might of itself change its destiny; so that an embryo liver might become a lung.

I could, indeed, imagine that in the hereditary transmission of cancer there might be transmitted such a tendency to likeness to that part of a parent or ancestor which was cancerous, that the same part in the offspring might, as of itself, become cancerous; but even if this were sure, it would not explain the numerous cases in which the cancer in the offspring is not in the same part as it was in the progenitor, or those in which many members of one family have cancer in many different parts. To explain these we need to assume that there was transmitted a tendency to the production of the cancerous material in the blood; indeed, it would be hard and unfair to think that one tendency would be transmitted without the other. If both are transmitted, we may well suppose that cancer would form somewhere; but really one can be only guessing at questions such as these.

The fact of frequent inheritance is sure in this as in many other diseases, but its method is so mysterious; it is so utterly impossible to conceive the form or the material in which the impregnated ovum contains that which will become or be made cancerous, that it cannot be safe or useful to think that we can deduce anything from the bare fact. We are apt to speak of potentiality, tendency, and predisposition as if they were forces independent of matter or of structure; but when we try to think of the very things on which they depend, we find ourselves in a cloud-land of mystery, where the difficulty of discovering truth is as great as the facility of guessing.

I have limited myself to the pathology of primary cancer and cancerous diseases, and I shall not go far beyond it; for nearly all that happens in the history of secondary—or, as they are now wrongly called, metastatic—cancers, or of some that recur after operations, might happen as consequences of that which was at first an entirely local disease. If we could believe a primary cancer to be formed by any part in and of itself, then it would be easy to believe that this cancer would infect adjacent structures, and that materials would be carried from it in the lymphatics and the bloodvessels, and would grow and multiply in distant parts, and in them be centres for yet further infections.

But I hope that I have shown reasons enough for believing that primary cancerous growths are not merely local diseases, but require for their production at least the two conditions that I have spoken of. Once formed, the secondary diseases and much of all that follows, even to the inevitable end, may be due to transference of cancerous materials from the primary growths. But I do not think that all the secondary and yet later events can be thus explained. We have no reason for believing that the morbid material in the blood is always exhausted in the formation of the primary cancer, and it seems more probable that in some form this material remains or is renewed, and that to this, as well as to transference from the primary disease, the secondary and later changes are to be ascribed. I believe there are facts in the history of secondary cancers which cannot be explained by the merely mechanical process of penetration or of embolism. There are often evidences of other than mechanical relations between the primary and secondary. The organs that are most frequently the seats of primary cancer are very rarely the seats of secondary. The uterus seldom becomes cancerous in one who has cancer of the breast; still more rarely does the breast become cancerous as secondary to the uterus; and I suppose no one ever saw two cases of cancer of the face or lip or any part of the digestive canal following cancer of the tongue. Then there are the well-known cases of cancer of the thyroid, in which the secondary disease affects, as if by selection, the bones more often than any other part. And my son has gathered facts from the records of great numbers of cases of cancer which seem to indicate that the relations between the primary and the secondary seats of cancer may be compared with those which he found between the primary and secondary seats of suppuration in pyæmia. Certainly, some of those relations—such, for example, as that between the peritoneal and pelvic organs and the parotid gland—could not be explained by any mechanical embolism. Similar relations, I think, will be found between the primary and the secondary and later seats of cancer.

But I shall not discuss these questions; the main interest of the whole subject is in the biology of the primary cancer or cancerous diseases, and I hope I shall be deemed to have shown that in this, as in all the other characters of which I have spoken, there is so great likeness and so little unlikeness between these diseases and the specific ones with which I have compared them, that we may expect equal likeness in respect of the material on which they essentially depend. If it be so, then we may justly hope that by careful study, both clinical and experimental, we may find the morbid material, microbe, or ptomaine, or one or more of their products to which cancer is due. And if this be attained, then may we hope to be much nearer to a remedy, preventive or curative.

It would be easy to ask questions which this theory of the specific nature of cancer could not yet safely answer; to raise doubts which might seem to show it to be erroneous or insufficient. It may be asked, Why, then, is cancer not inoculable? Whence does its micro-parasite come? Why cannot it be found? Can one micro-parasite produce such various forms of disease? Where, in the unbroken series between innocent tumours and cancers, does the parasitic influence come in? I could not answer these questions. I could ask many more just like them; but I can remember that when I last lectured here on this subject, if similar questions had been asked concerning tuberculosis, leprosy, tetanus, or many other diseases now known to be dependent on parasitic or other specific materials in the blood, they could not have been answered; or, most probably, those which would then have been answered "No" would now be more correctly answered "Yes."

And now it may be asked, if all these things be in due time proved, what will the practical utility be; what the better treatment of cancer? I cannot tell. I promised only to suggest how best we might try to find out, and at least we may hope for more than is gained by the merely local operative treatment.

I should have tried to deal with this, but that the whole subject is so thoroughly and so admirably treated by my friend and former pupil, Mr. Butlin, in his recently published work on the "Operative Surgery of Malignant Disease," that I could not even in many lectures have taught so much as he does; but it is clear that, great as is the good that operative surgery may do when practised with the prudence which he urges, it does not do all we want; the disease returns even after complete removal of the diseased parts. All that is locally wrong may be removed, the local portion of the disease may be deemed cured, but something remains, or after a time is renewed, and similar disease reappears, and, in some form or degree, is usually worse than the first, and always tending towards death. It is true that, in less measure, the like of this may be observed in some of the cases of specific diseases which appear medicinally cured. Ague may have been cured, as we say, with quinine, or syphilis with mercury, and for years no sign of either may have been observed, but sometimes one will reappear in its old form, or as modifying some other disease. Especially we may see this in persons who have suffered with ague, or any similar kind of

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malarial fever, or even without suffering from it have been exposed to the malarial poison. They may have been in good health for any number of years, but the ordinary changes following any considerable operation may bring out some dormant material; and all the characteristic signs of the fever may for the first time appear, or may be renewed, and may be cured, as we say, with quinine.

Still, we might well be nearly content if we could find a medicine as efficient against cancer as mercury and quinine are against syphilis and ague, especially as the recurrences of these diseases are less, not more, severe than the primary. Such a one we have not. Can it be reasonably hoped for? Yes, and the more so if we may count cancer among the specific diseases, for it is of some of these that we most surely have remedies more nearly complete than we have of any other disease whatever. The same commonly used of specific medicines may tell of this. There are none so definitely useful against diseases of any other kind; and, indeed, if we had to reckon cancer as a local disease, we should have to look for a different remedy for it in each locality.

But I can now only commend the study to my juniors. It must be both clinical and experimental, and probably the latter will be the more fruitful. If once the specific morbid material can be found, it may be dealt with as others generally like but specifically unlike it have been. But I will not guess how. I have tried to show by facts a right way to a good end: I will not now by guesses run the risk of pointing to a wrong one.

OBSERVATIONS ON THE

ANÆMIA OR CHLOROSIS OF GIRLS, OCCURRING MORE COMMONLY BETWEEN THE ADVENT OF MENSTRUATION AND THE CONSUMMATION OF WOMANHOOD.[1]

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EVERYONE experienced in the practice of medicine must have been often struck by the frequent occurrence of anæmia or chlorosis in girls between the ages of fourteen and twenty-four—that is, from about the time of the beginning of menstruation to about the time of the consummation of womanhood; and everyone acquainted with medical literature knows the great variety of names which has been given to this malady, the conflicts of opinions which have occurred respecting its nature, the confusion which reigns regarding its nosological position, and our complete and confessed ignorance of its causation. Many years ago, when studying the effects produced upon the body by the undue retention of the excretions and of the products of their decomposition, I came to the conclusion that this anæmia or chlorosis of girls was brought about for the most part by fæcal poisoning; and as the experience of later years has given increased probability to this view, I have at last ventured to submit it to the Society for discussion. As neither the time at my disposal nor the traditions of the Society will permit me to enter upon a historical and a critical consideration of my subject, I must confine my observations for the most part to the facts which constitute my personal experience, and to the more important reflections which they have naturally begotten.

The girl who is the subject of this anæmia, whilst often declaring herself perfectly well, looks extremely ill. Although very plump, she is very pallid. Her countenance has a wistful or a sad expression; the face is so puffed that its finer contour lines are effaced; the eyes are large and prominent, the conjunctivæ are white and watery, the pupils dilated, and the eyelids swollen; the lips are full, and of a pale purple colour; there is a slight varying flush upon the cheeks; the ears and neck have the hue of wax, and the hair is dry and thin. Although at first professing to be well, a slight cross-examination of the patient speedily elicits the fact that she complains of breathlessness and feelings of suffocation, of palpitations, noises in the ears, and throbbing headaches, of more or less constant pain in the left or in the right side, of languor or of malaise, and of frequent but fleeting storms of nervousness, irritability, and passion.

Passing to the objective and more methodical examination of a patient suffering from this form of anæmia, we shall find its presence manifested and characterised by the symptoms, which I proceed to enumerate. Beginning with the digestive system, one finds that the tongue, sometimes clean, is usually loaded at the base, indented at the sides, and watery; that the breath is tainted, and has on rare occasions even a fæcal odour; that the appetite is usually good, although capricious; that there are sensations of sinking between meals and of weight after food; that there is much intestinal flatulence of a disagreeable odour; that at one or other flexion of the colon, usually the left, there is more or less constant pain, extending to the back; that the bowels are either obstinately confined or inadequately relieved, and that the fæces, usually scanty, hard, dark, and lumpy, occasionally consist of showers of scybalous masses, embedded in an offensive mucus swarming with bacteria. Here I must pause for a moment to notice at further length two of the symptoms just enumerated as connected with the deranged digestive organs of anæmic girls.

In reply to questions concerning the action of the bowels, it is often said—and said accurately—that they are relieved daily, and it is often added, but added quite inaccurately, that in that respect there is nothing wrong. For it is quite certain that a daily relief may be an inadequate relief, and that with a regular feculent discharge there may be also a regular feculent accumulation. And in anæmic girls of the class of which I am speaking, I feel as sure as I can well be about anything of this character that inadequate feculent relief, or, in other words, feculent retention, is not only the rule, but the characteristic sign. To this point, however, I shall again advert at the close of my observations.

The second symptom which, occurring in anæmic girls, I wish to notice at further length, is the pain more or less constantly felt in the region of one or other of the right or left flexures of the colon. Occurring most commonly in the left hypochondrium, and rarely absent, the most diverse explanations have been offered of its seat and nature. For my own part, I have become convinced, both by the descriptions of patients and by my own inquiries, that the colon is the seat of this trouble. Some patients are so sensitive that they feel the passage of matters along the transverse colon, and they will explain that sometimes the passage being obstructed in the region of the left flexure, the obstruction is followed by an aggravation of the characteristic pain. Furthermore, when, for the relief of this pain, becoming at some time intolerable, an emetic of hot water is so administered by elevation of the patient's hips that it shall reach the transverse colon, the patient becomes conscious of the contact of the water with the painful part, and is also usually relieved.

The derangement of the genital organs occurring in the anæmia of girls has received an amount of consideration which neither the time and order of their development nor their intrinsic importance seems to me to warrant. In those disorders some writers find, or think that they find, the whole etiological relations of the disease. And Aitkin, indeed, defines chlorosis, the malady in question, as "that form of anæmia which occurs in the female at the period of puberty, and is to be classed among the functional diseases of the female organs of generation in the unimpregnated state."

One may sum up the genital disorders in chlorosis by saying that the menstrual period is usually regular; that the discharge is scanty, pale, and otherwise altered; that sometimes there is amenorrhœa; that on rare occasions the menstrual flow becomes excessive and irregular; and that almost always there is a leucorrhœal discharge. Now, for my own part, the more closely I have studied the time of the appearance of those disorders, the course which they follow, the effects which they produce, and the place which they occupy when found in other maladies, the less disposed do I become to regard them as the sufficient causal agencies in the evolution of this disease. On the contrary, I consider them to be secondary disorders, not primary results, not causes, and the outcome of antecedent and adequate conditions.

The condition of the urine, as far as it has been hitherto examined, teaches us but little. Usually it is copious, pale, acid, of low density, somewhat deficient in urea, uric acid,

[1] Read before the Medical Society of London on Monday, Nov. 14th.

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and their congeners, occasionally albuminous, and always prone to speedy decomposition. Exceptionally, and this for the most part after the cessation of nerve storms, the urine is scanty, high-coloured, irritatingly acid, loaded with lithates and oxalates, and exhaling strongly urinous odour. The ordinary urine has always struck me as in several ways peculiar, and I suspect that when our chemistry of the ptomaines and leucomaines is further advanced we shall discover the cause of this peculiarity to be due to alkaloids absorbed from the alimentary canal and excreted through the kidneys.

The disorders of the blood and of the circulatory system developed in the course of this malady are numerous, varied, and important; and, together with the disorders referable to the nervous system, with which they interact, they constitute the characteristic signs of the disease.

Concerning the blood, it has been said by almost every writer of note in these days that there are but two essential changes: a little change, which is a paucity of blood discs; and a large change, which is an extreme penury of hæmoglobin. On these two changes, however effected, it is alleged that every alteration of tissue, every disorder of function, and every sign or symptom in this disease by which these alterations or disorders are manifested entirely depend. But I cannot accept this statement as either conclusive or complete. The clinical evidence of the existence of other changes in the blood is too clear and precise to admit of refutation. For example, as was first pointed out by Tuckwell of Oxford, a not inconsiderable percentage of chlorotic girls is subject to venous thromboses, and in at least one case of my own I have seen spontaneous clotting in the smallest arteries (inopexia).

Turning now to the symptoms of this anæmia as manifested through the circulatory organs, we find that the action of the heart, usually weak and regular, is sometimes tumultuous and irregular; that commonly a systolic bruit is heard within the pulmonary area; that rarely a bruit may be heard over any of the orifices, and even at the diastolic time; that the larger vessels are liable to attacks of local throbbings, and that slight compression of their walls elicits a systolic and sometimes also a diastolic murmur; that the pulse, varying in frequency, quickness, and force, is deficient in tension, and moderately full; that sometimes in circumscribed areas there are flashes of redness or of pallor; that now and then a finger, or a small tract of skin upon the body, will become suddenly blanched and remain in that condition for hours; that the venous system is flaccid; that one hears over the larger veins a continuous murmur of varying intensity like the buzziug of a fly; that the hand lightly laid upon the neck has conveyed to it a vibratory thrill; and that under emotional and other excitement the whole vascular system is capable of being roused into violent and perilous activity.

The blushing or blanching of organs which I have just adverted to, and which occurs in many different affections, is a subject of great clinical importance, and would justify separate and detailed consideration. But here, in reference to anæmia, I must content myself with saying that I have seen the blanching of a bit of skin followed by gangrene, and the blushing of kidneys followed by transitory albuminuria.

The respiratory disturbances in this anæmia are few, but strongly marked. The breathing, even in repose, is hurried, and it is painfully accelerated by emotion or exertion. The chest is always more or less oppressed; a dry cough is seldom absent; and sensations of suffocation are of frequent occurrence. Very rarely there is seen a little blood-stained mucous expectoration; and this, with a concurring dry, rustling character of the respiratory murmur, excites suspicions of approaching tuberculosis. But such suspicions are ill-grounded, for I have never seen the two affections—the chlorotic and the tubercular—concur in the same person.

In this malady the alterations of the skin are the most obvious. It is of the colour of long-kept white wax, lighter or darker at different parts; on the forehead it is of a greenish-white tint; on the temples and neck it is of a yellowish hue; about the lips and nostrils it is of a very pale purple colour; and about the eyelids it is like a withered autumn leaf. For the most part thick, dry, and cushiony, the skin is in some regions thin and soft and moist; in the axillæ and about the groins it is liable to profuse, and sometimes to rank, perspirations.

The nervous disorders characteristic of this chlorotic anæmia appear to be the results of an imperfectly nourished and constantly irritated nervous system. Its dominating conditions are an undue sensibility, irritability, excitability, instability, and debility. The patient suffers from a variety of disordered sensations, from sensations of heat or of cold, of numbness or of tingling, of loss of power or of internal spasms; and she complains of aches and pains, and weakness; of throbbing headaches, and of facial or pelvic neuralgias; of noises in the ears, and of disturbances of vision; of giddiness, and of disturbing dreams. But still more remarkable are the disorders manifested through perturbations of the higher nervous centres. At one time languid and indifferent, the patient at another time is interested and active. Sometimes capable of great temporary exertion, she is at other times exhausted by the slightest effort. Usually irresolute and capricious, she is occasionally obstinate and unreasonable. For the most part gentle and inoffensive, she now and then falls into a condition of insufferable irritability, or bursts into fits of uncontrollable passion. So variable is she in spirits that whilst to-day she may be sunk in the depths of despair, to-morrow she will be brimming over with mirth and laughter.

In view of this summary of the disorders accompanying the anæmia of girls, we must now proceed to inquire into the causes of the disease. As set forth by the chief writers of the time, they are of two sorts, the general and the special. The general causes are imperfect and improper food, deficient air, exercise, and light; overwork, especially of the brain; the dissipations of society; solitude and the absence of healthy amusements; disappointments and sorrows; secret impurities; digestive uterine and nervous disorders.

The alleged special causes of chlorosis are three in number. First, there is the theory of Virchow, which ascribes the malady to an imperfect development of the heart and larger arteries, associated with an original weakness of the formative power of the blood-cells. The second theory, advanced by Sée, explains the origin of the disease by the inability of the organism to meet the great reparative demands suddenly made upon it by the advents of menstruation and the concurrent increase of growth throughout the body. The third theory, proposed by Zander, ascribes the disease to the presence in the blood of unassimilable forms of iron, and alleges that this is owing to a deficiency in the organism of hydrochloric acid. It is held that by the use of this agent the iron is converted into assimilable forms, and that so the disease is cured.

It would be unprofitable to enter here into a critical consideration of these alleged causes of the malady under consideration, for the issue of judgment would surely be that they were inadequate to account for it. The malady occurs almost equally among the rich and the poor, among the generous livers and the plainly fed, among the cultured and the rude, among the idle and the occupied; and it seems to be independent of race or of nation, of climate or of soil, of mountains or of valleys, of seaside or of inland, and of country or of town.

Is, then, the problem of causation insoluble? I think not. And I even venture to express the opinion that if we submit to careful examination the conditions of life which accompany the appearance of this anæmia, we shall be able to discover in them violations of physiological laws common to every case, wherever found, and sufficient through the results of those violations to explain the essential characters of the disease. In the period between the advent of menstruation and the consummation of womanhood there arise physical, mental, and moral changes which greatly influence the girl's habits of life and thought. She becomes self-conscious, and enters into new relations with those whom she meets. She thinks of her appearance and tightens her waist. Afraid of getting fat, she stints herself in food, and eats of only dainty things. With her sense of modesty deepened, she is shy of being seen about the closet. Unprompted by nature, and perhaps disdainful of such affairs, she omits the daily solicitation of the bowels. And so at last it happens, through the compressed waist, the insufficient food, and the disregarded desire or the neglected trouble, that the bowels become either obstructed, confined, or inadequately relieved. In either case the fæces accumulate, are retained, and not only undergo changes in themselves, but provoke changes in the mucous membrane with which they are in contact. As one of the results of those changes, both chemical and biological, there are produced new substances, ptomaines and leucomaines, which are injurious to the organism, and which, absorbed into the blood, originate in girls of a nervous type of organisation those alterations of the constitution of

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he blood which constitute the true pathogeny of this anæmia f girls.

Now, it is necessary to ask if this alleged cause of the nalady is adequate to the explanation of it? Well, it has een shown by Bouchard, in his lectures on Self-intoxication n Disease, that the poisonous activity of human fæces, ven in healthy men, is very great. And he concludes that here are formed throughout the intestines of an adult in wenty-four hours a quantity of alkaloids, which, if excreion were stopped and all were absorbed, would be sufficient o destroy life. It is, then, impossible to doubt that oisonous alkaloids are formed in the alimentary canal; that vhen excretion is seriously diminished they must be in some legree absorbed; and that, mixing with the blood and enterng the tissues, they must produce some sort of injurious ffects determined by the rate of absorption and the amount bsorbed.

And here arises the crucial question of this communicaion, Can any sufficient collateral proof be given that fæcal etention is not only adequate to explain the phenomena of his disease, but also that it is the true cause of it? Yes, here can, through an exposition of the means of cure; for he treatment which most speedily and effectually cures his disease is a treatment which by the use of tonic perients produces full and regularly recurring action of he bowels. With the suspension of this treatment the lisease recurs; with its resumption the disease again subides; and no treatment appears to be permanently successful vhich does not provide means for securing daily relief to the ntestinal canal. What are the details of this treatment?

I shall answer this question best by giving *au naturel* the lirections which I should prescribe for an ordinary patient. On first waking in the morning, sip a quarter of a pint of old water. On rising, take a tepid sponge bath; dry uickly, and follow with a brisk towelling. Clothe warmly nd loosely; see that there is no constriction of the body or f the limbs. Have four simple, but liberal, meals daily, rranged after this fashion: Breakfast, eight to nine—whole-meal bread and butter, with one or two eggs or some roiled fresh fish, or the wing of a cold chicken or pheasant, nd towards the close of the meal half a pint of equal arts of milk and tea, not infused longer than five minutes. Lunch or dinner, one to two—fresh, tenderly-dressed meat, read, potato, well-boiled green vegetable, and any sort of imple farinaceous pudding or of cooked fruit, preferably pple; drink one glass of Burgundy alone or in half a umblerful of water. Tea from four to five—whole-meal read and butter, with a cup of equal parts of tea and milk. Dinner or supper, from seven to eight—this should reemble the mid-day meal, but should be less in quantity. Nothing is to be taken after this meal, nothing between neals, and nothing but what is here set down. Walk at east half an hour twice daily, and as much more as strength nd convenience will permit. Retire to bed about ten, and epeat the sponging and towelling. See that your bedroom s cool and well ventilated. Lead a simple, regular, active, ccupied, purposive life; and do not notice or distrust ourself.

With such instructions modified according to individual eculiarities, I prescribe an old-fashioned ferruginous athartic, to be taken twice a day, about eleven and six. sually it is an acid mixture, designed somewhat as follows: Ferri sulphatis, gr. xxiv.; magnes. sulph., ℥ vi.; acid. ulph. arom., ℥ i.; tinct. zingiberis, ℥ ii.; infus. gent. co. el quassiæ, ℥ viii.; Fiat. mist. Sig. One-sixth part twice aily, about eleven and six. Occasionally this acid mixture roduces sickness, dries the skin, and is otherwise ill borne. n such cases I prescribe an alkaline cathartic mixture: 'erri sulphat., gr. xxiv.; sodii bicarbonat., ℥ ii.; sodii sulhat., ℥ vi.; tinct. zingiberis, ℥ ii.; spts. chlorofor., ℥ i.; nf. quassiæ, ℥ viii. Fiat. mist. Sig. One-sixth part twice aily, about eleven and six. Sometimes neither mixture grees, and then I prescribe sulphate of iron in pills with neals, and a saline aperient on first waking in the morning.

Upon the plan of treatment here described nine out of ten ases of this anæmia of girls recover their health in from one o three months; and if, when health is quite restored, one rescribes once or twice a week an aloes, myrrh, and iron ill, in doses just sufficient to bring about a moderate atural action of the bowels, the recovery will prove in all robability permanent. But upon this statement some of ny auditors will remark, "It is the iron which cures; t is not the aperient." That iron has much to do with the ure of the malady I admit, but I doubt if it plays the chief part; and I know that in numerous cases the use of iron, arsenic, and manganese unaccompanied by aperients has failed to cure. Furthermore, I have seen many patients who, having been treated in this manner unsuccessfully for months, speedily recovered their health under the influence of a ferruginous cathartic mixture and a regulated diet. And so clear and strong is the teaching of my experience upon the point under consideration that if in the treatment of this malady I were perforce limited to the employment of one sort of drug, the drug which I should choose for use would be an aperient.

And here I end where I began, by contending that the anæmia or chlorosis of girls arising in nervous constitutions with imperfectly developed sexual organs is caused for the most part, and in the first instance, by feculent retention and its consequences, and that the right as well as speedily successful treatment lies in the enforcement of a sound hygiene, the administration of ferruginous cathartics, and in the provision after cure for a daily and, as far as possible, a natural relief to the bowels.

The cardinal idea embodied in this communication, the idea of the evolution of diseased states from the retention in the body of its excretions and of the products of their decomposition, is one of wide application and of extreme importance in medicine. It has been often dealt with under the heavy discouragements of imperfect knowledge and unsound doctrines in past times; and in this Society, as well as elsewhere, I myself have endeavoured to call attention to the consequences and issues of pulmonary, cutaneous, and renal inadequacies. For a time, however, the wonderful results of bacteriological research engrossed our whole attention. But now that we are ceasing to be dazzled by their brilliancy and have had our visual powers restored, we can see that the ideas of auto-genetic and of bacterial infection are so closely related, and so curiously interact, that the true place of bacteriology in scientific medicine cannot be finally determined until the chemistry of all the devolutionary processes has been further advanced, and the relations of animal alkaloids and extractives to the genesis of pathological processes has been experimentally investigated anew.

Cavendish-square, W.

ON THE TREATMENT OF CANCER.

By PROFESSOR JOHN CLAY.

THE following cases of epithelial cancer have been treated during the past year, and as the disease has disappeared under the use of Chian turpentine they may be deemed of sufficient general interest to merit publication.

Epithelioma of the Uterus and Vagina.—Mrs. B——, aged fifty-five, residing in Devonshire, consulted me on Feb. 16th, 1887. She has never had children. She was operated upon twenty years ago by the late Sir J. Y. Simpson for contraction of the os uteri. Since that time she has not enjoyed robust health, but has not suffered from any special illness. Menopause two years ago. She has an anxious expression, is anæmic, but not cachectic. Six months ago she had a profuse purulent discharge, which continued for two months, when a severe hæmorrhage ensued lasting more than a fortnight. She had some pains in the back and in the lower part of the abdomen, but they were never very acute. Palliative treatment only was adopted until the gravity of the case was recognised by a consultant, who excised the os uteri four weeks before I saw her. The operation did not arrest the growth, which seemed to develop more rapidly afterwards and speedily involved the vagina. A few days before coming to me she consulted Mr. Knowsley Thornton of London, who confirmed the diagnosis of malignancy and expressed his opinion that the case was too far advanced for operative treatment; he thought it improbable that the patient could live longer than a month.

On examination I found that the posterior wall of the vagina at its upper part was occupied by a growth of the size of a walnut. There was also a nodule, which was more diffuse, and seemed to arise from the anterior wall of the vagina. These growths, which bled readily on manipulation, met in the centre, and entirely prevented any exploration of the uterus. The lymphatic glands were apparently free, and there was no bladder or rectal complication.

As there was no other plan of treatment open to her, I

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recommended that the Chian turpentine should be pushed vigorously, the patient deciding to remain in Birmingham under my care. She was ordered one teaspoonful of Chian turpentine mixture, with resorcin, three times daily, to be rapidly increased to nine teaspoonfuls; the vagina to be syringed with equal parts of vinegar and water twice a day, and the growth to be painted two or three times each week with a solution of chromic acid (1 in 24). With the use of these remedies the growths diminished rapidly during the first two months, so that I was enabled to determine that the one mass did not proceed from the vaginal wall, as there was a projection of uterine tissue remaining, about a quarter of an inch in extent, proving that at the first examination there was considerable eversion of the cervix, and that when reduced in size the parts resumed a more normal position. The treatment was steadily continued, with occasional omission of the medicine, for two or three days consecutively. The vaginal growth entirely disappeared in about four months. The "stump" of the uterus was irregular, but did not present to the naked eye any appearance of being cancerous. There was no pain, and the slight discharge was singularly free from odour. At the end of six months the patient could walk three or four miles daily with comfort, and on a few occasions she drove upwards of twenty miles in an open carriage without experiencing fatigue. At the seventh month of the treatment she expressed herself as feeling well, and left Birmingham for Devonshire. Dusart's syrup was taken for the last three months. Mr. B——, in writing from home to me, stated that he had not seen his wife looking so well for fifteen years.

I had an opportunity of carefully examining Mrs. B—— a few days ago, when I found that the vaginal growth had entirely disappeared; the part it had occupied was covered with pale but healthy mucous membrane. The portio vaginalis was limited to a ring of healthy tissue about one-third of an inch in depth. The os was patulous, readily admitting the finger, which passed into the uterus about three-quarters of an inch. The interior was smooth, excepting posteriorly, where there was a nodule the size of a pea, which looked healthy, and appeared to be a portion of tissue which had escaped the cancerous attack. There was no discharge, and the patient was exceedingly well.

Epithelioma of Tongue.—Mr. S——, of Sheffield, aged forty-eight years, consulted me on May 20th, 1886. He was in fair health and well nourished. He stated that he had been suffering from an ulceration of the mouth for some time, to which caustics had been frequently applied. He had recently seen Mr. Jonathan Hutchinson of London, who pronounced the case to be one of epithelioma, and advised its immediate removal by excision. The operation, as represented to the patient, appeared to him an unusually severe one, especially as it did not promise to permanently cure him. Casually hearing of the case of Mr. M——, recorded in THE LANCET of Oct 16th, 1886, he determined to consult me.

On examination, a fungating growth was found in the floor of the mouth on the left side, involving the gum and the edge of the tongue for an inch and a quarter. The tissue surrounding it was very dense, the infiltration extending for quite half an inch. There were no sharp or irritating teeth, but the patient was a great smoker.

He was ordered Chian turpentine with resorcin, and to take one-twelfth of a grain of chrysophanic acid in pill every other night, also to have the growth painted with a solution of chromic acid (1 in 24) every other day. A gargle of perchloride of mercury (1 in 2000) was used as an antiseptic. This treatment was continued for four months, when it was found that two pieces had sloughed away from the anterior edge of the growth, and that the surface of the ulcer was covered by the characteristic grey slough usually present after the use of the mixture. The medicine was increased in quantity, and was well borne. The infiltration lessened, and the growth gradually disappeared—first from the gum,—being replaced by apparently healthy tissue. The floor of the mouth healed over, and the ulceration was limited on the tongue to a patch little larger in size than a sixpence.

At the end of thirteen months of the treatment the patient went to the seaside, where he caught a chill, and for the first time there was an enlargement of the left submaxillary gland, and a small abscess formed in the floor of the mouth. He was ordered half-drachm doses of the syrup of iodide of iron, and was directed to discontinue all local applications for a fortnight. At the end of this time the adenitis had disappeared. When two months more had elapsed the ulcer was only the size of a threepenny-piece. Mr. S—— has been able to attend to his profession during the whole of the treatment, and is now in excellent health. He patiently and perseveringly followed out the treatment, being ably nursed by his wife, to whom great credit is due for the punctual and careful manner with which she carried out my instructions.

Epithelioma of Nose and Face.—Mrs. S——, aged forty-five, a widow, consulted me on June 4th, 1887. Menstruates regularly; general health good. Has an epithelial ulcer on the left ala of the nose, and encroaching on the cheek. It began as a small warty growth two years ago, and readily bleeds during bathing, &c. Perforation was imminent. She had been under medical care almost constantly since the appearance of the disease, but without benefit, and as the affection was rapidly extending, she applied to me.

In this case I was desirous of trying the effect of the Chian turpentine alone. I therefore ordered her two teaspoonfuls three times a day, and to dress the ulcer with simple ointment. During the first six weeks there was no change in the appearance of the condition, and she began to despair of ever being cured. I told her, however, to persevere. After the treatment had been continued for two months the sore was covered with a greyish slough. At the fourth month two-thirds of the ulcer had healed, showing only a dark crust about the size of a fourpenny-piece. In two or three weeks the scab fell off, leaving the sore absolutely healed.

Epithelioma of the Uterus.—Dr. Hamilton of Finsbury-circus, London, has kindly furnished me with particulars of a case treated by him, and of which nothing was known to me until I received his report. The notes should be very highly appreciated, as the case is unique in regard to independent testimony, combined with a thorough and incontestable diagnosis. The communication is as follows:—

"May 27th, 1887.—The patient some five or six years ago had a small growth on the cervix uteri, which I pronounced to be epithelioma; it was hard, nodular, and attended with an irritating discharge, which was frequently bloody. After consulting a local medical man, who confirmed the diagnosis, I took her to Mr. Knowsley Thornton, who also agreed with us, and excised the growth, putting on chloride of zinc paste afterwards. I then had sections made of the tumour, examined it microscopically, and sent one to Mr. Thornton; it was undoubtedly malignant. The growth returned in about six months' time, and the patient again saw Mr. Thornton, who stated that the cancerous material had now invaded the body of the uterus, which was fixed within it, and that this time he could do nothing without he scraped it all away from the interior. This, however, he did not advise at all strongly; he just took off what he could on the vaginal part of the cervix, and put on some chloride of zinc paste as before. I then made up my mind to try the Chian turpentine, and I kept her on that and the compound sulphur pills for about a year; the symptoms gradually disappeared, the discharge and blood lessened, until, I may say, now there are no symptoms whatever indicating a return. Now this was a case of undoubted epithelioma, as shown microscopically; and I have, as you may imagine, now the strongest possible faith in the efficacy of Chian turpentine."

Birmingham.

THE CLIMATIC TREATMENT OF PHTHISIS IN THE STATE OF COLORADO.

By M. CHARTERIS, M.D.,
PROFESSOR OF THERAPEUTICS AND MATERIA MEDICA, GLASGOW UNIVERSITY.

FROM a very early period in the history of medicine we learn that change of climate and change of air have been considered as remedial agents of great efficacy. Supported by custom and fortified by experience, this opinion was always acted upon, although there were no substantial reasons given for doing so. In fact, we may say that until Sir James Clark's book was published on the "Influence of Climate," in 1829, no definite ideas had been entertained, and no rules had been laid down, for the guidance of physicians in selecting a climate for any disease. Sir James Clark's treatise dealt with the influence of climate in the prevention and cure of chronic diseases, more especially of the chest and digestive organs. The book is full of wise reflections

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gathered from a large experience, and is couched in anguage forcible and plain. It may be read at the present lay with great advantage, although the views he expresses as to tubercle may be considered, in the light of this scientific age of bacteriology, as somewhat antiquated. Since Sir James Clark's time much has been learnt as to the nature of tubercle, its causes, its development, and its progress either to recovery or to death. No one doubts now the utility of a climatic change in phthisis, but opinions vary as to the place that should be selected. It may be said broadly and truly that no climate possesses specific powers, and hence we find some advocating a warm, moist atmosphere amid flowers and sunshine, while others prefer one amid snow and ice. No general rule can be laid down. The decision in each case must to a great extent be guided by the age, the sex, the mode, and rank of life of each consumptive patient. These considerations can never be undervalued by anyone whose advice is sought. Yet while individual cases must be duly weighed, I think the tendency of the present medical views gives precedence in a case of phthisis to a dry rather than a moist atmosphere, a high altitude to a low one. And if we look at tubercle briefly from its pathological aspect as to what it is and how it grows, we can better understand how the preference is given.

Nature of Tubercular Change.—Avoiding all controversial points as to its etiology, being primarily bacillus or otherwise, we may state that tubercular change usually begins in the walls of the smallest bronchi, generally in one or two circumscribed spots, and in the great majority of cases in the apex. The tubercular infiltration thus begun in the bronchial wall spreads gradually to the periphery, establishing tubercular peribronchitis, in which are noticed "cheesy nodules," which at first are grey and later yellowish. The adjacent nodules run together; a little irregular excavation succeeds, which is the first beginning of the formation of a cavity. With the disease of the smaller bronchi the alveolar tissue of the lung is also affected, and partial lobular pneumonia results, which from its tubercular character becomes caseous. The alveolar walls are also diseased, and the destruction of the cheesy tissue results in the further formation of cavities, or in diffuse caseous pneumonia. With these destructive processes there is a tendency towards circumscribing the disease, thus limiting its growth and causing healing. New connective tissue forms round the tubercular infiltration, especially where there is already destruction of tissue, and this chronic interstitial process leads to contraction and the formation of a cicatrix. In chronic phthisis the conservative contractile changes evidence that the tubercular process may heal. This tendency to heal may, however, be baffled by the infectious material, being carried into other bronchi, and in this process the tubercle bacilli are important agents. So new tuberculosis is set up, and the disease is constantly extended.

Influence of Climate on Tubercle.—It seems evident from this short pathological survey that the true treatment of phthisis once begun is to assist nature in limiting the process of the disease. Climatic treatment is obviously suggested, and the nature of that climatic treatment will now be considered. Tubercle cannot live without moisture. A moist air nourishes its growth, a dry air tends to destroy it. The breathing of pure, dry air, not by fits and starts, but constantly, is what we have to desire, and the question is now narrowed to this, Where can this pure, dry air be found? Undoubtedly in Europe we find this in winter at Davos Platz, but the unfortunate facts stare us in the face that phthisical patients can only remain there during the winter, and that they must remove to some other locality when the snow melts. The healing process, thus commenced but not finished, is again tried by a different atmosphere, not dry, but variable and moist, and again the disease, not in all cases, but in many, resumes its fatal course. Davos Platz has not therefore the elements of a permanent cure, and we must look to other places where the conditions are more favourable. It appears to me that we have these conditions in the air of Colorado at certain stations where the altitude is great. Here we have at Colorado Springs a charming health resort at a height of 6000 ft., situated six miles from Pikes Peak, which towers up to the extent of 14,000 ft. Manitou Springs (altitude 6700 ft.) lie at the base of this mountain, but the circumscribed position and the lack of a free current of air and afternoon sunshine render it not such a desirable residence during winter as the Colorado Springs. Passing further on in the same range of the Rocky Mountains we come to Denver, with a population estimated at 80,000, and an elevation of 5000 ft. This town is well built. The streets are wide, the hotels large, the shops attractive, and the environs interesting. In none of the places mentioned are there cramped surroundings. They are not hemmed in by mountains, but stand on elevated plains, over which a pure, dry air ever sweeps. The seasons are marked by no extreme climatic vicissitudes. There is no extraordinary heat in summer, and no excessive cold in winter. The average summer heat is 70° F.; the average winter cold is 9·5° F. Winter steals upon autumn with no marked change. The snow that falls rarely rests more than twenty-four hours on the ground, and leaves, when melted, no slush under the foot. In no season of the year is there a prolonged rainfall, for the whole amount annually only reaches fifteen inches. The principal rainfall is from April to the middle of October. The rain is never continuous, only falling at intervals in heavy showers lasting rarely more than twenty or thirty minutes. The medical officer of health of the city of Denver has kindly forwarded to me a summary of the monthly meteorological reports for the last ten years, and statistics as to the mortality for five years. From the meteorological report I learn that during the periods mentioned the mean temperature of June was 67·9°, of July 70·0°, of August 68·6°. During the same months the total precipitations for June was 1·4, for July 2·4, and for August 1·4. During the same months there were no foggy days, and only twice in each month were there cloudy days, the other days being clear and fair. During my stay at Denver I noticed the diathermancy of the air, or the increased facility by which the sun's rays are transmitted through the attenuated air. This tends, according to Dr. Denison, to an increase in the difference between the sun and shade temperatures, according to the elevation, in the proportion of 1° F. for every rise of 285 feet. Though the sun in August was hot in the open, yet in the shade during the day and in the evening it was always cool.

Action of the Colorado Climate on a Healthy Person.—Previous to describing the action of the climate of Colorado in disease, we shall briefly allude to its influence on a healthy person. A marked influence is exerted on the circulation. The pulse is quickened, and the beats of the heart are audible when standing still. This increased cardiac action sometimes gives rise to considerable anxiety to new comers, and they should be informed that in the course of a week these disagreeable impressions will cease, and the circulation will become normal. During the continuance of this increased action of the heart the nutrition of the brain is markedly disturbed. There is little desire for sleep at the usual hour for going to rest; and sleep, when it does come, is restless. The slightest noise awakens, and dreams, vivid but not very pleasant, are associated with incomplete repose. All people suffer more or less from sleeplessness on their first arrival in Colorado, but the condition is aggravated in females, owing probably to their more delicate and sensitive nervous system. Full, deep inspirations are taken which expand the lungs, and the expirations seem less prolonged than in a low latitude. The keen air leaves the mouth dry, and this sensation, appreciable at an elevation of 5000 ft., becomes very marked at a higher altitude. My experience on this point was peculiar, and to me unexpected. I proceeded from Denver by rail to Silver Plume, a small village up the gorge of the Rocky Mountains. When I arrived there at midday, as the day was not warm, I started with the intention of taking a good long walk. But the effort was fruitless, for in a short time I found my mouth dry, my voice hard and croaky, while a panting indescribable "all-overish" sensation replaced the easy respirations of health. I was glad to rest and wait patiently for two hours until the train arrived to take me to Denver. The skin never feels moist. Yet there must be considerable perspiration, for the urine markedly diminishes in quantity, although the amount of fluid taken is equal to that drunk at an ordinary altitude. The appetite is keen, and food is enjoyed with relish and easily digested. These are the chief points of difference I detected, and physicians at Denver and Colorado Springs told me they were by no means singular.

Action of the Climate on the First Stage of Phthisis.—We shall now turn from considering the influence of the climate of Colorado in health, and speak of its action in tubercular disease of the lungs. We will suppose a case of phthisis at home, where weakness and loss of flesh have been followed by expectoration, and an increase of the evening temperature

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to 99° F. If hæmoptysis existed, we will presume that for the present it is checked, for unless this is the case a sea voyage from our country undoubtedly tends to bring it back. The patient leaves home, say, at the end of August, and arrives at Colorado fourteen days afterwards.[1] His first step on arrival is to secure, according to his means, suitable rooms, and these can be had in private houses or hotels at terms varying from 10*s.* to 15*s.* per week; if with board from 24*s.* to 48*s.* His next step should be to consult a medical man acquainted with the climate and of good professional standing. The advice given to him will in all probability be this: To be out of doors all day, and to take systematic exercise; to avoid night air, and to retire to rest early. Above all, it will be deemed advisable to insist on the patient considering himself or herself an invalid, and to take no liberties either in food or drink, and to have amusements in which there is nothing to excite or to agitate the nervous system. Rigorous self-control must be put in force, and the professional mandate must be strictly and literally obeyed. Returning health makes this difficult at times, and restraints may be considered irksome. Yet a false step may retard all the improvement happily begun. Sometimes, on account of this, a cold is caught and broncho-pneumonia develops, the prognosis of which is very grave, for all acute inflammation of the respiratory tract in high altitudes tends to assume a serious form. After six months, in all probability, the patient will feel well, with no cough, no expectoration, no weakness, and with a temperature which is normal. The bodily weight will have increased, from the bracing air necessitating the taking of more food and assisting the proper assimilation of it by the system. Shall the patient now return home? Undoubtedly not. The risk is too great. There is arrest of the disease but no permanent cure. A moist, damp air will certainly bring it back in an aggravated form. Consequently the advice is generally given that the patient, if a man, should proceed to a ranche in the latter month of spring. There board varies from £2 to £2 10*s.* per week; but if the man can, and is willing to work, he will find no difficulty in obtaining employment. When the hay season commences, wages are paid to labourers at the rate of from four to six shillings a day with food. And on the same or increased terms he can earn his living as a cowboy, pursuing, by daily horseback exercise, the method of treatment, which Sydenham considered "as certain a cure for phthisis as quinine was for ague." From all I can learn, the cowboy's active life is one characterised by good fellowship, primitive manners, and redundancy of health. There are also opportunities for those who like this out-door life not merely earning a living, but of making money. The field is large, and the chances are many. If this life is not congenial, then in a town like Denver, with 30,000 inhabitants and increasing rapidly, he has a prospect of going into business with good hope of success.

(To be concluded.)

SEVEN CONSECUTIVE CASES OF LAPAROTOMY.

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CASE 1. *Multilocular Ovarian Tumour; Ovariotomy; Recovery.*—Mrs. H——, aged thirty-nine years, was first seen by me in November, 1877, when I treated her without operation for double laceration of the cervix and retroflexion. In May, 1880, she had an enlarged ovary posterior to the uterus and no retroflexion. In February 1881, the tumour was exceedingly hard to the feel. Mr. Rudal gave ether, and I aspirated one pint and a quarter of clear, straw-coloured fluid, which was one-third albumen, and contained Drysdale's cells. In October I drew off six ounces more, and decided, on its refilling, to remove the cyst by the vagina, but did not see her again till March, 1886, when she was confined to her bed. A multilocular ovarian cyst occ pied the abdomen to the ensiform cartilage and w moderately prominent; but she was rendered ill more l the occupation of the pelvis by a solid mass, which appea to have developed from the original pelvic cyst, than l the abdominal enlargement. Her pulse was 120, thin; a her temperature was from normal to 100°. She was ve thin, and her face drawn.

On March 29th, Dr. Burke saw her in consultation wi me, and on the 31st he administered ether and methylen and, assisted by Drs. Le Fevre and Lalor, I operated. A incision two inches and a half long was made between t umbilicus and pubes, and the various cysts aspirated into two-gallon bottle, as is my custom, when the pelvic tumo was with some difficulty extracted. The left ovary was al cystic, and was removed. The pedicles were tied with sil with a Tait's knot. The wound was closed with silver an horsehair sutures. The operation from beginning to en occupied twenty-five minutes.

She was treated with a pill of powdered opium (one grai occasionally when in pain and awake. The temperature di not exceed 100°, nor the pulse 100. On getting up, th uterus was retroverted, and a severe drag on the abdome occurred on walking, apparently from an adhesion of t left pedicle. A pessary presently relieved this, and sh became quite well.

CASE 2. *Multilocular Ovarian Tumour; Ovariotomy Recovery.*—Miss P——, aged forty, a patient of Dr. Snow ball, who called me in consultation, was in bed for six week with rheumatic fever when eight years old, and since the has been subject to rheumatic pains. Has for years ha piles; worse the last year. In December, January, an February had low fever and cough. In March noticed lump in the lower abdomen, when she was much increase in size, and since then has become very much larger. Ever day has pains like needles or shooting at the lower righ abdomen, or from right to left, and has got thinner. Th catamenia has always been regular. Is 5 ft. 8 in. high, thi with a prominent abdomen. There is a tumour extendin from the pubes to half-way between the umbilicus an ensiform cartilage, occupying the whole of the right sid and three-fourths of the left; doubtfully fluctuatin apparently not; dull on percussion, but with resonance i the right groin, and less in the left. The hymen is entir The os uteri dimply. The sound passes in the normal direc tion through the cervix to the fundus two inches and a hal Pulse 120. There is a systolic bruit at the base and apex The rest of the organs normal. On exploratory puncture, straw-coloured fluid gave Drydale's cells.

On August 5th, assisted by Drs. Snowball and Fishe Dr. Burke kindly administering ether and methylene, I mad an incision two inches and a half long midway between th umbilicus and pubes, and found a very multilocular tumour the right ovary, which was aspirated as usual. The left ovar which was cystic, and as large as a hen's egg, was remove The pedicles were tied with fine silk in a Tait's knot, an the wound closed with silver and horsehair sutures. Th operation occupied thirty-five minutes. No sedatives w given, but on occasions sulphate of magnesia or calom after Lawson Tait's method. The temperature did exceed 100°; the pulse from the cardiac affection vary from 100 to 120. There was some difficulty from constipati from the tenderness of the piles, and a contracted sphinc ani, while the hymen prevented vagina-rectal assistan The recovery was uninterrupted, and she was up on sixteenth day, and has been quite well except for the pi which Dr. Snowball and I lately removed.

CASE 3. *Multilocular Ovarian Tumour, with Twi Pedicle; Acute Peritonitis; Pregnancy; Ovariotomy; Ab tion; Abdominal Abscess; Recovery.*—After a series of succe ful ovariotomies, the question arises, why should fatal c occur in future? The mode of avoidance of one class them is here indicated. Mrs. S——, of South Melbourne, h had two children, the last three years ago. The catame had ceased on May 24th. On August 26th she was taken and Dr. Barker found her suffering from acute perito and constant vomiting. Dr. Brett also saw her. I Dr. Barker in consultation on Sept. 2nd, when her temp ture was 102° and pulse 120. The abdomen was gre distended, and the skin brawny; resonant in the hypoch dria, dull in the flanks. The diagnosis was that, in absence of other apparent cause for the peritonit tumour had burst or become twisted. She took one g

[1] The railway rates from New York to Denver are liable to frequent fluctuations; at the present time they are as follows: First class, £10 7*s.* 11*d.*; second class, £9 11*s.* 3*d.*; emigrant, £8 14*s.* For the passage from Glasgow to New York by the State Line the rates are: Saloon, £17 7*s.*, or £8 8*s.*; and steerage, £4. The rates by the Anchor Line are from £8 8*s.* to £10 10*s.*

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f powdered opium in pill every four hours when awake, nd had linseed poultices applied. On the 4th the tempera- ure was 100°, pulse 100, the abdomen more lax, and a umour could be felt reaching from the pubes to half way etween the umbilicus and ensiform cartilage, central, eely fluctuating; neither fœtal heart nor placental bruit ould be heard. On the 6th the tumour was more distinctly lt. We decided to admit her at once to the Women's ospital for immediate operation, on the diagnosis of varian tumour, with twisted pedicle and pregnancy of bout three months and a half.

In the hospital on Sept. 6th I drew off with a fine needle ne ounce of light red fluid, which gave atrophic blood cells nly. At a consultation of the hon. staff opinions as to the ondition varied, and in view of the unsatisfactory micro- copic examination it was determined to wait. From the th to the 10th, the morning temperatures were normal, the vening temperatures varying from 98·8° to 99·8°; pulse om 96 to 100. Adhering to my original opinion, and guided y the experience of former cases, on Sept. 10th I again rew off an ounce of fluid, which was of a deeper red than efore, and full of Dysdale's cells. A sound was gently passed pparently to the fundus uteri (four inches), and a con- ultation was called for the 12th, with a view to an immediate peration, which was held and so determined.

On Sept. 13th the operation was performed in the presence f Drs. Barker, Doyle, Forster, Meyer, and Workman, Dr. urke giving ether and methylene, Drs. Fetherston, Rowan, nd Hooper, the resident surgeon, assisting. The abdominal alls had many bleeding points, which were compressed ith Spencer Wells' forceps. There was general peritonitis. he tumour was seen to be of a dirty purplish-black colour. he contents (one gallon and a half of a purple colour) were spirated with a large trocar into a two-gallon bottle. The umour was on the right ovary, was universally adherent, but adily separated, and similarly the intestines; the pedicle as occupied by clots distending it irregularly as a flattened usage, and so extending to the right iliac region, to which was closely adherent. This had previously burst, and had us apparently caused the original peritonitis. It left a uish-grey clot surface close to and apparently attached to testine, so that it could not be removed; it was sponged clean as possible. Below this expansion the pedicle was ghtly twisted, deep down, close to the uterus, and was ith difficulty tied with a Tait's knot, whence there was no emorrhage. A large piece of semi-gangrenous omentum, hich had been adherent to the tumour, and which bled at any points, was similarly tied and removed. Much oozing curred from the previously adherent intestine high up, ep, close to the abdominal aorta, which pressure did not op. Sponges squeezed out of a one to four solution of quor of persulphate of iron produced more but not quite rfect effect. The oozing was from very numerous but ex- edingly fine points in the peritonitic surface of the lately herent intestine. The left ovary was found enlarged to e size of a hen's egg and cystic, and its Fallopian tube uch enlarged and intensely inflamed. Both were tied se to the uterus with a Tait's knot and removed. Great re was taken in thoroughly cleansing, and the cavity was shed out with pure warm water. In view of the intense ngestion and slight bright oozing from the untiable in- stine as mentioned, as well as the dirty clot surface istent on the right side, a curved glass drainage tube reach- g to Douglas's space was introduced. The uterus reached to ove the pubes, was apparently pregnant three months d a half, and was much congested. The wound was then sed and dressed with absorbent cotton. At 10 P.M. the lse was 96 and the temperature 98·5°; and, as she was ry restless, a suppository of a quarter of a grain of rphia was introduced into the vagina. No more sedatives re given.

The patient progressed well, and her temperature did not ceed 100°, except when a large stool descended and ed the rectum, whereby some strain was, no doubt, put the newly coherent surfaces; seram came through the inage tube, which was removed on the second day, and ne matter subsequently through the upper end of the und. On Sept. 20th she had a vaginal red discharge like nstrual fluid. On the 22nd she became convalescent, and temperature normal. On the morning of Oct. 5th she l pains, and the umbilical cord was found in the vagina, but temperature and pulse were normal. It was impossible her to carry the child to term in view of the universal hesions in the abdominal cavity. At 4 P.M., the tem- perature rising to 99·5° and the pulse to 108, it was deemed necessary to assist her, and under methylene I delivered her, piece by piece, of a fœtus with breech presentation, which had been dead some two or three days, with con- siderable difficulty on account of a contracted uterus. The placenta was adherent and the uterus hourglass, and thus it was impossible to remove it without undue bruising, and it was therefore left. The temperature then fell to normal; but on the afternoon of the 8th it suddenly rose to 102·8°, and I deemed it necessary to complete delivery, which was effected under methylene with considerable difficulty, since the placenta was situated at the summit of the hourglass contraction. It came away in small pieces, till, at a happy moment, the mass was seized and removed. She then be- came convalescent till the 13th, when she complained of pain and fulness over the centre of the right illum, where a tumour of the size of a hen's egg, and quite resonant from before backwards, was felt projecting in the direction of the centre line. It was realised that this was a suppuration of the ragged burst veins, projecting towards the median line, and pushing before it the intestines matted together by the peritonitic adhesions. This rapidly increasing, on the 13th, under methylene, I introduced, as much from the side as possible, a fine trocar, and, getting pus, cut the skin and pushed in a large trocar by the side of the smaller, and through it introduced a drainage tube. The temperature contined normal; but, in spite of drainage tube and syring- ing with a solution of Condy's fluid, the discharge became exceedingly offensive and did not freely escape by the syringing catheter, which entered about three inches; and on Oct. 22nd the temperature rose to 101·8°, and the woman was retrograding. Accordingly then, under methy- lene, I enlarged the opening so as to introduce the finger, and found a mass of rotten grey clots, which were removed by syringing, and a large drainage tube was inserted. From this time she progressed, the temperature remaining quite normal, and is now up walking about, and looking well and fat; yet a probe passes down two inches and a half, but no pus escapes, and there is only a sense of slight deep induration. It is probable that increased strength will heal the channel. She is now at home and will occasionally be seen.

The lessons to be learnt are:—1. Had the operation been performed on September 6th, instead of the 13th, the adhe- sions would have been less vascular, and so no hæmorrhage might have occurred; but what a catastrophe had she had some disease of pregnancy, as dropsy of the amnion, and opinions differed. 2. The lateral clots and the omentum would have been less advanced towards gangrene. 3. The neces- sity of the presence of a foreign body, the drainage tube, might have been avoided. 4. The risk of clotted veins on the proximal side of the pedicle would have been reduced. 5. The exploratory fluid should be taken from the lowest depths of the tumour, or the patient have been previously made to stand or have been placed on the side. The main general axiom derived is, "When in doubt perform an immediate exploratory operation." I trust I may never omit to do this in cases of such diseases with complications, in which, however, the given diagnosis desired for a capital operation is densely clouded. I hope shortly to bring forward a series of cases of ovarian tumour with twisted pedicle, which will show that those in which an immediate opera- tion has been performed have been crowned with complete success, while in those in which delay has occurred fatal results have been courted.

CASE 4. *Uniocular Ovarian Tumour, closely adherent; Ovariotomy; Hæmorrhage; Recovery.*—Mrs. K——, aged twenty-seven, has never been strong, and always subject to great dysmenorrhœa and bearing-down pain, and has worn a pessary. Is said to have had a miscarriage at two months four months ago; since this she has had constant pain in the right iliac region, pain on walking, and much leucor- rhœa. The catamenia is more frequent, and less in dura- tion and quantity.

On Nov. 3rd the abdomen had a hard-feeling tumour, three-fourths to the umbilicus; the vagina contained a large pessary; the os uteri was very high, looked back, was pale, and had a small opening surrounded by slight granulations. No sound passed the inner os. The body of the uterus felt very hard, and on either side of the apparent uterus were firm tumours extending to the sides of the pelvis, only slightly movable. There was no albumen, and the heart and lungs were normal. On Nov. 5th, under methylene, administered by Dr. Gray of South Melbourne, the sound was after some difficulty introduced into an anteflexed uterus two inches

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and a half. On the introduction of a fine trocar on the 7th, dun-coloured fluid dripped, which was sticky, and under the microscope gave atrophied blood cells and a moderate number of Drysdale's cells. On the 15th Dr. Burke administered methylene at my private hospital, and Dr. Snowball assisted me, when I made an incision two inches and a half long down to the tumour. and aspirated thirty ounces of dirty greyish-brown grumous fluid. The tumour, which was of the right ovary, was completely and closely adherent to the right iliac region and posterior wall of the uterus, and was with difficulty defined and separated. The pedicle was tied with silk. The left ovary was cystic, of the size of a hen's egg, and was similarly tied and removed. There was persistent hæmorrhage from the posterior uterine adhesions, which pressure nearly stopped, but it was deemed necessary to introduce a drainage tube. The operation lasted an hour and a quarter, on account of the adhesions and hæmorrhage. The tube was removed in twenty-four hours, during which there was some escape of bright blood and serum. The temperature was from subnormal to normal for the first week, when a large stool descending raised it to 100°. On the third day there was a tendency to jaundice, relieved by ten grains of subchloride of mercury. The pulse was afterwards 72, and she was convalescing.

I have a strong feeling in favour of private ovariotomies over those in public hospital, having only had one death among the former, which occurred more than four years ago.

(To be concluded.)

THE DISEASE OF INEBRIETY AND ITS TREATMENT.[1]

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IT is a fact of historic interest that inebriety was called a disease long before insanity was thought to be other than spiritual madness. On an old papyrus found in one of the tombs of Egypt, dating far back into antiquity, was found a clear, explicit recognition of the disease of inebriety. Herodotus wrote, four centuries before the Christian era, that in drunkenness both body and mind are sick. Diodomus, Plutarch, Chrysostom, and Alpian, the Roman purist, all mentioned the disease of inebriety long before and after the Christian era. From that time down to the present century this fact has been mentioned by scientists and philosophers in almost every age. By a strong shifting of events, insanity, which was supposed to be a spiritual affection until a comparatively recent date, is now studied as a physical disorder; while inebriety, which was mentioned as a disease twenty centuries ago, is still invested with the superstition of a spiritual origin. At last, within a quarter of a century, this great truth has been formulated and organised into the realm of practical science. This is a discovery in science, evident from the sharp contradiction which it has provoked, and the same opposition and battle which every new truth must encounter before it is accepted. In the first surveys of a new country only a few general outlines are marked out, leaving wide gaps and stretches to be filled up by other and further studies. In like manner the purpose of this paper is to point out some outline facts of the disease of inebriety and its treatment, and indicate, not only the few facts known, but the wide ranges of the unknown, awaiting future discovery and study.

When inebriety is seen from a scientific point of view, it is found to be controlled by laws, which vary according to certain physiological, psychological, and physical forces, of which heredity, environment, culture, nutrition, brain and nerve vigour, &c., are prominent. When accurately recorded histories of many cases of inebriety are studied and compared, certain fixed ranges of causes appear which seem to follow some regular order of movement. The following is a list of those causes: 1. Certain conditions of heredity, [illegible] physical and psychical shocks, and nerve injuries [illegible] proportion of cases are followed by inebriety. 2. Certain structural changes of the brain and functional irritations precede inebriety in many cases. 3. Certain unstable brain organisations, irregular, retarded, and defective brain developments, manifest in great feebleness or intense activity, are intimately associated as apparent existing causes with many cases of inebriety. 4. Certain diseases seem to have a special predisposition to develop into inebriety with or without any exciting causes. These conditions are uniformly found either alone or combined in all perversions, certain disturbances of nutrition, and nerve cases of inebriety. The outbreak of inebriety varies widely and is gradual and obscure at first, or sudden and precipitous. It may be masked for a long time, or may be very prominent, with long, irregular halts. In the first group of causes the inebriety may be of the dipsomaniac type appearing suddenly. In the second group it is often concealed for a long time; in the third group long halts and apparent recoveries occur. In the fourth group it begins suddenly, and is of short duration. In the second and third groups inebriety is not unfrequently a symptom of insanity and general paralysis, and these diseases follow from inebriety.

The craving for spirits is not the disease, but only the symptom or expression of the disease. It is the demand of the disordered governing centres and general organisation for relief; and alcohol, as a narcotic, supplies this demand most perfectly. Often the first use of alcohol acts like a spark, concentrating and exploding the diseased tendencies which may have been forming or transmitted from the past. Also it may give an impulse or impress to a feeble, unstable organisation, that quickly merges into inebriety. In these cases a train of degeneration is started which will ever seek relief from alcohol. The more impulsive and intense the desire for spirits, the greater the degeneration. When the craving is paroxysmal, with free intervals, the degeneration is central and profound. All these periodical and paroxysmal cases are closely allied to epilepsy. The free intervals may recur with uniform exactness in time and duration. In some cases the return of the drink paroxysm may be predicted with as much certainty as an eclipse of the sun, and the duration of the paroxysm rarely varies more than a few hours. In other cases the paroxysms, both in length and free intervals, are irregular and uncertain, appearing unexpectedly and ending suddenly, in adverse conditions apparently. Thus, in some cases, the inebriate will begin to drink under the most opposed circumstances and surroundings, and will stop suddenly under equally adverse conditions, beyond all rational explanations to account for such acts. In certain cases, the appearance of health and the confident hopefulness of the patient are signs of the approach of a paroxysm. Great mental and muscular activity is often followed by an outbreak of inebriety, lower in degeneration than before. These strange and mysterious phenomena are undoubtedly governed by laws that will be known in the future. Such inebriates, like epileptics, have distinct nerve storms and explosions of morbid energies. This is literally a great, dark continent of the most fascinating psychological interest.

When inebriety is developed, either continuous or periodical, there are distinct traces of a regular order of symptoms. Other diseases may complicate and cover up the order of the march, but sooner or later the same symptoms appear, following the same order. Thus certain brain palsies of the highest centres, certain delusions and hallucinations, certain psychical manias and melancholias, certain morbid impulses and functional perversions, associated with anæmias, hyperæmias, and a great variety of complex symptoms, are sometimes masked with the appearance of health, but generally they are apparent.

A certain number of inebriates, morbidly conscious of their condition, live in the thought of their wickedness and misery; humiliation is coupled with a delirious faith of recovery; they are pleased to serve as examples for others. exalted delusions and delirious manias are always present. Another large class seem thoroughly unconscious of their condition. They have delusions of strength to recover, and believe all accounts of their danger or weakness are exaggerated for the purpose of creating alarm in them. The sense of danger grows less, and their faith in themselves increases in steady progression on to death. Although the action of alcohol may differ widely in different cases, the same general symptoms mark all the stages of acute and chronic degeneration.

Inebriety in America is becoming [illegible]

[1] Read in the Medical Section of the International Medical Congress [illegible] on Sept. 7th.

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in intentity and maniacal symptoms. The use of alcohol is more precipitate, followed by mental excitement, delirium, nerve and muscle exaltation and depression. Increased culture and intelligence takes away the coarser and more repulsive symptoms of inebriety, but increases the maniacal and suicidal phases and mortality. Inebriety is more concealed to-day than ever before, and more intimately allied with, and terminates more often in, pneumonia, Bright's disease, apoplexy, and various organic and heart affections. Inebriety is increasing, as is shown by the fact of the increased consumption of alcohol in this country and the increased number of persons arrested for inebriety in our large towns and cities. The dipsomaniacs and the intermittent and periodical inebriates are increasing, and the moderate drinkers are diminishing. From a variety of evidence, as yet in outline, it appears that inebriety moves in waves and currents, prevailing like an epidemic, then dying away. This seems to be evident from the statistics of persons arrested for inebriety, and from comparative studies of the numbers of inebriates in different countries. From these data it appears that inebriety steadily increases up to a certain maximum point, then declines to a minimum number, resembling a tide-like movement of continuous ebb and flow. Some of these drink cycles have a period of about eight years. In Sweden it is fourteen years; in other countries it is less. The consumption of spirits in England was found to follow a similar ebb-and-flow movement of eight or ten years. These great movements seem to be beyond any range of causes that will explain their presence. They have been traced in cities and villages of New England in many instances, where it is clearly evident inebriety prevailed at certain times to great excess, then died away, only to reappear again after a lapse of years. The evidence is steadily accumulating, pointing out these great drink cycles, which, like storms, gather and increase up to a certain period, then die away. The great unknown forces and laws which regulate these drink epidemics await discovery. When they are known, then much of the mystery of the strange temperance revivals and agitations; which spring up and sweep over the land, dying away as suddenly as they appear, will be cleared away. Temperance agitations have a strange wave-like movement, evidently controlled by laws unknown. Who will doubt that they may not be the reactions of some high tidal waves of inebriety—the backward swing of some great drink cycle—a psychological protest and consciousness of the presence of some high point of inebriety, which will recede, and with it the agitation will die away. These are but hints, and faint outlines of facts and forces that control inebriety far above the roar of theoretical agitation and personal resolution. Inebriety is a disease governed by certain fixed causes which follow a certain order of events, and the evidence of these and other facts are clearly within the range of a more accurate study and a wider intelligence to remedy and prevent.

In the efforts to check and prevent inebriety, the interest and agitation are increasing far beyond all rational knowledge of the subject. The following are some of the theories on which the present efforts for cure are based. Moralists assume that inebriety is always a vice and sin, the only treatment of which is prayer and conversion. Temperance men and reformers call inebriety the result of a weak will power, and urge the pledge and the force of societies as the only real cure. The temptation of saloons and the facility of procuring spirits are supposed to be active causes, to be broken up only by prohibitory legislation. Ignorance in childhood of alcohol and its effects as a cause is supposed to be remedied by forced instruction in the common schools concerning the nature and character of alcohol. The theory most widely believed is that alcoholic excess is a sin and crime, to be cured by punishment and suffering. It has been stated that in this country during 1886 over 300,000 persons were arrested for inebriety and punished by fine and imprisonment. Yet it is the unanimous testimony of all competent observers that such means for restraining inebriety not only fail, but increase the very disorder they seek to remove. Every individual sent to gaol for inebriety is made more unfit for temperate living, and further removed from health and capacity to recover. He goes to gaol with impaired nutrition and degenerate brain and nerve force. He is suffering from brain anæmia and structural changes, with mental exaltations and depressions. In gaol the quality and quantity of food is ill adapted to restore and build up the weakened organism. The hygienic influences are wanting, the mental influence is bad, and the associates and surroundings still further depress and weaken the mental vigour necessary for restoration. The only compensation for this is the removal of alcohol, which is often a small factor in the treatment. All this and much more can be read in the anæmic faces, tremulous eyes, and depressed movements of inebriates in gaols and prisons. Happily the great delusion of inebriety being a moral disorder, a vice, sin, and crime to be punished, is passing away. In past ages the phenomena of nervous diseases and insanity were regarded as moral disorders, to be remedied by law and Church influence. These remedies, applied most vigorously, made no impression; insanity and nervous diseases steadily increased. To-day history repeats itself in the punishment of inebriates and the efforts of the Church and society to stop drunkenness, while the army of inebriates goes on increasing. As long as the causes are unknown the remedies will fail.

All exact study of the facts indicate that the disease of inebriety is both curable and preventable. We must realise that inebriety is a dangerous disease, not only to society, but to the victims, requiring restriction of personal liberty and legal guardianship, under medical care, in special surroundings. Like victims of contagious diseases, inebriates should be quarantined and forced to come under treatment. Society should not tolerate their presence, or permit them to injure themselves and imperil others by their acts. Dr. Bellaws said long ago: "Inebriates will all eventually be restrained in hospitals and treated medically the moment their liberty becomes dangerous to society." The terms of their confinement will be limited by the conditions and cure of the disorder. Society gains nothing by holding any man prisoner who is fit to be at large; liberty and human rights gain nothing by allowing any man to be at large for a moment who is destroying himself, his family, and his neighbours. Facts and experience show that this can be best accomplished in workhouse hospitals, where restraint and all other appliances can be gathered. These hospitals should be military training asylums, where medical care, restraint, occupation, and general treatment can be applied for long periods. They should be divided into three classes: the first for the chronic incurables, the second for recent cases and the middle classes, and the third for private and wealthier patients. The first and second classes of these military hospitals should be built from the moneys received from the licensed fund, and supported by the same fund and the labour of the inmates. The first class—that for the chronic cases—should be placed in the country on large farms, where various occupations could be profitably carried on. They should be managed by a board, with an expert superintendent, the same as in all State charities. The government should be of military exactness, and every condition of living and surrounding regulated with steady uniformity. Each case should be studied, and a course of treatment pursued that would build up both the mental and physical organisation, providing also rest, change, and occupation in exact surroundings, where every defect is antagonised, and every element of health encouraged and strengthened. The pauper inebriates who are now sent to gaol, and inebriates of all grades should be committed to these hospitals for periods of not less than five years. On apparent recovery within this time, they should be permitted to go out on parole, to be returned at once on relapse. Each one should be employed, and, if possible, be self-supporting. Practically, the final cure of persons in this class might be limited to exceptional cases, but the gain to society and civilisation by housing and treating these poor victims would exceed all computation. The second class of hospitals should be smaller, built in the same way, and conducted on the same plan of exact military care and medical treatment. In the case of persons of limited means who could pay some part of their expenses, and recent cases, who would come voluntarily or by force, under this restraint, for from one to three years' commitments, the same system of parole and occupation should be employed. The third class should be private hospitals, under the same general management and plan. Rest, medical care, change, and occupation should be suited to the needs and demands of all who could command them. They should be built by private enterprise, and be under the general care of the State. Benevolence would endow these places, and the special means of treatment would accumulate rapidly. The great principle of treatment would be, in all these hospitals,

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to quarantine and house the patient, and treat all the conditions which enter into the disease as well as the disease itself.

These are outlines of the hospitals to be built in the future, the practical success of which is demonstrated in many ways. The inebriate hospitals of to-day are struggling in this direction amid difficulties that would crush out any other work not founded on great principles. The legal power of restraint is limited to months instead of years. Nearly all these hospitals are wanting in location, surroundings, and means of support, except from the income of patients. Means and appliances for occupation and thorough medical care are wanting in many cases. Public sentiment and friends of patients will not sustain the physician in his efforts and methods of treatment. False pride in the friends of patients keeps them away from all hospital treatment, until they are beyond reasonable hope of restoration. Then, as a last resort, they are sent to such places, expecting some extraordinary change. These are only a few of the great difficulties which beset all hospitals for this class, and yet unmistakable evidence indicates a large percentage of positive cures. All authorities agree that over 20 per cent. of all cases treated by the most imperfect means and appliances are cured. The nature and character of inebriety is so largely unknown that its treatment will vary with the hospital and its management. Enthusiasts and non-experts occupy the field in many cases, and try methods of treatment that wider intelligence would condemn. There are three classes of hospitals for inebriates in this country. The first recognises the disease of inebriety, and aims to treat it on thoroughly scientific principles. The second class treats these cases as half disease and half vice, giving prominence to moral means over all physical remedies. The third class are the specific physicians, who adopt special remedies, which are empirical and unfounded on any sound knowledge of such cases. The treatment, like the study of inebriety, is passing through the stage of empiricism; yet, with all the confusion and ignorance which of necessity surrounds these efforts, the actual results far exceed the most reasonable expectation. It may be safely said that no medical field presents more difficulties for the student, as it stretches along the frontier land of sanity and insanity; and no medical field promises grander results in the redemption of the race and requires a higher order of talent than the study and treatment of inebriety. These are some of the teachings of science, which are like head-lights far above the mists and fogs of theory. From these points we shall discover the sources and forces which develop inebriety and indicate the means of cure and prevention. From this standpoint the possibility of restoring the inebriate and stamping out inebriety is only limited by our want of knowledge of the laws and means to accomplish this end. Pausing on the confines of this almost unknown realm of mental disease, and looking over into the darkness of theory and temperance agitation, and empiric efforts to know and cure this disorder, we are assured that here, as elsewhere, the same eternal reign of law and order exists. Here we shall find the same causes and effects, the same circumstances and conditions, which are active in developing the epileptic and the insane, the inebriate and the criminal, all following some unknown lines and obeying some unknown forces as fixed and eternal as that which governs the planets. Along this border line science is gathering its forces, and, like the problem of the stars, its mysteries can only be solved along the line of accurately observed fact.

THE SANITARY REGISTRATION BILL.—At the ordinary meeting of the Council of the Sanitary Assurance Association, 5, Argyll-place, Regent-street, on Monday last, Sir Joseph Fayrer, K.C.S.I., F.R.S., in the chair, the following resolution was unanimously passed, on the motion of Mr. H. Rutherford, seconded by Mr. Andrew Stirling:—"That the principle of the Sanitary Registration of Buildings Bill—viz., that the law should forbid any building being used for public or semi-public purposes, unless and until the arrangements for the water supply, drainage, and ventilation of such building shall have been certified as satisfactory by some qualified person—having been very widely approved, a determined effort ought to be made to pass the Bill into law during next session, and in order to facilitate its progress in Parliament it will be desirable to introduce the measure in the House of Lords."

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A SERIES OF RENAL CASES, WITH REMARKS.

(Under the care of Mr. HULKE.)

THE cases which we publish below are illustrative of renal conditions which come under the care of the surgeon for treatment. The remarks made by Mr. Hulke on each case point out the special points of interest; but we would especially draw attention to Case 4, where the patient recovered from a condition which was at one time regarded as hopeless. The cases are reported by Mr. G. S. Ware, house-surgeon.

CASE 1. *Severe blow in the loin followed by copious and long-continued hæmaturia; scalp wound; concussio cerebri.* A well-grown, muscular labourer was admitted into the Founder ward on Dec. 14th, 1886, suffering from concussion of the brain and scalp wound. In addition to these injuries he had a bruise on the left loin. He was said to have fallen headlong off a scaffold twenty-eight feet above the ground, and to have struck his left side on a projecting beam. The first urine voided contained a very large admixture of blood, and the hæmaturia continued, with slight variations in the quantity of blood, until the 25th of the same month, when an evident decrease was first noted, coincidently with the exhibitions of acetate of lead in doses of three grains every three hours. Visible traces of blood did not, however, finally disappear from the urine until Jan. 3rd, about which date a small quantity of pus was noticed in it, and a few hyaline casts.

Remarks by Mr. HULKE.—It hardly admits of doubt that the source of the hæmorrhage was the kidney, this organ having sustained some degree of laceration, for the amount of blood was too great to have proceeded from the ureter, and there was not anything to suggest a vesicular origin. That such lacerations of the kidney are not necessarily fatal without operative intervention is, it is believed, abundantly established by experience, and they do not necessarily demand nephrectomy; presumably this should be restricted to the severest forms of injury. In this and in other similar cases acetate of lead has appeared to be decidedly useful.

CASE 2. *Hydronephrosis treated by tapping.*—On Jan. 14th, 1885, a maidservant, aged thirty-three, was transferred by Dr. Cayley to Mr. Hulke's charge for the exploration of an abdominal swelling. The left half of her abdomen was occupied by a swelling which reached from the vertebral column forwards to about an inch and a half beyond the middle line in the level of the umbilicus, from which point its anterior border extended downwards to within one inch of the anterior superior spina ilii. The whole area thus defined was dull, and it fluctuated distinctly. A narrow resonant band intervened between it and the hepatic dulness, and the left inguinal region also gave a clear note. A vaginal examination established the separateness of the abdominal swelling from the pelvic organs. The urine was scanty, the total quantity voided on three successive days being 16 oz., 13 oz., and 12 oz.; its specific gravity was 1028; its reaction was slightly alkaline. The woman stated that she had enjoyed fair health, and had never had any serious illness until the present. She had first noticed her abdomen to be swollen only a month previously. She herself had attributed this to "wind." Two doctors had seen her, one saying she had "distension of the bowels," the other that she had dropsy. The cyst was emptied by aspiration through the loin, 22 oz. of fluid being drawn off. Its colour was greenish yellow; its specific gravity 1022; its reaction slightly alkaline; boiled with nitric acid it gave a copious precipitate of albumen. The only formed elements noticed in it were a few squamous epithelial cells, some leucocytes, and red blood-corpuscles. It was quite devoid of urinous odour. After the operation she expressed herself as being much relieved,

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and on Feb. 2nd she returned to the medical ward, from which she was discharged convalescent on April 20th.

Remarks by Mr. HULKE.—Its situation, unchanged by posture, the entire absence of resonance posteriorly, its proved independence of the other solid abdominal viscera and of the pelvic organs, collectively afford a very high degree of probability that the swelling was a renal cyst. The character of the fluid drawn off does not negative this supposition, since in advanced stages of hydronephrosis the fluid is certainly in some instances distinctly albuminous and wanting in urinous smell, and the date of origin after cystiform dilatation of the kidney may have long preceded the time of discovery of the swelling. The result, even if it should not prove permanently good, justifies the propriety of the treatment by aspiration.

CASE 3. *Renal calculus; pyonephrosis; lumbar incision; subsequent extraction of the stone.*—On Jan. 27th a charwoman, aged forty-six years, who had been admitted into the hospital under Dr. Cayley, was transferred to Bird ward for operative treatment. At that date the right half of the abdomen was occupied by a swelling, which extended forwards from the vertebral column to slightly beyond the middle line, and reached downwards from the hypochondrium nearly to the groin. This entire area was dull, and throughout it fluctuation was distinct. Between its upper edge and the liver, and also between its lower limit and the pelvic brim, was a narrow resonant interspace. The reaction, the specific gravity, and the average daily quantity of urine were normal. The patient stated that twenty years previously she had first had an attack of pain in the right loin, accompanied by vomiting; and at that time she was told that she had a stone in the kidney. From that date she had seldom been long without lumbar pain. Ten years ago, during such an attack, she first noticed a swelling in the loin. She was not aware whether at any time her urine had contained pus or blood. Her present symptoms, together with her history, were considered to indicate a cystic dilatation of the kidney, presumably due to calculous obstruction, but they did not appear sufficient for the differentiation between hydro- and pyo-nephrosis. The absence of pyrexia favoured the former supposition. On the 28th of January a renal cyst was opened by lumbar incision, giving escape to a very large quantity of a thin, slightly opalescent fluid, after which the edges of the opening in the cyst were easily brought to the surface of the external wound and stitched to the skin. Neither with the finger passed into the cyst nor with a long probe could a calculus be detected, but the cavity was so large that its exploration was necessarily very incomplete. With the exception of a transitory rise of temperature to 101·6° F. on Feb. 1st—coincident with the occurrence of a slight blush of redness of the integument between the wound and the crista ilii, which soon disappeared — the temperature remained normal. A few days later a slight cystitis and also diarrhœa supervened; these also quickly passed off. On March 31st, the external wound having closed except at the exit for the drainage tube, a calculus was felt with a probe, lying not far from the surface. Two days later this was easily extracted. It broke into several pieces, and by an oversight these were unfortunately thrown away before they had been carefully examined in respect of their constitution, and before they were weighed; their aggregate bulk probably equalled that of a pigeon's egg. After this the patient made rapid progress, she was soon allowed to leave her bed, and she was shortly afterwards sent into the country to a convalescent home. On her return to the hospital to report herself, in the early summer, her condition and appearance were so improved that at first she was not recognised. A small indiarubber apparatus efficiently protected her dress from a scanty escape of urinous fluid from a fistula in the scar. She found her condition so tolerable that she would not entertain any idea of further operative procedure.

Remarks by Mr. HULKE.—In the feeble condition in which the patient was on Jan. 28th it may well be doubted whether she would have survived the shock and the later risks incidental to removal of the immense renal cyst by abdominal section, and the selection of treatment by lumbar incision and drainage may claim to have been justified by the result. The large size of the calculus, and the ease with which it was felt and seized when by the contraction of the cyst it had been brought towards the external wound, favour the supposition that it had been impacted in the pelvis of the kidney, and had not passed into the ureter. The most important lesson deducible from a review of the whole history of the case is the propriety of recourse to operative procedure directly the diagnosis is established and before the structural integrity of the kidney is seriously impaired. Had this been done in the present case, many years of suffering and broken health would have been averted. It has been abundantly established by experience that exploration of the kidney through a lumbar incision for the detection of a calculus, unless attended with inordinate roughness of manipulation, entails relatively small risk, and that the danger of a judiciously performed nephro-lithotomy is not very much greater, whilst the gain from a successful extraction of a calculus can scarcely be over-estimated.

CASE 4. *Pyonephrosis; consecutive post-renal abscess; extreme irritability of urinary bladder; lumbar incision for drainage of abscess and renal cyst; later exploration of urinary bladder by external urethrotomy.*—S. G——, an extremely emaciated, pale, very feeble youth, aged about fifteen years, whose whole aspect bore witness to long and severe suffering, was admitted into the Founder ward on Feb. 12th, 1884. At that date the right half of his abdomen from the vertebral column behind to the middle line in front, was occupied by a swelling, which throughout its whole extent fluctuated and was dull on percussion. Its anterior border descended almost vertically from the ensiform cartilage to the umbilicus, from which it extended obliquely towards the anterior superior crista ilii. No resonant interval occurred between this swelling and the area of hepatic dulness. In the right line was an evident unnatural fulness, and there fluctuation was very distinct. The patient complained but little of his loin and abdomen, and referred his sufferings, which were very great, chiefly to the glans penis. His urinary bladder was very irritable, expelling its contents with straining at short intervals, seldom exceeding ten minutes. Examination of the bladder with a sound, and exploration of its base with the finger through the rectum, yielded a negative result. The urine had a slightly acid reaction; its specific gravity was 1020; it contained a trace of pus and albumen. The boy said that his illness had begun, about three years previously, with severe pain in the right loin, darting thence down the thigh, and that after this blood and matter had been noticed in his urine. A very large quantity of pus was evacuated by a lumbar incision, opening, as was thought, the cystically dilated suppurating kidney. Neither with the finger nor sound could a calculus be detected. A large drainage tube was inserted. This was followed by marked relief, and his general condition manifestly improved; but later, in the first week in April, the penile pain returned, and the irritability of the urinary bladder greatly increased. The incision, which had contracted around the exit for the drainage tube was extended, and the cavity again explored. It then first became apparent that the space directly drained by the tube was not the dilated kidney, but that of a very extensive post-renal abscess communicating with a still larger renal cyst through a small opening in the back of the kidney. Through this opening, when dilated, the finger entered a renal cyst too large to allow its extreme limits to be fully traced. No calculus could be discovered. The escape of many ounces of pus proved the previous drainage to have been imperfect. A large drainage tube was passed into the kidney. The relief following this better drainage was very distinct; but again, a few weeks later, very great penile pain returned, and with this the recurrence of excessive irritability of the urinary bladder, the uncontrollable urgency to micturate at intervals of only a few minutes, was quickly exhausting his little remaining strength. On June 25th the interior of the urinary bladder was explored with the finger through an external urethrotomy, but nothing abnormal was detected unless it were two little hard knots in or under the mucosa of the anterior wall, which it was conjectured might be miliary tubercles. An attempt to sound the lower end of the ureter through its vesical orifice was unsuccessful. Nothing abnormal was discoverable by the finger in this situation, and no calculus could be felt with a long probe passed from the loin downward in the direction of the ureter until it nearly approached the finger in the bladder. A large drainage tube was placed in the renal cyst, and another in the bladder through the perineal incision. Again some relief was obtained. The penile pain and vesical irritability lessened; his appetite improved; he regained strength, so that on August 1st he was able to leave his bed, and a few

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days later was taken into the garden. After this his condition quickly improved, and on August 20th he returned home. At that time the discharge from the loin was slight; a minute fistula remained in the perineum, through which occasionally a few drops of urine escaped; and the irritability of the bladder had greatly abated. In the following November he re-entered the hospital in a condition of extreme weakness, having then obstinate diarrhœa, marked enlargement of the liver and spleen of an amyloid character, and highly albuminous urine. The lumbar opening discharged daily about one ounce of pus devoid of urinary smell. In this condition further operative procedure appeared only likely to hasten the end, and in February, 1885, realising that his recovery was not expected, he expressed the desire to return to his home, which was acceded to. Contrary to expectation, he did not die, but came two or three times in the course of 1886 to see the ward sister (who had been most kind and attentive to him), and each time he appeared to be in better health. On June 3rd, 1887, he was seen and examined by Mr. Hulke's house-surgeon, who made the following note of his condition at that date:—"The boy presented himself on June 3rd, and was found to be in apparently good health. He stated that he passed urine regularly. There was a small sinus in the right loin. He said that at intervals his loin swelled there and discharged."

Remarks by Mr. HULKE.—The impaction of a renal calculus obstructing the pelvis of the kidney or ureter, cystiform dilatation of the organ, pyonephrosis, and latterly the formation of a large abscess behind the kidney, comprise the chain of circumstances suggested by the history of the patient's illness and by the symptoms present at the date of the lad's first entry into the hospital. Upon a review of the whole case as now recorded, the question forces itself upon the reader's consideration whether, in the first instance or subsequently, instead of the more limited procedure of lumbar incision and drainage, it would not have been better practice to have combined with this measure the extirpation of the cystiformly dilated suppurating kidney by an abdominal section. It was obvious that such extirpation, if practicable, could only have been performed by abdominal section in the presence of the circumstances already existing when the lad first entered the hospital. In view of the unavoidable purulent contamination of the peritoneal cavity and the great shock inseparable from so extensive and severe an operation, the procedure adopted seemed at the time the only prudent course. The non-detection of a calculus may not be taken as implying that such had never been present, causing the obstruction which, it is assumed, led to the cystiform dilatation of the kidney, because the cyst was so very large that a stone enclosed in it might easily have eluded discovery by the finger and sound, or it might have escaped from the kidney when the large post-renal abscess formed, and been lost in this. It must be allowed that there was no absolute certainty that the probe passed from the loin towards the urinary bladder actually traversed the ureter, although the ease with which it took the course of this tube favoured the supposition that it did so. When seen by the house surgeon in June last the youth's condition had so improved, it had become so tolerable, that he would not allow any examination of the sinus in the loin with a probe, nor would he consider the probability of further operative measures.

CITY OF LONDON INFIRMARY.

RETENTION OF URINE PRECEDING APOPLECTIC ATTACKS.

(Under the care of Mr. W. GEM.)

THE following cases illustrate the above heading.

W. S——, aged sixty, labourer, of temperate habits. Has had rheumatic gout for some years. Was admitted into the Infirmary in 1882, and has been readmitted off and on ever since for rheumatic gout. Heart sounds normal, but has atheromatous arteries. Has had iritis, but no other defect of vision. Urine normal. Suffered from retention for six days, after which he had a severe apoplectic attack, with consequent left hemiplegia.

G. [illegible]——, aged forty, carman. Intemperate. Had rheumatic [illegible] time. Was admitted in 1882, and has been [illegible] and on ever since for rheumatism and cardiac [illegible]. His albumen in urine, but sight is good. Had [illegible] for seven days, followed by an apoplectic attack [illegible] right hemiplegia.

W. C——, aged fifty-seven, labourer. Intemperate. Had rheumatic gout for some years. Admitted for such in 1885. Heart sounds normal. Double optic neuritis, but urine normal. Had retention for ten days, after which he had a severe apoplectic attack and complete left hemiplegia.

G. W——, aged forty-nine, baker. Habits not known. Admitted for melancholia, and was transferred to an asylum. Being discharged some time after on trial, he was readmitted for subacute rheumatism. Heart sounds normal. Sight not ascertained (too restless). Urine normal. Had retention for four days, and then had an apoplectic attack, with subsequent right hemiplegia.

All the above cases were treated as follows:—Perfect rest, blistering the nape of the neck, croton oil, and warmth to feet, *plus* the following drugs—bromide of potassium, decoction of aloes, and compound spirits of ammonia; followed up afterwards with the iodides. The very best results were obtained by this treatment, with the exception of the last case, which is recent.

Remarks by Mr. GEM.—It is with reticence I bring forward the above cases, as such may have been discussed in the ephemeral literature of the day. The drugs above mentioned need no comment from me, as their actions are too evident, but I may say that I have had the most favourable consequences from them in two cases I anticipated, where retention had been complete for two or three days. The query of course arises, Would such cases have gone on to an apoplectic attack? I have every reason to suspect such an unfortunate accident, as the one patient had an intense localised headache, with retinal hæmorrhages; the other not so well marked. The first one was readmitted after some time with a recent hemiplegia, showing that such an untoward event had been previously warded off.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Compound Comminuted Fracture of Lower Jaw, with Rupture of Nerve.—Central Fibro-sarcoma of Tibia.—Congenital Inguinal Hernia.—Cyst of Cerebellum and Adrenal Body.—Lardaceous Disease in Congenital Syphilis.—Congenital Hydronephrosis.—Adenoma of Mamma, with supervention of Scirrhus.—Separation of Upper Epiphysis of Radius.—Fracture of Lower Epiphysis of Femur, with Bony Union.

AN ordinary meeting of this Society was held on Tuesday last, Sir James Paget, Bart. President, in the chair.

Mr. GODLEE read the report, signed by Dr. Norman Moore and Mr. Clutton, on Dr. Jacob's specimen of Tumour of the Skull. They found genuine myxomatous tissue, but nothing sarcomatous; the diploë was the seat of origin of the growth; and the report therefore accepted Dr. Jacob's opinion that the tumour was a myxoma.

Mr. SPENCER showed a specimen of Compound Comminuted Fracture of the Lower Jaw, in which the inferior dental nerve was torn; the latter accident was rare. In this case direct violence caused the fracture in a woman aged fifty; it was vertical fracture; there was extreme pain for some time, and anæsthesia of the chin and parts supplied by this nerve. There was no displacement of the fragments, and no bleeding from the inferior dental artery. In reply to Sir James Paget, Mr. Spencer said that the necrosed portions came away during the healing; and in reply to Mr. Godlee, he said he could not say whether the teeth were anæsthetic or not.

Mr. FREDERICK EVE showed the Macerated Bone for a Central Fibro-sarcoma from the Tibia, with extreme Cystic Degeneration. There was much cholesterine in the fluid contents. The solid part was partly fibrous, partly sarcomatous, and partly had undergone mucoid degeneration. It came from a man aged twenty-four; the tibia had been fractured ten years before, and the tumour grew at this site. He had never seen so much fibroid conversion of a sarcoma before, except in those developed in the jaw; the extreme cystic degeneration was also rare. The specimen reminded him of that shown by Mr. Bilton Pollard two years ago, in which case the Morbid Growths Committee could not decide the inflammatory or sarcomatous nature of the tumour of the tibia.

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PAGET remarked on the long period of time that elapsed between the traumatism and the tumour.—Mr. BOWLBY related a case of a child aged three, in whose tibia there was a central sarcoma expanding the bone. From the centre of this some fluid was removed from a large cavity in the upper third of the tibia. After the operation of removal of the fluid the child gradually improved and the bone healed up. He asked for information as to the laying open of such cases.—Sir JAMES PAGET referred to his paper on the Enucleation of Tumours from Bone, and in this there were, he believed, cases of large cysts containing blood, which were emptied and did well. In one case of Mr. Thomas Smith's in which laying open was practised the case did well, and the child remained well, and was, indeed, still living.

Mr. BLAND SUTTON exhibited and made some remarks on two specimens of Congenital Inguinal Herniæ in Monkeys. He stated that, with the exception of the gorilla and some chimpanzees, man is the only mammal in which the funicular process of the peritoneum becomes normally obliterated above the testis. If, as some surgeons maintain, a patent funicular pouch predisposes to hernia, it should be very frequent in monkeys. This, however, is not the case, for out of more than 800 monkeys he had examined post mortem, only three presented herniæ—two were congenital epiploceles, the third an entero-epiplocele. Reference was made to a large inguinal hernia from a monkey preserved in the College of Surgeons, a Hunterian preparation, in which the omentum and colon occupied the sac. A re-examination of the specimen showed that the testis had a proper tunica vaginalis. Further, the sac also contained several large hydatid cysts. As a curiosity, a drawing of a hernia in a frog was shown.—Mr. JONATHAN HUTCHINSON, jun., had never observed inguinal hernia in monkeys, though he had frequently demonstrated the patency of the funicular process. He did not think that the observation could be taken to militate against the theory that the patent funicular process was a factor in the production of inguinal hernia in man, but it tended to prove that a long mesentery could not be the efficient cause. In monkeys the mesentery was always long, and could be pulled down below the scrotum; yet inguinal hernia was, as Mr. Sutton said, extremely rare.

Dr. CHARLEWOOD TURNER showed a specimen of Cystic Tumour in the cerebellum and right adrenal from a man aged forty-four, who had served as a policeman ten years, and got a good deal of knocking about. Eight years before his death he received a blow on the forehead from a brick. His symptoms commenced with headache referred to the occiput and forehead eighteen months before his admission to the hospital, with failure of sight and deafness of the right ear, and vomiting. He subsequently had incoördination of movements, with a tendency to fall to the right side. He became dull and torpid, and died in coma. There was a tumour at the right border of the cerebellum, and another on the upper surface, contiguous to the anterior part of the middle lobe, which it had compressed. The centre of each tumour was occupied by a cyst. The growth consisted of a fine reticulum, with round and elongated nuclei, traversed by a network of vessels, some of which presented varicose dilatation occupying much of the field. The right adrenal was converted into a tumour of the size of a fist, which consisted of a large cyst surrounded by a wall of growth, having an adenoid structure resembling that in the cerebellar tumour, but more fibrous. There was a cyst in the liver containing clear fluid and cholesterine, and there were several cysts in the left kidney. This wide-spread cystic disease was interesting, and in a case recorded by Dr. Pye-Smith in vol. xxxvi. of the Transactions there was a simple cyst in the cerebellum, associated with small cysts in the pancreas and kidneys.—Dr. HALE WHITE said it would be interesting to know whether the patient was insane, because in some of the insane general cystic degeneration was found, as had been communicated to the Society by himself and Dr. Savage in their paper on Holes in the Brain.—Mr. STEPHEN PAGET said that he had found that the suprarenals were involved with secondary growths in cases of cancer, and these organs were symmetrically affected, and yet when they were involved the kidneys escaped. He asked which was the primary disease in Dr. Turner's case.

Dr. HALE WHITE showed specimens of Congenital Syphilis causing lardaceous disease of the viscera, gummata, and fibrosis of the liver, and chronic peritonitis. The patient was a girl aged seven years, both of whose parents had syphilis, and who herself presented most of the signs of congenital syphilis. The liver could be felt with a hard rounded edge just above the iliac crest; the spleen reached below the umbilicus; there was some pain and tenderness in the abdomen; the left eye showed disseminated choroiditis and optic neuritis; the glands in the right axilla were enlarged, and there was a painful node over the head of the tibia; the urine was albuminous, and this decided the diagnosis in favour of lardaceous disease. She improved under treatment, but ultimately succumbed to an attack of acute tonsillitis. The liver weighed 61 oz.; it was hard, rounded, with radiating fibrous depressions all over it; there was also some cirrhosis; at the anterior part there was a gumma the size of a walnut; it was extremely lardaceous throughout, as was also the spleen, which weighed 16 oz. The kidneys weighed 12½ oz., and showed both tubal nephritis and lardaceous disease. The small intestine and cervical glands were slightly lardaceous; there were several bands of fibrous tissue indicative of old peritonitis. There was no sign of there ever having been any suppuration. The lardaceous deposit was seen very well under the microscope. This case showed three very rare manifestations of congenital syphilis: First, lardaceous disease; second, chronic peritonitis; third, fibrous scars and gummata in the liver, in addition to cirrhosis.—Dr. ANGEL MONEY said that lardaceous disease in children dying of congenital syphilis was undoubtedly uncommon; but probably lardaceous degeneration was not so rare an occurrence as might be supposed from this, for the reason that children seldom died at so advanced an age as seven years, unless from other diseases. In children under two years, when deaths were frequent, he had never observed lardaceous disease.—Dr. COUPLAND said, so far as he knew, no case had been recorded in which only congenital syphilis was operative in the causation of the lardaceous disease.—Dr. HALE WHITE thought it was rare, even clinically, for signs of visceral enlargement were uncommon and albuminuria wanting.

Dr. DAWSON WILLIAMS showed a specimen of Dilatation of the Ureters and of the Pelves of the Kidneys observed in a boy aged five and a half years. There was no history of calculus nor of any illness beyond diarrhœa until about six months before death, when a swelling, subsequently identified as the distended bladder, was first noticed. For two or three months earlier he had had incontinence. Six weeks before death he had two attacks of convulsions, probably uræmic, with partial unconsciousness. When he came under treatment at the East London Hospital for Children (Shadwell) there was slight irregular fever, the bladder was found to be habitually distended, a small quantity of urine being passed every few minutes; on one occasion Mr. Parker drew off one pint, and no urine was passed for twenty-four hours, when the bladder was again full. The urine was persistently albuminous; at a later stage much blood was passed with the urine; subsequently this was replaced by pus. Death was due to suppurative nephritis, which was found to be more advanced in the right kidney. Both organs were much enlarged, the superficial measurements considerably exceeding the average in the adult; the enlargement appeared to be due to dilatation of the calyces; the pyramids projected into the calyces, and extended quite to the surface; the cortical substance occupied the intervals between the pyramids. The collecting tubes were enlarged. The ureters were much dilated, and had the general external appearance of a coil of the ileum. The bladder was much trabeculated, and there were numerous hæmorrhages into the mucous membrane. There was no obstruction post mortem to the flow of urine from the kidney to the bladder, and pressure on the bladder caused regurgitation into the ureters and pelves. A catheter was easily passed during life, and there was no reason to suspect any obstruction. The dilatation and trabeculation of the bladder and the presence of fibrotic changes in one kidney were mentioned as facts which might be quoted in support of the theory that the dilatation had been produced by past obstruction, but for two reasons it was suggested that the case was an example of congenital dilatation of the ureters and pelves (so-called congenital hydronephrosis); in the first place there was a complete absence, both from the history and the post-mortem appearances, of any cause for the dilatation; and, secondly, the anatomical characters of the abnormal parts, which included an unusual size of the collecting tubes, seemed to favour the theory of an error of development, because the ureters, pelves, and collecting tubes were developed from the same mass of blastema, the collecting tubes growing out from the ureter into the metanephric blastema.—Mr. GODLEE thought such cases were

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most puzzling to explain; chronic catarrh or stone could not have been the cause, for the bladder was greatly hypertrophied.—Dr. HALE WHITE referred to a card specimen shown at the last session.—Mr. BLAND SUTTON agreed with the view that it was a case of congenital hydronephrosis.—Dr. ANGEL MONEY concurred in the view, and mentioned a case of lipæmia in which there was congenital hydronephrosis on the left side, and a fibrous atrophied kidney on the right side. There was doubtless an intra-uterine want of vitality, which led to various errors of development in different directions.—Dr. DAWSON WILLIAMS, in reply, remarked that the two kidneys in his case were different, one being more fibrous than the other.

Mr. JONATHAN HUTCHINSON, jun., after quoting Sir James Paget's statement that cancerous disease had never been observed to occur in adenomata of the breast, said that the patient's mother had an adenoma of the breast at the age of fifty-four. The daughter had noticed a tumour of the breast for many years, but it began to grow at the age of forty-four. The original tumour was an adenoma, while round it was a scirrhous growth of the round-celled variety, which in parts infiltrated the adenoma; but it could not be determined whether the scirrhous growth started in the adenoma or not.—Mr. EVE had described a similar specimen from St. Bartholomew's museum. The growth was a scirrhus except in the centre, where it included a nodule of adenoma.—The PRESIDENT said he had never met with a case in which adenoma had disappeared; he thought it very proper to advise their removal, as he had seen several develop into recurrent fibro-cystic tumours.

Mr. MANSELL-MOULLIN showed a specimen of Separation of the Upper Epiphysis of the Radius. The injury that caused it had greatly torn the forearm of a boy aged sixteen. The solution of continuity took place between the cartilage of the epiphysis and the bone of the shaft. The orbicular ligament was much torn. He also showed a specimen of vertical Fracture through the Lower Epiphysis of the Femur, which had united by bone, also from a boy aged sixteen, who had sustained one year previously a compound fracture into the knee joint; afterwards a swelling formed in the popliteal space, which became quite full, and there was distinct pulsation, which led to the diagnosis of arterial hæmatoma. Suppuration into the knee joint led to amputation through the lower end of the femur, when it was found that the fracture had united obliquely, and that a fragment had caused ulceration of the popliteal artery, hence the hæmatoma. The popliteal vessel was ligatured in two places, but this was followed by suppuration into the knee joint. After maceration the lower epiphysis separated at the epiphysial line.

CLINICAL SOCIETY OF LONDON.

Suprapubic Drainage of the Bladder for Enlarged Prostate.—Prostatectomy by the Suprapubic Incision.

AN ordinary meeting of this Society was held on the 11th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair. A most interesting evening was spent in the discussion of the Surgical Treatment of Enlarged Prostate.

Sir HENRY THOMPSON read a case of Enormous Prostate; vesical calculi, free and encysted; urine passed for years by catheter, but now by suprapubic tube, without any catheter, for a year and a half; patient in excellent health. The following is an abstract:—"A gentleman, aged sixty-four, applied to me on April 21st, 1885. All urine was passed by catheter, used sixteen times in twenty-four hours; there being symptoms of stone, verified by sounding, I advised lithotrity.—April 24th: Under ether I unexpectedly found stricture of urethra, which was forcibly dilated by conical metal instruments from No. 8 up to 13 to admit lithotrites &c., enabling me to remove a phosphatic calculus, weighing 142 gr., at one sitting. He soon improved, and used the catheter now only eight times daily. In the autumn severe symptoms reappeared, and he came again. Finding no adequate cause, after consultation with Dr. George Johnson, I decided to perform digital exploration of the bladder through the perineum, and did so on Nov. 4th. The prostate was so large I could barely reach the neck of the bladder with my finger, still sufficiently so to discover there a collection of calculi, evidently movable in a sac. Opening this with the scalpel, I removed six, each with facets, the effects of packing (exhibited). Nothing had been left in the bladder from the previous operation. At the same time the stricture, which had rendered his daily catheterism troublesome, was now freely divided by the knife. He made a good recovery, but the relief was not great. He soon began to pass much phosphatic grit, and suffered greatly, taking morphia largely in consequence; and before the early spring of 1886, having spent that winter in a warmer climate, he required hypodermic injection daily, while catheterism was required more frequently than ever. I advised the suprapubic section and the placing of a tube permanently there as the only chance of saving him, and, if it answered, of rendering his existence comfortable. His friends advised him to decline my proposal for the present, but in the end of April he came to me, regarding life as unendurable, and begged me to do whatever I thought best.—April 29th: Dr. G. Rice Ord, of Clapham, and others present, I performed the high operation, finding the prostate enormously large, and interior of bladder coated with an adhering fibrinous layer containing much phosphatic deposit. I peeled off the layer with some trouble, leaving the bladder quite free from adhering matter. A tube was placed in the wound by which all the urine issued, and he rapidly improved from the cessation of catheterism and pain. In three or four weeks, when he had thus regained health and strength, I adapted a silver plate to the suprapubic region with an opening, admitting a silk gum tube, No. 20 English scale, and consequently very large, one end being in the bladder, the other projecting half an inch from the outer surface of the plate, and attached thereto an ordinary urinal worn in the usual manner. After a few experiments and adjustments, this answered perfectly, and all the attention necessary now was its removal and cleansing once a day, and washing out the bladder, all which he learned to do. He soon left for Brighton, discontinued all opiates, went abroad for the winter of 1886-87, and wrote me last spring that he is 'able to walk two miles, and to be out an hour at a time; the urine good in colour and clear, passing through the tube at night, and not interfering with sleep.' He has not used the catheter since. He called on me soon after, looking the picture of health, cheerful and happy. A few months later he wrote me that the wound had contracted somewhat, and that he had hurt himself by forcibly attempting to push in the tube, and partially lost the route. I advised him to come up at once, and he did so. Giving him ether, I enlarged the wound a little and re-established the channel, and he left me in a few days, the old system being re-established with the same freedom as heretofore, having never at any time resumed the use of the catheter. This was in June last, and I have seen him only once since, about a week ago, in the end of October, and found him as well as ever; active, healthy, and free from pain; in every way far more comfortable than during any part of his long experience of passing urine by the catheter. I employed the suprapubic puncture first in 1869, in University College Hospital, in order to give relief to an extreme case of constantly recurring catheterism, by inserting a tube to give issue to the urine as a permanent channel, which afforded much relief; and I repeated the proceeding with more or less success in five. But a free suprapubic section, inasmuch as it enables the surgeon to detach all chronic fibrinous and phosphatic deposits which are in no other way removable, appears to me a far better method, and I propose it now for adoption in some of those exceptionally formidable developments of the prostate and associated disease of the bladder which sometimes occur, as the only chance of prolonging life and obtaining relief from terrible sufferings. Of this proposal the case reported is a remarkable illustration, while it is perhaps almost unique from the complication of morbid conditions present in one patient."

Mr. M'GILL read a paper on Suprapubic Prostatectomy, and related three cases where the operation had been successfully performed. The operation consists in opening the bladder above the pubes in the usual manner, and removing with scissors and forceps that portion of an enlarged prostate which prevents the outflow of urine. Case 1 had suffered from urinary symptoms for seven years, and had not been able to pass urine without a catheter for seven months. Six calculi, weighing 174 grains, and a portion of the prostate as large as a walnut, were removed by suprapubic incision. The patient made a speedy recovery, and did not require to use a cathether. Case 2: Symptoms of prostatic enlargement for two years, acute symptoms for a fortnight, fetid urine, and frequent micturition. The patient was treated for three weeks by ordinary methods without

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benefit. The middle lobe of the prostate, the size of a bean, was removed with immediate benefit. He left the hospital on the twenty-seventh day with the wound healed, and passing urine without difficulty. Case 3: Prostatic symptoms for six years. Acute symptoms of greater and less severity for three years. On admission into hospital the patient was found to be extremely ill. He vomited all his food, had constant diarrhœa, and passed putrid urine, which deposited one-third of its bulk of pus. On opening the bladder the ureters were felt to be much dilated. The projecting portion, the enlarged prostate, was removed. He made a quick and satisfactory recovery, and was able to micturate without difficulty. The benefits derived from the operation are of two kinds: first, acute symptoms are relieved by the drainage of the bladder; and second, the cause of these symptoms is removed by excision of a portion of the enlarged prostate. As yet the operation has only been practised in acute and urgent cases; it is not improbable that in the future it may be resorted to before any acute symptoms intervene.

Mr. CHRISTOPHER HEATH spoke of the great advantage of the suprapubic drainage in cases of long-standing prostatic enlargement with its consequences. He considered Mr. M'Gill's action as a new departure. Some years ago Sir William Ferguson tried the removal of enlargements of the prostate by the perineal incision as in lithotomy, but the hopes raised by this method did not appear to have been fulfilled. Mr. M'Gill's mode of treatment may be said to have opened up a great field for enterprising surgery. Mr. Heath remarked that few surgeons were familiar with the aspect of a prostate as seen from within the bladder in the natural state. He congratulated Mr. M'Gill on his success.—Mr. BARWELL raised the question whether it was safe to make wounds in the prostate and bladder whilst the urine was in a fetid condition.—Mr. HENRY MORRIS considered that theory and experience might show that the suprapubic method of removing the prostatic overgrowth might not perhaps be the best method of procedure. Sir William Ferguson and Mr. Bryant had removed portions of enlarged prostate by the perineal lithotomy section in cases of vesical calculus. The operation of removing the prostatic overgrowth through the perineum without the bladder being incised was discussed, and it appeared in a favourable light; the upper part and sides of the prostate were not to be removed, but the posterior part between the bladder and rectum; and Mr. Morris asked whether we ought not to attempt to shell out the posterior part of the prostate through the perineum, the one finger being placed in the bladder through a median urethrotomy incision; he thought by this method we might record successes without the necessity of any suprapubic operation. He referred to a case of suppuration in and around the prostate, which he attempted to heal by median urethrotomy and drainage, but without success; extensive fistulous channels formed in the perineum, and to remove irritation and promote the healing of these parts Mr. Morris performed the suprapubic operation for draining the bladder. At the operation, the fistula, which led from the bladder into the perineum, was distinctly visible on inspection through the high incision. The greater part of the perineal wound closed, but the man left Middlesex Hospital when that institution closed for summer cleaning, and Mr. Morris had not heard the termination of the case. The instrument he employed for draining the bladder through the suprapubic opening somewhat resembled that of Sir Henry Thompson's, but had the additional advantage of a ball-and-socket joint. Mr. Morris considered that in the method of suprapubic drainage we held a means for relieving cases of perineal fistulæ.—Mr. QUARRY SILCOCK supplied the previous history and sequel to Mr. Morris's case. When he first saw the man there appeared, to be an ischio-rectal abscess, which was opened and was followed by the development of much granulation tissue. After Mr. Morris had drained the bladder by the suprapubic opening, still some urine trickled away from the perineal fistula, which refused to heal despite every attention. The patient was now in a workhouse adjoining St. Mary's Hospital, and there was practically no improvement in his condition.—Mr. T. BRYANT considered the suprapubic drainage to be now proved to be of great value, and such success as has been found by its use must tend to diminish the fear of practising it. He confessed to a long liking to, and personal preference for, draining through the rectum; but he was satisfied that the bladder could be well drained above the pubes. Sir Henry's case could, indeed, only have been treated in that way, and there could be no question as to its value. Mr. M'Gill had introduced a new subject of an interesting and pleasing nature. He was not disposed to criticise so frank a paper as Mr. M'Gill's. The first case appeared to be that of a rather young man, and some doubt might be entertained as to whether a large prostate really existed. It must remain an open question as to how far the suprapubic method of prostatectomy was likely to be better than the perineal. He himself inclined to think the perineal was the best, but this must be a subject for experience. He had on two occasions removed enlarged lobes of the prostate; both were cases of lithotomy. The first tumour was removed unwittingly with the stone. The patient was alive and well seven years after the operation. In the second case, the tumour was designedly removed from the posterior part of the prostate after the removal of the stone. Eighteen months later the man was in good health. He inquired how long the first two cases (of Mr. M'Gill) could retain the water.—Mr. H. BENNETT discussed the best method of approaching the prostate with a view to its removal, and he thought the suprapubic method had advantages. He related the case of an old man aged seventy, who was admitted into St. George's Hospital, under the care of Mr. Holmes, for acute retention resulting from old prostatic disease. An incision was made through the centre of the perineum; the finger could not be passed into the bladder; the catheter was passed and the bladder drained thereby, but, nevertheless, much distress was occasioned, and the patient but little, if at all, relieved from pain. He returned later to the hospital, after having gone out and begged to have something done to relieve his distress. A suprapubic opening was made; a stone not previously detected was found and removed; many portions of the large prostate were deliberately cut away—enough to fill the palm of the hand. This procedure relieved the patient from all pain and distress, but death followed in three weeks from exhaustion, the old wound not having healed. The termination might have been different if the patient had had the suprapubic operation performed before his kidneys and general system had become so deteriorated.—Mr. BOWLBY related a case which had been under the care of Mr. Willett at St. Bartholomew's Hospital. It was a case of vesical stone removed by perineal lithotomy; a large prostate was found, and this tumour was enucleated through the perineal incision; there was no pedunculated portion, but the sessile tumour was freely removed by the aid of scissors and finger; the parts removed equalled half an orange in size. The patient was much benefited; passed urine for himself, and could retain it for several hours. He was discharged, and some time after readmitted with calculus pyelitis and cystitis, from which he died. Examination of the parts after death showed that the cavity in the prostate had contracted so as now to be only of the size of a walnut, whereas the tumour cut away had the dimensions of half an orange; practically, the whole of the prostate was removed; the parts removed, and also the bladder with its surroundings, were specimens preserved in St. Bartholomew's museum. He asked Mr. M'Gill as to the statement that the ureters could be entered by the finger palpating the bladder; such an experience was most unusual, and was opposed to the belief that under no circumstances did regurgitation take place from the bladder into the ureter.—In reply to Mr. Thomas Smith, Mr. BOWLBY said that the prostate was removed by Mr. Willett from outside the bladder.—Dr. BROADHURST thought there would still be a place for the operation suggested and practised by Sir Henry Thompson.—Sir HENRY THOMPSON, in reply, said he was much interested in Mr. M'Gill's operation, and gratified by its results. This procedure was indeed a fresh starting-point, and he should further inquire into it. He, like Sir William Ferguson, had in three recorded cases removed large portions of prostate in cases of stone. All the urine had been withdrawn by catheter in the cases in which the suprapubic operation was performed. It was not the size of the prostate that constituted the danger. A small hypertrophy might cause the greatest interference with micturition, and consequent distress. Though an enlargement be enormous, yet retention might rarely be present. In neither of the three recorded cases had there been the slightest improvement in the patient's powers of micturition or in his general comfort. They had to resort to the catheter as before operation. It was of no use to remove a large prostate of many years' standing, because the bladder had then become a mere membranous sac, not possessed of any contractile power. But in earlier

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cases, as in Mr. M'Gill's, before the bladder was atonied, there was an opening for the operation of prostatectomy; he said this without endorsing the operation, which must rest its claims to recognition on its success in the future. He was disposed to think that the suprapubic method was better than the perineal for the removal of the enlarged prostate in suitable cases. He considered that the vulsellum was a clumsy instrument for the removal of portions of the prostate—this in way of criticism of Mr. M'Gill's cases. The clean-cutting instrument would be better. As to the objection to operating in the presence of fetid urine, Sir Henry said that this phenomenon was solely due to decomposition in the bladder, and that usually after draining this organ the urine in a few hours became sweet.—Mr. M'GILL, in reply, spoke of the difficulty of getting portions of the prostate away; hence he had not been able to preserve any but minute fragments, which were microscopically examined in the first case recorded, and found to be true hypertrophy of the prostate. He should devise a special pair of curved scissors with long handles, so that in future he proposed to divide the prostate into two halves and cut portions away with a clean incision. He was satisfied that prostatectomy could be done, but he himself was not sure as to which was the best way to do it. He should not employ the perineal method of removal. Doubtless Sir Henry was right in placing a limit of time after which the operation would prove useless, as the result of the atony of the bladder consequent on the long-standing prostatic disease. A drainage tube of celluloid would be less expensive than a silver tube.

MEDICAL SOCIETY OF LONDON.

Fæcal Anæmia.

AN ordinary meeting of this Society was held on Monday, Nov. 14th, at 8.30 P.M., Dr. Hughlings Jackson, F.R.S., President, in the chair.

Sir ANDREW CLARK read a paper on the Anæmia or Chlorosis of Girls, occurring more commonly between the Advent of Menstruation and the Consummation of Womanhood, which appears in full on p. 1003.—Dr. BURNEY YEO said he considered too little stress had been laid on improper feeding as a cause of this condition. He had observed cases in which there were exacerbations of fæcal absorption indicated by rise of temperature, with languor and prostration.—Dr. DE HAVILLAND HALL thought that the frequency of chlorosis in young females and its rarity in males of similar age pointed to the generative system as being primarily at fault.—Dr. THEODORE WILLIAMS admitted that constipation was one cause of anæmia, but it was not an invariable accompaniment of that condition; on the other hand, the French who were habitually constipated, did not suffer to any great extent from anæmia, and he had met with many cases of constipation in young girls who were otherwise healthy.—Mr. S. BENTON advocated small enemata of rhamnus frangulæ mixed with lemon juice, glycerine, and alcohol as an easy and rapid method of removing fæcal accumulations.—Dr. ROGERS had found the majority of these cases accompanied by menstrual irregularity.—Dr. EDIS recommended treatment by a mixture of iron, aloes, and nux vomica, combined with out-door exercise.—Sir JOSEPH FAYRER said that the form of anæmia he most frequently had to treat was dependent on splenic cachexia. As a purgative he had found the sulphate of magnesia or soda of the greatest value.—Dr. HINGSTON FOX had met with similar cases in middle-aged women with "earthy" complexions. In them the cause was obviously fæcal accumulation.—Dr. THOROWGOOD had great faith in a combination of aloes and myrrh with iron.—Dr. HUGHLINGS JACKSON mentioned some observations by Bunge and Strümpell. The former pointed out that iron in ordinary food exists in a very complex organic combination—hæmatogen. Strümpell suggests that inorganic salts of iron are useful in anæmia, by protecting the hæmatogen from decomposition by sulphides in the alimentary canal.—Sir ANDREW CLARK, in reply, said that, though the appetite was sometimes capricious, it was often very good. A daily evacuation of the bowels was often unattended with adequate fæcal relief. He regarded accumulation of fæces in the rectum as only a local and mechanical evil, but it was the retention of fæces in the colon that gave rise to constitutional symptoms.

OPHTHALMOLOGICAL SOCIETY.

Brain Disease with Hemianopia.—Iridectomy in Relapsing Iritis.—Quiet Iritis.

AN ordinary meeting of this Society was held on the 10th inst., Mr. J. Whitaker Hulke, F.R.S., President, in the chair. A manuscript copy of the library catalogue, prepared under the direction of Mr. Adams Frost, was laid on the table.

Dr. SEYMOUR SHARKEY read a paper on a case of Cortical and Subcortical Disease of the Occipito-angular Region producing Hemianopia. The patient was a hawker, aged twenty-nine, who had suffered for twenty years from ordinary epilepsy, and since from epileptic insanity. In October, 1866, he struck his head with a piece of wood on the vertex of the skull; the wound left a scar, and since that time he had not been able to use his right hand, and the right leg was noted to be weak; the right hand is said to have been rigid since, and to have gradually lost sensation. On Dec. 17th he had a fit, and was brought into St. Thomas's Hospital. His pupils were dilated and unequal, the right being the larger. There were clonic spasms of the facial muscles and rigidity of the right arm and leg. He recollected the events of the fit, and had not bitten his tongue. There was hemianæsthesia in the right side, including the special senses on the same side. Optic neuritis developed. On Dec. 11th there was right lateral hemianopia. Death occurred on Feb. 1st, 1887, and was preceded by headache, insomnia, mental dulness, passing into coma. The temperature, though previously normal, rose on the last three days before death, and reached 107·4° F. just before death. At the necropsy, a tumour, which proved to be a round-celled sarcoma, was found in the left cerebral hemisphere beneath the cortex, and occupying the occipital lobe and part of the parietal lobe. The convolutions of the anterior half of the occipital lobe, the superior parietal lobule, and the upper extremity of the angular gyrus were thinned. The posterior part of the internal capsule was not invaded, but the growth extended nearly up to this sensory crossway. The question of the relation of ordinary epilepsy to so grave a disease as cerebral tumour, and whether the conditions of the former predispose to the latter, was only mentioned to be passed by for the present. Dr. Sharkey was not clear as to the cause of the partial right hemiplegia, but considered that the growth may have damaged without invading the arm centres. The growth had involved part of the leg centres in the superior parietal lobule. The optic neuritis was ascribed to the chronic thickening of the meninges at the base of the brain (another feature of interest was the thinning of the cranial bones, especially at the base). The homonymous hemianopia was ascribed to the destruction of the cortical and subcortical region of the occipito-angular region. The extensive destruction was parallel with the experimental facts determined by Ferrier, who observed that the lesion must be extensive and complete to produce a permanent ocular defect. The concentric contraction of the visual fields was probably due to the optic neuritis. The hemianæsthesia was set down to the damage to the fibres which go to make up the sensory crossway, but which had not yet entered the posterior third of the posterior limb of the internal capsules. Therefore the hemianæsthesia and the hemianopia may be ascribed to damage of the sensory radiations into the temporo-sphenoidal and callosal regions, and the optic radiations of the occipito-angular region. Dr. Seymour Sharkey also read the sequel to the case of hemianopia recorded by him in the fourth volume of the Transactions of the Society, p. 276. The patient had had a series of epileptic fits associated with visual phenomena, and almost certainly due to discharges commencing in the motor cortex, and spreading thence into the visual area or occipito-angular region. In December, 1886, all signs of paralysis had disappeared, but the area of blindness remained practically the same as before (Nettleship). This case was like other cases of hemianopia that Dr. Sharkey had seen, in that the symptom persisted for a long time without change, and without being associated with other morbid nervous phenomena.—Mr. NETTLESHIP could call to mind at least four cases of hemianopia which remained stationary for at least three or four years. In one case of a man the hemianopia had lasted at least ten years, and there was perhaps a peculiar intellectual state, for the patient invariably denied having been

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seen previously.—Dr. KEALL had not observed special mental defects in cases of hemianopia.—Dr. J. ANDERSON thought that some cases were accompanied by mental change, and others were not; perhaps hemianopia of cortical or subcortical origin was more likely to be accompanied by mental alterations.—Mr. NETTLESHIP referred to cases of hemianopia of sudden onset, and apparently due to basal lesions, and asked how such cases were to be explained.—Dr. SHARKEY, in reply, said that in the case of which he had read the sequel, the conclusion might legitimately be drawn that the hemianopia was of cortical origin. He had not observed alterations in the veracity of hemianopic patients. If the hemianopia were due to basal lesions, the other sensory fibres lie so closely to those which subserve vision that they could hardly escape; nevertheless, affection of the special and other senses might be overlooked; and later in the cases compensation might have been established.

Mr. NETTLESHIP read a paper the object of which was to obtain as close a definition as possible of cases of Relapsing Iritis in which there was reason to think that iridectomy would have the effect of preventing further attacks of the disease. It was shown that relapses of iritis were due much less to the presence of adhesions than to the constitutional cause of the disease, since syphilitic iritis did not relapse, whilst forms of rheumatic inflammation of the eye without iritis relapsed in exactly the same way as rheumatic iritis. Putting aside as usually unsuitable for iridectomy cases with keratitis punctata, and cases where the iris was very extensively adherent and yet softened (parenchymatous iritis), and regarding cases as unfavourable which were complicated with high myopia; and, on the other hand, assuming the necessity of the operation in cases where iritis with circular synechia had led to bulging of the iris,—the operation was next considered as preventive of future active attacks rather than of the consequences of past disease. In this relation he believed that whilst the effect of iridectomy in preventing future attacks of iritis had, chiefly owing to Von Graefe's teaching, been considerably overrated, the operation, in properly selected cases, very seldom did harm, and sometimes undoubtedly did good. Observation of cases not operated on showed, however, that very long intervals occurred between successive attacks, and that the disease tended to wear itself out with time; whilst, on the other hand, it was not uncommon to meet with cases which had relapsed as much after iridectomy as before. Taking into account these and other sources of error, the conclusion was arrived at that iridectomy for recurrent iritis should be resorted to only after a very patient trial of all other means of treatment. Cases were given in illustration of all the more important statements.—Mr. PRIESTLY SMITH doubted from his own experience whether Von Graefe's dictum was generally true. When glaucoma seemed imminent he would perform iridectomy, but till then treat the cause of the iritis. Salt baths, acting on the skin, were perhaps the best means of treatment in these cases of recurrent iritis—better than mercurials and other alterative treatment. A tonic treatment, with change of air at Droitwich, with its salt baths, was very good. Iridectomy was powerless to cut short the tendency.—In reply to Mr. Juler, Mr. NETTLESHIP said that in cases of serous iritis, with keratitis punctata, he thought iridectomy was not required; and in other cases where the iris was infiltrated, the iridectomy was not likely to prove of benefit. In cases where complete adhesion forms a circular synechia, iridectomy was called for, and generally did good. But he could not say which cases of relapsing iritis would, and which would not, be benefited by iridectomy.—Mr. J. HUTCHINSON, jun., related several cases of Quiet Iritis, in which the attack, sometimes leading to extensive adhesions to the lens, and involving much deterioration of sight, was from the first unaccompanied by the typical features of inflammation. It was, perhaps, not sufficiently known that iritis in certain cases did not reveal its presence by the characteristic frontal pain, and was practically unattended by congestion or photophobia, though the fact had been pointed out by various ophthalmic surgeons. He had tabulated thirty-seven examples of quiet or insidious iritis, and from these deduced the following conclusions: 1. Sympathetic inflammation, congenital syphilis, and inherited arthritic (gouty or rheumatic) tendency are probably the most frequent causes of quiet iritis. 2. This form is very rare in the iritis of acquired syphilis, that of the ordinary rheumatic type, and in traumatic or herpetic iritis. 3. Sex and age have little or no influence in modifying the severity of the symptoms accompanying iritis. 4. That a constitutional tendency cannot always be invoked as the reason for iritis taking on an insidious form is shown by the occasional occurrence of two attacks in the same patient, one being accompanied by violent inflammatory symptoms, the other perfectly quiet throughout. 5. The absence of the ordinary symptoms of iritis by no means always implies a mild course of the disease, some of the cases going on to complete blindness of the affected eye.—Mr. J. B. LAWFORD said that it would be difficult to tell whether the quiet iritis were relapsing or not, if the pigmentation on the lens were the chief evidence of past mischief. Cases might originate congenitally or even during intra-uterine life.—Mr. HUTCHINSON, in reply, thought that the cases might originate during intra-uterine existence; in one case a traumatism was the cause; but the iritis was silent, and was only manifested after the use of atropine by the presence of uveal pigment on the back of the lens.

The following living and card specimens were shown:—

Mr. QUARRY SILCOCK: Case of Choroido-retinitis with Opaque Nerve Fibres and Keratitis Punctata.

Dr. POULET WELLS: Localised Secondary Pigmentation of Retina in Distribution of Plugged Branch of Central Artery.

Mr. KEALL: (1) A case of Congenital Small Lens (?)—Mr. Juler considered that the lens was present of usual size, and on its posterior surface there was an opacity. (2) Semicircular Hæmorrhage, not at the Macula Lutea.

Mr. DOYNE: Recurrent Œdema of Upper Eyelids in a young woman who had not menstruated; it had lasted fourteen months; megrimous headache had appeared for the last two months.

Dr. MULES: (1) An Evisceration Scoop; (2) an Instrument for Inserting the Artificial Globe used in his method of operation. Made by Mr. Armstrong of Manchester.

Mr. JULER: A new Apparatus for Illuminating the Perimeter.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

President's Address.

A MEETING of this Society was held on Nov. 9th, R. Thorne Thorne, M.B., F.R.C.P., President.

In dealing with the subject of the Progress of Preventive Medicine during the Victorian Era in his inaugural address to the Society, the President expressed the opinion that there were but few phases in the great progress which had marked the Victorian era that had had a greater effect for good than that which had been concerned with improvements affecting public health, and he contended that intelligent action in this direction had been largely based on the development of preventive medicine and epidemiology. Up to the date of the Queen's accession the first requisite to a proper understanding of the etiology of disease—namely, the registration of the causes of death—was wanting. With 1836 came the civil registration of deaths, and at once some insight was acquired as to the incidence of disease on condition of life and locality; and between 1838 and 1840 it became evident that wide-spread epidemics of small-pox, scarlet fever, and "fever," a generic term including all our continued fevers, were prevailing. It was also found that in English towns and cities the general mortality was greater by 44 per cent. than in country districts, and that this excess was largely capable of remedy. Tracing the history of certain preventable diseases during the past fifty years as typical of the progress made, reference was made to the adoption in 1840 of the system of public vaccination, by which "all persons" could claim to be vaccinated at the public cost, and it was shown stage by stage how it was reserved to this era to extend and elaborate that system under the Vaccination Acts passed between 1853 and 1871. The effect of these various statutes was discussed, and it was shown that whereas in the quinquennium 1838-42 the small-pox mortality of England was 57·2 per 100,000 living, it steadily fell to 14·4 during the period 1865-69, an achievement without parallel in the history of sanitary medicine. But then came the sudden rise during the period 1870-74 to a rate of 42·7. Discussing the various causes of this fatal epidemic, Dr. Thorne Thorne alluded to the immunity to attack from infection which is believed to be inherited by the offspring of those who have themselves suffered from certain infectious fevers, and he thought it possible that, just as the Fiji islanders were decimated by measles, against which

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they had acquired no sort of protection by heredity, so the people of this country lacked, in the face of a poison of exceptional virulence, and by reason of their ancestry being vaccinated, that partial protection against small-pox which they might otherwise have inherited. But it was, above all, proved by the researches of Dr. Buchanan that the epidemic had been brought about by excessive trust in vaccination as such, without regard to the quality of the protection given, and it was abundantly proved that the potency of a comparatively recent vaccination can hardly be exaggerated. With improved practice in vaccination methods, the small-pox death-rate has again continuously decreased, until in the five years 1880-84 it stood at 6·5 per 100,000, a far smaller rate than any attained since records of this fatal disease were commenced. In dealing with typhus fever, its wide diffusions in our large towns and cities during the earlier portion of Her Majesty's reign were recalled, and it was explained how this disease had always been associated with the crowding together of houses on area and of people in dwellings; these conditions being invariably associated with a state of destitution, and leading to that fouling of air breathed which results from the concentration of the emanations from human bodies. Turning to the early history of the city of London, it was pointed out how in such places typhus was found to be a habitual pestilence, our fever wards being filled from their midst. Gradually the fact was recognised that the great enemy to typhus was free movement of air, and then came the wholesale destruction of unhealthy property, the carrying of great thoroughfares through the densest aggregations of houses, and the opening up of breathing-spaces—a task to which the Metropolitan Board of Works have already devoted over fourteen millions sterling. Some millions have also been spent by official and unofficial bodies in erecting wholesome homes for artisans and labourers. Until 1869 typhus was not separated from the deaths due to the continued fevers generally, but before that date a substantial reduction of deaths from fever had already been effected, and whereas in that year the typhus death-rate for England was 1·9 per 10,000, it had now fallen to 0·1. The story of Liverpool typhus was next discussed, but, with all its progress, that city had never got rid of its houses densely built together, back-to-back and overcrowded, and Liverpool still formed the principal centre for typhus in England. Coming next to typhoid fever, special prominence was given to the great results which followed on the final differentiation of this disease from typhus by Sir William Jenner. Then for the first time, works, hitherto carried out largely with a view to prevention of nuisance and generally in the interests of health, could be adopted intelligently and with the intention of coping with a specific infection. And, later on, the operation of the infection was traced to channels always operating through the agency of filth, but which so far had remained undetected. First came Dr. Ballard's discovery of the communication of typhoid through the agency of a milk supply; frozen creams and ices were found to act as vehicles of the infection; intermittent water-services led to its distribution; and the potency of the infection was found to be such that, even when present in potable water in quantities that were infinitesimal and altogether beyond the reach of discovery by chemistry or physics, it could, as in the Caterham epidemic, lead to widespread disaster. Steadily, with an expenditure based on the lines indicated by these discoveries, have the deaths from typhoid fever diminished, and between 1869 and the present date the rate per 10,000 has fallen from 3·9 to 1·7. In a similar way the progress of our knowledge in the prevention of scarlet fever, diphtheria, phthisis, and cholera was considered, and especial prominence was given to Mr. Power's recent researches as to the connexion which existed between scarlet fever in man and a corresponding disease in milch cows. In scarlet fever a definite micro-organism common to man and the cow had already been discovered; and diphtheria was known to have certain relations to an allied animal disease, and there were observers who believed that phthisis in man had concern with the use as food of the flesh and milk of tuberculous animals of the bovine tribe. The story of the past fifty years was one in which the principles of preventive medicine had been applied to the unravelling of the actual sources of disease, and in the case of many communicable affections their cause had been traced to organisms, definite in character, always breeding true, and having known habitats. The results were shown by the significant lessening of the general mortality, and of both death and sickness from the more preventable diseases—results which necessarily involved an improved vitality and a greater power for remunerative work among the living. The work of disease prevention during the Victorian era had proceeded on a scale that it would be difficult to define, but it can be in part measured by the influence it has had in sweeping away much of that misery which is the harder to bear because its cause is preventable, in elevating the condition of our fellow men, and in bringing health with its attendant happiness and prosperity to an untold number of British homes.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE quarterly meeting of the Medico-Psychologica Association was held at Bethlem Hospital on the 11th inst. There was a large attendance of members, under the presidency of Dr. Needham.

Dr. SAVAGE read notes on the International Congress in Washington; and Drs. BLANDFORD and MICKLE also reported their observations after attending the Congress, the Medico-Pyschological Section of which seemed generally admitted to have been very successful.

Dr. R. PERCY SMITH exhibited the brain of a young case of Pachymeningitis.

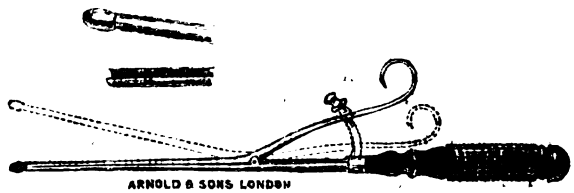
Several new members were elected; and a further donation of £340 for scientific purposes was reported to have been made by members of the family of the late Mr. Gaskell.

Dr. WHITE read a paper on Athetosis connected with Insanity, communicated by Dr. Greenlees.

New Inventions.

NEW UTERINE DILATOR FOR RAPID EXPANSION OF CERVICAL CANAL.

THIS instrument will, I believe, be found to supply a want long recognised by gynæcologists—namely, that of a reliable and effective means of securing the rapid and permanent dilatation of the cervical canal in the treatment of stenosis giving rise to dysmenorrhœa, sterility, &c. The principle on which it is constructed differs from that of other dilators in producing expansion of the canal from within outwards—in other words, in imitating the natural process of expansion from the uterine cavity downwards to the os uteri; whereas



other dilators, such as Hegar's &c., act in the opposite direction. In my own hands the utility of this instrument has been fully tested in a large number of cases of sterility and dysmenorrhœa in my hospital and private practice, and the method of its employment in such cases is fully described in a paper "On the Treatment of some forms of Sterility," which I recently read at the Dublin meeting of the British Medical Association. I may add that the instrument may also be used with advantage for the dilatation of the female urethra in many cases in which this procedure is indicated. This instrument has been most carefully made and artistically finished by Messrs. Arnold and Sons, West Smithfield, London.

THOS. MORE MADDEN, M.D., F.R.C.S. Edin.,
Obstet. Phys. and Gynæcologist, Mater Misericordiæ Hospital, Dublin, &c.

VACCINATION GRANTS.—Mr. Felix Jones, M.R.C.S., of Llanfyllin, Montgomeryshire, has received for the second time the Government grant for efficient vaccination.—Mr. W. D. Jefferson, of No. 1 District, Ripon Union, has obtained the grant (third time) for vaccination in the above union.

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ROYAL COLLEGE OF SURGEONS' SUPPLEMENTAL CHARTER.

DEPUTATIONS, FROM FELLOWS AND MEMBERS TO THE LORD PRESIDENT OF THE PRIVY COUNCIL.

[AN abstract of the following report appeared in our Second Edition of last week's issue, published at 6 P.M. on Friday.]

DEPUTATION OF FELLOWS.

ON Friday, the 11th instant, the Lord President of the Privy Council received a deputation from the Association of Fellows of the Royal College of Surgeons, consisting of Mr. Pollock, Mr. Swain, Mr. Timothy Holmes, Mr. J. Couper, Mr. Bruce Clarke, Mr. A. Norton, Mr. A. Willett, Mr. Macnamara, Surgeon-Major Smith, Mr. Alban Doran, Mr. Wickham Barnes, Mr. Wakley, and others.

Mr. POLLOCK, in introducing the deputation, said he did not know whether his lordship was familiar with the Charter granted to the College of Surgeons in 1843; if not, he would shortly call attention to the alterations made by that Charter. Prior to 1843 the Council of the College was self-elected, and the College consisted merely of Members. The Council consisted of twenty-one members, and they conducted all examinations. In 1843 a new Charter was applied for, and some very important alterations took place. The Charter provided that the Council should consist of twenty-four members to be elected by a body that was then established termed Fellows, in addition to the Members. That body of Fellows was in the first instance established by the nomination of a certain number of names without any examination or without any fee. The total number nominated was about 300; the names were submitted to the proper authorities, and the Fellowship was accordingly conferred. The body of Fellows had one privilege granted to them—namely, that for the future they should elect the Council. The Council was no longer to be self-elected, and the members remained in office until resignation or death; but whenever a vacancy occurred the Council was recruited by Fellows at a general election. After the 300 Members were nominated there was a second list of about 150 or 200 added to the original number without examination or fee, but on nomination of the Council. Subsequently to that period every Member of the College who was not included in this list of Fellows was compelled to pass an examination and to pay a certain fee. He was himself one of those unfortunate individuals. He had only been a Member of the College a few years, and on his return from a foreign journey he found himself in the predicament of being compelled to set to work to pass an examination and pay a fee in order to take the position of surgeon at St. George's Hospital. It was considered by many of them a great injustice that a large body of Members, some 15,000 in number, should be placed in an inferior position, while a certain number, by selection as it were, should be placed in a superior position. That consideration had more or less influenced him in never attempting to enter the Council of the College, because he thought that a great injustice had been done, and he had resisted all solicitations to enter the Council, although he had held the position of surgeon at St. George's Hospital for many years. The Council was elected by the Fellows, and had the management of everything connected with the College, all its general arrangements, its examinations, and its finances. They called a meeting of the Fellows once a year, at which they made a statement of the general work of the College, but the Fellows had no power or authority to interfere in any way, to alter anything, or to express any opinion with regard to the conduct of the College during that time; in fact, they had no share in the management of the corporation. He was happy to say that there were present in the deputation several distinguished members of the profession. Mr. Holmes, senior surgeon of St. George's Hospital, was present as a past examiner and a past member of the Council, and had he retained his seat in the Council (and they would all have been glad if he had done so), he would probably by this time have been President of the College. There were also present two members of the Council, Mr. Macnamara and Mr. Willett, and he had a letter from a past member and another from a present member of the Council, who entirely approved of their proceedings. A few years ago a new Charter was contemplated by the College, and in consequence of that Mr. Swain of Plymouth proposed a certain number of resolutions at an annual meeting of the College. As that gentleman was the proposer of those resolutions, he thought it would be better for them to be represented by him on the present occasion, and he would therefore call upon Mr. Swain to take up the subject.

Mr. SWAIN said that as one of the originators of the movement, which, as his lordship was aware, was to increase the power and the rights of the Fellows and Members of the College, it fell to his lot to address his lordship, and he would do so very briefly upon one topic only. It had fallen to his lot in March, 1884, to move the following resolution, which would indicate the spirit by which the Fellows and Members were moved: "That it is desirable that no alteration in the condition or relations of the College shall be effected without the consent of the Fellows and Members convened to discuss such alteration. That there shall be an annual meeting of Fellows and Members at which the annual report shall be presented, received, and adopted." That resolution on that occasion, and he believed on two other occasions, or at any rate one exactly similar, was carried unanimously. At those meetings the President and Council of the College had sat quietly by, having made no motion in any shape or form, and they simply rejected all overtures which were made to them in the direction of the resolution. The position in which the Fellows and Members were placed had already been stated. They were annually called by the College to meet from all parts of the metropolis, and from all parts of the United Kingdom. The report was laid before them, but it was nothing more or less than the minutes of the meeting of the Council. The Members were allowed the right of speech and the right of meeting, but they had no power to modify the report in any way or to shape the action of the Council. It appeared to him and to all concerned, and he ventured to think it would also appear to his lordship, that to call together a number of men from all parts of the kingdom who were certainly not the least educated portion of the community, and to ask them to come and hear a report read about which they knew everything already, and to give them no power whatever to adopt the report, to reject it, or to modify it in any way, was, to say the least, exceedingly puerile. What they especially asked for was that, as Fellows and Members of the College, they might have some power in the management of the College. Year by year the College was becoming more and more important, not only as an educating body, but also as a spending body. They had a very large sum of money at their command, and although the Members had perfect confidence in the twenty-four gentlemen who constituted the Council, it was not in the nature of things that a power of that sort should be vested in the hands of twenty-four gentlemen who were entirely irresponsible to anybody, either for the management of the College or for the expenditure of the very large sums of money entrusted to them. It was not at all in accordance with the spirit of the times, and the deputation sincerely hoped that in any consideration of the new Charter some greater powers would be conferred upon the Fellows and Members in the management of their own College. He thought he was right in saying that had the Council met them upon a single point with anything like liberality or with any desire to concede the point to them, the agitation would not have proceeded to the extent to which it had gone—an extent far beyond the limits which they had originally contemplated.

Mr. TIMOTHY HOLMES said he had been asked to say a few words as the mover of the resolution which he had the honour of forwarding to the Lord President at the general meeting of the College of Surgeons held a few days ago, and also as having served the College in a great variety of capacities—he might say in every possible capacity except that of president; and, if he might say so much about himself, it was in consequence of his disapproval of the way in which the election of president was managed that he ceased to be a member of the Council. He was happy to think that the movement in which they were concerned was largely supported even by the members of the Council of the College themselves, two of whom were present with the deputation in order to support the general objects for which the Association was founded. Those general objects had been ex-

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plained by Mr. Swain. The original resolutions on which the Association was founded were four in number. The first was, "That in the opinion of this meeting it would materially conduce to the welfare of the College that the Fellows and Members should be invested with a larger share of its management." The second resolution was, "That it is desirable that no alteration in the constitution or relations of the College should be effected without the consent of the Fellows and Members convened to discuss such alteration." The third was, "That there should be an annual meeting of Fellows and Members, at which the annual report should be presented, received, and adopted." And the fourth was, "That at such meeting the president for the ensuing year should be elected by a majority of the Fellows present." It was on those lines that the Association of Fellows was formed, and it comprised about one-fourth of the whole number of Fellows of the College, a very large number when they considered that men in practice were very little disposed to join in any such questions as these, which really did not very much bear upon the immediate needs of professional life. He submitted, as a proposition that must commend itself to the common sense of everyone, that it was an anomaly that a great institution, consisting of at the very least 13,000 perfectly educated and well-cultivated men, should be entirely at the mercy of twenty-four of their number. It was a thing which was never contemplated by the original Charters. It was perfectly evident in the original Charters, to which that of 1843 was only a supplement, that Members were intended to take an active share in the management of the College, and were, in fact, the governing body of the College. That, however, had been entirely set aside, and since the Charter of 1843 the Members had had nothing whatever to do with the management. They were treated as having exactly the same rights or no rights as persons actually strangers to the College; and the Fellows themselves, who were created by that Charter, had no power whatsoever, except that of coming to the College once a year and voting for the members of the Council—beyond, of course, admission to the College, and to the examinations and other functions which took place therein, and which naturally they could not be deprived of. That was an anomaly, even comparing it with a body so strict in its management as the neighbouring College of Physicians, for there the Fellows of the College had that control over the proceedings of the Council which was the natural privilege and almost the right of Fellows of a College. He could not understand for what reason the Council of the College should be invested with an absolute and arbitrary discretion over the great property which had been accumulated, partly by the contributions of Fellows and Members, and partly by the bequest of a gentleman, whom his lordship might have known, and who had recently left the College a very large sum of money. He did not see why all this influence, all this power, and this great institution should be entirely in the hands of a Council with no control whatever on the part of any other person, so long as they confined themselves to professional objects. They were all willing to treat the Council with that respect which was their due, and they were not there to charge them with anything like corruption or malversation, or anything of the kind, but he repeated that they disposed of this money and of their great influence in a way which deprived Fellows and Members of what, he submitted, they ought to have—namely, some right of management in their own College. The Council of the College proposed in their petition for a new Charter to do certain things. In the first place, in respect to the Fellowship, in direct defiance to the wishes of the Fellows as they had been formulated on many occasions, and not only of the Fellows, but of the Members also, they proposed to empower the Council to elect to the Fellowship Members of twenty years' standing, not exceeding ten, instead of two, in each year. That was really a proposal to revive the old order of Fellows by election, which Mr. Pollock had referred to, and to perpetuate an abuse which had been protested against by all the Fellows by examination from the time that it existed. There was a reason for its existence originally. At that time the order of Fellows was new, and it was thought right that any Member who was a Member in the year 1843 should have admission into the new order. Whether that was right or not he did not say, but there was no reason for it at the present time. The Fellowship examination was a thing which they were proud of. It was the first examination, the first qualification for surgeons anywhere. They protested most strongly, and would continue to protest in every legitimate way, against anything which would discredit this diploma. That his lordship might see how strong the feeling of the profession was on that subject, he would refer to a resolution passed at a late meeting of the Fellows and Members of the College on this very subject. That was a meeting held on Nov. 4th, 1886, and the resolution that was carried was this: "That in the opinion of this meeting the first method recommended by the Council for widening the basis upon which the Fellowship is obtained tends to lower the academic status of that diploma, and in the interests of surgical education is not advisable." That referred to a proposal which, if not identical with the present one, was the same to all practical purpose, and the resolution he had read was proposed, not by a Fellow of the College, but by a Member, seconded by another Member, and carried by acclamation by the Members present. He protested most strongly, in the name of the Association of Fellows, against that clause of the new Charter, and begged his lordship to give it his most serious attention before he proposed to recommend Her Majesty to assent to the prayer of the College. And what he said of that clause, he would say still more strongly, if possible, about the one preceding it, which was to enable the Council to determine by rules and regulations, instead of, as at present, by bye-laws, the condition of admission to Fellowship by examination. He said that that proposal ought to be entirely excised; that one of the great safeguards the profession now had against the tampering with the Fellowship, to which some members of the Council showed so strong a disposition, was that they could not do it by resolution; and, if he was not wearying his lordship, he would give a very strong example of the fact. It was not many years ago since he was a colleague of the present President of the College, Mr. Savory, and another gentleman, who he was sorry to say was now deceased (Mr. Cooper Forster), in the Court of Examiners, when it came to their knowledge, quite casually, that a proposal was being passed through the Council which they considered derogatory to the examination for the Fellowship of the College of Surgeons. A very short time was given before the next meeting of the Council, at which this bye-law would have been affirmed and passed, so far as the College could pass it, and would have been submitted to the Secretary of State, who, being probably not in possession of sufficient information, would in all probability have passed it as a matter of course. They exerted themselves to the utmost—Mr. Savory, Mr. Cooper Forster, and himself—and addressed every Fellow by examination who was at that time accessible in England. The result was, they made so strong a protest on the subject that the Council of the College at the last moment rescinded the decree, and the proposal was no more heard of. But if the proposition which was now made had then been in operation there would have been no such opportunity; the Council could have passed it at one meeting and confirmed it at the next, before the matter was laid before the public at all. He was sure that he would have the support of all the Fellows of the Association in protesting most strongly against those two clauses of the revised Charter. Mr. Swain had alluded to the way in which the Council determined and disposed of the very large funds which were now in their hands, and on that subject he would therefore say nothing further, except to protest in the strongest way against any such power being left in their hands. But there were other matters on which the feeling of the profession was even stronger. For instance, the Council of the College, joining with the College of Physicians, had established a new examining body, to which they had not the slightest objection. He was a member of the Council when the matter was carried through, and thought it was a wise and good step, and one in the interest of the profession, but at the same time a step of that kind ought not to have been taken without the profession having the opportunity of pronouncing their opinion upon it, and no professional body was so competent to pronounce an opinion upon it as the Members of the College of Surgeons themselves. The Fellows of the College of Physicians had, as he had mentioned, a privilege which the Fellows of the College of Surgeons did not possess in this matter. But besides that, the Council of the College had taken a step which was very much more questionable and arbitrary. They had excluded from that league of theirs with the College of Physicians the Society of Apothecaries, and by that exclusion they had set up in London a second examining body. Now, if there was one thing on which professional feeling

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was more strong than another, it was that there should not be a plurality of examining bodies, and the College of Surgeons had done that in spite of the protest of the General Council itself. The General Council begged the College of Surgeons to reconsider their proposal, and they would not do so. That showed the absolute control which the Council of the College of Surgeons affected to have over matters that ought to be matters of common interest to the whole profession. The same thing might be said with regard to granting degrees. The College of Surgeons proposed to join the College of Physicians in making some arrangement for the granting of medical degrees, and they had never ascertained what the feeling of the present practitioners of medicine was upon the subject, and even if they had ascertained it they would not have taken the smallest notice of it. He wished to refer to the election of president, a matter which had touched his feelings very strongly, and also those of his old friend and instructor, Mr. Pollock. It used to be the habit at the Council of the College of Surgeons simply to hand this office round from one man to the next. That became such a mere matter of routine that it degraded the office of president, and, in fact, very few people knew who the president of the College of Surgeons was. That matter was one which required not so much the intervention of any public authority as a full and free discussion between the Council of the College and their constituents. They did not ask his lordship to interfere in a professional matter, which must necessarily be somewhat obscure to him; but they asked him to remit those matters back for consideration in order that there might take place—what had never yet taken place in the history of the College of Surgeons—a full discussion between the governing body and the body that it governed, in order that they might state plainly their proposals and the reasons for their proposals, and that they might hear any objections that might be raised to them. They were not certainly destitute of experience or information on those matters; they were not violent agitators or revolutionaries; they were perfectly prepared to meet together and to settle those matters in a friendly way with friends such as they regarded the Council of the College to be. They thought, however, that to attempt to settle this off-hand by the mere motion of a majority of a couple of dozen men with whom they were never able to have any intelligent discussion was an absurdity, and they confidently hoped that Her Majesty would be advised to remit this proposed new Charter for reconsideration and for discussion. There was only one other matter on which he wished to speak, and that was with respect to the claims of the Members. They were all Members of the College as well as Fellows, and their Association, as an Association, backed up the claims of the Members to a fair and reasonable share in the management of the College. He perfectly allowed that Fellows by examination ought to have the leading share in a body which was to a very great extent educational, but they said as that body ought not to be entirely educational, so the Members ought to have a fair share in its management. As an Association they had backed up the claims of the Members, but there were some of them who did not take that view. Those of the Fellows who did take that view would join the deputation of Members, and it was partly for that reason that they had asked that they might be received separately.

Mr. TWEEDY said he did not know that he could add much to the statements just made, but he would call his lordship's attention to the difference between the practice of the College of Surgeons of England and that of other Colleges. In the King and Queen's College of Physicians of Ireland there were meetings of the Fellows every month. In the Royal College of Physicians of Edinburgh there were four quarterly meetings of Fellows, and extraordinary meetings of Fellows on the requisition of four Fellows. At the Faculty of Physicians and Surgeons of Glasgow there were ordinary meetings of Fellows resident in Scotland every month. At the Royal College of Physicians of London there were four ordinary meetings, and extraordinary meetings on requisition. At the Royal College of Surgeons of Edinburgh there were regular general meetings, and at the Royal College of Surgeons in Ireland, though the Fellows were not consulted by the Council, yet the Council was elected annually; so that really the Fellows had an effective power in the control of the management of the College. In the case of the Fellows of the College of Surgeons of England, Mr. Holmes and Mr. Swain would pardon him if he said he thought they had made their position rather more favourable than it was. They had absolutely no inherent right of meeting in the College whatever. (Hear, hear.) They had had two or three general meetings since the Association was formed, and in consequence of the representations made by it, but previously no Fellow and no Member, and no body of Fellows or Members, had, as such, any right whatever to hold a meeting or to call a meeting in the College. There was a bye-law framed in the year 1831 for the purpose of preventing such meetings in the College. The Members of the College in that year met at the Hunterian Oration, and some of them thought it a convenient occasion to protest against an order that had been given for the exclusion of navy surgeons from levées. The Council at that time endeavoured to, and did as far as it could effectually, suppress the meeting. A good deal of contention arose; but the consequence was that in May of that year the Council obtained a bye-law, which was still in existence, preventing all meetings in the College, except with the consent and approval of the president and the Council. That bye-law had, ever since, effectually prevented Fellows and Members from holding a meeting in the College, and yet, curiously enough, it was by that bye-law that they were now allowed to meet in the College. In the year 1869 Mr. Erichsen moved in the Council that Fellows and Members should have greater facilities for meeting in the College to discuss collegiate affairs. When the report was made, it was found that this bye-law, which had been framed to exclude Members and Fellows from such meetings, was sufficiently elastic to allow them to meet. The bye-law stated that no business should be transacted or any matter discussed or debated at any meeting or assemblage convened by or under the authority of the president or Council, except the special business for which the meeting was convened. The meetings that had been convened had been meetings for the election of members of Council, for the delivery of lectures, and so on, but at those meetings effectual precautions had been taken to prevent the discussion, or even the mention, of any other subject whatever relating to the College. So that, so far from their having the right of meeting, they had no real right of meeting. In consequence of the representations of the Association of Fellows, they had been allowed lately to go to the College once a year to receive as read a report which, as a matter of fact, he believed, was printed and bound up in the College Calendar before the meeting was held. Such a proceeding was ridiculous and absurd. (Hear, hear.) One other point he wished to call attention to. A resolution had been passed by the Association, and unanimously approved by large general meetings of Fellows and Members held in the College, that no alteration should be made in the constitution or relations of the College, or in any bye-laws, without the consent of the Fellows and Members specially convened to discuss the same. In the Charters the Fellows and Members were called the body corporate and politic. But the Council, which was defined as being the governing body, had declined to accept this proposal. Before any person could be admitted as a Member of the College he had to make this declaration in the presence of an officer of the College: "I, A. B., do solemnly and sincerely declare that while a Member of the College of Surgeons of England I will observe the bye-laws thereof"; and then it was laid down that "every person prior to his admission as a Member shall subscribe his name to a copy of the bye-laws of the College in testimony of his having engaged himself to the observance thereof." They had therefore solemnly to declare to observe bye-laws which might be altered, rescinded, or added to without their consent and without their sanction—nay, even without their knowledge. They were members of the body politic and corporate, and yet the constitution of that body might be altered in many ways without their having any voice or control in the matter. It seemed to him contrary to every principle of equity and justice that one party to a solemn contract should be at liberty to alter the terms as they pleased (hear, hear), while the other party should have no power whatever of approving or disapproving. At present, though the Fellows had very little power, they did, as a matter of fact, nominally elect the Council; but the conditions under which that election took place were so prohibitive and restrictive that the Council was, as a matter of fact, elected by a very small number of persons. He had prepared a list, from which would be seen the number of votes by which the present members of the Council were elected.

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At the head stood Sir James Paget, but with only 205 votes, while at the bottom of the list stood another member of the Council, elected by 101 votes. A member of the Council might therefore be elected by about 100 votes, and yet he then became one of twenty-four, or perhaps one of thirteen, who might have the absolute disposal of the affairs of the College of Surgeons, numbering, say, from 13,000 to 17,000 Members. In the College Calendar the number of Fellows for the year was given at about 1100, and the number of Members at 17,000. These numbers, he believed, were not strictly accurate. It was, perhaps, impossible to keep a strict Register, but, as a matter of fact, the Fellows, he believed, numbered about 1000, and the Members from 14,000 to 15,000; but 101 votes, as it seemed, might make a Fellow of the College a member of the Council; by this it would be seen how little representative the Council was of the great body of the profession.

The LORD PRESIDENT, in reply, said that what had been brought before him should receive his careful attention. As he understood it, their case practically came to this—that they wanted an alteration of the constitution of the Royal College of Surgeons, to make it a popular body to a certain extent, instead of being comparatively a close body. (Hear, hear.) That was the foundation of what they required, and he would look to the facts they had laid before him before coming to any decision.

Mr. TIMOTHY HOLMES asked the Lord President whether he would like this matter to be put in writing.

The LORD PRESIDENT said he certainly should like it to be in writing.

Mr. POLLOCK said he was sure he expressed the feelings of the meeting in thanking his lordship sincerely for the kindness with which he had received them.

DEPUTATION OF MEMBERS.

A very numerously attended deputation from the Association of Members of the Royal College of Surgeons then waited upon the Lord President with reference to the same subject.

Sir GUYER HUNTER, M.P., in introducing the deputation, said he did not intend to enter into any details, but would leave those to others who were more competent to speak upon them. He was in entire sympathy with this meeting; it had his hearty concurrence and best wishes. It did seem an exceedingly anomalous state of affairs that when the electoral franchise had been extended even to the illiterate classes of the country, a body of diplomatised Members of a College should not be allowed to exercise any influence in the affairs of the College from which they had their diplomas. In 1797 he was informed the Houses of Parliament threw out a Bill which failed to recognise the status and the position of the Members of the College with reference to the capacity to elect the president and to sit on the Council; and Lord Thurlow, in speaking of the Members, then said: "They have great cause to complain: their privileges have been violated; they have been too long trampled under foot, and they have the strongest title in the world to have their complaints heard with patience and attention." He was sure that the Lord President would give his patient attention to what would be laid before him, and hoped that it would end in the settlement of a question of great difficulty, and which had created a great deal of dissatisfaction amongst the members of the medical profession. (Hear, hear.)

Mr. HART read a long statement endeavouring to trace the succession of the College of Surgeons from the two guilds, the Company of Barber Surgeons and the Fellowship of Surgeons, existing in the early part of the fourteenth century. He referred to the various changes which had been made in the Charters of the College. After the Charter of 1843, he said that, with the exception of an unimportant Supplementary Charter in 1849, relating to the examination in dental surgery, no further legal change in the rights or constitution of the commonalty had been made down to the present time. An important practical change, however, had taken place as to the customary annual meetings of all the Members. These did not appear to have been held in the bad times following 1784, although the body of Members successfully asserted their right to meet and act in connexion with the petition against the Bill of 1796–7; but with the exception of an important meeting at which they resolved to approach the Crown for an amendment of the Charter in 1826, they did not appear to have taken any pronounced action until the present movement began in consequence of an agitation that had been growing for many years. The President and the Council had for a few years past been in the habit of convening an annual meeting of Members and Fellows, and had placed before them a printed report comprising a record of their transactions during the Collegiate year, and a statement of receipts and expenditure. In the Minutes of the Council the report was officially described as being "submitted" to the meeting. The printed statement included the Council Minutes and other matters of business, and the balance-sheet of income and expenditure for the year. The Council professed to take up the position that they were not concerned in the proceedings of the meeting, and they had generally attended in a separate part of the theatre. They commonly refrained from taking any part in the discussion, but they had not, in fact, insisted upon that view, inasmuch as the president had uniformly taken the chair as of right in his capacity of chairman of the whole community, and the secretary of the College had kept the Minutes as a part of his general duty; and it also happened that a member of the Council had risen to a point of order, while another member spoke and voted in favour of a resolution proposed in the interests of the Members of the College. In addition to that, the Council had received, discussed, and entered upon its Minutes such resolutions as they were directed to do by the general meeting, and had appointed certain of its members as a committee to discuss with the representatives of the Members' Association its policy as to the resolutions passed. With regard to the proposals which had been placed before his lordship for a Charter, the Council, at a meeting on May 5th, 1887, expressly based its refusal to convene a special meeting of the Fellows and Members to discuss the proposed Draft Charter upon the ground that the subjects to which it referred had been already submitted to the Fellows and Members. In view of all those circumstances, it was submitted that the annual meeting recently held was, in fact, a revival of the customary annual mote at which the whole body of Members had always been, and still were, entitled to consider the affairs of their community, and pass resolutions relating to their common interest. The petition on which the present deputation appeared embodied the resolutions passed at the last of those general meetings held on the 3rd inst. The subjects discussed had been under consideration at several previous annual meetings, and gave ample evidence of the steadily growing desire of the Members to obtain recognition of their legal and moral claim to some representation on the governing body. Resolutions tending in a similar direction had been submitted at a former meeting in November, 1886, and were rejected by the Council on Jan. 13th last. With regard to the form in which the present application came before the Privy Council, the deputation desired to say that all the resolutions embodied in the present Members' petition had been duly declared by the Chairman to be carried at the annual meeting, and that a consequential motion was then made and seconded in the usual way that the resolutions be forwarded through the Chairman to the Privy Council. Those were resolutions identical with the provisions of the Charter. That motion the Chairman ruled out of order, and held that the question of forwarding the Members' resolution to the Crown must be left to the decision of the members of the Council. Against that arbitrary action, which affected to abrogate a right permitted even in the dark days of 1797 and 1826, the present deputation on behalf of the Members desired formally to protest. (Hear, hear.) They tendered their present petition to the Crown as being a lawful and constitutional declaration of the Members of the ancient Society of Surgeons in general meeting assembled, and they respectfully prayed the consideration of the Crown to their contention that, especially in such a matter as an application to the Crown for any alteration of the existing Charter, the decision of the whole body of free men ought to prevail against an adverse resolution on the part of the executive. At an earlier general meeting of Members in March, 1884, it was resolved that no alteration in the constitution of the College should be effected without the consent of the Members, and also that there should be an annual meeting. Both those proposals appeared at that time to have received the assent of the Council, and it was submitted therefore that in that respect they had recognised the right of the Members to approve or otherwise the proposals for the alteration of the Charters, and that they ought not

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now to be permitted to override the constitutional expression of opinion invited on their own action. The Council claimed the right to have submitted to them beforehand any resolutions which were to be submitted to the Members, and to disallow them at pleasure. This claim was not admitted by the Members, and they submitted that it was bad in law. Such cases as had from time to time arisen had been amicably arranged, excepting only on the occasion of the disallowance of a motion to forward resolutions to the Privy Council. The Members submitted that as the President and Council did not exercise the right claimed to forbid the discussion of these proposals, they further admitted the right of the Members to have a voice in the present question. In 1885 the Association of Fellows insisted that no steps should be taken by the Council to obtain a new Charter till the various alterations proposed were accepted by the Council and submitted to the General meeting of Fellows and Members, and that proposal was endorsed by a minority of the Council. He wished to call attention to the fact that the Council in the course of the present year directed voting papers to be issued to all the Fellows, inquiring whether, in their opinion, Members should be allowed to vote in elections for the Council, or whether Members should be eligible for election. The Members objected to the form in which these questions were put. (Hear, hear.) They considered the result, nevertheless, largely in confirmation of the views they now presented. Out of 1116 appearing in the College Calendar only 419 voted. Those were all Fellows who were asked whether their own privileges should be curtailed by the admission of Members, and when it was remembered that the proposal itself to some extent curtailed the privileges of the Fellows, it was submitted that the result was a moral victory. Two hundred and seventy-six answered the official circular in favour of the Members' claim, six sent undecided answers, and 260 returned no reply. About 130 did not appear to have received the circular. About the same time the Association of Members made a private attempt to ascertain the opinion of all the Members of the College, and for this purpose they issued a circular. Taking 10,000 Members as being accessible in this way, of those 10,000 nearly 5000 had signed the petition which had been already placed before the Privy Council in favour of the contention now advanced. That was a clear half, and that was more remarkable because circumstances had proved that the medical profession were slow to return any circulars of that sort. When 20,000 circulars were sent out with regard to the right of voting for the election of members of the General Medical Council, only 5000 were returned; so that if in the present instance 5000 had been returned out of 10,000, that showed a general consensus of opinion, which was very remarkable. With regard to the question of public policy, he would only refer to the objections that had been raised on the part of the Council to the claim of the Members. The first was that the Members never had any right to vote for the governing body; secondly, that the functions of the College were educational and scientific only; thirdly, that in any case the Members were not qualified to take part in elections, and that the extending of the constituency would lead to bad results; fourthly, that analogous bodies did not give to ordinary Members power of voting; fifthly, that any concession of voting power to the Members would be a confiscation of the inherent rights of the present Fellows. Taking the first point, that the Members never had any right, it had been abundantly shown that the election rights of Members were not only undisputed, but were the essential points in the constitution of the Society; and the right of Members to assemble in general meeting for proper purposes had, in truth, never ceased to exist, and was exercised with practical continuity down to the periods of anarchy at the end of the last century, when the Crown overrode the decision of Parliament, and with what was legally known as "fraud" granted the present autocratic Charter. As to the second point, it was notorious that the Members entirely protested against it as a falsification of the real nature of the duties of the College. It was admitted that the business of the College as defined in Section 15 and in the bye-laws was to protect and defend the Members; but it was only quite lately, in the course of the last year or two, and under the strongest pressure, that the Council had shown the least interest or sympathy in defending the Members, and they had done this only in a very small number of cases. Great dissatisfaction existed amongst Members as to the employment of the Wilson bequest—a matter in which they considered they ought to have a voice. The third objection was only an old argument repeatedly brought before select committees and always rejected. Precisely the same argument had been used against the extension of the franchise. With regard to the fourth objection, that there was no analogy in the case of other universities, his lordship was well acquainted with the constitution of the University of London, where the junior graduates had full voting powers and were eligible to be elected on the Senate. In the case of the older universities, it was well known that although it was true the M.A.'s only voted, yet the obtaining of that degree was merely a question of time and the payment of a small fee. The Members were quite willing to submit the limits with regard to age and also as to the number of Members that might be elected on the Council. The next argument of the Council was that there was no case of representation and taxation as alleged, but that the Members paid a fee for their diploma and obtained it, and had no further claim in respect of the money so paid. That argument had been declared by select committees and by Parliament to be out of the question. It was evident that if the payment of a fee gave the Members no right to share in the administration, it was impossible to say why Fellows should have any claims, the rights being the same in the one case as in the other. It should not be forgotten that the Members contributed £16,000 to the funds of the College, and the Fellows only £1000. The exclusion of Members, it was contended, must prejudicially affect the public interest. It was a remarkable fact that in a College numbering from 12,000 to 17,000 Members, including men largely engaged in the Army and Navy and in the Poor-law and Sanitary Services, not one of those services was represented on the Council, or had been for fifty years. The Council of the College, consisting almost exclusively of consulting surgeons, had been, and was still, greatly to its own detriment and greatly to the detriment of the public, altogether out of touch with the great public interests of medicine which had from time to time come before Parliament. The public and the College had suffered greatly from the limitation of its constitution, and by introducing such a representation as was now asked, not only would justice be done to the Members, but the public interest would be very largely advanced.

Mr. TIMOTHY HOLMES said that he represented a very large number of the Fellows of the College who were most earnestly anxious to see the state of things which had been so well described terminated, so that the College of Surgeons should be representative, not only of the consulting Surgeons of London, but also of the whole medical profession engaged in the practice of surgery. (Hear, hear.) He hoped that by the decision of his lordship this end might be secured.

The LORD PRESIDENT said he had, of course, very little to answer upon the present occasion, because it was a matter which he must very carefully discuss, and upon which he must gain as much information as possible upon the various points that had been raised. He was not quite sure that Mr. Hart's view of going back to the ancient guilds would be so very satisfactory to the Members of the body whom he represented as he supposed, because, though he might think upon one point they went with him, upon others they would probably be in a somewhat different category. But, however that might be, he could only say he would give the statements that had been laid before him his most serious and careful attention.

Mr. HART inquired if the Lord President would hear counsel in the event of any legal explanation being required.

The LORD PRESIDENT said that if the Members thought that the Charter was in excess of the powers of the Crown they could raise that point in the ordinary courts of law. No materials were before him for deciding that point. The question before him was the granting of a Supplemental Charter to a Charter which must be taken to be a valid one. If any difficult point arose, he should take care to seek information upon it.

Sir GUYER HUNTER thanked his lordship, and the deputation withdrew.

ASYLUM FOR INCURABLES.—A wealthy Russian lady, named Khvoshtinski, has left £10,000 to found an asylum for incurables in the town of Tamboff.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 19, 1887.

WHATEVER may be the official decision at which the Lord President of the Council may arrive, the reception which he gave on the 11th inst. to a deputation of the Fellows and of the Members of the Royal College of Surgeons of England respectively is not only an immediate gain to the cause of collegiate reform, but marks an epoch in the history of the College. In a second edition of our last week's issue, we published a short account of these deputations, and a fuller report appears in the present number. These reports tell a woful but instructive tale, which may be briefly summed up in the words with which the Lord President dismissed the deputation of Fellows: "It practically comes to this: you want an alteration in the constitution of the Royal College of Surgeons to make it a popular body to a certain extent, instead of being comparatively a close body." This is, in truth, the precise object of an agitation which has persisted more or less, though with dormant intervals, since the first conception of the College in the year 1797—three years before its birth—down to the present time. The principal eruptions of the agitation occurred in the years 1826, 1843, 1848, and 1870. The present outbreak began about five years ago, when an Association of Fellows of that day petitioned the Council to obtain an alteration in the Charter which required compulsory personal voting at the election of members of the Council. At length a committee of the Council was appointed to consider and report on this suggestion and any other alterations that might be desirable in the Charters. At a meeting of the Council held in January, 1884, a list of alterations proposed by the Council to be made in the Charters was presented, and an attempt was made to pass them through the Council and into the office of the Privy Council without the knowledge of the Fellows and Members of the College. Happily this attempt was frustrated, and the proposed alterations were "reported" to a general meeting of Fellows and Members held on March 24th, 1884. At that meeting, at which the proposed alterations had been approved, certain other suggestions were made. These were, chiefly, that Fellows and Members should be invested with a larger share in the management of the College; that there should be an annual meeting of Fellows and Members for the reception and discussion of the report of the Council; and that no alteration should be effected in the constitution or in the relations of the College without the consent of the Fellows and Members convened to discuss such alteration. These demands the Council from the first was unwilling to entertain, and, with the exception of one small concession, has ever since resisted and refused. The immediate effect of this refusal was the creation of two powerful organisations of Fellows and of Members, pledged to uphold the resolutions passed at the general meeting, and to promote in every lawful manner a readjustment of the relations between the Council and the general body of the College. These organisations, known as the Association of Fellows and the Association of Members, soon numbered in the aggregate many thousands of the body politic and corporate. The Association of Fellows confined itself to the principles underlying the proposals made at the general meeting, but the Association of Members, took a bolder flight, and at one swoop attempted to secure an extension of the franchise to all Members, and the conferring on Members rights coequal and coextensive with those of Fellows. It seemed at one time as if the aims and intentions of the two Associations would prove antagonistic and mutually destructive; but by prudent and timely concessions and compromises an *entente cordiale* was established, and for more than two years these organisations have loyally co-operated, each in its own way working for the attainment of the same end.

Both the Associations find a common object in the following approved opinion: First, that it would tend to promote the interests of medical polity and education if Members of the College of ten years' standing were empowered to vote at the election of members of the Council, and if Members of twenty years' standing were eligible to sit in the Council; and, secondly, that no alteration should be made in the constitution or in the relations of the College, or in any of its bye-laws, without the consent of Fellows and Members convened to discuss such alteration. These two propositions have been more than once adopted by large general meetings of Fellows and Members; and at the general meeting held on the 4th inst. a resolution was unanimously passed disapproving of the application for a new Charter which did not contain these provisions. The Council has, however, refused to alter its first decision, and the appeal has now been transferred to the tribunal of the Privy Council. What may be the immediate result of that appeal it would not be right or proper to attempt to forecast. The Lord President has promised to give the matter his best attention, and we must await his decision. What the next stage will be must therefore depend upon that decision; but be this decision what it may, it is certain that henceforth the limits of the controversy will never again be confined to the same narrow area as before. Now that public attention has been called to the defects of the fundamental constitution of the College, it is almost impossible to conceive that the *status quo antea* can much longer be maintained.

CARDIAC auscultation presents ample scope for the scientific exercise of the imagination. The problems that it offers are not to be solved by an appeal to direct experiment; they can only be tested in the light of facts concerning the physiology and physics of the heart and its contents applied to the abnormal conditions of disease, and no position taken up with respect to the mechanism of heart murmurs can be justified, except by appeal to such knowledge. We have been forcibly reminded of this in noting the revival of the controversy around the much-disputed question of the causation of the presystolic murmur, which has been carried on in our columns during the past few weeks, and which culminated in the debate at the Medical Society on the 7th. The same controversy, in which some of the present disputants engaged, raged round the contention of Dr. BARCLAY fifteen years

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ago. Dr. DICKINSON, in reviving Dr. BARCLAY'S views, has urged them with his characteristic felicity of language and directness of aim. He speaks with confidence of the time when they will become accepted as canons, and is not dismayed at the number and authority of his opponents. It is not the diagnostic value of the bruit that is in question. All admit that it is the typical indication of a stenosed or obstructed mitral orifice; but how and when it is produced—these are the points which have been so strenuously contested, and they are just the points which are so little capable of proof. That wherever the presystolic murmur is noted clinically the existence of mitral thickening or narrowing may be predicated is abundantly proved from post-mortem evidence; but no such evidence can inform us, except only indirectly and inferentially, that the bruit we heard during life was due to the blood flowing in the one direction rather than the other. And, indeed, whilst freely admitting the value of having true conceptions on the mode of production of cardiac bruits, it must be confessed that the all-important fact is the lesion they indicate, and not the precise mode in which they are generated. In this respect the presystolic murmur is pathognomonic.

It may be well—although this is by no means the first time that the subject has been discussed by us[1]—to briefly summarise the arguments that have been raised on the two sides of the question—viz., whether the murmur in question is an obstructive or a regurgitant mitral bruit; whether it be truly or falsely denominated "presystolic." The first place must be given to the attacking party. Dr. DICKINSON based his argument upon several clinical and pathological facts. He avers that, when accurately timed with the apex beat, the bruit and its accompanying thrill are synchronous with that index of the ventricular systole; also that the characteristic loudness and intensity of the murmur are more compatible with its production through the ventricular systole, gathering in force as it proceeds, than with the feeble auricular contraction; that it blends with the systolic sound, and may be continued without a break into an admittedly "systolic" bruit. Its abrupt termination in a "snap" is due to the closure of the thickened cusps after the escape of blood at the beginning of the systole, this closure being delayed by the physical change in the cusps. He would term the bruit preferably an "early systolic," and would discard such phrases as "presystolic" and "auricular-systolic" as misleading and inaccurate. The only direct obstructive murmur generated at the mitral orifice that is recognised by Dr. DICKINSON is the "diastolic mitral" of HOPE, which is comparatively rare. In the correspondence that followed in our columns, these views were supported by Dr. JOHN HARLEY, who declared that he had always regarded the bruit as regurgitant, and who denounced the alternative view as being both "unphysical and unphysiological." Dr. SEYMOUR TAYLOR explained the bruit as being produced by the vibration of the chordæ, and not as generated at the orifice; also that, owing to their altered state, the valves would close more slowly than in health, so that time would be allowed for the murmur and thrill to precede the systolic sound, and yet themselves be strictly systolic. Dr. OWEN TRAVIS showed that normally the valves are uplifted by the blood filling the ventricles, and come together before the actual contraction of the ventricle, but that when diseased they would require a greater force for their approximation, such as could only be supplied by the systole of the ventricle. Dr. CHARLEWOOD TURNER deduced an argument in favour of the regurgitant hypothesis from his observations of a case of pulmonary regurgitation with prediastolic murmur; although he seemed to admit that the presystolic bruit was both direct and regurgitant, and appealed to the cardiograph in his support. Lastly, Dr. HANDFORD argued at length upon the hypothesis that the two ventricles do not act synchronously in mitral stenosis, and that the impulse in this affection is that of the right ventricle, which is probably delayed in its contraction behind the left. All which arguments, it may be noted, have a very considerable theoretical basis.

On the other side, the challenge thrown down by Dr. DICKINSON was taken up by Professor GAIRDNER, who in times past defended his position from the onslaught of Dr. BARCLAY, and who also recently had met Dr. MCVAIL'S physical objections at the Glasgow Medico-Chirurgical Society. As the first clear exponent of the auricular-systolic view, Professor GAIRDNER could not do otherwise than lay stress on the fact that an obstructive mitral bruit may start from the second sound and cover the whole diastole and pause, so as practically to exclude any bruit produced by regurgitation before the systolic sound. The triumphant indication of the value and import of the murmur rendered by his classical and unique case of ball-valve obstruction of the tricuspid was again quoted, for it conveys a lesson which it would be futile to ignore; whilst as to the blending of presystolic and systolic bruits, he averred that this was never so complete as to be capable of discrimination. Dr. GRAHAM STEELL repeated these arguments, and showed that the diastolic mitral had sometimes the characters of the presystolic, with a thrill, in evidence that the auricular contraction can suffice to produce these characters. Dr. SHEARER exposed the fallacy of arguing from the intensity of a bruit to the force of the blood stream, citing in support the character of the *bruit de diable*; he also drew attention to the remarkable curtailment of the period of cardiac rest, which must occur if the regurgitant explanation of the prolonged presystolic murmur be accepted. Dr. G. JOHNSON pointed to the difference in conduction of the presystolic and systolic murmurs, and to the interval that elapses between them, as evidence of their independent origin. He also concurred with Professor GAIRDNER as to the occurrence of combined mitral diastolic and presystolic, and could not explain the abrupt termination of the presystolic bruit on the regurgitant view. Dr. BALFOUR combated the objection as to the inadequacy of the auricle to supply sufficient force to generate a bruit of the character of the presystolic, by pointing to the high tension of the blood in the pulmonary circuit. Dr. SANSOM agrees with the views of Dr. GAIRDNER, but objects to the term "auricular-systolic" as applied to the murmur, and would prefer the word "presystolic." Dr. BROADBENT pointed out that this did not occur in mitral regurgitation where there is the same increase of pulmonary tension. Dr. BALFOUR says he considers the

[1] THE LANCET, 1875, vol. ii., p. 351.

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duration of the diastolic mitral to be an index of the degree of obstruction; and compares the alleged "continuity" of presystolic and systolic murmurs with that of the double aortic bruit. Dr. SAINSBURY pointed to the post-mortem evidence of auricular hypertrophy, and emphasised the doctrine that loudness of a bruit does not imply force in its production.

The debate at the Medical Society turned almost wholly in favour of the "orthodox" view, if we except, of course, Dr. DICKINSON'S speech, and the indisposition of Dr. SANSOM to accept the auricular-systolic mechanism; for Dr. BRISTOWE, in his elaborate exposition of mitral obstructive murmurs, covered the whole ground, and maintained a position which has not been met by the arguments of the other side. So completely did this paper traverse the question that the subsequent speeches added but little that was fresh, although the Society had the opportunity of examining cases in point. Moreover, it is indisputable that cardiographic tracings, such as those shown by Dr. SANSOM, those of Dr. GALABIN, published in Guy's Hospital Reports (1875), and some which Dr. PAUL CHAPMAN has sent us, support the original notion propounded by Professor GAIRDNER; and as it is only through the cardiograph that we can, independently of the ear, gain knowledge of the actual working of the living heart, we are bound to pay regard to its teachings. In fine, we do not think that the case, ably as it has been presented, has been made out in favour of the regurgitant hypothesis. Perhaps it may be allowed to slumber for another fifteen years, by which time, let us hope, some more certain criteria of the action of the heart in disease will be known.

IT is necessary that the ethics of professional work done "for the good of the public" should be formulated and clearly laid down. The time has arrived when the honour and dignity of the profession demand that a well-considered expression of opinion should be obtained, and by common consent adopted as the guiding rule of practice, to which all will, and in a sense must, henceforward conform, unless, every man doing that which is right in his own eyes, the self-respect of the medical body is to be sacrificed, and the well-being of the many ruthlessly set aside by the impatience or the ambition of the few. The promulgation of hints and suggestions for the management and self-management of the mind and the body in health is one thing, and we have never been backward in this good work ourselves, or failed to appreciate the efforts of others in the same direction—namely, *the prevention of disease and the conservation of health;* but the management and self-management of mind or body *in disease* is wholly another matter, and against the endeavour to popularise this enterprise we have always protested, and must at this juncture enter a strong objection and raise a warning cry. The two endeavours are totally and radically different. The one aims to teach such facts in anatomy or physiology as may be intelligently applied by the non-professional public to the furtherance and preservation of health; the other is a positively mischievous and wholly insincere pretence of enabling and helping laymen and women to do that for themselves and others which it is impossible they should do—namely, treat diseases. We say it is mischievous, because harm must be done by this encouragement of unskilled self-physicking and physicking others. We say it is insincere, because the merest tyro in medicine knows perfectly well that the thing is beyond doing rightly or safely. It would be a dereliction of duty on our part not to speak out plainly on this subject. THE LANCET has done much to popularise the laws of health. Scarcely a week has passed during many years in which we have not issued specially-considered and purposely-written leaderettes or annotations with the express purpose of informing the public, through our medical readers, on subjects of health preservation and the prevention of disease. Nor have we been backward in encouraging this enterprise for the public good whenever and wherever it has been legitimately carried out by qualified members of the profession We are especially desirous to draw a sharp line at the limits of that which is legitimate labour for the public good, and to mark off as obviously incompatible with the honourable practice of our art all that which lies outside and beyond that boundary.

We cannot deem it possible that any intelligent member of the profession can be seriously in doubt as to the impropriety of those enterprises which are now on foot to inaugurate an avowed propaganda of self-physicking in the family. It is monstrous that the semblance of legitimacy should, even for a moment, be given to such a scheme, by the association therewith of names highly honoured amongst us, and borne by persons who have hitherto been regarded as examples of strict and self-respecting conduct in professional life. Do the experience and observation of many long years go for nothing? Have not those who have been brought into contact with the public by service at hospitals, and as lecturers on science applied to public needs, yet learned that "a little knowledge is dangerous" in everything, and in nothing else so much as in the science and art of healing? Do not these gentlemen perceive that by the very sanction of their names in connexion with undertakings which have for their object the teaching of heads of families and the "public" the managing of those about them "in disease," they are giving the lie direct to all they have themselves said and written about the need of a competent knowledge of anatomy and physiology, of pathology, chemistry, and therapeutics, and even considerable clinical experience, before any man can be competent to prescribe? How are persons without any such knowledge to comprehend and apply the hints and suggestions, or even the "broad principles," they propose to cast before them? We cannot excuse the course taken by those who are engaged in this strangely unreal work on the score of want of acquaintance with the facts. It is impossible that persons so well informed as are the partisans of these enterprises can fail to know what they are doing; and if they do know, it follows that they are either pretentiously attempting the impossible or pandering to a false and mischievous desire on the part of the public to make themselves practically independent of medical advice and assistance, and by thus pandering hoodwinking and misleading those they affect to serve. The management of mind and body in health is a matter of common-sense prudence acting on physiological principles, and not only can be, but ought to be, taught to every intelligent being in the land;

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but the management of the mind and body "in disease" is wholly and specifically a matter for the medical practitioner, and none know better than the physicians and surgeons who stand committed to these novel enterprises that by undertaking to carry out the purpose assigned to them they are breaking roughly and wilfully through rules of conduct framed not one whit less in the interest of the public than of the profession, and which it is unjustifiable to transegress.

What, then, are we to conclude? Frankly, that, carried away by the impulse to achieve popularity or dominated by some mistaken ambition to appear philanthropical, the promoters of these extraordinary schemes of "usefulness" have placed themselves in a position which must be seen to be untenable, and from which they will feel compelled to retreat. We decline to believe that any respectable member of our profession is *consciously* animated by the sordid motive of gain in such a transaction. We do not conceive it possible that it can have occurred to any of those who have committed themselves to the task of teaching the public how to physic themselves and those about them, that the parade of their names and professional qualifications in connexion with these works, coupled with the "advice" they give, is neither more nor less than "touting." Nevertheless, this is what it really comes to. The position taken up is, we say, a false one, and it must be abandoned—the sooner the better—by all honourable professional men. By all means teach the public to take care of their health, show them how to live healthy lives and ward off disease; but in the name of common sense and professional propriety, for the public good, not less than the dignity of the profession, abstain from "quackish" discourses about management in disease. The boundary line between the legitimate sphere of usefulness and that which lies outside and beyond it, and which is not merely useless but harmful, is so clear that it cannot be overlooked or mistaken, except by those who wantonly go astray.

THE passing of green-coloured stools several times a day by infants is dependent, according to M. LESAGE, on the action of certain micro-organisms which he has succeeded in isolating, cultivating, and demonstrating, to his own satisfaction at least, to be the sole pathogenic agents.

M. LESAGE describes two varieties of green diarrhœa. The first is really of biliary origin, for the greenness of the stools is due to biliverdin, and a chemical examination of them demonstrates the presence of bile acids. The reaction of the stools is acid, and this acidity persists even after much dilution, microscopical examination of this variety of green motion having discovered the presence of a large quantity of biliary crystals and cholesterine, and of a certain number of ordinary microbes. The chromogenous bacillus, to be studied hereafter, is entirely absent. This bilious diarrhœa generally appears on the fourth day of life, and ceases by the twentieth or the twenty-fifth. It may supervene in breast-fed or hand-fed infants, is not accompanied by dyspepsia, and does not lead to emaciation. The number of stools is very variable. It appears to be due to an augmentation of the biliary secretion, which lights up a slight enteritis with acid secretion. At a necropsy, twenty-five minutes after death, of such cases, the whole of the intestine contains in its interior much bile of highly acid reaction. Attacks of this form of diarrhœa may be met with also between the ages of two and six months, especially in tuberculous infants.

The second variety of green diarrhœa is very different, for the green colour of the stools is the result of the activity of a special micro-organism. The fæcal matter only contains traces of bile, quite insufficient to explain the special colouration. In athrepsia and in tuberculosis, as the result of steatosis of the liver with consequent acholia, this slight quantity of bile may even be wanting altogether. Chemical examination demonstrates the presence of a special pigment. According to STEINER, in half the cases the stools are neutral; in the remainder the reaction is slightly acid, and mere dilution abolishes even this acidity. At the necropsy, made immediately after death, the intestine is found to be neutral throughout its entire extent if the stools are neutral and the acidity is localised to the colon when the stools are acid, so that the acidity must be developed in the large intestines.

The special micro-organism is a bacillus of varying length, according to the part of the intestine it comes from, to the medium in which it is cultivated, and to its age. The adult form is from 2 μ to 3 μ long and 1 μ broad; it is rectilinear and uniform along all its length; its extremities are slightly rounded. With advancing age it increases much in length, and forms a filament which may be from 5 μ to 20 μ long; it may become sinuous and twisted, or even doubled on itself. It has a certain degree of mobility, less marked than the typhoid bacillus. The bacillus reproduces itself by fission and sporulation: by the former method in the intestine and on potato cultivations; by the latter, outside the organism and on gelatine media, at a temperature of from 20° to 22° C. GRAM'S method is useful for staining this bacillus. The bacillus under different circumstances produces pigment which is not visible in thin layers, but the green colour is very marked in potato cultivations, and lighter in tint on gelatine. A similar variation may be observed in stools. The green tint is heightened by the presence of oxygen; but it has no relation to the bile pigments, for it is not extracted from solutions containing it by alcohol, ether, or chloroform. Saturated solution of sulphate of ammonium may form a solution of the pigment, whose chemistry has not yet been completed. The pigment is not identical with that produced by the micrococcus pyocyaneus. The bacillus may be cultivated in neutral peptonised gelatine, and in serum and agar-agar. Its characteristics are: (1) a green colour of variable tint; (2) the slowness with which it liquefies gelatine; (3) the greenish mantle which forms as the result of the growth of the bacillus on artificial media with a gaseous surrounding. Is this chromogenous bacillus the cause or the effect of the diarrhœa? To this question M. LESAGE gives the answer that the bacillus is the real cause of the diarrhœa, and this conclusion is arrived at as the result of experimental research. The injection subcutaneously of the bacillus gives rise to no lesion or disturbance. The injection of half a Pravaz-syringeful of the pure cultivation into the venous system of a rabbit is followed at the end of ten or twelve hours by the appearance of the pathogenic bacillus and of green diarrhœa. The injection of the bacillus into the intestine (by laparotomy)

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of young dogs and cats produces the green diarrhœa. The same result ensues if the stomach is the way of entrance, for the gastric juice of a fasting animal only retards the growth, but does not kill the bacillus. The transmission of the bacillus by the atmosphere has been demonstrated by various experiments, according to M. LESAGE. In discussing the treatment of this form of diarrhœa, the reaction of the alimentary canal is first considered. It is not, he maintains, true that the reaction is acid throughout the intestine, even when the mouth and the colon give an acid reaction; the rest of the intestine is neutral. Lactic acid is the best medicament. (See THE LANCET, vol. i. 1887, p. 1149.)

Annotations.

"Ne quid nimis."

SUMMER MORTALITY, 1887.

NOTWITHSTANDING the high temperature that prevailed during July and the greater part of August, it appears from the Registrar-General's last quarterly return that the public health, judged by the recorded death-rate, was below the average during the third or summer quarter of this year. The English annual death-rate during the three months ending September last was 17·6 per 1000, a rate slightly below both the mean rate in the corresponding quarters of the ten years 1877-86 and the rate in the third quarter of last year. The summer death-rate is to a large extent governed by the mortality from infantile diarrhœa, which, in its turn, is mainly dependent upon temperature. The rate of mortality from diarrhœa in the whole of England and Wales during last quarter was equal to 2·1 per 1000, against 1·8, the mean rate in the ten preceding corresponding quarters. As diarrhœa, however, is specially fatal in large urban populations, it will be well to note the mortality from this disease in the twenty-eight large towns dealt with in the Registrar-General's Weekly Return. In these towns the death-rate from diarrhœa last quarter was 3·3 per 1000, against 2·8 in the ten preceding summer quarters, in which the rate ranged from 1·2 in 1879, to 4·2 in 1878 and 4·5 in 1880. The annual death-rate from diarrhœa in the twenty-eight towns, under the influence of the exceptionally high temperature during July, rose steadily from 1·5 in the first week of that month to 5·5 in the first week of August, which was the maximum weekly rate in the quarter. The highest rate in any week of 1886 was 5·7 in the second week of September. The diarrhœa rate last quarter was maintained at 5·3 and 5·0 in the following two weeks of August, after which it rapidly and steadily declined week by week, influenced by the low temperature in September, to 0·9 in the week ending Oct. 1st. The unseasonably cold weather in September undoubtedly spared the lives of several thousands of infants in England and Wales, who would have succumbed to diarrhœa if the average temperature of the month had prevailed. The diarrhœa death-rate in the last four weeks of the quarter, however, averaged but 1·6 per 1000 in the twenty-eight great towns, whereas in the corresponding period of 1886 the rate was as high as 4·6. The diarrhœa rate last quarter, which, as we have seen, was 2·1 in the whole of England and Wales and 3·3 in the twenty-eight largest towns, was 2·2 in fifty other large town districts, and 1·4 in the remainder of England and Wales, exclusive of the seventy-eight great towns. The variations between the diarrhœa rates in different towns were as unaccountably wide as in previous summers; they ranged last quarter in the twenty-eight towns from 0·8 in Halifax, 1·1 in Huddersfield, and 1·6 in Bristol, to 4·7 in Salford, 6·4 in Leicester, and 7·6 in Preston; and in the smaller towns from 0·4 in Southport, 0·6 in Rochdale, and 0·7 in Gloucester, to 5·5 in Chatham and 6·3 in Wigan. The Lancashire towns, as in former summers, showed generally high death-rates from diarrhœa, but some satisfactory elucidation of the causes which produce such variations as 0·6 and 1·7 in Rochdale and Oldham, and 6·3 and 7·6 in Wigan and Preston, is still urgently needed in the best interests of sanitary progress.

SIR HENRY ACLAND ON THE ARMY MEDICAL SCHOOL.

SIR HENRY ACLAND has done well to allow his Address to the Army Medical School, delivered in July at the distribution of prizes, to be published. It might be thought that one of less eloquence and authority than Sir Henry Acland might have sufficed to vindicate the claims to continued existence and increased support of the Netley School. But it is not so. The scandalous calamities of the Crimea are now far enough off to be forgotten by eager politicians who think they can make a little party capital out of any proposal of paltry economy, which may not bear disastrous fruit till their petty purposes are served. But they are not forgotten by the nation, and will not be suffered to recur for want of the few thousands a year that the Netley School costs. This is not the time when we can afford to relax the cultivation of military hygiene and medicine. Our army and navy are too small, and the duties and the distances to which they are called are too great, to allow any such experiment. If anyone is in doubt on this subject, let him read the stirring words of Sir Henry Acland, in which he relates the origin of Netley School in the sufferings of our Crimean troops—"sufferings..... in which sickness destroyed far more than were slain by the sword or the projectile, and which were such as to shock the most thoughtless." The very triumphs of medicine and hygiene tend to make nations forget what will happen if they fail to cultivate these sciences, especially as affecting the services on which our safety depends. But Sir Henry spoke not only to public men who on superficial financial grounds would starve or abolish such a school as Netley, but to the students and candidates of the school, and gave them much good advice. Few men were more fitted or entitled to give it, or to commend to them the great lessons and the great teachers of recent years in respect of army medical organisation, and to inspire them with lofty thoughts in repairing to the distant dependencies of the Empire on their beneficent mission.

HUMAN LOCOMOTION.

M. MAREY, whose brilliant researches into the *kinematics* of animal movements are so well known, has, in collaboration with M. Demeny, been making a series of observations upon human locomotion, of which a highly interesting account appears in a recent number of the *Comptes Rendus* of the Académie des Sciences. The method employed has been that of "photo-chronography," and the experiment is described as follows:—"In order to obtain a representation of the movements of torsion about a vertical axis, we covered a floor with black velvet, and caused the subject of the experiment, attired in white, to pass beneath a photo-chronograph placed vertically at a height of about 40 ft." In this way the investigators obtained a series of successive images, from which they publish a selection, displaying movements complementary to those movements in the vertical plane which have been photographically registered some time ago. In order to obtain more exact materials for measurement, they clothed their subject in black, and fitted to his shoulders and hips white wands, marking the transverse horizontal axes at these points. Of the index lines so depicted they obtained a series of photo-

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graphic drawings at intervals of one fiftieth of a second. These, when viewed from above, afford of course a measure of the torsion of the trunk about a vertical axis; viewed horizontally, they exhibit the torsion about the antero-posterior axis. A third white wand attached along the spine and projecting above the head affords indications of the "movements of totality"—that is to say, of balancing movements by which the whole body is inclined forward or backward or to either side. The joint authors give a minute analysis of the results which they bring out, and a careful description of the torsions to which the body is subject in walking and running, and their most interesting result is an approximate proof that at a walking pace the movement of the head is by compensatory motions in the trunk reduced to a minimum, and assimilated closely to that of the centre of gravity of the whole body. This they prove by means of an ingeniously constructed diagram, in which the trajectories of head, shoulder, and hip are brought together for comparison. It then appears that the trajectory of the head lies always midway between those of the shoulder and hip, so that the middle point of a line joining hip and shoulder would have a motion almost identical with that of the top of the head. There still remains, however, the antero-posterior swaying of the body to be allowed for, but this in walking amounts to very little more than zero. A further investigation of this interesting relation is, however, promised in M. Demeny's name, and will doubtless well repay the attention that is being bestowed upon it.

SMALL-POX HOSPITALS.

A CASE of some importance to sanitary authorities came before Mr. Justice Stirling, in the High Court of Justice, on Tuesday. The guardians of the Wortley Union, a district adjoining the borough of Sheffield, had hired for use as a small-pox hospital a house abutting on a road leading to three other houses, which were situated at a distance of less than fifty yards from the hospital. Application was made by these inhabitants for an injunction to restrain the guardians from the use of the house in question as a small-pox hospital. On the first hearing Mr. Justice Stirling expressed the opinion that the case was a proper one for an independent inquiry by a person skilled in such matters, and he accordingly appointed Mr. Shirley Murphy to inquire and report to him as to whether, by reason of the situation or management of the institution or otherwise, there was any danger to the plaintiffs, or any of them, in its being used as a small-pox hospital. After inspection of the locality, Mr. Murphy reported that there was danger, but the danger was slight, amounting rather to a possibility than to a probability of infection arising from the hospital. His lordship, in giving judgment, said that the position of the law was clear; the burden of proving that the use of this building was a nuisance lay upon the plaintiffs, and the question was whether the amount of injury was sufficient to justify the Court in treating this as a nuisance to be restrained by interlocutory injunction, and, in the words of Lord Justice Cotton, in the case of Fleet *v.* the Metropolitan Asylums Board, there must be "an appreciable injury to the healthiness of the plaintiffs' property. The plaintiffs must make out that there was real danger, otherwise, however much they might feel the hospital to be an annoyance, they could not get an injunction. In the present case it was true that the amount of the danger was not very great, but, on the other hand, it was a case in which from the particular nature of the disease its damage might be of an irreparable character." He therefore granted the injunction. We may comment on the wisdom of the course adopted by the learned Judge in obtaining independent skilled assistance for the purpose of enabling him to arrive at a conclusion—a far preferable method to that of merely hearing the often conflicting evidence of witnesses.

THE PARKES MUSEUM.

WE are sorry to see that this excellent institution is in want of funds, and that unless assistance is forthcoming its career must close. A powerful appeal has been made to the public and the profession by the members of council, and we feel sure that our readers will not allow these gentlemen to appeal in vain, more especially as they themselves have given very solid proof of the disinterested earnestness with which they heretofore have supported the museum. Eleven years ago the museum was only an idea; now there is a building, a very extensive collection of sanitary apparatus, and a large and valuable library, which is daily growing. The total cost of supporting the museum and library is, we believe, something under £700 a year, and it is still impossible to think that this modest sum will not be forthcoming. It is pointed out that the museum is a purely educational museum; and certainly the lessons to be learnt in it are of the utmost importance to the medical profession, who cannot afford in the present day to be ignorant of the details by which we seek to secure health in our dwellings and elsewhere. The professors and teachers of hygiene at all the chief medical schools bring their pupils there for practical instruction, and were the museum to be abolished our medical schools would feel the want of it. It has been used also for examination purposes, and we should hope that the great examining corporations will see their way to making a grant for the support of an institution which is of real importance for the practical teaching of medical students. Those who become members or life members will not only be helping the museum to continue its career of usefulness, but, as appears by the winter programme just issued, they will have their money's worth. Eleven lectures are to be given during the winter and spring, and of these the first was given by the Earl of Meath on Thursday last. Sir Douglas Galton will lecture on Smoke and Fog on Dec. 1st, and Mr. Shirley Murphy on Scarlet Fever on Dec. 15th. The first lecture in 1888 will be on Jan. 5th, on Hygiene in Childhood, by Dr. Angel Money, and on Feb. 2nd, Professor Crookshank will take for his subject the History and Present Position of the Germ Theory of Disease. Dr. Payne, whose antiquarian lore is well known, will discourse on Plagues Ancient and Modern, on Feb. 16th; and he will be followed at intervals of a week or a fortnight by Dr. Sims Woodhead on Milk and Disease, Miss Chreiman on Physical Culture, Mr. A. S. Murray on the Physical Training of the Greeks and Romans, Mr. Justice Cunningham on the Public Health in India, and Professor Hayter Lewis on Ancient and Mediæval Towns. Membership and life membership give admission to the lectures, and also the free use of the museum and library, and we trust that many of our readers who have not already done so will come forward, and by participating in the advantages of the museum help to secure its benefits for others.

THE MEDICAL FACULTY OF LYONS.

THE Medical Faculty of Lyons, which has just completed its first ten years of existence, has great reason to be proud of the success which has attended its formation. It now boasts of nearly 800 students, and is therefore one of the largest medical schools in Europe. But it is not only of numbers that it has cause to be proud. Although its *alumni* are necessarily as yet but very young men, they have successfully asserted their superior ability in several of the *concours*, or public competitive trials for professorships, lectureships, prizes, &c. The Lyons Faculty is now able not merely to provide all its own junior teachers for itself, but it has given teachers to other Faculties. Thus, up to the present time Lyons students have gained five professorships; besides, fifteen are *agrégés* or

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assistant professors. Perhaps the greatest compliment which the Lyons Faculty has received was when Paris took Professor Chauveau to be Professor of Physiology. There has always been a tendency for the Paris Faculty to overshadow the French provincial Faculties far too completely for its own good; therefore the exhibition of the healthy rivalry of one or more of the provincial schools is much to be rejoiced at, even for the sake of the great metropolitan Faculty itself. If Lyons, Montpellier, and Bordeaux held the same relationship to Paris that Leipsig, Munich, and Bonn hold to Berlin, it would be far better for the cause of medical science in France.

RABIES.

THE method of discussing any subject by the use o questions is generally suggestive and almost always instructive. The interrogative method has been adopted by M. Duboué in his pamphlet entitled "Des Progrès accomplis sur la question de la Rage,"[1] which discusses the part played by the nervous system. We reproduce the questions asked and answered in some measure by M. Duboué, who is a firm supporter of Pasteur. Is the virus of rabies propagated from the bitten part towards the medulla by the agency of the nerves? Granted that the virus is transmitted during the period of incubation by the nerves, and in a centripetal direction, may we conclude also that its transmission is effected equally in an opposite, centrifugal direction? Further, is the virus propagated through the agency of the sensory or of the motor nerves, or do both kinds of nerve convey the poison? Is the duration of the period of incubation to be explained on the distance between the bitten or inoculated part and the spinal bulb? What influences are exercised by age and mode of alimentation of the inoculated animals and by the rectilinear or angular direction of the contaminated nerves on the duration of incubation? When once the virus has reached the bulb in a centripetal manner, is it then reflected along other nerves in a centrifugal fashion? If the answer be in the affirmative, which can only be ascertained by experiment, which are the affected nerves? Does the poison pass across from one side of the cerebro-spinal axis to another, or does it remain limited to the side first affected? At what exact moment of time does the saliva become virulent? Does this occur only during the period of incubation, or only during and after the period of invasion? Are other liquids than the saliva infective—as, for example, the bronchial mucus and those liquids which come in contact with the contaminated nerves? Perfectly satisfactory answers to these questions would certainly advance our knowledge considerably, and the knowledge attained would hereafter prove of value in the rational treatment of this fell disease.

SMALL-POX IN MILAN.

AN Italian correspondent writes:—"The small-pox epidemic now prevailing in the Lombard capital is of serious import for the English-speaking traveller, who, if he seldom resides for any considerable time there, is in the habit of making it a half-way house, to the number of many thousands every season. As in Florence, so in Milan the disease has declared itself among the non-vaccinated, and, to a smaller extent, among those imperfectly vaccinated. To the former category belong the infant victims; to the latter the adults, many of whom have reached ages averaging from sixty to seventy years. This outbreak, as the Milanese journals indicate, is another warning to the Italian Government to lose no time in enforcing a universal system of compulsory vaccination throughout the peninsula, and in putting an end, once for all, to the inadequate precaution which contents itself with making admission to school, to the army, or to the civil service conditional on the applicants having been vaccinated. Meanwhile the Town Council is offering every facility for primary or secondary vaccination—all classes, both in city and suburb, being freely invited to avail themselves of the prophylactic gratuitously afforded in the Piazzale delle Galline. As an additional inducement to have the operation performed or re-performed, the authorities announce that the supply of lymph has been greatly improved in quality. The trials made of this fresh supply by Professor Grassi have answered all expectations, and the Vaccination Committee congratulate themselves on having now for the sixteenth time, during their nineteen years' experience, so ensured the efficacy of the prophylactic that nothing but its compulsory enforcement is wanting to make small-pox as rare in Italy as it has long been in England, France, or Germany.'

[1] Paris: G. Masson, Boulevard St. Germain.

THEORIES OF HOSPITAL REFORM.

OUR contemporary, *Charity*, gives an account of an essay on Hospital Reform, by Mr. Richard Moreland, honorary secretary of the Finsbury Dispensary. Mr. Moreland's views seem somewhat peculiar. According to one of these, much of the financial depression of hospitals is due to "the fact that committees, medical staffs, and nurses do not in many cases act sufficiently in concert." More seriously still, he attributes much of the want of harmony to the medical staff, who, according to the representation of his views in our contemporary, "are continually at loggerheads," because each one wants to have the patients treated according to his own peculiar theory. The nurses catch the contagion of this discord, and the time of the committee is spent in adjusting quarrels which should be spent in more profitable and creditable work. We cannot but think that this is rather a far-fetched theory of hospital difficulties, and, so far as regards the medical staffs, essentially an inaccurate one. We are glad to see that, in spite of the blame he attaches to the medical staff, Mr. Moreland is, somewhat inconsistently, disposed to give them more active interest in the regulations of their hospital. Mr. Moreland would approve of patients contributing to their maintenance; and of nurses, sisters, students, and probationers paying special fees. He would have one or more wards in each institution constantly closed, and so reduce expenses and permit of cleansing. Further, he advocates the merging of smaller hospitals into larger ones, with a view to reducing expenses of separate maintenance. Some of these views are highly worthy of consideration, others are more doubtful; but none of them go to the bottom of the financial difficulties of hospitals, which are to be found in an imperfect conception of the suffering they are calculated to relieve. When this is once realised, the wealthy will pour their money into the treasury of hospitals.

THE WATER-SUPPLY OF BADSEY.

THE inhabitants of Badsey in the Evesham rural district are a people easily contented as regards their water-supply. They have evidently no knowledge of Sir John Simon's writings; otherwise, instead of talking about a low death-rate in connexion with the state of their existing wells, they would bear in mind what he said as to arrears of impunity in the matter of neglected filth being often cancelled in one dreadful blow. But they have even endorsed a resolution to the effect that their water is, except in a few cases, too good to be set aside for another. In one instance a grave was being dug in Badsey, but it commenced to fill with water, and during the time occupied in conveying the coffin from the church the grave became flooded. The result was that the water had to be baled out, but it

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was found that this operation had almost dried a well supplying two houses. After rain, some of the water becomes the colour of porter, but this does not suffice to condemn it in the minds of the villagers. They are apparently scientifically inclined, and they prefer basing their final judgment on the result of a quantitative examination of the water such as chemists usually supply, to forming any estimate on such trivialities as obvious churchyard soakage and porter-like colour. We believe the Local Government Board have the question in hand, and it is possible that, in view of such evidence of contamination as is forthcoming, they may not be so particular as to the chemical constituents of the filth that soaks into these wells.

AN ARTIFICIAL ATMOSPHERE FOR PHTHISIS.

DOUBTLESS a perfect atmosphere for cases of chest disease, and especially phthisis, must remain for a long period a utopian idea. The subject of an artificial atmosphere was raised recently at the Biological Society of Paris by M. d'Arsonval, who described several apparatus constructed by him for permitting patients, and especially phthisical ones, to respire an artificial atmosphere, and he showed a means by which the inspired air should be uncontaminated by the fluid in the expired air. Dr. Brown-Séquard, in the discussion thereon, said it would be very important to settle this point in the hygienic treatment of *poitrinaires* and others. He had tried to employ an atmosphere containing a rather larger percentage of oxygen than the normal of ordinary air; but he found that when the oxygen was in too great a quantity irritation resulted, causing considerable distress, even when the carbonic acid eliminated remained normal. If, nevertheless, a mixture in determined proportions of carbonic acid and oxygen be made in an artificial atmosphere, these phenomena of intolerance were no longer produced. It is known that carbonic acid, besides its anæsthetic property, exercises a cicatrising effect on wounds. It is possible to comprehend how, in cases of tuberculosis, a diminution of reflex sensibility, and consequently a lessening of cough, may be afforded, whilst at the same time the pulmonary lesions may be favourably influenced, by carbonic acid.

PUERPERAL PEPTONURIA.

PEPTONURIA accompanies every normal accouchement, but it does not always present identical characters, and certain causes may modify its intensity and its duration. According to M. Barone, it is but little marked on the first day of the puerperium, but augments on the second and the third, attaining its maximum on the fourth. From this point it gradually decreases, undergoes a manifest augmentation towards the eighth or ninth day, and then again lessens until the twelfth, when it disappears. This peptonuria is explained as a collateral phenomenon of the involution of the uterus, and it is not necessary to suppose that a purulent exudation is concerned in its causation. It has been remarked that if the fœtus is macerated, peptone is not found in the urine, or only in small quantity; the diminution is in direct relation with the time that elapses between the death of the fœtus and its expulsion from the womb. It appears, then, that involution may be more rapid than when the child was born alive. Urine passed on the last days of gestation also contains peptones, which may also be found during parturition. Peptonuria has no relation with the kind of uterine contractions, nor with a painful or prolonged parturition. Uterine involution follows the same course as the peptonuria; the two conditions vary concomitantly; when the uterus has sunk to the level of the symphysis pubis peptone is no longer found in the urine. The specific gravity of the urine augments in direct parallelism with the increase in the peptones. M. Barone concludes that the peptones formed in the uterine parenchyma behave themselves in regard to the blood precisely as do the peptones of digestion, and as do also the peptones artificially injected into the blood.

THE ANTI-VACCINATIONISTS AND THE LORD MAYOR.

THE Lord Mayor has begun well. Being asked to allow the use of the Mansion House for a public meeting on the question of compulsory vaccination, his lordship sent the following answer through his secretary:—

"The Mansion House, London, E.C., Nov. 12th, 1887.

"DEAR SIR,—I am directed by the Lord Mayor to say not only that he must decline the request of your committee to grant the use of the Mansion House for their meeting, but that he is most thoroughly opposed to their sentimental antagonism to a recognised, wise, and humane law.

"I am, Sir, yours very truly, W. J. SOULSBY."

The trumpet of public men is apt in these days to give an uncertain sound on life and death questions. The morbid desire to please is a public evil. The Lord Mayor might as well be asked to allow a meeting at the Mansion House to discuss the expediency of fire brigades. His decision is refreshing, and will enhance public respect for the Mansion House.

HONOURS IN BRUSSELS AND IN PRUSSIA.

AT the recent third examination for the degree of Doctor of Medicine in the University of Brussels 10 candidates were successful, all but one of them obtaining more or less "distinction"; thus 2 obtained "the highest distinction," 3 "great distinction," and 4 "distinction." It is instructive to compare this list, which is of the usual character for Brussels, with the statistics issued by the examining commissions of the ten Prussian universities charged with applying the test, not for medical degrees, but for the mere licence to practise. During the examination year 1886-1887 694 candidates, many of them already Doctors of Medicine, were examined. Of these 505 passed, 270 obtaining the mark "good," but only 20 the mark "very good." The University of Berlin sent the largest number of candidates (232), that of Marburg the smallest (35). The Pharmaceutical Commission reports that 270 candidates were examined, of whom 218 passed.

THE LANGUAGE OF PRESCRIPTIONS.

THERE is among medical practitioners an increasing disposition to substitute for the series of classical terms hitherto usual in prescribing, their simpler and more accurate equivalents in the vernacular. The reform is one which has our approval. In making this admission, however, it is necessary to define with some preciseness the extent of its application. For the purpose of the present argument a prescription may be conveniently regarded as consisting of a professional and a popular part, the former being concerned with a statement of drugs and their quantities, the latter with directions for their use. The first great requisite that should belong to such directions is, we take it, clearness. Their meaning must be plain beyond all chance of misunderstanding on the part of inexperienced dispensers, a result hardly to be expected if words, phrases, and abbreviations are clothed in a garb of studiously quaint antiquity. The advantage conferred by a common scientific language is in this connexion, as a rule, wholly inoperative, since a translation of injunctions to the patient is not usually required, and, should it be needed in consequence of a change in the medical attendance, is not difficult to obtain. Doctor, chemist, nurse, and patient are here on common ground that has less to do with medicine than with attendance on

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the sick, and their simplest and surest means of communication is the native tongue. It is otherwise when we come to component parts and quantities of a prescribed mixture. These are the special concern of practitioners, and a clear and easy understanding among all such, of whatever country, with regard to the means of treatment, is of the first importance. Alike for this purpose and to allow of advisable brevity, the use of one common medium of expression is decidedly preferable to any other system. We are therefore of opinion that the best and most natural result of the reform in prescribing which is now in progress will be to leave the body of the prescription in its present convenient though antique form, and to ensure the most accurate observance of instructions to the patient by expressing these in the language of every-day life.

DIPHTHERIA AT SHIRLEY.

SOME of the principal inhabitants of Shirley, which lies within the borough of Croydon, have, after exhausting every other attempt to secure a remedy, appealed to the public press in order to expose an alleged default of the Corporation to deal with a condition of nuisance which is locally believed to have been the cause of diphtheria. The place, it is stated, has been provided with sewers and sewer ventilators, and by means of these latter the air of the place is contaminated, and fatal and preventable disease is induced. Failing to get any local redress, the complainants last January laid their case before the Local Government Board, who, after an incomprehensible delay, suddenly sent down an inspector, who arrived without notice, and failed to see many of the principal persons concerned. A recommendation was then made to the effect that pipe ventilators be provided for the sewers; but after six months' interval nothing whatever has been done, and both diphtheria and scarlet fever are alleged to be still in the place. Few things are more difficult than to eliminate all sources of error due to personal communication at school and in other places, and to state decisively that diphtheria has been due to sewer emanations. But it is equally certain that unless some other cause can be assigned without risk of error, it is nothing less than culpable to leave such obvious conditions of nuisance untouched, and this for nearly a twelvemonth after the first cause of complaint arose. The Croydon Town Council seem about equally divided as to the question of nuisance from the street ventilating shafts, and between the two opposite parties Shirley is allowed to remain without a remedy. We observe that, in a letter to *The Times* of the 17th inst., the chairman and vice-chairman of the Sanitary Committee of the Croydon Town Council aver that "the general health of Shirley is exceedingly good," and that the sewers of the district are not more offensive than those of places where the population is sparse and the quantity of liquid flowing down the sewers is comparatively small.

UNDERSELLING PRACTITIONERS.

IT is lamentable to think that the feelings, if not the circumstances, of medical men in some places have sunk so low that they underbid for appointments. A provincial newspaper contains reports of two instances. We fondly hope that there is some inaccuracy in the statement. In one case there was keen competition between two medical men. When one was appointed club doctor, it was decided that he should receive 3*s.* per annum per member—i.e., 2*s.* a year less than should be paid to club surgeons. But "last week," says our contemporary, "an offer was made to do the work at a cheaper rate—viz., 2*s.*!" In the other instance, the services of a gentleman as medical officer of health were required by the Local Board. The appointment was advertised at a salary of £20 a year. The feeling in favour of the resident gentleman was well known. But a tempting offer was sent in to take the duties for £6! To the credit of the Local Board, they resisted this temptation. We are glad that the names of the places and the persons are not given. But, speaking impersonally, we cannot too strongly express our surprise and regret that any medical man can be found so little alive to the dignity of his profession and the value of his own services as to offer the latter on terms lower than those offered, and for appointments already held by another medical practitioner. Very little different is the conduct of the new practitioner in a district who, by lowering fees to catch patients who can pay higher fees, brings himself and his profession at once into disrespect. Our contemporary says that if this competition among doctors could be extended, doctors' bills would be substantially less. Perhaps so. It does not follow that justice would be done to a liberal profession, or that, in the long run, the public would be better served.

FEVER IN LONDON.

THE trifling decline in the prevalence of scarlet fever, on which we commented in our last issue, has become more pronounced, and during the week ending November 11th 228 cases of this disease were admitted into the Metropolitan Asylums Board hospitals, the number during the preceding week being 265. Scarlet fever is therefore behaving during the present year much as it has done in past years, and we may reckon on the decline being maintained during November and emphasised during December. Already the admissions during the present week have shown that the fall is not merely temporary. Of other diseases, twenty-seven fresh cases of enteric fever were admitted into these hospitals during last week, and one case of small-pox was received, the patient previously living in the parish of St. George-in-the-East. Two patients not suffering from infectious fever were also removed to the hospitals.

FIRES IN HOSPITALS.

PUBLIC attention has recently been directed to the especial horrors which must attend an outburst of fire in a hospital. The terrors of fire breaking out among a bedridden population cannot be over-painted, and it certainly is the duty of the governors of the great medical charities to see that all reasonable precautions are taken for dealing with an outbreak of fire. We have reason to know that in some of our hospitals considerable expense has been incurred in providing buckets, hose, water cocks, fire cisterns, and printed regulations, which are displayed throughout the building. It is difficult to see what more can be done, except in construction with fireproof materials; but as most of the hospitals have not funds enough to adequately pay their way, it seems futile to tell the managing bodies to rebuild. The risk of fire in hospitals is not so great as it is in some other buildings: first, because none of the work carried on in a hospital involves any special danger in this respect; and secondly, because, as a rule, there are nurses and attendants on the alert in nearly every part of the building at all hours of the day and night, and it is not likely that a fire could make much headway without discovery. Nevertheless the danger is undeniable, and it is well to draw attention to it now that winter is fairly with us. There is always some extra risk during the "Christmas entertainments" which it is now the fashion to give annually in many of our hospitals. Most of these entertainments involve extra lights, the transport of lamps, and not unfrequently the illumination of combustible Christmas trees; and it has always been a question with us whether, considering the undoubted risk which they involve, these entertainments

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should be permitted in the main building of a hospital. We have no wish to deprive those who unfortunately spend Christmas in hospital of such comfort and happiness as the season may bring, but we feel bound to say that, unless such entertainments can be given without risk, the authorities who have control of the hospitals would do well to limit the Christmas bounty to the distribution of gifts &c. In the construction of a hospital, escape in case of fire should ever be present to the architect's mind. The main thing seems to us to be the provision of sufficient staircases, so that from all parts of the building the patients may have a choice of staircases, which, of course, must be wide enough to allow a bedridden person to be carried down. Many of our hospitals are somewhat antiquated in design, and might doubtless be improved by rebuilding, but that is a matter which rests with the public, from whom the necessary funds must come. The governing bodies cannot be blamed if, without funds for building, they have to make the best of possibly imperfect edifices.

BIRMINGHAM AS THE SEAT OF A UNIVERSITY.

FOLLOWING an elaborate paper by the Rev. Dr. Crosskey at the Philosophical Society, and a discussion on the same introduced by Professor Haycraft, a paper was read by Mr. James Heath, M.A., at the University Graduates' Club, on the 15th inst. The medical element in the scheme is an important one, and closely affects the existing institutions of the Queen's and Mason Colleges. It is to be hoped that the subject will be pursued, and that, if it is to be carried out, some means will be adopted to remove the greater objections, which appear to be mainly of a financial kind. The formation of a degree-giving body should not be the only aim—already numbers of these are present—but the consolidation of existing institutions for the purposes of higher educational requirements, technical and otherwise.

A SCARLATINA CURVE.

IN his last number of the Sanitary Chronicles for Marylebone, Mr. Wynter Blyth gives a diagram based on the statistics of the past thirty years for England and Wales, showing how scarlatina is influenced by season. The deaths are shown to be at their lowest ebb at the end of February and the beginning of March; after this they rise, the increase being rapid during May and June, and then more gradual up to the middle of October, when a steady fall commences. The fall increases rapidly in December; it is sudden during January, and continues until the minimum fatality is again reached soon after the close of February. Every epidemic does not necessarily follow this course; but there are grounds for assuming that our metropolitan prevalence will, in all probability, be governed by much the same influences as those which are indicated in the curve referred to.

GLASSBLOWERS' SYPHILIS.

PROFESSOR E. DE SMET of Brussels, in lecturing on a case of syphilis occurring in the mouth of a glassblower, referred to several epidemics which have been reported as having occurred amongst artisans of this description, and remarked that only two plans for preventing these outbreaks had been devised—viz., giving a separate movable mouthpiece to each man and instituting frequent rigorous periodical inspections of the persons of the *employés*. The first plan is always declared by the workmen to be impracticable from the loss of time which it would occasion by fitting the different mouthpieces on the tubes. The second would of course be resisted by the men, but he thinks their objections could be overcome by showing them the danger to themselves and their families of the present system.

THE HEALTH OF THE CROWN PRINCE.

IN another column will be found an article by Sir Morell Mackenzie on the case of his Imperial Highness the Crown Prince of Germany from the time of his visit to England till his arrival at San Remo. In the report, which is published by the wish of the illustrious sufferer, Sir Morell briefly recapitulates the salient points in the Prince's illness, and states that the extension of the fresh growth since it was first seen has always been upwards. During the last visit of the English laryngologist to San Remo a complete view of the new formation at the lower part of the larynx was for some days rendered impossible by the intense œdema of the mucous membrane, which, in Sir Morell's opinion, was due to limited perichondritis, probably set up by the growths which have been formed from time to time in the larynx. It is the opinion of Sir Morell Mackenzie that, although the nature of the growth which has lately appeared has not been determined by microscopic examination, it presents every appearance of cancer.

THE OBSTETRICAL SOCIETY.

ON Wednesday next, the 23rd, the meeting of this Society will be devoted to the discussion of the subject of Extra-uterine Gestation. Papers will be read by Dr. Herman, Dr. Champneys, and Dr. John Williams. By an error this meeting was put down in our diary last week for the 16th.

STATESMAN AND OPERATING SURGEON.

DR. ZALDIVAR, formerly President of a South American Republic, is now on a visit to Spain. Though considerably occupied with political matters, he finds time to pay attention to those connected with his original profession—that of medicine. Having specially devoted his attention to ophthalmic surgery, he was invited by Dr. Osio to operate in his clinic. The ex-president performed an iridectomy and operations for cataract, pterygium, and several other affections of the eye, in the presence of many of the heads of the profession in Madrid. All were afterwards entertained at a brilliant luncheon by Dr. Osio.

RELATIONS OF HOSPITALS AND DISPENSARIES.

WE direct the special attention of our readers to the Conference to be held on Nov. 22nd, at the Society of Arts, 18, John-street, Adelphi, to discuss recommendations framed by the Medical Attendance Organisation Committee. Sir Spencer Wells will preside. All interested in hospitals and dispensaries and the difficult questions connected with medical attendance on the wage-earning classes should attend.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Ignaz Havas, formerly Dean of the Medical Faculty of Buda-Pesth, at the age of eighty-five.—Dr. Mering, Professor of Special Pathology in Kieff.

A JUST JUDGE ON PATENT MEDICINES.

MR. JUSTICE KAY, in the Chancery Division, in the case of C. A. Vogeler and Co. *v.* Middleton, was asked to restrain the defendants from advertising and selling an oil as St. Joseph's Oil, as being an infringement of the plaintiff's trade mark, and calculated to deceive the public. Mr. Justice Kay said that both the plaintiffs and defendants were vendors of quack medicines which were largely advertised to heal all manner of external injuries. He declined to rule that the

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use of any saint's name in the calendar was an infringement of the plaintiff's trade mark. But lest either party should use his judgment as an advertisement, he hoped they would add that no one should employ either preparation except under medical advice. The judge's counsel is excellent. It is too much to expect that the parties to the suit will publish it. But we gladly give it publicity and praise.

CHOLERA NEWS.

ACCORDING to a telegraphic communication, a few cases of cholera still occur at Messina. Malta is now stated to be entirely free from the disease; and clean bills of health have been issued. If this is strictly correct, the final disappearance of the disease from the island must have been rather sudden. On the other hand, the South American continent, which is in such free communication with Italy for purposes of emigration, is again attacked, cholera having appeared in Santiago. Last winter the disease prevailed widely in and about this and other Chilian ports.

WARWICK JOINT BOARD HOSPITAL.

WE are glad to record that, after many difficulties and delays, the Warwick, Leamington, and other sanitary authorities included within the area of the Warwick Union have at last laid the foundation stone of their new hospital for infectious diseases. The hospital is conveniently situated for the more populous localities needing it; and, since it is being erected from the designs of Mr. Keith D. Young, who has had such exceptional experience as regards these buildings, there can be but little doubt that it will be well adapted to the requirements of the district.

FOREIGN UNIVERSITY INTELLIGENCE.

Bordeaux.—The session which is just commencing has already seen the inauguration of the new buildings, amongst which the Anatomical Institute is especially worthy of note; indeed, it has been enthusiastically declared to be the "first anatomical institute in the world."

Buda-Pesth.—Professor Wagner having resigned the chair of Medicine, the post is advertised as open to competition. The stipend is 2500 gulden with a lodging allowance of 400 gulden, a total of less than £300 per annum.

Helsingfors.—This Russian university being in Finland is under different regulations from the others. The language in which instruction is given is neither Russian nor Finnish, but Swedish, so that the scientific work which emanates from Helsingfors finds its way into Scandinavian rather than into Russian medical journals. There are at present 974 students, including 8 women, in the university. Of these only 77 belong to the medical faculty.

Lille.—The Faculties of Law and Arts of Douai are to be moved to Lille, which will then have no less than nine faculties, a unique position for a French manufacturing town. The townspeople, however, are welcoming what may be looked upon as the growing up of a northern university amongst them, and are subscribing a large sum, amounting to something like £100,000, for the erection of the necessary buildings.

Madrid.—Don Francisco Criado y Aguilar, Professor, first of Hygiene and subsequently of Obstetrics, in Saragossa, has been appointed Professor of the Diseases of Children. Don Francisco de Certajarena, Assistant Professor of Surgery, has resigned his post.

Montpellier.—Bitter complaints are being made that the wishes of the Faculty concerning some questions connected with the appointment of professors have been disregarded by the Government. A desire is being expressed here, as well as in other provincial medical schools, that each Faculty should be allowed a much larger degree of autonomy without the vexatious centralisation which now exists.

Naples.—Dr. G. Nicolucci has been promoted to the Professorship of Anthropology.

Pisa.—Dr. Griffini has been appointed Professor of General Pathology.

Rome.—Dr. Antonio Ceci has been appointed Professor of Surgical Pathology.

St. Petersburg (Princess Helena Pavlovna Clinical Institute).—Dr. Anrep, formerly professor in Kharkoff, has been appointed Professor of Medical Jurisprudence. Drs. Nikitin and Tiling have been appointed *docents* in laryngology and surgery respectively.

Turin.—Dr. Pagliani has been promoted to the Professorship of Hygiene.

THE death of Sir William McArthur, which occurred suddenly, after hurrying to catch a train on the Metropolitan Railway on Wednesday morning last, should not be allowed to pass unnoticed by us. Amidst his philanthropic exertions, his zealous promotion of the Metropolitan Hospital Fund during his mayoralty was most conspicuous, and the financial efficiency of the London medical charities was a subject very near his heart. His occupancy of the civic chair in 1881 was also signalised by the reception at the Mansion House of the members of the International Medical Congress held in London in that year.

FROM the report on the composition and quality of daily samples of the water supplied to London, made by Messrs. Crookes, Odling, and Tidy, to the Water Examiner appointed under the Metropolis Water Act, 1871, it appears that the supply during October was found practically identical in character with that of the preceding three months. All the samples alike from the Thames and the Lea were free from turbidity, and unexceptionable in respect to colour; while the proportion of organic matter present was but small, and very uniformly so, in the different samples examined.

A CHANGE is announced in the editorship of the *St. Petersburger Medicinische Wochenschrift*, Dr. Th. v. Schröder of St. Petersburg, taking the place of Dr. Gustav Tiling. The other members of the editorial staff, Professor E. von Wahl of Dorpat, and Dr. L. von Holst of St. Petersburg, remain unchanged.

WE regret to learn that, on account of illness, Mr. Francis Galton, the President of the Anthropological Institute, was unable to commence his course of three lectures upon "Heredity and Nurture" at the South Kensington Museum on Saturday last. The lectures have been indefinitely postponed.

THE first of a course of post-graduate lectures on Diseases of the Skin was given by Dr. R. M. Simon in the library of the Medical Institute, Birmingham, on the 15th inst. There was a large and appreciative audience, and the lecture was amply illustrated by patients, diagrams, and therapeutic preparations.

MESSRS. P. AND D. COLNAGHI AND CO. have submitted to us a fine etching of Dr. William Harvey, from the picture by Cornelius Janssen, in the collection of the College of Physicians, London. The portrait is an excellent work of art.

WE understand that the appointment of Obstetric Physician to St. Thomas's Hospital has been deferred, Dr. Gervis having agreed, at the request of his colleagues, to postpone the date of his retirement.

DR. OCTAVIUS STURGES has been appointed Assessor to the Regius Professor of Physic in Oxford University.

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THE CASE OF

HIS IMPERIAL HIGHNESS THE CROWN PRINCE OF GERMANY,

FROM THE TIME OF HIS VISIT TO ENGLAND TILL HIS ARRIVAL AT SAN REMO.

BY SIR MORELL MACKENZIE.

(*From notes supplied by* Dr. NORRIS WOLFENDEN *and* Mr. MARK HOVELL.)

AFTER the removal of the growth last summer, and the subsequent application of electro-cautery, no recurrence of the growth took place. Some general congestion of the larynx remained, and whilst His Imperial Highness was in the Isle of Wight a slight thickening of the mucous membrane on the posterior surface of the arytenoid cartilages near their base was observed by Dr. Norris Wolfenden, at that time in daily attendance on the Crown Prince. At one of my weekly visits I verified Dr. Wolfenden's report, and perceived that the thickening presented the form of a ridge, raised to the extent of about a millimetre, of yellowish colour, and extending horizontally from the outer border of one cartilage to that of the other. The action of the left vocal cord, which had been noticed in Berlin to be slightly impaired, continued in the same state. It should, perhaps, be here mentioned that soon after His Imperial Highness arrived in England a marked disposition to catarrhal inflammation of the larynx and trachea, or fugitive congestion, was observed. A rather sharp attack occurred in the Isle of Wight, and this was followed by general relaxation of the mucous membrane of both the pharynx and larynx. The congestion disappeared whilst the Crown Prince was in the Highlands, and during this period the thickening at the base of the arytenoid cartilages already described was absorbed. On the return of His Imperial Highness to London the condition of the larynx was on the whole satisfactory; the movement of the left vocal cord was much more free, and the voice strong though not quite clear, owing to a slight increase in the congestion having taken place on leaving Braemar. The Crown Prince's general health was excellent.

On Sept. 9th a slight thickening was noticed on the posterior extremity of the left vocal cord, which increased for a few days, and then gradually disappeared, being on the 18th no longer visible. For a few days previous to the development of this thickening the larynx generally had again been more congested. On Sept. 13th Dr. Evans of Paris extracted the Crown Prince's left lower second molar tooth, which was much decayed, the fangs showing the result of a considerable amount of periostitis.

On Sept. 14th an oblong thickening of the mucous membrane, about five millimetres in length and three in width, was observed by Mr. Mark Hovell nearly half an inch below the middle of the left vocal cord and parallel with its free border. Mr. Hovell states that this swelling gradually increased in size, and when seen by me on Sept. 22nd it was nearly round, and measured rather more than half a centimetre in diameter. Two days later the Crown Prince took cold, and on the following day complained of a sense of fatigue, disinclination to take food, and great sleepiness in the daytime. On examining his throat, the left ary-epiglottic fold was found to be œdematous. His temperature was 101° F. In twenty-four hours the œdema had entirely disappeared, and the temperature had become normal. Although the œdema was apparently due to cold, the possibility of its being caused by limited perichondritis was discussed at the time. The acute swelling had no apparent effect on the little thickening below the left vocal cord, *which gradually became smaller, but did not entirely disappear.*

The Crown Prince continued to enjoy good health after his arrival at Baveno, and when I left Italy everything appeared satisfactory, though slight general congestion remained, as well as the thickening referred to previously. On the evening of Oct. 17th Mr. Mark Hovell noticed a marked increase in the congestion of the larynx, both vocal cords being of a bright-red colour. During the next few days the congestion decreased, but on the 21st the hyperæmia again increased in intensity, and was more diffused. On the 27th an increase was noticed in the size of the thickened surface beneath the left vocal cord, and at the same time slight general tumefaction of the left side of the larynx appeared. During the next few days the thickened surface slightly increased, and on the 31st the surface was seen to be irregular, and in one place there was a distinct spur or projection. The next day superficial ulceration of the new formation was noticed, and the left vocal cord was seen to be slightly swollen along its free edge. On the 28th the voice of His Imperial Highness was quite clear, and, indeed, in the opinion of the Crown Princess, was perfectly natural; but since this date the Crown Prince had been much more hoarse. On Oct. 30th a slight reddish projection was noticed beneath the *right* vocal cord; this remained stationary for two or three days, then disappeared, and formed again on Nov. 5th. On Nov. 1st a slight enlargement of the left submaxillary gland was noticed, and this subsequently increased in size.

On Nov. 3rd, the new formation had further enlarged, and was now rather more than a centimetre in diameter, and raised to the extent of about four millimetres. The extension of the growth since it was first seen had always been upwards. On the morning of the 4th, a very slight œdema was noticed at the base of the left arytenoid cartilage, which disappeared in the evening, and was again present on the morning of the 5th.

On the following day I arrived and found the state of the larynx such as Mr. Hovell had described to me. On the afternoon of the 8th, intense œdema of the mucous membrane covering the left arytenoid cartilage was noticed, and in the evening the œdema involved the entire fold, which was tense and red. On Nov. 9th the patient was examined by Professor Schrötter and Dr. Krause, but owing to the œdema it was impossible to obtain a complete view of the new formation at the lower part of the larynx. On Nov. 10th the patient was again examined by the same physicians, and also by Dr. Moritz Schmidt; the œdema was already much diminished, and a good view could be obtained of the whole of the larynx.

In my opinion the œdema is due to limited perichondritis, which, in its turn, has probably been set up by the growths which have been formed from time to time in the larynx. Although the nature of the growth which has lately appeared has not been determined by microscopic examination, it presents every appearance of cancer.

The above report is published by the wish of His Imperial Highness the Crown Prince of Germany. A copy of it was sent on Monday to the *Berliner Klinische Wochenschrift.*

INJURIES DURING THE RIOTS.

BY the courtesy of the Surgical Registrars of the Middlesex, St. George's, Charing-cross, and Westminster Hospitals, and the house-surgeons of St. Thomas's and King's, we are enabled to give a few interesting particulars of injuries received during the rioting in Trafalgar-square on Sunday, the 13th. We do not pretend to give a detailed list of those injured. This would be impossible, the number being unknown; but several were treated at Bow-street by Mr. Mills, who was busily employed for some time, and others were treated in or near the Square. It will be seen that Charing-cross Hospital was most busily employed, its proximity to the seat of the disturbance being well known. At this hospital patients were attended to for the following injuries: — Shock 1, contusion of face 6, head 3, arm or hand 6, abdomen 2 (of which one was admitted for a few hours), foot 1; wounds of the scalp 40, face 2, arm 1, hand 2, finger 2, leg 1, bayonet wound of buttock 1, punctured wound over the eye 1. One was also seen for a slight burn on the neck, due to corrosive fluid thrown from a squirt. At Westminster 27 were attended to: 18 for wounds of the scalp, 2 incised wounds of the face, 2 contusions of the arms, 2 contusions of legs, 2 contusions of the abdomen (kicks from horses), 1 incised wound behind the right shoulder (policeman). At St. Thomas's Hospital from fifteen to twenty cases were treated. Of these the great majority were contused scalp wounds, chiefly

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of a superficial character, and occupying the occipital and parietal regions; two or three extended to the bone. In only one case were there two wounds on the same patient. The wounds were nearly all linear in appearance. One patient was attended for fracture of the right ulna in the lower third produced by direct violence. Only two cases were admitted, one a youth with severe concussion and fracture of left clavicle, the other a mounted policeman, who received an injury to the hip from his horse falling and rolling upon him. Both are now doing well. About fourteen casualties, some of a serious nature, were treated at the Middlesex Hospital, chiefly contused wounds of the head and upper limbs. A case of cut lip, another of cut eye, an injury to the arm, and five cases of scalp wounds were treated at King's College Hospital. At St. George's Hospital a few scalp wounds and hæmatomata of the head, and a fracture of the clavicle in an old woman who had been knocked down by the crowd, received treatment.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sheffield Urban District.—Reporting on the health of this borough during 1886, Dr. Sinclair White records a death-rate of 19·7 per 1000, which is 0·9 lower than that for any previous year as to which information is available, a circumstance which involves not only some substantial saving of life, but a corresponding higher degree of vitality in the living by lessening sickness, and hence less poverty and misery. The birth-rate is also the lowest on record. The death-rate from zymotic diseases was 2·88 per 1000, and of the deaths included there were 133 from scarlet fever, 447 from diarrhœa, and 160 from whooping-cough. Dealing with tubercular diseases, Dr. White refers to the possibility that tubercle may be communicated to man by supplying as food the flesh or milk of animals who have already developed the disease, and he considers that just as the danger from food is rendered remote by cooking, so it may be staved off by the boiling of milk. And this leads him to speak generally of the importance, in view of recent researches in bacteriology, of paying great regard to our sources of food supply. As to scarlet fever, the investigations carried out in Sheffield have not as yet tended to connect that disease with the milk service or with any bovine affection. Dealing with the question of the notification of infectious diseases, Dr. White explains that a voluntary system has been in operation since the middle of 1885, and that it has been very helpful. But he cannot say that such a system is satisfactory; its imperfections are numerous, and it breaks down at the most critical point. Lead poisoning still continues in Sheffield from the use of the Redmires water, on which Dr. White reported at length some time since, and the danger is, in his opinion, one that ought forthwith to be dealt with. The report dwells also at length on the nuisance and danger to health arising from the midden-privy system; and in discussing the remedy, prominence is given to the excellent results following on the use of the trough-closet as now constructed with automatic means of flushing. In a record of ordinary sanitary work, we find that disconnexion of house drains has been carried out in no less than 3000 houses, a piece of work that represents a most important effort in getting rid of dangers to public health. The report, like others issued by Dr. Sinclair White, is a document containing an excellent record of work done, and it bids fair to act as an incentive towards still better work in the future.

Salford Urban District.—Dr. Tatham, in his annual report for 1886, calls the attention of the sanitary authority once again to the existence of certain areas which are so wanting in health requisites as to constitute a constant source of danger and of high mortality to the borough. The sewerage in these parts is bad; the state of the Irwell is filthy; the removal of night soil is most objectionably carried out; and the private slaughter-houses constitute a nuisance. On one point Dr. Tatham speaks most emphatically: he declares that until the midden system shall have been entirely and permanently banished from the borough the public health there will never be finally satisfactory. The action of the Manchester and Salford Sanitary Association, and the labours of the ladies and mission women connected with it, receive a grateful recognition; and a record of the services of that body shows how much it has done to improve the conditions of life under which the people live. The annual death-rate for 1886 was 23·7 per 1000 living, and this shows that ground has been lost during the year. The excess was not due to any special disease, although diarrhœal and tubercular affections were more than usually prevalent. In dealing with typhus, Dr. Tatham calls attention to the circumstances under which that disease was imported into the borough by means of gipsies who had been attending a neighbouring fair in their vans, and he refers to the fact that these gipsies moved about in their caravans until, in the end, they could no longer be traced. The story shows strongly the need for the compilation of bye-laws under the recent Act as to the housing of the working classes &c., and for a clause definitely prohibiting the removal of any van containing infectious disease, except under the authority of the sanitary officers. Referring to the compulsory notification of infectious diseases, it is recorded that whereas prior to that system coming into force only 14 per cent. of the scarlatina deaths occurred in public institutions, since its adoption 42 per cent. have occurred in the borough fever hospital. And since the notification has been in force a material reduction has taken place in the rate of that mortality. Appended to the report is an excellent paper, to which we have before alluded, as to the principles which should be held in view by the Town Council in the erection of the new infectious hospital which is in contemplation.

Bethnal-green.—The annual death-rate for 1886 was 23·4 per 1000, which is not only in excess of that for the previous year, but much in excess of the metropolitan rate, which was 19·9. Nearly half the deaths were of children under five years of age, and of those under one year the death-rate amounted to 171 per 1000 births. Of the principal zymotic diseases there were 507 fatal attacks, the heaviest number of deaths being 162 from diarrhœa, 148 from whooping-cough, and 108 from measles. All the various diseases causing death are dealt with in groups, and the conditions leading to them are in some cases considered. The Washington Lyon steam disinfector gives satisfaction, and from Dr. Bate's account of the general sanitary proceedings it is evident that a good deal of attention is now directed to the promotion of health in this metropolitan district.

St. Pancras.—In this district the death-rate was 20·1 per 1000 last year; the deaths under one year being 15·1 per 1000 registered births. During the year 290 rooms were fumigated, and a large number of infected articles were dealt with in the disinfecting stove. Whereas the density of population for the metropolis generally was 54 persons per acre in 1881, it has now reached 90 in St. Pancras; and Dr. Sykes finds it necessary to warn the vestry of the extreme importance of retaining such open spaces about houses as can be secured. Amongst the dwellings in which air is obstructed, he refers to cellar dwellings, back-to-back houses, and enclosed dwellings; the latter term relating to some that are obstructed on all sides. As regards such description of accommodation, he recommends that action shall be taken, even if it must be deferred until the expiration of the present leases. Dealing with overcrowding, Dr. Sykes refers to 300 cubic feet as being sanctioned for day and night purposes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5872 births and 3548 deaths were registered during the week ending November 12th. The annual rate of mortality in these towns, which had been 21·5 and 21·4 per 1000, further declined last week to 20·0. During the first six weeks of the current quarter the death-rate in these towns averaged 19·7 per 1000, and was 1·0 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 9·3 in Brighton, 12·2 in Plymouth, 14·1 in Norwich, and 14·5 in Sunderland. The rates in the other towns ranged upwards to 27·0 in Preston and in Halifax, 29·6 in Oldham, and 28·3 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 464 and 466 in the preceding two weeks, declined last week to 402; they included 111 from scarlet fever, 82 from measles, 58 from

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whooping-cough, 53 from "fever" (principally enteric), 43 from diphtheria, 37 from diarrhœa, and 18 from small-pox. No death from any of these zymotic diseases was registered last week in Plymouth, Wolverhampton, or Cardiff, while they caused the highest death-rates in Salford, Bradford, and Sheffield. The greatest mortality from scarlet fever occurred in Norwich, Manchester, Bristol, Salford, Oldham, Birkenhead, and Blackburn; from measles in Derby, Blackburn, Bolton, Birmingham, and Bradford; from whooping-cough, in Birkenhead; and from "fever" in Derby and Preston. The 43 deaths from diphtheria in the twenty-eight towns included 30 in London and 2 in Manchester. Small-pox caused 17 deaths in Sheffield, and 1 in London, but not one in any of the twenty-six other large provincial towns; the 13 cases of small-pox under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease corresponded with the numbers at the end of the previous week. The number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had further increased to 2751 at the end of the week, although the number of admissions showed a decline. The deaths referred to diseases of the respiratory organs in London, which had steadily increased in the six preceding weeks from 206 to 506, declined again last week to 438, but exceeded the corrected average by 14. The causes of 76, or 2·2 per cent., of the 3548 deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Sunderland, Leicester, Portsmouth, and in six other smaller towns. The largest proportions of uncertified deaths were recorded in Preston, Sheffield, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·2 and 20·6 per 1000 in the preceding two weeks, further declined to 19·9 in the week ending Nov. 12th; this rate was 0·1 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 15·1 and 16·2 in Aberdeen and Perth, to 23·3 in Greenock and 29·1 in Paisley. The 498 deaths in the eight towns last week showed a further decline of 17 from the numbers returned in recent weeks, and included 26 which were referred to whooping-cough, 17 to scarlet fever, 10 to diphtheria, 8 to diarrhœa, 7 to measles, 6 to "fever" (typhus, enteric, or simple), and not one to small-pox; in all, 74 deaths resulted from these principal zymotic diseases, against 70 and 66 in the preceding two weeks. These 74 deaths were equal to an annual rate of 2·9 per 1000, which exceeded by 0·6 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 26 in each of the preceding two weeks, were again 26 last week, of which 9 occurred in Glasgow, 6 in Greenock, and 3 in Dundee. The deaths from scarlet fever, which had declined in the preceding four weeks from 23 to 14, rose again last week to 17, and included 7 in Dundee, 5 in Glasgow, and 2 in Greenock. The 10 deaths from diphtheria exceeded the number in any recent week, and included 7 in Glasgow and 2 in Greenock. The 8 deaths from diarrhœa, however, corresponded with the number in the previous week, and were 13 below that in the corresponding week of last year. The 6 deaths referred to "fever," of which 2 occurred in Edinburgh and 2 in Greenock, corresponded with the number returned in each of the preceding three weeks. The 7 fatal cases of measles, however, showed a slight further increase upon recent weekly numbers, and included 3 in Perth, 2 in Edinburgh, and 2 in Dundee. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had increased in the preceding five weeks from 87 to 131, declined last week to 107, and were 16 below the number returned in the corresponding week of last year. The causes of 71, or more than 14 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 32·1 and 31·0 per 1000 in the preceding two weeks, rose again to 32·1 in the week ending November 12th. During the first six weeks of the current quarter the death-rate in the city averaged 28·5 per 1000, the mean rate during the same period being but 19·0 in London and 18·2 in Edinburgh. The 217 deaths in Dublin last week showed an increase of 7 upon the number in the previous week; they included 20 which were referred to scarlet fever, 10 to measles, 6 to diarrhœa, 5 to whooping-cough, 3 to "fever" (typhus, enteric, or simple), 1 to small-pox, and not one to diphtheria. Thus, the deaths resulting from these principal zymotic diseases, which had been 29, 42, and 41 in the preceding three weeks, further rose last week to 45; they were equal to an annual rate of 6·6 per 1000, the rate from the same diseases being 2·4 in London and 1·4 in Edinburgh. The fatal cases of scarlet fever, which had been 8, 11, and 19 in the previous three weeks, further rose last week to 20; the fatal cases of measles and of whooping-cough also showed an increase upon recent weekly numbers. The deaths from "fever," on the other hand, had considerably declined. Nine inquest cases and 4 deaths from violence were registered; and 51, or nearly a fourth, of the deaths registered in the city during the week were not certified.

THE SERVICES.

INDIA OFFICE.—The Queen has approved of the following promotions among the officers of the Staff Corps and Indian Military Forces made by the Governments in India:—Surgeon-Major David John McCarthy, M.D., of the Madras Medical Establishment, to be Brigade Surgeon (dated Aug. 1st, 1887); Surgeon Edward Ferrand and Surgeon Francis Hoskins Pedroza, of the Madras Medical Establishment, to be Surgeons-Major (dated Sept. 30th, 1887). The Queen has approved of the retirement from the Service of the undermentioned officers of the Indian Military Forces:—Deputy Surgeon-General Lewis Stanhope Bruce, of the Bombay Medical Establishment (dated Sept. 15th, 1887), and Brigade Surgeon Charles Edwin Raddock, of the Bengal Medical Establishment (dated Aug. 6th, 1887). The Queen has approved of the undermentioned Officers being granted a step of honorary rank on retirement:—Deputy Surgeon-General Henry Walter Bellew, C.S.I., of the Bengal Medical Establishment (dated Nov. 14th, 1886), and Deputy Surgeon-General Lewis Stanhope Bruce, of the Bombay Medical Establishment (dated Sept. 15th, 1887), to be Surgeons-General; Brigade Surgeon C. E. Raddock, of the Bengal Medical Establishment (dated Aug. 6th, 1887), to be Deputy Surgeon-General; and Surgeon-Major William Nolan, M.D., of the Bombay Medical Establishment (dated Sept. 24th, 1887), to be Brigade Surgeon.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon A. Gorham, to the *Téméraire;* Staff-Surgeon W. P. M'Boyle, to the *Shannon;* Staff Surgeon A. Patterson, to the *Victor Emmanuel;* Staff Surgeon W. F. Spencer, to the *Ajax;* Surgeon J. F. Kellard, to the *Mutine;* Surgeon J. M. France, to the *Shannon;* Surgeon J. Crowley, to the *Urgent;* Surgeon G. T. Brostch, to the *Excellent;* Surgeon E. H. Menden, to the *Téméraire;* Surgeon J. W. O. Underhill, to the *Assistance;* Surgeon H. L. Crocker, to the *Carysfort;* Surgeon B. C. E. F. Gunn, to the Chatham Hospital; Surgeon E. J. Fogerty, to the *Cruiser;* Surgeon J. S. Jackson, to the Walmes Depôt of Royal Marines; Fleet Surgeon Frederick M'Clement, to the *Dreadnought;* Fleet Surgeon Wm. B. Wadsworth, to the *Northumberland;* Staff Surgeon Joseph Wood, M.D., to the *Agamemnon;* Staff Surgeon Chas. L. Vasey, to the *Active;* Surgeon Alexander G. P. Gipps to the *Dreadnought;* Surgeon F. M. Puddicombe, to the *Agamemnon;* Surgeon A. J. J. Johnston, to the *Asia;* and Surgeons Robert M'Ivor and Horace Elliott, to the *Northumberland.*

RIFLE VOLUNTEERS.—1st Ayrshire: John Moyes, M.D., to be Acting Surgeon (dated Nov. 12th, 1887).—18th Middlesex: Acting Surgeon J. E. Lane resigns his appointment (dated Nov. 12th, 1887).

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.—The autumn general meeting will be held at 49, Berners-street, Oxford-street, on Wednesday next, the 23rd inst. The chair, to be taken at 5 P.M., will be occupied by the President, Sir Thomas Crawford, K.C.B. The Council will report further proceedings with reference to the exclusion of those holding Irish medical degrees and the higher diplomas of the K.Q.C.P.I. and of the R.C.S.I. from English hospital appointments. The Association dinner will take place at the Holborn Restaurant at 7 P.M. the same evening, Sir Thomas Crawford in the chair.

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Correspondence.

"Audi alteram partem."

THE DISCUSSION ON CARDIAC MURMURS.

To the Editors of THE LANCET.

SIRS,—Permit me to correct a misunderstanding of my remarks at the Medical Society of London last Monday. I am reported to have said that I differed from Dr. Gairdner as to the mode of production of the murmur which is pathognomonic of mitral stenosis. I wished to assert, on the other hand, that I entirely agreed with Dr. Gairdner's explanation of the cause of the murmur. My valued friend knows this full well, for I have had the advantage of his co-operation in examining patients manifesting the murmur in my wards in the London Hospital. Our only difference, as I tried to make clear at the Medical Society, is on the point of nomenclature. I object to the term "auricular-systolic" as applied to the murmur, because it seems to define that the systole of the auricle is *alone* the cause of the sound, whereas we are agreed that this may be produced anteriorly to the auricular contraction. I prefer the term "presystolic," because I could connote by this a murmur commencing not with but after the second sound, and occupying the whole or any part of the long pause until the succeeding first sound. I am, Sirs, yours truly,

A. ERNEST SANSOM, M.D.

Harley-street, Cavendish-square, W., Nov. 13th, 1887.

"IS CANCER CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—In 1864, when practising in Nottinghamshire, I was consulted by a labouring man, in middle life, suffering from extensive epithelioma of the lower lip, which eventually caused his death. He always attributed the cause of his complaint to drinking daily out of the same vessel as his father, who died a year previously from epithelioma of the lip. This, if nothing more than a coincidence, is momentarily interesting.

This is the only instance that has ever come under my notice which would support the theory of cancer being contagious. I am, Sirs, yours truly,

Manchester, Nov. 12th, 1887. WALTER WHITEHEAD.

"HEMIPLEGIA DURING THE PUERPERIUM."

To the Editors of THE LANCET.

SIRS,—After reading the interesting case by Dr. S. Sloan in THE LANCET of Oct. 1st, I looked over my scribbling note-book, and found the following note, which you may think might interest your readers:—

Mrs. F—— was delivered by a nurse. The delivery was natural and easy, notwithstanding that ten days previously she had a row, and, I heard, a stand-up fight with one of her female neighbours. The child dying suddenly on the fourth day brings me on the scene with a coroner's order to report on the probable cause of death, which was from natural causes. There was nothing out of the way to draw my attention to the mother, but three days after I am asked to see her, and find her in a semi-conscious state, her hand to her head complaining of pain, bosom swollen and hard, bowels costive, lochia flowing. Under ordinary treatment these symptoms cleared up; but on my usual visit on the seventh morning, I again find her semi-conscious, her mouth drawn to the right side, her left arm and leg quite paralysed, and no control over either bladder or bowel. Here my note ends, for soon afterwards she was removed to the workhouse, and I know after some months she returned home able to do her household duties. Her previous history is this: Always subject to epileptic fits; this was her second child; no fits either during or after labour; parents never "very clever." In this case you will see the hemiplegic symptoms did not show themselves until the fourteenth day after confinement. As to her heart, I believe that was and is quite healthy.

I am, Sirs, yours truly,

Ashburton, Devon, Nov. 9th, 1887. WILLIAM FRASER, M.B.

SCARLET FEVER; SECOND ATTACK.

To the Editors of THE LANCET.

SIRS,—On October 10th I sent a child to the Fever Hospital with scarlatina, well-marked symptoms, sore throat, and scarlet efflorescence on wrists. The patient was returned from the hospital as cured a few days ago, and on Nov. 6th I was called to see the patient, who, I found, was suffering from a second attack, and consequently I had to order the patient to be sent to the hospital a second time, which I should consider rather an unusual occurrence. If you consider it to be so, perhaps you would insert this in your valuable journal. I am, Sirs, yours truly,

Nov. 8th, 1887. M.R.C.S.

*** Such cases as the above are undoubtedly rare. In THE LANCET of July 21st, 1883, a somewhat similar case was reported as occurring in the Leeds Fever Hospital, under the care of Dr. Barrs.—ED. L.

THE PROFESSION AS A CALLING *v.* QUACKERY. THE CORPORATIONS AS GUARDIANS OF PROFESSIONAL INTERESTS.

To the Editors of THE LANCET.

SIRS,—It is with wonder that I read from week to week, in your valuable journal, the numbers of men entering the medical profession or commencing their studies, lectures, hospital practice, &c., at the various schools. I ask myself, Have these men well considered what they are doing? Have they sat down and counted the cost of time, study, and pecuniary outlay? If so, for what? I am a general practitioner, with an average income from my practice. I am an M.D. of a university; this gives a status if you have money. I am a surgeon; a "bone-setter" near me gets larger fees and better income. I am an apothecary; a chemist close by visits and prescribes. It may be thought by these young men that the universities, colleges, or examining boards, who derive large incomes from fees &c., will protect their rights, interests, &c. I never heard of their so doing. I therefore say to these men, Think twice before you endeavour to enter the profession for a living, when you can practise with equal success as a quack, without the expenditure of your capital, time, and brains. Such is the advice of one who is looked upon as a well-to-do, successful REGISTERED PRACTITIONER.

November, 1887.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

TYNEMOUTH INFIRMARY.

AT a meeting to promote the erection of a hospital for the borough of Tynemouth, and presided over by Mr. H. S. Donkin, M.P., it was mentioned that the project was in a fair way of being realised, but that £1000 were still wanted to complete the erection. The chairman mentioned that a gentleman in the borough had promised him £250 of the amount provided the balance was raised in six months. Before separating the meeting pledged itself to raise the necessary sum within six months.

YOUNG CHILDREN IN A WORKHOUSE.

At a late meeting of the Auckland guardians, co. Durham, the very large number of young children in the workhouse was commented upon. A guardian had counted nineteen children in arms, and thought they should, as guardians, prevent the workhouse being turned into a lying-in hospital.

A SHIELDS BATHER'S RECORD.

Mr. Joseph Pollard, swimming master, South Shields, has completed ten years of sea bathing. With the exception of forty mornings, he has bathed continuously. The actual number of dips for the ten years was 3612, and in walking to and from the seaside for these baths Mr. Pollard has travelled 6772½ miles. The omissions were caused by illness, brought on by Mr. Pollard's attempt to swim from New-

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castle to Shields, in August, 1884. Mr. Pollard still continues his bathing, and although well advanced in years he is in excellent health.

DEATH OF MR. WILLIAM CARR AND DR. J. C. MURRAY, LATE OF NEWCASTLE.

I regret to notice the rather sudden death of Mr. William Carr, M.R.C.S., of this city, which took place on Nov. 7th. He was in his seventy-sixth year, and was one of our oldest general practitioners. He was a pupil of the late Sir John Fife, and had been in active practice in Newcastle for half a century. He was a widower, and had also the misfortune to lose two sons by death, who were fully qualified and assisted him in his practice, which at one time was an important one, but of late years he mostly restricted his services to his old friends who remained as patients. Mr. Carr has left one daughter as his sole survivor. He was very active when in good health, and did a large amount of work outside his profession as churchwarden &c. He also contested a vacant coronership with much spirit a few years ago, and, although not successful, he earned the gratitude of the profession, for it is well understood that it was the principle rather than the emoluments of the office he fought for. Mr. Carr's health had been evidently failing for some time, but he got about up to the day of his death. I saw him on that day in the forenoon at the Exchange News Rooms. Soon afterwards, it appeared, he was taken ill in the streets, and, hailing a hansom, was driven home, where he was enabled with help to recline on a sofa. His neighbours, Drs. Embleton and Stainthorpe, were speedily on the spot, but found that their friend had passed away from syncope.—Dr. John Cass Murray, who had been many years in practice in Newcastle, also died last week at Stranraer, where he had retired from active practice a few years ago owing to failure of health. Dr. Murray was one of the founders of the Chest Hospital in this city; he was a ready writer, and, as well as being a regular contributor to the medical journals, he published a very successful *brochure* on the Use and Abuse of Tobacco, which has had a large sale, and was very favourably reviewed by the medical journals as a treatise; but his views as to the advantages of tobacco in chest diseases were peculiar, and will hardly be adopted by the profession. Dr. Murray, who was in his fifty-fifth year, has left a widow and grown-up family of four daughters and one son.

Testimonials of respect have been given by friends and patients to Drs. Rennie of Cullercoats and Paxton of Norham. The latter received a jubilee gift, having practised in Norham for a period of fifty years.

Newcastle-on-Tyne, Nov. 15th.

EDINBURGH.

(From our own Correspondent.)

HEALTH SOCIETY LECTURES.

THE first of the annual series of Health Lectures for the People was delivered by Dr. T. S. Clouston last Saturday night. Taking as his subject, "How pleasant Surroundings and Conditions affect Health and Happiness," the lecturer stated, and illustrated by a series of striking instances, the general principle, that whatever outward conditions contribute to growth, strength, and perfection of structure, and promote normal function, tend directly to the production of conscious happiness or to the maintenance of a condition of calm equilibrium, which he terms "organic satisfaction." Using this statement of physiological principles as a text, Dr. Clouston preached an admirable and lucid lay sermon on the gladdening and health-giving powers of sweetness and light; nor was the opposite side of the picture left unpainted, for he describes in realistic colours the sort of life that exists in some of the "dark places of the earth." That tendency of human nature which in pleasant surroundings found its expression in innocent gaiety and enjoyment, was identical with that which, in an opposite environment, was the direct cause of indiscretion and excess, with all their train of crime and misery. Alluding to the law of heredity, he showed how the effects of these gloomy surroundings were implanted in the brain before the child was actually conscious of their objective existence, and he gave an ominous warning of what the effect must be when this is continued generation after generation. In concluding his lecture, which was listened to with marked attention by a large audience of the general public, he drew attention to the good done by open spaces, recreation grounds for various forms of exercise and pastimes, and the importance of making schools, hospitals, and other public buildings as bright and cheerful as may be. While acknowledging that much good has been done in these directions, he urged that with increased knowledge of the importance of such reforms, increased efforts should be made on all hands for their accomplishment.

Edinburgh, Nov. 15th.

DUBLIN.

(From our own Correspondent.)

M'GOVERN'S ALLEGED CURE FOR HYDROPHOBIA.

A CONSIDERABLE number of people believe in the efficacy of M'Govern's treatment, while, on the other hand, those sceptical as to the invariably successful result of the cases treated by this method are not few in number. One of the latter (Dr. Thompson of Omagh), in order to test the matter has recently offered a sum of £50 to anyone who can prove an authentic cure by M'Govern; but up to the present no attempt has been made to claim the money.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The Council will, at a meeting to be held on Thursday, the 17th inst., elect one additional examiner in Pathology, and one additional examiner in Ophthalmic and Aural Surgery, to examine candidates for the conjoint diplomas of the College and the Apothecaries' Hall.

THE COLLEGE OF SURGEONS AND THE APOTHECARIES' HALL CONJOINT SCHEME.

The examinations under this scheme have been unavoidably postponed in consequence of the action of the College of Physicians, who last week lodged a *caveat* against the scheme.

THE DUBLIN MEETING OF THE BRITISH MEDICAL ASSOCIATION.

A sum of £66 3*s.* 10*d.* (including interest allowed by the bank) having been left over all expenses incurred at the recent meeting of the British Medical Association in Dublin, a meeting of the subscribers to the Reception Fund was held last week in order to dispose of the amount. After some discussion the following resolution, proposed by the Registrar-General and seconded by Sir William Stokes, was unanimously adopted:—"That the surplus should be applied to procure a portrait of Dr. Banks, the President of the Association, to be hung in the hall of the King and Queen's College of Physicians, as a memorial of the Dublin meeting of the British Medical Association in 1887, and of the able, courteous, and efficient manner in which he presided over the meeting." A committee has been appointed to make all necessary arrangements in furtherance of the resolution. At the same meeting a vote of thanks was passed by acclamation to Dr. Duffey for the able manner in which he acted as general secretary during the meeting of the Association in Dublin.

HEALTH OF IRELAND FOR SEPTEMBER QUARTER.

The birth-rate for the quarter was 0·1 over the average rate for the corresponding quarter of the past five years, and 0·3 above the rate for the third quarter of 1886. The deaths exceeded those registered in the September quarter of last year to the extent of 1141. Compared with the returns of pauperism furnished by the Local Government Board for the corresponding quarter of 1886, there is a slight increase in the average number of workhouse inmates on Saturdays during the quarter, but a decrease of 6196 in the average number of persons on out-door relief. The Registrars report the presence of the following diseases in their respective districts—viz., small-pox in 3 districts, measles in 37, German measles (rötheln) in 4, scarlatina in 40, whooping-cough in 46, diphtheria in 10, and fever in 43.

SMALL-POX IN DUBLIN.

Sir Charles Cameron, Medical Superintendent Officer of Health, has reported that five cases of small-pox have

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occurred lately in Dublin, and in the same district. Brief details of the outbreak are as follows: The first case was that of a girl, who probably received the infection from a sailor, who lodged in the same house, and who had suffered from an eruption. The second was an infant, who had been nursed by the girl above mentioned. Both these cases were admitted to hospital, the infant dying on Nov. 12th. On the 11th inst. a girl sickened with the disease, and two days afterwards a woman was taken ill with it. A fifth case is that of a girl, who is at present under treatment in her own home; and, as she resides in a house occupied by only one family, she cannot forcibly be removed to hospital. It appears that this last case has been going on since Nov. 3rd; yet no report was made of it to the sanitary authority either by the medical attendant or any of the girl's family. This is a fresh illustration of the necessity for the compulsory notification of infectious diseases in Dublin. Sir Charles Cameron points out that the last epidemic of small-pox in Dublin, which caused 2000 deaths, originated in circumstances resembling the present limited outbreak of small-pox. It is intended to issue posters without delay, recommending vaccination, avoidance of contact with people likely to have the contagion of small-pox in their clothing, and the early notification of cases of the disease to the sanitary authority.

THE ABOLITION OF NIGHT LECTURES.

The non-recognition of night lectures after a certain date by the Senate of the Royal University cannot be regarded as a subject for congratulation. As has been pointed out on more than one occasion, some of the smartest medical students in Dublin have attended night lectures — men who were engaged in business during the day, and had not any other time at their disposal. The writer of this has had considerable experience for many years of both day and night students, and can conscientiously affirm that in energy, earnestness of purpose, intelligence, and general good conduct, night students are in no way inferior to their day brethren.

COUNTY GALWAY INFIRMARY.

The Governors will appoint a resident surgeon to this institution on the 10th prox., at an annual salary of £100, with residence &c.

MERCER'S HOSPITAL, DUBLIN.

The inquiry into the charges brought against the senior surgeon, Mr. E. Stamer O'Grady, M.B., F.R.C.S.I., has been adjourned till the 28th inst.

Dublin, Nov. 15th.

PARIS.

(From our Paris Correspondent.)

HYPNOTISM IN PARIS.

THE experiments related by M. Luys some time back at the Academy of Medicine, which were reported in your columns, are repeated frequently at the Charité Hospital, and continue to draw crowds. The lecture theatre is now too small for all the *badauds* who throng to see the wonderful Gabrielle and the no less celebrated Esther, but the world at large is kept *au courant* with the performances by frequent articles in the public press. If the phenomena observed in the unfortunate creatures who are trained into a state of cunning insanity, and who, like Gabrielle, have passed nearly all their lives in hotbeds of hysteria, only were in question, it would still be profoundly humiliating for the profession in general to see the ridiculous comedy now played passed off upon the unscientific public as an advance in medicine. But matters of far wider importance are at issue. Medico-legal experts here have recently acquitted a shop-lifter because she could be hypnotised. There was auto-suggestion, and, consequently, irresponsibility. Professor Brouardel, whose position as dean of the faculty of medicine makes his utterances almost official, has discussed at length both in his lectures and in the medical press (*Gazette des Hôpitaux*) the possibility of the consummation of rape in hypnotised girls, and fully admits it; a conclusion which has been accepted by the Medico-Legal Society. By all means let us have the truth. If past experience be false, which has over and over again unmasked the trickery of these mesmerised, magnetised, or hypnotised subjects, let the question be reopened and examined dispassionately and scientifically, but let the experiments be surrounded with the necessary safeguards to make them an exact test. I for one am convinced that the action of medicine *à distance* would fail under these circumstances, and little would remain of hypnotism beyond perhaps the induction of nervous sleep. But if responsibility is in reality a delusion, and virtue no defence against lust, the sooner our prejudices in these matters are swept away the better. THE LANCET has before this exposed frauds and delusions of the kind, but never was an independent inquiry more needed than at present.

THE ACTION OF MEDICINES *à distance*.

It may be remembered that the experiments upon hysterical patients, with different medicines in sealed tubes, performed by M. Luys, and to which such a notoriety has been given by the press, were originated by MM. Bourru and Burot. The first-named gentleman has been endeavouring to obtain a repetition of these interesting phenomena before an unbelieving public, and has signally failed in the attempt. Speaking at the Société de Thérapeutique, M. Constantin Paul said that he had placed at M. Bourru's disposal a most sensitive subject, upon whom he was allowed to act without any extraneous influence. With a bottle of alcohol *uncorked*, and evidently smelt by the patient, staggering was produced. In another instance, a bottle supposed to contain cherry-laurel water produced effects usually caused by this drug, but it was discovered that the chemist had made a mistake (?), and that the bottle contained water only. Five or six other experiments gave results of the same value. M. Bucquoy said that he was afraid the Commission appointed by the Academy would throw but little light on the question. He could, however, affirm that those of his colleagues and the *internes* with whom he was acquainted were convinced that M. Luys had been imposed upon. M. Voisin, at the Medico-Psychological Society, attributed the results to suggestion. Upon applying an *empty* tube to the neck of one of his subjects, and leading her to suppose it contained alcohol, she immediately showed signs of intoxication. The characteristic effects of other drugs were produced in succession, the patient thinking they were applied, whereas the empty tube was each time substituted. Two months later the experiments were repeated, M. Voisin remarking that the patient would be able to distinguish the drugs from one another. As before, an empty bottle was used, but the therapeutic effects of the drugs were again witnessed, and *in the same order*. Further comment is unnecessary.

NAPHTHOL AS AN ANTISEPTIC.

The antiseptic properties of naphthol have been known for a long time, but owing to the supposed toxicity of this substance, its employment has been till now limited to the local treatment of certain affections of the skin. At a recent meeting of the Academy of Sciences, Professor Bouchard stated that, after two years of research, he has been able to determine and measure the antiseptic power of naphthol as well as its toxic power, and he has been led to conclude that, in certain circumstances, it is to be preferred to all the antiseptics known, owing to its very feeble solubility. To disinfect a surface easily accessible, the soluble antiseptics suffice, and the same should be employed to effect general antisepsia, but none has as yet been found that can be introduced into the blood in sufficient quantity to destroy the vitality of the microbes without compromising the health or life of the patient. To produce antisepsia in the thickness of the tissues, or in that of cavities reached with difficulty, where continued drainage cannot be practised, the insoluble antiseptics, or those only partially soluble, can alone be employed with advantage. They should be preferred for the interstitial treatment of certain maladies of the tissues, for the antisepsia of serous cavities, and particularly for the antisepsia of the digestive tube, which the author has had especially in view in his researches. The explanation on which the advantage of an insoluble antiseptic is founded is that from the fact of its insolubility it is unabsorbable; it will therefore be found present throughout the length of the digestive tube, and can be administered in sufficient quantity to render all fermentation impossible, without having to fear its general action on the economy, into which

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its insolubility would prevent its penetrating. It was for these reasons that Professor Bouchard preferred the salicylate of bismuth and iodoform; and Rossbach also, when he employed naphthol for intestinal antisepsia. After having tested the antiseptic property of naphthol in certain microbian maladies, Dr. Bouchard found that in a solution of 33 centigrammes to one litre of diluted alcohol the naphthol very much retarded the development of the bacillus of typhoid fever, as well as the germination of the bacillus of tuberculosis. Urine, shaken up with naphthol in powder, then filtered and exposed to the air, does not ferment. According to Dr. Bouchard, the dose of naphthol which may be considered toxic for a man weighing 65 kilogrammes is about 250 grammes. Two and a half grammes of naphthol per day suffice to procure intestinal antisepsia; the author therefore concludes that the toxic power of this substance has been very much exaggerated, though there can be no doubt that a solution introduced into the organism directly through the veins would prove far more dangerous.

SULPHO-BENZOATE OF SODA IN THE DRESSING OF WOUNDS.

At a subsequent meeting of the Academy of Sciences, Dr. H. Heckle, of the Naval Hospital of Toulon, read a note on the results he obtained by the employment of the sulpho-benzoate of soda in the dressing of wounds. These results have been so satisfactory that the author considers this agent as being far superior to all the antiseptics now in vogue, without having any of the inconveniences inherent to them.

DIPHTHERIA AMONGST SOLDIERS.

Since the army surgeons brought to notice the frequency of diphtheria in the French army, particularly among cavalry regiments, Dr. Longuet has studied the subject, and in a paper read before the Academy of Medicine he has arrived at the following conclusion as to the etiology of the disease: "It is incontestable that, not only in the French army, but in the German army, the cavalry, though less numerous than the infantry, furnishes three times more cases of diphtheria. It is equally certain that at Paris, for example, the most active foci of this cruel malady are, on the one hand, the largest of the cavalry barracks, and, on the other, a hospital situated near one of the most important stables belonging to the omnibus company; and, as the cause of the malady could not be traced to the water, nor to the straw, nor yet to the horses, it appears conclusive that it must exist in the manure."

FIRE AT THE ÉCOLE PRATIQUE.

A fire broke out yesterday morning at the École Pratique de Médecine which caused considerable damage. It originated in the laboratory of Dr. Charles Richet, Professor of Physiology, by the over-heating of a gas stove. As the laboratory contained a number of different kinds of essences, these contributed in a great measure to increase the force of the fire, and the whole place was in a blaze in a few minutes, and were it not for the active assistance rendered by the firemen considerable damage might have resulted to the neighbouring buildings. By a curious coincidence, a banquet was arranged for yesterday evening by his pupils to Dr. Charles Richet, son of the eminent Professor of Clinical Surgery at the Hôtel Dieu, who had just been nominated Professor of Physiology at the Paris Faculty of Medicine.

Paris, Nov. 16th.

PROFESSOR MOLESCHOTT ON THE UNITY OF SCIENCE.

(From our Correspondent at Rome.)

THE Roman University began its winter session on the 3rd inst, with a discourse from the Professor of Physiology, Dr. James Moleschott. The great hall of the Sapienza was crowded in every part, and the lecturer was supported on the platform by a distinguished attendance of men of science, of letters, and of public affairs. On such occasions Moleschott, whether addressing a mixed audience or one composed of medical students only, never fails to acquit himself with ability and effect; and his inaugural address was so fully equal to expectation that, by general desire, it will be printed and published for the edification of circles far beyond that of academic Rome. His purpose being to demonstrate the unity of science and the harmony of its various sections, he passed in review the whole array of the *scibile*, setting in relief the reciprocal relations of its components, and leading up to the organic total or harmonious synthesis (*sintesi armonica*). This forms the science of sciences, the true philosophy of the modern time. Before it disappear the artificial classifications, the premature "systems," to give place to a chain whose "continuity" knows no "solution," and of which each individual science is but a link. Palæontology, for example, has given its hand to embryology, to weave again the evolution of living organisms, always more specialised and more complex, but springing from the unbroken series of the transformations and specialisations of organ and function. So the circle of life closes in death, in which again life, like a new Phœnix, finds the germs of another birth. The value of each science in its bearing on general progress was thereafter estimated, the palm being given to mathematics as formulating the True in the rigorous exactness of Number, while in the infinitely various multiplicity of geometrical forms it furnishes to art the eternal principles of the Beautiful. Metaphysics, he continued, created the axiom, which modern science repudiates, as she repudiates "innate ideas." But if metaphysics no longer creates the *scibile*, she gives organic form to the truths ascertained by analysis and generalises their laws, vouchsafing to science that method which is the foundation of inductive research. Besides, in metaphysics lies the basis of ethics, which, soaring to the serenity of the ideal, gives its hand to æsthetics, to form the sublime triad of Plato, the True, the Good, and the Beautiful. No man of science, continued Moleschott, can nowadays isolate himself in a specialty; each of us has need of the aid of the cognate sciences. The physician may no longer seek the causes of disease in the mere influences of the atmosphere, or in the disorders of the passions; but to-day he finds an unexpected auxiliary in botany, which reveals in the ultimate categories of vegetable life the sporules of the lowest parasitic fungi, which are the determining cause of maladies without number. Hence he prepares the human organism through hygiene to resist those enemies to health by denying them the soil in which they germinate. Proceeding to anthropology, which embraces all the manifestations of life, Moleschott dwelt on it by way of transition to the moral sciences, and to politics, which subsists on statistics, up to the social sciences, which, studying society as a living organism, prepare, step by step, the solution of the great questions in which lies the amelioration of the condition of the labouring classes. Scientific progress, concluded Moleschott, has two implacable enemies—ignorance and pessimism. But in the dark one is afraid of a statue, and pessimism has only the courage of despair. Now, "he who despairs," says the poet, "does not work." Only he who works carries in his own conscience the fruit and the guerdon of his life. Loud and continuous plaudits greeted the lecturer as he resumed his seat—the reference to the obscurantist horror of the proposed statue to Giordano Bruno (a "reformer before the reformation," who was burnt for heresy in the Campo dei Fiori) evoking rounds of cheering from the students, with whom the commemoration of Bruno originated. Moleschott, as an accomplished scholar, particularly profound in his knowledge of Dante, as a proficient physiologist, and as an able consultant, has long mastered the secret of charming a cultured audience. His discourse was a brilliant success, and cannot fail in its printed form to give equal delight to still more extended circles than that of his adopted compatriots.

PRESENTATIONS.—Dr. Blomfield, physician to the Exeter Dispensary, on resigning the house-surgeoncy of the Devon and Exeter Hospital, which he held from 1881 to 1887, has recently been presented with a silver teapot, cream-jug, and sugar-basin on an oak tray, by the nurses and servants of the hospital. The teapot bears the following inscription:—"Presented, with a sugar-basin and cream-ewer, to Arthur George Blomfield, Esq., M.D., House-Surgeon of the Devon and Exeter Hospital from 1881 to 1887, as a token of esteem, from the nurses and servants. October, 1887."—Mr. Paxton, of Norham, has been presented with an illuminated address, a carriage clock, and a purse of sovereigns by over 300 of his patients and friends, on his completion of fifty years practice in that village.

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Obituary.

JAMES GREY GLOVER, M.B., C.M.
(OF SUNDERLAND.)

GRADUATES of the University of Edinburgh of two or three years' standing will be sorry to hear of the very early death—at twenty-three—of Mr. James Grey Glover, M.B. and C.M. Edin., at Las Palmas, Grand Canary, on Nov. 9th. This feeling will not be unshared by many of the professors to whom his faithful work and bright and genial character were known. To his own family the event is fraught with a great sadness, at once mitigated and enhanced by the memory of his nature and his promise. Shortly after graduating in Edinburgh, in 1885, which he did with honours, Mr. Glover studied for some months at the London Hospital. Thereafter he took an assistantship at Barry, near Cardiff, which he had to relinquish in December of last year, on account of chest symptoms, for which he took a voyage to India, without advantage. He was distinguished in the University for his ability at play as well as work, being among the foremost at cricket, football, cycling, &c. On two occasions he rode from Edinburgh to Sunderland in one day on his bicycle, a distance of 120 miles. He was bent on trying the effects of Las Palmas, but it is only fair to say that his disease was far advanced, and his friends did not share his hopes of the results of the experiment. Mr. Glover was the second and only surviving son of Mr. Terrot Glover of Sunderland, and nephew of Dr. Glover of London.

CHARLES FRANKLIN, M.R.C.S., L.S.A.

IT was with sincere regret that the numerous friends of Mr. Charles Franklin heard of his sudden death on the 4th inst., from heart disease. This occurred at Brighton, where he had been staying for a few days in order to recruit his health. The third son of Henry Franklin, Esq., he was born in Kingston, Jamaica, on Oct. 4th, 1842, and when eight years of age came with his brother to England, and was placed under the care of the late Rev. E. Trimmer of Putney. Afterwards he went to Tonbridge School, where he was under the tuition of Dr. Welldon. He then entered as a student at Guy's Hospital, taking the M.R.C.S. in 1863, and the L.S.A. in the following year. In a few months' time he went into practice at Ingatestone, in Essex, where he remained for more than eleven years. In 1876 he entered into partnership with Dr. Wyman of Putney. After their dissolution of partnership, which took place this year, he took as partner Mr. John Gay. Although he had not enjoyed good health for some time, the sudden and fatal termination of his illness was unexpected, and the announcement of his death caused great and widespread grief in the places where he was known. Kind, sympathetic, and unsparing in his devotion to his patients, he was much beloved by them. Skilful as a practitioner, his very presence in the sick room inspired confidence, whilst his known uprightness and honourable character made him trusted even in other than medical subjects. In order to mark their appreciation of Mr. Franklin, his patients and friends propose placing a monument to his memory in Putney Cemetery.

JOHN IRVINE, M.R.C.S.

MR. JOHN IRVINE, whose death recently took place at Tarves, was born in 1807. He obtained his professional education at Aberdeen, and in 1828 became a member of the Royal College of Surgeons of England, his examiners for that diploma being John Abernethy, Sir A. Carlisle, and Sir Astley Cooper. He then commenced practice at Tarves, and for many years was one of the leading medical men in the Buchan district. He was one of the oldest members of the Aberdeen Medico-Chirurgical Society, a member of the North of Scotland Medical Association and the Garioch Medical Society, and a member of the original Spalding Club. Mr. Irvine also held a commission as Justice of the Peace, and the respect in which he was held by his medical brethren was shown eight years ago in a complimentary dinner given him on his completing his fiftieth year of practice.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At examinations recently held the following obtained the Fellowship of the College:—

William Berry, Wigan. | Patrick Joseph MacNamara.

THE annual Hospital Sunday collection was made at Bootle on the 13th inst.

AN outbreak of measles has occurred in several towns in North Wales, and the schools in many districts have been closed on account of the epidemic.

ROYAL FREE HOSPITAL.—A concert was given at this hospital on Friday last, Nov. 11th, for the amusement of the patients, under the direction of Mr. O. H. Bamberger. The entertainment was a great success from beginning to end.

THE wife of a working man residing in Birmingham gave birth on the 7th inst. to twin boys, joined together in a most remarkable manner. The infants are reported to be well, but their bodies are so connected that separation would cause instantaneous death.

FATALITY AT A FOOTBALL MATCH.—An inquest was held at St. Helens, on Nov. 15th, on the body of William Edward Taylor, who died from injuries received whilst playing football. The jury returned a verdict that deceased came by his death accidentally.

SANITARY INSTITUTE OF GREAT BRITAIN. — At an examination, held on Nov. 10th and 11th, sixty-two candidates presented themselves—eight as local surveyors, and fifty-four as inspectors of nuisances. Of the former three, and of the latter thirty-one, obtained certificates of competency.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—At a meeting to be held in the rooms of the Medical Society of London on Tuesday, Nov. 22nd, at 4 P.M., Dr. Richardson, F.R.S., will preside and deliver a short address. A paper will be read by Dr. J. J. Ridge on "Alcohol, its Substitutes and Alternatives."

THE steamer *Grosvenor* arrived off Liverpool on the 11th inst., having had fatal cholera on board during her passage from Calcutta. She was allowed to pass the Suez Canal "in strict quarantine." As the result of Dr. Stopford Taylor's inspection she was allowed to enter the dock, and no restrictions were placed on her crew.

ROYAL MEDICAL SOCIETY OF EDINBURGH. — The following have been elected office-bearers:—Presidents: W. A. Turner, M.B., C.M.; G. O. C. Mackness, B.A., M.B., C.M.; H. F. Waterhouse, M.B., C.M., M.R.C.S.; E. H. Ezzard, M.B., C.M. Secretaries: Robert Abernethy and L. A. W. Beck. Chairman of Finance Committee: A. L. Gillespie. Chairman of Library: P. B. Haig. Curator of Museum: F. D. Boyd.

SOCIETY FOR THE STUDY OF INEBRIETY.—Under the auspices of this Society two lectures will be delivered at the rooms of the Medical Society of London: the first on Nov. 23rd, by Dr. George Harley, F.R.S., on the "Action of Moderate Drinking on the Human Constitution; Alcoholic Stimulants as a Bane and Antidote in the Sick Room"; the second on Nov. 30th, by Dr. Norman Kerr, on the "Various Forms which Inebriety may assume."

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At a meeting of the members of this Association, on the 11th inst., Dr. Kenyon in the chair, Dr. Barr submitted a plan and section of a new apparatus for the abatement of smoke for factory chimneys. It showed a method of applying the steam jet automatically, and, besides efficiently abating a smoke nuisance, the appliance economised fuel. Dr. Adams read a paper on Outbreaks of Measles, Scarlatina, and Diphtheria in Runcorn. A discussion followed, in which Drs. Vacher, Hope, Welsh, and the chairman took part.

DONATIONS.—At a meeting of the weekly board of the Wolverhampton Hospital, held on Nov. 15th, the chairman (Lieut.-Colonel Thorneycroft) announced that he had received from Mr. W. F. Fryer, of London, the handsome sum of £500 as a donation toward the endowment fund of the institution. A vote of thanks was unanimously accorded to Mr. Fryer for his generous gift.—Mr. Gervas Lennox Tayler has given £50 to the Meath Hospital, Dublin.

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BEQUESTS.—The late Right Hon. Edward, first Baron de Ramsey, who died on Aug. 9th last, has bequeathed £1000 to the Huntingdon County Hospital, £200 each to the Norfolk and Norwich Hospital, the Hunstanton Convalescent Home, the Royal Hospital for Incurables, Putney, and the Hospital for Consumption, Fulham; and £100 to the Norwich Eye Infirmary.—The late Miss Mary Fothergill of Hensol Castle has bequeathed £500 to the Cardiff Infirmary.

THE HOME FOR INVALID LADIES AT SAN REMO.—Her Imperial Highness the Crown Princess of Germany lately visited the Home for Invalid Ladies at San Remo, of which institution she has been patroness for several years. Her Imperial Highness expressed herself as being much pleased with the arrangements and surroundings of the home, and made some practical and useful suggestions. Dr. Freeman of San Remo had the honour of being presented to the Princess.

FATAL ACCIDENT TO A SURGEON.—A profound sensation has been created in the town and neighbourhood of Wellingborough, Northamptonshire, by a fatal accident to Mr. Arthur D. Gripper, a young surgeon of that place, on Monday evening. About 6 P.M. two working men were going down the walk on the London road, when they met a riderless horse galloping towards the town. Suspecting that something was wrong, they made a search, and found Mr. Gripper lying by the side of the road, unconscious, but moaning. They conveyed him to a neighbouring house, and medical aid was called in. An examination showed that Mr. Gripper had sustained concussion of the brain, and, though every effort was made to save his life, he died before midnight. He had been out on his rounds when he met with his accident, but how it arose cannot be stated with certainty, though he appears to have been dragged a considerable distance with one foot in the stirrup. Deceased, who was a native of Ware, in Hertfordshire, and thirty-two years of age, came to Wellingborough about four years ago as assistant to Dr. Heygate, afterwards entering into partnership with that gentleman. He was very popular with all classes, and his untimely death has cast a gloom over the town. At the inquest on Wednesday a verdict of "Accidental death" was returned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ATTWATER, ARTHUR WILLIAM, L.R.C.P.Ed., M.R.C.S., has been reappointed Medical Officer of Health for the Whickham Urban Sanitary District.

BARST, CHAS. THEODORE UVO, L.R.C.P.Ed., L.R.C.S., has been reappointed Medical Officer of Health for the Howdon Urban Sanitary District, Northumberland.

BROWN, JOHN, L.R.C.P.Lond., L.S.A., has been reappointed Medical Officer of Health for the Bacup Urban Sanitary District.

CADDY, ARNOLD, M.R.C.S., L.R.C.P.Lond., has been appointed House-Surgeon to the North Lonsdale Hospital, Barrow-in-Furness, Lancashire, vice F. Edge, resigned.

CALDERWOOD, GEORGE, M.D.Univ.Glas., has been reappointed Medical Officer of Health for the Egremont Urban Sanitary District.

COSENS, W. BURROUGH, L.R.C.P. Lond., M.R.C.S., has been appointed House-Surgeon to the Taunton and Somerset County Hospital, vice G. W. Rigden, resigned.

FOWLER, WALTER, M.A., M.B., F.R.C.S.Eng., has been appointed Registrar and Pathologist to the Central London Throat and Ear Hospital, vice G. W. Hill, M.B., resigned.

LUSH, PERCY J. F., M.A., M.B., B.S.Oxon., M.R.C.S., has been appointed House-Surgeon to the West London Hospital.

MONTGOMERY, SAMUEL, L.R.C.P.Ed., L.R.C.S., has been reappointed Medical Officer of Health for the Ovenden Urban Sanitary District.

PATERSON, WM. BROGDON, M.B., C.M.Edin., has been appointed Medical Officer to the Beaufort-street Dispensary, Liverpool.

PIGGOTT, CECIL H., B.A., M.B., B.C. Cantab., M.R.C.S., has been appointed Medical Officer of Health for the Teignmouth Urban and Port Sanitary Districts, vice Lake resigned.

SHELSWELL, WILLIAM ARTHUR, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Hornton District of the Banbury Union, Oxfordshire, vice S. D. MacVicar, L.R.C.P.Ed., L.R.C.S.Ed., resigned.

SMITH, CHARLES CALLOW, M.B. Cantab., M.R.C.S., has been reappointed Medical Officer of Health for the Redditch Urban Sanitary District.

VON WINCKLER, WILLIAM J., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Out-patient Assistant at University College Hospital.

WINSLOW, L. S. FORBES, M.B., LL.M.Camb., D.C.L.Oxon., M.R.C.P. Lond., has been appointed Physician to the North London Hospital for Consumption and Diseases of the Chest.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary £100 per annum, increasing by £10 per annum to £150, with furnished apartments, board, and attendance.

BOSCOMBE PROVIDENT INFIRMARY, Bournemouth. — Resident Medical Officer. Salary £60 per annum, with board and residence.

BURTON-ON-TRENT INFIRMARY. — House-Surgeon. Salary £130 per annum, with a prospect of increase, and rooms, coals, and gas free.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C. House-Surgeon.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian-road, N.—Obstetric Physician to Out-patients.

HOME AND INFIRMARY FOR SICK CHILDREN, Lower Sydenham.—Second Honorary Assistant Physician.

PADDINGTON-GREEN CHILDREN'S HOSPITAL.—House-Surgeon. Salary £80 per annum, and rooms.

PARISH OF ST. LEONARD, Shoreditch. — Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary £100 per annum, increasing £10 annually to £120 per annum, with rations, furnished apartments, and washing in the Infirmary.

PEWSEY UNION.—Medical Officer for the Third District. Salary £63 Also for the Fifth District. Salary £40. For each midwifery case £1 will be paid.

ST. GEORGE, HANOVER-SQUARE, PROVIDENT DISPENSARY, Little Grosvenor-street, W.—Residedt Medical Officer. The salary and allowances last year were £235 8s.

STOCKPORT INFIRMARY.—Assistant Medical Officer. Salary £50, with board and lodging.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea.—House-Physician. Honorarium £50 per annum, and board and lodging in the hospital.

WALLASEY DISPENSARY.—House-Surgeon. Salary £120 per annum, with furnished residence, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BATTYE.—On the 12th inst., at Denbigh-street, S.W., the wife of John Howard Battye, M.D., of a son.

CHANING-PEARCE.—On the 8th inst., at Montague House, St. Lawrence-on-Sea, the wife of J. Chaning-Pearce, M.D., of a daughter.

FARNELL.—On the 13th inst., at The Goffs, Eastbourne, the wife of Henry D. Farnell, F.R.C.S., of a son.

MORRIS.—On the 9th inst., at Gordon Lodge, Charlton-road, Blackheath, S.E., the wife of Clarke Morris, M.R.C.S., L.S.A., of twin daughters.

MORSE.—On the 30th ult., at Torrington, N. Devon, the wife of Edward Morse, L.R.C.S., L.R.C.P.Ed., of a son.

POLAND.—On the 11th inst., at St. Thomas's-street, London-bridge, S.E., the wife of John Poland, F.R.C.S., of a son.

RAKE.—On the 25th ult., at Mucurapo, Trinidad, the wife of Beaven Rake, M.D.Lond., J.P., Medical Superintendent of the Trinidad Leper Asylum, of a daughter.

THOMPSON.—On the 7th inst., at Suffolk-place, Sevenoaks, the wife of Herbert Thompson, M.R.C.S., of a daughter.

TWEEDY.—On the 16th inst., at 100, Harley-street, W., the wife of John Tweedy, F.R.C.S.Eng., of a son.

MARRIAGES.

FLIGG—BORTON.—On the 8th ult., at St. George's Cathedral, Grahamstown, South Africa, by the Lord Bishop of the Diocese, assisted by the Rev. Canon Wharton B. Smith, William Fligg, M.B.Edin., son of the late Wm. Fligg, of Scarborough, to Marion Teresa, elder daughter of the late Captain Henry Martin Borton, Royal Artillery.

WALTON—BARTON.—On the 12th inst., at St. Jude's, South Kensington, Arthur Walton, M.S., M.B., to Emily, elder daughter of George Kingston Barton, M.D., F.R.C.S., of Fulbeck, Lincolnshire.

DEATHS.

CARRUTHERS.—On the 3rd inst., at Denbie House, Lockerbie, Dumfriesshire, John Hetherington Carruthers, of Denbie, late Surgeon, Royal Navy, aged 82.

FIRTH.—On the 6th inst., at St. Giles' Plain, Norwich, Eustace Firth, M.D., aged 31.

HUGMAN.—On the 15th inst., at 27, Alma-square, St. John's-wood, William Curtis Hugman, F.R.C.S., late of Guildford-street, Russell-square, after a few days' illness of inflammation of the lungs, in his 73nd year.

MORRIS.—On the 11th inst., at Gordon Lodge, Blackheath, Mabel Annie, aged 2 days, twin daughter of Clarke and Mabel Morris.

SMART.—On the 14th inst., at his residence, 6, Cecil-street, Greenheys, Robert Bath Smart, Surgeon, late of 176, Oxford-road, Manchester, aged 59.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, November 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Ferrier: Some cases in illustration of Cerebral Hemianæsthesia.—Mr. J. Knowsley Thornton: Two cases of Cholecystotomy.

Tuesday, November 22.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. J. Warrington Haward: A case of Excision of a Tubercular Movable Kidney.—Dr. Archibald E. Garrod: A Contribution to the Theory of the Nervous Origin of Rheumatoid Arthritis.

Wednesday, November 23.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Dr. Herman: On Delivery by the Vagina in Extra-uterine Pregnancy.—Dr. Champneys: On Primary Laparotomy (that is, abdominal section in the latter half of pregnancy, the child being alive) in cases of Extra-uterine Gestation.—Dr. John Williams: A case of Extra-uterine Pregnancy in which Abdominal Section was performed during the life of the Fœtus at the Thirty-fifth Week of Gestation. Specimens bearing on the above subject only will be shown.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Conversazione.

SOCIETY OF ARTS.—8 P.M. Prof. SIlvanus P. Thompson: The Mercurial Air-pump.

HUNTERIAN SOCIETY.—8 P.M. Mr. Fowler: A case of Richter's Hernia.—Dr. Savage: Proposed Lunacy Legislation as affecting Medical Men.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M.—Specimens will be shown by Drs. Edis, G. Granville Bantock, Mansell-Moullin, and others. Mr. J. Bland Sutton: The Nature of the Hymen.—Dr. E. Holland: Electrolysis of Uterine Fibroids.—Dr. Bedford Fenwick: On the Use of Bloodletting in Gynæcological Practice. Council, 8 P.M.

Thursday, November 24.

ST GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, November 25.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Gibbons and Mr. R. W. Parker: Case of Removal of Tumour from the Female Bladder by the Galvano-écraseur, Rapid Dilatation of Urethra, combined with Supra-pubic Incision.—Dr. Clemow: Case of Hysterical Hyperpyrexia.—Dr. Barlow: On a case of Acute Enlargement of the Thyroid Gland.—Mr. R. C. Lucas: The Congenital Absence of an Upper Lateral Incisor Tooth as a Forerunner of Harelip and Cleft Palate (with cases). Living Cases:—Mr. J. H. Makins: A Synovial Cyst in connexion with the Shoulder-joint.—Dr. J. B. Ball: A case of Chorea, with Embolism of a Retinal Artery.

Saturday, November 26.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 17th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Nov. 11	30·00	N.E.	43	42	65	49	42	...	Overcast
,, 12	30·21	N.E.	43	42	60	46	42	...	Overcast
,, 13	30·09	E.	42	39	...	45	38	...	Overcast
,, 14	29·73	N.E.	42	40	57	45	39	...	Overcast
,, 15	30·14	N.E.	36	34	45	39	33	...	Hazy
,, 16	30·40	N.E.	29	...	...	34	27	...	Foggy
,, 17	30·16	E.	28	...	...	35	25	...	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE Publisher is much obliged to several correspondents for calling his attention to the admission to the advertising columns of THE LANCET of an advertisement which, in so far as this journal is concerned, is of an eminently objectionable character. It was received with others from a very respectable agent in the ordinary way, and by some means escaped critical attention.

VACCINATION WITH CALF LYMPH.

WE lately referred to a case of alleged injury from the use of calf lymph. The father of a child who had been vaccinated at the Animal Vaccine Establishment had written to the *Echo* asserting that his child had suffered from a serious eruption as the result of the operation. This eruption was, however, as we stated, due not to vaccination, but to the administration of bromide of potassium; and we commented on the action of the father in addressing a letter to the public press without mentioning that he had been fully informed of the circumstance that had led to his child's illness. He now writes to us that he does not believe the rash was due to bromide of potassium, because of its limitation to the legs and arms of his child, and because of its prolonged duration. As a result of inquiry, we learn that the child was seen by a number of the medical staff of St. Thomas's Hospital, as well as by the medical officers of the Vaccine Establishment, and that no difference of opinion exists as to the nature of the eruption.

Mr. T. W. J. Allen.—1. Special assistance would be required if no more dissecting were done.—2. Yes.—3. No. They are not on the same footing.—4. Quain's or Gray's Anatomy, Foster or Landois's Physiology, Bell, Nicholson, or Huxley on Comparative Anatomy.

Mr. P. P. Griffith.—The Surgical Aid Society, Salisbury-square, or Surgical Appliance Society, Finsbury-circus.

Mr. Buss (Leominster).—Very shortly.

PHYSICAL EXERCISE FOR A HEMIPLEGIC PATIENT.

To the Editors of THE LANCET.

SIRS,—Perhaps some of your readers know of a tricycle or other machine with mechanism contrived so as to allow pedal and manual exercise for a patient suffering from slight hemiplegia? My object is to enable my patient to have open-air exercise, with the satisfaction accompanying locomotion by his own effort. The principal invalid-chair manufacturers have been communicated with without result.

I remain, Sirs, yours truly,

Aylesbury, Nov. 11th, 1887. R. HARVEY HILLIARD, M.D.

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"CHANGE OF AIR."

IN reference to a question on the above subject which appeared in our last issue, we are reminded that the matter is discussed at length in the second chapter of Dr. Lindsay's work on "The Climatic Treatment of Consumption," published by Macmillan.

T. H. S. (Plymouth).—Alchemy, according to Prof. Crum Brown, had its origin in two ancient arts, pharmacy and metallurgy. The pharmaceutical goal was the elixir of life, the "universal medicine," which, if taken *secundum artem*, ensured perfect bodily health for ever. The metallurgic goal was the philosopher's stone, a substance which if mixed with a large quantity of lead turned it into gold.

Sangrado.—Our correspondent might consult Dr. Oscar Jennings' paper on the subject, published in THE LANCET of June 25th last; also Considérations sur le Traitement de la Morphinomanie, Bulletins de l'Académie de Médecine, March, 1887.

Dr. Groom (Wisbech).—We shall be pleased to receive the abstract for consideration.

X. Y. should consult a medical practitioner.

"SEA-SICKNESS."

To the Editors of THE LANCET.

SIRS,—The subject of sea-sickness periodically appears in your correspondence columns, and remedies are recommended and theories advanced as to its causation. No doubt many of the remedies have been proved by practical experience to do good, and we are gainers by being told of them. But it is doubtful if so much can be said of the theories. No theory can be considered a satisfactory one which will not explain why sickness is not, as a rule, caused by horse riding, carriage and railway travelling, swinging, and other jolting or swaying conditions to which the body may be subjected. And a trustworthy theory must explain why custom to the sea gives immunity to sea-sickness, and why some persons never suffer from it. I would suggest yet another theory, which is absolutely useless as suggesting a means of cure or relief. To those who are sceptical as to the relief or curability of sea-sickness this uselessness may, perhaps, be in favour of the theory. It is that giddiness is produced by the unusual motion, and that sickness follows sympathetically, "the stomach sympathising with its dear friend, the brain," as a famous "grinder" used to say. Doubtless, after a time, in some cases, from much vomiting irritability of the stomach is set up, and we have those very severe cases in which the patients are brought to death's door and have to be landed at the nearest port of call to save their lives. On board ship the unusual motion which one cannot, as it were, feel a reason for, though one knows that it is caused by waves; the way in which objects that should be perpendicular are constantly moving out of the perpendicular; the heaving up and subsidence of the deck; and the rolling waters outside—all these conspire to make one giddy. Some people become sick in swings, in trains and carriages, especially with their backs to the engine or horses. The moving ground and surrounding objects in the case of the swing, the flying trees, hedges &c. in travelling—movements all the more odd when one is going backwards—tend to cause giddiness. What giddiness is physiologically, and why some people are more easily made giddy or sick, I cannot pretend to say. Many persons will become sea-sick on board a large steamer who do not suffer in a small boat, or even in a sailing ship. It is possible that the mind is better able to realise the surroundings and "the reason why" of the motion in the smaller vessels than in the huge steamer, which, apparently, ought to be immovable, but is not. No doubt, to a person whose head is beginning "to go round," the smells common to steamers may give the *coup-de-grâce* and make him sick, when otherwise he might have escaped with a feeling of giddiness and discomfort. I would therefore suggest that in the case of those who get over sea-sickness custom cures the giddiness caused by the unwonted motion; while those who never suffer from sea-sickness are endowed with unsympathetic stomachs, or are not easily made giddy. Most persons who escape sea-sickness suffer from a feeling of giddiness and discomfort for the first day on board ship. My excuse for now speaking of myself is that I am one of the lucky few who escape sea-sickness, and my immunity has been proved by many voyages. I have generally suffered from an uncomfortable giddy feeling for the first day on large ocean steamers; once in a high-sided surf boat, from which I could see nothing but sky and distant sea; in this latter case the sky and the horizon and the boat heaved up and down in a most unintelligible manner, and made me very giddy.

A not uncommon symptom among those who are going to be sea-sick is an uncomfortable feeling, or even pain, in the perineum; this I have felt in a swing. Those whose imaginations make them sea-sick on board a vessel moored in smooth water do not, I think, form evidence against this theory of giddiness, for every medical man has had equal proof of what imagination can do.

I am, Sirs, yours faithfully,

Oct. 19th, 1887. VERTIGO.

EXHIBITIONS IN EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—Allow me to supply an omission in my letter of last week. All applications relating to the examinations for these exhibitions must be sent in on or before December 1st.—Yours faithfully,

Reigate, November, 1887. C. HOLMAN, M.D., Treasurer.

A JUDGE'S RESPECT FOR MEDICAL SERVICES.

WITH reference to the want of appreciation of the value of medical men's services displayed by Belgian courts of justice a story is related by a correspondent of a Belgian medical journal of a provincial judge whose decisions were habitually in favour of patients who disputed their doctors' bills and of quacks who infringed on doctors' practices. A time came when sickness invaded the judge's house, and he was obliged to have the doctor—or, rather, a succession of doctors, for he went from one to another till he had called in nearly all the local members of the profession—constantly in the house. These all demanded a fee of ten francs at every visit. The judge's purse not being a long one, he was terribly distressed, and at last applied to an old friend who was a medical man, practising, however, at a distance. This friend made inquiries amongst his professional brethren, and found that the local medical association had passed a resolution that the judge should be taught a little more respect for medical services by being charged ten francs a visit—not, as it would seem to us in this country, a very exorbitant fee for a man in the position of a county-court judge to be expected to pay.

Surgeon J. E. Wask, M.S.—We understand that Mr. Pepper will deliver an address before the Metropolitan Branch of the British Medical Association in the early part of 1888, on "Medical Witnesses—their Duties and Remuneration"; and that this will be published in pamphlet form, with a reprint from THE LANCET of his lectures on "Practical Legal Medicine."

A Subscriber.—We cannot give our correspondent further information than that contained in our advertising columns.

F. M.—We are not aware that the article has appeared in print.

Mrs. I. White.—We are unable to accept the offer.

Dr. W. P. Watson.—We cannot exchange.

LARYNGEAL SPASM WITH ASSOCIATED NERVE SYMPTOMS.

To the Editors of THE LANCET.

SIRS,—Being somewhat at a loss to know how to continue the treatment in the undermentioned interesting case, I should esteem it a great favour if any of the readers of your valuable journal could advise me what to try, and who have found benefit, especially if permanent, to their patients, as the one I am treating is too frequently still a sufferer from these peculiar attacks.

The patient is a healthy, robust-looking woman, aged twenty-five, the mother of two children. She was married at the age of twenty, and, except for these attacks, enjoys excellent health. Since the age of sixteen she has been at varying, though frequent, intervals suddenly seized, usually after meals, with considerable difficulty in breathing, almost amounting to imminent asphyxia, this being associated with a sucking sound. At the same time urticaria rapidly developed itself, often from head to foot, with intense irritation, whilst her features are greatly distorted. She does not lose consciousness, nor altogether the power of speech. The pulse is quickened and small, the breathing being laboured and also quickened. Vomiting sometimes supervenes, giving the patient more or less speedy relief. Otherwise it generally takes, according to the severity of the attack, from twenty minutes to half an hour to recover the breathing. I have tried the following remedies with marked benefit, but still not with, as yet, any permanent relief:—Anti-dyspeptics, nux vomica, bromide of potassium, arsenic, and general tonics; and at the time of attacks ether, chloroform, hot sponges to the throat, ozone papers, and stimulants.

I am, Sirs, yours very truly,

Nov. 15th, 1887. M.B.

WATER-TIGHT CASES.

To the Editors of THE LANCET.

SIRS,—If Messrs. Mayer and Co. had taken the trouble to read the description of our "Patent Water-tight Cases," it would have saved your valuable space and our time in replying to the letter which appeared in your issue of the 12th inst. What we principally claim is not the metal grove or tongue, but the covering of porpoise hide, thereby rendering the case impervious to moisture (the groove, or tongue, is likewise covered with the same material). Messrs. Mayer and Co.'s verdict of superiority is somewhat premature. Considering they have never seen one of our cases, we fail to see how their verdict has been arrived at.

We are, Sirs, your obedient servants,

London, Nov. 15th, 1887. ARNOLD AND SONS.

STROPHANTHUS.

To the Editors of THE LANCET.

SIRS,—As specimen pods of a species of strophanthus different from that which is in general use are being offered to the medical profession and to materia medica museums, we beg to say that having on hand about 10 lb. of pods of the genuine drug as now employed in medicine we shall be happy to present a specimen for any museum of materia medica or to any medical man who may write for the same. We are also willing to supply, without charge, seed or tincture for experimental purposes to any physician or institution desiring the same.

We are, Sirs, yours very respectfully,

BURROUGHS, WELLCOME, AND CO.

Snow-hill-buildings, E.C., Nov. 10th, 1887.

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A CORONER'S INQUEST IN THE COUNTRY.

To the Editors of THE LANCET.

SIRS,—Will you kindly insert this letter in your valuable journal, showing what a farce a coroner's inquest may be, and hoping something may be done to rectify the matter by making it publicly known in the medical press, since it has failed in the daily newspapers.

On Thursday last (Nov. 4th) I was called to see J. G——, a lad of eighteen years of age, who was a farm servant. When I arrived at the farm (7 A.M.) I found the patient dead. It appears he had not felt well for some days previously, but had not sought medical advice, and he did his work as usual on Wednesday. On calling him to get up in the morning he made no response, whereupon they opened the door of his room and found him in a dying condition in bed. A messenger was sent off at once for my principal, who despatched me. An inquest was held next day, but I have not heard the verdict of the jurymen, neither did I receive any intimation from the coroner to make a post-mortem examination or to attend the inquest. I am told it is not the first case by any means that has happened in this manner, and the coroner is no doubt complimented in the way in which he cuts down the expenses. Is this justice? I enclose my card, trusting that I have not trespassed too much on your space.

Believe me, Sirs, yours sincerely,

Nov. 8th, 1887. JUSTITIA.

STRUMOUS ULCERS.

To the Editors of THE LANCET.

SIRS,—If any of the profession could suggest anything for the following case I would be much indebted to them. I have at present under my care a girl, about nineteen years of age, who is in good health, except that all round her neck, chin, and both sides of her face she has large scrofulous sores, and all the lymphatic glands of those parts are enlarged, and in many places undergoing caseous degeneration. The glands at the base of the ulcers have been scraped, and after that, under dressing of red wash, they healed. But they will not keep healed. As soon as an ulcer has healed the scar will keep all right for two days. Then a few minute yellow pustules appear here and there upon it. If these are pinched, a little unhealthy fluid escapes and dries into a scab, beneath which unhealthy ulceration rapidly goes on. If they are left alone, the pustules rapidly enlarge and burst, the fluid dries into scabs, beneath which ulceration rapidly goes on, and coalesce with others, until the whole scar is broken down again. Under proper dressing the ulcer will again heal, to again break down in the same way. This goes on week after week, and month after month, in spite of the greatest care, the most careful dressing, and the most varied treatment, both internally and externally.

I am, Sirs, faithfully yours,

November 14th, 1887. M.B.

WHAT MUSCLES ACCOUNT FOR IT?

To the Editors of THE LANCET.

SIRS,—I would like the opinion of some of your physiological readers on the following facts.

My paternal grandfather, who died at eighty-eight, had all his life the power to eject food or fluid from the stomach at will, at any time. My father, who is eighty-one, always had the same gift. So have I, who am forty-nine. When a medical student I have—stupidly, I admit—often swallowed for a wager large doses of narcotic poisons diluted in water, merely retiring for a few seconds immediately after. There is not the slightest difficulty in the act, and, of course, no nausea. I frequently wash out my stomach in the morning with two or three successive tumblerfuls of cold water, and feel fresher after it; and if at any time troubled with acidity, dilution and ejection are naturally suggested. Now, what voluntary muscles account for this? Could not physiological experiments be made on the Beaumont principle? Not that I want to go in for them; but there must be many similar cases.

I am, Sirs, yours truly,

Nov. 9th, 1887. M.D., C.M.

THE LANGMORE DEFENCE FUND.

THE Secretary of the above fund, Mr. G. Hastes, acknowledges the receipt of one guinea, sent by Surgeon-Major Stanley L. Dobie, 4th Madras Cavalry, Kamptee, India.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Coats, Glasgow; Sir J. Paget, London; Mr. W. Whitehead, Manchester; Dr. Whittle, Brighton; Mr. C. S. Rose, London; Mr. C. Mackie, Port Glasgow; Mr. T. Holmes, London; Dr. Voight, Southport; Mr. E. Clarke, London; Dr. Moir, St. Andrews; Mr. F. G. Smith, Liverpool; Dr. Lucas, Gibraltar; Mr. Wilkinson, Birkenhead; Dr. Oscar Jennings, Paris; Mr. A. E. Taylor; Dr. McCaw, Belfast; Drs. Silk and Goodhart, London; Mr. C. E. Jones, Watford; Dr. Finlayson; Dr. Groom, Wisbech; Dr. Hilliard, Aylesbury; Messrs. Burroughs and Wellcome, London; Mr. E. Casse, Bournemouth; Messrs. Barnes and Co., New York; Dr. Abraham, London; Mr. Heale; Dr. Holmes, Southam; Dr. Sansom, London; Dr. Whitla, Belfast; Mr. Borham, Fulham; Mr. Raven, Broadstairs; Dr. Cheadle, London; Dr. G. Thompson, Stapleton; Messrs. Warren, Bristol; Messrs. Tillotson and Son, Bolton; Mr. G. Kelly, London; Mr. Maw, Bradford; Mr. Van Praagh, London; Dr. Stallard, Manchester; Messrs. Faulkner and Co., Manchester; Dr. Branthwaith, Rickmansworth; Messrs. W. and A. K. Johnston, Edinburgh; Mr. Brown, Brompton; Messrs. Lee and Nightingale, Liverpool; Mr. Andrew, Stockport; Messrs. Allen and Hanburys, London; Mr. Sangster, Lambeth; Dr. Tennant, Ben Rhydding; Mr. Thomas, Pwllheli; Mr. Mercs, London; Dr. Norman Kerr, London; Mr. Lamby, Epsom; Mr. Tuye, London; Mr. Adolphe Smith, Rome; Mr. Anderson, Gipsy-road; Messrs. Drysdale and Co., Montreal; Dr. Pollock, London; Dr. Allwright; Messrs. Squire and Co., London; Mr. Ingzet, Bethnal-green; Messrs. Smith and Son, Birmingham; Mr. Buckby, Nottingham; Messrs. Reynolds and Branson, Leeds; Mr. Hartley, Thirsk; Mr. Taller; Messrs. Orridge and Co., London; Dr. Taylor, Nottingham; Messrs. Burgess and Co., London; Mr. Cox, London; Mr. Forsyth, Glasgow; Dr. T. F. Pearse, London; W.; W., Marlow; M.B.; Tinea Favosa; One of the Members' Deputation; G. P.; H. J.; A Subscriber to THE LANCET since 1868; M.D., Maidenhead.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Hills, Swansea; Mrs. Vincent, Hampstead; Dr. Prowle; Messrs. Blake and Co., Leeds; Mr. Cremonine, Auckland, N.Z.; Messrs. Isaacs and Co., London; Mr. Heap, Llskeard; Dr. Daly, Glasgow; Mr. Morris, Blackheath; Mr. Robinson, Sunderland; Mrs. Adams, St. Leonards-on-Sea; Mr. Barnet, Kennington; Mr. Miller, Lechlade; Mr. Vokes, Birmingham; Mr. Teesdale, Bossington; Mr. Hind, York; Mr. Davies, Pontypridd; Mr. Murray, Queenstown; Mr. Cuthbertson, Rhondda; Mr. Arnold, Hastings; Mr. Good, Dorchester; Messrs. Hopkinson and Co., Nottingham; Messrs. Mahomed, London; Messrs. Eason and Son, Dublin; Capt. Pead, Dulwich; Mrs. Wilson, Bristol; Dr. Ridge, Enfield; Mr. Watkins, Newport; Mr. Allsop, Shipley; Dr. Beaman, Newton-le-Willows; Messrs. Matthews, Birmingham; Dr. Thomas, Sheffield; Dr. Oscar, Bournemouth; Mr. Ware, Kensington; Mr. Hine; Dr. Martin, Bermondsey; Dr. Oswald, Clapham; Mr. Brearley, Batley; B. G. S. L.; G. E. J.; Tenax, Guildford; Medicus, Soole; House Surgeon, Bath; Medicus, Northampton; A. B. C., Wanstead; Medicus, Stow-on-the-Wold; Medicus, York; B.; A. B. C.; Surgeon, Lower Broughton; D. C., Manchester; J. C. A.; Matron, Bedford; H. A., London; Spiro; Dalston; Fides, New-cross; M.D., Kineton; X.Y.Z., King's-cross; Sphenoid, Shap; Myrtus.

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The Bowman Lecture

ON THE

RELATION OF OPHTHALMIC DISEASE TO CERTAIN NORMAL AND PATHOLOGICAL CONDITIONS OF THE SEXUAL ORGANS.

Delivered at the Ophthalmological Society, Nov. 11th, 1887,

BY HENRY POWER, M.B. LOND., F.R.C.S.

MR. PRESIDENT,—Allow me in the first place to thank you, Sir, and the Council of the Ophthalmological Society for the distinguished honour conferred upon me in entrusting to my hands the "Bowman Lecture" for the present year. No one can, I think, occupy the position I now hold without a feeling of trepidation at the task he has undertaken—the task of placing before a Society of experts the results of some of his own observations on subjects with which they are as familiar as himself, and regarding which it is as difficult to make general statements which shall not be platitudes as to adduce special cases which shall not be tedious, uninteresting, and uninstructive. With the multitude of observers in every civilised country who with the best appliances are now engaged in the practice of ophthalmic medicine and surgery, few indeed can hope to present to his brethren any anatomical description that shall compare with the short but pregnant chapters on the parts concerned in the operation on the eye by the distinguished surgeon after whom this lecture is named, any new instrument approaching in value the ophthalmoscope, any mode of treatment approximating in importance the application of cylindrical glasses for certain errors of refraction, or who can indicate and support by reference to numerous carefully collected cases the relations that exist between certain affections of the eye and such a specific constitutional disease as syphilis. I feel that I must at least be contented with a humbler *rôle*, and I have ventured to take as my theme the relations of the diseases of the eye to the normal and pathological conditions of the sexual organs—a subject which, although discussed in several monographs, is only briefly referred to in modern text-books, and yet which seems to present many points of interest.

The generative system, developed essentially from the mesoblastic layer of the embryo, remains undeveloped, with its function in abeyance, to the age of thirteen or fourteen years in girls and of fourteen or sixteen years in boys, though, of course, slow maturation of the spermatoblasts in the one sex and of the primordial ova in the other is taking place from birth to puberty. During infancy and childhood no influence of the sexual system on affections of the eye can be demonstrated, nor can any difference be shown to exist in this respect between boys and girls. After this period, however, the changes induced in the economy by the development of the sexual organs exert a powerful influence on the forms presented by ophthalmic diseases in general and give rise to marked contrasts in the affections of the eye in the two sexes. Hence it will be well to make a primary division of the subject into the relations of the sexual organs to the eye in males and females respectively, and then to follow, so far as practicable, the forms of disease which occur at different periods of life and different conditions of the system.

The influence of the sexual system upon the eye in man is far less potent, and the connexion is consequently far less easy to trace, than in woman. No doubt even moderate sexual indulgence exhausts the physical powers: "Omne animal post coitu triste est," says the old adage; and if the indulgence be extreme various troubles to which I shall presently refer are experienced; but in young unmarried and continent men the customary rare and spontaneous emissions of semen, which are the correlatives of the menstrual discharge in women, have no perceptible effect upon the general health, and far less upon the structure or function of the eye. In women, on the other hand, the sexual system, in accordance with its more complex structure, its larger bulk, and much greater nervous and vascular supply, together with its wider sympathies, is much more profound. That this circumstance did not escape the observation of the older physicians is sufficiently attested by the remark of Hippocrates—"Propter uterum mulier tota est morbus"; or that of v. Helmont—"Propter solum uterum mulier est quod est." It is, indeed, one of the arguments against the higher education of women that, with some remarkable exceptions, the normal performance of the act of menstruation tells on the economy, rendering even very strong women less capable of mental and physical exertion, owing to pain, languor, and diarrhœa; whilst the defective, excessive, or difficult and irregular discharge of the function is constantly followed by derangement of some part of the organism, and not unfrequently of the eye. And if this be true of the detachment of the unimpregnated ovum, how much deeper and more important an influence must be the effect of that great effort of the system by which a new creature is generated, nourished, and cast forth by the immensely developed pregnant uterus.

The supervention of puberty in boys is attended with rapid growth of the body in height and weight, and in some instances, though not always, with increased mental activity. I say in some instances, because not unfrequently the rapidly growing boy is dull and languid, and really requires protracted sleep—a point too much neglected by parents and schoolmasters. The practice of masturbation at this period has been considered by many observers to be a fertile source of ophthalmic trouble. The effects have been particularly discussed by Cohn,[1] Boggs,[2] Fitzgerald,[3] Mooren,[4] and Hutchinson.[5] The principal symptoms noticed by these authors are of a functional character. Thus, Cohn's cases indicated retinal irritation. They were seven in number, of whom four were boys, and the chief symptoms he noticed were photopsiæ, muscæ, and muscular asthenopia. The vision was not in any instance deteriorated; it was of normal acuteness in all. The photopsiæ that were complained of consisted in the appearance of stars, and bright, sometimes coloured, dots, rings, snowflakes, and the like, and an unpleasant dazzling. Hutchinson observed, in addition to similar symptoms, that the patients complained of stiffness and peculiar sensations about the lids. Examination with the ophthalmoscope affords little or no information. The media may be perfectly clear, and the disc, retinal vessels, retina, and choroid present no indications of disease. The symptoms seem to be essentially dependent on anæmia and nervous exhaustion, or at least upon conditions of disturbed circulation in the retina and visual centres.

Several inflammatory or subinflammatory symptoms have been noticed by different authors. Thus, Förster and Cohn both maintain that there is a connexion between persistent conjunctival inflammation and masturbation, and they adduce cases in which hyperæmia, follicular and catarrhal inflammation, and even trachomatous infiltration of the conjunctiva, resulted, or appeared to result, from the habit. The evidence on which reliance was placed that these affections were due to masturbation, was that masturbation was practised, that the inflammation was persistent and intractable under ordinary treatment, and that when the habit was discontinued the ophthalmic disease subsided and ultimately disappeared.

Both Michel and Cohn have noticed blepharospasm. They admit, however, that the evidence was not very satisfactory; for although many cases of blepharospasm occurred in which it was also stated in the notes that "excessive onanism" was practised, yet there was no evidence of improvement when the habit was given up. It must not be forgotten that blepharospasm is a common accompaniment of errors of refraction, and that any circumstance which would tend to weaken the bodily powers would intensify the symptoms arising from such defect. Moreover, there are other general states of the body which might be the efficient cause of the spasm, the exclusion of which in any given case would require a much more exhaustive examination than is given in the histories of these cases. Cohn

[1] Archives of Ophthalmology, 1883, p. 428.
[2] Galezowski's Recueil, 1881, p. 692.
[3] Transactions of the Ophthalmological Society, vol. iii., p. 178.
[4] Ophthalmic Hospital Reports, vol. xi. [5] Lecture, 1875.

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states that the subjects were mostly boys or young men from eight to twenty years of age, who appeared delicate. In most instances the spasm affected both eyes, though occasionally only one was attacked.

In the paper read before this Society by Dr. Fitzgerald, and printed in the Transactions, he has given an account of the results of masturbation in three young ladies. In one of these there was intense neuro-retinitis of one eye; in the second, with hysterical symptoms, there were at first no ophthalmoscopic signs beyond slight haziness and pallor of the optic discs, but white atrophy of both discs subsequently occurred; and the third presented hyperæmia of the disc with asthenopic symptoms. In the first case visual acuteness in the affected eye was reduced to counting fingers, but with restitution of the menses recovery rapidly followed. In the second case total blindness resulted. It will be noted that the physical lesions, as well as the impairment of vision, were greater in Dr. Fitzgerald's than in Cohn's cases, but Dr. Fitzgerald himself admits that his second case, which terminated in white atrophy, might have arisen from some other cause.

I may mention that I have seen one case of a rare disease, agoraphobia (or dread of open spaces), in a man aged thirty-two, who himself attributed it to extreme nervousness engendered by excessive masturbation in youth. He could live in comfort in towns, and was happy in crowded streets. The presence of lofty buildings removed all his anxiety, but in the country, and especially in an open plain, he was overcome with fear and apprehension, and life was a burden to him. There was in this case a considerable degree of amblyopia, vision being reduced to $\frac{1}{100}$ths. The attacks of agoraphobia were irregular in their occurrence and in their duration. He complained of seeing numerous muscæ, some bright, like diamonds, and some dark, like smuts. He was myopic, and used −4·5 D., but there was no apparent disease of the fundi.

Upon the whole, I am inclined to think the effects of masturbation have been exaggerated. No doubt when self-abuse is frequently practised—and cases are given where it was repeated several times daily—harm may result, and possibly even white atrophy of the discs be produced; but we may be sure that such cases are very rare; and it is to be remembered that the glands are active in youth, their activity being, in fact, the stimulus to the vice, whilst any injurious influence is probably first evident in loss of accommodation and the usual symptoms of accommodative and muscular asthenopia, a symptom that alarms the patient, and is likely to lead him to discontinue the habit before any permanent harm is done to the system or eye. I have found (and others, I have no doubt, have also found) that it is difficult to institute any inquiries in this direction. If the lad is young and pure-minded—and let us hope there are many such in England—one feels that it is injudicious to suggest what may be unknown; and, on the other hand, if the boy be naturally vicious, it is probable he will not hesitate to lie. In the few cases in which, from special circumstances, I have arrived at the conclusion that self-abuse was practised, or respecting which I have received some hints from parents, or have been told outright by the patient himself, no serious or permanent injury to the eye seemed to me to have resulted. The condition was rather fear of what might happen, perhaps induced by reading the pamphlets of quacks and charlatans, than that any disease had been produced. In the case of girls, I must frankly admit that it seems to me impossible to ask any questions on the subject at all, and I have not even dared to interrogate the mother. If it is difficult to institute inquiries upon this point, there is, I think, a mode of treating it which commends itself to my mind as being both simple and successful, whilst it can be equally applied to either sex. It consists in directing that on retiring to rest the arms should be kept outside the bedclothes. In cold weather a jersey may be worn. This plan, with due attention to physical exercise, the relief of constipation, and the avoidance of too great mental excitement, has, I know, been successful in some cases.

At the age of puberty, or a little later in boys, I have seen cases of hæmorrhage on the retina the cause of which was very obscure, but which I was disposed to attribute to constipation of the bowels—a condition that may itself result from masturbation. One such case I showed to the Society a year or two ago, in which no renal trouble could be discovered, yet in which there were numerous hæmorrhagic and white patches, which have yet not wholly disappeared. Through the kindness of Dr. Mackinlay I have this very day seen a case of hæmorrhage upon or in the retina, and large flocculi in the vitreous of a lad of nineteen years of age, thin and ill developed, who, whilst admitting frequent masturbation, presented good teeth, healthy urine, and general freedom from disease, whilst refraction was hypermetropic.

I do not propose to enter into any detailed account of the effects upon the eye of such morbid conditions of the sexual organs in either sex, as gonorrhœa and syphilis, since their consideration would open up a field far too wide to receive adequate treatment within the limits of an hour's lecture; but I would point out that these conditions are frequently initiated between the ages of eighteen and twenty-five, the results of such inoculation leading at first to iritis and its consequences, but often affecting that organ secondarily by inducing some slowly progressive disease, such as locomotor ataxy or some other serious nervous affection. The sad results of many of these cases constitutes one of the most cogent arguments for the re-enactment of the Contagious Diseases Acts, the abolition of which in deference to ignorant and senseless popular clamour all practitioners must deeply deplore. How beneficial they were I may be allowed to state from my own experience at Chatham, which I am sure will be endorsed by the thoroughly practical and highly intelligent house-surgeon of St. Bartholomew's Hospital, Chatham, Mr. Nankivell. When I first attended that hospital some fifteen years ago syphilitic affections of the eye were common; the Acts were passed, and for several years diseases of the eye dependent upon syphilis all but vanished; the Acts were repealed and they reappeared, and Mr. Hartridge, who now holds the post of honorary ophthalmic surgeon to that hospital, assures me they are now common.

Of the disorders of vision which are attributed by the patient of youthful or middle age to sexual excess, both legitimate and illegitimate, amblyopia, the appearance of muscæ, and loss of accommodation are the most common. Of such excesses I suppose most of us have heard revolting details enough. But occasionally more serious results may follow. I saw one case of great pallor of the optic disc in an officer home on leave from India, in whom I am inclined to think the condition of the discs, with the great impairment of vision that accompanied them, were produced by six weeks' sedulous devotion to the pleasures and vices of London life. I was assured in that case that he had led a life of perfect continence for several years in a remote country district in India, and that his vision had on his arrival in this country been perfect. In that instance vision recovered its normal sharpness when the cause of the impairment was pointed out and removed, though the discs remained pale.

The departure of sexual power is so gradual in men that it is hard to indicate any relations between its loss and ophthalmic disease. I have, however, occasionally seen cases of widowers who complained of anomalous symptoms, such as pain in and around the eyes, and confusion of vision, which they attributed, perhaps rightly, to sudden and prolonged suppression of accustomed seminal discharges. I have certainly seen cases of white atrophy of the optic discs in old men who had been indiscreet enough to marry young and prepossessing women. Perhaps previously existing disease in these cases was aggravated by the proceeding. Tissot gives a case (and others are quoted by Hoffman of an analogous kind) in which a man aged fifty-nine, three weeks after marrying a young woman, became suddenly blind, and died in four months.

Turning now to the opposite sex, it may be remarked, in the first place, that the great changes occurring in the whole system of a woman at the period of the establishment of the catamenia are not likely, as I have pointed out, to be without their influence on the eye. The experiments of Röhrig have demonstrated the effects that are obtained by electrical stimulation of the ovaries, such stimulation in the rabbit causing a rise of blood-pressure from 12 mm. to 24 mm. of mercury. And we accordingly find that several conditions of disorder or disease of the eyes are met with at this period, whilst functional disturbance of the act of menstruation is constantly a source of visual trouble. At this time, under normal and healthy conditions, the process of growth and development are more rapid and vigorous that at any other period of life. The appetite is increased; much more work is thrown upon the digestive organs; assimilation is at its height; the quantity of blood and the activity of the circulation are augmented; the excitability of the nervous

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system, as manifested by the exaltation of the emotional activity, is greatly increased; there is a tendency to local congestion of different organs before the uterus accepts its function, which is exhibited by diarrhœa, headaches, or abdominal pains, which at length culminate in and become restricted to the menstrual discharge. It is not surprising, then, that when any circumstance interferes with the institution of the function, the close and extensive plexus of the choroidal vessels becomes surcharged with blood, and that occasionally one or more of these should give way, permitting their contents to escape into the vitreous humour. In such cases the patient, after some premonitory symptoms—as headache, vertigo, fainting, inability to exert the mind,—complains of sudden impairment of vision. This is often at first slight, and either no change may be perceived with the ophthalmoscope, or the alteration may only reveal itself by some slight haziness to the observer, or by the presence of muscæ and lines or webs to the patient; but after one or two ineffective returns of the effort to menstruate, a more copious effusion may take place, rendering the media so obscure that the details of the fundus are wholly unrecognisable, a dim reflex being alone perceptible. In some cases, perhaps in most, this may clear up, and vision by degrees, and after the lapse of a considerable period, become normal; but I have seen several instances where the eye has never regained its former visual power. Cases of choroiditis analogous to those to which I have just referred may be found in many treatises, and an examination of them will show that the congestion and effusion or inflammation sometimes affects the anterior region of the choroid, sometimes the posterior; that it may be circumscribed and small in extent, or diffused, and affecting apparently the whole membrane; that it may be accompanied by actual hæmorrhage, or that there may be effusion of lymph only; and that it may terminate either in perfect recovery or with some deterioration of vision, which may be general or limited to a certain area of the field, or, lastly, in loss of vision with white atrophy of the optic disc. The effusion that takes place in these cases is probably in most instances of the nature of lymph; at least, the reflex is dark and not ruddy in tint; but now and again actual blood is poured out, and I exhibited to the members of this Society two years ago a healthy and apparently well-developed girl in whom a large clot of blood of crimson colour was visible immediately behind the lower segment of the iris. This presented the extraordinary feature that whilst undergoing little change in its form or size it retained its colour unaltered for more than a year, and only slowly disappeared by diffusing itself into the substance of the vitreous. I may just add to my former account of the case the fact that the eye now presents normal aspect, and that the vision is $\frac{6}{9}$ in the affected eye. A very similar case of hæmorrhage into the vitreous in a girl of fourteen, which took place prior to the establishment of menstruation is recorded by Oursel. M. Dor[6] also gives the case of a girl in whom the catamenia had not yet appeared, but who presented hæmorrhages in each vitreous, the blood disappearing and reappearing at intervals. When menstruation at length supervened with regularity, the hæmorrhages and the amblyopia which invariably accompanied them disappeared and did not again return. Occasional hæmorrhages into the parts surrounding the eyes occurring at a later period of life in cases of amenorrhœa and of dysmenorrhœa have been placed on record. Fritz gives a table compiled by Puech, from which it appears that in 200 cases of disturbance of the menstrual function there were ten cases of hæmorrhage from the lids and caruncle.

Amongst the affections which are believed by some observers to be associated with amenorrhœa, phlyctenular ophthalmia may first be mentioned; but it may reasonably be questioned whether it is a direct or an indirect effect of menstrual disturbance. The difficulty which leads one to reject many cases that seem at first sight to be supported by clear evidence is the difficulty by which we are so frequently confronted, the concurrence of several causes, amongst which it is difficult to select the efficient one. A woman may be amenorrhœic or may suffer from dysmenorrhœa, and the eyes may present such affections as keratitis, choroiditis, or optic neuritis; but it does not follow that either of these diseases is the direct consequence of the amenorrhœa or dysmenorrhœa. It may result from dental disease or from intestinal irritation, or may be the consequence of some affection of the nervous centres; or, as Mr. Habershon laboured to prove at our last meeting, there may be strong hereditary predisposition to ophthalmic disease, which, though latent, is ready to develop on slight provocation. A case cited by M. Oursel, which he regards as typical, is that of a young girl with a good family history, who was accustomed to suffer at her menstrual periods severe neuralgic pain in the face. At about the age of sixteen she was subjected to violent emotional excitement, and as a result suffered from amenorrhœa, with much pain, nausea, and vomiting, and phlyctenulæ appeared on one eye, and from this time forth for six months or more pustules formed at the period when the catamenia should have occurred, sometimes on the right, sometimes on the left eye. After an unusually severe attack the girl applied to M. Courserant for relief. Bitter tonics, friction of the skin, revulsives to the lower extremities, fumigations of the vagina with aromatic plants, and the administration of aloetic purges re-established the menstrual flow, and with the recurrence of this discharge the phlyctenulæ ceased to appear. This, no doubt, is a fairly typical case, and the eye symptoms may reasonably be regarded as directly connected with the amenorrhœa; still, it may just be pointed out that no mention is made of the condition of the teeth, or of the presence of irritation or disease of the intestinal mucous membrane, or of the state of the heart and other organs, though it is possible that all these may have been investigated and sources of trouble excluded.

Mooren finds diseases of the sclerotic, and especially episcleritis, to be more common in women than in men, and thinks that it is associated with menstrual disturbance. I consider episcleritis to be a rheumatic affection, and believe that it is generated by exposure to wet and cold in a state of exhaustion, and can quite believe that it is more likely to be induced, or, if present, for the symptoms to be exaggerated, when the system is enfeebled by the presence of the catamenia, but should hesitate to accept uterine disease as anything more than a predisposing cause of its occurrence.

An exceedingly interesting *résumé* of the affections of the cornea, and especially of interstitial keratitis, in regard to sex and age, has been drawn up for me by Mr. Andrew E. Wynter, from the ward books of the ophthalmic department of St. Bartholomew's Hospital. I cannot express the results better than he has done:—

Number of Cases of all kinds of Keratitis in Males and Females at different ages.

Age.	Male.	Female.	Proportional decimal.	
			Male.	Female.
— to 10	42	77	0·304	0·37
11 to 20*	37	73	0·265	0·356
21 to 40	39	39	0·28	0·19
41 to 50†	9	5	0·067	0·024
50 to —	11	11	0·08	0·053
Total	138	205		

* Menstruation commencing. † Climacteric.

The table shows that: 1. There are many more cases (205 females to 138 males) of keratitis occuring in females than males. 2. That the difference is most marked in the decade previous to and contemporaneous with the decade of commencing menstruation (150 females to 79 males). 3. That in the first decade 30 per cent. males to 37 per cent. females of the whole number occur. 4. That in the decade of commencing menstruation there is a distinct difference in the percentage of males and females; thus in males it is only 26 per cent., while in females it is 35 per cent., an increase of nearly 10 per cent., due to, or certainly contemporaneous with, the period of commencing menstruation. 5. That during the menstrual period of life (twenty to forty) there is a diminution among females compared with the same time of life in males. Thus in females 19 per cent. occur between the ages of twenty to forty years, as against 28 per cent. for the

[6] Galezowski's Recueil, 1884, p, 164.

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same period in males. 6. That at the age of the climacteric (from forty-one to fifty) there is a sudden fall in the percentage, the males being higher (6·7 per cent.), the females being 2·4 per cent. After fifty there is a rise in the number of cases in both sexes, males being still greater. Thus: males, 8 per cent.; females, 5·3 per cent. 7. That it is curious to note the fact that, in spite of the greater exposure &c. in males, the female cases have a greater sum total, suggesting that women are more liable to keratitis than men. 8. In some cases occurring between twenty to forty years in women, over-lactation or bad confinements have been given as the constitutional causes.

An examination of our ward books further shows that interstitial keratitis is more frequent in women than men, omitting cases of keratitis punctata, traumatism, and keratitis due to (*a*) granular lids, (*b*) mercurial poisoning, and (*c*) lesions of the fifth nerve, the chief difference lying at about the on-come of menstruation (i.e., ten to twenty), 28 females to 13 males. 2. That the average age for men to be attacked with interstitial keratitis is $17\frac{6}{75}$ years, whilst the average age for women is $15\frac{8}{13}$ years. So that women are attacked a year and a half earlier, the average being brought down by the great number occurring about the supervention of menstruation. 3. No cases occurred at the climacteric.

Galezowski[7] and Daguenet[8] have recorded several cases of disease of the cornea resulting from sudden suppression of the menses. The patient in M. Daguenet's case was thirty-seven years of age, married, but childless. Whilst in perfect health she was exposed to cold in washing linen in the month of January. Suppression of the menses followed, and in the course of the night she was awakened by intense pain in the left eye. The whole left globe was inflamed, and a large abscess formed in the substance of the cornea followed by leucomata, which, however, cleared up sufficiently to enable the patient to pursue her avocation.

Mooren gives the case of a girl of fourteen who had an intense keratitis pannosa, and who, notwithstanding the fact that every symptom of her molimina menstrualia was present, could not be brought to menstruate; yet a recurrence of the inflammation occurred every four weeks, and treatment continued for a year proved entirely ineffectual. When menstruation did occur, a sudden change took place; but the tissue of the right cornea was so altered that, although it remained transparent, it became conical. I entertain no doubt that the age of puberty in girls, and probably in boys also, is one in which interstitial inflammation of the cornea is particularly apt to occur, and at that period in delicate children suffering from inherited syphilis the attack may be extremely severe. I remember one case in particular of a girl of fourteen, in whom menstration had just commenced, and who was exposed to cold and a somewhat spare diet. The cornea, after becoming cloudy, was invaded by vessels which were so numerous, that only perception of light remained in the eyes. I despaired of the recovery of vision, and she began to learn the alphabet for the blind. With the establishment of the menses, however, improvement commenced, and by degrees, with appropriate treatment, vision was absolutely and perfectly restored. Thaon[9] also points out that interstitial keratitis may be coincident with the supervention of menstruation. Mooren,[10] on the other hand, gives a good case of double interstitial keratitis, in which the symptoms greatly increased in intensity during the menstrual period.

Iritis of a serous type, affecting sometimes one, sometimes both eyes, has been described by many writers as a concomitant of amenorrhœa and of dysmenorrhœa. The causes of the uterine trouble have been very various: mental shocks and worry, and sudden exposure to cold, are amongst the most common; and the results have been sometimes satisfactory, sometimes serious.[11]

In Thaon's case amenorrhœa was suddenly occasioned by grief at the loss of a child. Some pain in the eyes was felt. There appears to have been choroiditis, for the vitreous contained flocculi. With re-establishment of the menses recovery of vision took place, only some slight synechiæ posteriores being left. In M. Levat's case recurrent attacks of serous iritis occurred with each return of the menses, which had been suppressed by a violent mental shock. Improvement resulted from treatment. In Kay's case the menses were irregular and an attack of serous iritis accompanied their return. In this instance appropriate treatment effected a cure. In one of M. Oursel's cases the patient, aged nineteen, was very irregular, and both eyes were affected; a glaucomatous attack supervened. The patient declined operative treatment. In another case of Oursel's double iritis supervened upon a menstrual period, synechiæ formed, and the case was complicated with keratitis and hæmorrhage into the anterior chamber. Wecker, Caudron, and others have reported cases of double irido-choroiditis, which certainly followed, and apparently resulted from sudden suppression of the menses.

Retinal apoplexy consequent on sudden suppression of the menses has been described by several writers. Thus, Léon Oursel[12] gives the case of a previously healthy woman who, while menstruating, was caught in a violent shower of rain. Sudden arrest of the function occurred, followed by rigors, headache, and vomiting. Two days afterwards she discovered suddenly that the vision of the right eye was almost lost. Ophthalmoscopic examination showed that there was a large retinal hæmorrhage covering the macula lutea. In this case almost complete recovery, with only a faint central scotoma, resulted. A similar case is recorded by Danthon.

I saw, with Dr. Gill, a young lady twenty-two years of age, who two years previously had swum out of her depth at Margate. She gained the shore greatly exhausted, and the same night had an epileptic fit, and subsequently others at intervals of a month or more, but these were without effect upon her eyes. Shortly before I saw her she had been rowing up the Thames, and fell into the water at Windsor Lock. She was menstruating at the time, and the sudden immersion stopped the process, and she became amenorrhœic. Within a few weeks keratitis, partly interstitial and partly superficial, attacked both corneæ. The inflammation was not accompanied by pain. Her vision was reduced to $\frac{6}{18}$ with the right eye and $\frac{6}{24}$ with the left. The discs could not be clearly seen. The possible origin of the disease from the reflex action of the teeth, of worms, and of constipation were one by one excluded. About a week after she was first seen pain began to be felt, which gradually became very severe, and the inflammation extended from the cornea to the iris and choroid, so that she was suffering from keratitis and from irido-choroiditis. Vision was reduced to perception of light. Dr. Gill had ordered citrate and iodide of potash, without improvement. Leeches and hydrarg. c. creta with quinine were prescribed; and cold applications proving most agreeable, cold compresses were kept constantly applied. In the course of a few days the mercury was exchanged for bromide of potassium. Improvement gradually took place. The catamenia became regular, and early in December the corneæ began to clear, and by July in the following year she could read No. 1 Jäger with each eye. I saw her one year later, and she could then read 1 with the right eye and $\frac{6}{9}$ with the left. A small spot of retino-choroiditis was visible near the fovea centralis of the left eye.

Retinitis may occur as the result of sudden suppression of the menses. M. Thaon records a well-marked case in which the connexion between the inflammation of the retina and the menstrual disturbance was well marked in a girl of twenty, of previously good health and regular, who was suddenly rendered amenorrhœic in consequence of mental excitement and family troubles. On the third day after the emotion violent headache was experienced. She had rigors, and on the seventh day the vision of the left eye was seriously impaired. The symptoms of optic neuritis were slightly marked, but at the distance of three diameters from the disc were numerous white patches along and superjacent to the vessels, with some large muscæ in the vitreous. Vision was abolished in the upper third of the field. Treatment directed to the restoration of the menses was followed in this case by great improvement, if not perfect recovery. Other cases will be found in the Journals and Reports, in which retinitis occurred sometimes with and sometimes without hæmorrhage.

Paresis of both the internal and external muscles of the eye has been noted. Hasner has reported one case of a girl aged seventeen, who, each month when the catamenia were present, was attacked with complete paralysis of the whole of the left third nerve, which lasted for three days, and was accompanied by headache and vomiting. The affection had persisted for four years, with great regularity in its recur-

[7] Recueil, 1875. [8] Recueil, 1876-77, p. 194.
[9] Thèse de Paris. [10] Archiv f. Aug., Aug. 8th, 1881.
[11] Thaon: Thèse de Paris. Oursel: Thèse de Paris, 1878. Kay: American Journal of Med. Sciences. Levat Thèse de Paris, 1885, p. 30.

[12] Thèse, p. 63.

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rence. I suppose that we have all met with slight affections of the third nerve, in the form of accommodative asthenopia, dilatation of one pupil, and diplopia clearly attributable to the enfeeblement and general exhaustion of the system, which accompanies the menstrual discharge, and which of course brings any hypermetropic defect into prominent notice.

I have a strong impression that menstrual disorders constitute a factor in the development of the obscure affection termed conical cornea, or perhaps there may be some cause common both to the derangement of the menstrual function and to the thinning and yielding of the cornea. I have seen three or four cases, in all of whom the catamenia were scanty, the complexion pale, the expression of the face dull, and the general aspect poor and ailing. I have, however, been unable to recognise any special organ as diseased. The cases I have seen have been of the ages between twenty-eight and thirty-four or thirty-five.

One of the functional disturbances of vision that may be met with associated with amenorrhœa or with dysmenorrhœa is amaurosis, of which a typical case was reported by M. Dor to the Congress of Ophthalmology, 1884. The blindness lasted for twelve days in the right eye, and for six weeks in the left eye. There was hemianæsthesia affecting the left half of the body. With the return of the suppressed menses the symptoms cleared away, leaving the patient with perfect vision.

Some years ago I saw a patient sent to me by Dr. C. P. Tomkins of Beddington, who had long suffered from severe dysmenorrhœa. She had been a governess, and had always been delicate, hysterical, and subject to most severe attacks of neuralgia at her periods. I need not give her symptoms in detail, but she had had ovaritis, had lost her voice, had had herpes and her pulse had been 50. She complained of great impairment of vision due to a close black network, which was constantly before her eyes, and a central scotoma of the form of a hand. I raised her lids with difficulty, for she kept her head down, and light was distressing to her, and after some trouble obtained a sufficiently good ophthalmoscopic examination to assure myself that the media were clear, that the discs were whiter than natural and slightly cupped. The symptoms in this case were, I imagine, essentially reflex, and connected with the dysmenorrhœa.

Partial atrophy of the papilla may now and then occur. Galezowski[13] reports a case which, however, I should have been disposed to attribute to hæmorrhage, for in the year preceding she had had a miscarriage attended with much loss of blood. The symptoms were: Derangement of the catamenia, with headache, vertigo, and sudden failure of the vision of the left eye. Return of the menses, accompanied with much hæmorrhage, was followed by a similar attack in the right eye, and a condition of hysteria was established. No improvement took place after treatment, and the optic disc presented a condition of atrophy chiefly affecting the external segment.

The precise mode in which disturbance of the menstrual function operates in inducing ophthalmic disease is obscure. It may be by retaining in the blood, in cases of sudden suppression of the menses and in cases of amenorrhœa more slowly induced, materials that are of a poisonous nature, the action of which is indicated by the loss of blood-making power, and consequent imperfect performance of other functions, with spasms and pain in different regions of the body, in which the eye participates; or it may be by acting on the vessels of the eye alone through the nervous system in a reflex manner, and thus interfering with its due nutrition, as we know may occur in cases of dental disease and the intestinal irritation of worms.

It need hardly be said that the treatment of such cases falls into the hands of the obstetric physician in most instances, and our part is limited to the recognition of the nature of the ophthalmic trouble and to giving a forecast of the probability of improvement or complete restoration of sight. In cases of the deep-seated affections of the choroid and retina much caution should be exercised: first, because it is not possible, owing to the cloudiness of the media, to recognise the exact extent of the mischief; and, secondly, because the history of such cases shows that even when no very serious lesion is visible under the ophthalmoscope vision may long remain impaired.

(To be concluded.)

[13] Recueil, 1882, p. 36.

Address

ON THE

FUNCTION OF MEDICAL SOCIETIES,

AND ON THE

ABIDING IMPORTANCE OF PATHOLOGY TO CLINICAL WORKERS.

Delivered at the opening of the Session of the Glasgow Pathological and Clinical Society, Oct. 10th, 1887,

BY JAMES FINLAYSON, M.D.,

PRESIDENT OF THE GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY; PHYSICIAN TO THE GLASGOW WESTERN INFIRMARY, AND TO THE GLASGOW HOSPITAL FOR SICK CHILDREN.

GENTLEMEN,—My first duty is to thank the members of this Society for the honour conferred on me in electing me as their president for a second year of office. I believe I am not wrong in seeking the explanation of your selection in the fact that for the first ten years of this Society's existence I acted as its secretary, and may, indeed, claim to have been one of its founders. It is natural, therefore, in my present position, to inquire how far the Society has fulfilled the objects of its foundation. These objects are indicated in its name, as being for the study of medicine in its pathological and clinical aspects. But why, it may be asked, should a *Society* be formed for this purpose? Are there not books and printed lectures, and weekly and monthly journals, all ready to supply such wants? It seems to me, I confess, in the matter of Medical Societies as in the courses of instruction at our schools — the former for the education of practitioners, and the latter of students,—that the time has fully come when the great fact of the printing press, and of a cheap and valuable medical literature, should be openly and practically acknowledged. It seems an extraordinary anachronism that a medical teacher should often read to a class of students a series of detailed statements or facts, practically compiled, or capable of being compiled, from standard treatises, and that these young men should try to take down in their note-books a complicated series of facts and names, often quite new to them, when the only thing one can feel sure about in such a method is that notes so taken by them must, from their ignorance of the subjects and from the imperfections of hearing and of attention, be more or less inaccurate and imperfect. We all know from our own experience, or from observation of students, how such note-books are apt to teem with errors in names, in spellings, in quantities, and other points of vital importance, all of which could be supplied with almost absolute accuracy by means of carefully prepared text-books. The system of oral teaching had a very different place when text-books were few or bad, and apt to be antiquated; but in these days, when some of our best men write works adapted for students, when they are carefully brought up to date in successive editions, and when the cost of them is comparatively small, it seems to me that the whole system of our instruction should be remodelled with due recognition of this fact. The sphere of oral teaching, if abolished in some directions where it can be superseded by a better, could then be extended to subjects and to methods where books, however good, must wholly fail.

Now it seems to me that similar remarks apply to Medical Societies. We have all listened at them, I am sure, to admirable communications, full of interest, full of details and of facts of great importance, with a feeling that such papers were to be read, and not merely listened to. How often do we notice in a discussion which follows such a paper that the speakers feel that it would be an impertinence to criticise it seriously till they had read it. Even in less elaborate communications, how often do we see a member rising to inquire about some point in a case which had been duly stated by the speaker, but had escaped the notice of the member, even although he might be listening with great interest and attention. We all know how that in reading a medical case we have often, when we come to some point at the end, to turn back to

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re-read some details at the beginning. For all such communications the printed form, with its accuracy, its facility for reference to special points, its condensation still compatible with clearness and fulness, appears pre-eminently the best. It seems to me very doubtful if the day has not passed for Medical Societies to meet formally and hear such papers as a preliminary to their publication. No doubt such papers are sometimes followed by important discussions, a form of society work to which I will refer presently.

But just as in the student's education there are methods which the books cannot take up, so in the education of the profession at Societies there are enormous advantages which no development of the periodical medical press can possibly supply. It is when we come to the demonstrative methods that we see the benefit. How imperfect, for example, are the descriptions of some rare skin disease, some intricate nervous affection, or some unfamiliar pathological appearance, even when aided by expensive engravings or lithographs. Or rather, as is sometimes said, how perfect these descriptions seem, how accurate and how full, when once we have seen for ourselves what the writers describe so well to those who know, and so unintelligibly to those who do not. Our Pathological and Clinical Society in Glasgow was founded in this view. Whatever subject might come up, we wished to have something to be shown; even comparatively trivial communications had thus an educational value; and when the rarities from the wards or the post-mortem room are brought forward, the members are supplied with illustrations which may serve to illumine their future reading on the subject. Our limited numbers, and the less formal or conversational style always permitted in our Society, enable those present to see or handle for themselves what is shown, and to grasp the points which the speaker wishes to bring forward. In this way some of our smallest and least ambitious meetings have been among the most instructive to those present. Another point aimed at in our methods at this Society was the cultivation of accuracy. When the specimen referred to is on the table for examination by experts who may be present, we feel an additional incentive to care and accuracy in our remarks and in the preparation of the case; and the educational value of bringing forward cases or specimens thus to be criticised on the spot makes this Society a valuable training ground for the younger members of the profession, for whose benefit it was specially founded. In this view, moreover, a specimen or case shown at a Society receives a certain stamp of authenticity as compared with one merely reported without being shown.

A distinctive value of Society meetings, as compared with printed matter, has always been regarded as consisting in the discussions following a communication, or in the holding of more formal and set debates. In our own Society the criticism and discussion of specimens and cases have often proved useful, and our rules give permission for the occasional carrying out of more formal debates. On four occasions during the fourteen years of its existence the Council arranged for such discussions—the first on the pathology of phthisis, the second on the treatment of internal aneurysm, the third on albuminuria, and the last on cancer. I believe the general impression amongst the profession here as to these discussions was that they were, in a sense, successful, and that they had an important value in stimulating interest in the great subjects referred to; and in all of them we had the special advantage of seeing and hearing distinguished members of the profession from a distance, who kindly came to take part in the meetings, and by their presence and the value of their communication gave vitality and interest to the proceedings. But discussions of a formal or ambitious character are apt to be disappointing; they tend to lose the character of true discussion, and to consist rather of a series of independent dissertations by the speakers, with but little reference to what had gone before. In our discussions an attempt was made to lessen this danger by the circulation of proofs of the speeches made on one evening before the resumption of the debate on the next. But the charm of a discussion is often lost when each speaker has to deliver himself after careful preparation and in view of being reported in the journals. How often do we enjoy a talk with a medical friend, when he discusses a subject with us in private, giving his speculations, his half-facts and their [illegible] could be answered [illegible] ating the matter [illegible] same person has to get up to speak in view of reporters, his imagination has to be restrained, his facts have to be reduced to a form he can absolutely stand by, and what was sparkling and suggestive is apt to become commonplace and unsatisfactory. Few men with any reputation care to commit themselves under such circumstances to express an opinion on the spur of the moment, except in the most general terms, on the views of a previous speaker, if they are in the least novel: and even if there may have been time to consider them in a printed form before resuming the debate, one who has undertaken to speak on an important subject is apt to have already decided in his own mind what to take up in his share of the discussion, and is rather chary of deviating from the lines which he had sketched out for himself. I believe a distinguished member of our profession once formulated the proposition that "accurate knowledge spoils conversation." Many interesting remarks might be made, it was said, in a miscellaneous company, when discussing almost any casual subject, say the height of a steeple or the age of a building; and stores of interesting matter and a pleasant interchange of ideas brought up from varied lands and varied experiences; but all this (so it was said) has the life taken out of it if some person unfortunately is present who can give the relative height of the steeples named in feet and the exact age of the buildings in years. So it has seemed to me that preparation and a sense of responsibility spoil medical discussions. We only care to hear the opinions of those having some claim to be heard; but it is just those men who are unwilling to discuss new ideas without time for consideration, and so they limit themselves to ground on which they feel confidence; hence it is that so very often their remarks are but partial expositions of views already published by them in some other form, without much, or perhaps any, of that active conflict of mind which we look for in a discussion.

Reviewing the work of our Society as a place where we all, without exception, could acquire much valuable knowledge, where many of us have been trained to habits of accuracy and precision in preparing and showing our cases, where a stimulus and encouragement to honest work, especially amongst the younger members of the profession, could always be looked for, I believe I may safely say that the influence of this Society has been very potent for good; and its discussions, exciting as they did much general interest in medical circles, had, in addition to the mere value of the communications, a useful influence in adding to the medical life of our city.

Coming now to a wider subject, I would like to ask, What is the really important relationship between the two great subjects, the cultivation of which is aimed at by our Society, as indicated by its title of "Pathological and Clinical"? What is the relationship of pathology to clinical medicine and surgery? It might seem at first sight that this was very plain, that pathology, or the science of disease, must constitute the very foundation of what we observe and what we treat when called to the bedside of the sick. I remember one of my students, some years ago, saying to me how much he was interested in pathology as a fascinating subject in itself, and as forming the very basis of all medical and surgical practice. I said that it was natural for him as a student who had only learned one pathology, and that the newest, to think in this way; but that he must remember that the pathology he was learning was utterly different from that of even twenty or thirty years ago, and that the pathology of the next twenty or thirty years would no doubt be very different from what he had learned; in the meantime the patients and the diseases and accidents were very similar, and that clinical medicine and surgery must be founded on something less shifting in its character. I put the changes in pathology in large cycles of twenty or thirty years, but one would scarcely be wrong in saying that this science gets almost revolutionised every few years, so as to be scarcely recognised as the same subject. Taking changes and innovations promulgated, or at least generalised, within the experience of many of us here present, what would our pathology be like if we had to cut out of it all ideas of embolism, septic as well as otherwise; all ideas of the migration of leucocytes, and all ideas of micro-organisms and germs? But there was a pathology long before these notions were current, a pathology cultivated by such master spirits in the profession as Morgagni and John Hunter. It would ill become one who has been, by your kindness, elected president of a Pathological Society to speak disparagingly of pathological science, but I have often wondered in my

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own mind wherein lay what I felt to be the enormous value of pathology to the art of the physician or surgeon in his clinical work. One cannot help feeling that the value of Hunter's surgical work, and even more notably of his mighty influence, turned on his extraordinary energy and brilliancy as a pathologist; but equally one cannot help feeling that it could scarcely depend on the value of his mere pathological facts, or on the soundness of his views, for these of course have been displaced or superseded to a great extent by the progress of the very science which he did so much to found. It would seem as if some more stable influence than the knowledge of shifting pathological data must be at the bottom of the important relationship referred to—the relationship of pathology to clinical work.

Coming down from the great masters of our art and science to our own level, I would ask what is the secret of the enormous advantage which we have when we have attained to the position of physicians and surgeons to the hospitals and infirmaries of our city? No doubt in the wards we see many unusual cases not otherwise available, but I am sure that all must admit that specially great advantage arises from the opportunities presented to us in the pathological theatre for observing the state of parts after death; or, in the case of surgery, in the limb or tumour removed by operation. It may be contended that we have in this merely an additional field for the acquisition of facts bearing on our art, and that it is only natural that those with wider and more varied fields of study should thereby derive greater profit. It seems to me, however, that there is more than this.

Pathology is not a mere collection of facts; if it is to be a living influence it must be a more or less compact body of doctrine, relating these facts to each other and to the processes going on in the living, as well as to the results found in the dead. I suppose we all require to have some such doctrines in our minds, vague or definite, held firmly or loosely, formulated hypothetically or dogmatically, as the case may be. I have sometimes been struck by the air of certainty and authority with which some members of our profession speak regarding the pathological processes going on in their patients; they seem to see the exact state of the cells of their livers, and the varying condition of these and of the epithelium of all the mucous membranes, with every change in the disease, or with every variation in their remedies. Of course with such men their diagnosis is as certain as their pathology and their therapeutics. But this type of mind is usually outside of our hospital staffs; for, as I daresay you all know, it is not very infrequent for the hospital physician to find his pet theories of an illness rudely upset when the case comes to the post-mortem table in the presence of his students; and even our friends the surgeons sometimes get a rude awakening at the operating table in a crowded theatre. Working under conditions of this kind, where errors in our diagnosis, pathology, and treatment are constantly liable to be brought to light before competent and incompetent judges (the competent being usually much the more charitable of the two), one is almost forced to learn to separate what he is sure of from what is merely highly probable, or what is quite speculatively problematical. Such a one may, indeed, at times speak with a certainty and a dogmatism on some points in diagnosis or pathology which might astonish even the other type of mind to which I have referred; but very often this certainty is limited to special points only, and these not always the most vital; he may be certain of an enlargement of the liver or of a consolidation of a lung, but may be doubtful as to the nature of the enlargement or the cause of the consolidation. Trained to work under the possibility of constant checks, one is almost necessarily led to be more accurate and careful in diagnosis, trying to omit nothing which is likely to throw light on the disease, keeping pathological speculations well in hand, always discriminating between those parts of the diagnosis or pathology which are securely established, and those on which more or less doubt may still linger, acquiring in one way certainty and decision, in another openness and flexibility of mind. Dealing with hidden processes of disease, the physician is sometimes tempted to arrogate an infallibility of judgment which public opinion at one time tended rather to force upon him, or to adhere to doctrinal traditions which he may have inherited, and may, as a teacher, be himself transmitting; but all such tendencies receive constant checks from the facts of pathological anatomy, for our nationality and the spirit of our times are both distinctly adverse to the well-known retort of one whose theories were convicted of being at variance with the facts, when he said, "So much the worse for the facts."

We seem, then, to see in this relationship of pathology to clinical work something of the same kind of advantage which I referred to in connexion with the presentation of specimens or cases to a medical society, where the tendency is to care in the preparation of the case, accuracy in statement, and liability to correction or criticism from the scrutiny of other observers whose habits of mind lead them to look at things from a different point of view. It may, however, be contended that pathology might be an admirable check and guide to the clinical worker if its data were accepted as ultimate and absolute facts, but that any such test becomes illusory, and perhaps even fallacious, if pathology be admitted to be in such a constant state of flux that books five or ten years old cease to be adequate guides even for our students, while the great masterpieces of the last generation of pathological workers are only consulted as interesting historical records, or for the artistic beauty of their illustrations. Now, of course, in this department of science, as in all others, the great sweeping changes which occur from time to time always leave an ever-growing residue of facts more and more firmly established amidst the shaking of others; and in a multitude of cases it is the interpretation, rather than the fact, which is called in question and changed. No doubt this is sometimes so radical in its character as almost to amount to the substitution of a new fact for the old. When Rayer figured with such accuracy the lesion in the kidney which his experience showed to occur in rheumatic subjects and called it "néphrite rhumatismale," we have his fact remaining, in a sense, although in another sense we also change it, ceasing to regard it as "rheumatic nephritis," when we know it to be due to a mechanical plug or embolism, even although rheumatism may have been the origin of the whole mischief, as it usually is. But the facts of pathological anatomy and an ever-growing body of pathological doctrine resting on a sure basis may well be looked up to in connexion with the mysterious processes of disease as affording, as a rule, a tolerably sure court of appeal to the clinical student. Even, however, if pathology were much less certain than it is, and even at the times when it was much more imperfect and much less worthy of confidence, we can understand that in the check afforded by the facts of morbid anatomy and the observation of pathological processes, so far as this was possible, the physician or surgeon might find the greatest guidance in his work. The tendency of many, perhaps most, minds in our profession is to theorise and speculate, and to spin fine webs out of our own heads. Our great pathologist revealed his method in a couple of words in writing to Edward Jenner, when he said, "Why think?"[1] To observe, to inquire, to compare, and to experiment where this was possible, these were Hunter's methods. But in thus bringing us ever close to nature and to the observation of her methods, in subordinating theoretical doctrine to the observation of nature and facts, Hunter was teaching himself and all his followers a lesson not merely useful for the pathologist, but of paramount importance for the surgeon and the physician. To be guided in the observation and treatment of disease by the facts which lie open before our eyes is the great qualification of the clinician. How difficult it is to observe disease apart from theoretical or doctrinal considerations, no one would, *a priori*, imagine. But it is well known that we all pass by, as if blind, certain obvious features of disease, which are so glaring that when a new disease or a new symptom of disease is described by some true clinician, immediately throughout Europe and America confirmatory cases, hitherto ignored, are at once recognised. If this be so in diagnosis, we need not wonder if in treatment we are equally blind, and that methods are pursued for years or for generations which are ultimately discovered to be either useless or injurious, or of but trivial value.

It is, I believe, in tending to keep us to true facts and to the observation of nature that pathology supplies a great and abiding influence for good on clinical work. No doubt pathology itself is uncertain in many ways, and, as I have ventured to say, in a state of flux; but the very fact of this constant change in an allied science makes the physician or surgeon keep his mind ever open to new facts and to new ideas, which may, whether true or false, serve the useful

[1] Hunter's Works, Palmer's Edition, vol. i., p. 56.

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purpose at least of keeping him on the alert, and of saving him from degenerating into a degrading routine or a dogmatic obstinacy. It is vain to complain of the imperfections of pathology; it is better to try to improve it. Clinical medicine has been under enormous obligations to the pathologist, and it is right that it should exert itself to help forward pathological inquiry. In the foundation of our own Society it was felt that neither had an independent existence apart from the other, and that, with us at least, they should not be dissevered. The genius of the greatest living pathologist recognised the wide reach and close interrelationship of different methods in the study of medicine. Long ago Virchow[2] sketched out his *Handbuch* of medicine to supply from the best writers he could find a systematic statement of our knowledge in its various branches. But he likewise organised in his *Jahresbericht* a repertory of new and contemporaneous work in all countries to supply the means of checking and correcting our ideas up to date. In his *Archiv*, which may be taken to represent living and original work, he clearly expresses in its title that it was to be no mere receptacle for dead morbid anatomy, but that it was to extend to the physiological as well as the anatomical aspect of pathology, and *likewise to clinical medicine*, a relationship which this *Archiv* has done so much to uphold.

The value of the contributions which clinical work may make to pathology seems to me to be well illustrated by one of the newest departments of pathological research. The far-reaching influence of minute organisms and germs in our science at the present time calls for the accurate recognition of one set of germs from another, which, while so far similar, may yet be utterly different—the one full of mischief, the other essentially harmless. The difficulty we have to contend with arises from mere morphological distinctions often failing us: an organism in its life history may go through many forms, and may vary with the media of its cultivation, so that what seem to be very different may be really the same; on the other hand, organisms very similar, practically identical in form, may be utterly different in reality. As you all know, the pathological bacteriologist seeks to prove his germs by cultivation, tracing the history of the organism in its various phases and in various media. It is just this kind of service which clinical workers can render to pathology,—not indeed in cultivating disease, but during their efforts at suppressing it, by watching its life history, the variations which the diseased condition undergoes in various parts of the body or at different periods of the patient's life, or in the transmutations brought about in different generations. This life study in the human subject must ever be the accompaniment and corrective of a true pathology, however carefully it may otherwise be studied on the dead subject, or even by experimental researches on the lower animals. In the recent discussion held by this Society on the great subject of Cancer (1886), Mr. Jonathan Hutchinson said "that it seems just possible that the turn of the clinicists is again coming round," and various matters were raised even at that discussion which only clinical workers can solve. The remarkable suggestions and instances of apparent transference of this disease from husbands and wives, raised at that discussion, call for the close attention of clinical inquirers. The family history of patients, if scrutinised in the future, may throw much light on the vexed question of the relationship of sarcomatous and carcinomatous tumours, if, as I am inclined to believe from fragmentary information brought to my notice, it may yet be shown that the same families breed both sets of growths. As yet, however, inquiries on this matter are beset with this difficulty, among many others, that what, even a few years ago, and by pathologists who recognised the distinction, were put up in our museums as cancer would now by the same men be labelled sarcoma; as time extends for us, however, the available mass of reliable materials, we may be able to show that, as in the case of the germs already referred to, what is morphologically very distinct may be really very similar when submitted to the test of cultivation. At a previous discussion in this Society on Phthisis (1881), some of us, as physicians familiar with the life history of this disease, refused to separate at the dictation of pathologists what we felt to be allied, although on the ground of histology we might feel that we must appear to be hopelessly beaten;

[illegible]

[2] Handbuch, 1854; Jahresbericht, 1851; Archiv für Pathologische Anatomie und Physiologie, und für Klinische Medicin, 1847.

but since then the developments of pathology itself have tended to include in one common group not only various forms of pulmonary disease at one time separated from each other, but also other manifestations of so-called "strumous" and "scrofulous" disease, which had always been felt by physicians to be closely allied in their family history to phthisis and tuberculosis. In thus recalling an incident, full of significance as I believe, I do not of course wish to stir up antagonism or recrimination between pathological and clinical workers: the best men in both departments feel that these subjects must go hand in hand, and that they cannot be divorced from each other without risk of grave disaster. Such was the view of the founders of this Society, and I hope that its work in the future and its influence on its members may be such as to strengthen this alliance, so that our Society may truly deserve its name of "Pathological and Clinical."

SEVEN CONSECUTIVE CASES OF LAPAROTOMY.

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(*Concluded from page 1010.*)

Case 5. *Fibro-cystic Disease of the Uterus: Oöphorectomy; Recovery.*—Miss De L——, aged forty-seven, has been attended by me for the last nine years. I first saw her in consultation with Mr. Rudall, who desired me to take the case. Up to June, 1880, she had been subject to frequent and violent uterine hæmorrhage, with fibroid of the uterus, reaching half way between the pubes and the umbilicus. She had taken large quantities of ergot for considerable periods, and at intervals ergotine had been systematically injected after Professor Simpson's method, at first apparently with some benefit, then without. The cervix had been divided, and the posterior thickened uterine wall incised. Again the cervix had been dilated and the uterine wall incised. The hæmorrhage then ceased, though the catamenia was rather profuse, and she gained strength and colour, but there was an enormous flow of clear, straw-coloured fluid, which was almost pure albumen, or as if blood without the colour.

June 28th, 1880: Solution of persulphate of iron was applied to the os, and repeated frequently. Ordered twenty minims of liq. ergotæ three times a day.—August 11th: Still loses large quantities of the fluid. Removed a large rotting white clot from the upper vagina. The interior of the uterus fluctuated, and the sound was introduced into it, when a thin, brickdust fluid escaped, and a fresh blood clot followed. Injected iodine into the uterine cavity.—13th: Applied the iodine on cotton to the uterine cavity, and left it there.—14th: The cotton had not remained in the uterus.—16th: Lost a great deal of the clear fluid. Plugged vagina with iodised cotton.—17th: Lost very little.—September 4th: Catamenia should have occurred on August 23rd, but has not appeared; much less watery discharge; looking well.—October 9th: Catamenia not appeared looking well; watery discharge comes with a rush with white clots, then a little for two or three days. When the discharge is less she feels tighter and larger; the abdominal tumour is large and hard. The os admits to the first joint of the finger, when the edge of something, perhaps a white clot, is felt. The uterine surface felt around the clot is soft behind, it is felt as if fluctuating.—December 13th: The catamenia had not appeared for three months, but a half till November 7th. The watery discharge had also stopped gradually and entirely for three days, when she walked much about town and went to the Exhibition, where she was much squeezed in a great crowd, especially on the abdomen. The catamenia came on the next day and lasted a week; then there was an interval of three weeks, duration four days, with clear discharge and white clots between. The abdominal tumour extends above the umbilicus. The os is well open; there is a soft substance [illegible] which the sound easily passes. Applied solution of persulphate of iron.—15th: Very quickly, and

incompletely, I introduced a little iodised cotton inside the uterus.—18th: Better; applied iodised cotton internally and at the os.

April 5th, 1881: For the last three weeks has had pain at the epigastrium, and could not stoop. Ten days ago had much watery discharge, and I introduced iodised cotton within the cavity, and the fluid diminished. Now has pain again, and loose black stools. Within the os is felt a large tongue-like mass, differently adherent; easily breaks down. Pulse good; colour fair. Last catamenial interval four weeks, duration five days.—June 23rd: Cramps and œdema in legs; watery discharge moderate.—30th: Last catamenial interval three weeks, duration three days, with great pain and moderate quantity; ceased three weeks ago. Has a firm, easily movable tumour reaching above the umbilicus. The os uteri is high, and protruding through it is a tongue-like mass. The legs are œdematous; urine albuminous; heart, lungs, and liver normal. The watery discharge is not so large, yet constant. In view of the albuminous urine a large operation was deemed to be undesirable, if avoidable, and she was ordered iron and ergot. If the polypus should become more vaginal an operation could be performed; if not, the necessity could be considered a little later.—Aug. 15th: Polypus projects a little more from the os. Pulse 112; looks thin and pale; cough. Iron and ergot to be repeated.—Sept. 7th: Polypus projects much; bad catamenia, with maddening pain, and not quite stopped yet.—13th: Yesterday had a squirt of bright blood, then a flooding of clear fluid; urine pale, specific gravity 1003, slightly albuminous.—14th: Dr. Burke administered methylene, and I introduced the hand into the uterus and broke up quantities apparently of cysts with thin coverings, no solid substance being removable, but the débris being shreds. The os was also thoroughly cleansed of the projecting tumour of the same character. In the operation, the vagina, being very small and undilatable, was ruptured from below the uterine junction posteriorly, through the perineum, showing the external surface of the rectal sphincter. The wound was carefully sutured from above downwards. The temperature reached 101°, but she recovered well, the discharge ceased, and three weeks afterwards had her catamenia as a slight red discharge.—Nov. 11th: Has had a slight red, thin discharge daily, requiring less than a napkin. Now her complexion is red. The fundus of the uterus can be felt just above the pubes. The vagina is perfectly healed, as well as the os. The uterus measures two inches and a half. Nothing but thick uterine walls noticeable.

March 6th, 1882.—Wonderfully well; walks, eats, and is quite well, fat and rosy. Catamenial duration three days; occasional slight "whites." Abdominal walls very fat. The uterine tumour extends half way to the umbilicus.—May 22nd: Looks well and fat and very jolly. Has rheumatic pains in knees and rolls her stockings down. The uterine tumour extends to the umbilicus and much in the right iliac region; the sound enters five inches and a half; the uterus is drawn up from the pelvis, the os is nicely open, and nothing abnormal is perceptible by the vagina but the tumour on double palpation. Catamenia normal, and scarcely any discharge. To have half a drachm of the solution of ergot night and morning.

July 21st, 1883:—Catamenial interval from two to four weeks; duration from ten to fourteen days, not much after four or five days. Looks well. The tumour is below the umbilicus and small; the os is soft. To take a draught composed of quinine and sulphate of magnesia with dilute sulphuric acid.

Feb. 8th, 1884.—The catamenia was regular at intervals of three or four weeks; then ceased for three months, with a constant, slight, coloured discharge, and she got enormously large in the abdomen, when the catamenia recurred two weeks ago for a week and in large quantity. Now says she is large and thinks the tumour is growing. There is a round central tumour to half an inch above the umbilicus, with sense of fluctuation. The internal os is open and admits the finger, but the external vagina limits its introduction. The sound passes readily five inches. I think the uterus is full of gelatinous tissue and fluid as at the operation. Ordered a three-grain ergotine pill night and morning.

Jan. 14th, 1885.—Complains of palpitation, shortness of breath, menorrhagia, large quantity of "whites," and nervousness. The catamenial interval is two weeks, duration seven days; very great pain for previous two days; quantity very large, requiring eighteen diapers a day. A large tumour occupies the abdomen to three inches above the umbilicus. The right loin is resonant, the left less so. The os uteri is large, the anterior lip being greatly broadened and apparently fluctuating. To have half a drachm of tincture of sesquichloride of iron three times a day.—Feb. 3rd: Feels strange, but has pains in the abdomen from the large swelling. Last catamenia ceased Jan. 3rd. Says that sixteen months ago it ceased for three months, and has recurred in floodings since taking the three-grain pill of ergotine.—March 11th: Catamenia recurred on Feb. 6th, duration one week, with violent pain; and again on March 4th, which is just over; lost a large quantity; took four bottles of tincture of sesquichloride of iron. "Whites" stopped; she had great pain and swelling, but the medicine made her stronger. To repeat the sesquichloride of iron (half a drachm), and to have cold vinegar-and-water injections.—April 7th: Had a heavy flooding for four days after an interval of one week.—Nov. 14th: Catamenia regular, with an interval of from two to four weeks, and a duration of from ten to fourteen days; the last ceased Sept. 10th, and then she had great pain till two weeks ago, when the catamenia was induced by hot poultices for two days, and she had a slight discharge. Says she now feels very large, with pressure upwards, shortness of breath, and pain, but feels stronger now that she has no floodings. The tumour reaches to the ensiform cartilage, and extends across the abdomen, distending it greatly; it is tense and hard. By the vagina the sense of fluctuation is very strong. On Nov. 27th I introduced my dilating trocar into the tumour in the anterior lip by the vagina and drew off four quarts of clear yellow serum, which coagulated rapidly, and introduced a drainage tube. It continued to drain for two or three days, when the abdominal tumour was hard and reached only to the umbilicus. After five days she had hæmorrhage for twenty-four hours and got very low. In January the catamenia was normal and had not recurred on April 3rd, except for a slight show every ten or twelve days, which had then lasted fourteen days. Had continuous nausea and pain across the epigastrium, and food created fulness but no vomiting.—On April 3rd the tumour receded to the ensiform cartilage and was as before, and I thought I could feel the left ovary to the left of the umbilicus. Had enlarged greatly in the last month. The anterior cyst was again emptied per vaginam, and on Aug. 8th five pints and a half was similarly evacuated, and on the 25th a smaller quantity. On the 26th, in accordance with the opinion of the hon. staff in consultation, Dr. Burke administered methylene, and, assisted by Drs. Fetherston, Rowan, Hooper, and Lynch, and in the presence of other medical men, I, by an incision an inch and a half long, removed both ovaries, which were cystic, the left of normal size, the right as large as a hen's egg. The operation from beginning to end occupied twenty-five minutes. The temperature did not exceed 100°, nor the pulse 100, and she made a perfect recovery, though she had a small parietal abscess. The tumour at once atrophied. On Oct. 29th she was quite well, and had had neither catamenia nor discharge. The tumour was felt indistinctly, except on double palpation, when it felt moderately firm, and so by the vaginam, but not cystic. The abdomen was resonant above, half way between the pelves and umbilicus.

I have ventured to be wearisome in the details of this case to show the following points:—1. The gradual development of a fibroid uterus into fibro-cystic disease of the uterus during a period of nine years. 2. The variations between amenorrhœa and menorrhagia, with invarisble increase in size during the former. 3. The complete practical inefficacy of ergot, ergotine, and ergotine injections, continued for years; of iron, intra-uterine applications, divisions of the cervix, of the walls of the tumour, of cleaning out the cavity of the uterus, and of draining the cyst; and the final and complete cessation of the refilling of the cyst, and the atrophy of the fibroid uterus, and restoration to complete health by the removal of the diseased ovaries.

CASE 6. *Fibroid of the Uterus; Oöphorectomy; Suppurative Peritonitis; Death.*—Mrs. J——, aged forty-nine, was a patient of Dr. Dowling, with whom I saw her in consultation. Had been married thirty-two years, and thinks she had a miscarriage twenty years ago. Seventeen months ago she began to lose blood, which has been continuous since, and frequently in very large quantities, which only stopped a little when treated by Dr. Dowling. When I first saw her she was a large anæmic woman with a thin pulse; an abdominal tumour, hard and solid, reached from the pelvis to the level of the umbilicus, into which the sound

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entered four inches and a half. It was decided to admit her to the Women's Hospital, where, in consultation of the staff, it was determined to remove the ovaries. The operation was performed on Oct. 11th, when Dr. Burke administered ether and methylene, Drs. Fetherston, Rowan, and Hooper assisting; and, in the presence of Drs. Brett, Doyle, Joske, and Meyer, I made an incision an inch and a half long below the umbilicus into the abdominal cavity. The left ovary was situated below a pear-shaped subperitoneal fibrous outgrowth, and was a little difficult to find, and, being to the surface, it was ligatured with a Tait's knot; it was small and completely cystic. The right ovary was of the size of a small hen's egg, was cystic, and a broad cystic state continued on to the broad ligament, so that the ligature had to perforate and encircle a pedicle in part cystic. The proximal cysts were lightly punctured in two places, but the point bleeding, a fine ligature was placed round it. There was no hæmorrhage or bruising of the tissues beyond what such a slight operation necessitated. The patient appeared to go on well for several days, but the abdomen became gradually distended, and she had great pain in the right hypochondrium; it was evident that general suppurative peritonitis had supervened, and it was deemed useless in the face of this condition, and as the fibroid uterus prevented pelvic drainage, to attempt further abdominal interference, and she sank on Oct. 20th, nine days after the operation. There was no further hæmorrhage by the vagina after the operation.

The post-mortem examination was performed on Oct. 21st. The abdomen was much distended, pus welling from an incision in the abdomen below the umbilicus. The edges of this wound showed little tendency to heal; they were slightly gaping and of a dirty black colour. Intestines much distended with flatus. Omentum bound down to the intestines by recent lymph, which also covered the whole of the abdominal organs, being particularly abundant on the under surface of the liver and about the uterus. The peritoneal cavity contained an abundance of pus: peritoneal vessels injected and greatly congested. Besides the recent lymphy exudation, the intestines were in part bound to each other and to the uterus by firmer bands of considerably older date, especially in the region of the uterus. Lungs: Some old adhesions posteriorly near the base of the left lung; in both pleuræ there was a limited quantity of blood-stained serum. The bases of both lungs, more especially the left, were hypostatically congested, friable, with some patches of extravasation, and furnishing on pressure some considerable quantity of blood-stained frothy fluid. The upper lobes of both lungs were emphysematous, anæmic, dry, and pale. Heart: Right side filled with dark clot, which extended into the pulmonary artery. Left heart empty, contracted; left ventricle somewhat hypertrophied, firm, fleshy. Pulmonary artery hypostatically stained. Spleen friable. Kidneys subgranular, congested; cortex broad; some unravelling of the base of the pyramids. Liver enlarged, pale, friable, fatty. Uterus: There were two or three pedunculated fibroids posteriorly near the neck, several small subperitoneal fibroids, and a large fibroid of the body.

It may well be asked why this woman died of suppurative peritonitis after an operation which in itself appeared so simple. It is true that the liver and kidneys had undergone degenerative changes, probably from the large and constant hæmorrhages; but the operation had been quick, without exposure of the abdominal contents, and the shock very slight. It is certain, in my opinion, that no contamination had occurred from sponges or instruments, for I am personally responsible for these, and know that they were clean. On the other hand, the conditions under which she was placed, and of which at the time I was not aware, are not beyond criticism; and to these I believe may be ascribed the absence of recovery. A public hospital is less under one's control than a suitable private house.

CASE 7. *Case of Porro's Operation on a Rickety Dwarf; Recovery.* — Catherine C——, aged seventeen years, was sent to me by Dr. Tuthill, and consulted me on July 7th, 1886. Her catamenia were always regular four or five months previously, the dates being uncertain. She is 4 ft. high, rickety, and malformed. The head is large, and she looks forty. The arms and legs are particularly proportionately short. The finger tips reach only to the anterior superior iliac spines, the humerus measures 6 in., the forearm 6½ in., and the hand 5 in. The thighs are 9 in. long, the tibia 9 in., and through the foot to the heel 2 in. The lumbar curve is particularly marked. At this date the abdomen was very prominent, the uterine tumour extending to halfway between the umbilicus and ensiform cartilage. The fœtal head could be apparently felt above and a little to the right of the pubes. The fœtal heart was heard 2 in. below and 1½ in. to the right of the umbilicus. The child thus lay with its face forwards. The placental souffle was most distinct just above and to the left of the pubes. The vagina had no hymen, and was patulous. The os uteri was so high as only to be just felt when meeting with the palm anteriorly, and the opening was small. The cervix projected diagonally through the perpendicular space of 1½ in. formed by the sacral prominence being superior to the pubes, instead of obliquely behind. The sacral curve was very marked, forming apparently half a circle. The following were the measurements:—Between iliac spines, 9 in.; between iliac crests, 9⅞ in.; external conjugate, 6 in.; from lower border of symphysis to top of coccyx, 2½ in.; conjugate vera, 1½ in.; Wood's inclined conjugate, 2 in. The patient was admitted to the Women's Hospital, and after consultations of the staff it was determined that Porro's operation should be performed at a later period of her pregnancy, and she returned home.

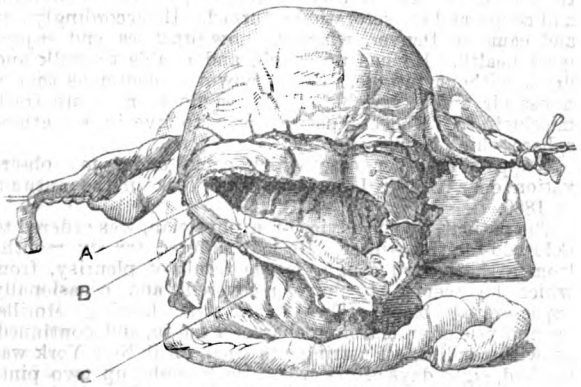
On Oct. 14th, when the child was supposed to be between eight and nine months old, assisted by Drs. Fetherston, Rowan, and Hooper, Dr. Burke administering methylene, and in the presence of Drs. Tuthill, Brett, Doyle, Forster, Meyer, J. P. Ryan, Shields, and Snowball, I made an incision four inches long from just below the umbilicus to two inches above the symphysis pubis, through the abdominal wall. A transverse cut one inch in length opened the uterus, and was rapidly extended by tearing to the limit the abdominal incision permitted. The bulging membranes were then opened, but the child's neck could not be grasped, as it had previously been recognised that it lay too high with respect to the incision, but the head was expelled by the considerable uterine contractile force and some external pressure around it through the opening, which was just large enough to let it squeeze through. The child, a girl, immediately cried lustily, and was enveloped in flannel. The hand then grasped the neck of the uterus, and Lawson Tait's uterine clamp adjusted below the level of the opening of the ovaries and Fallopian tubes. At this time the placenta was seen to be presenting at the uterine opening, and to be free from the neighbourhood of the neck, where by auscultation it had appeared to be attached. A sound was introduced into the bladder, and as it appeared not to be included in the clamp the latter was tightened up. The uterus was then cut away with scissors below the level of the transverse incision, the cavity cleansed and closed by six silver sutures above the stump and one below it, and intervening horsehairs, the stump touched with solid perchloride of iron and a strip of lint applied under the ends of the clamp wire, carbolic absorbent cotton over all, followed by Mead's plaster and a flannel bandage. There was practically no hæmorrhage except a little free bleeding when nicking the uterus, and what escaped from the uterine division after its constriction. The whole operation, from its commencement to the removal to the ward, occupied twenty-five minutes, and was very simple. The membranes were afterwards found to be closely adherent to the left uterine wall.

The progress was uninterrupted, except that by the twenty-second day the temperature had risen to 102·5°, and the pulse to 110, and jaundice was threatened, but dispelled by ten grains of calomel, which produced free action on the fourth day. On the seventh, eighth, and ninth days there was some diarrhœa, which subsided under a milk diet, and chalk mixture with solution of opium (five minims). On the tenth day the temperature fell to the normal, but was again variable from half a degree to a degree till Nov. 4th, when it rose to 102°, owing to the passage of a large hard stool and a small parietal abscess, and from Nov. 6th has been quite normal, but during all the time she seemed quite well. The stump, being broad, presently became offensive, but this was removed by iodoform and charcoal poultices. The clamp was daily tightened, and came off on the thirteenth day, when the line of separation had occurred below its level, leaving a concavity in the proximal end of the stump, through which a probe could be passed deeply into the cervical canal. No opium was given except a morphia suppository after the operation, and that for the diarrhœa. The sutures were removed on the eighth and tenth days. On Nov. 9th the temperature and pulse were normal; she ate and slept well, the abdominal wound was nearly closed,

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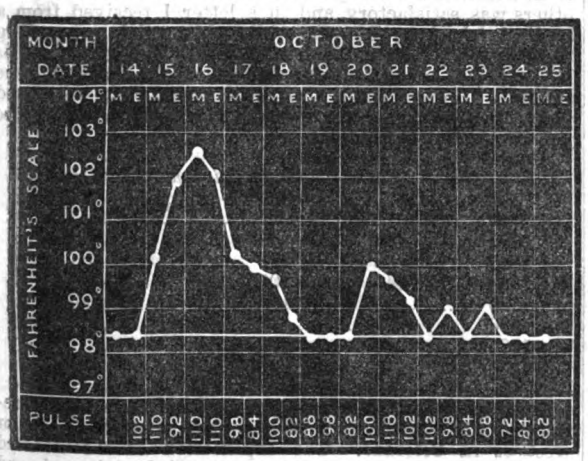
and a little induration caused by two small suture abscesses had nearly disappeared. To-day (Dec. 12th) she is up and quite well. The baby (a girl) has been wet-nursed, and looks bright and well. I am much indebted to the able paper of my friend Dr. Godson.

I think there can be no doubt that this girl would have died had Cæsarean section only been performed, for the opening of the os was very small, would not have been dilated by labour, and the discharges could scarcely have had such a ready escape thereby as they would probably have had through the opening in the body, whence death would have ensued. Moreover, the height of and consequent difficulty in reaching the os would have prevented



Uterus removed by Porro's operation, Oct. 14th, 1886.
A, Opening for removal of child. B, Level of removal of uterus.
C, Placenta.

its manipulation, and the cavity of the uterus could in no case have been syringed. Great care was taken to avoid enclosing the bladder or ureters by applying the clamp only just below the ovaries and Fallopian tubes, which appears to have been at the junction of the lower third, the uterus being finally cut across an inch below the opening made into it for the removal of the child. The contraction of the uterus after the rupture of the membranes was very rapid and firm on to the child, and subsequently the placenta, which was not touched except to feel with the finger that it was free from the constriction of the clamp. There was no defined reason for the threatened jaundice, of which there was no doubt, but which at once yielded to the



ten grains of calomel, but without action of the bowels till two days later. The external pedicle appears to be a sad and coarse necessity, but the rapid contraction of uterine tissue so far bars an intra-peritoneal method, and the question arises whether the nutrition of so large a distal constricted mass would be usually sufficiently maintained by contiguity to avoid gangrene, which in the case of an ovarian pedicle is by the lowness of its tissue and its comparative smallness so much less imminent. I believe that this is the first case of premeditated Porro's operation performed south of the equator. (See annexed engraving and chart.)

None of the foregoing cases were performed under the influence of special antiseptics, as I have passed through the various phases of no antiseptics, complete antisepticism, the previous saturation of the atmosphere by carbolic spray, and of the most complete cleanliness, and have concluded that the last is best. I have to thank Drs. Hooper and Lynch, the resident surgeons, for their careful attention in the after treatment of such of these cases as were in the Women's Hospital.

Melbourne, Australia.

THE CLIMATIC TREATMENT OF PHTHISIS IN THE STATE OF COLORADO.

By M. CHARTERIS, M.D.,
PROFESSOR OF THERAPEUTICS AND MATERIA MEDICA, GLASGOW UNIVERSITY.

(*Concluded from page 1008.*)

OUT of three hundred notes of cases of phthisis kindly presented to me from the archives of Dr. Denison at Denver, I have selected two as bringing out important points connected with the first stage of the disease, one with the second, and a third with fibroid phthisis. We shall now proceed to speak of these.

Phthisis with hæmorrhage; arrest in first stage.—M. B——, a medical student, resided until 1876 in Chicago, since then in Colorado. There was no hereditary predisposition. In July, 1870, he had slight hæmoptysis after great exertion in a gymnasium, and the hæmoptysis recurred during the next two months. Afterwards he enjoyed good health until the autumn of 1872, when there was a severe attack of hæmorrhage. During the winter he lost considerably in weight, and in February he went to Louisiana, and returned to Chicago in the beginning of May, when he consulted a medical gentleman, who thus reported on his case: "I found the chest well formed, but the motions of the left side were restricted. Inspiration over the whole of this side was feeble, and over the right side normal. The percussion sound was elevated in pitch over the left side, and dulness was marked over the inferior portions. On the right side percussion was normal. Pulse 108. Expectoration not copious." In company with his brother he came slowly to Colorado. The high altitude seemed to suit him well, for he felt splendid, and stated that his lung "was much cleared up." After remaining quiet for six months he proceeded to a ranche near Denver, where he remained eighteen months, working, riding, and hunting. Subsequently he came to Denver and studied medicine. His improvement has been almost uninterrupted since he came to Colorado. There is no cough and no expectoration. Pulse 75; temperature normal; weight 162 lb. The last examination of him which was made showed that "he measured thirty-seven inches round the chest; below the clavicles the movements were normal, with no depression. Percussion, however, revealed a slight depression in the third interspace near the sternum, where possibly the hæmorrhage originated; over that spot, also, bronchial breathing was detected."

First stage further advanced; recovery.—G. M——, aged twenty-four, an architect by profession at Pittsburg, Pennsylvania. There is no hereditary taint, as his parents are living and well. He commenced to get weak four years ago, and his weight fell from 167 to 115 lb. This weakness was accompanied with cough and slight expectoration, and resulted in hæmoptysis. During the summer of 1881 he tried various climatic health resorts, as S. Carolina and Bethlehem, and in the fall he went to England and remained three weeks. Feeling himself no better, he came to Denver, and on examination it was found that his temperature at 11 A.M. was 99°F., pulse 88, respiration 17. There was slight flatness at the left apex and proportional expansion at the right infra-clavicular region. The right shoulder was higher than the left. Dulness was detected at the infra-clavicular region of the left lung, and also at the supra-spinous and inter-scapular spaces. Over these parts there was also bronchophony and bronchial breathing. He remained in Denver during the winter and went to a ranche in summer. In the fall he weighed 130 lb.; his temperature was 98·5° at 11 A.M., his pulse 80. Steady improvement followed, and he now enjoys good health, His present condition shows the chest to be well formed. The right

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shoulder is, however, higher than the left, and the breathing is a little hard and bronchial at the infra-clavicular region; but no râles can be detected.

In the two cases narrated we have recovery from the first stage of the disease when the consolidation has not broken down; but in the second stage the state of the lung is different; for in all probability a cavity has formed where the condensation previously existed. This cavity may be chronic in type, secreting pus, but not increasing in size, or it may be enlarging by caseation and ulceration. The happiest issue of such conditions now is that the sides of the cavity gradually approximate, and form at length a tough cicatrix, which steps, however, may cause a stretching of the surrounding tissue and displacement of the neighbouring organs. Should the cavity thus heal, the cavernous sounds disappear, and are replaced by harsh breathing. In some cases also, owing to adjacent lung tissue being drawn across, a natural respiratory sound is detected.

Phthisis in the second stage.—J. H. B——, aged thirty-seven, with hereditary taint, came to Denver on April 3rd, 1877. In 1869 he had a hard cough, which lasted three months. He went to a high altitude, and afterwards remained pretty well until 1873, when his cough returned and he lost weight. He proceeded again to a high altitude, and had varying health until 1876, when he was unable to attend to business. In the autumn of 1877 he came to Colorado. The physical examination then revealed great emaciation, a temperature of 102°, respiration 20, and pulse 112; the sternum to the left; and at the base of the same side the thorax was shrunken. Percussion was dull over the same parts, and slightly at the left apex. Mucous râles were heard at the upper half of the right lung, with bronchial sounds; and prolonged expiration, especially below the right scapular region. On May 14th he was feeling better, but did not sleep well. He seemed bilious, and for this acid and taraxacum were prescribed. Pulse, sitting, 100. On Sept. 20th his weight was 113 lb. Appetite and breathing much the same, but the cough was a little better, and the sleep good. The face looked much ruddier. At 10 A.M. the pulse, sitting, was 99, respiration 20, temperature 99·5°. Chest much shrunken in front and base. Tubular breathing in right and left apices, but no râles could be heard. Sonorous sounds were detected in the inter-scapular region. On April 28th the pulse was 108, temperature 99·5°, respiration 20. He had been living at a ranche for six months, and now looked well. Chest deformed as before, the right shoulder being lower than the left, while the infra-clavicular space was shrunken. The heart was displaced and beat below the sternum, which also had been moved to the left. A hollow sound existed at the third interspace of the right side near the sternum, which indicated the site of the cavity. There had been, however, no increase of the size. The râles over the chest were few, and the signs of possible arrest numerous. This patient is still living and well.

The next case is one which, as the history reveals, commenced with pleurisy, and subsequently to this phthisis set in of the type termed by Sir Andrew Clark "fibroid." The narrative in this case was given to me personally at Denver, and I can substantiate the fact that the disease has been arrested, and that the gentleman in question is now able to conduct medical consulting practice.

C. H—— graduated at the University of Edinburgh in 1879, and subsequently obtained a position as surgeon in one of the Allan line of steamers. As a student he was healthy and robust, and continued to be well until six months after he had entered on his appointment. When walking up a hill one day, during the time the steamer was lying in the harbour at Lisbon, he felt a pain in the left side, and some difficulty of breathing. On returning to the steamer he examined his chest, and detected dulness at the base of the left lung. From the fact that he had no fever, he concluded that his case was one of chronic pleurisy, and he applied as an absorbent linimentum iodi externally, and took a mixture of iodide of potassium in a bitter infusion. These means seemed to be effectual in removing the effusion, and he considered he was better. On the return of the steamer from Valparaiso, and near to the port of Liverpool, he had a severe attack of hæmoptysis, and when this was checked there remained for some time a streaked bloody expectoration. He gave up his appointment, and went in the autumn to his home in Canada, where he remained six weeks. Here he was comparatively well. There was no return of the hæmoptysis, and he only suffered from general weakness, a slight cough, and occasional night sweats. Not feeling his recovery progressive, he yielded to the advice of a physician in Montreal, and came to Denver about the middle of October. Dr. Denison reported then as to his condition as follows: "A cracked-pot sound is heard over the left bronchial interspace, and from that spot there is dulness down the side before and behind." He stayed quietly at Denver for six months, taking daily exercise when the sun was shining, and carefully returning to the house in the evening. In the spring he went to a ranche, and remained there for two years. Except at meals and when sleeping he was constantly in the open air. He considered himself quite strong, and commenced practice at Utah. Six months' experience of this city convinced him that the moisture in the air from the Salt Lake was seriously detrimental, for he lost weight, and cough and expectoration returned. He accordingly left and came to Denver, where he now practises, and enjoys good health. He has no cough, and is able to walk and drive without fatigue. He is, however, conscious that a moist air and a variable climate would soon set up fresh mischief, so he elects permanently to live in an atmosphere which is pure and dry.

I append another case which came under my observation on a voyage I made to New York in the autumn of 1886.

The patient, by the advice of a physician, was ordered to Colorado for the winter. He had suffered for six months from a short hard cough, as the result of pleurisy, from which he seemed to have recovered, and occasionally expectorated blood. Two days after leaving Morille, hæmoptysis of an alarming character set in, and continued, notwithstanding all astringents tried, until New York was reached, eight days afterwards. He brought up two pints of blood daily, and his frame was so weakened that on arrival at New York he had to be carried to an ambulance waggon, which conveyed him to the Presbyterian Hospital. Two weeks later I visited him, as he was anxious to learn what I should advise him to do. The hæmoptysis had not recurred during the period mentioned, and after making an examination of his chest, I advised him after a rest of three weeks more to proceed to Colorado. I did so for these reasons: 1. While one lung was hopelessly gone, the other did not seem to be affected. 2. If he returned home he was certain to die; if he went on he had a chance of recovery. I was gratified in the summer to learn that his progress had been steady, that he was able to walk six miles without fatigue, and that he had commenced to do business as an estate agent. While I remained in Denver I failed to see him, as he was away from home, but the report received as to his health from others was satisfactory, and in a letter I received from a medical friend at Denver, while this article was going through the press, he says: "Mr. S—— has called, and is looking well, but had one or two hæmorrhages during the summer. He expressed very great regret that he missed you in Denver, but will write you at an early date and give you an account of himself."

Statistics of Deaths for the last five years in Denver.

Year.	Total deaths.	Consumption.
1882	494	48 .....
1883	808	111 .....
1884	840	106 .....
1885	945	155 .....
1886	991	186 .....
1887*	995	156 .....

* Up to August.

Since 1885 the deaths from consumption have been carefully tabulated according as they were contracted east or west or in Colorado. The explanation of "contracted east" means any state or territory east of the Missouri, and "contracted west" means any state or territory west of the same river, other than the state of Colorado. Thus, out of a total of 2981 deaths from 1885 to Aug. 31st, 1887, 497 were attributed to consumption, and from these only 33 contracted the disease in Colorado. Since 1882 the death-rate from all sources has markedly increased, but it is to be remembered that since that time Denver has nearly doubled its population, the estimated population now being 80,000. Industries and trades are flourishing. Printing, bookbinding, and shoemaking employ a large number of hands, and we know from the death-rate of other cities that these employments notably increase the mortality from

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phthisis. The very small proportion of 33 deaths from phthisis contracted in Colorado out of 497, shows the influence of the rarefied air in protecting the frame from causes which would otherwise operate in originating tubercle.

General conclusions.—The testimony of the physicians I spoke to in Denver and at Colorado Springs was this: that the high altitude is specially recommended for (1) early phthisis, or where there is a tendency to this from hereditary predisposition; (2) hæmorrhagic phthisis; (3) chronic pleurisy, where after the removal of the fluid the lung does not expand, and in chronic pneumonia where the consolidation is not removed; and (4) the second stage of the disease, when it appears to be quiescent and there is no evidence of rapid disintegration. The patients who should not be sent are those who suffer from heart disease, chronic bronchitis, emphysema, or where with phthisis in the first two stages there is any nervous irritation and sleeplessness or affection of the kidneys. They were also pronounced on a crucial question—viz., that there was not complete recovery, except in the incipient stage; that there was only a drying-up of the tubercular deposit, which would again become active if the patient returned for however brief a time to a climate which was variable and moist. The continuance of the dry aseptic air was essential, and disregard of this fact led to a rapidly fatal issue. The patient, male or female, in whose case the phthisis is arrested, must necessarily live permanently in Colorado or in a high altitude. Fortunately this State is young. There is room for all, and with renewed vitality and vigour the no-longer invalid can find something to do, either in the open air or in some in-door employment. But if Colorado does not seem a sufficiently large field, there are abundant proofs of the growing activity of Kansas city, situated in the State of Missouri, but very near to Colorado, and with an altitude of 4000 feet. Here is a city increasing by leaps and bounds, or, as it is termed, a "boom." Within six years its population has doubled, and one hundred trains daily pass through the central depôt. I have never visited any city which exhibited such marvellous growth, and whose future seemed so full of promise. It has become a serious rival to St. Louis, and some sanguine prophets already term it "the Chicago of the West." Speaking from a sanitary point of view, it is visibly extended over a wide area, with no poor or crowded alleys. The streets are wide, and cable cars move rapidly and often through the thoroughfares; and in the evening the electric light sheds its brilliancy over the streets, and pervades theatres and places of business. In THE LANCET of July 9th an editorial article states, and justly so, that "a hospital is but a poor part of the remedy for the misery of consumptive disease." And further, "we also require a large charitable fund for the good of those threatened with, rather than those actually ill of, phthisis. A change of air would do more for such cases than any mere hospital treatment, and is a form of charity that would be worthy of the Jubilee year of Queen Victoria." In a like spirit, but not in such well-chosen words, I ventured to advocate the same fund at the last meeting of the British Medical Association in Dublin, and, I may add, the paper was sent to the secretary of the Therapeutic Section on July 1st. I wrote at that time from no personal knowledge of the climate suitable all the year for such cases of phthisis; but I am glad to state that my autumn holiday has enabled me to visit Colorado, and I am convinced that in its pure dry air many patients who linger at home only to die might there get better and work and do well. Would that some millionaire might be induced to give out of his abundance the foundation of a large charitable fund, such as THE LANCET suggests; and if inclined to do so now, the Latin adage, "Bis dat qui cito dat" should be present to his mind.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—The Princess Christian paid a private visit to this hospital on the 19th inst. Her Royal Highness was received by the vice-chairman of the hospital, Sidney Gosnell, Esq., and by the secretary, Mr. Austin, and conducted through the wards, speaking most kindly to the patients. Before leaving she expressed a wish that one of the wards should bear her name, and be called the "Helena Ward." The Princess expressed pleasure with the arrangements of the hospital, and regret that some of the wards were closed for lack of funds, and hoped that she might soon hear of their being opened.

THE VALUE OF COCAINE IN OBSTETRICS.

BY JOHN PHILLIPS, B.A., M.B. CANTAB., M.R.C.P.,
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COCAINE is now so generally used locally as an anæsthetic, that it seems rapidly assuming the *rôle* of a universal panacea for all pain. This indiscriminate use cannot, however, be too much deprecated, more especially in obstetrics, and it seems most desirable that certain rules for its administration should be laid down. Statistics of any value on this subject are scanty, but all the more important contributions have been analysed, and the result embodied in the following lines:—

The action of cocaine may be considered under five heads: 1. The vomiting of pregnancy. 2. During the dilating stage of labour. 3. During the expulsive stage of labour. 4. During any necessary obstetric operations, be they ante-partum, intra-partum, or post-partum. 5. Sore nipples.

1. *The vomiting of pregnancy.*—Weiss[1] appears to have been the first to call attention to the drug for this object, and gave it as a last resource, but with entire success. He administered it as the hydrochlorate in doses of one-sixteenth of a grain, by mouth, every half-hour. Fraipont[2] reports several successful cases; he prefers to administer it by subcutaneous injection of twenty minims of a 4 per cent. solution into the epigastrium. Engelmann[3] relates a most obstinate case, where morphia, cauterisation of the os uteri, and injection into the rectum of CO_2 had all been tried without avail. He gave ten minims of a ten per cent. solution thrice daily by mouth, with entire recovery in two days. Bois[4] relates the case of a young multipara who was brought to a moribund condition by pregnancy vomiting; she had arrived at the fourth month. He made a pomade of cocaine hydrochlorate and vaseline (1 in 50), and placed a piece the size of a filbert against the os uteri: a fresh application was made night and morning. Amelioration of her symptoms soon began, and at the end of three weeks recovery was complete.

Here, then, we have cocaine administered in every variety and with evident success. My own experience amounts to two cases. In Case 1, a nervous primipara at her seventh month, vomiting occurred after every meal, and she was reduced to lie upon the couch all day, but unfortunately with no good effect. After trying the usual remedies, bismuth, soda, and ingluvin, I prescribed cocaine as follows:—Cocain. hydrochlor., $\frac{1}{10}$ gr.; tinct. aurantii, 10 m.; mist. chloroformi, $\frac{1}{2}$ dr.; aquam ad 1 dr.; every three hours. There was a peculiar numb sensation about the tongue and fauces after each dose, but the effect upon the stomach was remarkable. The vomiting gradually ceased, and in three days she was able to take soup and milk puddings, and in a week became quite well, and went to the termination of her pregnancy without further return of her trouble. In Case 2 the result was more in doubt. Vomiting was general all day, the patient being at the end of the fourth month. The drug was administered as before and was taken continuously for a fortnight. The vomiting gradually ceased and never returned. Of course here it might have stopped in consequence of the natural progress of pregnancy.

2. *During the early stages of labour.*—I am able to bring forward four cases of this kind, three being successes and one an absolute failure. The first case, A. B——, a primipara, aged eighteen years, had been in labour six hours when I saw her. The os uteri just admitted the tip of the examining finger, and no thinning of the lips had as yet occurred. The pains were most severe; she was throwing herself about and crying continually. I inserted one of Head Moore's cones[5] immediately after a pain; it was almost entirely dissolved in nine minutes. The effect was at once apparent, the pains coming more regularly even than before; but between them the patient gradually dozed off and cried out no more. The effect of the drug was kept up for four hours, at the end of which time the os uteri was thinned out and dilated fully. Labour terminated naturally. The next two cases were counterparts of the fore-

[1] Prag. Med. Wochensch, 1884, No. 51.
[2] Ann. de la Soc. Médico-Chirurg. de Liège, 1886, p. 367.
[3] Cocain bei unstillbaren Erbrechen der Schwangeren, Centralbl. f. Gynäk., 1886, p. 396.
[4] Bulletin général de Thérapeutique, 1886, p. 507.
[5] Brit. Med. Jour., 1885, vol. ii., p. 1140.

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going, but the last, for some unexplained reason, was entirely unrelieved. In order to understand the effect of the drug, we must try and analyse the early pains of labour. Two agents unite to produce them: 1. The pain of uterine contraction—similar, indeed, to any other organ consisting of smooth muscular fibre, endeavouring to expel its contents. 2. The pain resulting from the stretching of the nerves of the cervix and the lacerations of the cervical tissue (more or less slight) which doubtless occur. Over the first cocaine has absolutely no control, and its beneficent effect in this stage is due to its mitigation of the second kind. Doleris and Dubois[6] painted the uterine neck through a speculum with a 4 per cent. solution of glycerine and hydrochlorate of cocaine. They experimented in eight cases, and in six the result was decidedly affirmative. Jeannel[7] relates six cases, and in five of them (three of which were successful, and which he gives in full) he applied cotton-wool tampons soaked in a 5 per cent. solution to the cervix and posterior vaginal cul-de-sac. In the first case he cautions us against the use of bichloride of mercury with cocaine, as he found the former decomposes alkaloids with great rapidity. In three successful cases by Fischel[8] a 2 per cent. solution was applied to the cervix on a tampon, and repeated every twenty minutes. In two others, however, a similar application of a 4 per cent. and then a 2½ per cent. solution produced a negative result. The method adopted by Hartzhorne[9] is to introduce through a female glass syringe, as high up as possible behind the cervix, the following mixture: Cocaine, 6 parts; glycerine, 20; and vaseline, 24.

And now as to the best mode of application of the drug. I must here venture to differ with those who use the speculum. The objections appear to be (1) the exposure necessary; (2) the idea which must imbue the patient that some operation is about to be performed, in spite of all assurances to the contrary; (3) the removal of the vaginal discharge necessary before the application of the drug, which would be detrimental to the course of the labour; (4) a very large number of hyperæsthetic primiparæ can scarcely bear an ordinary vaginal examination, much less the introduction of a speculum, and these are the very cases in which cocaine is of so much value. I always use Moore's cones, because of their simplicity and painless introduction—because of their antiseptic properties and the ability to use them without the patient's knowledge. Indeed, I think no improvement can be made upon them, either in composition or shape.

3. *During the expulsive stage of labour.*—Here the factors causing the pain are much more numerous. We have (1) the deeply seated pain from compression of the large nerve trunks; (2) the pain of the stretching of the perineum and vulva, which is most excruciating; (3) the pain from compression of the mucous membrane against the pelvic bones; and (4) the pain of true uterine contraction. It is only from the third that any relief is obtained, as all mucous membranes are anæsthetised by a 2 per cent. solution of cocaine. The part this factor, however, takes in the totality of an expulsive pain must be so slight that it may be neglected, and almost before making experiment we can say, on physiological grounds, that any certain or marked relief is out of the question. In six cases in which I have tried the drug either in the form of saturated tampon (5 per cent.) or painting the vulva with it, I have found practically no amelioration of the pains, and I need therefore not detail the individual cases. In a very elaborate paper by Fränkel ("Ueber Cocaïn als mittel zur Anasthesirung der Genital-schleimhaut"[10]) he confirms this view, and concludes his paper as follows:—"That it is little probable that cocaine can be used as a local anæsthetic in labours, because anæsthesia and analgesia developed under this drug are essentially superficial, while the pains of labour are the result of distension and stretching of tissues through their whole thickness." Drs. Dabbs and Hartzhorne have, however, used it extensively, and with very favourable results. I have met with isolated instances in the literature on the subject, in which a favourable result was thought to have occurred, but they scarcely influence the general result.

4. In this class it has suggested itself to me that cocaine might be useful, as, for instance, to anæsthetise the vulva in the operation for induction of premature labour by catheter, or the application of forceps on the perineum, or removal of an adherent afterbirth. I have had no experience of its value in these cases, and therefore content myself with making the suggestion. Hale[11] reports two cases where it was entirely successful in post-partum "vesical neuralgia." He injected twenty minims of a 2 per cent. solution into the urethra, with an immediate disappearance of the pain. A case is related in the *Cincinnati Lancet and Clinic* (Nov. 4th, 1884), in which cocaine was applied with success to the vulva of a recently delivered woman in order to pass the catheter, and there seems no reason why in cases like this the drug should not be of great service.

5. It is in *sore nipples* that cocaine has been most frequently tried, and again with doubtful results. Hergott[12] first made a local application of a 4 per cent. solution in nine cases, and concludes that suckling can be allowed without pain; the fissures rapidly heal, and cauterisation of them by nitrate of silver becomes a painless proceeding. Mecuen[13] found complete relief from pain in three cases he experimented upon. I have tried a 6 per cent. solution in four cases, and must confess that I was disappointed with the result. The anæsthesia produced was more or less deep, but only lasted two minutes, and the sores certainly did not tend to heal more quickly. In three cases weaning was deemed necessary, while in the fourth healing took place and successful lactation followed. Children do not object to taking the nipple after the application of the drug, nor do they appear to suffer in general health.

We may therefore draw the following practical conclusions:—1. That cocaine in whatever way administered for uncontrollable pregnancy vomiting is a valuable adjunct, and in some cases a superior drug to those at present in vogue. 2. That during the painful earlier stages of labour, especially in primiparæ, it materially assuages the pains, but neither quickens them nor retards their onset, and hence has no effect on the actual dilatation. 3. That it is useless in mitigating the pains of expulsion and those caused by pressure on the perineum. 4. That in the case of sore nipples it relieves the pain attendant on suckling, though the duration of its effects is not sufficiently long to be of material service. It is, however, without any apparent detrimental effect upon the suckling.

Harley-street, W.

[6] Archives de Tocologie, 1885, p. 165.
[7] Nouvelles Archiv. d'Obstetr. et de Gyn., 1886, vol. i., p. 216.
[8] Prager Med. Wochensch., 1886, No. 16.
[9] THE LANCET, 1886, vol. i., p. 1148, and personal communication.
[10] Central. f. Gynäkol., 1884, No. 49, p. 777.
[11] Nouvelles Archiv. d'Obstet et de Gyn., 1887, vol. ii., p. 291.
[12] Annales de Gynécologie, 1885, vol. xxiii., p. 81.
[13] Boston Med. and Surg. Jour., 1885, vol. ii., p. 239.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE SCIENTIFIC TREATMENT OF CONSUMPTION.

BY G. W. HAMBLETON, L.K.Q.C.P.I.

THE following are short notes of the four cases to which reference was made in my paper read before the British Association at Manchester.

CASE 1.—In April, 1883, I saw H. O. M. E ——, a married lady, in conjunction with the gentleman who had attended her. We found the usual signs of phthisis of the right lung. Family history good; height 5 ft. 2 in.; vital capacity 85 cub. in. I accompanied the patient to Hastings, and saw that she was carefully treated on the principles I advocated in that paper.—June 13th: Much improved; vital capacity 130 cub. in.—21st: Improvement continues; now able to walk a mile or two; vital capacity 162 cub. in.—29th: Able to walk four miles; vital capacity 167 cub. in. The patient was unfortunately obliged to return to town. The improvement stopped, and after a few weeks she began to lose ground. In September the patient went to the Isle of Wight, the vital capacity then being only 161½ cub. in.—Oct. 9th: Very much improved: vital capacity 195 cub. in. She continued in the south, and was gradually accustomed to walk many miles daily; no chest symptoms.—Nov. 4th: Patient's appearance that of a lady in good health; vital capacity 201½ cub. in.—25th: Continues well; vital capacity 222½ cub. in.—Dec. 11th: Patient has recovered; angles of scapulæ lie flat on back; chest freely movable, and vital

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capacity 226 cub. in., or 44 cub. in. above the so-called standard of health. Since that date the patient has had two children, there has been no relapse, and in September last her vital capacity was 220 cub. in.

CASE 2.—L. J. F—— was said to have disease of the right lung by the family doctor. The patient's father and uncles had died of consumption. I found the disease very limited, and the case a most favourable one to treat. Height 5 ft. 6 in. Chest girth at third rib 30 in., extent of movement ½ in.; girth at ensiform cartilage 29 in., extent of movement 1½ in. Treated on the same principles, the patient steadily and rapidly improved. Two months later the chest girth at the third rib was 32⅛ in., extent of movement 1⅝ in.; girth at ensiform cartilage 30 in., extent of movement 3 in. Two months after the above the patient had practically recovered. There was a further gain of half an inch in girth; no depression above or below clavicles; angles of scapulæ flat, and the weight 9 st. 5 lb. The patient continues well.

CASE 3.—This was a servant with disease of both lungs. The patient was sent home to the country, apparently recovered, and desired no further attendance. I have since lost sight of her.

CASE 4 is that of myself. It will be fully understood that I only refer to it to complete the *primâ facie* case I have established in support of this method of treating the disease. My mother, her three brothers, and two sisters, died of phthisis. In physical appearance I was a well-marked example of the so-called "inherited" disease. Height 5 ft. 9¼ in., vital capacity considerably below the so-called standard; was always subject to winter cough; broke down while attending hospital in 1873, and was advised to leave at once in the middle of the session. There was no doubt about the nature of the disease. Since that time I have gained about five inches in chest girth, and for ten years have been free from any sign, symptom, or appearance of disease.

Upper Gloucester-place.

SALIVARY CALCULUS OCCUPYING WHARTON'S DUCT AND A PORTION OF THE SUBLINGUAL GLAND BENEATH.

By JOSEPH DIXON, L.R.C.P. ED., &c.

FOR a period of fifteen years my wife has from time to time been subject to a peculiar form of dyspepsia, which has occasionally been intractable to treatment. Not until recently did she inform me of the following symptom, and indeed took pains to conceal it from me until her distress induced her to tell me, or rather till I began to notice it myself. This was a swelling, more or less marked during or after meals, of the submaxillary and sublingual glands. This, she says, has always been worse after eating pork—a kind of animal food she could not for a long time be induced to touch. A week ago she complained of a saltish taste in the mouth, and called my attention to a purulent discharge appearing on one side of the frænum linguæ. At this time there was a swelling to be perceived, and articulation and deglutition caused pain. On examination, by passing the finger along the course of Wharton's duct from near the orifice of that canal to the position where it passes beneath the gustatory nerve, a distinct swelling could be clearly defined; it was very hard, and appeared to be about the size of a date-stone. An attempt was made to pass a fine eye-probe, which, however, could not be done without causing pain. I then with a tenaculum made an exploration, and from the grating sound it caused I readily ascertained that a stone was present. My patient was determined that I alone should perform the necessary operation for her relief; accordingly, on Saturday morning, Oct. 29th, I determined to extract the calculus. As I had no assistance, no anæsthetic was administered, but I injected ten minims of a 4 per cent. solution of hydrochlorate of cocaine into the submucous connective tissue of the sublingual gland, in the immediate neighbourhood of the calculus. I need not take up time in describing an operation of such a nature; but I may here remark that, except no pain was felt in inserting a sharp hook to draw forward the sublingual gland and making an incision about an inch long, considerable suffering was undergone in extracting the concretion. This, I may mention, was rendered somewhat difficult owing to its under surface being rough and spiculated, thus affording firm attachment to the connective tissue of the sublingual gland, in which it was deeply embedded. The physical characters of the concretion were—length one inch; shape conical, resembling a canine tooth; weight ten grains. Its chemical composition was apparently calcium phosphate.

Kempston, Beds.

CURIOUS COMPLICATIONS IN A MIDWIFERY CASE.

By HOWARD D. BUSS, M.R.C.S., L.S.A.

I WAS called to see Mrs. T——, multipara, aged thirty-five, on the night of Friday, Oct. 7th. On my arrival I found that she had had a sharp attack of hæmorrhage, which had just ceased. It came away, she told me, in a gush and then stopped. I made an examination, but could not make out anything except that the os was undilated. I was called again to her on Sunday evening, Oct. 9th, and found her in labour. Having made an examination, I found the os very high up, but dilating slowly, and could not make out the presentation. By palpation and auscultation I discovered that the head was in the normal direction—viz., downwards,—but it could not then be felt per vaginam. The pains continued regular and strong, but very little progress was made until about two hours after my arrival, when the child had descended sufficiently for me to make out that there was a placenta prævia, and situated more to the right than the centre. The patient having had bad times with her last three confinements, and the placenta having been adherent, I thought it advisable to call in some assistance. A neighbouring medical man was accordingly sent for, and on his arrival, after the placenta had been detached from the left side, we found that the right hand was presenting, together with the head and the right foot. As the pains were very strong, chloroform was administered. I inserted my hand into the uterus, drew down the presenting foot, and tried to get hold of the other, but found it impossible to do so, as the thigh was close to the abdomen and the foot near the head. Traction was made on the presenting foot till the buttocks were born, and then the other foot, being easily within reach, was brought down. I then drew down the arms and got them safely outside the vagina. The head not showing any signs of coming away, I put the forefinger of my left hand in the mouth, and, using traction there and also to the body, succeeded in extracting the child. The placenta was firmly adherent to the right side of the uterus and required detaching. It was very thin and small. The patient has not had a bad symptom, and recovered rapidly. The child (a male) was dead.

It is rather curious that the woman did not have any hæmorrhage previous to Oct. 7th, as this is a sign of placenta prævia. She had complained of pain in her right side for some months, but had never had any loss until that date. Her pelvis is very capacious, and she had a quantity of liquor amnii. In her three last confinements the placenta had been adherent and required taking away piecemeal. I cannot find any account of such a combination of complications.

Leominster.

A CASE OF LUMBAR HYPERTRICHOSIS.

By ARTHUR H. DODD, L.R.C.P. LOND., M.R.C.S. ENG.

AN abstract of a lecture by Mr. Bland Sutton, reported in THE LANCET of July 2nd, on Spina Bifida Occulta, reminded me of a case I had seen a few months previously which in certain particulars seemed somewhat similar to those referred to in the article; I have therefore thought that a few notes might be of interest.

A girl aged six years came under my care in May last, when, having occasion to examine her, I discovered the unusual development of hair in the region of the loin. The mother had noticed at the child's birth a quantity of fine downy hairs, which have continued to grow up to the present time. She had never noticed any swelling or anything else unusual about the part, nor has the child ever complained of weakness locally. The skin is normal and not pigmented at all, and apparently the same as that in the immediate neighbourhood. The hairs, which are equally distributed on both sides of the loin, are the same in texture

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and colour as those of the head, and the longest measure six inches and a half. No deficiency or irregularity can be detected in the form of the spine, and there is no localised tenderness. Neither is there deformity, nor at present any ulceration about the foot, but she is troubled rather with cold feet and chilblains in the winter.

Remarks.—The position and distribution of the hair, together with the history of the case, seem to point to a case of spina bifida occulta, but not being able to detect anything abnormal about the spine, I have hesitated to place the case under that heading. In nearly all those reported in the article referred to, disease of the bones of the foot seems to complicate the case. The patient in the present instance is younger than any of those mentioned, and I am unable to find what is the youngest age at which perforating ulcer commences. I have, however, impressed upon the mother the importance of bringing up the child at once for examination should any pain or trouble occur about the feet at any time.

West Brighton.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A SERIES OF RENAL CASES, WITH REMARKS.

(Under the care of Mr. HULKE.)

THE following cases are the continuation of a series illustrative of renal surgery commenced at p. 1012 of our last issue, one of the chief points of which is the complete account, including the ultimate result, given in the more important, although in two instances the history extended over a period of some months. Mr. Hulke has appended remarks to each case fully explaining it, and pointing out its chief features. These cases are reported by Mr. G. S. Ware, house-surgeon.

CASE 5. *Nephralgia; simulation of renal calculus; exploration of kidney.*—On Nov. 10th, 1884, a tailor, aged nineteen years, was admitted into Founder ward complaining of attacks of excessive pain in his left kidney. He said that the pain began in the loin, and it thence darted down the abdomen into the testis, which became drawn up, and into the thigh. He described the pain as "agony." These attacks, he said, quite disabled him, making it impossible for him to follow his calling; they "doubled him up"; his life had become a burden to him, and he was ready to submit to anything that could be proposed for his relief. The first of these attacks, he said, occurred about twelve years ago. Four years later, during such a paroxysm, blood was first noticed in his urine, and this had occurred also in some of the more recent attacks.

On admission nothing abnormal could be felt in the left loin or abdomen, and he bore firm pressure on those parts when his attention was diverted from them. The urine was clear and light-coloured; sp. gr. 1016; its acidity, and the average daily quantity voided, were normal.

On Nov. 15th the left kidney was exposed by a lumbar incision, and its dorsal and ventral surfaces were examined by touch with a negative result. The organ was next pierced in several places with a needle. No abnormal condition being detected, further surgical interference was judged improper, and the wound was closed. It soon healed, and on Dec. 15th he was allowed to leave his bed.

During the first few days following the operation he complained of being unrelieved; then for a few days he said he felt better, and later again he expressed himself as suffering greatly. On Dec. 29th he first mentioned that twelve years before he had swallowed a pill, and he attributed his illness to this having stuck in and remained in his kidney. This was regarded as an illusion, and in his hearing a prescription was gravely dictated in Latin, and the ward sister was enjoined to measure out carefully and herself administer the exact dose. It consisted only of a few grains of sodium chloride dissolved in water, coloured with spt. lavand. co. The hope was expressed to him that this powerful remedy might dissolve the pain and relieve him of all his suffering. The effect of this placebo for some days appeared magical; all pain was absent, he was cheerful, and appeared happy; but later the former symptoms returned, and in January he left the hospital disappointed because he could not have his kidney cut out. His further history is unknown.

Remarks by Mr. HULKE.—The general appearance of the patient was so little in accord with such prolonged and severe suffering as he described, and his manner of expressing himself betrayed so much exaggeration, that from the time of his being admitted doubt was felt whether his disorder was not neurotic, and not calculus. It was thought not improbable that having been already under the care of several medical men, he might from their conversation about him have gleaned the symptomatology of renal calculus, and that his mind dwelling on the idea of this disorder, he might have come to believe that he had it. The occasional difficulty of detecting a small calculus within the kidney, even by direct palpation and puncture, is so well known that we are not justified by the negative result of the exploratory operation in denying the presence of such calculus in the organ, but we think it highly improbable in face of the very thorough examination of the kidney that it would have eluded discovery. This improbability of its non-detection, together with the subsequent history of the pain, and the magical though transient effects of sodium chloride, warrant the hypothesis that the patient's disorder was purely neurotic. His age, his appearance, and his demeanour whilst in the hospital well accorded with the above view of his malady.

CASE 6. *Suppurating tubercular kidney; perinephritic abscess; exploration by lumbar incision.*—On Feb. 24th, 1884, a maid-servant, aged twenty-one years, in a state of extreme emaciation and feebleness, with sunken flushed cheeks, was transferred by Dr. Cayley to Bird ward under Mr. Hulke's care. The left side of the abdomen was distended by a visibly prominent swelling which posteriorly filled the interval between the twelfth rib and the crista ilii; anteriorly, reached to within an inch of the middle line; above, nearly touched the line of the costal cartilages; and, below, very closely approached Poupart's ligament. The whole area thus marked out gave a dull percussion note. Above, it was separated by a narrow resonant interspace from the area of splenic dulness; and below, an equally narrow clear interval occurred between it and Poupart's ligament. The whole front of the swelling had a degree of firmness suggestive of solidity; but in the loin there was slight elasticity, giving rise to the suspicion of deeply situated fluid. Handling the abdominal swelling occasioned only trifling discomfort; marked tenderness was certainly not present, but the woman said that the swelling often occurred. Her urine was high-coloured and scanty, and the temperature febrile. She had diarrhœa. An examination of the chest disclosed moist inspiratory crackling over the front of the left lung, and posteriorly impaired percussion-note over both bases. The patient stated that five weeks previously, being at the time in good health, she was seized with backache, giddiness, and with pain in the left loin, aggravated when she drew a deep breath. These symptoms increasing in severity soon obliged her to take to her bed. A medical man called in by her employer, thinking that she had typhoid fever, procured her admission into the London Fever Hospital, whence she was transferred to the Middlesex Hospital by Dr. Cayley, who thought the swelling was probably a renal or peri-renal abscess.

At 2 P.M. on the day of her admission into the latter hospital, the swelling was explored with an aspirator passed into it between the twelfth rib. A little thick, flocculent blood-pus flowed. An incision was then made through the loin into the swelling, giving escape to a quantity of similar pus when the stratum of peri-renal fat was divided. The finger then passed into a large ragged cavity or space without distinct walls. This was washed out with a solution of chloride of zinc (forty grains to one ounce of water); a drainage tube was inserted, and the wound closed around it. At the operation, and in the dressing, the customary antiseptic precautions were observed. In the course of the same night the patient's breathing became short and hurried, and she had a distressing pain in the left side of the chest; pleurisy had supervened. Next

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morning she complained of sore throat, and the presence of an ulcerative pharyngitis was noted. The diarrhœa persisted, and, later, vomiting was superadded. Her little strength declined, and her condition soon appeared hopeless, but she lingered until March 16th, having survived nineteen days since her entry into the Middlesex Hospital (and the date of the exploration), and about nine weeks in all from the known beginning of her illness. A few days before her death the discharge from the lumbar incision became fetid.

At the necropsy the abdominal swelling proved to be an immense scrofulous kidney, centrally liquefied and sloughy. The right kidney was similarly affected, but in a less advanced stage. No evidences of tubercle were found in any other viscera. There was a septic suppurating infarct in the spleen, and in the lungs scattered purulent lobular pneumonia.

Remarks by Mr. HULKE.—This case would appear to be an example of primary renal tuberculosis, a disorder usually chronic, but here taken an exceptionally rapid course. It is possible that the tuberculosis may have long existed latent and insidiously progressive, and unmarked by obvious symptoms until the supervention of acute suppuration in the latter half of January, which gave rise to the supposition that the patient was suffering from typhoid fever. To the early accession of septic infection (it scarcely admits of doubt that this preceded the lumbar incision), hastening, as it did, the fatal termination, is probably referable the non-extension of the tubercular disorder to other viscera. The concurrent implication of the right kidney would have barred nephrotomy, even had the condition of the left been correctly diagnosed.

CASE 7. *Large myxoma enclosing the left kidney, extirpated together with this organ by abdominal section; recovery; recurrence of neoplasm, and death, about twelve months after the operation.*—On Feb. 22nd, 1886, a lady's maid, aged fifty years, a sallow, very feeble, and extremely emaciated brunette, entered Middlesex Hospital, under the care of Dr. Cayley, with an abdominal tumour, which occupied the left loin and the iliac region. In front it rose to the level of the umbilicus, and extended inwards to the middle line. The resistance in the left loin, very distinct when the patient was lying on her back, became somewhat less evident when she turned on to her right side, indicating a slight mobility of the mass. Except in a limited spot behind, the whole area occupied by the cancer gave a dull percussion note. The tumour was very elastic, but true fluctuation was doubtful. Dr. Edis, by a vaginal examination, found the uterus displaced upwards and towards the right; and he ascertained further that the tumour did not descend into the pelvis, and that it did not appear to have any connexion with the pelvic viscera. The urine was pale, clear, of average quantity and acid reaction; its specific gravity was 1015.

History.—The patient related that she had first noticed the enlargement of the abdomen in the preceding January. Coincidently with this she had begun to lose flesh and strength, and she had latterly through weakness become unable to discharge her work.

Diagnosis.—The position and the other circumstances of the tumour appeared best explained by the supposition of its being renal, and such it was considered to be; whilst its rapid increase, the coincident deterioration of health, and the patient's age concurred in favouring the idea of its being a malignant neoplasm, and not improbably a sarcoma. The apparently definite outline of the mass, together with some amount of mobility, encouraged the hope that it was yet encapsuled.

Treatment.—In the expectation that extirpation might be yet practicable, and as it appeared to offer the only prospect of present relief and of prolonging life, the removal of the tumour was proposed, and accepted by the patient with a full understanding of the risk. The large size of the mass made an abdominal section preferable to a lumbar incision. On March 8th, the patient being under the influence of ether, an incision about five inches long was made in the raphé below the umbilicus. When the abdominal wall was divided the tumour immediately came into view, and on tracing the peritoneum covering it, this was found to pass on all sides from the tumour into the abdominal wall, plainly proving the tumour to be retro-peritoneal. The peritoneal covering was next divided parallel to the outer border of the left colon, which descended along the front of the tumour, and then the tumour (which in consequence of its great elasticity was thought to fluctuate) was pierced with a large trocar. In doing this a thin delicate capsule, which simulated a cyst wall, tore, upon which it became apparent that the contents were not fluid but colloid in consistence. Free hæmorrhage ensuing, the abdominal incision was prolonged, the peritoneum detached from the front and sides of the tumour, and this latter was brought to the surface and extended through the external wound. In completing this, embedded posteriorly in the colloid mass, a firmer part was brought into view, having the characters of renal tissue. A stout strand, presumably comprising the renal vessels, having been transfixed and tied in two pieces, and a lesser band connected with the lower end of them having been similarly secured, these were divided (their cut ends were dusted with iodoform), and the tumour removed. An artery of the size of the radial cut early in the operation was easily secured. The peritoneal cavity was next very carefully cleaned, and the external wound was closed and dressed as after an ovariotomy.

Progress.—A slight laryngeal and tracheal catarrh caused a troublesome cough, which slightly retarded her recovery. On the second day a vaginal sanguineous discharge appeared, and this continued during several days. At the end of one month she was regarded as convalescent, and she returned to the general ward. Subsequently a parotid abscess formed. On April 20th she was sent to a country convalescent home, where she quickly regained strength, and on leaving it resumed her former occupation. In the following autumn she began occasionally to have vague, ill-defined uneasiness in the abdomen, which increased later to positive pain; and coincidently with this she became aware of swelling. On Nov. 16th she returned to the hospital for further advice. At that date the left lumbar and inguinal regions were found occupied by a very large elastic mass, fixed, and not having any distinct limits. This was plainly a recrudescence of the neoplasm. Under the circumstances no further operation could be advised, and she went home again. We are indebted to Dr. Fletcher of Derby for notes of her subsequent progress. The tumour rapidly grew. At the beginning of February, 1887, distinct nodules were noticed in both lobes of the liver, and there was some enlargement of the lymph glands in both groins. On Feb. 19th vomiting supervened, which, though relieved by effervescents &c., recurred and persisted until the patient's death on the 27th of the same month. The mass of new growth at that time extended from the left lobe of the liver to the pelvis, and also considerably to the right of the middle line of the body. The patient's relatives would not allow an examination after death.

Remarks by Mr. HULKE.—Whilst consecutive implication of the peri-renal fat by extension into it of infective neoplasms originating in the kidney appears to be an ordinary circumstance, and the peri-renal fat also seems to be not infrequently similarly implicated in the progress of renal inflammation, and occasionally also to be the primary seat of inflammatory disorders—e.g., traumatic abscess,—it would appear to be very seldom the seat of primary tumour formation. Of neoplasms beginning in the kidney sarcoma is probably the most frequent. Long remaining encapsuled, and possessing a high degree of elasticity, such renal tumours have, as is well known, been mistaken for ovarian cysts, the error not being discovered until the abdomen was opened. From the continuity of the peri-renal fat and renal capsule, and of this latter with the interlobular dissepiments of the kidney, coupled with the fact that these structures are severally varieties of the same great tissue group—that of the connective substances,—in which sarcoma, wherever occurring, probably always arises; and from the known relative frequency of this form of neoplasm in the kidney, the inference would not appear unreasonable that a primary tumour in the peri-renal fat would probably also be a sarcoma. In the present case the neoplasm, whilst not a sarcoma, was a closely allied form. Mr. R. Williams, surgical registrar and pathologist to the hospital, reported, from a careful examination, that the tumour presented the histological characters of a myxoma, and its rough, naked-eye appearances were in accord with this. The speedy recurrence, the rapid increase, and the wide extension of the myxoma are circumstances too frequently observed after extirpation of this form of tumour, even where the knife has been thought to have been carried through perfectly normal tissues well beyond the apparent limits of the tumour, and at a distance from it which might well be regarded as sufficient to exclude their being already involved in the morbid process. Here the kidney itself was not actually invaded by the tumour, but

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merely flattened by the pressure of its mass, the principal bulk of which lay in front of it. Could the integrity of the organ have been previously known, and had not the copiousness of the hæmorrhage compelled expedition, it would have been practicable to have shelled out the organ from the mass of the tumour and preserved it; yet, in view of the locally infective character of myxomata, it may be doubted whether this procedure would have been wise, since it would have heightened the chances of recrudescence owing to minute portions of neoplasm remaining attached to the capsule. The deceptive simulation of true fluctuation noticed before, and also in the course of the operation, was well explained by the very soft, flickering colloid consistence of the mass.

BRIGHTON AND HOVE LYING-IN INSTITUTION.

DELIVERY OF A CHILD AT FULL TIME, FOUR YEARS AND A HALF AFTER AMPUTATION OF THE CERVIX FOR PROLAPSE.[1]

(Under the care of Mr. GOODE.)

M. S——, aged twenty-four, primipara, married ten months, commenced to menstruate when fourteen years of age, and, with the exception of amenorrhœa for three months, has always been regular. Her family history is unimportant. Before marriage she was a general servant, and since then has only done housework. Four years and a half ago she began to feel discomfort on walking, which gradually increased until the womb projected about four inches from the vulva. She was seen by her medical attendant, who thought it necessary to amputate with the galvano-écraseur, he having diagnosed it as simple hypertrophy. Menstruation quite normal since the amputation, and without pain. The patient became pregnant one month after marriage, and the history of the pregnancy was normal. At midday on Saturday, Feb. 19th, 1887, labour pains commenced. At 6 P.M. the membranes ruptured spontaneously, and the pains continued every ten or fifteen minutes all day Sunday, and on that evening (9.30 P.M.) she was admitted. On admission, the patient had pains about every fifteen minutes, but they were feeble, and the os, the size of a shilling, hard, and rigid, did not dilate during the pains. On examination the vertex presented, the posterior fontanelle lying over the os. It was impossible to introduce the forceps, so the patient was placed under chloroform and the os incised bilaterally, forceps applied, and the child delivered; the perineum was ruptured, necessitating two sutures; the uterus was syringed with a solution of carbolic acid (1 in 50). The child was apparently still-born, but was brought round after artificial respiration for fifteen minutes.

Progress and treatment.—Feb. 21st: Complains of smarting in vagina. Urine drawn off on the 22nd. Mother and child doing well. The former progressed until March 1st, when a speculum was passed to examine the os, which was found to be split, with the edges everted. The examination was followed by hæmorrhage, which was slight at first, but afterwards increased considerably. Hot douches and ergot failed to stop it, so the vagina had to be plugged with tampons soaked with glycerine and carbolic acid, which had the desired effect. The patient and child were discharged on March 19th.

[1] Read before the Brighton Medico-Chirurgical Society.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Removal of Tubercular Movable Kidney.—Nervous Origin of Rheumatoid Arthritis.

AN ordinary meeting of this Society was held on Tuesday last, Mr. G. D. Pollock, F.R.C.S., President, in the chair.

Mr. WARRINGTON HAWARD related a case of Excision of a Tubercular Movable Kidney. A girl, aged sixteen, had suffered for sixteen months from irritability of the bladder, pain, and purulent urine. She was pale, but well nourished, and showed no signs of disease excepting of the urinary organs. A firm lobulated tumour, having the shape and characters of an enlarged kidney, could be felt in the right lumbar region of the abdomen, and could be made to move either up under the ribs, or down into the inguinal and umbilical regions. Pressure upon the tumour produced a feeling of nausea, and manipulation was followed by rigors and elevation of temperature. The bladder was sounded and found natural. The diagnosis was scrofulous suppuration of a movable kidney. In spite of treatment by rest and drugs, the symptoms increased in severity, and the patient's health steadily deteriorated. It was decided, therefore, to remove the kidney. This was done through an incision at the outer border of the rectus muscle. The commencement of the ureter being found thickened, dilated, and lined with granulation tissue, it was attached to the upper angle of the wound. The rest of the pedicle was returned into the abdomen. The kidney was found to be enlarged and in great part converted into large cysts filled with pus and caseous material. The remaining cortex was studded with miliary tubercle and caseous deposits. Vomiting of blood came on during the second day, and the patient died forty-four hours after the operation. Post-mortem examination showed the other kidney to be of healthy structure, but greatly congested. There was a complete absence of disease in the rest of the body. Removal of the kidney was preferred to opening and drainage in the loin, because of the mobility of the kidney, of the probability that its secreting structure was extensively destroyed, and of the difficulty if the kidney be left of preventing some of the irritating and infective pus still passing into the bladder. The abdominal incision was adopted because of the size of the kidney, and its displacement towards the front of the abdomen.—MR. POLLOCK had seen a case in which scrofulous disease affected only one kidney; the disease had extended down to the bladder along the ureter. He hoped the question would be discussed as to the justifiability of removing the kidney. He compared the surgery of the kidney with that of the bladder, and especially of lithotomy and lithotrity. The state of the other kidney should be ascertained, if possible, by an examination of urine drawn from its ureter alone.—Mr. HOWARD MARSH related a case which he had communicated to the Clinical Society. In this case the one kidney was movable; abdominal section was made, and the right kidney was found to be healthy; the left kidney was removed, and the patient recovered. It was a question whether the condition of the kidney could be ascertained through the anterior abdominal incision; by its means a more satisfactory exploration could be made than by lumbar palpation. He referred to one case in which extensive adhesions prevented his removing the kidney by the lumbar incision, and it would have been very difficult to have removed it by the abdominal incision.—Mr. THOMAS SMITH asked whether Mr. Haward drained the wound from the loin. The pulse stopped during the application of the ligature in Mr. Haward's case. He suggested that the ligature of the ureter should be first, next the artery, and then the vein, and by this means we might avoid much of the shock of the operation.—Dr. ORD would always be very slow to advise removal of the kidney unless he were very sure that the other kidney was sound, and this to be ascertained by the percentage of urea taken from the ureter of the sound kidney.—Mr. A. E. BARKER referred to a case in which he had, with Mr. Victor Horsley, taken tracings of the pulse during the application and drawing tight of the ligature to the pedicle of the kidney. The pulse and the tracing showed that but little effect was made on them by the procedure of ligature. A case of tubercular pyonephrosis of the right kidney was referred to, which was opened and drained, with much relief for a time. The urine from the bladder was acid, contained a little pus, and a fair percentage of urea. The opposite kidney, supposed to be sound, was in a far greater state of suppurative disease than the one on which an operation had been performed; this was ascertained by a necropsy, and fully justified Mr. Barker's refusing to remove the right pyonephrotic kidney.—Mr. BARWELL narrated a case in which ligature of the pedicle *en masse* was rapidly followed by death from shock. In two other cases treated in the same way no shock occurred. In a fourth case some considerable shock occurred, even when the constituents of the renal pedicle were tied separately. He considered it very important to ascertain the amount of urea discharged per diem.—Mr. WARRINGTON HAWARD said there was a difficulty in deciding, even by an examination of the urine, whether the other kidney was certainly healthy. It was also exceedingly difficult by mere palpation to say whether the remaining kidney was sound.

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In his own case he allowed the edges of the peritoneum of the posterior wound in it to fall together, and no stitches or separate drainage was used. The ligature of the pedicle *en masse* was doubtless in his own case responsible partly for the death of the patient. Nevertheless, cases treated in a similar way showed no sign of shock.

Dr. ARCHIBALD E. GARROD introduced a paper entitled "A Contribution to the Theory of the Nervous Origin of Rheumatoid Arthritis," of which the following is an abstract:—Some of the arguments which have been put forward in support of the view that rheumatoid arthritis is a disease of nervous origin are examined in the light of a large number of cases. The statistics given are based upon a series of 500 cases. Arguments are adduced in support of the following propositions: 1st. That the causes of rheumatoid arthritis are such as might be expected to act upon the central nervous system. 2nd. That the distribution of the lesions is such as would be likely to result from nervous lesions. 3rd. That the distribution of the lesions is similar to that of certain arthropathies of spinal origin. The influence of heredity is first discussed. In 216 cases out of 500 there was a family history of joint disease, sometimes of more than one variety. There was a history of gout in 86, of probable gout in 10, of rheumatism in 64, and of other conditions which may be classed together as probably rheumatoid arthritis in 84. These figures can only approximate to accuracy as they are based upon information given by the patients. The influence of uterine causes is next discussed, and it is shown that when the female cases are arranged according to the age of the patients when the disease commenced, there is a steady increase in numbers up to the period of the menopause and a steady decrease after that period. Amongst the male cases there is no such regularity. Of the 500 patients 411 were women, and only 89 men. The influence of anxiety and care, mental shock, injuries, damp, cold, and previous rheumatic attacks, are discussed, and each of these is shown to have a share in the causation of the disease. Stress is laid upon the extreme symmetry of the joint lesions in rheumatoid arthritis, and some examples are adduced. Reasons are given for believing that there is a tendency for the joint lesions to advance up the limbs from the periphery towards the trunk. This order of invasion is by no means constant, but in particular instances it is well marked. In the localised form of the disease it is of course absent. The knees rank only second to the hands in liability to rheumatoid arthritis. Lastly, it is shown that there is a close resemblance between the distribution of the joint lesions in rheumatoid arthritis and in the recorded cases of arthritis following spinal concussion, whereas in more local spinal injuries one or more large joints are usually affected, as in tabes dorsalis. The associated nervous phenomena, such as muscular wasting, increase of tendon reflexes, &c., are regarded as secondary to the joint lesions, and as therefore lending no efficient support to the theory of the nervous origin of rheumatoid arthritis.—Sir DYCE DUCKWORTH agreed with the views expressed in the paper. The morbid anatomy of this disease required very much more investigation than had at present been given.—Dr. ORD had been interested in this subject for many years. The joint troubles were to be regarded rather as symptoms than as the whole disease. He came to the conclusion that nervous influences had a great deal to do in the causation of this disease. He believed that nervous influence was reflected from the uterine organs to the spinal cord and on to the joints. The cord also exerted a primary influence. Injury might lead to a joint affection, and then the nervous system tended to propagate the joint change to other joints. He compared rheumatoid arthritis to progressive muscular atrophy. In a case of chronic cervical pachymeningitis there was much muscular and cutaneous wasting, and later a remarkable degree of chronic osteo-arthritis developed. In another case of spinal injury joint trouble followed at a long interval the muscular wasting.—Dr. BUZZARD said that in association with Charcot's disease of the joints there was a much clearer evidence of disease in the central nervous system than was the case in rheumatoid arthritis. He alluded to the various crises and paroxysmal secretions occurring in tabes dorsalis as evidence of the involvement of the central nervous system in most cases. Eight years ago he promulgated the theory of a joint centre in the medulla oblongata, and he brought forward arguments to show that acute rheumatism might be an acute affection of the medulla oblongata.—Dr. HERRINGHAM alluded to the belief which he shared that cold and damp were very potent causes of rheumatism and rheumatoid arthritis.—Dr. GARROD, in reply, said he should have classed Dr. Ord's case of myotrophy as one in which the arthropathy was due to definite nervous lesions, and therefore not of the same category as rheumatoid arthritis.

MEDICAL SOCIETY OF LONDON.

Cerebral Hemianæsthesia. — Cholecystotomy.

A MEETING of this Society was held on Monday, Nov. 21st, Dr. J. Hughlings Jackson, F.R.S., President, in the chair.

Dr. DAVID FERRIER read a paper giving an account of the symptoms (in seven cases) and the post-mortem appearances (in five cases) of patients suffering from Cerebral Hemianæsthesia, the most of them recently under his care at the National Hospital for the Paralysed and Epileptic. Before entering into the details of the cases he gave an account of the anatomy and physiology of the internal capsule and basal ganglia, and the vascular supply of those regions. Hemianæsthesia depended on lesion of the posterior third of the hinder segment of the internal capsule, and the symptoms varied according to the extent of implication of this region, and whether the lesion invaded also the occipital region or corpora geniculata, in which case hemiopia occurred. The first case alluded to was a woman (exhibited) who had been affected for some years with hysterical hemianæsthesia. On the left side she was almost blind and deaf, had loss of smell and taste, and of common and muscular sensibility, the left hand up to the wrist excepted. The next case described was that of a woman who had never been the subject of hysteria, but who suddenly one evening became paralysed on the right side. She exhibited six months after the attack complete hemianæsthesia on the right side. She was treated in the hospital with faradisation, and recovered in the course of three months. The third case was one of hæmorrhage into the right optic thalamus and posterior division of the internal capsule, and a smaller and more recent effusion into the left optic thalamus. Besides left hemianæsthesia in this case, there was also left hemiplegia complicated with pain and spastic rigidity, associated apparently with the more recent lesion in the left optic thalamus. There were clonic spasms for a time in the right arm and leg, and the whole course of the case extended over a period of two months. The fourth was a similar case, under the care of Dr. Hughlings Jackson, in which death occurred five months after the onset of the disease. The lesion was a softening invading the lenticular nucleus and posterior division of the internal capsule of the right hemisphere. The fifth case, which was under the care of Dr. Ferrier and Dr. Hughlings Jackson, was one of right hemiplegia and hemianæsthesia, with hemiopia and some degree of aphasia and word-blindness. The left basal ganglia and internal capsule were softened, and the overlying cortex flattened; there were also adhesions of the membranes in the region of the fissure of Rolando on both sides at the upper part. There was a history of alcoholism in this case, which ran its course in two months. The sixth case, under the care of Dr. Ramskill, was one of left hemiplegia, hemianæsthesia, and hemiopia, due to hæmorrhage invading the posterior division of the right internal capsule and the occipital region. This case, like the last, ran its course in two months. The seventh case was one of cerebral tumour (sarcoma) occupying the whole of the left occipital region, and pressing forwards on the temporal and parietal lobes. Dr. Ferrier had seen the case in consultation with Mr. Lewis May five months before death, and had correctly diagnosed the position of the tumour. Besides the general symptoms—optic neuritis, &c.—of cerebral tumour, there was a right hemiopia, together with right hemianæsthesia. The question of operation was discussed, but was not considered advisable, owing to the evident extensive implication of the hemisphere. The tumour was of the size of an orange, and the parts anterior to it considerably softened.—Dr. HUGHLINGS JACKSON had seen the case last described by Dr. Ferrier. He witnessed the patient at one time in what might be termed "an attack of tremor." He had seen opisthotonos in a case of tumour of one cerebral lobe.—Mr. LEWIS MAY thought that symptoms arising from pressure on neighbouring parts might mislead one in diagnosing the exact seat of a tumour.—Dr. BEEVOR described his experiments with Mr. Horsley of stimulating in minute areas the motor part of the internal

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capsule in the monkey. The anterior motor fibres near the "knee" of the capsule caused movements of the head and eyes to the opposite side, then from before backwards were produced movements of the mouth, jaw, and tongue, the arm, the trunk, the lower limb, and lastly, the big toe.—Dr. FERRIER, in reply, referred to the difficulty of diagnosing organic from functional lesions. The association of complete hemi-anæsthesia with excellent health, and its distribution when inexplicable on anatomical grounds, led him to suspect hysteria as a cause.

Mr. J. KNOWSLEY THORNTON read notes of two cases of Cholecystotomy. The first, a female of forty-five, was placed under his care by Dr. George Johnson, and was operated upon when deeply jaundiced, and in very broken health from the pain of constant attacks of gall-stone colic. A single stone was found impacted in the common duct; the bladder and its duct being much contracted, rendered the operation very difficult, and it was found impossible to follow the usual practice, and suture the edge of the wound in the gall bladder into the parietal incision. It was therefore carefully closed by four silk sutures and dropped into the peritoneum, glass drainage tubes being placed in the peritoneum just below the liver and in the pouch of Douglas, through a counter opening above the pubes. The patient made a good recovery, and remains well. The second case was that of a female, aged fifty-six, who was a patient of Dr. Henley of Woodbridge. The operation was similar, one large stone being impacted in the cystic duct, which was contracted in front of it; and two other large stones were found impacted in the common duct. This patient also made a good recovery. The difference between such operations and those in which the gall bladder is distended behind a stone impacted in the cystic duct were pointed out, and the precautions to be observed in each operation were discussed. The entire removal of the gall bladder and the possibility of forcing the stones through by manipulation without surgery were mentioned, and some curious cases which had come under the author's notice were briefly referred to.—Dr. GEORGE JOHNSON pointed out that in many cases of jaundice the history of a sudden onset with pain could not be relied on. He quoted a case in which a diagnosis of gall-stone having been made chiefly for this reason, operation revealed a scirrhus tumour at the end of the duct. A second case with similar history proved to be one of hepatic hydatid, in which secondary cysts were periodically passed by the gall duct.—Mr. THORNTON, in reply, deprecated the use of the sharp probe as an instrument of diagnosis.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

A MEETING of the above Society was held on Friday, Nov. 4th, Mr. C. B. Keetley, President, in the chair.

Mr. PERCY DUNN exhibited (1) the Sac of a Hæmatocele removed during life; (2) an Epithelial Growth from the tongue; and (3) a Kidney with Calculi.

Dr. HERRINGHAM showed (1) a case of Optic Neuritis with preservation of vision; (2) a case of Syphilitic Laryngitis; and (3) one of old Facial Paralysis.

Dr. SPICER read a paper on Obstruction of the Nose, its bearing on Throat and Ear Disease, and its Treatment. The author referred to the scanty amount of literature and observations regarding the functions of the nose in respiration. Dr. Aschenbrandt's observations on the connexion of the nasal functions with aural affections were alluded to, and the fact pointed out that the higher animals normally breathe through the nose, and not by the mouth. Sir Morell Mackenzie has shown the great power of the nasal passage in heating the air, and Aschenbrandt has proved that almost the whole of the warming and moistening of the inspired air takes place in the nose. Constant inspiration through the nose is injurious, and in cases of nasal obstruction the current of air only passing along the lower meatus may cause dryness and catarrhal changes &c. in the pharynx, alteration in the voice, snoring, noisy breathing, sneezing, tickling cough, secondary catarrh, loss of smell, &c. Nasal obstruction may also give rise to exhaustion and collapse of the Eustachian tubes, the rhinitis extending into the tubes, while catarrh and many other sequelæ may result in the aural apparatus. With regard to treatment, the use of cocaine for congestive obstruction was recommended, as well as tubes in place of bougies; also, in suitable cases, the local application of chromic acid to produce bands of contracting cicatricial tissue, and sometimes the galvano-cautery. The removal of polypi and bony growths, and the treatment by fracture of deviations of the septum, were discussed, and the advantages of the saw or nasal trephine, worked by a "dental engine," pointed out. The author concluded by referring to Dr. Curtis's recent observations.—The PRESIDENT remarked on the beneficial use of hazeline in congestive obstruction, as well as of hot water and a cold foot bath. He thought that it was not generally known that a deviated nasal septum is a common cause of nasal obstruction, and that the enlargement of one meatus does not usually compensate for the narrowing of the other.—Mr. SHIELD observed that in an extensive experience in the removal of vegetative growths from the pharynx in children, he had found difficulty with the forceps, and also with the artificial finger-nail; he now prefers the use of his own finger-nail, allowed to grow long for the purpose, followed by the application of sulphate of copper. He requested information as to Dr. Spicer's method of operating in these cases.—Mr. LYNCH related the case of a lady with a dry and hypertrophied tongue, which she had been recommended to have removed; it was, however, discovered in time that nasal obstruction existed on both sides, and that this was no doubt the cause of the changes in the mucous membrane of the mouth.—Dr. THUDICHUM referred to his own experience of over 3000 cases, and stated that, having carefully scrutinised the American results, he had no hesitation in warning the Society against their acceptance. His own radical operations were undertaken solely to remove the disease itself. He regretted that Dr. Spicer had taken no notice of the work done in this country, much of which had been laid before this Society. He emphatically spoke against the use of chromic acid, Sir Andrew Clark's method, operations on the septum, &c., for the cure of reflex neuroses.—Dr. BALL considered that there are certain cases in which escharotics are advisable. Where there is deviation of the septum and narrow meatus, leading to blocking, the galvano-cautery with the help of cocaine is very satisfactory. Cocaine only reduces the swelling temporarily, and there may be subsequent congestion.—Dr. SPICER, in reply, regretted that much of his paper, from its length, had to be left unread, and particularly that part which referred to British work. In answer to Mr. Shield, he stated that he used the forceps as modified by Woakes; the finger cannot remove such growths in adults. The galvano-cautery is, in his opinion, less delicate than the revolving drill. Chromic acid, when used, must be applied with great care to the exact part which is to be cicatrised; if properly employed, no ill results ensue, except perhaps a little catarrh. He considered it unjustifiable to operate simply to remove a growth which had no deleterious effects. He insisted again on the great use of cocaine in certain cases.

Dr. THUDICHUM read a paper on the Varieties of Aconitine, and the Dangers of their Medical Use. The author remarked how often drugs possessing healing properties have powers going far beyond. On account of progressive concentration alarming effects may be produced and a medicine become discredited. The different varieties of aconitine, are due to its varying sources and differences in soil and climate. One variety is actually 4000 times more poisonous than another. Even the so-called "English" aconitine is not always the same substance; one manufacturer may prepare it from A. napellus, another from A. ferox. The German aconitines are also of different strengths, and the French "aconitine crystallisée" is really a nitrate. With such variations, it is surprising that fatal mistakes have not more often ensued. The author has compared the chemical properties of a large number of specimens of aconitine; there are certainly three distinct substances known by the name, and very likely a fourth. They vary in their chemical reactions, as well as in their poisonous power. On account of the danger of their use, he agrees with Professor Gluch that they should all be removed from the Pharmacopœia. He considers that with aconitine paralysis of the sensory nerves is very slight and superficial, and that the motor nerves are more affected. He alluded to numerous experiments on rabbits, and especially remarked on the rapidity of the poisonous effects. In his opinion, the best treatment after a poisonous dose is the swallowing of charcoal and an emetic of sulphate of zinc.—Dr. POPE related the deleterious effects of five drops of tincture of aconite, and stated that since this experience he had given up the use of aconite.—

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Dr. HERRINGHAM considered aconite a real sedative, relieving pain which resisted all other drugs. As a medicine it was largely used, and not with bad results.—Dr. OWLES corroborated the last speaker, having employed it extensively, and never with evil effect.—Dr. ALDERSON had prescribed the tincture of aconite largely, and had found it most useful in numerous cases. He considered the purity and uniformity of drugs a matter of the utmost importance.—Dr. DODSWORTH thought that the effects of such remedies should be carefully watched; small doses of aconite in his hands had apparently done good.—Dr. WARNER related a similar case to Dr. Pope's. The patient was nearly poisoned by a dose of aconite administered by a homœopathic practitioner.—Dr. THUDICHUM shortly replied.

ULSTER MEDICAL SOCIETY.

THE opening meeting of the session (1887-88) was held in the rooms of the Society, the Museum, College-square North, on Wednesday evening, the 9th inst., at 8 o'clock. There was a large attendance of members.

A vote of thanks having been moved and passed unanimously to the out-going President (Dr. Whitla) for his untiring zeal during the past year, the President (Dr. Esler) delivered his opening address, in which he dealt with the origin and progress of medical matters in Belfast, and compared the practice of medicine and surgery in 1837 with that in 1887. At the conclusion of a very able address a hearty vote of thanks to the President was moved by Dr. J. W. Browne, seconded by Dr. A McConnell, and carried by acclamation. A large number of medical men were nominated for membership.

The following is a list of the office-bearers for this session:—President: Dr. Esler. Vice-Presidents: Drs. Dempsey and O'Neill. Librarian: Dr. H. S. Smith. Pathological Secretary: Professor Sinclair, M.D. Treasurer: Dr. Coates. Secretary: Dr. John McCaw. Council: Professor Dill, Drs. Burden, Kevin, Culwell, O'Connell, and Bigger.

Notices of Books.

Traité Complet de l'Examen Médical dans les Assurances sur la Vie. Paris: J. B. Baillière et Fils. Pp. 571.—An anonymous scientific work must possess strong intrinsic merit before it can command acceptance at the hands of those who are in the habit of gauging every written statement by the known personal equation of the author; it must deal solely with recognised facts or theories, and it must not endeavour to introduce any innovations whatever; in fact, it can only be a *résumé* or rearrangement of common property for the sake of presenting it in an unfamiliar aspect to those who have not leisure to think for themselves. The reader naturally desires to know the status of his instructor, and when this knowledge is denied him, he is tempted either to throw the book aside as unworthy of consideration, or to undertake its perusal in a cavilling spirit, anxious to find flaws which shall justify and explain the author's wish to remain unknown. We are informed that the work above named has been compiled by the physician of one of the French insurance companies, with the assistance of an experienced actuary. Credit is claimed for anonymity on the score of the truthfulness and independence inseparable from a work against which no idea of business speculation may be urged. The scope is ambitious, aiming at filling a supposed gap in medical literature by supplying information of the expectancy of every case, measured by a consideration of the actual physical condition of the life proposed, together with the circumstances tending to curtail this expectancy from the influence of heredity or from the occurrence of previous illnesses. The book is divided accordingly into five sections. An introduction deals with the position of the medical examiner, and his duties to the office employing him, as well as to the individual examined. Then follows a very valuable section upon heredity divided into sub-sections for various diseases. The third portion looks to the previous personal history of the proposer; the fourth describes the precautions necessary in examining the individual; and lastly, in an appendix we find grouped together the medical forms of some few foreign insurance offices, selected for reasons which are not obvious, some notes on the average duration of life, some tables of mortality, and charts in which their value may be easily traced. The introduction is somewhat chatty and discursive, but defends sensibly enough the lengthy medical forms occasionally put before the examiner, amusing examples of temporary mental aberration being quoted. One story seems almost too good to be true: the proposal of a good life was marked "*inadmissible*" by a hospital physician, who was confusing the proposer with a sick person seeking admission to the wards. We are glad to note that heredity is regarded in two directions, ascending and descending, the former of course dealing with the parents, brothers, and sisters, the latter with the children. Descending heredity is very commonly overlooked, but occasions are by no means rare in which inquiries in this direction have been serviceable in dealing with a doubtful case. In this section, however, we meet with a surprise. According to the statements made here, and also later on in the book, the custom of French offices appears to be this: a case is accepted or declined, or acceptance may in certain instances be deferred, but no hint is given of meeting an increased risk by loading the premium; the whole system of extra premiums by which, in this country, certain offices gain largely on insuring unsound lives, seems to be ignored in France. Another point upon which a difference exists is the candour apparently expected from the proposer, for directions are given concerning hæmatemesis, melæna, and other symptoms, for which we have to trust implicitly to the admissions made in our presence. The remarks upon the personal examination of the proposer are, as a rule, sensible enough, but we venture to hope that few members of our profession need so much education when called upon to examine a life; it might surely have been assumed that medical men entrusted with such duties should be able to recognise locomotor ataxy, or to examine the urine for sugar or albumen, without so many detailed instructions. The index and the table of contents appear to be full and useful.

Pathology and Treatment of Ringworm. By GEORGE THIN, M.D. London: J. & A. Churchill. 1887.—The purpose of this work is to describe, so far as is known, the nature and peculiarities of the trichophyton tonsurans fungus, the changes in the human skin to which it gives rise, and the treatment which experience shows is most likely to be successful in destroying the parasite and curing the diseases which it causes. Dr. Thin gives a plain, unvarnished exposition of the subject, conceived in a scientific spirit, and he has successfully kept in view throughout the practical object of the work. There is nothing very new offered to the profession, if we except the results of his cultivation experiments, which lead him to hold that the trichophyton tonsurans is a fungus by itself, and totally distinct from the common fungi whose spores infest all the objects by which we are surrounded, and that the home of this fungus is solely in certain parts of the horny layers of the epidermis of some of the mammalia. Dr. Thin's indications for treatment are clearly given, but such is the diversity of practice that many will no doubt think he has finally adopted very mild and unsatisfactory methods. He gives an interesting and useful account of the plans in vogue in the hands of the Hôpital St. Louis physicians. At the end of the book we find an illustration of the fungus found in some scales from a case of tinea imbricata sent him by Dr. Manson. We miss any discussion of the widespread phases of ringworm, such as

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are found in many hot climates, and occasionally in this country, and also his experience of the existence of the acute macular form described by Hebra and his disciples.

Anatomy, Descriptive and Topographical. By CARL HEITZMANN, M.D., and LOUIS HEITZMANN, M.D. London: Dulau and Co. 1887.—Messrs. Dulau have published for the English-speaking medical public a translation of Heitzmann's "Anatomischer Atlas," which is so popular a text-book in Germany. The illustrations are very familiar, and in some instances show that the original blocks have been so much worn as to lose in distinctness and finish. The Latin names employed for the identification of the structures depicted will detract materially from its sale in Great Britain, if not in America. We find no special advantage in the work which would entitle us to recommend it to students in preference to the text-books and atlases which are usually recommended in this country.

Anatomy, Descriptive and Surgical.—By HENRY GRAY, F.R.S. Eleventh Edition. Edited by T. PICKERING PICK, Surgeon to, and Lecturer on Surgery at, St. George's Hospital, &c. London: Longmans, Green, and Co. 1887.—Although Mr. Pick has made many alterations in this edition, we are pleased to find that the general character of the book remains the same, and that the peculiar advantages of readability, clear diagrams, and precision of statement have been carefully preserved. The corrections in the work are mainly of errors of detail, which had passed on from edition to edition, but which would necessarily be removed when the work came under the revision of a thorough anatomist and teacher with the reputation of Mr. Pick. In the illustrations to this edition the nerves are coloured, as well as the arteries and veins, but the engravings do not equal in artistic merit many continental works, such as those of Henle and others. A few new drawings are introduced, and one or two which disfigured the preceding edition have been removed.

Manual for the Physiological Laboratory. By VINCENT D. HARRIS, M.D. Lond., F.R.C.P., Demonstrator of Physiology at St. Bartholomew's Hospital, &c.; and D'ARCY POWER, M.B. Oxon., F.R.C.S. Eng., Curator of the Museum, and late Assistant Demonstrator of Physiology at St. Bartholomew's Hospital, &c. Fourth Edition. London: Baillière, Tindall, and Cox. 1888.—This work is the outcome of the experience of the authors as teachers of practical physiology in our largest metropolitan school, and is a valuable text-book for histology, practical physiology, and physiological chemistry. The new edition is a great improvement on former ones, especially in the histological and chemical sections.

Pocket Chart for Bedside Case-taking.—Mr. Robert Simpson, L.R.C.P., L.R.C.S., has done good service to his brother practitioners in supplying them with a convenient and handy means of recording notes of cases seen in daily practice. Upon a small thin sheet of paper he has introduced a temperature chart (for four weeks), chest outlines, and columns for the record of the leading features of the case and its treatment. A specimen copy, fully filled in, of a case of typhus complicated with pneumonia, explains the method to be adopted; upon which our only comment need be that the reporter will have to study brevity in his notes. The sheets are contained in a suitable pocket-case, and a record book is supplied for the insertion of each sheet as filled in, an index being appended. The chart is published by Messrs. J. Wright and Co., Bristol.

Letts's Medical Ledger. London: Cassell and Co.—This book has been prepared to be used in connexion with Letts's Medical Diary, and is calculated to make very plain and simple all the bookkeeping required by the profession.

Diaries.—We have received copies of several of Messrs. Letts's Diaries for 1888. These productions are fully equal to those issued by this firm in previous years, their continuous Diaries being especially useful to members of the medical profession.

ROYAL COLLEGE OF PHYSICIANS.

AN extraordinary Comitia of the Royal College of Physicians was held on Monday, the 21st inst., Sir E. Sieveking, Vice-President, in the chair. The meeting was held in order to affix the College seal to the petition to the Privy Council, and was thinly attended. Before this formality was gone through Dr. Pye-Smith made a few remarks, in the course of which he pointed out that the powers sought by the Royal Colleges to grant degrees in medicine would scarcely satisfy the general desire of the profession for the title of "Dr." to be conferred on all qualified practitioners, and that the formation of a Medical Faculty only would not advance the cause of education to the required extent, which could only be accomplished by a combination of teaching and examining bodies in London, including the University of London. He believed the time would come when such a combination would be effected.

The Moxon Memorial Committee having expressed their intention of devoting the surplus of the fund (after defraying the cost of the erection of a memorial tablet in Guy's Hospital) to the foundation of a gold medal for clinical research to be awarded on the recommendation of the President and Council of the College every three years, it was resolved on the motion of Dr. Pavy, seconded by Dr. Handfield Jones, that the offer of the committee be accepted.

The Treasurer gave notice of his intention to propose the following resolution at the next meeting of the College: "That, in recognition of the protection afforded to this College by the police during the recent riotous proceedings in Trafalgar-square, and of the admirable discipline exhibited by that force under prolonged provocation, the College do vote the sum of twenty-five guineas as a contribution towards the funds of the Metropolitan Police Convalescent Home, or towards any project approved by the Chief Commissioner of Police."

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.

AT a meeting held at the Medical Society's rooms on Nov. 22nd, Dr. B. W. Richardson delivered an address, in which he replied to the recent statements of Sir W. Roberts in favour of alcohol. He pointed out that the one nation which had exhibited the most marvellous vitality for centuries—namely, the Jews—was distinguished for its sobriety. The Turks also, but for bad government, would be amongst the foremost; while, on the other hand, Spain, in which there was not a single temperance society, perhaps hardly an abstainer, had degenerated from its position as the leading nation of Europe. Centuries ago the conquering bands of Mahomet had carried all before them, and in the other waves of invasion which had passed over the world it was the more sober which had proved victorious. As to the death-rate, that of Norway and Sweden had markedly improved since the reform of the licensing laws a quarter of a century ago. Our own death-rate had diminished concurrently with the spread of total abstinence, though of course not entirely due to that cause. Russia had the highest death-rate of any European country, and consumed enormous quantities of alcohol. He also referred to Dr. Murray's lecture against regular habits as a revival of the exploded Brunonian theory, and said that such advice to men and women reclaimed from intemperance would be most disastrous.

A paper was also read by Dr. J. J. Ridge on "Alcohol—its Substitutes and Alternatives," in which he urged the desirability of not recommending alcohol if any other drug or measure would suffice, and expressed the opinion that if this were conscientiously followed out the profession would administer alcohol in ever-decreasing quantity. It was stated that the Association is the largest association of medical men, save one, in the United Kingdom, numbering 350 members and 75 associates (students); also that the news had been received of the total abolition of the ration in the British Army in India.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 26, 1887.

ALTHOUGH the subjects which the General Medical Council have under consideration during the present session are not calculated to command the same interest as those which related to the maintenance of the Societies of Apothecaries as licensing bodies, they none the less require considerable judgment and skill in their adjudication. The Council is, however, well constituted to perform its duties. The fact that it is presided over by Mr. JOHN MARSHALL is alone a guarantee that it will have due regard for the honour of the profession, and that every effort will be made to ensure that its labours will bear fruit; while the recent addition to its numbers of Sir GEORGE MACLEOD and of Dr. SAMUEL WILKS will give it fresh strength. The accession of Dr. WILKS at a moment when efforts are being made to increase the thoroughness of medical education is an event upon which the profession are to be congratulated.

The address of the President placed tersely before the Council the nature of the subjects which must engage their attention. Of these, perhaps the most important is the employment of unqualified assistants. The placing of patients under the sole charge of unqualified persons is we are told, becoming more largely condemned by the "representatives of the public sense of justice," and recent judicial decisions have rendered it impossible for claims to be enforced for payment for services of this character. This is so far satisfactory, but it is a tedious method of preventing a custom which all right-minded persons must disapprove. The committee to whom this subject was referred embodied in their report that it was worthy the attention of the Council that one excuse for the employment of unqualified assistants was the want of knowledge sometimes possessed by young qualified practitioners. Serious objection was taken to the incorporation in the report of this last paragraph, and eventually it was not adopted. The two subjects are not, indeed, related, and the decision we hold to be a proper one. If medical education is faulty it must be amended, but we cannot allow that any insufficiency in this respect need be entertained as affecting the employment of persons who have not submitted to the tests which the law requires in the interest of the public. Dr. WILKS undoubtedly showed much reason why the practical element in medical education should receive more serious attention. It is a standing reflection on the present system that many men pass through the schools without becoming conversant with maladies so common as measles and scarlet fever. Opportunities exist where maladies of this sort can be studied in public institutions, and it is the fault of the teachers if students can leave their schools without having made themselves acquainted with them. Perhaps the greatest reflection upon the teaching of the present time is the neglect to thoroughly study vaccination. Apart from the few visits which may be paid to a public vaccination station the operation is not thought of, and there is, we believe, hardly a reference made to the subject in a single lecture on medicine delivered during any session.

The Council have further engaged themselves with the question of registration of foreign degrees. Already more than two hundred applicants have sent in their claims for their degrees to be registered, and the committee to whom the subject has been referred have recommended that the Registrar be authorised to register the degrees from universities where examinations had been properly held. The report of this committee was postponed for further consideration.

The Society of Apothecaries have not shown themselves wanting in a desire to maintain the position of their body as an active participator in the granting of diplomas. They have now come before the Council with a request to grant a registrable diploma in Public Health, and have submitted a programme which, if faithfully adhered to, will enable them to take a prominent position in advancing the study of this subject. Compliance with their request has been postponed for the purpose of obtaining a legal opinion on the meaning of the Medical Act in this particular, but there is little doubt they will shortly be in the enjoyment of the right they desire.

The President has given to the Council an opportunity of performing a useful work in taking steps for the simplification of the methods of dealing with cases arising under the penal clauses of the Medical and Dentists Acts. There is much to be said for leaving to the various licensing bodies the duty of taking the first step for the removal of a name from the Register by the withdrawal of their licences in cases of infamous conduct in a professional respect. But the need for equality of procedure is evident, and the Council will have to overcome this difficulty before they can hesitate to take the initiative in proceedings necessary for the vindication of the honour of the profession.

The rearrangement of the work of the General Medical Council promises to make its labours more productive than heretofore. The Council have this session been summoned, as the President announced, for the discussion and settlement of certain specified subjects, particularly for the consideration of questions connected with the completion and rectification of the Registers. In the spring the Council will meet especially for the consideration of matters relating to education and examinations. By this arrangement the waste of time which formerly characterised its meetings, and which was frequently condemned in these columns, will be prevented. The experience Mr. MARSHALL has had as chairman of important committees has enabled him to decide on the manner in which the Council can most economically employ its time; and the system now adopted is well calculated to attain the end that is desired. If the Council should succeed, as they hope, in relieving themselves of the prolonged investigation into matters relating to "infamous conduct," they would be much more free to devote themselves to the many other important subjects which require settlement.

The placing of a marble bust of Sir GEORGE PAGET in the Council Chamber is a fitting tribute to this distinguished physician. As President of the Council, Sir GEORGE PAGET

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had rendered services which well deserved to be remembered by those who had served with him.

AT the present time several circumstances combine to centre both professional and public attention upon those malignant diseases grouped under the heading of Cancer. Renewed efforts are being made to elucidate the nature of the disease, and the question of its contagiousness has been the subject of many letters recently published in our columns; and while the surgical treatment of cancer was never prosecuted with more zeal or a greater measure of success, the hope that some drug may be found which will have the power of arresting these malignant growths must receive a fresh impetus from the remarkable cases published by Prof. CLAY in our last week's issue. But more than all, the illness of the Crown Prince of Germany, which illustrates most of the salient points in the clinical history of cancer, is an object-lesson which the whole of Europe cannot fail to read. It illustrates the proneness of the disease to attack the robust and strong, its insidious onset, its stealthy progress, the enormous importance of a correct diagnosis in the early stages of the malady, the extreme gravity of the issues at stake in its proper treatment, and the unerring certainty of its result unless successfully dealt with in its earliest stage. All these are points long familiar to the profession and only too well known to many individuals among the public, but never before have they been demonstrated with such tragic effect as now. It is impossible to write of the Crown Prince's case, even in a medical journal, without a word of tribute to his heroic courage, often before tested in the fierce scenes of war, but never more nobly shown than in the calm and manly way in which he is facing a more relentless foe than can be encountered on the battle-field. When commenting on this case in the summer we could only write with reserve, for the uncertainty that prevailed, and the desire to entertain hope so long as it was at all possible, prevented a more emphatic criticism. Now, however, all doubt as to the nature of the affection has been removed, and we are in a position to speak more freely. Upon certain personal issues that have been raised in some quarters we do not intend to enter, for they are out of place in the presence of so far-reaching a calamity as that with which we are dealing. But we ought to refer to one view in which this matter has been presented for the sake of protesting against it. An attempt has been made to exalt Sir MORELL MACKENZIE'S intervention in the case into a national incident. Nothing is more incorrect. Surgery is too cosmopolitan to warrant such a conclusion under any circumstances, and Sir MORELL MACKENZIE was not called in to attend the Crown Prince in any way as a representative of British surgery. It was a purely personal matter; his opinion was sought on account of his great reputation as a laryngologist, his extended experience, and his acknowledged dexterity in all intra-laryngeal manipulations.

There is a danger lest the course of the Crown Prince's case should bring undeserved discredit upon intra-laryngeal surgery, and upon the value of the microscope in diagnosis. It is important to lay stress upon the fact that there is no evidence to lead to the opinion that the nature of the Crown Prince's disease has undergone any essential change. It is not as if some very chronic affection had suddenly assumed an active character. The rapid and continuous development of the case shows that it was cancer in the spring, and cancerous ever since its activity has been noticed. Were this not insisted upon, the case might be used as an illustration of the mischievous effects of intra-laryngeal operations in converting benign growths into malignant. The case also shows once again that the value of the microscope in diagnosis is of positive rather than of negative value. It can throw light upon the structure of what is submitted to it, but it cannot go further. The examination of a minute fragment of a growth may prove it beyond doubt to be cancerous, but, on the other hand, if it shows the absence of any distinctly cancerous elements in the part examined, this cannot be implied to hold equally true of other parts of the growth. When employed for clinical diagnosis the microscope may prove the presence of cancer, but it is alone insufficient to prove its absence. It is to be regretted that this fact was not sufficiently insisted upon by the distinguished pathologist to whom the portions of growth removed by Sir MORELL MACKENZIE were submitted. For while the profession fully realised that his reports were insufficient to rest a diagnosis upon, the laity were naturally led to attach greater weight to them.

The treatment of laryngeal cancer may be classed as either palliative or quasi-curative. The palliative treatment waits on symptoms, and its chief value lies in the performance of tracheotomy to provide a free passage of air to the lungs. It is this course which the Crown Prince has decided to follow, and we trust that it may be long before any active interference is called for in his case. The curative or quasi-curative treatment aims at entirely eradicating the disease at an early period, in the hope of permanently arresting the disease or of obtaining a long immunity from it. Its success depends upon the thoroughness with which not only the obvious morbid products, but a considerable area of apparently healthy tissue around them, can be excised. When once a cancer has developed, every week such an operation is postponed both adds to its gravity and lessens its prospect of utility. Moreover, the operation, even when reduced to its simplest proportions, is a very grave one, attended with considerable danger to life and with serious impairment of the voice. It is right to run these dangers when the prospect of success is good, but as the progress of the disease both adds to the dangers and lessens the prospect of success, the time soon comes when the balance is turned and the operation is no longer admissible.

WE are reluctantly, but unavoidably, compelled to emphasise the arguments adduced in our last two issues against the inauguration of a systematic attempt to popularise the science and art of medicine; and still more unwilling are we obliged to recognise the need of giving very forcible expression to those views which we have already briefly laid before our readers as to the mistaken and mischievous policy of the members of our profession who have committed themselves to this extraordinary enterprise. It would seem unnecessary to contend, at greater length than we have already argued,

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that the distinction between popularising the laws of health—which is not only possible, but highly expedient—and endeavouring or pretending to popularise the laws and practice of medicine—a task which every tyro in science well knows to be impracticable—is self-evident. If the knowledge of disease were a formulated and demonstrable science, and medicine a complementary applied science or art, so that each set of symptoms indicated the exhibition of a particular drug or method of treatment, anyone who either possessed a Concordance of Symptoms and Remedies for ready reference, or who could commit such classified lore to memory, might set up practice as a physician or undertake the duty of domestic management "in disease." But, as everyone who has only a superficial acquaintance with the subject is aware, the knowledge of disease, or of diseases, is not a formulated or demonstrable science, and still less have particular symptoms their cognisable remedies. So far from either of the above premisses being admissible, precisely the same symptoms, even similarly associated in groups, may be produced by totally different causes and bespeak diametrically opposite states of ill-health requiring absolutely antagonistic agents and modes of treatment; while, as regards the exhibition of particular drugs for particular symptoms, the choice between acid and alkali, between stimulant and depressant, between aperient and carminative, may make all the difference between life and death. To give only one illustration of this position which at the moment occurs to us: The diagnosis between some forms of colic and a sudden attack of peritonitis secondary to perforation of a gastric ulcer is one which may be extremely difficult for even a skilled practitioner to make, and the use of an even moderately powerful aperient which might be highly helpful in the one case would perhaps cause death within a few hours in the other. How is it possible to place the unskilled in a position to act with safety in an emergency like this? Yet such an illness is precisely the sort of emergency in which, with the temerity engendered by "a little knowledge," the practitioner of a popularised medicine would be sure to act. There is a popular belief that a special cherub sitting up aloft watches over poor Jack when he is drunk, and that the same or an equally benevolent providence protects children. We do not remember to have heard of any particular cherub told off to guide the wits of amateur practitioners of popularised medicine, albeit there will be sore need for the special intervention of such help if the poor children who are to be "managed in health and in disease' under the patronage and direction of the new propaganda are not saved from the peril that besets them by the honourable withdrawal of those members of our profession who have lent their names to the undertaking, and a candid avowal on their parts, either in our own columns or through some suitable medium, that they have been misled.

All endeavours to inspire the public with medical knowledge and power are false, and must fail. It is opposed to the spirit and tendency of modern enlightenment to entertain or encourage the belief that work so *difficult* and *dangerous* as the treatment of the sick can be done without knowledge and skill, the result of long and arduous study and training. It is startling to find that really thoughtful and well-informed men are connecting themselves with such a policy at the very moment when they are strenuously insisting on the need of technical education, and attributing the deficiencies of British industry to the lack of such training! If it be desirable that working men should be specially instructed because they cannot do the ordinary and simple work of their crafts without special training, how comes it to pass that sagacious and competent authorities are practically encouraging the public to believe that a few vague hints thrown together in a popular periodical can qualify them to deal with the incarnate mystery of organic animal life *in disease?* Do the propagators of this perilous heresy realise their grave responsibility? Has it occurred to them to estimate the magnitude of the mischief which may ensue if, in some case of serious but unidentified disease, not only is precious time wasted, but possibly a destructive method of treatment adopted by some person acting on the hints they cast broadly before the public without having the least control over the application which will be made of their suggestions? It is no answer to this appeal that the drugs prescribed are very simple, and the directions given exceedingly plain. How easy, even in plain cases, is it to blunder so that life may be allowed to slip away or death be actually induced? We protest against the procedure as an outrage on common sense, and as opposed to the whole principle of medical science and practice.

We have no sort of interest in thus writing. Those critics who twit us with advocating what is decried as a "professional" view of the question are very much at fault even as the matter lies from their own standpoint. Nothing could by any possibility tend more directly to "make work for the doctors" than that the unskilled should take to physicking themselves. Every man his own lawyer is a mine of wealth to the legal profession; every man his own physician and physician to his own family would speedily issue in an overwhelming demand for the services of skilled practitioners of medicine to repair the grave injuries inflicted by those who know neither the work nor the tools. It is on far higher ground than that of selfish interest we take our stand in discussing this question, and the only consideration of a professional nature that has weight with us is that which relates to the discredit and humiliation thrust on the profession by the fact that some of its best known and most trusted members stand committed to the task of attempting that which we and they both *know* to be impracticable in its completeness, and full of the gravest peril in its insufficiency. Unless the public can be placed on precisely the same footing of knowledge and competency with the professors of medicine, they cannot safely undertake their work—a work which to the most erudite and skilful amongst us is one of great responsibility and difficulty; and if it be possible to give the public even a *safe* minimum of knowledge by popular discourses about management in disease, then, of course, it is possible to make medicine an accessory branch of ordinary education, and the sooner it ceases to be regarded as the business of a profession the better.

DURING the autumn of this year there has been, and still is, considerably more scarlet fever in London than has been usual for the last few years. It is a matter for doubt,

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however, whether there is sufficient to be dignified by the name of an epidemic, or whether the public would be aware of its existence were it not for the punctual appearance of the statistics of the Metropolitan Asylums Board in every morning paper.

During the months of August, September, and October somewhat less than 3000 patients, drawn from a population of 4,000,000, have been admitted into the hospitals of the Board, and it is probable that these contain at least one out of every five of the recognised scarlet fever cases now in London. If this estimate be not excessive, it would show that there have been during this autumn at most fifteen cases to every 4000 of the population. Now, at the last census it was seen that the increase of the population during the ten preceding years amounted to 14·36 per cent.; in other words, there were among every 1000 people 143 under the age of ten, or among 4000 people 572. It is probable that at least one child in every four has recognised scarlet fever under the age of ten; so that if fifty-seven children be born yearly in a population of 4000, we may expect that there will be on an average at least sixteen scarlet fever cases every autumn; whereas there are, as has been shown, probably not more than fifteen at present. These figures may be taken as approximately correct, and they show that, far from there being an epidemic of scarlet fever, there is at present less than may be expected in future. On referring to the reports of the Asylums Board it may be seen that the numbers yearly admitted into its hospitals show a gradual but steady increase, and also that while the numbers are increasing the death percentage is slowly diminishing; and, further, it may be seen from the report of the Registrar-General that the proportion of deaths from scarlet fever which occur in these hospitals is increasing, and has already reached nearly 40 per cent. In other words, these hospitals, originally intended for pauper patients, have inspired so much confidence, that practitioners and parents are sending their infected sick to them in such numbers as to give rise to the idea that there is at present a serious epidemic of fever "raging" in London. It is probable that in its clinical aspect the scarlet fever of this autumn does not differ greatly from that of any other autumn. The mortality may be taken to be 7 per cent., which is satisfactory, and it is probable that this average could be very much reduced if the poorer children were removed sooner from their dirty and unhealthy homes. Among eighty-three deaths at two of our largest hospitals, twenty-four occurred within two days of the patients' admission. In other words, these hopeless cases, most of them with sloughy throats, swollen neck, discharging nostrils, and much asthenia, were only kept alive for forty-eight hours by the free use of alcohol. Some form of kidney mischief is responsible for 12 per cent. of the deaths, but of course, if the so-called cases of "scarlatina maligna" which have been already mentioned were eliminated, this number would be greatly increased. It is exceedingly difficult to give statistics as to the vague term "albuminuria," for albumen in traces may at some time be nearly always found, but it may be said that it occurs in appreciable quantity and for a considerable time in from 15 to 20 per cent. of the cases, and among these it occurs mainly in those patients who are anæmic and have been formerly badly clothed and ill-nourished, and it frequently occurs in two or more members of the same family. As it is difficult to define albuminuria, so is it to say what is and what is not acute nephritis, but it will be found that from 5 to 7 per cent. of the cases have either high temperature, vomiting, hæmaturia, or dropsy, together with albuminuria, and of these a very considerable proportion are admitted already desquamating. Among these desquamating cases, such a large number are the subjects of renal disease that it would be interesting to know whether they are suffering from the neglect of due precaution, or whether they represent the 7 out of 100 cases of unrecognised scarlet fever daily spreading the disease. Convulsions have not been common in the nephritis of scarlet fever, and are not serious. Lung affections have occurred, either as complicating the nephritis or alone, in 16 out of 113 fatal cases, pneumonia being the more common form, and pleurisy rare. No case of empyema has been noted. In about 8 per cent. of cases acute laryngitis has been the cause of death, and in two of these membrane has been noted. It has occurred that a patient suffering from scarlet fever has lost a brother on whom tracheotomy was performed at a general hospital for what was diagnosed to be diphtheria. Scarlatinal rheumatism is another vague term, and one which does not lend itself to statistics. During this autumn a larger number of the patients than is usual have been adults, and of these about the ordinary proportion have had pains in the joints without any sign of endocarditis or pericarditis. Joint affections in the younger patients have, as is customary, been of rarer occurrence, but more serious in their nature. Throat complications have, perhaps, been rather more common than is usual, sloughing tonsils, cellulitis of the neck, and sloughing of the cervical tissues having occurred in about 12 per cent. of the fatal cases. As regards the duration of the disease during the present autumn, it will probably be found that accordingly as the fever is of a milder type, so will its duration be lessened; but it may be safely said that the average will not be under fifty-five days. It is customary to isolate the patient until the desquamation is entirely completed and there is no roughness of the heels or ankles. It is a popular belief that this will always have occurred by the end of the sixth week. The annexed table, taken from a memorandum made for another purpose, will, however, show the true facts of the case:—

Duration of Scarlet Fever.

Oct. 1st to Sept. 30th.	Cases.	Days.	Average.
1877–78	305	20·542	67·31
1878–79	376	26·666	70·92
1879–80	704	39·242	55·74
1880–81	413	30·727	74·39
1881–82	497	35·117	70·65

DR. PEKELHARING of Batavia, who, as has been mentioned (see THE LANCET, Sept. 24th. 1887), recently discovered and cultivated the micrococcus of beri-beri, is to be granted a considerable sum by the Dutch Government to maintain his bacteriological laboratory at Weltevreden, near Batavia, so that his important investigations may be continued.

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Annotations.

"Ne quid nimis."

METROPOLITAN HOSPITAL SUNDAY FUND.

THE Right Honourable P. de Keyser, Lord Mayor, president and treasurer of this fund, has requested the attendance of the members of the Council at a meeting at the Mansion House on Monday next, the 28th inst., at 3 o'clock. The business of the meeting is to determine the report of the Council for the year 1887, and to order its publication; to revise the list of the Council for 1888; to order the convening of the next annual general meeting of constituents on Monday, Dec. 12th, at 3 o'clock; to consider what day of 1888 shall be recommended to the constituents for the sixteenth Hospital Sunday; and to transact general business. Again this never-ending and anxious work, the support of our large hospital system in this vast metropolis, is commencing to engross the attention of the members of the Council of the Fund. We earnestly hope that a large number of the Council will respond to the call of the Lord Mayor, who will take the chair for the first time as president of the Metropolitan Hospital Fund, although he has long been known as an active member of the Council. The Sunday Collection for 1888 must not be allowed to exhibit a falling off in comparison with the results of former years; on the contrary, it must be a yet further advance on the amount collected during the last two Hospital Sundays. Supposing it to be again ordered by the Council that a "Hospital Week" shall be arranged as in the last two years, in accordance with the suggestions of Dr. Wakley, the late Editor of this Journal, we propose to publish two or three detached Supplements, which, in addition to a reprint of all leading, special, and other articles on the Fund that may appear in the pages of THE LANCET between the present time and the date fixed for the collection in 1888, will contain shorthand reports of the speeches of the different noblemen and gentlemen who will attend these meetings, to advocate the interests of the London hospitals with reference to the coming Hospital Sunday collection. These Supplements will, as on a previous similar occasion, be distributed gratuitously to the clergy, staffs and governing authorities of the various metropolitan hospitals, and to all who are already interested, or who may be moved to interest themselves, in the prosperity of our metropolitan medical charities.

PROFESSOR KREMIANSKI'S ANILINE TREATMENT OF PHTHISIS.

PROFESSOR KREMIANSKI, who, it may be remembered (see THE LANCET, March 5th, 1887), proposed, at the Moscow Congress of Russian medical practitioners held at the beginning of the present year, to treat phthisis by means of aniline, and whose views were generally condemned at the time, has just published a long letter complaining bitterly that he has been misrepresented and misunderstood, and that the most influential medical journals in Russia have refused to admit papers by various observers which contained favourable reports of trials made of the treatment, while prominence has been persistently given to all unfavourable and unsuccessful cases. Again, it seems that the bactericide treatment by no means consists merely of aniline inhalations, but that many other substances are employed either in conjunction with aniline or without it. The detailed description of the treatment is set forth in Professor Kremianski's book, and apparently has not been at all accurately reported in any of the better known Russian journals. He is anxious to point out that some observations which have recently been published on the action of aniline in large doses on the lower animals do not really militate against his views, because he never proposed that more than very minute doses of aniline should be given. He is quite prepared to admit that his plan of treatment is as yet very imperfect, and that it requires much more elaboration; but he insists that his later experience only goes to confirm his belief in its value, and numbers of brother practitioners who have tried it fairly have obtained good results. He expresses his regret that he has as yet been unable to make arrangements for publishing his book in some language more accessible than Russian to the majority of foreign medical men, from many of whom he has, he says, received inquiries about his system.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN (SCOTLAND).

MOST of those who are interested in vital statistics must at some time or other have felt more or less inconvenience from the absence of sufficient uniformity in the statistical returns issued by the three Registrars-General for England, Scotland, and Ireland. The weekly, quarterly, and annual reports for England and Ireland do, it is true, very closely correspond in most of the essential particulars, but between the reports issued from Edinburgh and those issued from London and Dublin, the amount of divergence, to say nothing of the dates of issue, is such as to place most serious obstacles in the way of a useful comparison of the vital statistics of Scotland with those of England and Ireland. The Quarterly Return for Scotland recently issued, and relating to the three months ending with September last, presents some of these features of nonconformity. More than fifteen years ago the Registrars-General of England and Wales changed the form of their Quarterly Returns, in order to show the number of deaths registered from each of the principal zymotic diseases, and other details of the deaths, in each registration sub-district. The Scotch Quarterly Return, however, now as then, only gives the numbers of births and of deaths registered, without any clue to the causation of the deaths, thus depriving the return of their most important feature as a measure of sanitary condition. Not content, moreover, with this omission from the general return, a paragraph in the introductory remarks invites the reader to make an erroneous assumption from the statistics of fatal diseases in the eight largest towns which are published in the return. Having stated that about 32 per cent. of the entire population of Scotland resides in those eight towns, the report adds: "it may therefore be assumed that diseases which are prevalent in them will be found to a similar extent in the surrounding districts." We feel bound to protest against the publication of such untrustworthy official assumptions at the public expense. There is, moreover, inconvenience in the custom that prevails in most of the Scotch reports of giving all rates of births, deaths, and marriages to population as percentages in the tables, and to quote them in the remarks as rates to 10,000 persons living, whereas in the English and Irish reports all these rates are quoted to a thousand living. In this protest against nonconformity in the vital statistics of the three parts of the United Kingdom, it is but fair to add that in two important respects the Scotch quarterly is more complete than the English or Irish returns. The Scotch return gives the numbers of marriages recorded in the same three months as are dealt with as regards births and deaths; whereas in the English and Irish returns this information is three months behind date in the quarterly returns. Surely some way should be found for bringing the marriages in the English and Irish returns up to date, as is done in the Scotch return. Again, the Scotch return distinguishes the illegitimate from the legitimate births, which is not done in the English and Irish quarterlies; we doubt, however,

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whether this information is worth publishing in a quarterly return, as it naturally appears in the annual reports. The report before us shows that during the three months ending with September the birth-rate in Scotland was 30·4 per 1000 against 31·2 in England and Wales; and the death-rate was 16·8 in Scotland, against 17·6 in England. The rate in Scotland ranged from 18·4 in the principal towns (which was 2·0 below the rate in the largest English towns), to 17·3 in other town districts, 14·0 in the mainland rural districts, and 13·4 in the insular rural districts. In consequence of the deficiencies in the Scotch quarterly compared with the English and Irish returns, it is impossible to compare the rate of infant mortality or the causes of death in the several parts of the United Kingdom, or it could probably be shown that the excess of the death-rate in England last quarter, compared with that in Scotland, was mainly due to excess of infant mortality from summer diarrhœa. It is noted in the Scotch quarterly that 8·2 per cent. of the births registered in Scotland during last quarter were illegitimate, the proportion of illegitimacy ranging from 7·1 per cent. in the large towns and insular rural districts, to 10·0 per cent. in the mainland rural districts.

CAUSE AND EFFECT OF EXCESS OF FAT IN HUMAN MILK.

DR. ZALESKI of Dorpat publishes a case in the *Vrach* which bears out the well-known doctrine that a peasant wet-nurse should not be made to change her habits and her food for those customary among persons belonging to the wealthier classes of society. A baby four months old was brought to Dr. Zalêski with a history of diarrhœa and an emaciated appearance. The wet-nurse, a peasant woman, who had been accustomed to live on black bread, potatoes, and very small quantities of milk and cheese, with no alcoholic liquor, was suddenly promoted to a rich and highly nitrogenous diet, consisting of quantities of meat and eggs, with at least two bottles of beer a day. Samples of the milk were analysed. By Dr. Zalêski's advice her diet was changed so as more nearly to resemble that of her peasant home, the beer was stopped, and she was given some light manual labour to perform. At the end of a fortnight a great improvement had taken place. Her milk was again analysed. The mean results in the two cases showed that there was but little difference in most of the constituents. The lactose, however, had increased from 4·40 to 5·46 per cent., and the fat had decreased from 6·29 per cent. (which was the high figure denoting the proportion of fat in the first sample) to 3·97. Dr. Zalêski goes very fully into the literature of the subject, and gives analyses by many other observers. The conclusion to which he comes is that an excessively high percentage of fat in the milk, so far from being beneficial, is actually prejudicial to the health of the child; and that a highly nitrogenous diet tends to produce excess of fat, and, to a smaller extent, an excess in the saccharine matter in the milk.

BREATHING SPACES IN TOWNS.

AMONG the various projects the intention of which is to provide for the physical well-being of our population, there can be none of greater interest or importance than that which is concerned with the purity of our surrounding atmosphere. There are movements on foot for the better distribution of the pressure of work, for the suitable housing of the poor, for the supply and regulation of food in accordance with physiological necessity, and a variety of other useful purposes. None of these, however, can claim a higher title to consideration than the question which has to do with the feeding of the blood by respiration. Upon the efficiency of this process all else in the way of vital function must, of course, depend, and the question accordingly becomes a most pressing one where, as in great cities, breathing air is as far from purity as the simultaneous demands of countless overcrowded human beings and of coal-fed fires can make it. We cannot, in the face of this fact, pretend that the conditions of town life do not affect more or less injuriously the physical state of the inhabitants. Women and children suffer to a large, men to a relatively less, extent; but the fact of impaired health chiefly attributable to this cause is in numerous instances proved by the evidence of diagnostic signs. The tendency of an in-coming rustic population to frequent already congested urban districts cannot soon or easily be restrained. It will apparently continue with practically no limit for an indefinite time, and it behoves us therefore to do our best to provide in towns, and in all parts of them, that ready access to pure air which is so essential. For children especially, as being the embodied promise of coming generations, and as requiring almost more fresh breathing air than adults, it is most desirable to secure this boon. Fortunately, much has been done in this direction already. Among other agencies, the Association formed for the purpose of opening up vacant spaces in the metropolis for public recreation maintains an increasing activity in its useful work. Its labours are from time to time commended to public notice by the voice and pen of its energetic president, and we cannot but add to his utterances the statement of our hearty approval and support alike on grounds of rational theory and practical observation.

THE NORWICH INFECTIOUS HOSPITAL.

THE action of certain authorities with regard to the isolation of infectious diseases is bringing considerable discredit upon our system of health administration. The latest case in point has occurred at Norwich. In 1872 the Corporation acquired, to a large extent by gift, an iron infectious hospital, which now belongs to and is maintained by the town; in short, it is a hospital which, according to the Public Health Act, 1875, has been provided "for the use of the inhabitants." Two cases of scarlet fever having occurred in Norwich, the vicar of St. Peter, Mancroft, endeavours to get them removed to this place, which is professedly kept up by the rates for the prevention of the spread of infection. He is first bandied about from medical officer of health to inspector of nuisances, and thence to a chief clerk; and after on one occasion having wandered about for four hours, all he can do is to enter into an undertaking to be responsible for all payments on behalf of food, light, and firing, and subsequently he is further asked to promise that he will pay a guinea a week for a nurse. Having thus willingly consented to be fined a substantial sum in the interests of the public, he awaits the removal of the patients, but this was never effected; one died and the other has reached a state of convalescence in the place where they were both originally attacked. We are aware of the fact that the Public Health Act says the Town Council may demand payment for maintaining such patients in hospital; but how any sensible authority can prefer getting hold of a few odd guineas to securing the removal of the infectious sick from amongst the population, who have the right to look to them for protection against infection, passes our understanding. They might as well refuse to send the fire engine to put out a fire at a poor man's house until someone undertook to pay them for the hire of the horses and the cost of the water that would be consumed. According to the vicar's statement, the inspector of nuisances told him that poor people were not welcome at the hospital. That is to say, the very class who are most unable to deal efficiently with infection in their houses are the ones whom the authority desire to keep in

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the midst of the community. It is the obvious duty of a sanitary authority to receive into such hospital as has been provided "for the use of the inhabitants of their district' those inhabitants needing isolation, so long as suitable accommodation exists for them; and if the town is so circumstanced that it needs in its infectious hospital means for classifying patients according to their social status, as well as according to disease, this should be provided. But to refuse cases because there are only twenty-five beds, whereas ninety would be needed if all cases were to be received, is to admit that there has been a failure on the part of the authority to do its duty to the community who elect them to their office. And yet we learn that this is one of the excuses put forth. The Norwich infectious hospital has for a long series of years not been successful as regards the prevention of the infectious fevers of the district; and the inhabitants must themselves determine whether it is so to remain. In connexion with the questions raised in this case we would refer to that of the Leeds Corporation Hospital, mentioned elsewhere.

EXOPHTHALMIC GOITRE.

WE may look to rare morbid associations of ill-understood diseases for some elucidation of their pathology. Considerable hypertrophy of the tonsils has been observed in association with hypertrophy of the thyroid, and such a connexion suggests many ideas which it can do no harm to entertain, but by which we must not set too much store. Sometimes considerable mental disturbance may accompany other symptoms of exophthalmic goitre. The insane state has occasionally been of that description met with frequently in general paralysis—the expansive and grand sort. Why the right lobe of the thyroid and the right-sided proptosis should be greater than the left, supposing the observation to be true, may be dependent on other causes than a sympathetic nervous association. Though ophthalmic goitre is most frequent between the advent of puberty and the full development of womanhood, yet children and aged persons may present all its signs. Benedikt places the essential lesion in the medulla oblongata, Eichorst in the grand sympathetic, and Filehne in the restiform body, whilst Charcot considers it as a general neurosis allied to hysteria, and other authors believe it to be specially related to chlorosis or anæmia.

FEVER IN LONDON.

SCARLET fever was last week rapidly diminishing in London, the numbers admitted during the week ending Nov. 18th being 174, or 54 less than in the preceding week. During the present week there has been some increase in the number of persons attacked with this disease, the epidemic behaving as we ventured to predict that it would, and showing a general decline, with a temporary increase during this month. It will probably not be many days before the cases again diminish, and during December the decline should be strongly marked. We note that in the report of the last meeting of the Metropolitan Asylums Board on Saturday last, it was proposed to make a considerable increase in the hospital accommodation for cases of scarlet fever. We believe that this provision will not be required, and that after the next few days the discharges will so far outnumber the admissions to the hospitals that any overcrowding which at present exists will cease. Of other diseases under treatment in the Managers' hospitals, enteric fever contributed fourteen cases and small-pox seven during last week. The Metropolitan Asylums Board have received from the Local Government Board a letter stating that the Board cannot comply with the Managers' application for authority to remove to their hospitals all persons suffering from fever or small-pox whose removal shall be applied for by duly qualified medical practitioners, as they are of opinion that they are not empowered to issue such an order; but they have reminded the Managers that the medical superintendents are empowered to retain persons presenting themselves for admission whose condition is such that it would be dangerous to refuse them admission. It is unfortunate that the law does not permit a larger discretion to the Local Government Board, for there can be no question as to the desirability of the course the Managers suggested. The Metropolitan Asylums Board have also had under consideration a letter from the Society of Medical Officers of Health, urging them to address a request to the Local Government Board for a Bill to be brought in for the compulsory notification of infectious disease. This step has now been taken by the Managers.

THE MEDICAL WITNESS AND THE JUDGE.

AT the late Nottinghamshire Assizes, before Mr. Baron Huddlestone, John Webster, a collier, was indicted for having caused grievous bodily harm to Frank Holmes, at Worksop, on Aug. 8th. The prisoner was convicted, and sentenced to eighteen months' hard labour. From the reported evidence, it appears that during an altercation between the prisoner and the man Holmes, the latter was kicked, and had both bones of the leg broken just above the ankle. Dr. Hogg, who attended Holmes, testified that in his opinion the leg was broken by a fall, and not directly by the kick. We are inclined to believe that this view of the case is correct, because there was no bruise or abrasion of the skin over the seat of fracture, which we certainly think would have been the case had the alleged blow broken the tibia and fibula. Dr. Hogg was severely taken to task by the learned judge, who accused him of coming to the Court with his mind occupied with preconceived judgment, and in consequence of this the Doctor's expenses were disallowed. Mr. Baron Huddlestone may be learned in common law, but, if we are correctly informed, he talked uncommon nonsense upon the subject of surgical injuries. Webster kicked at Holmes; the latter's leg was afterwards found to be broken; therefore, says Baron Huddlestone, the kick caused the fracture. Legally, of course, the accused was responsible for the injury inflicted. We have no desire to extenuate Webster's offence, and it may be that he received a righteous punishment. At the same time we cannot forget that the learned judge, in passing sentence, was apparently largely influenced by his opinion that the savagery of Holmes was to be measured by the fracture apart from a common-sense surgical view of the proximate cause. The aspersion on Dr. Hogg's professional reputation is of far greater moment to him than the loss of the paltry fee that the Court disallowed.

A NEW ARTIFICIAL ALKALOID.

CHEMICAL synthesis has constructed a new alkaloid with the name of oxy-propyl-endi-iso-amylamine. It is produced by the action of the hydrochloride of propyl upon di-iso-amylamine and forms an oily colourless liquid, soluble in alcohol, ether, and fatty bodies, but very little in water. The salts are very soluble. The physiological and therapeutic properties of this body have been investigated by E. Louïse. The toxic dose for a dog is two decigrammes; and for a man weighing 65 kilogrammes, 13 grammes. On the nervous system it acts something like atropine, but its chief feature consists in the production of epileptic seizures of two kinds. In moderate doses this alkaloid may be considered as a powerful cardiac tonic and an energetic stimulant of the circulation and cerebro-spinal centres. In its action on the heart it approaches atropine, paralysing the inhibitory apparatus and heightening the action of the accelerating nerves. It does not influence the cardiac muscle fibre or the intra-cardiac nervous system. Probably it excites the

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medullary moderating centres of the heart. The cortical representations of the vagus centres are also acted upon, and it may be that this double action accounts for the remarkable augmentation of the intra-vascular pressure and the marked elevation of the temperature of the body in cases of acute intoxication.

THE TEMPERATURE OF THE NEWLY BORN.

So great a change in the mode of life as happens when the fœtus is detached from the mother might reasonably be expected to be accompanied by some variations of the temperature of the body. Authors have made some observations on this subject, but more are wanting before we can arrive at the truth. The conclusions of Eröss are worthy of attention, for they appear to be the result of careful observation. The temperature, always taken in the rectum, attains its highest degree at the time of birth, generally 37·6° C.=99·3° F.; in the course of one or two hours it sinks to its lowest degree, the average being 35·67° C.=96·2° F. Two days after birth it attains its first maximum, which is less than the birth maximum by ·3° C. The fourth or fifth day witnesses the second minimum, which is less than the first by 1·2° C. The temperature rises again on the sixth day after birth, and reaches its second maximum—1° less than the first—by the eighth day. The curve drawn to represent graphically these fluctuations of the corporeal temperature is interesting to study in the light of the nutritional processes. The first fall is clearly due to the excessive discharge of heat not being properly compensated by the production of heat; the subsequent rise must be regarded as the expression of a physiological reaction from the first fall. That the new-born do react to such conditions was proved experimentally by placing infants in cool baths and subsequently observing the effects on the temperature. Besides these variations, which may be regarded as physiological and dependent on changes in alimentation and rapidity of nutrition, pathological disturbances of the temperature of the body may be noted as the result of suppuration about the umbilicus, intercurrent intestinal catarrh, and the like. Greater fluctuations are observed in proportion to the feebleness of the infant. In opposition to Bärensprung and Förster, Eröss finds that the normal diurnal variation reaches its highest point in the morning at from 6 to 7 A.M., and its lowest point at midday from 12 to 1 P.M. The evening temperature between 6 and 7, and the night temperature between 12 and 1 A.M., are found to give a mean, and not to be maximum and minimum respectively. These latter conclusions certainly require to be investigated afresh.

INJURIES TO THE POLICE DURING THE RECENT DISTURBANCES.

WE have been favoured by the Chief Surgeon of the Metropolitan Police with a short summary of the injuries received by members of the force who were on duty in or near Trafalgar-square on Sunday, Nov. 13th, during the disturbances. In many instances it was not possible for the men to say what kind of weapon was used, but some of those recognised may be mentioned, such as life preservers, a piece of gas pipe, an iron bar, sticks, stones, and kicks from heavy boots. One was stabbed by an oyster-knife, and more than one knocked down and trampled upon. Altogether about 73 are known to have been injured. Injuries of the head, scalp wounds, and contusions 20, injuries of the face 3, head and face 7, neck 2, chin 2, eye 5, shoulder 1, elbow 1, head and hand 1, hand 1, abdomen 2, abdomen and chest 1, thigh (fall of horse) 1, leg 9, knee 4, foot, knee, and back 1, general contusions 4; wounds of eye 1, lips 1, finger (bitten) 1, shoulder (punctured) 1, knee 1; sprains of wrist 1, fingers 5; fracture of nasal bones 1; dislocation of forearm 1; slight concussion 1. Several of these injuries were attended to on the spot, others were treated at the nearest hospital, and others by the divisional surgeons. There was no instance of bullet wound.

THE CONVERSION OF BENIGN GROWTHS OF THE LARYNX INTO MALIGNANT.

AT the recent Congress of German Naturalists and Physicians Professor Schnitzler read a paper upon the subject of the Malignant Degeneration of Benign Growths in the Larynx. He first described a case of epithelial carcinoma with secondary growths in the lymphatic glands and pleura, in a patient who some months previously had been operated on for papillomata, the recurrence of which had been treated by cauterisation. The patient subsequently came under Professor Schnitzler's care with symptoms of perichondritis, but the carcinomatous nature of the disease was recognised, and the supervention of pleurisy some weeks later was considered to be due to a diffusion of the malignant disease. This diagnosis was confirmed after death, when, besides the laryngeal and pleural carcinoma, there were found necrosis of the thyroid cartilage and gangrene of the right lung. Professor Schnitzler remarked upon the rarity with which benign tumours take on malignant characters, he having seen such conversion only three times among hundreds of cases of laryngeal papillomata. He left undetermined the question whether the operations and frequent cauterisations induced the malignant disease, and said that endo-laryngeal operations upon papillomata should be discountenanced on this ground. He also spoke of the difficulty in the differential diagnosis between benign and malignant growths, as well as between laryngeal syphilis and carcinoma. Dr. Morelli related the case of a man whose larynx was so blocked by papillomatous growths as to necessitate tracheotomy prior to a thyrotomy, with complete ablation of the new growth and galvano-cauterisation of the laryngeal wound. The patient left apparently cured, but wearing the tube. After the lapse of a year he returned with evident carcinomatous degeneration of the papilloma, which filled the larynx to the level of the tube, which was partially displaced and blocked by it. This was the only case of the kind that Dr. Morelli could recall within a period of nearly ten years. Dr. Seifert referred to a case published by Böhmer, where papillomata (histologically examined) had been treated by Professor Gerhardt and himself for a year, but which passed into carcinoma, for which extirpation of the larynx was practised; but the patient did not long survive the operation.

UNOFFICIAL PHARMACOPŒIAS.

IT is always satisfactory to the regular practitioner when he can confine the choice of his remedies within the bounds of the British Pharmacopœia. But it must be allowed that many medicines have achieved a decided and meritorious reputation before they reach a place in that honoured but somewhat slow volume. Indeed their appearance in it is the recognition of a reputation already made. Nay, more, it is desirable that new medicines should be well tried before they are admitted into the Pharmacopœia. During this stage of their history it is very important that the profession should have some knowledge of the best way of using them, and of the preparations in which they may be more safely pleasantly, and advantageously administered. Let us take, for example, the case of the drug strophanthus, the action and uses of which have been so brilliantly and laboriously studied by Professor Fraser over a period of fifteen years. Professor Fraser brought his investigations to a most practical issue two or three years ago, and enriched thera-

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peutics with a new and powerful remedy, but not in time to secure recognition in the Pharmacopœia of 1885. Many practitioners are using strophanthus, or thinking of using it. But they will look in vain for any notice of it, or of any preparation of it in the official list of drugs and preparations. A list of drugs and preparations that, though new and unofficial, are still to a certain extent wanted by the profession, is a real desideratum, for meeting which we must look largely to practical and scientific pharmacists. In 1886, at the British Pharmaceutical Conference, a committee of its members was appointed to prepare a formulary of unofficial remedies. As we announced in our issue of Sept. 10th, it has now produced such a formulary, published by Messrs. Churchill, containing thirty-seven formulæ for the preparation of new drugs or old drugs in new forms. The Medical Council has given power to a committee to do similar work. But it will necessarily move more slowly and view the matter from a somewhat different standpoint.

TEMPERANCE ON SEA AND LAND.

THE virtual suppression of floating grog-shops by common consent of the Powers bordering on the North Sea is a step which must give rise to very general satisfaction. The evils connected with their use and the need of reform had come to be widely recognised before the work of eradication was taken in hand. We may therefore feel assured that the action of the covenanting Powers in this matter will be justified by its results. On land, the advantages of sobriety are everywhere apparent. At sea, the necessity for its observance is at least doubled, as far as concerns the individual immediately affected. There danger is not only common, but is apt to be as various and as sudden in its appearances as the movements of the shifting elements from which it arises. A drinking seaman, if he passes the vague limit of moderation, is in such a case but little better than the waterlogged and derelict vessel, and has become an actual peril to those who sail with him. Any who may be disposed to complain of the new regulations, as affording an instance of illiberal and grandmotherly legislation, must take into account this latter aspect of the question. The interest of the temperate and the desires of the intemperate are here, by the special conditions existing, brought from time to time into inseparable, and it may be fatal, opposition. Hence, in part at least, arises the need of interference by third parties. Another point must not be forgotten. Adulteration is, we cannot doubt, regarded with equal favour by unscrupulous publicans afloat and by men of the same type and calling on shore. There is, however, this practical difference between the two cases: a fairly efficient supervision can without much difficulty be exercised over the defaulting landsman; at sea there must be, to say the least, considerable facility for evasion under any system of inspection. The abolition of the floating public-house will probably prevent much "bad stuff" from reaching the fishermen of the North Sea. With regard to the liquor trade in the coast fisheries, each of the contracting Powers will exercise a separate jurisdiction. Restrictions conceived in the same spirit as those already agreed to will no doubt be imposed, the traffic in this case, with its attendant evils, being but the slightly modified counterpart of that which has till now been carried on at a greater distance from land. The uselessness of this traffic to any but the publican is apparent when we reflect that stimulants amply sufficient for all possible requirements can be taken on board a smack before she leaves for the fishing station. As an example of an effort in the same direction as that we have been discussing, we may mention our own Truck Amendment Act. The clauses of that measure which deal with the payment of wages to farm labourers expressly provide that payment for work shall in no place take the form of an offer of intoxicating drink. It is to be regretted that hitherto custom has in many cases proved stronger than the law; but it is also satisfactory to note that there is an increasing disposition on the part of both farmers and labourers to carry out the provisions of the Act in this important particular. We are also reminded, in a letter by Mr. John Abbey, that the Royal Agricultural Society in 1884 pronounced very decisively against the drink payment, and asserted that labour should be paid in money only. There is, as might have been expected, substantial evidence to show that work is better done when intoxicants are left out of the daily provision than when they are consumed. Workmen on farms have in very many instances shown a prudent consciousness of this fact by adopting, in place of alcoholic drinks, the simplest and cheapest non-intoxicating beverages.

THE ORIGIN OF THE SUPERIOR FACIAL NERVE.

IT is well known that in cases of hæmorrhage and softening of the brain the resulting facial paralysis respects nearly always the orbicularis palpebrarum innervated by the superior part of the facial nerve. In bulbar paralysis a similar exemption of these muscles is also observed. M. Mendel has addressed himself to the study of this subject, and gives the following facts experimentally ascertained. Extirpation of the muscles innervated by the inferior facial nerve, if accomplished on new-born animals, always causes an atrophy of the nucleus of origin of the facial nerve. Extirpation, in a young rabbit and two young guinea-pigs, of the muscles of the eyelids and forehead gave the following result at the end of three months in the rabbit and ten months in the guinea-pigs. The ocular bulb was found to be intact, and so were the trunk and nucleus of the facial nerve. On the other hand, the three brains presented an atrophy of the posterior part of the nucleus of the oculo-motor nerve. The atrophy was not only manifested in the dimensions, but also in the number, of the nerve cells. These experiments seem to prove that in the rabbit and guinea-pig the superior facial nerve has its origin in the nucleus of the third nerve. Is it possibly the same in man? In one case of ophthalmoplegia of central origin the muscles to the eyelids were also paralysed. At present the course of the fibres is not known in these animals, but Mendel thinks they traverse the posterior longitudinal system. The different origin of the bundles of the facial nerve is not surprising, for a similar occurrence takes place in other peripheral nerves.

SANITARY DEFAULT AT FULBOURN.

THE Rector of Fulbourn, near Cambridge, and within the district of the Chesterton rural district, has a sorry tale to tell of disease and maladministration. For five years enteric fever has off and on been prevalent in the village, and for the same period the medical officer of health has persistently but ineffectually urged improvements in dealing with the sewage of the place. In 1883 Mr. Spear of the Local Government Board visited the village and suggested immediate remedies; and in 1886 his colleague, Dr. Airy, went down, but his report, like previous ones, "was, in its turn, shunted." From August to December thirty-eight attacks with nine deaths occurred, and the authority were urged to do something beyond the adoption of mere palliative measures. But notwithstanding all this, fever is still in the place, and it is stated that things must remain so until the causes leading to its production and spread are removed. We have no definite information as to the sort of action that has been taken at Fulbourn; but it seems quite evident that the sanitary authority have not done their duty in the removal of obvious causes of disease and death, and that the inhabitants of the place have a right to demand such permanent remedies as shall prevent a recurrence of further fever spread amongst them so far as this

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is preventable. This is probably one of the cases in which it becomes a plain duty on the part of some who are strong enough to bear the burden of such action to make definite and formal complaint to the Local Government Board, under Section 299 of the Public Health Act, that the authority have made default. Without that, it seems that the central authority can do no more than they have done, but with a formal complaint before them they have very wide powers of compulsion, and there are many cases in which those who set these powers in motion deserve the highest thanks of the community which they thus serve.

SMALL SOCIAL VICES.

A CORRESPONDENT very sensibly directs attention to the influence exercised by some of the niceties of modern life upon the physical condition of young women at the present day. Without adverting to such grave excesses as the free use of alcohol and of toxic remedies, he instances incessant tea-drinking, sipping eau-de-cologne, and addiction to sensational novel-reading as examples of the prevailing spirit of self-indulgence. There is considerable force in his observation that we may be disappointed in the result if girls, who have in these and similar matters been allowed to regard their wish as their ideal, should at any time have to assume the responsibilities of motherhood. The practices to which he refers are, happily, counteracted in many cases by a native strength of mind and body, or by other habits of a more wholesome character. Still, it must be allowed that they are not in themselves conducive, but rather injurious, to health. They are part of a general tendency to luxurious living, which is not peculiar to one people, century, or sex, and to which we, as a prosperous commercial nation, have too readily become subject. The means of correction are not to be found in Pharmacopœias or in regulations as to the safest methods of indulging the petty cravings of selfish desire. The real remedy will be found in a return to simpler or less artificial usages, and in the increasing recognition of the value of some guiding purpose even in the leisure and the diversions of our lives. A general understanding of sanitary principles would also assuredly do much to assist the formation of a just estimate by the general public of what is and what is not calculated to favour the healthy growth of mind and body. These principles are now happily becoming better and more widely appreciated than formerly. The evils associated with such vices of civilisation as the social customs we have referred to stand, therefore, a fair chance of great limitation, if not of extirpation, when the verdict of common sense thus instructed will have been pronounced upon them.

CHOLERA ON BOARD THE STEAM-SHIP "GOVERNOR."

ON November 11th the steam-ship *Governor* entered the river off Liverpool, having had cholera on board. One man sickened on October 2nd, two days after leaving Calcutta, and died on October 4th; a second man sickened just after, and he rallied, but he ultimately died on October 12th. There were also several cases of diarrhœa on board, but there having been no sickness for three weeks before reaching Liverpool, Dr. Stopford Taylor allowed the vessel to go into dock. The most interesting feature of the story is the fact that the vessel was allowed to pass the Suez Canal "under strict quarantine," and this apparently at a time when she was not free from choleraic sickness. This action, which has now several times been repeated, seems to foreshadow the abandonment of the vexatious and dangerous system of ordering suspected and infected ships to return to Tor, and there to discharge their crews and passengers at an unhealthy lazaret in the Arabian desert.

IMPORTANT DECISION AS TO THE ISOLATION OF INFECTIOUS PAUPERS.

A VERY important question relating to the isolation of the infectious fevers has been raised at Leeds. The sanitary committee of the Town Council claimed the right, if they received paupers into their hospital, to charge the guardians with their maintenance. The guardians of the several unions concerned refused to make the necessary payment, and yet insisted on sending cases into a hospital which had been provided for all inhabitants of the district; they also sought the opinion of the Solicitor-General, who stated that they were right in their contention. The Town Council, having this legal opinion before them, met on the 15th inst., and they now declare that they are not prepared to accept it as sound, but they have written to the guardians to say that without prejudice to the general question, they have decided to receive for a period of one year such pauper patients as may be *bonâ-fide* inhabitants of the borough, after which date they will reconsider their action. They further state that, in adopting this course, they in no way acquiesce in the contention of the guardians, and that they have been actuated by a desire, if possible, to avoid costly litigation. It is much to be regretted that so important a matter should be left in so undecided a state; for if all Poor-law guardians have a right to send into hospitals provided by sanitary authorities such pauper cases of infectious disease as they see fit, it seems obvious that the right to refuse admission on the ground of social status is at an end, and the question of the nature and extent of the hospital provision to be supplied by sanitary authorities will have to be dealt with in a very different way from that hitherto adopted.

ATHETOSIS.

DR. ALFREDO RUBINO of Naples discusses, in some thoughtful articles in the *Riforma Medica*, two cases of athetosis which have come under his care. Both followed hemiplegia due to embolism, and one of the two was associated with multiple paramyoclonus (a muscular spasm differing but little from chorea). The fact of the athetosis and the paramyoclonus coexisting appears to point to a common origin of the two affections, which may be, as Dr. Gowers has suggested, in post-hemiplegic spasm generally, a peculiar condition of molecular instability of the grey substance of the brain, which, however, is not recognisable with the means at present at our command. The lesion which causes athetosis may, Dr. Rubino thinks, be situated at any point of the cerebral motor elements; but it is usually in the psychomotor centres of the cortex, in the inner capsule or in the optic thalamus. He does not view athetosis, generally speaking, as forming a pathological entity in itself, but considers it, like hemichorea, which is only another variety of post-hemiplegic spasm, as a mere development of a preceding affection—hæmorrhage, embolism, inflammation, atrophy, &c. Nevertheless, he is prepared to admit that some cases may be true essential neuroses, especially as it is sometimes double; and this may, perhaps, bear the same relation to the more usual single form that chorea does to hemichorea.

INQUEST EXTRAORDINARY.

AN inquest was held before Mr. W. E. Baxter on November 19th touching the death of Anne Gieser, aged thirty-three. The deceased, whilst under the influence of drink, was struggling with her husband, when she fell backwards to the ground. The husband alleged that owing to the fall a hairpin was driven into her head to the depth of five inches. A medical witness deposed that he could find no trace of a puncture, and that in his opinion death was due to syncope. We can quite under-

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stand all this; but we were not prepared for the coroner's statement that the medical men were unable to discover the aperture of entry of the bullet fired into Mr. Gold's body by the murderer Lefroy. It is true a bullet wound may close up, as it were, and not be recognised on casual observation; but surely a careful examination could not fail to detect the lesion, nor is it probable that the channel made by the passage of a hair-pin into the flesh would escape discovery. The report of the inquest reads something like a romance. It was consistent, however, in this, that the verdict returned by the jury agreed with the narrative of Lefroy's case made by the coroner. It ran thus: "Death from failure of the heart's action, accelerated by the prick of a pin."

SIR WILLIAM GULL.

WE learn that Sir William Gull left Pitlochry for his residence in London on Wednesday at 2 P.M., arriving in Brook-street at 5 A.M. on Thursday morning. Sir William, we are glad to announce, made a most satisfactory journey. His general health is good, and improvement in the special symptoms is maintained. The London and North-Western Railway Company sent a special carriage for Sir William's accommodation, and made every arrangement in their power for his comfort and convenience during the long journey from the north.

THE INTESTINAL ORIGIN OF CHLOROSIS.

AN interesting contribution by M. Duclos has been made to the *Revue Générale* (No. 37) on this subject. He considers that chlorosis is eminently a result of auto-infection, a true poisoning resulting from the retention and putrid decomposition of fecal matters in the intestine. As a rule chlorosis is preceded by and associated with constipation, but this rule is not without exception. Sometimes the poisoning takes place rapidly; the putrid decomposition may be active or the intestinal absorption may be more or less complete; and in harmony with these differences the varieties of chlorosis may be observed; even fever and endocarditis may arise as a result of such auto-infection. Everyone admits the importance of overcoming intestinal inactivity in these cases, even though they do not feel disposed to accept M. Duclos' theories.

HARVEIAN SOCIETY.

A COURSE of three lectures on Lupus, by Mr. Hutchinson, will be commenced at the rooms of the Harveian Society on Thursday next. We are informed that these lectures will concern general pathological problems as to the real nature of many maladies cognate with the more typical forms of lupus, more especially in their relations with tuberculosis and scrofula, and that they will not be addressed specially to dermatologists. The Society meets at Stafford Rooms, Tichborne-street, Edgware-road, at 8.30.

ŒDEMA NEONATORUM.

ŒDEMA NEONATORUM, though closely associated with sclerema of the newly born, also presents considerable analogy with phlegmasia alba dolens according to M. Léon Dumas, who perceives the analogy not only in symptoms, but also in etiology and pathological anatomy. Nevertheless, thrombosis of veins had not hitherto been described in cases of œdema neonatorum. M. Dumas of Montpellier has discovered a thrombus in both femoral veins in a fatal case of this affection. Whilst awaiting fresh observations to confirm this view, M. Dumas speculates on the possibility of spontaneous venous thrombosis occurring in the cachectic condition common in many new-born infants, in whom respiration and circulation are not easily established in full perfection.

H.I.H. THE CROWN PRINCE OF GERMANY.

WE are authoritatively informed that Sir Morell Mackenzie has received a highly satisfactory report from Dr. Krause. The lumen of the larynx is practically entirely free, and the general health could not be better.

DIPHTHERIA AT SHIRLEY.

THE difficulty which we indicated of proving a connexion between diphtheria at Shirley and the nuisance from the sewer ventilators is well shown by the contradictory statements that have appeared in the public press. But, on the whole, it seems clear that there is an offensiveness connected with the sewers that ought not to exist, and the most recent explanation of it is the abnormally high temperature which the sewer contents exhibit, owing to the discharge into the culverts of boiling water from a brewery. It is a great pity that the report of the Government inspector is not asked for by the complainants. Its perusal might clear up some of the difficulties connected with the case.

EPIDEMIC OF LEAD-POISONING DUE TO FLOUR.

IN the month of June, 1887, more than 100 individuals of all ages, inhabiting the villages of Villemontois, St. Maurice, and Lentigny, presented simultaneously a peculiar series of symptoms which proved to be due to lead poisoning. The case has been investigated by MM. Bertrand and Ogier, who came to the following conclusions:—That leaden vessels employed in transferring meal may be a cause of serious lead poisoning. That the lead enters the system in the form of sulphide. The sulphur must have been derived from fissures in the grindstones which had been obliterated by the use of sulphur.

SMALL-POX IN THE PERTH INFIRMARY.

DR. LITTLEJOHN sees no harm in the directors of the Perth Infirmary retaining in their institution such cases of small-pox as arise in it; and apparently the separate pavilion will in future be used for such purposes. As we have said before, other similar institutions have not, even with detached pavilions and isolation buildings, felt this to be a safe course; but so long as the inmates of the Perth Infirmary are well enough, and are willing, to be revaccinated on such occasions, danger is of course practically removed. But such favourable circumstances may not always be experienced.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda-Pesth.—Drs. Eröss and Ottava have been appointed lecturers in Diseases of Children and Ophthalmology respectively.

Innsbruck.—The Professorship of Pathological Anatomy having been declined by Professor Weichselbaum, Dr. Pommer has been appointed to give the lectures for the present.

Kiel.—It is proposed to establish a Professorship and an Institute of Hygiene.

Marseilles (école de plein exercise).—The Municipal Council is endeavouring to get the Medical School raised to the rank of a Faculty.

St. Petersburg.—Dr. Shudnovsky has been promoted to be Professor of Diagnosis.

Seville.—Señor Moresco has been nominated Professor of the Diseases of Children.

Strasburg.—Professor Kussmaul, being about to retire at the end of the current winter semester, will probably be replaced by Professor Naunyn of Königsberg.

Valladolid.—Señor Roa has been nominated Professor of the Diseases of Children.

Zaragossa.—Señor Borovio has been nominated Professor of the Diseases of Children.

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MR. S. HAMILTON CARTWRIGHT has recently sailed for Australia, where he is about to be married. He has resigned the Professorship of Dental Surgery at King's College, and the Dental Surgeoncy to King's College Hospital, which he has held for the past twelve years, in succession to his father, Mr. Samuel Cartwright. He has also given up all intention of resuming dental practice, but may probably return to general medical work. A large number of friends assembled before his departure to bid him adieu.

THE great St. Petersburg physician, Professor Botkin, is now in Paris, where, accompanied by his son, Dr. S. Botkin, he has been visiting the hospitals. He is, of course, receiving every mark of attention, and when his name is mentioned to the students he is greeted by an ovation.

A CONGRESS of physicians and veterinarians, with the view of discussing the subject of tuberculosis in man and in animals, is announced to be held from July 25th to the 31st, in the rooms of the Faculty of Medicine, Paris. Professor Chauveau will preside.

MR. FRANCIS GALTON'S proposed lectures at the South Kensington Museum on Heredity and Nurture, which were postponed on account of his illness, are now announced for the Saturdays, Nov. 26th, Dec. 3rd, and Dec. 10th, at 4 P.M.

AT a meeting of the Council of Queen's College, Birmingham, held on the 17th inst., Mr. Lawson Tait was elected Professor of Gynæcology, and Mr. T. H. Bartlett Lecturer on Operative Surgery.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

TUESDAY, NOVEMBER 22ND.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

AFTER some formal business, including the introduction of new members (Sir George Macleod in the place of Dr. Fergus, and Dr. Samuel Wilks as a representative for the University of London), the PRESIDENT delivered the following address:—

I deeply regret that upon the first occasion on which it is my privilege to open a session of this Council my earliest words must be expressive of our common sorrow at the unexpected death of the late Dr. Andrew Fergus, who, as the Crown member for Scotland during the past ten years, had gained the esteem of all his colleagues as a sagacious councillor and a genial friend. The serious illness of Sir William Gull demands an expression of sympathy on our part towards one who was for twelve years a zealous Crown member for England, and has since then been for a brief period the representative of the University of London. To this I am confident I may add your earnest hope that his progress towards recovery may lead to his complete restoration to health. The two seats on the Council thus vacated will doubtless be worthily filled by the well-known members who have just been formally introduced. Since the last meeting of the Council, the business of the office, whether current or occasional, has been so arranged and carried on that no important arrears have been permitted to accumulate. It will have been noted by you that, as indicated in the summons, this present session of the Council may be regarded primarily as brought together for the discussion and settlement of certain specified subjects. This view has been adopted in accordance with what I have understood to be a general desire, that the autumn meeting of the Council, in November, should be limited, so far as found to be practicable, to the consideration of all questions connected with the completion and rectification of the Medical and Dentists' Registers, including the investigation and decision of cases involving the possible removal of titles or names, or of both titles and names, from the Registers, under the penal clauses of the Medical and Dentists Acts; whereas questions appertaining to education and examinations might be relegated to the spring meeting of the Council in May, which will, however, be summoned for "general business," and so be formally competent to deal also with registration work. It is believed that such an allocation of the exceedingly varied duties of the Council may contribute to the satisfactory and economical despatch of its business. To prevent misconception, and to anticipate possible queries, it is well for me to add that this arrangement in no way precludes the consideration of any subject not included in the terms of the special summons, provided that a majority of the Council should be in favour of such a proceeding. Indeed, one important additional subject has already offered itself, which will require the decision of the present meeting of the Council—namely, an application from the Society of Apothecaries of London relating to a proposed examination for the grant of a diploma in Public Health. With this addition, it is hoped that the following sketch will be found to comprise all important subjects demanding immediate attention. 1. The adoption of the amended Standing Orders is a necessary, but I trust a merely formal, part of our present duty. These have undergone revision by myself, by the Registrar, and by a special committee, and have been finally submitted to and approved by the Executive Committee. The chief alterations in them relate to the times of meeting of the Council, to the constitution and election of committees, and to the appointment and duties of the inspectors. A few obsolete orders have been omitted. Some slight additions or emendations may still have to be introduced, in the event of any further recommendations from the Finance Committee or the Income and Expenditure Committee being adopted by the Council. 2. The inevitable, but I believe not embarrassing, subject of finance will be brought to your notice in a report to be presented to you by the senior treasurer. 3. A brief report on the question of "unqualified assistants," to be submitted to you by Dr. Chambers, will, it is hoped, be adopted by the Council and entered on the Minutes, with a view to its gaining subsequent useful publicity. 4. An important document relating to the registration under the Medical Act, 1886, of foreign degrees in medicine, held by registered practitioners, and obtained previously to the appointed day—viz., June 30th, 1887,—will be brought forward by Dr. Humphry for adoption by the Council. It is the result of prolonged and elaborate inquiry and correspondence. The information obtained has been tabulated by the Registrar, and certain recommendations prepared by a few members of the Executive Committee have been considered and agreed to by that body. Several schedules are appended to this report. Should the recommendations therein contained be adopted by the Council, it will be further proposed that the titles belonging respectively to the registered practitioners named in Schedule A may, on payment of the proper fee, be forthwith registered. This form of procedure becomes necessary, as the Council is the authority to which, under the Act, that duty is assigned. In the near future applications for this form of registration will cease, and the recognition of the validity of the few outstanding claims may, after due inquiry, be properly delegated to the Executive Committee, subject to report to the Council. 5. I must absolutely defer, for the consideration of the Council only, the unfortunately numerous cases arising under the penal clauses of the Medical and Dentists Acts; but I may make this comment, that their number on this occasion is the necessary consequence of their being all reserved for consideration at this session of the Council. 6. In view of the complications which arise out of the diversity of disciplinary powers and practice amongst the numerous authorities capable of granting registrable medical qualifications in the United Kingdom, I desire to suggest to the Council the appointment of a special committee to collect authentic information on this important subject, and, after consultation with the legal advisers of the Council, to present a report at our next meeting, embodying the facts so ascertained, and, if found practicable, offering recommendations simplifying our proceedings in such cases. If not exceeding my privilege as your president, I would venture to suggest, in reference to this subject, four important propositions: First, that each qualifying authority should be the guardian of its own honour, and should primarily exercise

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the function of deprivation of its qualifying degree, diploma, or licence. Secondly, that all the qualifying authorities should have in this respect the same rights and powers conferred upon them by Act of Parliament or by special statute, the Universities also being included so far as their medical degrees are concerned, inasmuch as these convey the right of entry into a profession. Thirdly, that there should be granted to the licensing bodies a power to proportion the penalty to be inflicted to the gravity of the offence committed; such, for example, as by admonition and the requirement of a guarantee for the future, or by either a temporary or a permanent deprivation of a qualification. Fourthly, that, except under certain very restricted conditions, the withdrawal of a qualification, or the subsequent restoration of the same by the authority concerned, should be followed, as a necessary consequence, by its removal from, or its subsequent restoration to, the Medical or Dentists' Register, as the case may be. These and other propositions would, I submit, be appropriately dealt with by a specially appointed "Discipline Committee," which should report as early as possible to this Council. 7. Finally, I have to suggest that, now that we are assembled together, an opportunity exists for the members of the two Standing Committees on Education and Examination to indicate to their respective chairmen subjects for inquiry, consideration, and report, in readiness for the ensuing spring meeting of the Council. With these introductory observations, I now commit to your hands the important work of the present session.

Communications were received from the Royal College of Surgeons in Ireland and from the British Dental Association with reference to the case of Mr. H. T. Partridge and his removal from the Dentists' Register. The communications were referred to the Dental Committee for inquiry and report.

Dr. HUMPHRY called attention to the marble bust of Sir George Paget which had been presented to the Council by some of its members, and which, he said, formed an admirable companion to the bust of Sir Henry Acland presented at the last session. The presentations showed the high esteem in which the two late presidents of the Council were held by those who worked under them.

Dr. QUAIN expressed the thanks of the Council to the gentlemen, especially to Dr. Humphry, for the presentation of Sir George Paget's bust.

The PRESIDENT, on behalf of the Council, thanked the subscribers for the bust.

Sir W. TURNER moved the acceptance of the Standing Orders as revised by the Executive Committee, with the exception of Clauses 5 and 9 of Chapter XI, and Clause 1 of Chapter XVIII.

Dr. QUAIN seconded the motion.

Dr. STRUTHERS thought that the whole chapter relating to finance should be omitted. The question of the remuneration to members of the Council might give rise to a discussion, and had better be left until the Finance Committee's report was received.

Sir W. FOSTER wished to know in what particulars the old Standing Orders had been altered.

The PRESIDENT said that in the first instance the old Standing Orders were printed on one side of the page and the proposed new ones on the other.

The following report from the Committee on Unqualified Assistants was then read:—

"Since the publication, under the authority of the Executive Committee, given on July 25th, 1887, of the resolution passed by the Council on April 21st, 1883, relating to the misemployment of unqualified assistants, a number of letters on the subject, chiefly marked 'Private,' have been received by the Registrar. From these communications—which may be consulted by members of the Council, and which will be preserved for further reference,—from notices in the newspapers, and also from common report, it is evident that magistrates, coroners, County Court judges, and other representatives of the public sense of justice, as well as medical men themselves, are becoming alive to the professional misconduct of registered practitioners who place patients under the sole charge of unqualified assistants. The administrators of the law regard as implicit fraud any claim of payment for the service of such subtitute assistants, when it is represented as 'medical attendance.' This fact is encouraging, for when it is found that the owner of a 'branch practice' cannot get a claim allowed for the services of his unregistered 'substitute,' and, moreover, that the protection of a 'cover' does not enable the unqualified practitioner to recover charges, these two kinds of irregular practice will probably not long continue to exist in this country. It is worth the attention of the Council, and especially of that part of it which constitutes the Education Committee, that one excuse made for the employment of unqualified assistants is the fact that young medical men recently qualified are often found incompetent to treat common diseases, and are, therefore, so far unfit to take sole charge of the sick. Modifications of the educational curriculum, which would render imperative on the student to obtain a more complete clinical knowledge and a greater acquaintance with the details of practice by personal intercourse of patients, would be viewed with favour by members of the Council and of the profession generally."

Dr. CHAMBERS, in moving that the report be received and entered on the Minutes, said the committee had never met, the report having been drawn up by correspondence. They were so completely in agreement that it was not necessary for them to meet. It had often been remarked by jurists that the best statutory laws were those the penalties of which had never been enforced, acting, as they did, by indirect influence. That was the way in which the resolution of the Council with regard to the employment of unqualified assistants had acted. A very considerable number of practitioners in the North, who had formerly employed them, had given them up, being men of respectability and position in society, who valued their good name. There were, however, others who braved out the resolution of the Council. Unfortunately, the worst cases had not been brought forward, and their offences had been condoned on the promise not to infringe the rules again. It would be very desirable to get hold of some really bad cases. When evidence was obtained that certain men habitually employed unqualified assistants, the Council would, no doubt, know what to do with them. Several practitioners had stated that they could not put qualified men in charge because they were unequal to the treatment of ordinary diseases.

Sir W. FOSTER seconded the motion. There were, he said, two classes of unqualified assistants employed by medical men throughout the country. It would be perfectly impossible for the Council to interfere with the legitimate unqualified assistants, because, if they did, those men would probably be taken on under the name of apprentices, and the Council did not wish to stop the unqualified practice which went on under the eye of qualified medical men. They did, however, object to those who only escaped the law by the use of a "cover," and he hoped the Council would take the most vigorous action to put down that nuisance.

Mr. TEALE thought that certain recent actions at law had gone a long way towards settling that question. In one County Court the other day charges for an unqualified assistant were disallowed, and he had received a circular inviting medical men to attend a meeting in order to move Parliament on the subject, so that the persons concerned were keenly feeling the effect of the decisions.

Dr. DUNCAN felt bound to express his difficulties about this subject. What was an "unqualified assistant"? Until that was explained he must feel doubts about the propriety of the report. Although no money was made by it, he employed hundreds of "unqualified assistants" in one of the most important duties of the profession. He had 2000 midwifery cases annually under his charge, all done by "unqualified assistants," and there was no word in the report to prevent his being taken to a court of law as an employer of such assistants. He was in accord with the general object of the report, but he disliked that the Council should blacken its own children, and tell the public that young medical men were not fit to attend ordinary cases. It would be very remarkable if they committed themselves to any such doctrine.

Dr. HERON WATSON said that in May, 1883, a definite report was presented to the Council by a previous committee on the same subject, and in the discussion it was distinctly brought out that there was to be no interference with that legitimate supervision of pupils in the conduct of cases which was required for the purpose of training and for dealing with the sick and necessitous poor. Many instances, however, were brought forward of practitioners employing assistants who practically took full charge of the cases, and that seemed to be absolutely discreditable to any member of the profession.

Mr. MACNAMARA said there was a very important distinction between "unqualified assistants" and the class

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which Dr. Duncan had alluded to. In the latter case the assistant paid for the privilege of learning his profession, whereas in the former the public paid.

Dr. STRUTHERS said the last paragraph of the report contained a censure on young medical men, who, though highly educated, were of course unfitted to attend to certain diseases.

Mr. MITCHELL BANKS also thought the last paragraph ought to be struck out.

Dr. GLOVER said the subject of attention to the more common diseases had been referred to the Education Committee, from whom he hoped they would receive a very interesting report; but he objected to the last paragraph being deleted. It simply alleged that it was a common excuse for the employment of "unqualified assistants" that young qualified men were incompetent to take charge of ordinary cases. One of the defects of medical education was that the student had no chance of learning to deal with scarlet fever, small-pox, &c. It was a very common thing for patients to die without the principal ever seeing the cases. One instance had only just been reported to the Executive Committee. The patients were under the sole charge of an "unqualified assistant," and the principal, who resided at a distance, only came in at the death to give a certificate. Such practice had been severely condemned in Parliament, by the judges, and by the Council, and he hoped that that condemnation would not be retracted.

Mr. BRUDENELL CARTER thought the objection might be met if the words "is the fact" were altered to "rests upon the assertion."

Mr. MCVAIL considered the report a very valuable one, particularly in relation to the resolution passed last February, that it was necessary to reconsider the question of pupilage.

The further discussion was adjourned for a time, the hour having arrived for the attendance of the Solicitor in connexion with the following cases.

The SOLICITOR said the case of James McCully came under the 29th Section of the Medical Act of 1858, and he produced a certified copy of the conviction at the Central Criminal Court, to the effect that he had been sentenced to imprisonment for two years, without hard labour, for writing and publishing a scandalous and defamatory libel.

Strangers were directed to withdraw, and on their readmission,

The PRESIDENT announced that the Council, having considered the case of James McCully, have arrived at the conclusion that he has been proved to the satisfaction of the Council to have been convicted of misdemeanour, and that the Registrar be directed to erase his name from the Medical Register.

The SOLICITOR said a summons had been sent to Mr. Thomas Ormsby Wiley of the Isle of Wight to attend the Council, and a letter had been received from his legal adviser stating that he had gone abroad. The evidence he had to bring before the Council was a newspaper report of the proceedings in the Divorce Court, and a statutory declaration by the petitioner that the report was true.

Strangers were again directed to withdraw, and after the Council had deliberated for a few minutes,

The PRESIDENT announced "that, in the opinion of the Council, Thomas Ormsby Wiley has committed the offence charged against him; that the offence is, in the opinion of the Council, infamous conduct in a professional respect; and that the Registrar be directed to erase his name from the Medical Register."

The discussion on the Report on the Employment of "Unqualified Assistants" being resumed,

Dr. MATTHEWS DUNCAN said the definition of an "unqualified assistant" referred to by Dr. Heron Watson was not the definition of the Council, and never had been adopted by it. What he (Dr. Duncan) had intended to convey was that they could not condemn "unqualified assistants" without defining what the phrase meant.

Dr. PETTIGREW thought the Report should be referred back to the committee and the last clause expunged. The teaching supplied at the various hospitals was much better in the aggregate than the teaching of any one man, however good he might be. He was disposed to encourage the idea of young graduates taking assistantships before embarking in their own practice.

Dr. LEISHMAN considered the language adopted in the report as somewhat unfortunate. An "unqualified assistant" might be any person who had not a legal title. It was quite possible that an "unqualified assistant" might be capable of taking charge of minor cases, and a practitioner might be perfectly justified in handing such cases to an unqualified assistant. Was he therefore to be branded with "unprofessional misconduct" for "the employment of unqualified assistants"? It seemed to be an unfortunate phrase.

Dr. S. WILKS said there were no doubt certain points in which unqualified assistants might be found wanting. He knew for a fact that men came out from the hospitals without any knowledge whatever of diseases of children, such as measles and scarlet fever. He had conducted examinations for a number of years at the College of Surgeons in conjunction with Dr. Peacock, who never failed to ask the candidate how many cases of scarlet fever he had seen, and a very large proportion of them said they had never seen a case. He had heard of a young man who got prizes and obtained excellent testimonials, in addition to the diploma of the College of Physicians, and then took an appointment as medical officer to a school. A child in that school had an eruption, and in the course of three days twenty children were similarly affected. The medical officer, not knowing what it was, was obliged to ask an old country friend to tell him, and he pronounced it to be measles. He had actually never seen a case of measles before.

Dr. HAUGHTON knew, as a matter of fact, that many students never went near a fever hospital. It was only quite recently that steps had been taken by the great majority of the licensing bodies to see that no men were allowed to practise without having ever seen a case of childbirth. It was only a short time ago that some of the army surgeons rather prided themselves on never having seen a case of midwifery, but the Act of 1886 now required surgery and midwifery as well as medicine. He should support most cordially the last paragraph of the report.

Dr. BANKS said his experience had been the same as that of Dr. Wilks, he having seen men who had obtained their diplomas without having seen a case of some of the ordinary diseases, and particularly of scarlet fever. Some time ago he met an army surgeon in consultation about a case of scarlatina, and the surgeon told him that he had never been in a fever hospital and had never seen a case of scarlatina. Students were frequently very industrious in the surgical and medicine departments, but they sometimes feared to go into the fever ward; in fact, on one occasion a young man under examination in the Royal University, when sent to examine a fever case, actually refused to do so. The report referred to assistants of general practitioners, but if it referred to resident pupils in hospitals he should protest in the strongest possible way against it.

The PRESIDENT hoped the Council would adopt the report, striking out the last paragraph. The subject would come before the Council in May, and it would be better not to introduce any debatable matter into the report, which was one of facts, and which if published would do a great deal of good.

The report having been received and entered on the minutes, Dr. CHAMBERS moved and Dr. HAUGHTON seconded its adoption.

Dr. MATTHEWS DUNCAN moved, as an amendment, "That this report, with the omission of the last paragraph, be adopted."

Dr. STRUTHERS seconded the amendment.

Dr. GLOVER hoped that the last paragraph would be allowed to remain, especially after the statements made by Dr. Wilks. There might, perhaps, be some slight alteration made in the wording of the paragraph.

The amendment was then put to the Council, and carried by 16 votes to 10.

On the motion of Sir WILLIAM TURNER, seconded by Mr. TEALE, the report of the committee appointed to consider the question of the registration of foreign degrees in medicine under Section 16 of the Medical Act was received and entered on the Minutes. The consideration of the report was adjourned.

On the motion of Mr. BRUDENELL CARTER, seconded by Dr. MATTHEWS DUNCAN, a communication from the Apothecaries' Society of London, containing the proposed regulations of examination for a diploma in Public Health was received, and entered on the Minutes.

Mr. CARTER then moved: "That the diploma in Public Health of the Apothecaries' Society of London, granted after examination, according to the regulations now received and entered in the foregoing Clause 16 of these Minutes, be reco-

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gnised by the Council for purposes of registration in the Medical Register, under Section 21 of the Medical Act (1886)." He said the regulations had been framed with extreme care. They provided for a complete examination, and would provide a qualification of great value to members of the profession.

Dr. BRUCE seconded the motion.

Dr. HERON WATSON moved, as an amendment, "That the opinion of counsel on the meaning of Clause 21 of the Medical Act (1886), as bearing upon the application of the Society of Apothecaries of London, be obtained as soon as possible before granting that application."

Dr. MATTHEWS DUNCAN seconded the amendment, which was carried.

The Council then adjourned.

WEDNESDAY, NOVEMBER 23RD.

The Council reassembled at two o'clock, Mr. MARSHALL, President, in the chair.

The first business on the programme was the consideration of the case of Henry Arthur Allbutt, a medical practitioner of Leeds.

Dr. HERON WATSON moved: "That this case be heard with closed doors, in the absence of strangers."

Dr. PETTIGREW seconded the motion.

Sir W. FOSTER thought the wiser course would be to pursue the ordinary course and to hear the case in the presence of the public, and then, as required by its standing orders, for the Council to deliberate upon the case in private.

The PRESIDENT said that he had taken the advice of Mr. Muir Mackenzie and Mr. Farrer, their counsel and solicitor, and they did not recommend that the Council should proceed to any unusual exclusion of strangers at that stage of the case.

Mr. MUIR MACKENZIE having stated his reasons for the advice he had given, the motion was put to the Council, and lost.

Mr. Allbutt was then admitted, accompanied by Mr. Robert Lamb Wallace, who appeared as counsel on his behalf.

Mr. WALLACE asked formally for an adjournment of the case, on the ground that his client had not had proper time to prepare his defence.

Mr. MUIR MACKENZIE submitted that the time given by the summonses to Mr. Allbutt was such as would be considered ample in any legal proceedings. There was no reason for the application.

Mr. WALLACE said the summons was issued on the 9th inst., and owing to absence from home did not reach his client till the 14th, with the result that the brief was not placed in his (Mr. Wallace's) hands till Friday last. He submitted that there had not been ample time granted for the defence to be scientifically prepared and conducted.

Mr. MUIR MACKENZIE said the time given had been more than was granted by the standing orders. He could not advise the Council that sufficient ground had been shown for the adjournment.

Mr. WALLACE said he would withdraw his request for an adjournment, but he asked that the members from Leeds, Mr. Wheelhouse and Mr. Teale, might be requested to withdraw from the Council, as his client had good reason to believe that they were personally prejudiced against him.

The PRESIDENT said it was not possible for the Council to listen to such a request. The request had been made, but the Council could take no notice of it.

Mr. FARRER then stated the case against Mr. Allbutt, which had been brought to the attention of the Council by the Leeds Vigilance Association. Mr. Allbutt was a member of the Royal College of Physicians of Edinburgh, and a licentiate of the Society of Apothecaries of London. The gist of the charge against him was that he had published a book or pamphlet entitled "The Wife's Handbook." The General Council having referred the case to the English Branch Council, who deputed a committee of their body to inquire into the facts, the committee reported "that the pamphlet was extensively sold, and that besides containing much that was offensive to good taste and professionally objectionable, it taught how sexual intercourse might be indulged in without fear of pregnancy supervening, but it did not distinctly recommend that kind of indulgence unless avoidance of pregnancy was advised by the doctor." The seventh chapter was the one that was the most objectionable, the title being "How to Prevent Conception when advised by the Doctor." There were also a number of advertisements bound up with the book, entitled "Malthusian Appliances." The Committee of Inquiry did not proceed further on the supposition that the Royal College of Physicians of Edinburgh was taking steps for the removal of Mr. Allbutt's name from the list of their Members; but in a letter dated June 11th, 1887, the Royal College stated that, seeing that their action could only deprive Mr. Allbutt of one of his two qualifications and that the case was now occupying the attention of the English Branch Council, they proposed to delay taking any further steps until the decision of the General Medical Council regarding the case should be declared. Under these circumstances, the Branch Council for England thought the case was one for the consideration of the General Medical Council. The question to be decided was whether the book was a fair medical treatise or an indecent advertisement, and was it a book so injurious to the public in point of health as well as morals, and so evil in its tendency as regards the profession, that its publication would be considered to be "infamous conduct in a professional respect."

Mr. WALLACE said his client had been charged with a very grave offence, and one which, if proved, would merit severe punishment. He commented very severely upon the way in which the case had been got up by Mr. Lechmore and the Leeds Vigilance Association, and complained of the hardship that had been inflicted upon his client by the change of venue from Edinburgh to London. He was charged with having written an indecent book, and with having attached thereto advertisements of an unprofessional character entitled "Malthusian Appliances"; but what on earth was there unprofessional about Malthusianism? Though he was charged with printing an indecent book, yet for months afterwards they permitted the book to be publicly sold, instead of indicting him at once, as they might have done, in Scotland for issuing an obscene libel. Instead of that the charge had been hung over his head for ten months, and everything had been done to ruin his client. With regard to the advertisements about Malthusian appliances, they were inserted only at such a price as would cover the cost of printing, so that Mr. Allbutt did not issue them for the purpose of monetary profit or with the view of attracting patients to himself. Some of the advertisements were by firms who were well known to be thoroughly respectable, and it could not for one moment be supposed that they did not know the nature of the book. It was manifest that the British public, who were the last tribunal, did not think the work was an obscene libel. In reference to the general tendency of the book, he contended that the limitation of the population was a legitimate subject for discussion.

The learned counsel had not finished his address when the hour of adjournment arrived.

THURSDAY, NOVEMBER 24TH.

The Council met at two o'clock, Mr. Marshall, President in the chair.

The consideration of the case of Mr. Henry Arthur Allbutt was resumed.

Mr. WALLACE, continuing his address, urged that the tendency of the whole book written by Mr. Allbutt was highly moral, and he asked the Council, in any resolution they might come to, to give such an expression of opinion as would give the book the *imprimatur* of the Medical Council. The earlier chapters of the book dealt with the signs of pregnancy and how to keep health during pregnancy. It then proceeded to warn women against the danger arising from an over-prolonged suckling of infants, a practice which was stated to prevail to an enormous extent among the lower classes under the mistaken idea that by so doing they prevented conception, and which was apt to produce blindness in the mother and idiocy in the child. It also spoke strongly against the use of alcoholic stimulants. It then dealt with the ill-effects upon the mother of repeated pregnancies occurring at short intervals. He warned women against the crime of attempting to procure abortion, and then proceeded, in the seventh chapter, which was the crux of the whole matter, to state various methods to prevent conception. Here the question arose whether it was right to advocate the use of such checks, and whether the checks suggested were proper ones. He did not know whether it would be argued that the advocacy of any check to popula-

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tion was undesirable, but he would certainly undertake to show that such things had been discussed before, and not condemned. Referring to an article which appeared in the *Fortnightly Review*, written by Mr. Montagu Cookson, Q.C., in which the Malthusian theory was advocated and a check suggested, he urged that if the advice was immoral the writer of that article ought to be proceeded against. It had also happened that details of evidence given at divorce trials had been published in the daily press which were quite as suggestive as anything contained in the book now under discussion, and surely, if this was immoral, they, too, ought to have been proceeded against. He protested against the hardship done to his client by singling him out for persecution of this kind. Dealing with the figures representing the birth and death rates of large towns, he submitted that a *primâ facie* case was shown for some means being adopted to check the enormous and totally unnecessary increase of population among the pauper class. He proposed to call competent witnesses to prove the terrible and alarming state of things existing with regard to this constant propagation.

Mr. MUIR MACKENZIE said that would be absolutely irrelevant. There was only one question for consideration, and upon that there could be no evidence—viz., what was the tendency of this work? That was the whole question for the Council.

Mr. WALLACE thought it was most directly relevant. He was trying to prove that this book was written with a moral purpose, with a view of preventing a great evil which was accruing to the State, and the calling of a witness to prove the existence of that evil, and that this book would have the effect of reducing it, was, he submitted, entirely relevant.

Mr. MACNAMARA said it might be taken for granted that the members of the Council were perhaps better acquainted with questions of infantile mortality and with the protective means that had been suggested in the book than any witness that could be called before them.

The PRESIDENT said the Council had no power to examine witnesses upon oath, and therefore their statements could not have additional weight to those made by counsel. Unless the Council authorised him to do so, he must decline to have any witness produced.

Mr. WALLACE said he would withdraw his suggestion. It was alleged in the indictment that this book was sold at so low a price as to bring it within the reach of the youth of both sexes, to the detriment of public morals. It was not alleged that the book was an immoral one, although that was alleged in the Scotch indictment—the Medical Council did not think fit to charge him with that, and so he was charged with having sold it at a low price. Was it meant to be seriously contended that if it had been published at two guineas nothing could have been said against it? The book had now been published for two years, and he challenged the product of any proof that it had done any harm to public morals. He found on personal inquiry at places where it was most likely to be kept for sale that it was not so kept, and at one shop where it was kept it was only sold to adults and to persons supposed to be married. Mr. Allbutt had declined to allow it to be sold in the streets. It was charged that this work contained statements which might gratify the vicious, but was there any surgical work which did not contain material which might gratify the vicious? He referred to some fifty or sixty petitions which had been sent to the Council from all parts of Europe, and by all kinds of people, in favour of this book, showing that the profession were by no means unanimous in condemning it. The Council would be running an enormous risk in condemning his client, for they would go counter to the feelings of, at all events, a very considerable and influential minority of the profession. He put his case, however, on higher grounds, and asked for a unanimous decision of the Council in favour of his client that this book was not an immoral one, that it was a book written with a good purpose, with a view of teaching these poor people how to avoid pain, misery, starvation, poverty, and crime. He asked the Council on that high and moral ground to come to a decision which would exonerate his client from the imputation that had been cast upon him, and would enable him to stand [illegible] eye of the world as a respected and honourable [illegible] profession which they all so much [illegible]

ACTING AS "COVER."

The consideration of Mr. Allbutt's case was suspended in order to take the case of Mr. Orme (registered as Member of the Royal College of Surgeons of England, 1865), who was summoned to appear on the following charge, as supplied by the Council's solicitor, that he, being a registered practitioner, had acted, and did act, as "cover" to one James McGowan, of No. 3, Acorn-villas, Grays, in the county of Essex, an unqualified person, in connexion with the National Medical Aid Company, Limited.

Mr. FARRER stated that he had spoken to Mr. Orme on the subject, and he was quite willing to place himself in the hands of the Council, knowing that the Council never wished to press hardly on any man. Mr. Orme stated that he was not aware of the feeling of the Council on the subject in question, and that he had erred in ignorance.

The PRESIDENT asked Mr. Orme if it was his desire to place himself in the hands of the Council.

Mr. ORME said that that was his desire.

Mr. FARRER read a letter which had been written by Mr. Orme denying that he had employed Mr. McGowan as an assistant to take a large practice in connexion with the company in question, and also a letter from Mr. McGowan stating that he had never falsely assumed the title of Doctor.

Dr. QUAIN asked what was the National Medical Aid Company, Limited.

Mr. ORME said it was a medical club for the benefit of poor people who could not afford to pay medical men their ordinary fees. They paid so much a week, as in the case of the Foresters and Oddfellows. He was paid by the society as their regular appointed medical officer, residing in the district.

Mr. TEALE: Was Mr. McGowan, before he came under your supervision, assistant to another medical man?

Mr. ORME: Yes; he was dismissed from employment, and, as I thought he was unjustly dismissed, I took him into my employ to help in a large branch practice that I was asked to take up. He came as my assistant, and, as far as I know, has never misconducted himself or attempted to call himself Doctor.

Dr. GLOVER: Is this a company or a club?

Mr. ORME: It is a company in the strict sense of the word, having a capital of £10,000, and it is registered as a company.

Dr. GLOVER: What do you do in the case of death certificates?

Mr. ORME: I always see the cases myself.

Dr. GLOVER: It might happen that a person might die without your seeing him?

Mr. ORME: It might happen. There was another medical man residing in the place who was associated with me as general medical officer; but he has now resigned, and I am the only medical officer in the district.

Dr. GLOVER: Living eighteen miles away?

Mr. ORME: Yes. I could run up by train in a short time. Neither Mr. McGowan nor myself ever attempted to infringe the laws of the Council intentionally.

Mr. MACNAMARA: I presume that there is a telegraph between you and the dispensary?

Mr. ORME: Yes, and I can get there in an hour or two.

Mr. TEALE: Did Mr. McGowan write prescriptions or dispense medicines?

Mr. ORME: He never wrote prescriptions.

Mr. TEALE: Were the medicines dispensed by him on his own individual opinion?

Mr. ORME: On his own individual opinion when I was not present.

Dr. QUAIN: By employing an unqualified person do you think you excluded or prevented a qualified person from coming to the district.

Mr. ORME: Not that I am aware of.

Dr. QUAIN: In your absence he might prescribe for cases?

Mr. ORME: Certainly he might. I am not aware of his ever having written a prescription.

Dr. MATTHEWS DUNCAN: Were you aware of the action of the General Medical Council against unqualified assistants?

Mr. ORME: I certainly was not.

Dr. MATTHEWS DUNCAN: What medical journal do you generally read?

Mr. ORME: I generally take in THE LANCET, but I have not done so for some two years past.

Dr. GLOVER: How long was Mr. McGowan acting in this capacity?

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Mr. ORME: Three months.

The Council then deliberated on the case in private.

On the readmission of strangers,

The PRESIDENT said: Mr. Orme, I have to read to you the resolution of this Council, after having considered your case, as you must be aware, at considerable length and with very great deliberation. The resolution to which they have been obliged to arrive at is this:—That the Council views with the gravest disapprobation the conduct of Mr. Robert Orme as admitted by him, and while dealing with the offence leniently in the special circumstances of this case, and not erasing his name from the Register, they at the same time wish him to understand that the carrying on of a branch practice under the conditions admitted by him is a serious offence in the opinion of this Council, and is also detrimental to the public welfare. That is all that I have to say on the part of the Council.

Mr. ORME said that under the circumstances he should resign his appointment in connexion with the company, as he had no desire (and never had) to infringe the rules of the Council. He should also discharge Mr. McGowan with the proper notice.

The Council then adjourned at half-past six.

IRISH HOSPITALS AND MEDICAL SCHOOLS.

ROYAL COLLEGE OF SURGEONS MEDICAL SCHOOL.

SIR WILLIAM STOKES said that it seemed to him that there was a peculiar responsibility and importance attached to the opening of this session, as they were, so to say, entering upon a new dispensation. "The old order changeth, yielding place to new." They were now, in truth, ringing out the old system, and ringing in the new; and this process was fraught with consequences of the utmost gravity and importance, not alone to the student, but also to the College, the profession, and the public at large. Since the last inaugural address was delivered there a union had taken place between that College and the old medical corporations of Ireland. Hence the student in medicine had now to look forward not alone to sessional examinations, but also to a final one, conducted, not as heretofore by one, but by two of the medical authorities. From this union of their College with the other corporations he anticipated the best results. The want of it too long had been a source of weakness to their profession, and had kindled feelings of jealousy and distrust, keeping them divided, powerless, and weak; and although in the negotiations between the licensing bodies many feathers had been, and still were, ruffled, and the union not as comprehensive as he trusted he might live to see it, still a good beginning had been made, and he looked forward with confidence to witnessing a happy reciprocity and overlapping of their work, and an approach made to that end desired by all—unity in science of medicine. The lecturer then gave advice as to earnestness, enthusiasm, and honesty in work. One of their main ambitions should be not to be haunted in after life by the disturbing and paralysing spectres of lost opportunities. They should keep records of what they saw and what they heard, both in hospital and school. Their motto should be—"*Nulla dies sine linea.*" The lecturer then gave a brief retrospect of the chief surgical work accomplished by some of his predecessors in the surgical chair of the College, and said that in that survey he had to acknowledge with gratitude the assistance he had derived from the comprehensive history of the College by his friend and colleague, Sir Charles Cameron.

SCHOOL OF PHYSIC, TRINITY COLLEGE.

THE lecturer (Rev. S. HAUGHTON) delivered an address on "The History of the Medical School of Trinity College." He said that the school under Macartney went up like a rocket and it came down like a stick. That was because it was worked on the one-man principle. The professors were asked to surrender their opinions for those of a dictator. Under such a system he said fearlessly liberty perished, and no institution, not even the British Empire, could stand. From 1858 the school had progressed with varied fortunes, and now it had attained a prosperity not only equal but surpassing the time of Macartney, because it then stood on sand, but now it stood on a rock. It did not now depend on the one-man principle, but on the ability and energy of the teachers, and it was now worthy of the distinguished College of Elizabeth. Its future would be onward and upward. Having addressed some special remarks to the students, Dr. Haughton said he had great pleasure, in the name of the professors of the school, in asking the Provost, as head of the College, to hand over these enlarged buildings to them, and wish them God-speed in the future.

ST. VINCENT'S HOSPITAL.

MR. TOBIN said: When thinking of a subject for the remarks which it was his duty to make to them that day, this sentence from Watson's well-known introductory address occurred to him—"The profession which you and I have chosen, or which circumstances have prescribed for us, is a noble profession, and worthy of the devotion of a lifetime." He would take this for his text, and, in the first place, he would briefly indicate in what the nobleness of their profession consisted; and, in the next, how they could to the best advantage devote their time to its study and its practice. He asked them to bear in mind that when one gave advice one usually did so by going back on one's own life, reviewing its mistakes and its failures, looking into the causes thereof, and then raising a voice of warning to those coming behind. If, then, he seemed to them too emphatic in condemning any practice, they should remember that his censure included himself, and that in every word of blame he made a confession and a self-reproach. He then pointed out in what respect his profession differed from others, and mentioned cases showing that there existed in the public mind the expectation of gratuitous work from them, and he said this was not a thing to be cavilled at, but to be cherished and glorified in as a splendid inheritance put together by the devotion and self-sacrifice of those who had gone before them. He then proceeded to indicate how they could, to the best advantage, pursue their studies after they had first made a careful choice of their profession, and had in some way assured themselves of their competence for such a profession as theirs, one which required the severe mental gymnastics implied by the study of medicine. He urged the necessity of toil to obtain a position in the profession, and showed that in after life how much they were likely to lament lost opportunities.

RICHMOND HOSPITAL.

DR. O'CARROLL said he would attempt to speak to them on the subject of pathology: first, because of his faith in its necessity as part of medical education; and secondly, because of his conviction that it was that branch of investigation in which the Dublin school was most signally behindhand. First, to define what he meant by pathology. Pathology signified, as they were aware, the knowledge of the circumstances attending disease, but it had come to be narrowed down to mean that science which investigates the physical basis of disease. The science of pathology was yet in its infancy. They had ventured into depths unfathomed by those who had gone before them, but the time had been too short and the number of workers too few for many large discoveries. But what pathology had achieved might be gathered from a comparison of the state of medical knowledge before its recognition as a science and since that time. Now, as in the past, the only sure basis of progress was observation, and of all the fields for observation open to them, he submitted that pathology, studying as it did all the body changes, the sum of which they named disease, claimed their first care. They could have no ideas till they came to practise for themselves how vivid would be their diagnosis when based on a sound pathological knowledge. It was the absence of such knowledge which led such a large and persistent objectivity to such ideas as "constitution," "nerves," "system," and many others which he could mention. It had again been objected that pathology lends so little aid to therapeutics. The objection was a strong one, in the present undeveloped state of pathology. It was quite true that, to a large extent, they treated symptoms rather than physical conditions. Yet a comparison of the general course of treatment in the pre-pathological era and that of to-day would, he thought, convince them that the science of therapeutics proper had gained a very great

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deal from the accurate study of morbid changes. Finally, let him remind them that pathology, if as yet it had given comparatively little aid to curative medicine, formed nearly the whole groundwork of preventive medicine. Learning the causes of disease in one generation, it aims to anticipate or neutralise those causes in the next, and thus to increase, as it undoubtedly has increased already, the average of human life. A pathologist, to attain a high position and to be capable of teaching his science, must practically devote his whole time to its study. For what reward? Not for a pecuniary one, for there was no prospect of emoluments to the pathological teacher, and few of them commenced their professional career in sufficiently independent circumstances to be able to devote themselves to a study which promised no reward but fame. As a consequence, while a knowledge of pathology was urgently needed by every physician, the opportunities for acquiring that knowledge were almost completely absent.

CHILDREN'S HOSPITAL.

DR. MADDEN desired, he remarked, to show those who were to be their pupils in the hospital that they were not wholly unreasonable in suggesting another addition to the formidable list of lectures that now confronted them as medical students. Of some of these courses they might possibly be puzzled to discover the utility when once they had passed through the examination portals of the profession; but most assuredly they would then realise the fact, which was now strangely ignored by the licensing bodies, that in whatever part of the world their future practice might be, its success would be largely influenced by their competence to deal with the protean diseases peculiar to children. This essential practical knowledge of disease, whether in adult or child life, could only be acquired in one way—namely, by clinical study, the paramount importance of which was such that it would be impossible for him to exaggerate its value, or for them to devote too much time to its pursuit. No portion of their medical training, none of the multitudinous studies by which they must fit themselves for their profession, could for a moment vie with that engaging them in the hospital, to which all other branches of medical education should be made subservient. In dealing with the diseases of children, as they would have to do in their future practice, difficulties would present themselves, and complications would arise which no mere book learning could enable them to deal with fitly. In those moments of trial, when human life depended on the soundness of their judgment and the promptitude of their action, they would face the emergency calmly and act judiciously, in proportion as they would avail themselves of the special opportunities afforded them of acquiring such a store of sound clinical knowledge as would, he sincerely trusted, hereafter make them successful and justly-honoured ministers of the healing art. Medical science had become so widely extended within recent years that subdivision or specialism was essential to its successful cultivation; and this fact, which was well recognised with regard to so many other complaints, applied with special force to the diseases of childhood. In investigating these they would have to study a new semeiology, to learn a new pathology and new therapeutics. Their old means of investigating disease would here to a great degree fail them, and they would feel almost as if they had to learn their alphabet, or as if, entering a country whose inhabitants they expected to find speaking the same language and having the same manners as the people in the land they had lately left, they were to hear around them everywhere the sounds of a foreign tongue, and to observe manners and customs such as they had never seen before. Dr. Madden concluded by impressing the importance of acquiring a sound practical knowledge of the maladies of children by diligent clinical study of those living pages of disease now open to them in that hospital.

MEATH HOSPITAL.

DR. FOOT began his address by suggesting to the students, as worthy of adoption and incorporation into the essence of their daily life, the principles of earnestness, industry, and perseverance. He urged on their attention the paramount claims of opportunity. Never again would such a combination of advantages be at their command as they had now, while their attention was sharpened by curiosity, their powers of observation keen, their memories tenacious, their duties novel, and their responsibilities light. In their youth all possibilities lay, and nothing was for them as yet irrevocable. The necessity for and the best means of cultivating the faculty of observation were dwelt on, and the lives and results of the life work of Bright, Addison, and Laennec were quoted to show that the task of clinical observation must be begun early and perseveringly followed. As the ultimate end and reward to be looked forward to as compensation for their toil and self-sacrifice, he suggested that of "excellence in their profession." This would include and cover all they could possibly hope for or expect. This was the seventh time on which he had addressed them in the same strain, and in the sixteen years that had passed since he had first done so he had seen, heard, or learned nothing to shake his faith in the correctness of the principles laid down on each occasion. It was difficult to enhance with any new and memorable charm of presentment truisms now venerable from their antiquity, but the prizes of life and how they were to be attained were questions which knocked for answer at the hearts of each successive race of students. The answer was, these prizes were only to be obtained by earnestness, industry, and perseverance, dominated by a worthy aim—excellence, irrespective of pecuniary reward.

PROFESSOR VIRCHOW ON THE CASE OF THE CROWN PRINCE.

AT the meeting of the Berlin Medical Society on Nov. 16th (of which a full report is given in the *Berlin. Klin. Woch.*, No. 47, and of which the following is an abstract), Prof. Virchow asked permission to make a statement respecting his reports upon the microscopical examinations of the portions of new growth which had been removed by Sir Morell Mackenzie from the larynx of His Imperial Highness the Crown Prince. It had been publicly stated that these reports had influenced the line of treatment adopted, and as President of that Society he felt it incumbent upon him to meet the attacks which had been made upon him on this ground. It was far from his intention to discuss the case, for it would be unbecoming to do so at a time when they were all filled with anxiety and disquiet at the recent intelligence concerning it; he only desired to explain the circumstances under which his reports were made, and to place the position he held in the matter in a clear light. He had informed Drs. von Bergmann and Gerhardt of his intention, and they wished him to say that in their capacity as surgeons in charge they did not desire to make any statement at the present time, nor that any discussion should ensue upon what would be a purely personal explanation. Professor Virchow then related how on May 21st Dr. Wegner brought him a small portion of tissue which had been excised for the purpose of microscopical examination. The fragment was so small that it was entirely examined, and the report was not published simply because it dealt with so minute a portion as to be of no value. The other reports were published by command of the Crown Prince, and were known to all. This report of May 21st states that the preparation consisted of a fragment of the surface of the mucous membrane, with, at one spot, some irregular bundles of submucous tissue. In no part were there in the deeper layers of the mucosa any elements foreign to that tissue, the only abnormality being an increase of nuclei and vascular papillæ on the surface. The epithelium was much developed, and its cells contained nuclei in process of division; in some places there were nests of epithelial cells. At one spot there was marked epithelial proliferation, the cells being enlarged, cloudy, in part containing vacuoles and enclosing cells. Nothing was found inconsistent with the characters of a simple inflammatory process. After the report was sent in, Dr. Gerhardt examined the preparation with Professor Virchow, and was satisfied that the "nests" of epithelial cells were only found in the superficial layer. It is now generally admitted that these nests—which thirty years ago were held to be distinctive of cancroid—occur in the most various and benign epithelial formations. Professor Virchow then read the next report (June 9th), which has already been

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published,[1] and with respect to it he pointed out that he had expressly stated that an opinion on the nature of the whole disease could not be given from an examination limited to the excised portions. He could only frame his judgment upon what he himself examined, and he could not justly have expressed the opinion that it was still possible that a cancer existed. Such a possibility was not excluded by the terms of his report, for he had expressly affirmed that he only reported upon what was sent to him. At no time was he in a position from personal observation to gain any knowledge of the condition. He had not seen His Imperial Highness since the end of the winter, and at that time he was suffering from considerable hoarseness. His third report was dated July 1st,[2] and this confirmed the previous examination—viz., that it was a simple hard wart. But the portion excised was so superficial that no further opinion could be formed as to the condition of the deeper parts. He had expressed a wish for a detailed account and drawing of the precise relative position of the four fragments, and learnt that the first portion had been removed from the left vocal cord, and the last from the posterior third of the upper surface of the same cord. As to the other two portions, the nature of the subjacent tissue made it probable that they occupied the posterior third, probably to the right of the arytenoid cartilage; so that all the growths had probably been removed from the same region. At this time they learnt from English and German journals that Sir Morell Mackenzie had placed the responsibility of the diagnosis upon himself (Professor Virchow). He had kept silent, although he could indeed say that he was often very impatient, for he well knew the actual value which the English laryngologist would place on such a diagnosis.[3] During all this time he had not spoken to Sir M. Mackenzie, nor communicated with him by letter. Then came the authoritative reports that the morbid growths had been entirely removed, and that a small swelling which occurred had receded. It was repeatedly stated that no new outgrowths appeared at the seat of operation, and that is probably so. For, as Dr. Schmidt personally assured him (Professor Virchow), the left vocal cord is now not affected by the disease, which is described in the official report as in the hypoglottic region—how far or near to the cord Professor Virchow could not say. It seems, then, there has been no recurrence *in loco*, and that the clinical course of the case also rendered it impossible that the portions he examined were portions of cancer, if such had been present. He could not enter on the general question as to the conclusions upon the nature of the disease to be drawn from the examination of excised fragments, but could only say that he has since examined many specimens of laryngeal cancer in museums, and has not found one in which there were neighbouring warty growths quite independent of the cancer. He had never expressed the opinion that no other part of the larynx would become affected, but if, after the lapse of months, there had been no appearance of disease elsewhere the prognosis would have been much more favourable than is now unhappily the case.

MEDICAL ATTENDANCE ORGANISATION COMMITTEE.

A CONFERENCE was convened by the above committee at the Society of Arts on Nov. 22nd, at 4 P.M., to discuss a scheme which they had prepared to secure co-operation between the general metropolitan hospitals and provident dispensaries, and to establish more institutions of the latter class, to be supported by small periodical payments. There were present a large number of ladies and gentlemen who were representatives of metropolitan hospitals, or had publicly interested themselves in the question of supplying medical aid to the poor.

Sir SPENCER WELLS, who presided, in the course of his remarks referred to the desirability of forming some kind of union between the various hospitals and dispensaries of the metropolis. The result of the labours of the committee during the past year had been embodied in a series of resolutions which ran as follows:—

That the governing bodies of the metropolitan hospitals be requested to co-operate with provident dispensaries, recognised by the Metropolitan Provident Medical Association, on the following conditions:—That applicants for co-operation are *bond-fide* provident dispensaries for supplying medical aid to the industrial classes, and managed by a responsible committee. That such dispensaries shall in the main be conducted in conformity with the scheme of the Medical Attendance Organisation Committee. That no pecuniary liability, apart from their own normal expenditure, be incurred by the hospitals in consequence of this connexion, and that either party be at liberty to terminate the arrangement at any time, with such notice as may be agreed upon. That the objects of such co-operation shall be as follows:—

1. *Suitable Members of Provident Dispensaries to be referred to Hospitals.*—That the medical officers of these provident dispensaries be entitled to send cases to hospitals for consultative advice or treatment; and that priority be given to patients who bring a form approved by the hospitals, and issued by the Metropolitan Provident Medical Association. That the physicians or surgeons of the hospital shall be at liberty, with the patient's consent, to retain for hospital treatment any case of clinical interest thus sent to the hospital.

2. *Limitation of the Number of Out-patients.*—That the number of out-patients received each day and the hours for seeing them be limited, so that not more patients be received than can be deliberately attended by the stated officers of the hospital (and used for clinical instruction in hospitals having schools attached), and also that the present abuse of keeping patients waiting for a great part of the day be reformed. That the "casualty department" be strictly limited to accidents and street emergencies, and that only accident cases attend more than once. That in the interests of hospitals, provident dispensaries, and of the poor themselves, it is desirable that an agent, well trained, and thoroughly conversant with the locality, rates of wages, &c., be employed at general hospitals and free dispensaries to fulfil the following duties:—(*a*) To ascertain whether the patients should receive advice and treatment gratuitously; (*b*) to make inquiries and investigation on the plan now in force at the "London" Hospital.

3. *Ineligible Applicants for Medical Relief at Hospitals to be referred to Provident Dispensaries.*—That the committees of hospitals, in co-operation with provident dispensaries, be asked to recommend to applicants for out-patients' treatment, who are *primâ facie* able to make the necessary provident payments, that they should become members of the dispensaries, with the assurance that if they should need special or hospital treatment, they would be recommended by the medical officers of the dispensaries to the hospitals for that purpose, and be received by them. That notices, giving particulars of the provident dispensaries in co-operation with the hospitals, be placed in their out-patients' waiting rooms. That this proposal be adopted, on the understanding that all patients, whose cases are *primâ facie* urgent, are eligible for first treatment, and also that those cases which are vouched for by the physicians or surgeons as of special interest be retained for hospital treatment.

4. *Students to be permitted to make use of Provident Dispensaries for the Study of Common Diseases.*—That students of hospitals be permitted, under suitable regulations, to attend the practice of provident dispensaries in co-operation with their hospitals, when the medical officers see or visit their patients.

He invited those present to join in the discussion on the plan, and for the convenience of the meeting resolutions would be proposed, which could be discussed in detail.

Mr. W. BOUSFIELD moved: "That the scheme of the Medical Attendance Organisation Committee for co-operation between hospitals and provident dispensaries be accepted as a basis of negotiation." He said that at the hospitals many were treated who could afford to pay, and the out-patient departments were for the most part overcrowded and needed reforming. The Metropolitan Provident Association, which was formed in 1881, had been appreciated by the poor, but its progress had been slow from two causes: general practitioners had not supported it on the ground that people who could afford to pay were admitted as patients, and because no check had been put on the number of out-patients admitted to hospitals. Under the new scheme minor ailments would be treated at dispensaries, and, should need for consultative opinion arise, they could be transferred to the hospital.

Dr. GILBART SMITH, in seconding the motion, thought that the scheme would neither harm the hospitals nor deprive the really necessitous and deserving poor of the means of relief which were now open to them.

The Rev. Dr. WACE (King's College) proposed as a modification of the resolution, "That the scheme of the Medical Attendance Organisation Committee for co-operation between hospitals and provident dispensaries be referred to a committee composed of hospital representatives and of members of the Medical Attendance Organisation Committee for their consideration, and that the committee be requested to bring the scheme, when settled by them, before the governing bodies of their respective hospitals." This was seconded by Mr. Holmes.

After further discussion, in which Dr. Alfred Carpenter, Colonel Francis Haygarth, Mr. Jabez Hogg, the Hon. Conrad

[1] See THE LANCET, vol. i. 1887, p. 1302. [2] Ibid., vol. ii. 1887, p. 133.
[3] Vide Morell Mackenzie: Growths in the Larynx, p. 36. (London, 1871):—"*Malignant growths:* It is not always easy to distinguish between benign and malignant laryngeal growths; the latter, however, are diagnosed by being thoroughly blended with the surrounding tissue, by being very frequently ulcerated, and by the constitutional history and symptoms of the patient. In these cases, should particles be expectorated or removed during life, with the aid of the laryngoscope, *the microscope cannot be relied on for differential diagnosis.* Several cases have come under my notice where the histological features were decidedly those of cancer, whilst the clinical history was of a totally opposite character, and *vice versâ*."

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Dillon, and Colonel Montefiore joined, the amended resolution of Dr. Wace was put as the substantive motion, and carried unanimously.

Up to the time of the meeting representatives had been appointed by St. George's, St. Mary's, Middlesex, Great Northern Central, Evelina, and King's College Hospitals.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5704 births and 3747 deaths were registered during the week ending November 19th. The annual rate of mortality in these towns, which had been 21·5, 21·4, and 20·0 per 1000 in the preceding three weeks, rose again last week to 21·1. During the first seven weeks of the current quarter the death-rate in these towns averaged 19·9 per 1000, and was 1·0 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·5 in Hull, 15·3 in Leicester, 15·5 in Wolverhampton, and 16·3 in Brighton. The rates in the other towns ranged upwards to 29·0 in Halifax, 29·3 in Bolton, 29·6 in Preston, and 30·4 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 466 and 402 in the preceding two weeks, were last week 404; they included 85 from scarlet fever, 84 from measles, 80 from whooping-cough, 61 from "fever" (principally enteric), 38 from diphtheria, 31 from diarrhœa, and 25 from small-pox. These zymotic diseases caused the lowest death-rates last week in Bristol and Wolverhampton, and the highest rates in Blackburn, Bolton, and Sheffield. The greatest mortality from scarlet fever occurred in Oldham, Birkenhead, and Blackburn; from measles in Cardiff, Bolton, Bradford, and Derby; from "fever" in Leeds, Derby, and Bolton. The 38 deaths from diphtheria in the twenty-eight towns included 25 in London, 4 in Huddersfield, 2 in Brighton, 2 in Manchester, and 2 in Salford. Small-pox caused 25 deaths in Sheffield, but not one in London or in any of the twenty-six other large provincial towns. The metropolitan hospitals receiving cases of small-pox contained 16 patients on Saturday last, showing a further slight increase upon recent weekly numbers. The number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital at the end of the week was 2888, showing a further increase upon the numbers on previous Saturdays, although the number of admissions showed a further decline. The deaths referred to diseases of the respiratory organs in London, which had been 506 and 438 in the preceding two weeks, rose again last week to 461, and exceeded the corrected average by 40. The causes of 66, or 1·8 per cent., of the 3747 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Brighton, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·6, 20·6, and 19·9 per 1000 in the preceding three weeks, rose again to 22·0 in the week ending Nov. 19th; this rate was 0·9 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 17·3 and 18·8 in Leith and Paisley, to 23·9 in Glasgow and 24·4 in Aberdeen. The 549 deaths in the eight towns last week showed an increase of 51 upon the numbers returned in the previous week, and included 26 which were referred to whooping-cough, 16 to scarlet fever, 11 to "fever" (typhus, enteric, or simple), 8 to measles, 7 to diphtheria, 6 to diarrhœa, and not one to small-pox; in all, 74 deaths resulted from these principal zymotic diseases, corresponding with the number in the preceding week. These 74 deaths were equal to an annual rate of 3·0 per 1000, which exceeded by 0·7 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 26 in each of the preceding three weeks, were again 26 last week, of which 14 occurred in Glasgow, 5 in Dundee, 3 in Edinburgh, and 3 in Greenock. The deaths from scarlet fever were 16 last week, against 19, 14, and 17 in the preceding three weeks; they included 10 in Dundee and 2 in Glasgow. The deaths referred to "fever," which had been 6 in each of the preceding four weeks, rose last week to 11, of which 5 were returned in Edinburgh, 4 in Glasgow, and 2 in Aberdeen. The 8 fatal cases of measles showed a further increase upon the numbers in recent weeks, and included 3 in Edinburgh, 2 in Glasgow, and 2 in Perth. Four of the seven deaths from measles (showing a decline of 3 from the number in the previous week) were returned in Glasgow. The 6 deaths attributed to diarrhœa showed a further decline from the numbers in recent weeks. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 131 and 107 in the preceding two weeks, rose last week to 144, and were 7 above the number returned in the corresponding week of last year. The causes of 73, or more than 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 31·0 and 32·1 per 1000 in the preceding two weeks, further rose to 34·6 in the week ending November 19th. During the first seven weeks of the current quarter the death-rate in the city averaged 29·3 per 1000, the mean rate during the same period being but 19·2 in London and 18·5 in Edinburgh. The 234 deaths in Dublin last week showed a further increase of 17 upon the numbers in recent weeks; they included 8 which were referred to scarlet fever, 6 to diarrhœa, 5 to measles, 4 to "fever," 3 to whooping-cough, 3 to diphtheria, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had been 42, 41, and 45 in the preceding three weeks, declined last week to 29; they were equal to an annual rate of 4·3 per 1000, the rate from the same diseases being 2·2 in London and 3·0 in Edinburgh. The fatal cases of scarlet fever, measles, and whooping-cough showed a considerable decline from the numbers in recent weeks; the deaths from diarrhœa corresponded with the number in the previous week, and those from "fever" showed an increase of 1. Two inquest cases and 2 deaths from violence were registered within the city; and 55, or nearly a fourth, of the deaths occurred in public institutions. The causes of 38, or more than 16 per cent., of the deaths in the week were not certified.

THE SERVICES.

Deputy Surgeon-General G. M. Slaughter has taken over the duties of Principal Medical Officer of the Chatham District, in room of Deputy Surgeon-General E. H. Roberts, who proceeds to India.

Deputy Surgeon-General W. Colles has handed over his charge at Peshawur, and has joined at Meerut.

Surgeon-General W. A. Mackinnon, C.B., from head-quarters, will replace Sir J. A. Hanbury, K.C.B., as Principal Medical Officer at Gibraltar, who goes to India.

WAR OFFICE.—Brigade of Foot Guards: Surgeon-Major William Ralph Lane, Scots Guards, to be Brigade Surgeon, vice A. G. Elkington, Grenadier Guards, retired (dated Nov. 5th, 1887).

ADMIRALTY.—The following appointments have been made: Surgeon J. R. Dow, to the *Cordelia;* Surgeon J. S. Hughes to the *Himalaya* (dated Nov. 17th 1887).

ENGINEER VOLUNTEERS.—2nd Gloucestershire (the Bristol): Acting Surgeon G. M. Smith resigns his appointment (dated Nov. 19th, 1887).

RIFLE VOLUNTEERS.—2nd Bucks (Eton College): Surgeon J. W. Gooch resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement (dated 19th November, 1887).—1st Edinburgh (the Queen's City of Edinburgh Rifle Volunteer Brigade): Surgeon and Honorary Surgeon-Major R. J. B. Cunynghame resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement (dated 19th November, 1887).—1st Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Arthur Ernest Marsack, Gent., to be Acting Surgeon (dated Aug. 13th, 1887).—13th Middlesex (Queen's Westminster): Acting Surgeon W. H. Fenton-Jones resigns.

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his appointment (dated Nov. 19th, 1887).—14th Middlesex (Inns of Court): The undermentioned officer resigns his commission:—Surgeon J. H. Morgan (dated Nov. 19th, 1887). 18th Middlesex: Druce John Slater, M.B., to be Acting Surgeon (dated Nov. 19th, 1887).

Correspondence.

"Audi alteram partem."

THE NATURE OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—Sir James Paget, in the Morton Lecture, says: "We cannot tell why small-pox is especially manifested on the skin." In the nomenclature, small-pox, having fallen amongst the "specific febrile diseases," is regarded as a typical blood disorder. Believing that the fermentation theory has misled us, I hold this an unfortunate association, and would group small-pox with "parasitic diseases of the skin." The manifestations of small-pox can be accounted for by an hypothesis that spores dispersed from a small-pox victim, falling on "good ground," vegetate locally; that the local lesion and constitutional disturbance are sequences of that local growth. In ringworm spores may be carried by the air and settle on the skin. "In the first place the fungus takes root in the superficial epidermic layers." "The fungus elements act as a foreign body, irritating the subjacent papillæ." These become hyperæmic. Serous exudation follows, the epidermis is loosened and raised into vesicles, the part grown on is then protected from further vesicular eruption (see Hebra, new series, vol. v., p, 215). "Fever may also accompany such an eruption if it is spread over a large part of the trunk" (p. 201). There is no doubt that small-pox is propagated by spores (see Dr. Buist's "Vaccinia and Variola"). It is probable that they are given off in enormous numbers from a small-pox patient. An unprotected person entering a spore-laden atmosphere would arrest some of them. If each spore produced a pock at the spot where it was arrested, we would expect the pocks to be most numerous on well-aired parts, the respiratory tract, face, and hands; less so in parts covered by clothes and hair; least on unaired surfaces, such as the œsophagus, vagina, and urethra. It is so in small-pox, with the exception of the conjunctiva (the spores were washed away to the eyelashes). If we imagine the spores to be blood-carried, we cannot explain the distribution of pocks. The other theory does account for it. On the fermentation hypothesis the number of pocks would be independent of the number of spores originally leavening the blood. But on the unprotected the number of pocks does depend on the circumstances of exposure. Such a person passing a small-pox patient in the street would have discrete small-pox. Such a person attending a small-pox patient in a room for days, or sleeping in the same bed, would have confluent small-pox. The instances of most extensive confluent eruption over the body in my experience have been personal attendants on small-pox patients admitted into general hospitals. The longer such a one is exposed to infection, the nearer to the source, the fewer intervening obstacles and the more confined the space, the greater will be the number of spores adhering, the greater the number of pocks.

I am, Sirs, yours truly,

Hospital Ships, Nov. 20th, 1887. R. A. BIRDWOOD.

"IS CANCER CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—I have read with great interest the many letters which have appeared in the late numbers of THE LANCET on the subject of cancer, and also the admirable lecture in last week's number by Sir James Paget, Bart., who is decidedly of opinion that the disease is not contagious. Now, with your kind permission, I should like to bring before the profession a few cases which have happened in my own practice, and which can hardly, I think, be explained upon any other hypothesis than that of contagion.

1. Some years ago a gentleman, who had spent many years in India, came under my care for cancer of the lip, for which he refused to submit to any operation. When he was confined to his bed a favourite little terrier was scarcely ever out of his room, and, as is the habit of such little dogs, frequently licked his master's lips. This dog died, before his master, of cancer of the tongue.

2. A lady suffering from cancer of the uterus and vagina was nursed by a strong, healthy young woman of nineteen. She, in spite of my remonstrances, persisted in washing the rags which were saturated with the discharges from her mistress's wounds. Six months after the death of the lady this young woman was admitted into the North Devon Infirmary with a large mass of cancer in the axilla, and speedily died of the disease.

3. Since I have been in practice in this small town five surgeons, all of whom had officiated at the North Devon Infirmary, have died of cancer. Such a mortality can hardly be conceived except on the supposition that the disease was communicated, at least to some of them, during their manipulations on patients suffering from cancer.

I am, Sirs, yours faithfully,

Barnstaple, Nov. 21st, 1887. RICHARD BUDD, M.D., F.R.C.P.

To the Editors of THE LANCET.

SIRS,—The letter in your last issue under the above heading recalls to my mind the case of a man who died in the Liverpool Royal Infirmary in 1884 from cancer of the penis and secondary glandular disease, his wife having previously succumbed to malignant disease of the uterus. Like Mr. Whitehead's case, this may have been purely coincidental, but may also possibly bear another interpretation.

I am, Sirs, yours truly,

ARTHUR H. CLEMOW, M.D.

Earl's-court-square, S.W., Nov. 21st, 1887.

MANCHESTER.

(*From our own Correspondent.*)

VICTORIA UNIVERSITY.

THE ceremony of conferring degrees took place in the Town Hall, in the presence of a large and fashionable audience. Thirty-one degrees in all were conferred, in Arts, Science, and Medicine. The Vice-Chancellor, in his report, stated that the number of candidates at the various examinations was increasing yearly, amounting in the past year to 285. At a meeting of the University Court held the same day an important step was taken in the admission of the Yorkshire College at Leeds as a college of the University. The application was strongly supported by the Marquis of Ripon; and the Duke of Devonshire, Chancellor of the University, also wrote, expressing his sympathy with the application. After considerable discussion, it was unanimously decided to admit the Yorkshire College. Thus, another provincial medical school will have it in its power to offer a degree to its students. It is, however, to be hoped that, for the credit of the Leeds medical students, we shall not hear again of such a silly public demonstration as was made last week in the streets of Leeds by some of their number because they had been invited to attend a meeting under the auspices of the Young Men's Christian Association.

INFIRMARY AND SOUTHERN HOSPITAL.

The offer, alluded to in these columns, to build and equip a cottage hospital in Hulme, to be handed over to the Royal Infirmary, has been reluctantly declined by the board of that charity, as involving pecuniary responsibilities they do not see their way clear to incur. The recent death of Madame "Jenny Lind" has served to remind the present generation of the debt of gratitude owing to her for the substantial assistance given by her in building the third wing to the infirmary. During the past year the Southern Hospital has extended its sphere of operations by opening a lying-in department, and Dr. Sinclair, in the report presented at the annual meeting, was able to state that the public had responded well to the application for increased support to meet the additional expenses thus incurred. Good and useful work is being done by this hospital. At the last meeting of the Medical Society (which, by the way, continues this year to hold some of its meetings at the

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Literary and Philosophical Society's rooms, George-street) Dr. Sinclair read a paper on some cases of extirpation of the uterus for malignant disease.

OWENS COLLEGE.

We have had some distinguished visitors at the College lately, the latest being Earl Granville and the Lord Mayor of London, who, during a short visit paid to the city for the purpose of seeing the Jubilee Exhibition, took the opportunity of going through the laboratories, class rooms, and various departments of the College. The Combe lectures on Physiology are being continued at the College this winter by Professor Stirling, and are attracting large audiences.

BANQUET TO THE CHAIRMAN OF THE HEALTH COMMITTEE.

On Friday evening a complimentary dinner was given at the Grand Hotel to Mr. Alderman Schofield, J.P., chairman of the Manchester Health Committee, as an expression of appreciation by his fellow-citizens of his work in the cause of sanitary progress during the last eighteen years, and of sympathy with him in the vexatious and uncalled-for litigation to which the Health Committee was exposed a few months ago. The dinner was largely attended by leading citizens, members of the Corporation and the medical profession, and all the speakers bore testimony to the sterling honesty, integrity, and devotion to his committee's work so long shown by Mr. Schofield.

VACCINATION CORRESPONDENCE.

Our daily press has not escaped the outbreak of correspondence *re* compulsory vaccination lately engaging attention both in your columns and those of other London papers. Amongst the facts and arguments brought forward showing the protection afforded by properly performed vaccination, none were more striking or convincing, except to those who will not be convinced, than some adduced from the experience of the Infirmary Small-pox Hospital by Dr. Tomkins, formerly medical superintendent there.

November 21st.

LIVERPOOL.

(From our own Correspondent.)

THE MAYOR AND THE HOSPITALS.

FOLLOWING the example of his predecessors in office, the newly elected Mayor (Mr. Oakshott) visited the Infirmary for Children on the Sunday following his election, and last Sunday attended St. Barnabas Church in state, when a sermon was preached by the Rev. Canon Eyre, vicar of St. Helen's. The collection on behalf of the Royal Southern Hospital amounted to £110, exclusive of the donation of £25. After the service the Mayor visited the hospital. His worship also attended the first meeting of the Hospital Sunday Committee on the 17th inst., and took the chair.

DEATH OF A SHIP CAPTAIN FROM LAUDANUM.

An inquest was recently held by the city coroner on the body of a German ship captain, who had died shortly before reaching port. A post-mortem examination was made by Dr. Barron, who found indications of opium poisoning, as well as of recent intemperance. He removed the stomach and contents, and these were subsequently examined by Mr. Edward Davies, analytical chemist, who found distinct traces of morphia, and also obtained a spirituous extract giving the odour of opium extremely well marked, but there was no trace of meconic acid. It appeared from the evidence of the chief and second mates that the deceased had been for some time addicted to intemperance. In consequence of this, which led to the ship being placed in imminent danger, all intoxicants were kept out of his way. He contrived, however, to get hold of a large bottle of laudanum, a considerable quantity of which he evidently drank. An open verdict was returned. This case shows the importance of temperance being practised in the cabin even more than in the forecastle of all ships.

THE ASSIZES.

Since the 11th inst. Mr. Justice Day has been presiding in the Crown Court trying prisoners, of which there has been a very large number awaiting trial. Among these was a woman of loose character, indicted for the manslaughter of her paramour by throwing a lighted paraffin lamp at him, causing injuries from which he died. There was also a chemist charged with a series of indecent assaults on female children, the assaults having been committed in an apartment adjoining his shop. He appeared to have been in the habit of enticing the children in by offers of sweetmeats. The judge described the case as the worst of the kind he had ever tried, and regretted that, as the jury, acting under his direction, could only convict him of an attempt, instead of the full charge, the utmost punishment which could be inflicted was two years' hard labour, to which he sentenced him. There are still many serious cases to be tried.

THE HOSPITAL FOR WOMEN.

Among the other patients in the Hospital for Women, there is, under the care of Dr. Briggs, a Spanish woman, aged thirty-six, the subject of a protracted labour completed by instruments; this occurred in Spain seven years ago. Since then she has suffered from an unusually large vesico-vaginal fistula and deeply torn perineum, the bladder, vagina, and rectum forming one common cloaca. On admission the bladder was found to be turned inside out, so that the mucous membrane of the fundus vesicæ was protruded through the vulva like a hernia. After a fortnight's rest in bed the bladder had almost receded into the pelvis. The whole vesical floor was apparently absent. By making independent vesical and vaginal flaps on each side the gap was filled in without leaving tension on the sutured edges. The repair has been successful.

THE REMARKABLE CASE OF EXTRA-UTERINE GESTATION.

The case described in a previous letter has terminated most favourably, the patient being now, on the forty-second day, practically convalescent. She is sitting up daily, the original sac is represented by a mere sinus, and both temperature and pulse are normal.

Liverpool, Nov. 22nd.

EDINBURGH.

(From our own Correspondent.)

THE UNIVERSITY COURT.

AT its last meeting the Court adopted a minute expressing its regret at the retirement of Mr. Campbell Swinton, who has for the last forty years acted as one of its members in one or other representative capacity. The minute recognises that to his influence and the wise counsel he has advocated has been largely due the prosperity that has so signally marked the period of his tenure of office, and closes with a sympathetic expression of regard and good wishes on behalf of the remaining members. The report of the Business Committee of the University General Council, advocating measures of reform referred to in a recent letter, was brought up for consideration, but it was decided that the subject should be fully considered in all its bearings at a special meeting when a Bill on the subject should again be submitted to Parliament.

PROSPECTIVE CHANGES IN THE MEDICAL CURRICULUM.

During last summer the subject of an alteration in the curriculum that should make their labours, if not lighter, yet more evenly distributed over their period of study, and increase their opportunities of clinical instruction, was under discussion among the students; and their representative council drew up for presentation to the Senatus Academicus a series of propositions which it was thought would attain these ends if adopted. In effect, the students prayed for a redistribution of the professional examinations, by which the first and intermediate examinations should be placed anteriorly to the position they have till now occupied in the curriculum, and that an arrangement should be made by which they may be completed by the end of the second *annus medicus*, thus leaving two years and a half free for the clinical subjects, along with Pathology and Materia Medica. These proposals have now been considered by the Senatus, and in part adopted. It is to be in due time enacted that a student may pass the first professional examination in two sections within the first year of study; and it is anticipated that a similar enactment will be made by which he may pass in Anatomy and Physiology at the end of the second year. In regard to the latter point there is said to be a little difficulty; but there is no doubt that what opposition may arise to it will be of a formal nature,

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and will be easily overruled in accordance with the wide consensus of opinion in favour of the proposed alteration. Thus the last two years and a half of the student's undergraduate life will be freed from the incubus of impending examinations in subjects not directly bearing on his clinical work, an arrangement by which he can scarcely fail to profit as regards his preparation for the practical duties of his profession. The Senatus cannot be too highly commended for the wisdom and foresight evinced in their adoption of these suggestions, which will do much to enhance the value of the curriculum as a whole, and in large measure remove the one drawback it has laboured under—viz., the relatively larger development of its theoretical at the expense of its clinical aspect.

THE ETIOLOGY OF TUMOURS.

A special meeting of the Medico-Chirurgical Society was held last week for the discussion of the question of the origin of tumours. The subject was introduced in a paper by Dr. G. Sims Woodhead, which evoked a good deal of criticism, both favourable and adverse. His view is based on a study of the behaviour of the layers of the blastoderm in early stages of its development, and upon the observed inter-relation of the structures derived from each at different stages of adult life. He assumes a certain amount of antagonistic action between the developed derivative tissues from each layer in respect to functional and vegetative activity; and, by tracing the typical life history of each group, shows that their period of vital apogee and retrogression are not contemporaneous, but that at one stage the likelihood of invasion is greater on the one hand, at another period on the other. Thus in youth the connective tissue type of tumours preponderates; in middle life the histioid; and in old age the epithelial. In each case an irritant, in the wide sense of the term, must be supposed to determine the locality of tumour manifestation, whether the irritant be a trauma, an organised particle, or due to an hereditary local weakness. Further, an hereditary tendency to the production of one or other type of tumour may be established, depending on the age of the parents of the individual, and the state of their tissue equilibrium, as above defined, at the time of the individual's development; and such a tendency may become exaggerated in the course of successive generations till it becomes a diathesis and tumour formation actually occurs. The above is an outline of the argument adopted, which was largely amplified in the paper, and illustrated in many of its chief points by the citation of cases and the exhibition of specimens. In the discussion that followed, Professor John Chiene stated his opinion, based on a large series of cases tabulated for the purpose, that the great majority of malignant tumours occurred in consequence of local injury, giving "injury" the broad meaning of a local irritant or depressant. Dr. James referred at length to the biological aspects of the question; while Dr. Duncan expressed the opinion that malignant tumours are due to the action of micro-organisms. Dr. Joseph Bell, Dr. Russell, Dr. Macgillivray, and other gentlemen also took part in the discussion.

Edinburgh, Nov. 22nd.

ABERDEEN.

(From our own Correspondent.)

THE MEDICO-CHIRURGICAL SOCIETY.

THE annual meeting of the Aberdeen Medico-Chirurgical Society was held on Thursday, the 17th inst., when the following office-bearers were elected for the year:—President, Dr. James Rodger: Vice-President, Dr. Smith-Shand; Secretary, Dr. Edmond; Recording Secretary, Dr. MacGregor; Treasurer, Dr. Gordon; Librarian, Dr. McKenzie Booth; Council—Drs. Jackson, Ogilvie Will, Urquhart, Garden, and McKenzie Booth. The following gentlemen were also appointed representatives to the North of Scotland Medical Association—viz., Drs. Rodger and Edmond *ex-officiis*, and Drs. McWilliam and Theodore Thomson elected.

MEDICAL STUDENTS' SOCIETY.

As a result of some remarks made by Professor M'William in his introductory lecture at the opening of the winter session, the old Medical Students' Debating Society, which ceased to exist in 1880, has been resuscitated, and its first meeting was held on the evening of Friday, the 18th inst. Professor M'William delivered the inaugural lecture, choosing for his subject "Thought-reading." At the close of the meeting the following office-bearers were elected:—Honorary Presidents: Professors Struthers and M'William. Hon. Vice-Presidents: The other members of the Medical Faculty and the infirmary staff. President: Mr. Arthur Keith. Secretary: Mr. Park. Treasurer: Mr. M'Kay. Two gentlemen from each of the four years were appointed members of the committee.

FEVER AT MONTROSE.

The village of Ferryden, Montrose, is again the victim of a fever epidemic. During the last few weeks there have been between fifty and sixty cases of scarlet fever in the village, with four certified deaths, and two others which may, it is feared, be attributed to the same cause.

Aberdeen, Nov. 23rd.

DUBLIN.

(From our own Correspondent.)

QUEEN'S COLLEGE, GALWAY.

THE chair of Surgery in this institution is now vacant in consequence of the death of Dr. J. Valentine Browne, and the appointment, which is in the gift of his Excellency the Lord-Lieutenant, will be filled up some time in December, The gentleman selected will hold office for seven years only, and will enter upon his duties on January 9th, 1888.

FRACTURE OF THE SACRUM.

Fractures of this bone are so very uncommon that brief details of a case at present in the Meath Hospital may be of interest. A policeman, aged forty-six years, on the 17th inst. fell from a ladder a height of between twenty-five and thirty feet, the ladder falling under him at the time of the accident. On removal to hospital there was found a deep indenture corresponding to the middle third of the sacrum, and also a slight wound. He has been unable to pass urine since his admission, a catheter being used every four hours. A padded pelvis band has been applied, and the wound treated antiseptically. The lower fragment, it may be mentioned, was more prominent than the upper, and a finger can be introduced between them. The pulse was 104 on admission, and the temperature normal; but the latter on the 21st inst. went up to 102°, and to-day (Tuesday) it was 100°. I believe this is the ninth case recorded from other causes than gunshot injury.

ROTUNDO LYING-IN HOSPITAL.

At a meeting of the Dublin Town Council last Monday, the report of the Committee on the City Hospitals was under consideration. The grant to the Rotundo Lying-in Hospital—one of the largest institutions of the kind in Europe, having a world-wide fame, and admirably managed—has this year been suspended. The reason stated by the Nationalist members of the Town Council, who are in a large majority, for this procedure, is because they consider there are not a sufficient number of gentlemen belonging to their own religious persuasion on the board of governors of the hospital. As one of the Corporation, Sir George Moyers pointed out that what they had to consider was the treatment the patients received in the Rotundo Hospital, and not to deal with the religion of the governors.

THE PERMANENCY OF RETIRING ALLOWANCES TO MEDICAL MEN.

The guardians of the Limerick Union some time since passed a resolution granting Mr. Going, late medical officer of Coolycasey dispensary district, a superannuation allowance of £75 per annum. But they soon repented of their generosity—for what reason is unknown,—and notice of motion was given for the purpose of rescinding the arrangement entered into. Fortunately for Mr. Going, the Local Government Board have very properly interfered, and last week informed the guardians that the Union Officers' Superannuation Act contained no provision enabling guardians to revoke any grant of a superannuation allowance duly made by them in pursuance of the statute.

Dublin, Nov. 22nd.

AN extensive epidemic of measles prevails in the villages of Boughton and Dunkirk, in East Kent. In the last-named village the schools have had to be closed.

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PARIS.

(From our Paris Correspondent.)

CANCER OF THE LARYNX.

M. TILLAUX showed a patient at the Academy of Medicine upon whom he had performed tracheotomy five months ago for the relief of suffocation due to cancer of the larynx. Since then there has been, as is generally the case soon after an operation of the kind, a partial retrogression of the tumour, and the patient has resumed his occupation, having recovered his appetite, strength, and spirits, and gained seven pounds in weight. M. Tillaux said he made this communication because the question as to the best line of conduct in such cases is still open, as is shown by M. Schwartz in his thesis on the subject. Should a radical cure be attempted by extirpation of the larynx, or should the palliative operation of tracheotomy be adopted? M. Tillaux said that he thought the history of his case showed that tracheotomy was useful in some cases, and for his part he was not disinclined to prefer it, as a rule, to extirpation. Professor Verneuil considered that the superiority of tracheotomy over extirpation was incontestable. With the latter operation, when the patient does not die from the immediate consequences, he speedily succumbs to a relapse. In one case of epithelioma, tracheotomised by M. Verneuil a year ago, the tumour was so considerable that it was difficult to understand how it was possible to breathe at all. After tracheotomy, or rather Krishaber's operation of laryngo-crico-tracheotomy, the patient resumed his ordinary business, and is even able to speak pretty distinctly when the opening of the cannula is occluded. M. Richet mentioned a similar case. M. Labbé did not agree with his colleagues. He said that he had, like them, performed tracheotomy for the relief of laryngeal cancer, and should no doubt do so again. But he could not admit this to be the only operation possible, and that there are not cases in which we ought to practise extirpation of the larynx. As a rule, extirpation is done too late, upon subjects already tracheotomised, and for the relief of aggravated symptoms. It is reasonable to suppose that better results would be obtained if the operation were performed as soon as the cancerous nature of the growth is recognised, and before there is any secondary infection of the neighbouring glands. The gravity of the operation is not so considerable as is generally supposed. In four cases of the kind M. Labbé had had three absolute operative successes, the patients living for different lengths of time without relapse. In the fourth case death was due to the accidental negligence of the nurse, who omitted to change the cannula, as had been directed; in consequence the patient was nearly asphyxiated by the accumulated secretions, and died a fortnight later of septic pneumonia. The thesis of M. Schwartz ("Thèse d'Agrégation," 1886), the most impartial monograph upon extirpation of the larynx in the French language, necessarily serves as a groundwork for all general reviews of this question, and the current number of the *Bulletin Médical* contains a good *résumé* of of it by M. Maurice Hache, who brings the statistics of M. Schwartz up to date by the addition of recent cases. In 105 observations quoted of total extirpation of the larynx, death took place fifteen times within the first week from hæmorrhage, collapse, embolism or septicæmia, or other causes; twenty times during the second week from pneumonia or broncho-pneumonia. To these are added one case of death from pulmonary gangrene on the twenty-fifth day, five of late pneumonia, and two of exhaustion, making forty-three deaths in all from the operation itself, a mortality of 40 per cent. Twenty-eight of the remaining relapsed, two before the expiration of three months, six others before six months, eight before a year, two between the first and second years, and two before two years and a half. Thirty-four patients are recorded as cured—fifteen after six months' observation, eight more after less than a year. One was published fifteen months; one, sixteen months; two, from two to three years; three, from three to four years; two, five years; and one, ten years after operation. Counting those as cured who have lived two years, there have been eight certain successes in 105 cases. Of twenty-seven published cases of partial extirpation, in one there had been no relapse after eighteen months, in another the cure was definite after seven years. Seven other operations had been successful, but the time elapsed at the date of publication was under a year and a half. From a functional point of view the condition of those who have been operated on is less unsatisfactory than might be supposed. Deglutition is restored sometimes within a week, nearly always after a couple of months. And by means of Güssenbauer's artificial larynx there is a very fair restoration of the voice.

NEW TREATMENT OF PHTHISIS.

The report of the Commission appointed by the Academy to study the effects of hydrofluoric acid in phthisis has just been published. It begins by stating that glass workers attribute a curative action to the vapours, a fact pointed out twenty-five years ago by M. Didierjean, and which led to experimentation with this agent in the Paris hospitals. The results on the whole were negative, although it was thought likely that hydrofluoric acid might prove useful in diphtheria. The question has been reopened recently by MM. Seiler and Garcia (see THE LANCET, Oct. 15th), who now claim for hydrofluoric acid a foremost place in pulmonary therapeutics. The Academy Commission, MM. Herard, Féréol, and Proust, point out that the acid is highly antiseptic, ranking with biniodide of mercury in this respect. A solution of $\frac{1}{1000}$ to $\frac{1}{500}$ cleanses fetid wounds. It has a considerable anti-bacillary power, which the Commission has tested in guinea-pigs and rabbits infected by the inhalation of pulverised sputum. As regards the statements made by MM. Seiler and Garcia, the Commission thinks that, taken in their *ensemble*, they are exact, although it is somewhat premature as yet to affirm that the cures are permanent. They conclude that inhalations of hydrofluoric acid possesses an undoubted therapeutic action when phthisis is not too far advanced, and that they are both free from danger and easy of application. The *Journal de Médecine de Paris* publishes a long and interesting article by Dr. Ley on the treatment of phthisis by the inhalation of sulphurous acid. After relating numerous experiments upon the admixture of the gas with the atmosphere and the effects of inhalations of different strengths upon animals, the writer concludes that the therapeutic dose for man, is an atmosphere containing from $\frac{1}{5000}$ to $\frac{1}{10000}$ of sulphurous acid. This may be obtained by burning six grammes of sulphur for each cubic metre of room space for the first three days; after which (the walls being saturated) five grammes will suffice. The patients should not go into the rooms until ten or twelve hours after the combustion, which should always be performed in a well-aired chamber. M. Ley advises this treatment in torpid phthisis, and recognises febrile symptoms as a contra-indication.

ELECTION OF M. PÉAN.

The Academy has at length admitted M. Péan to its number, electing him to the membership last Tuesday by forty-seven votes, against thirty-four given to M. Le Dentu. M. Péan is perhaps better known than any other surgeon in the Academy, and it is difficult to understand why that venerable institution should have hitherto refused him a representative seat.

Paris, Nov. 23rd.

Medical News.

UNIVERSITY OF LONDON.—The following gentlemen have passed the recent M.B. examination:—

FIRST DIVISION.

Balgernie, Wilfred, St. Bartholomew's Hospital.
Barendt, Frank Hugh, Liverpool Royal Infirmary.
Barwise, Sidney, Queen's and Mason Colleges, Birmingham.
Braddon, William Leonard, Guy's Hospital.
Brook, W. Henry Breffit, St. Bartholomew's Hospital.
Brown, Herbert Henry, University College.
Caldecott, Charles, Guy's Hospital.
Calvert, John Telfer, St. Thomas's Hospital.
Clarke, William Frederick, Guy's Hospital.
Deanesly, Edward, B.Sc., University College.
Featherstone, W. Barltrop, Queen's College, Birmingham.
Finley, F. Gault, McGill University, Lond. Hosp., and Vienna.
Flemming, Percy, University College.
Gee, Frederick W., University College.
Gill, Ralnsford Foster, University College.
Godfrey, Albert E., Northampton General Infirmary and St. Thomas's Hospital.
Holder, Sidney Ernest, University College.
Jecks, Cyril William, University College.
Kelsall, Henry Truman, London Hospital.
Kidd, Hugh Cameron, St. Thomas's Hospital.
Lawrence, T. W. Pelham, University College.

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Lys, Henry Grabham, London Hospital.
Marriott, Hyde, B.Sc., University College.
Moynihan, Berkeley G. Andrew, Yorkshire College.
Nevins, J. B., Liverpool School of Medicine and Guy's Hospital.
Rennie, George E., B.A., Sydney, University College.
Risdon, William Newt, Guy's Hospital.
Routh, Charles Frederic, Guy's Hospital.
Smith, Hugh, London Hospital.
Solly, Ernest, St. Thomas's Hospital.
Stedman, Frederic Osmund, Charing-cross Hospital.
Sunder, Charles Edward, University College.
Taylor, Frederick Howard, London Hospital.
Thane, Edgar Herbert, University College.
Thompson, J. B., Owens College and Manchester Royal Infirm.
Tubby, Alfred Herbert, Guy's Hospital.
Tunstall, John Ogle, University College.
Vincent, Herbert Edmund, Guy's Hospital.
Wheatley, James, King's College.
Wheaton, Samuel Walton, St. Thomas's Hospital.
Williams, William Griffith, St. Bartholomew's Hospital.
Wynter, Walter Essex, Middlesex and St. Bartholomew's Hosps.

SECOND DIVISION.

Bailey, William Henry, St. Bartholomew's Hospital.
Chapman, Harry Cecil, St. Bartholomew's Hospital.
Clegg, J., Owens College and Manchester Royal Infirmary.
Colman, W. Stacy, University of Edin. and University College.
Crouch, C. Percival, St. Bartholomew's Hospital.
Fisher, Theodore, Guy's Hospital.
Furnivall, Bryan, St. Bartholomew's Hospital.
Gault, A. H., Owens College and Manchester Royal Infirmary.
Heatherley, Francis, Guy's Hospital.
Jordan, W. Ross, Birmingham Medical School.
Luff, A. Pearson, B.Sc., St. Mary's Hospital.
Mumford, A. A., Owens College and Manchester Royal Infirm.
Napier, Francis Horatio, St. Bartholomew's Hospital.
Pagden, Trayton Charles, St. Bartholomew's Hospital.
Randall, Ernest Bidgood, University College.
Strugnell, Walter T., St. Bartholomew's Hospital.
Watson, W. Ivens Buswell, Guy's Hospital.
Wells, George Lee, St. Bartholomew's Hospital.
Williams, Reginald Muzio, St. Thomas's Hospital.

UNIVERSITY OF GLASGOW.—The following degrees were conferred in the various Faculties of the University on the 17th inst.:—

DOCTORS OF MEDICINE.

1. COMMENDED FOR THESES.—John Brown, M.B., C.M., Scotland; John Love, M.B., C.M., Scotland.
2. ORDINARY DEGREE.—Quintin Chalmers, M.B., C.M., Scotland; W. Rees Jones, M.B., C.M., Wales; Alex. Morison, M.B., C.M., Scotland; James Foster M'Conaghy, M.B., C.M., Ireland; Ernest Mackenzie, M.B., C.M., England; Alex. Scott, M.B., C.M., Scotland.

BACHELORS OF MEDICINE AND MASTERS IN SURGERY.

1. COMMENDATION.—Gavin Russell, Scotland.
2. ORDINARY DEGREES OF M.B. AND C.M.—Alex. Butler, Archibald Campbell, J. Dobbin, W. R. Forrester, R. Jardine Freebairn, Daniel Laird, G. Lapraik, J. M'Corkindale, Thomas Longlands Macfarlane, David Johnston Penney, and J. W. Watkin Penney, all of Scotland.

CONJOINT EXAMINING BOARD OF THE COLLEGE OF PHYSICIANS IN IRELAND AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following, having passed their final examinations, have received diplomas qualifying them to practise Medicine, Surgery, and Midwifery:—

Edward W. Mahaffy Adair, James J. Behan, B. J. Dore, John David Ferguson, Robert Eustace Hickie, Leonard Kidd, H. Alban Marsden, James Martin, Denis Patrick Murphy, James O'Connor, Jeremiah O'Sullivan, John Dwyer Sexton, T. Stephen Sillis, and J. Trant.

COLLEGE OF PHYSICIANS IN IRELAND.—At the November examinations the following obtained licences in Medicine and Midwifery of the College:—

MEDICINE.—Martin Fitzgerald.
MIDWIFERY.—William Morris Lewis.

The undernamed have been admitted Members:—

George Richard Armstrong, Richard Cannon, William Malcomson.

UNIVERSITY OF OXFORD. — The Professor of Anatomy, Mr. Moseley, is incapacitated at present by ill-health from the performance of his duties, and Convocation is asked to grant him leave of absence for the ensuing year. Mr. S. J. Hickson, of Downing College, Oxford, has been appointed his deputy.—On the 17th inst. the degree of M.B. was conferred on Herbert Pennell Hawkins, Pembroke.

A NEW WARD has just been added to the Beccles Hospital as a permanent memorial of the Jubilee.

BEAVEN RAKE, M.D. Lond., has been appointed a Justice of the Peace for the Western District of the County of St. George, Trinidad.

NATIVE HOSPITAL IN ANNAM. — A hospital for natives is being constructed on the right bank of the river at Hué, near the French Legation.

QUADRUPLETS.—The wife of a fisherman of Austin-street, King's Lynn, has just been delivered of four children, all boys. Three of them were born alive, but one of the three died shortly afterwards.

NEW CHILDREN'S HOSPITAL IN PARIS. — The new children's hospital in Paris, which is to be called the Debrousse, for the erection of which the Baroness Alquié left two millions of francs, is to be built in the rue Bagnolet.

MEDICAL MAGISTRATE.—Mr. E. Godson, M.R.C.S., superintendent of the Hospital for the Insane, Parramatta, New South Wales, has recently been elevated to the bench of magistrates for the division.

PRESENTATION. — Surgeon-Major John Blackburn has been presented with a silver salver by the members of the Monckton Main Colliery St. John Ambulance Class, in recognition of his gratuitous instruction in rendering first aid to the wounded.

CHURCH OF ENGLAND BURIAL REFORM ASSOCIATION. The ninth annual meeting of the members of this Association will be held in St. Paul's Chapter Room on the 12th prox. at 3 P.M., the Right Rev. Bishop Suffragan of Bedford in the chair.

DEATH OF A MEDICAL MAN FROM HYDROPHOBIA.—A French medical man, Dr. Cauvy of Béziers, has just died from hydrophobia. He was bitten by a rabid dog some three months ago, and immediately went to Paris and underwent the inoculation treatment.

THE COUNTESS OF DUFFERIN'S FUND.—The Countess of Dufferin reports the result of the collection for the benefit of Indian women, through the National Association, to be the realisation of 478,465 rupees in India and £1770 in England.

PRESCRIPTIONS OF RUSSIAN SURGEON-DENTISTS.—The Russian Medical Council has rejected the request addressed to it by the Society of Surgeon-Dentists praying for the abrogation of the law forbidding these practitioners to prescribe "violent" medicines.

GLASGOW ROYAL INFIRMARY MEDICAL SOCIETY.—The introductory meeting of this Society was held on the 19th inst., when Dr. Wallace Anderson read a paper on Observations on the Study of Disease, being his valedictory address as honorary president. Dr. Fleming is the president for the ensuing year.

CHILDREN'S JUBILEE HOSPITAL AT GATESHEAD.—The foundation stone of the Children's Jubilee Hospital at Gateshead is arranged to be laid on December 2nd. It is intended at present only to proceed with the central administrative block and one of the wing wards, but the whole scheme includes four of these wards. The administrative block is estimated to cost £2000, and each of the wing wards about £1000, or a total of about £6000.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

DOWNMAN, CHARLES F., M.R.C.S., has been appointed Medical Officer for the Burnham District of the Maldon Union.

HILLIARD, R. HARVEY, M.D., F.R.C.S.E., has been appointed House-Surgeon to the Bucks General Infirmary.

KEMP, BENJAMIN, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Horbury Urban Sanitary District, Yorkshire.

MAHON, RALPH BODKIN, has been appointed Demonstrator of Anatomy, and Assistant to the Professor of Physiology at the Queen's College, Cork.

MOXHAM, M. CAMPLIN, M.R.C.S., L.R.C.P., L.S.A., has been appointed House-Surgeon to the Stroud General Hospital, vice C. E. Liesbing, M.R.C.S., L.R.C.P., resigned.

PARROTT, T. G., M.R.C.S., L.R.C.P. Lond., has been appointed House-Surgeon to the Bucks General Infirmary, vice R. W. Wilcox, M.R.C.S.

ROWNTREE, WILLIAM GEORGE, L.R.C.P. Ed., M.R.C.S., has been appointed Medical Officer for the Thornhill District, and Public Vaccinator for the Barnsbury and Thornhill Wards of the Parish of St. Mary, Islington, vice Whiteway Wilkinson, F.R.C.S., retired.

SIBLEY, WALTER K., B.A., M.B., B.C. Camb., M.R.C.S., has been appointed House-Physician to the Middlesex Hospital.

SMITH, SAMUEL GORDON, M.R.C.S., L.S.A., has been appointed Medical Officer for the Barnsbury District of the Parish of St. Mary, Islington, vice W. G. Rowntree, transferred.

WELCHMAN, E. W., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the St. Mary District of the Lichfield Union.

WILSON, MERVYN, M.R.C.S., L.S.A., has been appointed Medical Officer for the Chippenham District of the Chippenham Union.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BRISTOL FORESTERS' MEDICAL INSTITUTE.—Two Medical Officers.—Resident Dispenser.

BROMLEY AND BECKENHAM JOINT HOSPITAL BOARD.—Medical Superintendent. Salary about £70 per annum.

BROMLEY UNION, Kent.—District Medical Officer. Salary £85 per annum, vaccination fees and extras about £35.—Medical Officer for the Union Workhouse. Salary £90 per annum, vaccination fees and extras about £25.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary £130 per annum, with a prospect of increase, and rooms, coals, and gas free.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House-Surgeon.

CITY OF LIVERPOOL HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Officer. Salary £100 per annum, with board, washing, and lodging at the hospital.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian-road, N.—Obstetric Physician to Out-patients.

HULL ROYAL INFIRMARY.—Honorary Dental Surgeon.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer. Salary £30 per annum, with furnished apartments, board, attendance, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.—Assistant Physician.

NEWPORT (MON.) ODDFELLOWS' MEDICAL AID ASSOCIATION.—Medical Officer. Salary £140.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor, Isle of Wight.—Resident Medical Officer. Salary £100 per annum, with board and lodging in the hospital.

ST. GEORGE, HANOVER-SQUARE, PROVIDENT DISPENSARY, Little Grosvenor-street, W.—Resident Medical Officer. The salary and allowances last year were £235 8s.

ST. GEORGE'S HOSPITAL, Hyde-park Corner, W.—Physician.—Surgeon.

STOCKPORT INFIRMARY.—Assistant Medical Officer. Salary £50, with board and lodging.

UNIVERSITY OF EDINBURGH.—Examiners in the Practice of Physic, Midwifery, Anatomy, and Chemistry. Salary in each case £75 per annum, with an allowance of £10 for expenses.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea.—House-Physician. Honorarium £50 per annum, and board and lodging in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

GLASIER.—On the 16th inst., at Eastbourne, the wife of Charles Glasier, M.D., of a daughter.

HALL.—On the 17th inst., at Wimpole-street, W., the wife of F. de Havilland Hall, M.D., F.R.C.P., of a son.

JESSOP.—On the 20th inst., at Retford, the wife of Ed. Jessop, M.R.C.S., L.R.C.P., of a son.

LEECH.—On the 22nd inst., at Woolpit, Suffolk, the wife of A. Herbert Leech, M.R.C.S.E., L.S.A., of a son.

NANKIVELL.—On the 15th inst., at Penmellyn, Bournemouth, the wife of Herbert Nankivell, M.D., of a daughter, who survived her birth only three hours.

RUSHWORTH.—On the 17th inst., at Beechfield, Walton-on-Thames, the wife of Norman Rushworth, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

DIMMOCK—ALLEN.—On the 16th inst., at St. Peter and St. Paul's Church, Cremer, Augustus Frederick Dimmock, M.B., M.R.C.S., to Laura, eldest daughter of the late John Bonfield Allen, of Fairfield House, Norwich.

FOSBROKE—LANE.—On the 15th inst., at the Parish Church, Dorsington, G. H. Fosbroke, M.R.C.S., L.S.A., S.Sc.C. Cantab., to Mary Thorpe, second daughter of the late John Lane, Esq., of Little Dorsington Manor.

MYRTLE—SMITH.—On the 23rd inst., at St. James's Church, Westbourne-terrace, James Aitken Myrtle, M.D., C.M., to Jane Cranfurd, daughter of Thos. Smith, Esq., of Edinburgh.

DEATHS.

DAVIES.—On the 19th inst., at Penner House, near Newport, Monmouthshire, Arthur Evelyn Davies, M.R.C.S., L.R.C.P., L.S.A., aged 38.

FRANKLIN.—On the 5th inst., at Brighton, Charles Franklin, M.R.C.S., L.S.A., of Putney, S.W., aged 45.

MARRIOTT.—On the 18th inst., Fredk. Thos. Marriott, L.S.A., of Old-street, City, London, aged 50.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 24th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Nov. 18	29·44	E.	36	34	...	37	26	...	Foggy
,, 19	29·31	W.	35	34	55	46	33	·32	Foggy
,, 20	29·50	E.	39	36	...	41	35	·13	Hazy
,, 21	29·62	E.	36	36	...	39	33	...	Foggy
,, 22	29·69	N.E.	39	39	...	46	34	·09	Raining
,, 23	29·97	N.E.	41	40	56	44	39	·15	Cloudy
,, 24	29·93	N.E.	39	36	...	41	35	·02	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE LEPERS OF MOLOKAI.

MOLOKAI, "the leper island of the Pacific," is one of the Sandwich group, and the scene of Father Damien's heroic labours. By far the best description of that home of the banished leper and of the missionary care bestowed on him is that by Mr. Charles Warren Stoddard, one of the most painstaking, and at the same time picturesque, of contemporary transatlantic writers. From the little volume (published at Notre Dame, Indiana, U.S.) we gather that there are always between 700 and 800 lepers in the settlement, and that the average death-rate is 150 per annum. Within the last fifteen years 2500 of these afflicted ones have been segregated to Molokai. The sketch of Father Damien himself is entitled to take rank with Manzoni's portrayal of Cardinal Borromeo, in the "Promessi Sposi." The Father's experiences, as told by Mr. Stoddard, who was his guest in the leper island, add force to the saying, "Truth is stranger than fiction."

M.D. (Highgate).—Information on the subject will be found in the Australian Medical Directory and Handbook, published by Baillière, Tindall, and Cox, King William-street, Strand.

Mr. J. G. Smith (Liverpool).—The matter is of obvious importance; but we are unable at present to devote further space to its discussion.

Dr. L. Corazza (Verona).—The address is, Grant Medical College, Bombay.

"WHAT MUSCLES ACCOUNT FOR IT?"

To the Editors of THE LANCET.

SIRS,—In answer to the inquiry of your correspondent, "M.D., C.M.," I beg to say that the difficulty is not with regard to the muscles concerned—for vomiting is a coördinated action, the efferent impulses concerned in which proceed from a vomiting centre in the medulla in close connexion with the respiratory centre,—but with the independent power of the will to stimulate this centre. We know that some disagreeable sights and smells may readily affect it, and here the will has no control; but in this case the act is preceded by a sensation of nausea, and is therefore probably reflex. The only explanation I can offer is that your correspondent's case is an example of a physiological reversion to an ancestral condition. In the ruminantia the stomach is divided into four compartments, and after the food has lain in that division of it termed the "reticulum" for some time at the will of the animal, the partially masticated food is returned by small instalments to the mouth, and is there thoroughly chewed at leisure, and then swallowed for the second time. It is to be remembered that we all possess a relic of our herbivorous co-ancestry in the presence of an appendix vermiformis.

I am, Sirs, faithfully yours,

E. KENNETH CAMPBELL, M.B., F.R.C.S.

Lincoln's Inn-fields, W.C., Nov. 22nd, 1887.

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LEICESTER PROTECTED BY VACCINATION.

Mr. Biggs.—We must be satisfied in the first instance of the composition of the committee in point of principle. The *personnel* is a secondary matter. But we shall be quite ready to name a representative when the consent of other parties who would command public confidence to the constitution of the committee has been assured.

F.R.C.P. Edin.—So far as we are aware, the full address has not been published.

Mr. W. H. Pépler will find the information he desires in the Transactions of the Epidemiological Society for the session 1885–86.

Dr. G. W. Balfour.—The discussion of the question must be considered as closed.

"STRUMOUS ULCERS."

To the Editors of THE LANCET.

SIRS,—If your correspondent, "M.B.," will give the following plan a fair trial, I believe he will find the result satisfactory.

1. Cease administration of all tonics (including cod-liver oil). 2. Bathe the sores daily with warm water, so as to remove scabs and as much discharge as can be washed away. 3. Dress with old linen rag, dry, or soaked with sweet oil to facilitate removal. 4. Administer three times a week at bed-time from one to two grains of calomel, and every morning, half an hour before rising, a saline draught containing mag. sulph., ʒ i.; mag. carb., gr. x.; pot. nit., gr. v., in peppermint water. 5. Persist in the treatment for three months, longer if necessary, omitting the calomel one week in every four.

This method practically means the substitution of constitutional for local treatment. It is neither new nor original; but I have found the plan succeed when other approved modes of treatment have failed.

At the Willan Society, in October, I showed two cases about to be placed under this treatment. This month one of these patients again attended, the other being invited but failing to come. In the month both patients had gained in weight and felt stronger. Some of the lesions had cicatrised; the others showed signs of healing. When seen last Wednesday the progress continued; and I shall be glad to show your correspondent the cases if he will communicate with me.

I am, Sirs, yours faithfully,

Suffolk-street, Pall Mall, S.W., Nov. 19th, 1887. ARTHUR HARRIES.

To the Editors of THE LANCET.

SIRS,—In response to "M.B.'s" request as regards strumous ulcers of the neck, I may say that they are very troublesome to heal, as the treatment requires variation from week to week; but the following line of treatment might be tried.

If the sores are coated with scrofulous matter this must be scraped off. Then dust with plumbi iodidi daily, if sluggish and they do not seem to improve. Take a piece of cotton-wool, twist round a probe, and apply a solution of chloride of zinc (one drachm to an ounce of distilled water) each day. Pick off the scab. Sometimes the cerat. resina has a wonderful charm; other times cerat. resina and ungt. plumbi acet. part. æquale. The patient must be treated constitutionally either by cod-liver oil, syrup of hypophosphites, or equal parts of syrup. ferri phos., syrup hypophos., ʒ ss. ter die. I am, Sirs, yours faithfully,

Nov. 19th, 1887. F.R.C.S.

OINTMENT FOR USE IN SMALL-POX ERUPTION.

DR. J. M. REDMOND, Physician to Cork-street Fever Hospital, Dublin, informs us that he has been using, with apparently good results, the following as an application to the face in cases of small-pox:—℞ Acidi boracici, gr. 40; lanolin and adipis, ää ʒss. Ft. ungt. M.

Dr. Bowden (Chatham).—We should be glad to receive the reports of the cases mentioned, especially of the first, second, and fourth.

Mr. White Wallis.—An article in our last issue includes all the points in our correspondent's letter.

BURIAL REFORM.

To the Editors of THE LANCET.

SIRS,—Will your correspondent, "F. H. W.," kindly send me his name and address, that I may invite him to the ninth annual meeting of the Church of England Burial Reform Association, to be held on Monday, Dec. 12th, at 3 P.M., in the St. Paul's Chapter-room, E.C., the Bishop of Bedford in the chair. For the information of your readers generally, permit me to say that the Burial Reform Association aims at uniting ministers of religion, medical men, and scientists generally in the effort to bring back the nation to the Church's mode of burial—namely, that indicated by the words "earth to earth," and this on grounds both sanitary and economic; and that we shall be very thankful for co-operation of any sort.

I am, Sirs, faithfully yours,

F. LAWRENCE,

Hon. Sec. Church of England Burial Reform Association.

Weston Vicarage, York, Nov. 21st, 1887.

LARYNGEAL SPASM WITH ASSOCIATED NERVE SYMPTOMS.

To the Editors of THE LANCET.

SIRS,—If your correspondent, "M.B.," will try inhalations of amyl, I think he will find it suit his patient.—I am, Sirs, yours faithfully,

Nov. 21st, 1887. G. B. B.

SOLANINE.

J. V. (Hamburg).—This therapeutic agent, discovered in 1820 by Desfosses, a pharmacist of Besançon, and first applied to medical uses in 1859 by Clarus of Leipsic, had fallen into desuetude when its efficacy was once more tested by Drs. Geneuil and Bardet in the Cochin Hospital of Paris. These investigators found it very difficult of administration by the hypodermic method, as it is nearly insoluble in water, in ether, and in alcohol. It was therefore exhibited through the digestive tract in rice-wafers and pills. It was tried in sciatic neuralgia (in doses of from thirty to forty centigrammes daily); but after being carefully observed for seven days its action was found *nil*. In rheumatism it was prescribed with more success; but in gastralgia, accompanied or not by vomiting, as also in facial neuralgia and in angina pectoris, its pain-relieving virtues were not encouraging. With morphine and atropine it cannot be compared for a moment in certainty and rapidity of effect.

Ambulance.—There is a section on the subject in Sir J. Paget's Clinical Lectures and Essays, edited by Mr. Howard Marsh. There are also Cazalet's and Klencke's works.

Dr. James Johnston's letter is a little out of date. The regimental system is irrecoverably defunct.

A QUESTION OF OFFICIAL ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—At page 960 of your issue of Nov. 12th is a report of a case of general paralysis of the insane which the reporter says was under his care. The reporter is Mr. Mortimer, assistant medical officer of the Portsmouth Lunatic Asylum, in which asylum the case was treated, and of which institution Mr. W. C. Bland, M.R.C.S., is the medical superintendent. With your kind permission, I will point out that an assistant medical officer, as a person responsible for the care of a lunatic in an asylum, does not exist at law. The 55th Section of the Lunacy Act of 1853 empowers the visitors of an asylum to appoint a medical officer, who may also be superintendent. Mr. Bland holds both offices. Therefore the case was under his care, and not Mr. Mortimer's. It may interest Mr. Mortimer to know that the Commissioners in Lunacy insist that assistant medical officers are in no way responsible for the medical and surgical care and treatment of lunatics in an asylum, that responsibility resting, as it does, on the statutorily appointed officer, the medical superintendent. I am, Sirs, yours faithfully,

Stapleton, Nov. 14th, 1887. GEORGE THOMPSON, M.D.

A CENTENARIAN.

WITH reference to the case of longevity recorded at page 947 of our issue of Nov. 5th last, a correspondent informs us that he has seen a certified copy of the entry in the baptismal register of the parish church of Hodnet in this county, to the effect that the said Charlotte Pigot was baptised on July 9th, 1785, thus proving beyond question that this was a veritable instance of a woman who on Oct. 9th, 1887, had well entered upon her 103rd year.

Alpha is quite eligible to be elevated to the bench; but he must not act as an *ex-officio* guardian while he holds his appointment as Poor-law medical officer.

ELIXIR OF SACCHARINE.

To the Editors of THE LANCET.

SIRS,—A convenient fluid preparation of saccharine being required for dispensing purposes, as chairman of the Formulary Committee of the Pharmaceutical Conference, I have been requested by some of its members as a provisional formula to recommend the following for elixir saccharini:—Take of saccharine, 24 gr.; bicarbonate of sodium, 12 gr.; rectified spirit, 1 fluid drachm; distilled water, 7 fluid drachms. Rub the saccharine and bicarbonate of sodium in a mortar, with the water gradually added. When dissolved, add the spirit, and filter. Twenty minims contain one grain of saccharine. This is sufficient to flavour a four-ounce mixture. I am, Sirs, yours obediently,

New Cavendish-street, W., Nov. 17th, 1887. WM. MARTINDALE.

THE PRIORITY OF LARYNGECTOMY.

To the Editors of THE LANCET.

SIRS,—In the interesting "Chronicles of the Cumming Club," by Lt.-Col. Alexander Ferguson, recently published in Edinburgh, at p. 216 occurs the following statement with reference to Dr. Patrick Heron Watson:—"He cut out the larynx before the operation was performed in Germany, where it is supposed to have originated." Is such assertion a correct one? I am, Sirs, yours truly,

New University Club, Nov. 22nd, 1887. J. C. G.

COCAINE IN MIDWIFERY.

To the Editors of THE LANCET.

SIRS,—Some months ago a letter appeared in THE LANCET stating that the writer had used cocaine successfully in twenty cases of midwifery. Can anyone tell me how the cocaine is used, and to what extent it is successful? I am, Sirs, yours faithfully,

November 11th, 1887. G. P.

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COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Julius Pollock, London; Dr. E. K. Campbell, London; Mr. E. W. Wallis, London; Dr. G. W. Balfour; Mr. Thompson, Swansea; Dr. Dawson, London; Mr. Burdett, London; Mr. Pepler, London; Dr. Thursfield, Shrewsbury; Dr. C. R. Drysdale, London; Dr. W. Watson, Wheatpark; Dr. Nicholson, Greenwich; Mr. Taylor, Chester; Mr. Stonham; Dr. R. Neale, London; Mr. W. G. Dickinson, London; Dr. Claude Wilson, Tunbridge; Dr. P. F. van H. Roos, Amsterdam; Dr. Owen Travis, Crewe; Mr. J. H. Thompson, Manchester; Messrs. Griffin and Co., London; Mr. H. St. G. Queelif, Maytown, Qu.; Messrs. Ingram and Co., London; Mr. W. H. Denham, London; Messrs. Whitehead and Co., Manchester; Dr. W. S. Playfair, London; Mr. Bates, New York; Mr. Vieth, London; Dr. Groom, Wisbech; Messrs. Macmillan and Co., London; Dr. A. Harries, London; Messrs. Mottershead and Co., Manchester; Dr. O. Kraus, Vienna; Mr. Durell; Messrs. White and Son, Bristol; Mr. C. E. Jennings, London; Mr. Mason, West Hartlepool; Dr. F. W. Smith, Leamington; Messrs. Wright and Co., Bristol; Dr. G. Elder, Nottingham; Dr. McWilliam; Mr. Axon, Manchester; Dr. Myrtle, Harrogate; Dr. Herman, London; Dr. R. Budd, Barnstaple; Dr. R. A. Birdwood; Dr. Chippendale, London; Dr. Clemow, London; Mr. McKinney, Nunhead; Mr. F. Lawrence, Weston; Dr. Elliott, Hull; Dr. Thudichum, London; Dr. Redmond, Dublin; Mr. T. A. Rabbitt, Wimbledon; Mr. A. Laidlaw; Mr. Todd, Lancaster; Mr. Woolman, Watford; Mr. Wilkin, London; Dr. L. Corazza, Verona; Mr. Thompson, Ramsgate; Mr. Cadie, Stoke-on-Trent; Mr. Birchall, Liverpool; Mrs. Pratt, Bournemouth; Mr. Hyde, Brixton; Mr. Prowle, Sunderland; Mr. Green, Bow; Mr. MacMaine, Dudley; Dr. Hodges, Boston, U.S.A.; Mr. Haggerston, Newcastle-on-Tyne; Mr. Elliot, Wolverhampton; Mr. Bonnor, Ealing; Dr. Ellis, Swansea; Mr. Wolfington, Exeter; Mr. Farringdon, Bath; Mr. Boyd, Wandsworth; Mr. Branthwaite, Twickenham; Messrs. Laughland and Co., London; Mrs. Tweedy, Liverpool; Messrs. Robertson and Scott, Edinburgh; Mr. Brighouse, Liverpool; Messrs. Maythorn and Son, Biggleswade; Mr. J. Hutchinson, London; Messrs. Blake and Co., Leeds; Mr. Hunt, Hull; Mr. Kelly, Margate; Messrs. Burgess and Co., London; Mr. Hemming, Swindon; Mr. Burgess, King's Down; Mr. Sparrow, Southsea; Mr. Bailey, Smithwick; Mr. Evans, Stockport; Mr. H. G. Poock, Brixton; Mr. Simpson, Dumbarton; Mr. W. Bull, London; L. S. D., St. John's-wood; J. C. G.; A Wiltshire Doctor; M. N. O.; Ambulance; S.; F.R.C.S.; Scrutator; J. C. J., Sheffield; L.R.C.P.; Matron, Bedford; Mosquito; Matron, Bristol.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Elliot, Andever; Miss Smart, Greenheys; Messrs. Grace, Bristol; Rev. D. Hicks, Manchester; Mr. Johnson, Leicester; Mr. Keay, Eastbourne; Mr. Nicholls, Hartest; Dr. Phillips, Birmingham; Mr. Laban, West Bromwich; Mr. Burdett, London; Mr. Moore, Silloth; Messrs. Gale and Co., London; Mr. Wormald, Manchester; Messrs. Farwig and Co., London; Dr. Kerr, London; Dr. Beer, Newport; Messrs. Condy and Co., London; Dr. Morton, Kilburn; Mr. Fuge; Messrs. Dawson Bros., Montreal; Mr. Bowser, London; Dr. Churton, Leeds; Rev. A. Tooth, Croydon; Mr. Derry, Leeds; Mr. Bolton, Whitby; Mr. Marsh, Willenhall; Mr. Bramwell, Preston; Dr. McAuley; Mr. Powell, Newport; Mr. Bevan, Nantyglo; Dr. Fielding, Lyme; Dr. Thompson, Bath; Mr. Booth, Ripley; Mr. Davis, Worcester; Messrs. Roberts and Co., London; Dr. Heard, Cork; Mr. Morgan, Leeds; Messrs. Slinger and Son, York; Mr. Teesdale, Bosingham; Messrs. Hewlett and Co., London; Mr. Hudson, Sheffield; Mr. Leach; Miss Griffiths, Southport; Dr. Oswald, Clapham; Manora, London; H. D. B., Fareham; J. B. B., London; Alpha, Aberdare; Surgeon, Minchinhampton; Lady Superintendent, West Malling; L. W., St. Leonards; T., Bath; Private Physician; A. B., Brecon; A. F. E.; Surgeon, Brimsley; Matron, Lancaster; B. W. D.; X. Y.; D. L.; B. K.; Salufur; M.D.; Spes, Ashford; L. W. M.; A. L. S., Brighton; Opium; A. B., Stamfordhill; D.H.; Superintendent, Glasgow; Medicus, London.

Barnsley Independent, Newcastle Chronicle, Leeds Mercury, Birmingham Daily Gazette, Leicester Daily Post, Wexford Independent, &c., have been received.

Medical Diary for the ensuing Week.

Monday, November 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Mr. H. H. Statham: The Elements of Architectural Design. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. The following cases will be shown:—Mr. Bowreman Jessett: Two cases of Radical Cure of Hernia.—Dr. Ormerod: Case of Hysterical Tremor and Contracture.—Mr. Walter Pye: (1) Case of Persistent Branchial Cleft; (2) A New Form of Truss.—Dr. Savill: Case of Myxœdema in a Male.—Dr. Beevor: Case of Myxœdema.—Dr. Herringham: Case of Dizziness.—Mr. Spencer Watson: Case of Plastic Operation for Ectropion.—Mr. Marmaduke Sheild: Case of Syphilitic Disease of the Knee-joint.

Tuesday, November 29.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, November 30.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.

Thursday, December 1.

ST GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
THE PARKES MUSEUM OF HYGIENE.—5 P.M. Sir Douglas Galton: Smoke and Fog.

Friday, December 2.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Mr. Percy Dunn: A large Hæmorrhage into the Pons Varolii, and other Pathological Specimens.—Mr. Samuel Benton: Remarks on the Successful Treatment of Habitual Constipation by the use of Injecto-purgative.—Dr. Savill: Cases illustrating his paper, *vide infra*. Papers:—Dr. Middleton: On the Advantages of Venesection of the External Jugular Vein in Cardiac Diseases.—Dr. Savill: The Treatment of Rheumatism, Acute, Subacute, and Chronic, and of Rheumatoid Arthritis.—Dr. Alderson: The Safe Dose of the Salicylates.

Saturday, December 3.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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The Bowman Lecture

ON THE

RELATION OF OPHTHALMIC DISEASE TO CERTAIN NORMAL AND PATHOLOGICAL CONDITIONS OF THE SEXUAL ORGANS.

Delivered at the Ophthalmological Society, Nov. 11th, 1887,

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(*Concluded from p. 1053.*)

THE occurrence of a reflex action between the ovary and the eye, though in itself highly probable, is difficult to establish, because there are so many contingencies, and the path through which the noxious influence travels is difficult to trace. The following case is, however, one in which I thought that such a connexion existed.

A young lady, married, but childless, applied to me stating that she had experienced considerable pain over the right brow, and that dimness of the right eye had at first annoyed, and as it increased in intensity alarmed her, and that she had just discovered she was blind with this eye. On examination, I found the right pupil slightly dilated, very sluggish in response to light, and vision reduced to mere perception of light. There was slight eversion of the right eye. The left eye was normal, pupil acting well, and vision $\frac{2}{3}$. On ophthalmoscopic examination the disc of the right eye was found to be swollen and reddish, with ill-defined margins—in short, with the general aspect of optic neuritis. She informed me that about nine months previously she had suffered from an attack of ovariitis, for which active treatment was adopted, and she was confined to her room for some time. Having been married for a year or two without family, and thinking there might be some mechanical obstacle, she placed herself under the care of a distinguished gynæcologist, who passed a sound into the uterus, causing considerable pain, about two months previously. I prescribed iodide of potassium for her, directed her to rest at home, and gave general directions for her diet. During the next succeeding few days she complained of a feeling of coldness and numbness of both sides of her body. Improvement in vision took place almost immediately after commencing the use of the iodide, and in less than a week she was able to count the fingers, and to see large objects to the temporal side of the right eye. The urine was loaded with lithates. A consultation was held, and it was agreed to rub in mercury till the gums were touched; 1300 grains were required for this purpose, about half a drachm being rubbed in night and morning; steady improvement took place, the field of vision gradually extending till it became nearly normal. She herself called attention to the circumstance that within a small area—about fifteen degrees to the outer side of the point of fixation—pink objects appeared green. This area corresponded nearly to the region of the optic disc, but she was very positive about its occurrence. About four months afterwards, strychnine and iron having been taken with intermissions in the interval, she stated that she was perfectly well, and could see almost as well with the right as with the left eye, though it was slower of perception, so that she had to look for an appreciable time before the words became visible. The pupil had recovered its natural activity.

At first sight this case appeared to be one of hysteria, and in the pre-ophthalmoscopic period would undoubtedly have been diagnosed as hysteria. Dr. Hughlings Jackson, who saw the case with me, was quite satisfied of the existence of the neuritis. The family history was good. It seems to me that one of two suppositions is open to us: either that some coarse disease of the brain was in progress, which is to some extent negatived by the great improvement that has taken place; or that, as I believe, there was some reflex irritation proceeding from the old ovariitis, perhaps lighted up by the passage of the sound.

In similar hysterical cases, where great disturbance of vision accompanied with great pain have occurred, iridectomy has been resorted to in the hope of affording relief. A case of this nature has been recorded by Cuignet.[1] This case was remarkable for the fluctuations it presented, the patient, whose vision was at first almost abolished, being able to see with a smoked glass, then requiring a + 2 D, then a concave glass, the ultimate result being complete loss of vision in the eye affected.

It is not surprising that the profound changes effected in the female organism by the supervention of pregnancy should betray themselves by some alteration in the structure and functions of the numerous and complicated tissues of the eye. Physiological researches have shown that at this period there is considerable increase in the absolute volume of the blood, the development of the wide sinuses of the uterus requiring so large a quantity of blood to fill them that a state of anæmia in other organs would otherwise occur, as indeed is sometimes seen when this part of the process is imperfectly performed. At the same time the quality of the blood undergoes considerable alteration, which, though it may fit it for the retention of the fœtus, is certain to exert a marked influence on other organs and tissues. The most remarkable of these changes is that the red corpuscles and the albumen diminish, whilst the water, white corpuscles, and fibrin increase. Hence the specific gravity of the blood, as a whole, is diminished, and there is a deficiency in the solid constituents of the serum, probably owing to their being taken up by the fœtus. The increase of the fibrin and of the white corpuscles may perhaps be explained by the growth and development of the lymphatic system of the uterus and of the glands of the uterus, occasioning what has been termed by Virchow a physiological leucocytosis. In accordance with this condition of general plethora of the vascular system with thinner blood, the heart, having to drive a greater volume of fluid through a larger area, undergoes an hypertrophy of the left ventricle; and to the combined conditions of diluted blood, wider vascular area, and a more powerfully beating heart, some, at least, of the more common symptoms of pregnancy are due—as, for example, palpitation, tendency to syncope, and nervous irritability; numerous phenomena on the side of the digestive apparatus—as dyspepsia, anorexia, and morning sickness; and, lastly, various modifications of the urinary function, the urine being usually increased in quantity, and being found in a large percentage of cases to contain albumen. It is, indeed, stated that albumen appears in the later months of pregnancy in 20 per cent., and in a still larger proportion of primiparæ.

One of the subjective defects of vision that is first and very commonly observed by the patient in pregnancy is loss of the power of accommodation. She finds herself unable to read or work for more than a few minutes; letters and lines run together; pain in the eye or brow, sometimes of an acute character is felt, and the book is laid down, not to be again taken up. This symptom, due to imperfect nutrition of the ciliary muscle and of the third nerve, probably depends on the watery state of the blood, and belongs to the same category as the vertigo and fainting that are occasionally observed in pregnant women, though it may be of a reflex nature, and comparable with the amblyopia seen in cases of dental disease. The earliest period at which I have met with it has been at the eighth week, and in this case it occurred in a patient whose refraction was normal; but it is most common in the later months. It is to be relieved in two ways: first, by attention to the general health, the administration of tonics, the regulation of the bowels, and systematic, if brief, out-door exercise; and, secondly, by the temporary employment of weak convex glasses. The symptom is earliest and most strongly felt by the hypermetropic patient, and the strength of the glass must of course be proportionate to the degree of hypermetropia present.

Again, the great lassitude and debility which affect many women, the result of the disturbance of the digestive organs, renders them peculiarly susceptible to the influence of cold. I saw a woman thirty-two years of age, who came to me with intense congestion of the conjunctivæ, which she stated had recurred after exposure to cold with each of her five previous pregnancies near the time of her confinement, and other authors have noticed that liability to attacks of conjunctivitis characterise this period.

[1] Rec. d'Ophthal. Ann., 1886, p. 17.

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In all instances where the nutrition of the body is badly maintained, either from an inadequate supply of food or from imperfect digestion and assimilation, so that the blood becomes thin and poor, those parts of the body which are most remote from the blood supply are apt to suffer. The cornea is one of those parts, and we accordingly find that ulcers of the cornea sometimes occur in pregnancy. Whether the ulcer results from simple disintegration and decadence of the superficial epithelial layers of the cornea, or whether these cells, being imperfectly developed and preserved, yield to external influences—such as the attacks of micro-organisms, which under ordinary circumstances they are capable of resisting,—it is difficult to say. Perhaps both conditions coexist, and lead simultaneously to the formation of the ulcer. I believe that pregnancy is a predisposing cause to lacrymal abscess, the morning sickness, by inducing congestion of the head, putting a finishing touch to a nearly closed nasal duct, and effecting its complete occlusion.

Amongst the functional disturbances that are apt to accompany both dysmenorrhœa and the process of pregnancy is the condition formerly named *hebetudo visus*, in which there is heaviness of the lids almost amounting to ptosis, inability to face light, and indisposition to exert the power of accommodation by attention to any kind of near work. In many instances, no doubt, these effects are due to failure of the power of accommodation in a hypermetropic eye, but, as Förster remarks, a certain number of cases remain, where this complication is excluded, in which the failure of power is due to a reflex hyperæsthesia of the fifth nerve and of the optic nerve, and constitute an aggregate of symptoms to which the term "kopiopia hysterica" may be applied. Förster devotes quite a long chapter to this subject. He points out that the hyperæsthesia of the fifth nerve leads the patient to use exaggerated terms in describing her ailments, and causes her to continue to complain of pain and discomfort even when any slight defect of hypermetropia or presbyopia has been corrected. The glasses increase the pain, or the frames are too heavy, or she sees too acutely and clearly with them. The implication of the optic nerves is indicated by the patient complaining of light, and especially of artificial light, which, she states, irritates her eyes much more than the diffused yet more brilliant light of day. During the day such patients can walk out without inconvenience, but with the entrance of the lamps they insist that it is essential to their comfort that they should have darkened glasses. Förster believes this peculiar form of intolerance of light, which is characterised by the absence of any well-marked tendency to lacrymation, is due to intolerance of differences of illumination of objects in the field of vision, which is much more noticeable by artificial than by natural light.

That the congestion of the head which results from the severe retching and vomiting that so often accompanies the early months of pregnancy may induce hæmorrhage upon the retina, the following case, of which a drawing was taken by Miss Boole, will show. The patient was twenty-nine years of age; had married at nineteen, and had had five children, four of whom were living. Her eyes had been perfectly healthy up to five weeks previously, when, after a violent effort of retching in the evening, her eyes felt dazzling and every object was wavy. The next morning, on rising, she discovered that she could only see objects above the horizontal plane, and this defect was permanent. Ophthalmoscopic examination revealed the large hæmorrhage, with rounded contours, close to the disc and to its outer side, shown in the drawing. The patient was examined by Dr. Godson, who pronounced her in the sixth month of pregnancy. The urine was carefully tested by Dr. Bullar, and contained neither sugar nor albumen.

Puzzling cases occur every now and then in the early months of pregnancy, which, however, point to embolism as the cause of the symptoms. For example, a patient aged twenty-eight, in the third month of pregnancy, suddenly noticed that her vision was lost below a line running obliquely from the temple to the nose in the right eye. The most careful examination by more than one ophthalmic surgeon of repute failed to discover the slightest defect or disease in the eye. She had had severe headaches, and also some choreic movements of the facial muscles and of the arm of the right side, three weeks previously. The urine was perfectly free from either albumen or sugar. It was remarkable that pressure on the globe gave distinct phosphenes on the non-sensitive part of the retina. Six or seven years have elapsed, and the only change noticeable is that the disc on the right side is whiter than on the left.

In the later months of pregnancy another affection is sometimes observed, which has been frequently described, is of a serious character, and is deserving of special attention both on account of its value as an indication of the condition of the patient and for the special treatment that it suggests. It is a condition that very closely resembles, and is perhaps identical with, albuminuric retinitis. The patient does not usually complain of impairment of vision until well-marked retinal changes are visible on ophthalmoscopic examination. These changes consist in swelling of the optic disc, rosiness of its surface, indistinctness and blurring of its margin, enlargement and increased tortuosity of the retinal vessels, their point of emergence from the disc being concealed by effusion, hæmorrhages of large and irregular form, and white patches, which are sometimes irregularly scattered over the surface of the retina, and sometimes arranged in a radial manner around the yellow spot. The onset of the disease is often sudden, and accompanied by headache, flashes of light, and other symptoms of retinal irritation. Vision may be reduced to perception of light only, or to the power of counting the fingers. These symptoms are associated with the appearance and continued presence of albumen in the urine, and this condition has been described by gynæcologists as gravidic albuminuria. It is often a precursor of convulsions. The phenomena of uræmic eclampsia with ophthalmic symptoms were first brought under the notice of the profession in England by Dr. Matthews Duncan, in a translation made in 1857 of Braun's memoir on the subject. In accordance with the received pathology of that day, the symptoms were attributed to the presence and decomposition of urea in the blood; and, in giving a graphic description of the symptoms of the attack, Braun remarks that it is sometimes preceded by mental illusions, photopsiæ, and amblyopia, and that it may terminate in complete blindness.

The conditions which may lead to the appearance of albumen in the urine are very various. Dumas[2] collects them under three heads—viz., increase of intravascular tension, qualitative alteration of the blood, and temporary or permanent disease of the kidney. Others have suggested that there may be in some cases catarrh of the lower part of the neck of the uterus, and it is quite possible that two or more of these causes may co-operate in producing the symptom. The great derangement of the processes of digestion that occurs in pregnancy lends a high degree of probability to the view that changes in the composition of the blood, consequent on the absorption of imperfectly digested proteids, exert a powerful influence in inducing albuminuria, whilst the fact that it is particularly common in twin pregnancies lends support to the idea that pressure on the renal veins and local disturbances of the circulation may play their part in its production.

The appearance of albumen in the urine in pregnancy is most common about the eighth or ninth month; but it has been seen by Ollivier in the third month, and by Bach as early as the sixth week. The duration of the attack, according to Hofmeier, is usually five or six weeks. Gravidic albuminuria usually rapidly disappears after delivery. The ophthalmic trouble also usually commences in the later months of pregnancy, though Rayerson[3] reports a case in which it occurred in the fourth month. If pregnancy proceeds, the ophthalmic affection becomes more marked and manifest till delivery takes place, before which period no improvement can be expected to occur.

The history of all these cases is similar. I give one that I saw with Mr. Ambler of Hempstead House, Hemel Hempstead. The patient was a young woman aged twenty-seven, and applied to Mr. Ambler in the third month of her pregnancy, complaining of vomiting and great pain in her head, chiefly confined to the occipital region, constipation, and swelling of the legs and ankles. The urine, on being tested, was found to contain one-sixth albumen. Mr. Ambler prescribed hot baths, diuretics, and tonics, and compound jalap powder every other morning. The patient became steadily worse, and her friends were told she had little chance of going her full time. She suffered much from sleeplessness, for which chloral hydrate and digitalis were given to her. Albuminuric retinitis commenced about the sixth month of pregnancy. The constitutional symptoms became so severe about the seventh month that Mr. Ambler

[2] Thèse, 1880. [3] Gaillezowski's Recueil, 1883, p. 623.

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made up his mind to induce premature labour, and this was, with the consent and approval of Dr. Russell Steele, about to be done, when spontaneous premature delivery took place in January, 1885, and a still-born fœtus was expelled having the appearance of having been dead a week. She made a good recovery from the labour, and for some time subsequently Mr. Ambler prescribed perchloride of iron, and the vision underwent steady improvement. When I saw her three months after her delivery, the general aspect of the fundus was that of albuminuric retinitis in the right eye, that of the left being apparently normal. The disc was ill-defined, and there were numerous white spots arranged in a radiating direction around the yellow spot. Her vision was: R $\frac{6}{18}$; L $\frac{6}{9}$. She was ordered strychnia and iron. I saw her in July, six months after her confinement. Both discs were hazy; there was some amblyopia, but the area of the field was normal. There was defective colour vision; pinks were called white, bright browns were called slate, but saturated tints were immediately and correctly recognised. On Oct. 6th, 1885, the spots, with one or two exceptions, had disappeared; the right disc was much whiter than natural, but its edges were blurred and indistinct.

Holmes[4] describes a case of retinitis with albuminuria and partial detachment of the retina occurring at the sixth month of pregnancy. There was complete loss of vision. At the end of three months vision returned after the employment for three weeks of the bichloride of mercury, but there remained complete loss of colour perception. At the expiration of three months more she recovered the power of perceiving colours, blue being first recognised, then in succession brown, red, and green.

That conditions of optic neuritis with exudation on the retina may clear up in a very remarkable manner is well known, but it is not often that an opportunity is afforded of carefully comparing the earlier with the later conditions in drawings made by a competent artist. I desire to show to the Society the two drawings taken by Miss Boole of a patient who came to me complaining of great impairment of vision in the seventh month of pregnancy. It will be seen that in the first the appearances are those of gravidic albuminuria in its highest and most intense expression. The swollen, congested, and ill-defined disc, the dilated and tortuous vessels, the hæmorrhages, and the white plaques, are all shown to perfection. Vision was then reduced to little more than mere perception of light. The quantity of albumen amounted to about one-sixth. An abortion occurred, and delivery was safely effected. And here is the other drawing by the same artist, in which but few traces of the former troubles are to be seen.

No positive statement can be made as to the ultimate results of gravidic retinitis. I have seen a case of almost perfect blindness, and also one of almost complete recovery. In some instances, again, gradual and unexpected improvement will take place in one eye, whilst the vision of the other undergoes progressive deterioration. Thus, in one case that fell under my care, a woman, aged thirty-three, had been confined of her fourth child five weeks previously. All the children were living and healthy. Two months before her last confinement, which was protracted and difficult, requiring the use of instruments, her vision became impaired. The dimness affected both eyes, and increased till she was unable to see light with the right eye. Yet she had no pain in either eye. On examination it was found that the right eye was the best of the two, vision in this eye being $\frac{1}{3}$; while she was able to spell out 14 Jaeger with the left eye, she could only count fingers at one foot. The whole field of vision in the right eye was dull, but it extended to about 50° vertically, and to about 15° horizontally, being therefore a long oval placed vertically. Her perception of colours was pretty good. On ophthalmoscopical examination the media were found to be clear. Both discs were yellowish-white, with well-defined margins and smooth level surface; no physiological pit. The retinal arteries and veins were of normal size. The choroid generally was apparently healthy. She still had considerable pain in her head.

Weber[5] observed cases which terminated in complete amaurosis; and Hirschberg has reported cases of albuminuria in which, although there were no ophthalmoscopic signs, complete blindness existed. The amaurosis, however, in his cases, proved to be temporary only, the patients ultimately making a perfect recovery.

[4] Archiv f Augenheilk., xii., 1., p. 89.
[5] Berlin. Klin. Wochens., 1873, pp. 265—279.

The conditions we are able by means of the ophthalmoscope to recognise in the interior of the eye thus furnish the obstetric physician with valuable suggestions for treatment. The existence of hæmorrhages and of white patches on the retina indicates that the normal relations between the blood, the bloodvessels, and the tissues are so modified that healthy nutrition can no longer be maintained, and that, unless speedy relief be afforded, the same or similar changes will occur in the brain, and convulsions, and perhaps death, be the result. The treatment which seems to be most promising is to promote in every way the general health of the patient; to support the abdomen with a bandage or belt, so that pressure on the kidneys, the ureters, and renal vessels may be relieved; to limit the work thrown upon the kidneys by attention to the diet and to the quantity of drink taken; to unload the bowels; and, finally, if the ophthalmic symptoms become still more marked, to induce premature labour.

Mr. Hutchinson has recorded a case which seems to point to the induction of exophthalmic goitre as a result of pregnancy. The development of the disease in this case occurred in the fifth month of pregnancy.[6]

I have only time briefly to refer to the ophthalmic symptoms that may be met with in the puerperal state. Occlusion of the vessels of the retina might be expected to occur at this period. Mr. Snell[7] has quite recently brought before this Society an interesting case of embolism of the arteria centralis retinæ of the left eye occurring two months after delivery in the course of a case of puerperal septicæmia. It was followed by white atrophy of the disc. The heart and lungs were normal, and there was neither albumen nor sugar in the urine. It was surmised, but there appears to have been no positive evidence, that the embolus proceeded from the heart. In such a case as this the mischief appears to be entirely limited to the central artery of the retina and the vascular area beyond the point of occlusion.

A form of disease occurring in puerperal women was long ago described by Hirschberg under the term "septic puerperal embolism," which is altogether a different thing from simple embolism of the central artery of the retina. It is certainly of rare occurrence, and Hirschberg[8] had only seen six cases of it. In such cases the lochia are usually abundant and offensive, and from a fortnight to three weeks after delivery rigors are experienced and pain is felt in one or in several of the joints, which suppurate. The eye presents the appearance of general ophthalmia, the conjunctiva being red and chemosed, the iris being inflamed, the anterior chamber containing pus, and vision becoming greatly deteriorated; gradually the cornea becomes hazy, the area of the pupil is filled with exudation, and vision is lost. The patient usually dies, and the fluid in the joints is found to contain bacteria, whilst the globe is undergoing suppuration, the retina and choroid being also infiltrated with pus.

Local and more or less complete pareses and paralysis of the ocular muscles are occasionally observed in the puerperal state. I have seen, for example, a case of mydriasis in a primipara of delicate and neurotic habit of body, who had been brought to bed two months previously of a child she was unable to nurse. The prime cause of the paralysis is not easy to give; it may be of a reflex nature, or be due to some local neuritis of the nerve supplying the muscle, or be the consequence of a hæmorrhage into the sheath of the affected nerve, or possibly to spasm of bloodvessels, or to embolism. Recovery is doubtful.

Various exceptional conditions may be met with. For example, I saw a case where towards the close of her time a woman complained of seeing all objects much smaller than they were naturally presented to her eyes; and I find that Churchill, Gardien,[9] and others have observed the same symptoms. Churchill observes that the patient may imagine all surrounding objects are dancing or turning round, or she may be so dizzy as to be incapable of distinct vision. These symptoms are probably connected with anæmia, or at least with disturbance of the circulation in the brain, and in general nothing can be seen with the ophthalmoscope. In other instances the patient has illusions and hallucinations, fancying that she sees objects in the air; or photopsiæ; more rarely she sees everything double.[10]

I have seen several cases in which there has been sudden loss of vision or loss of one-half of the field of vision of one

[6] Trans. Ophth. Soc., vol. vi., p. 33.
[7] Ibid., p. 341.
[8] Archiv für Augenheilk., Band ix., p. 299.
[9] Diseases of Women, 1874, p. 616.
[10] Traité des Accouchements, vol. ii., p. 76 1834.

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eye, without manifest ophthalmoscopic signs, though the fundus was carefully and repeatedly explored. In two of these cases which I have had the opportunity of following up, the attack was quite sudden. In one no notable change has taken place in the course of three or four years in the disc or retina. In the other, a few minute spots, supposed to be tubercular, have appeared on the surface of the retina. The cases were regarded as instances of embolism of arteries supplying a minute area of the corpora quadrigemina, or to some trouble of circulation in one optic nerve.

Several conditions of disease of the eyes are associated with lactation. In a healthy woman it is surprising how well this active and abundant secretion is borne. A more abundant diet, the constituents of which are digested and absorbed with wonderful rapidity, seems all that is necessary to enable from one to three pints of good milk to be secreted without exhaustion of the system, and this may extend over a period of from four or five to nine or ten months. There are, however, a large number of more feebly constituted women in whom the powers of the system seem to be exhausted with the effort to develop and extrude the fœtus, and in whom the mammæ fail to respond in their growth and functional activity to the cry of the child. Many women desiring to become good mothers attempt, but in vain, to give suck to their infant; and if the attempt be continued, it is not uncommon to see one of several conditions arise. In the first place loss of accommodation occurs, which is the most common. Dizziness and temporary amblyopia, sometimes rising to amaurosis, has been seen and noted by many; both symptoms being clearly due to an insufficient supply of blood to the brain and eye. Black specks, showers of motes, and other photopsiæ are not uncommon. Paresis of one or other of the recti muscles occurs.

Keratitis may also result from exhaustion dependent on prolonged lactation and pregnancy. I saw a woman of worn and pallid aspect who had one child four years of age, another two, and was in the third month of her pregnancy with a third. She suckled the second child thirteen months, and had always dysmenorrhœa when not pregnant. She had keratitis in her right eye, and the vision was reduced to $\frac{1}{100}$; the vision of the left was perfect. The centre of the cornea presented a rough surface caused by the separation of a patch of epithelium. She was ordered meat and quinine, and recovered.

I may also refer to the not infrequent cases of severe keratitis with hypopyon, which are seen as the result of slight scratches of the cornea by the sharp and ragged nails of the infant, which show clearly the great depression of the system, the great relative increase of the white corpuscles, and how much even such dense tissues as the cornea have lost their cohesion and power of resistance to external injurious influences. A further evidence of the same fact is to be found in the predisposition occasioned by lactation to obstruction of the lacrymal ducts and to lacrymal abscess. Many women suffer from obstruction of the ducts of so slight and inoffensive a character that they never think of applying for relief; but when the system is weakened by lactation, either the mucous membrane of the nose or of the nasal duct becomes congested, and complete instead of incomplete obstruction is effected, or possibly the epithelial cells become, owing to their imperfect nutrition, less able to resist the invasion of germs and microbes, and suppuration is established.

I have had one case of detachment of retina, which seemed to me to be directly connected with the exhaustion of the system caused by suckling. Mrs. B——, aged twenty-seven, came to me complaining of complete loss of vision of her left eye. It had begun to fail two months previously, of which she became aware by constantly seeing a cloud of black flies before her. She was a thin, pallid woman, and had just weaned a baby after suckling it for eleven months. Dr. Watts of Charnbrook had instilled a little atropine, and she could then see a little better for a time. The vision of the opposite eye was perfect. Tension of both eyes normal. On examination by means of the ophthalmoscope, it was clear that there was complete detachment of the retina, only a very small portion of the normal red choroid being visible at the lower part of the eye. In this instance a general tonic line of treatment was suggested, but no operative procedure was resorted to.

I have noticed a peculiar affection in women who after severe confinements have made a slow convalescence and have remained for some weeks in the recumbent posture. To beguile the time they have read or worked for many hours in the day, and by looking downward have maintained the inferior recti muscles in strong contraction. Convergent action being also required, the internal recti and the superior oblique muscles are brought into play. The result of this is that, when the patient once more resumes her ordinary duties, she experiences pain in and around the eye, the slightest attempt to read causes discomfort, and she soon applies for relief. As a rule, no changes are visible in the eye on ophthalmoscopic examination. The fundus is healthy, and the retinal vessels and the optic disc perfectly natural. The pain experienced is probably of the nature of spasm, and is best relieved by prolonged rest from work and the use of prisms of 2° or more.

There can be little doubt, I think, that the critical age of the menopause in women has a powerful influence in the development of glaucoma. The age of forty-five to fifty-five is of great frequency in the history of that disease, and it is easy to understand how it may be induced by the more or less sudden arrest of the habitual discharge. Whatever our theories of the etiology of glaucoma may be, it is certain that it is attended with considerable congestion of the choroid and ciliary processes, and with a tendency to the effusion of lymph and the colouring matter of blood into the vitreous, which even in subacute cases may become so cloudy that the details of the fundus cannot be distinguished. In gouty patients the venous system is already distended, but so long as the menstrual discharge continues the vascular fulness undergoes periodical relief and the disease remains in abeyance; as soon as cessation of this function occurs the whole mass of the blood is augmented, and a natural relief is sometimes afforded by diarrhœa, or by hæmorrhage from the nose and other means; but should any circumstance determine the blood to the head, severe headaches are experienced; and if, further, a flow of blood to the eyes is induced by weeping whilst the tone of the vasomotor apparatus is depressed by grief and night-watching, which is often associated with constipation, then an attack of glaucoma is exceedingly likely to supervene, accompanied, in some instances, with intra-ocular hæmorrhage.

At the period of the cessation of the menses, and either directly or indirectly due to it, paresis or paralysis of various nerves and muscles may be observed. Amongst these may be mentioned impairment or loss of the power of accommodation, mydriasis, and strabismus. These conditions, if attended to early, and appropriately treated, are generally only transitory, but if neglected they may become permanent. I have seen several cases where peculiar rolling unsymmetrical movement of one eye occurred when the other was fixed on any object; the two eyes have sometimes been used indifferently, vision being good in both, whilst the other wandered. Women are apt at this time to take but little exercise, to dread cold, and to pursue some perhaps not very prudent plan of treatment. A lady came to me lately who stated that, finding she was becoming stout, she determined to practice Bantingism, and in three months had lost many pounds in weight. The result was that she had become weak and nervous, and had suddenly developed a well-marked convergent squint of one eye. Recovery soon took place on a return to her natural diet, with an allowance of wine and the administration of a little quinine and iron.

In conclusion, then, it may be said that in males the excessive excitement of the sexual organs in youth occasions various subjective symptoms on the side of the eyes—as muscæ, photopsiæ, asthenopia, and loss of accommodation, together with blepharospasm, and at a later period possibly retinitis, retinal hæmorrhages, and white atrophy. That in young women, the epoch of the installation of menstruation may be attended with conjunctivitis, both phlyctenular and follicular, and ulcers of the cornea, with special disposition to the development of keratitis consequent on constitutional taint. That amenorrhœa, especially if suddenly induced, may be followed by hæmorrhage into the anterior chamber or into the vitreous, iritis, irido-choroiditis, optic neuritis, and white atrophy of the optic disc. That dysmenorrhœa may be accompanied by conjunctivitis, keratitis, episcleritis, as well as by inflammation of the uveal tract. That the menopause is often accompanied by effusions into the vitreous and by a disposition to glaucoma; by paresis or paralysis of the ocular muscles. That pregnancy is often attended in the early months with asthenopia, and towards the close with albuminuric retinitis and its consequences—hæmorrhages and white

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patches on the retina; and that if delivery is attended with copious hæmorrhage, loss or great impairment of vision, with white discs, may occur. That in the puerperal state we may meet with embolism, which is sometimes of a septic character, and may rapidly lead to loss of the eye. And, finally, that in lactation—if we may be allowed to include that process in the consideration of the sexual organs—we find asthenopia, great tendency to suppuration of the cornea on slight scratches, and lacrymal diseases to be of common occurrence.

And thus, gentlemen, I have endeavoured to trace with feeble pen and imperfect knowledge some of the relations which exist between the sexual organs and the eye. I have omitted purposely reference to such affections as syphilis, which affect both organs and have an interest peculiarly their own; but I fear I have omitted a multitude of relations that may be familiar to others, and which I can only leave them to supply from their own practice. But I think the facts I have brought forward are sufficiently numerous to show that such a connexion really exists, and that no history of many forms of ophthalmic disease can be regarded as complete which does not include and take into due consideration the conditions of the generative organs.

REPORT OF A

CASE OF OBSTRUCTION OF THE BOWELS.

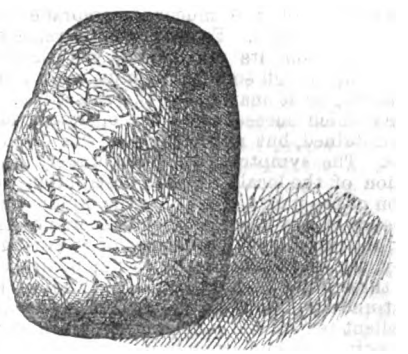
REMOVAL OF A LARGE IMPACTED GALL-STONE BY OPERATION; RECOVERY.

BY J. FORD ANDERSON, M.D.,
AND
THOMAS SMITH, F.R.C.S.

DR. FORD ANDERSON was sent for on June 30th, 1887, at 4 P.M., to see Mr. D——, a foreign consul, aged sixty-five, and found him suffering from complete obstruction of the bowels, with an anxious expression, fixed pain near the umbilicus, and vomiting. During the visit he vomited a quart of dark fluid, having a distinctly fæcal odour. The pulse was 78, soft; the temperature 98·4°; the urine scanty and high-coloured. The distension of the abdomen was slight, and there was no general tenderness on pressure. Mr. D—— stated that fifteen years previously he had an attack of inflammation of the bowels, which confined him to bed for three months, and ever since that time the motions had not been formed. On one occasion, eighteen months before the present attack, he was under treatment for a few days on account of partial obstruction of the bowels; and since this illness he had kept his motions fluid by means of daily doses of double Carlsbad water. The present illness began on June 26th; since then the obstruction had been complete, and there had been one or two daily attacks of vomiting of offensive fluid. For three days before the 26th he had suffered abdominal pain, and the bowels acted with unusual difficulty. Although feeling very ill, he was unable to lie up, and, among other duties, he attended several official dinners, returning home late in the evenings, which were cold at the time. The last of these dinners was on June 28th, but even on June 30th he went to his office as usual, though he was obliged to return home early and go to bed. Before sending for medical advice he took considerable doses of Carlsbad salts and some castor oil, but without relief.

The treatment consisted in applying warm fomentations to the abdomen, the use of gentle kneading, and in administering frequent enemata of soap-and-water and oil, which were retained in large quantity without distending the rectum, and which came away without any trace of fæces; opiate suppositories and subcutaneous injection of morphia were also given, and on July 2nd and 3rd extract of belladonna in frequent doses of a quarter of a grain was administered. This treatment was followed by relief to the pain. There was, however, occasional vomiting, with the same fæcal smell, but this was less frequent so long as he was fed by the rectum and took nothing by the mouth. Neither flatus nor fæces had passed through the bowel for six days, and, as signs of exhaustion began to appear, it became evident that medical treatment was of no avail. After consultation with Dr. Fenwick and Dr. Habershon operative measures were decided on.

On July 3rd, at 3 P.M., six days after the complete obstruction, the abdomen was opened by Mr. Thomas Smith by a median incision, six inches and a half long, from the umbilicus towards the pubes, the patient being under an anæsthetic administered by Mr. Mills. The small intestine was found much congested, its coats thickened, and moderately distended by flatus. While Dr. Anderson and Dr. Westland kept up equable pressure on the margins of the wound to prevent the escape of the intestines, the small intestine was examined by drawing it across the opening in the abdomen and examining each portion as it appeared. When eight or ten inches had thus been passed through the fingers, a hard mass was discovered in the bowel, on one side of which the intestine was distended and congested, and on the other flaccid and empty. The foreign body gave the sensation of being a gall-stone; it was only slightly movable, and as it could not be squeezed on without danger to the intestine, it was decided to remove it by opening the intestine. The portion of intestine containing the foreign body being drawn out of the abdomen, it was secured above and below by means of clamp forceps shielded with indiarubber tubing drawn over their blades. The intestine was opened by a longitudinal incision, two inches long, opposite the attachment of the mesentery, and the foreign body was removed. The intestinal wound was closed by thirteen sutures inserted after Lembert's method in a double row; they were of fine white silk, which had been thoroughly carbolised. The intestine, after being sutured, was returned to the abdominal cavity. The spray was not used. Every precaution was taken to



The wide end lay uppermost.

render the sponges, instruments, and ligatures aseptic. The external wound was closed by silk sutures, dusted with iodoform externally, and strapped and bandaged. It is quite certain that the entrance of any fluid into the abdominal cavity was completely prevented during the operation, which lasted one hour. The foreign body proved to be a large gall-stone, irregularly cylindrical, or barrel-shaped. The larger or upper end of the stone was smooth, circular, slightly cupped and facetted; the smaller or lower end was more rounded. The colour of the stone was reddish-brown, the two ends being black. The accompanying woodcut gives the exact dimensions of the stone.

Immediately after the operation the patient vomited a quart of the same kind of offensive fluid as had been observed before. He was given a subcutaneous injection of one-third of a grain of morphia.

July 3rd (seven hours after the operation): Pulse 92; temperature 98°. Sickness has ceased. Has had hiccough. Flatus has passed per anum. Restless, but no pain. Urine drawn off. One-third of a grain of morphia injected.—4th: Temperature 99°; pulse 92. Very thirsty. Two liquid actions of the bowels. Abdomen distended by flatus, and relieved by passing enema pipe into the rectum. Had a morphia injection.—5th: Pulse and temperature normal. Passes flatus freely. No pain; no distension. Wound dressed.—6th: Doing well. Two liquid motions passed. Flatus passed freely. Wound dressed; sutures removed.—7th: Two clay-like motions. In every respect doing well.—8th: Restless. Has diarrhœa. Temperature 100° (the highest temperature attained).—9th: much better in every respect.—13th: Bowels acted three times; clay-like motions.

On Aug. 1st the patient resumed, with some precautions, his usual diet, and on the 5th he returned to his office work.

The after-treatment adopted consisted in almost absolute starvation for the first forty-eight hours, and after this

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nourishment was given by the rectum. Nothing but ice or water in very small quantities was given by the mouth except on the fourth day, when he took a teaspoonful of chicken broth every hour. On the fifth day the same quantity of milk and soda-water was allowed, and the nutrient suppositories and enemata were discontinued, as he had diarrhœa. On the seventh day his diet was improved, and he was allowed beaten-up eggs, broth, milk, jelly, and a little claret. Morphia was used subcutaneously to give sleep and quiet irritability, and opium had to be given by the rectum for his diarrhœa.

The patient has enjoyed better health since the operation than he has done for years. His bowels act in a normal manner, which he believes they have not done for fifteen years, and he has gained in weight.

Remarks.—Although the impacting gall-stone in this case was large, there are many larger on record, which have been either passed per anum, discharged through fistulous openings externally, or found in the intestines after death. The chief interest of the case lies in its successful treatment by surgical operation. It is probably the first case on record of recovery after removal of a gall-stone from the intestine by incision, the intestine being sutured and returned to the peritoneal cavity. It is probable that the so-called "attack of inflammation of the bowels" fifteen years previously marked the time at which the gall-stone gained entrance to the intestine by ulceration, and that from this period there was an ever-increasing obstruction to the passage of fæces, until an attack of intestinal irritation produced sufficient swelling of the mucous membrane to make the obstruction complete. From the appearance of the stone, with a facet on its upper end, we conclude there is still another, though smaller calculus, most probably in the gall bladder, or it may be in the intestines. During the diarrhœa which succeeded to the operation careful watch was maintained, but no concretion was discovered in the motions. The symptoms that fortunately gave a correct indication of the locality of the obstruction were, first, the situation of the pain always near the middle line; secondly, the absence of any considerable distension of the abdomen; thirdly, the very early occurrence of vomiting in the case; fourthly, the scantiness of the urine; fifthly, the fact that two or three pints of fluid could be retained as an enema without unduly distending the rectum. The case furnished an excellent test of the value of Lembert's suture; it kept the intestinal wound, which was two inches in length, satisfactorily closed, although there were six actions of the bowels in the first four days, and on the sixth day there was an attack of diarrhœa. In the after-treatment we adopted a plan of dieting which Mr. Smith had derived from a knowledge of Mr. Lawson Tait's practice in cases of abdominal operation. For forty-eight hours the patient was kept almost entirely without food or fluid of any kind, and although he suffered severely from thirst, yet we believe his recovery without any serious symptoms was largely due to this regimen.

SUPRA-PUBIC LITHOTOMY: A HISTORICAL SKETCH.

By CHARLES W. DULLES, M.D.,

SURGEON TO OUT-PATIENTS IN THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, AND IN THE PENNSYLVANIA HOSPITAL IN PHILADELPHIA.

THE operation of supra-pubic lithotomy was first performed in France in 1551, under the stress of necessity. At this time, Franco, after he had failed to remove a stone from a child of two years, by cutting "on the gripe," made an incision through the abdominal wall and removed the calculus in this way. But he was far from recognising the value of the invention he had been driven to, and did not advise imitation of his example. Nearly thirty years later, Rousset, as a result of studies in regard to Cæsarean section, came to believe that Franco's act of desperation was worthy of deliberate adoption as a method of lithotomy, and, in a work on the Cæsarean operation, described the details he thought advisable, defended the theoretic merits of the method, and answered objections he supposed might be raised—objections which, in fact, were afterwards raised. Rousset never had the opportunity to perform the operation, the death of Henry III. depriving him of the hope of obtaining permission to practise it upon a criminal—a favourite way of experimenting in those days. Nevertheless, to Rousset, and Rousset alone, belongs the credit of first seriously advocating the removal of stone from the bladder by incision above the pubes. Franco's act was unpremeditated, and the value of its results unrecognised by him. Rousset saw what good use it might be turned to, and his name should never be left out of any account of supra-pubic lithotomy. Early in the seventeenth century Fabricius Hildanus did this operation, but strongly dissuaded others from attempting it. Nevertheless, contemporary writings would indicate that it continued in use in France much oftener that can be established from recorded cases.

It was not till near 1700 that the operation seems to have crossed the British Channel, the first recorded operation on the western side being done by Proby, in Edinburgh, to remove from a woman's bladder an ivory bodkin which she declared she had swallowed by accident. In 1718 the method was demonstrated by James Douglas before the Royal Society of London. The next year his brother, John Douglas, performed it successfully, and in 1820 he published a work upon it, called "Lithotomia Douglasiana." Deschamps accuses him openly of having borrowed his idea from Rousset's book, which both the brothers denied that he had ever seen. However this may be, the operation at once secured adherents, and was employed by a number of English surgeons both in hospitals and in private practice. The most noted operator at that time was Cheselden, the perfector of the left lateral operation, often called by his name. He followed Douglas's method in ten cases. All of his patients recovered except one, who died of diarrhœa and fever due to an indiscretion after he was able to go about. Cheselden finally abandoned this method because others cut the peritoneum and burst the bladder in attempting to distend it. Other operators in England did the supra-pubic operation about this time; so that for a while it seemed to have more acceptance here than in the land of its origin. In Holland it was employed by Sermes at least sixteen times, in five of which death followed, and the authorities forbade his using it any more.

In 1758, the scene of greatest activity was transferred to France, through the energy and success of Frère Côsme, who did a hundred operations of this kind from 1758 to 1781, and lost but nineteen of his patients. Côsme first used a counter-opening through the perineum to secure drainage, though this was first suggested by Palluci in 1750, together with a recommendation to close the wound with sutures. Côsme, however, has undisputed claims to the invention of the *sonde-à-dard*. Scarcely had Côsme left the world when Souberbielle began a series of operations in 1796, which, continuing until 1843, when the operator was eighty-eight years old, numbered in all 115. Thus we see that two French surgeons have contributed 215, or about one-third of all the cases recorded up to 1881.

With the early part of the present century the well-known names of Scarpa, Vacca Berlinghieri, Dupuytren, Home, Dzondi, Amussat, Lisfranc, and Civiale, in Europe, and of Gibson, Carpenter, and McClellan in America, enter the list of those who used the supra-pubic operation. All, however, practised it without preference, if Amussat be excepted. The prevailing opinion had come to be adverse to this operation, its dangers being exaggerated and the safety of perineal lithotomy being considered all that could be expected. One author copied another in condemning it, and it looked as as though it might soon fall into oblivion. In 1856 Dr. G. Murray Humphry, of Cambridge, England, published an account of a successful operation done by him in 1848, together with a table of 104 cases, which has been the basis of most English statistical estimates until after 1875. This collation of statistics was not calculated to give any great confidence in the supra-pubic method, and the English opinion has continued until recently to be in the main unfavourable to it.

In Germany, on the other hand, there began, at about the same time, a decided revival of interest in this operation. This was principally attributable to the influence of Prof. Günther, of Leipsic, who collected 260 cases and printed their details in an able monograph entitled "Der hohe Steinschnitt seit seinem Ursprunge bis zu seiner jetzigen Ausbildung" (Leipzig, 1851). His presentation of the subject, backed by his own successful employment of it, caused the opinions of his countrymen to be more favourable than those of any other nationality, while in Austria and Holland his

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influence has also been marked. Strange to say, there is scarcely an allusion to this, the best monograph ever published on this subject, by any English or American author before 1875, up to which time every one of these authors referred to Humphry's table for their estimate of the merits of supra-pubic lithotomy. In England and America the operation was but rarely done and hardly ever heard of. Here, however, occasionally a surgeon was driven to it because of failure to extract a stone through the perineum. From 1853 to 1857, Dr. Willard Parker, of New York, influenced by German teachings, cut four women and one man in this way, and then gave the method up. The late Dr. Krackowitzer, of New York, whose name betrays his nationality, wrote me in 1874 that he had done this operation six times since 1859. Dr. Guido Bell, of Indianapolis, a German, has done it four times since 1867 without a death. Dr. Jacobi, of New York, another German it will be observed, has done it seven times since 1868. But with these exceptions the operations of no surgeon in America had, before 1875, exceeded two or three in number.

In 1874, I was one day present at an operation of lithotomy in which several skillful surgeons laboured long and hard to extract a calculus by the usual lateral operation of Cheselden. Three hours were occupied in fruitless attempts to remove the stone entire, or to crush it. At the end of this time it was suggested to try the "high operation" before giving the attempt up. No one present had ever seen this method practised; but the operator, being a good anatomist, had no difficulty in carrying it out; and in about three minutes the bladder had been opened above the pubes, the stone—which was as large as a pullet's egg—had been easily removed, a few stitches had been inserted, and the patient was taken back to his bed. The sight of this operation led me—then a student of medicine—to a study of the history and merits of the supra-pubic operation of lithotomy, which covered a period of a year, and led to the publication of a paper on the subject, which was printed in the *American Journal of the Medical Sciences*, July, 1875. In this paper there is an abstract of the contents of an inaugural thesis, which embraced a historical sketch of the "high operation" from the days of Franco to 1875, and an analysis of the facts gathered from a table of statistics containing reports of 478 cases. The analysis showed the results of supra-pubic lithotomy, by themselves and compared with those of the lateral (perineal) operation. One of the most interesting features of the analysis was the demonstration of the fact that supra-pubic lithotomy gives as good results as lateral lithotomy for calculi weighing between one and two ounces, and better results for calculi above two ounces in weight. Upon theoretical grounds, it was contended in this paper that the supra-pubic operation is preferable to the lateral; and it was asked: "If these, then, be the facts, is not this method deserving of more attention and a fairer trial than it has yet had? Does it not, theoretically and by its actual results, commend itself to the candid judgment as a method which offers sufficient probability of success, if rightly and carefully executed, to lead to its application in other cases than the most desperate? For many years it has been assigned this position of a 'forlorn hope.' Shall it not be some day placed where, with less disastrous obstacles, it may win success without having its victories made to seem like defeats because of the losses rendered inevitable by the field to which it has been limited?".

From the time when this hope was expressed until the present, I have not ceased to follow with deep interest the history of supra-pubic lithotomy. For some years I continued to collate and analyse its statistics, so that, in 1881, I had collected and studied the reports of 636 operations by this method, with results practically identical with those published in 1875. Especially gratifying was it to one who had faith in the merits of supra-pubic lithotomy to note how it was gaining the confidence of surgeons all over the world, so that the operation was coming into more and more general use. A study of its history by epochs shows that it was practised in the sixteenth century only once; in the seventeenth only seven times; in the eighteenth 191 times; in the first half of the nineteenth 237 times; and in the next thirty years more than 200 times. At this time (1887) the whole surgical world seems convinced of the merits and practicability of this method. This state of affairs can be traced to several things: one, the steady defence of the method by those who believed in it; another, the demonstration of its merits by the study of a sufficiently large number of cases; another—and most important factor—the proposition of Professor Petersen to facilitate access to the bladder by distension of the rectum;[1] another, the zeal with which it has been championed and practised lately in Paris by Monod, Guyon, Perier, and other surgeons; and, lastly, the conversion of Sir Henry Thompson, who, after long denying its claims, has become one of its most enthusiastic propagandists. At the present day, then, supra-pubic lithotomy may be said to be on the very crest of the wave of popularity. It is even necessary, I think, for those who have believed most patiently and consistently in its merits, to raise a voice of caution, lest it suffer by being overrated, even as it so long suffered by being underrated. After thirteen years of study of this method and an analysis of over 700 operations, I have come to the conclusion that a temperate view of the subject will lead to the conviction that the supra-pubic operation deserves to rank above all other methods of lithotomy for stones of large size, and that its applicability to any case should be carefully discussed before deciding to cut through the perineum.

Chronological Summary.—1551: Franco did the first operation. 1580: Rousset described and advocated it. 1694: Proby did the operation successfully. 1698: Solengius distended the bladder with air. 1719: Douglas established it in England; Bamber injected the bladder after opening the abdomen. 1724: Sermes made a cut in the perineum to introduce the sound. 1739: Clelland proposed a peculiar sound. 1750: Pallucci proposed a perineal incision for drainage, and suture of abdominal wound. 1758: Côsme used the sonde-á-dard and perineal counter-incision; he also attempted suture of the wound. 1773: Le Blanc said to have operated "*en deux temps.*" 1783: Aitken proposed dividing the "share-bones." 1785: Espiaud placed his patient in a sitting posture after operation. 1800: Souberbielle argued that the catheter was not indispensable for drainage. 1826: Pinel Grandchamp proposed suture of the bladder-wound. 1828: Baudens operated with bladder undistended. 1829: Tanchou practised constant irrigation of bladder and wound. Geo. Bell dilated a fistula to remove a stone, and proposed this as a method. 1832: Vidal de Cassis proposed the method "*en deux temps.*" 1841: Nélaton did first operation "*en deux temps.*" 1843: Felpetu opposed using sutures. 1850: Delery applied sulphate of iron and powdered camphor to wound to prevent septic absorption. 1851: Günther published his monograph. 1854: Baudens sewed up bladder after extraction of bullet. 1857: Bruns practised suture of the bladder wound. 1871: Listerism used by Lister. 1874: Anger recommended use of thermo-cautery. 1875: Trendelenburg proposed placing patient on abdomen for drainage. Dulles reported analysis of 478 cases, and advocated general adoption. 1879; Flury published statistics of ninety-three cases. Van Geodœver advocated general adoption. 1880: Petersen recommended distension of the rectum to raise distended bladder out of pelvis. 1881: Langenbuch proposed "*sectio alta plastica.*"

ON ECZEMA AND PSORIASIS.

BY A. S. MYRTLE, M.D. EDIN.

FORTY years' experience with any class of patients should afford many and valuable opportunities of comparative observation, not only as to the results of one's own practice, but as regards that of many of the most distinguished of the profession. Such has been my lot; and it is after having treated thousands of cases of eczema and psoriasis—cases, many of them at least, which had been seen by the best specialists,—tried every remedy, from Holloway's ointment to cuticura, and visited the most famous watering places in Europe, without securing much benefit, that I venture to lay the lessons I have been taught and the conclusions I have arrived at before the readers of THE LANCET. I shall assume that they are all as familiar with the symptoms and varieties of both affections as I am. As far as varieties go, I may at once say I recognise only eczema and psoriasis; the forms they take are practically of no importance, however imposing they look on paper. Everyone will admit that both are becoming more and more common: as a proof of this I need only point to the rapid growth of dermato-

[1] This plan may have been suggested by the experiments of Dr. Garson, of Edinburgh, which were reported to the Congress of German Surgeons by Prof. Braune.

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logists. In 1845, in England, we had only one of any note, Erasmus Wilson; Scotland was entirely without; and Ireland was little better off. Now we have them flourishing in every city, and attached to every general hospital in the kingdom. The etiology of both affections is still to be discovered, notwithstanding the great advances made in every department of pathology and therapeutics. As yet no bacillus has been found, and, what is more, I prophesy that none ever will be; for wherever that most fashionable, highly cultivated micro-organism takes possession, death and destruction follow. Look at splenic fever, chicken cholera, and tubercle. Now, the affections under our consideration are in reality scarcely to be classed as diseases, for, correctly speaking, they are mere divergences or exaggerations of that cell life continually going on in health, and, however extensive, vexatious, and protracted, they never lead to any structural changes or permanent functional derangements, and never destroy life. Whilst our knowledge as to their proximate cause has made no progress, I am pleased to add that the same cannot be said as to their treatment, for here we have made immense strides; still, it is emphatically experimental, quite as empirical to-day as it was when I commenced practice. We have no royal road to cure—no specific; the best methods of treatment, the most usually successful every now and again, even in the same individual, prove worse than useless. Often have I fancied I had made a great discovery, thought of the Patent Office and enormous wealth, but, like Sir Andrew Clark and cocaine in summer catarrh, my hopes have been rudely shaken. Patients and friends continually ask, "Can you cure this? Will it ever return?" I answer to both questions, "Yes." Some also ask, "Would it not be dangerous to drive this in?" And even medical men, I suppose by way of comforting the patient, say, "It is better out." My great aim is to cure, and as quickly as possible, with one solitary exception—eczema capitis in teething infants.

It has become the fashion to say that both eczema and psoriasis are manifestations of gout, and that if you wish to succeed in treating them you must do so "according to the well-known therapeutic indications observed in that condition." These are the words of a Dublin physician. I hold that they have no more to do with gout than tapeworm has; but, like every other aberration of health, when they occur in a gouty subject they are all the more difficult of cure. I shall mention one reason only against the gouty theory of causation. Wherever any tissue has been the frequent seat of gout, and if to periodic we add protracted, structural changes invariably follow—degenerations, in fact,—and the part so affected never regains its normal condition. What happens here? I can produce cases that have been subject to attacks of both for thirty—ay, fifty—years, who will tell you that every portion of their skins has been, not once, but scores of times, the seat of these eruptions, and if you examine any part where they no longer exist you will find it perfectly healthy in appearance, and as capable of performing its functions as if these had never been interfered with. Would such be the case were gout the cause? Hereditary transmission affords no explanation of their etiology. Everything is hereditary—moral, mental, and physical; and, in my opinion, it is a waste of words to say that any disease is hereditary when we know it must be. Besides, whether hereditary or acquired, it makes no difference in prognosis or treatment. In both, what we do know is this, that there is an abnormal activity in cell life, and that this cell proliferation is due to fitful nerve disturbances—vaso-motor possibly, central frequently. How common is it to find a burst of one or the other follow close on the heels of grief, worry, overstrain of mind or body. In eczema we frequently observe the influence which digestion and assimilation exert on its behaviour, and, above all, the way in which hepatic conditions, whether functional or organic, interfere with the eczematous. Consequently, we must recognise the necessity of attention to diet and internal treatment. In psoriasis we seldom find any such influences at work. I am not aware that it is in any way affected by diet, or that it can be produced by any amount of dirt. As a rule, the subject of it is in rude health, capable in every sense of the word, and, with the exception of arsenic, little affected by internal remedies. I hold that both are non-contagious, and I differ entirely with Dr. Jonathan Hutchinson in his recently expressed views that the spread of eczema and psoriasis to contiguous portions of skin is due to "an infective process," and that this must serve as "the keynote of a large part of the therapeutics of the skin." By an infective process I mean, and I suppose Dr. J. Hutchinson means, the transmission of a noxious principle or material from one individual to another, or from one portion of the same individual to another portion. If eczema and psoriasis are spread by infection, surely we might look for their being frequently given to the friends and attendants constantly employed in dressing and waiting on those suffering from the very worst forms of both; in all my experience I have never met with such a result. If they spread by an infective process, why not chilblains, which, according to the same authority, arise from "inherited peculiarity of tissue as regards susceptibility to cold"—in fact, vaso-motor disturbance. This infective process is a new doctrine, and we are entitled to ask what is the contagium, and how does it happen that a single patch of eczema lasts a lifetime without spreading? Common sense and long experience tell me that the common cause of the spread of eczema is scratching, and wherever this is resorted to self-aggravation is the law, but that aggravation is not brought about by infection either in the part or through the blood, *but* by the nails; in fact, I go so far as to say—if you prevent itching, you do away with scratching, and the eczema is cured.

I shall not take up time by dwelling on ordinary cases of eczema or psoriasis. These can be successfully dealt with anywhere and by anyone qualified. I shall confine myself to three extraordinary cases of each, cases that had defied all treatment. Everyone is familiar with the popular belief that natural sulphur waters have great power as therapeutic agents in all chronic cutaneous diseases. Medical men recognise this fact, and send hundreds of patients to the sulphurous springs of Moffat, Strathpeffer, and Harrogate, as well as Aix-les-Bains, Aix-la-Chapelle, and other continental spas, to undergo the "cure," as it is called. Now, I shall briefly sketch how these same cases do at Harrogate.

Mr. Edmund Furner of Brighton, in 1860, sent me a retired Indian judge, aged seventy, who had been a martyr to one of the worse forms of eczema I ever saw. From head to foot there was scarcely a morsel of skin free from it; some parts were raw, exuding serum and pus, encrusted with scabs, on removal of which angry sores were exposed. He had visited Wiesbaden, Homburg, Aix-la-Chapelle, and Cauterets. He brought a note in which Mr. Furner stated it was the decided opinion of Erasmus Wilson, two eminent London physicians, and himself that no attempt must be made to cure the skin, as they believed that would kill the patient. I did nothing, but left him to swelter in Wilson's benzoated zinc ointment; in three months he went home as he came. Here I may observe that all ointments in such a condition are filthy and injurious; they rapidly undergo chemical changes, and add to the irritation. Next year, to my sorrow, the patient returned as bad as ever. One night I called on him accidentally. I found him in great trouble, talking of doing away with himself; he longed for death. Then I told him it was thought if his skin were cured he would die from lung mischief, but if he liked I would try to cure him. He agreed. Next morning he had his first alkaline sulphur bath, at 98°, for six minutes; this removed all ointment. He was dried carefully, and, as his skin was raw and bleeding, I covered the whole with fine sheet cotton-wool medicated with a preparation of coal-tar. Each day his stay in the bath was prolonged, and the dressing repeated. In six weeks he was cured. No lung mischief appeared, and he died at eighty of decay, never having suffered to any extent from eczema again.

Strangely enough, the next very bad case was a gentleman who had also been a judge in Calcutta for many years, and had to resign his appointment on account of eczema. He had gone to one health resort after another, had consulted the best authorities at home and abroad, and, hearing of Dr. McCall Anderson, he went to Glasgow. Dr. Anderson sent him to me for the purpose of drinking and bathing in our sulphur waters. His body was in such a state that he could not wear his usual clothes or lie down in bed; he sat wrapped in thin muslin, with a loose skirt and dressing-gown. He was flayed in many parts, and the raw surfaces were the seat of serous and purulent discharges to a painful and exhaustive degree. I resorted to the same treatment as in the former case, dressing him myself daily; the wool stuck to him at first, and had to be rudely torn off. The result was that in three weeks he could bear his clothes, and in six he left with a sound skin. I have seen him often since, and he has never had more than a slight threatening of his old enemy.

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Last April Mr. J——, a surgeon in large practice, placed himself under my care. His history was a sad one: from his ninth year he had been a martyr to eczema; twice he was cured—once by an attack of acute pneumonia, and again by an attack of rheumatic spinal meningitis,—but with returning strength the eruption returned. In 1885 he never passed a night free from urticaria, and since then his hands, soles of feet, elbows, buttocks, scrotum, and thighs were so involved with eczema that he was entirely crippled, and had to give up practice in the beginning of this year. Every kind of treatment, internal and external, had been tried—arsenic, iron, iodide of potassium, alkalies, and acids. I put him under a course of our sulphur waters and baths, and in a week he was greatly better, and at the end of the third week he was so comfortable and presentable that he went home and resumed work. About four weeks ago he wrote to me; he was able to keep the eruption quiet by using an ointment with carbolic acid, nitrate of mercury, bismuth, and lard. Unfortunately about a week after that he read Dr. Crocker's account of his success in eczema by counter-irritation. Mr. J—— jumped at the idea, and at once applied a mustard plaster to his nape. Suddenly, as he calls it, all the old places were recrudescent, his face became covered with blotches, and his body was in a blaze; he wrote to me in despair. With all deference to Dr. Crocker, and whilst concurring in his views as to the influence the vaso-motors have in eczema, I cannot speak too strongly against the application of counter-irritants to the skin of the eczematous for any purpose whatever. I have brought the case forward because, although only half cured, that proved an immense boon, and had Mr. J—— been able to stay for six weeks instead of three, I feel almost certain the result would have been most satisfactory.

Captain M—— was obliged to resign his commission in the army on account of a severe and very general attack of psoriasis, which made its appearance shortly after he joined his regiment in India. For eleven years he had never been free from it. Of course, he had done everything he could to get rid of it, and tried every remedy and baths. When I saw him his whole body was covered with scales, varying in size from a shilling to a pin's head. His extremities and face were also in the same plight, and his nails were thickened and corrugated. I found that all his organs were healthly and functions natural. I ordered him a mild sulphur bath at as low a temperature as he could bear, and to remain in it as long as he could without feeling chilled. For three months he lay in his bath sometimes for an hour, and at most for an hour and a quarter. At the end of this course every patch had disappeared, and, except for his nails, it could not be recognised that he had suffered from psoriasis. He went to Paris, and in the following spring announced the fact that his nails were nearly well, and that he was going to marry. I have never heard of him since.

Dr. Holman of Reigate sent me a gentleman with very bad psoriasis last year. He had suffered from it for a long time, and had large patches on his body, forehead, face, arms, and hands. A three weeks' course of waters and baths cleared him. He returned last April with a very good report, and underwent a fortnight's treatment by way of prevention.

A month ago Dr. Holman of Hampstead sent me a youth of nineteen who had never in his recollection been free from psoriasis. His face and neck were covered, giving him a most unsightly appearance; large patches running into each other were on the body, and on the legs and arms were a number of rings, more or less regular. He took a full course of sulphur and chalybeate water internally. He remained in as cold a sulphur bath as could be borne for an hour each day, and the result is his face and neck are entirely well, and the other patches have nearly disappeared.

Before 1876 I invariably ordered baths at a temperature of from 96·8° to 104°, and, finding that little impression was made on the eruption, I lowered the temperature until I got my patients into a cool bath, and I found a marked diminution of cell activity, and the longer I could keep them under this the greater and more rapid was the improvement. Certain conditions are absolutely necessary for such strong measures; the patient must be sound in all his organs. Were anyone with disease of the heart, liver, or kidney subjected to such a severe ordeal, most serious mischief might result; so also with those predisposed to gout and rheumatism.

In psoriasis, dieting is of no importance, and internal remedies are of as little. The same cannot be said of eczema; but in both I trust greatly to external applications. As a preventive against recurrent attacks of eczema dermato-therapeutic quinine lotion is by far the best thing I have yet hit upon. It acts as a powerful tonic as well as a sedative, and can be applied with freedom to all parts, as it never produces the slightest irritation. Such preparations are greatly to be preferred to ointments and pigments, which always rub off and soil whatever they come in contact with. I frequently paint old-standing patches of psoriasis and eczema with naphthaline tincture, after immersion in the sulphur bath, with the most satisfactory results, and confidently recommend a trial of it after other applications have failed.

Harrogate.

SOME CURIOUS VASO-MOTOR PHENOMENA OF TYPHOID FEVER.

BY ANGEL MONEY, M.D.,
ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN.

I DESIRE to publish some fragmentary clinical observations on certain so-called vaso-motor phenomena which may be observed in some continued fevers. If these phenomena have been previously observed, they have at least failed to obtain the recognition their interest and perhaps importance merits; and such mention as is accorded them by systematic writers is so unsatisfactory, not to say desultory, that it is plain the presence or existence of such phenomena did not appear to authors to have any definite value beyond that which attaches to mere ordinary phenomena. Nor, indeed, although I make more of them, and perceive in them a significance which may prove of diagnostic and even prognostic importance, do I pretend yet to have reached the bottom of their powers; and although I feel sure they have a worth, I cannot yet, even approximately, state what that worth may be, either intrinsically or extrinsically. But these are no reasons why I should not state what I have seen and set forth what I think.

In many cases of typhoid and rheumatic fever curious vaso-motor phenomena may be detected in the skin, and, after considerable observation, I think most of them may be grouped in one or other of the following classes:—In the first class I may place the *spontaneous vaso-motor phenomena*, by which I mean those facts which may be witnessed without further irritation or stimulation than attends the mere exposure of a surface of the body or limb on which the observation may be made. If it be the surface of the abdomen, this may be found to be for the most part of a pinkish hue, such as tends to obscure the presence of rose spots, if such be present; but scattered here and there through the red tint, which they mottle, may be seen areas of whiteness, which present a distinct and striking contrast with the general tint, and are, moreover, characterised by varying in distinctness, being whiter or less white at one moment than at the preceding or succeeding moment. If to such a skin, under such circumstances, the additional condition be added of a slight mechanical—and, I may add, electrical or thermal—stimulation, certain further observations may be made, the purport of which I cannot pretend to fathom, though it would be easy to offer plenty of hypothetical explanations. It generally happens that the stimulated area or line turns white or ivory-tinted after the lapse of a rather long latent period, variable in different cases and at different times for unascertained reasons, and measurable generally by seconds. The whiteness is not strictly limited to the irritated section, but spreads away from the part stimulated, and in a gradual, decreasing fashion. Moreover, the pallor does not appear abruptly after the period of latency, but the pinkness of the skin gradually gives way to the whiteness, and the changing hue is very perceptible. Thus, both in space and time the phenomenon has a graduation and a duration which are, comparatively speaking, of slow course, and remind one rather of the contraction of smooth, plain, nerveless muscular fibre, than the rapid, sharp contractions of the well-nerved voluntary muscle. And although too much stress should not be laid on this feature, still I cannot but think

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that these characters suggest the independence of the phenomena on the nervous system, and their dependence on the mere living undifferentiated protoplasm of the walls of the capillary vessels. But I am not bigoted in the matter of explanations of phenomena, and care more for the accuracy of observations and for the determination of facts.

I want further opportunities for examining the various etiological factors which must concur and the different conditional causes which must be absent for the development of this phenomenon. I make no doubt in my own mind from general grounds of causation, that one chief agent or agency must be at work in the production of the phenomenon, but, nevertheless, all that we yet know of etiology, whether of disease or of other earthly processes, points conclusively to the belief that many other conditions besides the chief one—the exciting cause as we call it—must be operative, and some conditions not operative, in the causation of the process. I have a few other facts of special connexion with the present phenomenon. Frequently, but not always, it will be found that exposure of the skin of the arm and forearm in the same subject presents a contrast with the previously or simultaneously exposed surface of the abdomen, the general tint being white with irregular patches, sometimes streaks, of pink or darker red. When this contrast is evident, and occasionally when there is no such general and spontaneous dissimilarity of appearance, mechanical, and sometimes (? always) electrical and thermic, irritation of the skin of the arm will be followed after a similar, but perhaps generally a trifle shorter, period of latency by the gradual development of the *tache cérébrale* or red streak, having the usual characters of that phenomenon. Sometimes the surface of the arm has a general pink tint on first exposing it to the atmosphere, and this may rapidly change to white, but the colour of the written characters thereon may be deep red. The contrast in colour may be still more remarkable, even in the same case; the writing may be white on the surface of the abdomen, red on the forearm, white on the legs. I do lay considerable stress on the circumstance that the temperature of the skin and of the body is usually high in cases which present these vascular phenomena, and, further, I have most generally observed them in full perfection when the skin has not been perceptibly sweating. But, as proving that neither increased heat nor an especial dryness of the cutaneous tissues is necessary to the production of such phenomena, I may observe that I have seen them very well marked in cases of epilepsy and chorea of uncomplicated and afebrile sort. It may be worth placing on record also in this connexion that the majority of cases in which these observations were made the brain was certainly perturbed in its functions, for delirium was frequently present at some period of the twenty-four hours, mostly at night-time; still I must add that my observations were usually made during the day-time, and when the intellect of the patient, to all ordinary modes of investigation, did not seem to be abnormally affected. I should like to make more investigations at different hours of the day in order to ascertain whether there are any daily or other periodic variations in the phenomena, and also to determine whether the morbid signs present any concomitant variations with other corporeal phenomena, either normal or abnormal. I do not think that a careful clinical study of this nature would be either a waste of time or would not be of some clinical avail.

Harley-street, W.

GLASGOW WESTERN INFIRMARY. — At the annual meeting of this institution, held a few days ago, the report submitted showed that 14,661 out-door patients had been treated during the year, and 3928 in-door. Of these latter 277 died, giving a percentage mortality of 7·7; but of the fatal cases 44 were hopeless when admitted, reducing the death-rate to 6·6 per cent. The average residence of each patient was 37·2 days. The cost of each bed fully occupied during the year was £49 0*s.* 3½*d.*; the average cost per patient was £4 19*s.* 10*d.* Financially the infirmary was reported to be in a flourishing condition, a balance of £9000 being carried forward to next year.

THE Blair Convalescent Hospital, which has been erected as a result of the munificence of the late Stephen Blair, formerly M.P. for Bolton, at Bromley Cross, near Bolton, is now practically completed, and will shortly be opened for the free admission of convalescents "without limit of domicile."

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

MULTIPLE MINUTE ULCERS OF THE CORNEÆ FOLLOWING EXPOSURE TO ELECTRIC LIGHT.

BY T. PHILLIPS,
CLINICAL ASSISTANT, MOORFIELDS EYE HOSPITAL.

IN this case the causal relations between the exposure to the electric light and the lesions of the corneæ seem to be fairly complete.

On August 31st an electrician, aged twenty-four years, while engaged in making observations of a very powerful electric arc, removed the usual protection in order to make a "better examination," thus exposing his eyes for about four minutes to the action of the light. He suffered no immediate inconvenience; resumed the shade, continued his labours for a short time, went home, had a "good sleep," and had no cause for complaint until he awoke about four hours after the exposure. He then suffered from acute pain in and about the eyes, great intolerance of light, and was unable to sleep. He said, "I was stone blind."

I saw the patient on September 5th. He was still suffering from acute pain and intense photophobia, which prevented examination till the application of a 10 per cent. solution of cocaine. The anterior surfaces of both corneæ were affected. The right was dotted all over with small definite ulcers. The left had six such ulcers arranged in pairs of three rows disposed vertically. The appearance of these ulcers was similar to that presented by the corneal ulceration which occurs in states of perverted innervation of the eye. The ophthalmoscope revealed nothing abnormal.

The eyes were bathed with boric acid lotion, and a solution of cocaine and atropine applied night and morning. In the meantime both eyes were closed with pads smeared with boric acid ointment.

Professor Tweedy kindly saw the case a few days afterwards, and verified the above description and approved the treatment. He also said that he had seen several cases of conjunctivitis with photophobia following exposure to a naked electric light, but had not noticed the corneal ulceration before.

The patient was well in about a fortnight.

A very interesting question suggested by the case is the possible cause of the phenomena—whether (*a*) due to direct damage of the corneal structure, (*b*) to direct damage to the trophic nerves, or (*c*) to indirect damage to the trophic nerves reflexly induced through the optic nerve. It should perhaps be stated that there was no past history of eye disease, except a trifling injury, and the vision was previously normal.

ABSENCE OF THE OCCIPITAL BONE IN NEWLY BORN INFANTS.

BY W. C. BROWN, M.D.

The publication of an instance of this rare deformity in THE LANCET of June 11th, has induced me to give particulars of two cases that have recently occurred in my practice.

On April 26th, 1886, I was called to attend Mrs. N—, aged twenty-four, in her first confinement. She complained of having been suffering from extremely strong fœtal movements for a day or two. On examination I found the os dilated, the head well down, and the face presenting. Anticipating a tedious confinement, I was surprised at the ease and rapidity of delivery. On the birth of the infant the reason of this was made apparent; the back of the cranium had remained completely undeveloped. A large soft tumour containing the cerebellum and part of the cerebrum protruded, and on running the finger round its edge the parietal bones could be felt soft and gelatinous. The arches of several of the cervical vertebræ were also wanting, the tumour extending down the back of the neck for some distance. Unlike Dr. Fraser's case, the skin was quite intact over the tumour, and a considerable quantity of hair was growing on it. The child, a healthy

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and well-nourished female of full term, drew a few respirations after its birth, but did not live for five minutes. The mother made a good recovery, and I saw nothing more of her until two months ago, when she came to tell me that she was again pregnant, and that she expected to be confined about the beginning of September. I was called to attend her, however, on July 7th, and found her well advanced in labour, with a foot presenting. There was a very large quantity of liquor amnii, but delivery was rapid and easy. On examining the fœtus, an eight-months' still-born female, exactly the same deformity was found to exist. The tumour was, however, not so large, and the arches of the cervical vertebræ were in this instance complete. In every other respect the deformity was identical with that of the first child. Notwithstanding the fact that the fœtus had not respired, pressure on the tumour caused convulsions, and, if maintained for some time, severe tetanic spasms. In each instance there was a peculiar protrusion of the eyes, which, I observe, is noted also by Dr. Fraser, and the neck was extremely short. In each instance, also, the skin over the tumour was so loose that the finger could easily be pushed between the cerebellum and the medulla, and also for some distance down the spinal canal. The occipital bone—in fact, the entire bony arch behind the foramen magnum—did not exist even in the most rudimentary condition, and the skin was lying directly on the membranes of the brain.

This arrest of development of the posterior arch of the skull is evidently caused by the primitive vertebral discs at the upper extremity of the fœtal chorda dorsalis being too few. If the number be even one too few, it will easily be seen how a gap may be left. The double curvature forward of the cerebral extremity, which takes place about the seventh week, would tend to pull what vertebral discs there are forward to the anterior part of the skull. In this way a deficiency in number of the vertebral discs results in a gap being left at the back part of the skull, and the posterior cerebral vesicles are left with no vertebral disc to mould itself over them into a bony covering. From the strong fœtal movements that had been felt in both labours I concluded that intra-uterine convulsions had supervened a certain stage of development, and that this had terminated the pregnancy. The parents are both young and healthy Europeans, the father being of German, the mother of English birth. I have been able to assign no cause for both of their offspring being born with this rare and peculiar malformation.

Penang.

THE TREATMENT OF COMA IN YOUNG CHILDREN BY HYPODERMIC INJECTION.

By F. R. HUMPHREYS, L.R.C.P. LOND., &c.

THE following cases may be of interest, as they seem to indicate a line of treatment applicable even *in extremis*.

CASE 1.—An infant aged ten months, very ill for fourteen days with broncho-pneumonia, complicated by relapses. When first seen (3.40 A.M.) the child was deeply unconscious, unable to swallow, the lips blue, and dying; it had been in this condition for two hours previous to my being sent for. The condition had come on very gradually.—3.40 A.M.: Pulse 176; respiration 96. Three minims of brandy were injected hypodermically.—3.45 A.M.: The brandy injection was repeated. The mouth was noticed to be drawn down to the right.—4.5 A.M.: Pulse 168; respiration 92. Better; coughed a little; nystagmus. Hypodermic injection of $\frac{1}{120}$th of a grain of digitalin. The child opened its eyes, looked about, and was able to swallow a little.—4.30 A.M.: Pulse 168; respiration 86. The child had improved so much that I left. It died at 9 A.M. I was told it gradually relapsed into its former state. I was only called in in the absence of the doctor in attendance. On making a hurried physical examination, the right lung appeared nearly solid, and the left was badly affected.

CASE 2.—A boy aged nine months, suffering from measles (fifth day). The rash had gone a few hours before. Hyperpyrexia with consolidation of the left lung having set in, the doctor who was in attendance declared the case hopeless, and said he would not come again. I was therefore asked to see what I could do. When first seen the child had just had a convulsion, but I was told it had been unconscious for some hours. The lips were blue, the pupils extremely contracted, and I could get no reaction to any stimulus.—3.30 P.M.: Respiration 12; temperature 104·8°. It was wrapped in a wet sheet, an enema of brandy, egg, and milk administered, and a hypodermic injection of two minims of brandy given.—4.50 P.M.: Respiration 22; temperature 102·7°; pulse 140. The child was breathing better, and appeared improving. During this period six minims of brandy and $\frac{1}{60}$th of a grain of digitalin were separately injected under the skin.—7.30 P.M.: Temperature normal; much better; able to swallow. The consolidation cleared up; but meningitis set in, and the child died from exhaustion on the seventh day after I first saw him. Each time he flagged brandy or digitalin was administered hypodermically, and each time there was temporary improvement. The child was unhealthy, living under bad hygienic circumstances, in great part nursed by a mother who was absolutely ignorant of such work, and it was only after repeated relapses that it finally succumbed.

In an extremely similar case to the last, broncho-pneumonia passing on to meningitis, with hyperpyrexia (107°), occurred in an elderly but healthy man, and death ensued in a few hours. Hypodermic injection was not made use of, and sponging was of no avail.

Queen's-crescent, N.W.

COMPOUND DISLOCATION OF THE PROXIMAL END OF THE MIDDLE METACARPAL BONE FROM THE OS MAGNUM.

By ERNEST CUSSE, M.R.C.S., &c.

THIS case being an instance of a rare injury may be worthy of note.

J. E——, a gardener, fell from a tree some twelve feet on to the palm of his left hand. On presenting himself at the Bournemouth Dispensary, I found the hand flexed, and the head of the middle metacarpal bone exposed in the palm. The patient complained of very great pain. Having thoroughly cleansed the parts with an antiseptic solution, counter-extension was made from the wrist and extension from the middle finger, pressure at the same time being made on the shaft of the metacarpal bone. The dislocation was easily reduced. The wound was not closed. An antiseptic dressing was used, and a splint applied from the elbow-joint to the ends of the fingers. The case did very well, without suppuration or impairment of the functions of the hand.

Bournemouth.

A VERY RARE PRESENTATION IN MIDWIFERY.

By J. R. BUCHANAN, L.F.P.S. GLAS.

THE very rare presentation in midwifery narrated by Mr. Borham in THE LANCET of Oct. 15th is certainly an unusual one, so far as my experience and reading have extended, but it is by no means unique. On Aug. 20th last I met with a case almost identical with that of Mr. Borham, but with a different result. The messenger who summoned me to assist the midwife, said that a loop of the cord had come down, but that the midwife had been able to replace it. On making an examination, I found a loop of the funis protruding from the vulva. It was quite cold and pulseless. A further investigation showed that the head and left hand were presenting, the hand lying closely pressed against the temple and cheek. I was able quickly and easily—the pelvis being roomy—to push the hand above the brim, and, applying the forceps, delivered in a few minutes, but the child had evidently been dead for some little time. The answer I got, on asking the nurse what she meant by saying that she had replaced the cord, was that she pushed it into the vagina under the impression that that made matters all right.

Glasgow.

DWELLINGS OF THE PEOPLE.—At a meeting of the members of the Mansion House Council on the Dwellings of the People on the 30th ult., it was reported that the inquiry ordered by the Home Secretary into the sanitary condition of Bethnal-green had been concluded, and that the Commissioners' report might shortly be expected. Meantime a very large proportion of the nuisances complained of had been remedied by the vestry. In Mile-end and in Limehouse district a similar condition of sanitary progress was reported.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

REMOVAL OF PART OF THE JAW, TONGUE, SIDE OF THE PHARYNX, AND SOFT PALATE FOR EPITHELIOMA.

(Under the care of Mr. ARTHUR E. BARKER.)

THIS case serves to illustrate some of the advantages of division of the cheek for the purpose of reaching disease far back in the tongue and pharynx, a measure which has yielded good results in the hands of many surgeons since first practised more than fifty years ago by Jaeger. The division of the cheek was here combined with removal of the lateral part of the jaw, which was in part involved in the growth. The rapid and uncomplicated convalescence after so severe an operation was remarkable, and most encouraging.

W. J. G——, aged fifty-five, was admitted on May 18th, 1885. He had already been operated on three times for epithelioma of the left tonsil and side of the pharynx, these operations consisting of thorough scraping with sharp spoons and the use of the actual cautery. In each case the wound had healed rapidly, but recurrence had taken place in a few months again. Still no trace of any glandular infiltration could be made out by the most careful examination. For some weeks before admission he had frequently requested further operation, as he was suffering from the most severe pain, quite beyond the control of cocaine, even when used in large quantity. It was explained to him that no operation short of removal of part of the cheek and jaw, as well as the tonsil and side of the pharynx, would now give him any relief, and would be a most serious procedure, and that probably the disease would even then recur. Nevertheless, in spite of dissuasion, he still pressed for the operation in order that he might have some cessation of pain, which was completely breaking him down, and his urgent request was acceded to.

At the date of admission the extent of the disease was as follows. There was difficulty of mastication and deglutition of hard substances. On the left tonsil and extending forwards over the anterior pillar of the fauces to the cheek, behind the molar teeth, there was an epitheliomatous ulcer with raised and thickened margins. The disease also spread above a little into the hard and soft palate, and below just on to the edge of the tongue. No affection of the glands was to be found anywhere. As there was no doubt as to the nature of the growth from examination of the tissues removed on former occasions, an extensive operation was clearly indicated.

Mr. Barker first made a slit from the left angle of the mouth to an inch and a half from the lobe of the ear. The facial artery was then secured below by a pin and figure of 8 of silk, and above by torsion. The last molar tooth having been extracted, the jaw was divided through its socket from above downwards and backwards, and all the angle, with part of the ascending ramus, was removed, the section of the ascending ramus being completed with bone forceps. With the bone were now removed by means of scissors, cutting well beyond the growth, half the soft palate and mucous membrane from the hard palate, the side of the pharynx and a considerable portion of the left side of the tongue, and a piece of the mucous membrane of the cheek and that lying over the ramus of the jaw. During this dissection three vessels were divided, which bled rather freely; these were probably the palatine and tonsillar branches. They were easily secured with Wells' forceps, and one was ligatured. The whole area of operation having been carefully dried, it was now dusted with iodoform. The divided cheek was then brought together with stout carbolised silk passed through everything but the mucous membrane, and a few finer stitches were placed between these. A dressing of salicylic wool was applied over all.

There was no shock, or very little, from the operation, and the next day the patient was sitting up in bed comparatively comfortable. The stitches were removed on May 24th, union by first intention having taken place except just at the posterior angle of the wound, which, however, soon closed. There were no complications, and the patient was discharged on June 8th, expressing himself as being more comfortable than he had been for twelve months. The temperature did not touch 100° except once, on the tenth day, when 100·6° was recorded in the evening; after this it was sub-normal until the patient left hospital. From this date the patient came backwards and forwards for examination for about a year. All this time there was no trace of recurrence or any pain, and he enjoyed the best of health. But at about the end of a year it was evident that a local return of the disease in the throat had taken place. This soon begun to ulcerate, and after several attacks of hæmorrhage he died at the end of fifteen months from the date of operation, after an attack of severe bleeding.

Remarks.—This formidable operation was only undertaken at the patient's earnest solicitation, and after explaining to him that it was not likely to be more than palliative. But the complete relief from suffering which it afforded, as well as the prolongation of life for more than a year, left no room for regret that it had been performed. It was remarkable that up to the end of the case no extension of the disease to the glands could be discovered. The result of this and other similar operations has left the impression on Mr. Barker's mind that more might be done in the way of excision of pharyngeal cancer than is commonly supposed.

MANCHESTER ROYAL INFIRMARY.

RUPTURE OF THE RECTUM; PERITONITIS; NECROPSY, WITH DISCOVERY OF A PIECE OF CLOTH IN THE ABDOMINAL CAVITY.

(Under the care of Mr. HEATH.)

THE following case was reported by J. Hilton Thompson, M.B. Vict., late house surgeon.

George C——, aged eighteen years, was admitted on May 20th, 1887. He stated that he had fallen about four feet, in a sitting posture, on to the end of the upright shaft of a smith's hammer, which he described as having entered his seat for a considerable but unknown distance, and requiring some amount of force in its removal, which was accomplished by a fellow-workman. He had very little pain at the time of the accident, and walked about a mile to the infirmary without much trouble.

On examination only some slight bruising was found around the anus, with a little blood-stained mucus. Per rectum nothing was detected. The abdominal walls were quite flaccid. Examination caused no pain. He complained, however, of a slight continuous aching pain just above the pubes. Soon after admission he passed both urine and fæces, the former normal, the latter soft and streaked with blood. Some hours later he passed another motion, with a considerable quantity of clotted blood; the suprapubic pain also became more intense, but the abdominal walls still remained flaccid. The face was very pale, the pulse rather weak, and the extremities cold; but the patient appeared to be in good spirits, answered questions readily, and did not feel unwell. He remained in this condition until midnight, when the abdominal pain became more severe. Symptoms of collapse gradually came on, and he died at 8 A.M.

At the necropsy on the same morning, the peritoneum was everywhere found intensely injected, and in parts presented a thin layer of lymph. There was a marked laceration in the recto-vesical pouch a little to the right of the middle line, which led into a triangular opening in the wall of the rectum, about three inches from the anus; this aperture was triangular, its base measuring one inch and a half, its sides an inch each. At the brim of the pelvis on the right side was a laceration of the peritoneum covering the psoas, with bruising of the subjacent muscle. The mesenteric glands were enlarged and inflamed. The abdominal cavity contained a small quantity of hard fæces; there was also found a piece of cloth corduroy, two inches long and one inch and a half in breadth, corresponding in texture to the patient's trousers and to an aperture in their seat.

The chief points of interest in this case appear to be: the slight amount of shock following so severe an injury to the

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abdominal viscera; the few symptoms of peritonitis, which were found to have been very severe; the peculiarity of the lesion; and the presence of the piece of cloth in the abdominal cavity, it having evidently been carried onwards by the end of the hammer shaft.

WORCESTER GENERAL INFIRMARY.

CASE OF COMPOUND DEPRESSED FRACTURE OF SKULL; OPERATION; RECOVERY.

(Under the care of Mr. BUDD.)

WILLIAM K——, aged thirty-five, a coalheaver, was admitted on Oct. 3rd, 1887, with the following history. He had taken a cart-horse out of the shafts, and was passing behind it, when it kicked at a pony, and its hoof, passing clear over the pony's back, hit him on the head. He was unconscious for a few minutes.

On admission at 6 P.M. the patient was collapsed, his extremities being cold, pulse very feeble, and his respiration shallow; but he was quite conscious, and complained of no pain. In the centre of the right frontal region there was a linear wound running from above downwards two inches and a half long. There was practically no bleeding or bruising. Through this wound depressed and bare bone could be felt. At 9 P.M. his condition had improved a good deal, although his right upper eyelid had become swollen and of a dark colour.

Operation.—The head being shaved and strict Listerian precautions used, chloroform was administered, the patient requiring a very small quantity, and an incision was made downwards and outwards, running from a little above the centre of the wound to a point just above the lobe of the right ear. The wound was also prolonged at its lower end for an inch and a half, and the flaps turned back. This exposed the right temporal muscle, torn, and a large area of depressed bone. The muscle being turned back, two or three small loose pieces of bone were removed from the centre and from the anterior end of the wound, and this exposed a piece of dura mater about the size of a sixpence one inch above the eyebrow. With the bone forceps a slightly overhanging piece of bone was removed from the lower edge of the sound bone, and this allowed the depressed fragments to be easily elevated and removed. This showed about half an ounce of blood clot on the surface of the dura mater, which was removed, and that membrane found to be uninjured. A piece of loose bone the size of a shilling in the upper angle of the wound was elevated, but as it was still adherent to the periosteum it was allowed to remain. Slight bleeding from branches of the anterior division of the middle meningeal artery was easily stopped by passing a silk ligature under it, and then tying it. A drainage tube was inserted, and the wound closed with silver sutures. It was then dressed with iodoform and corrosive sublimate wool.

On Oct. 4th the patient presented no symptoms whatever; the wound was dressed, and half the tube removed. Temperature normal; pulse 84; respiration 20. He was kept on liquid food and in a darkened corner of a general ward. On the 5th, at 8 P.M., the temperature went up to 101° F., and the wound was again dressed; but there being no discharge, and the wound looking perfectly healthy, the tube was removed, and the next day the temperature was normal, and remained so, the patient being allowed to eat some fish. On the 9th the sutures were removed, and on the 10th the patient sat up for half a day, being out of bed all day on the 16th, since which date he had been getting about all day, in perfect health.

Oct. 31st.—A depression now occupies the situation of the original wound, and pulsation is observed in it over an area measuring an inch and three-quarters from side to side and two inches from above downwards. Pressure in this situation causes no pain whatever. The vertical limb of the scar measures three and the horizontal limb four inches. Twenty-three pieces of bone were removed, the largest being two inches long and one inch broad, and two others being an inch long and three-quarters of an inch broad, and half an inch long and half an inch wide respectively, the remaining pieces being mere fragments. Careful measurements show that the whole of the area from which bone was removed would be in front of the ascending limb of the fissure of Sylvius, and therefore corresponding to the position of the lower and middle frontal convolutions of the brain.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Removal of Tumour from Female Bladder by Supra-pubic Incision.—Hysterical Hyperpyrexia.—Congenital Absence of Upper Lateral Incisor as a forerunner of Hare-lip and Cleft Palate.

AN ordinary meeting of this Society was held on Nov. 25th, Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

Dr. GIBBONS and Mr. PARKER contributed a case of Tumour (myoma) of the Female Bladder removed by the galvano-cautery through a dilated urethra combined with supra-pubic incision; illustrating, also, the value of the electric light for purposes of exploration of the bladder. The patient was a girl, aged eighteen, of good general health, and the daughter of healthy parents. The earliest symptoms noticed were inability to retain the urine, and pain on making effort to do so. She was treated "for stone in the bladder, but without any relief." When admitted into the Grosvenor Hospital for Women and Children, she was found to have lost all control over the urine, which dribbled away from her; she experienced a dull aching pain in the perineum. There was no blood in the urine at the time. On bimanual examination, a tumour was detected in the bladder; rapid dilatation of the urethra was accomplished with a view to a more accurate examination of this tumour. A week subsequently, the patient being under an anæsthetic, the tumour was removed by means of a galvano-cautery écraseur; the loop of platinum wire was introduced through the urethra, and fitted over the tumour with the aid of the fingers passed into the bladder through a supra-pubic incision which had been previously made for this purpose. When the platinum loop had been fixed round the base of the tumour, it was tightened up and the current turned on. In five minutes the division of the tumour was complete; there was no hæmorrhage during, or subsequently to, the operation. After removal the base of the growth and the interior of the bladder were carefully examined by the eye, a small incandescent electric lamp being introduced for the purpose; the advantages of this method were at once very apparent, for every part of the bladder could in turn be seen. The wound into the bladder was carefully sutured. There were no subsequent bad symptoms. The girl quickly and completely recovered, and has remained well since. In some remarks which followed the paper the authors advocated a supra-pubic incision in similar cases, and recommended the use of the electric light. They also drew attention to the value of carefully suturing the bladder after supra-pubic cystotomy, as materially aiding towards a rapidly successful result.—Mr. CROFT said that the case was a very rare one in so young a female. He concurred in the treatment of the tumour by opening the bladder. He related a case of vesical stone in a boy, employing the suture; on the third day after lithotomy scarlet fever appeared, but, notwithstanding, the sutures held and the bladder healed naturally. Tumours could be removed from the bladder without the aid of sight. Severe cystitis with fetid urine would contra-indicate closure of the bladder.—Dr. BRAXTON HICKS had removed two tumours from the posterior wall of the female bladder by dilatation of the urethra and snaring the tumours, which had each a diameter of one inch and a half, by means of a silver wire. Both cases were malignant. The galvano-cautery would prevent bleeding.—Mr. BUCKSTONE BROWN thought it would be impossible in most cases to make use of light; everything has to be done by the aid of mere touch, which was quite sufficient for all cases. In order to use the cautery it was unnecessary to see exactly what is being done. Straight forceps will, by "quiet" torsion, bring away even the toughest tumour. Phosphatic matter was apt to be deposited on the base of a tumour which had been removed.—Mr. J. H. MORGAN considered that the electric light was not generally useful in the removal of tumours from the bladder in adults. In some cases in children the light would be useful. The drawing of the tumour had the aspect of a papilloma. He did not think the wound closed speedily, and he should not have used a drainage tube in Mr. Parker's case. He would be inclined not to employ the suture.—Mr. BENNETT asked why the supra-pubic incision was employed, for such an operation could hardly be often necessary; what were the exact reasons for this mode of

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operation? In the female bladder the necessity for this incision must be extremely rare. Mr. R. W. PARKER, in reply, said he would only suture a healthy bladder. In Mr. Brown's cases the electric light would be extremely useful after the operation to examine the parts and for employing the actual cautery. The supra-pubic operation was not a serious one in his experience. Mr. Shattock agreed that the tumour was a myoma.—Mr. CROFT said that the notion advanced by Dr. Braxton Hicks that the malignant disease would tend to spread to the edges of the fresh wound was imaginary.

Dr. A. H. CLEMOW read the notes of a case of Hysterical Hyperpyrexia. The patient, a laundrymaid, aged twenty-three, was admitted into the Edinburgh Royal Infirmary, Oct. 22nd, 1883, under the care of Dr. Brackenridge. She was complaining of dizziness and pain in the left side, and presented a purpuric rash upon the lower extremities. The first high temperature (107·8°) was recorded on Nov. 29th, the day following a fright she had received from seeing a man who had lost his eye. At midnight the same night three records were successively taken, the first giving 111°, the second 108°, and the third 98°. At noon on Nov. 30th, a first record gave 110°, a second 99·6°. Taken under both axillæ at the same time, at 4 P.M., the temperature was, right side 108°, left 99·4°; at midnight, right side 98°, left 108°. Dec. 1st, 6 A.M., right 107·2°, left 98·4°; 9 A.M., right 100°, left 98°; 6 P.M., right 108·4°, left 98·8°; 9 P.M., right 99·2° left 108·6°; midnight, right 98·2°, left 105°. Dec. 2nd, 3 A.M., right 97·8°, left 108·4°; 6 A.M., right 107°, left 98·4°; 9 A.M., right 109·2°, left 99·2°; 12 noon, right 99°, left 109·2°; 3 P.M., right 109°, left 99°; 6 P.M., right 110·2°, left 98°; midnight, right 105°, left 98°. Dec. 3rd, 3 A.M., right 109°, left 98°; 9 A.M., right 98·8°, left 109·2°. Dec. 4th, 9 A.M., right 99·9°, left 98·4°; 12 noon, right 98°, left 99·2°; 6 P.M., right 108·8°, left 99·8°. On Nov. 30th, several short, but severe, spasms simulating tetanus occurred. On Dec. 1st, apart from persistent headache and nausea, there was a peculiar and constant elevation and depression of the eyelids. There was also a slowed reaction to light of the right pupil, and left internal strabismus. There was throbbing pain at the vertex, increased by pressure, which also was capable of inducing the pseudo-tetanic spasms above described. On the 3rd the spasms were of frequent occurrence, and during their continuance the heart's sounds became muffled, its beats doubled in rapidity, and the pulse at the wrist imperceptible. At night the head was shaved, a blister applied over the vertex, and the patient removed to a private room. A quarter of a grain of eserine was administered hypodermically, which, after an interval of wild delirium, appeared to exercise a soothing effect. On December 4th she was delirious, talking much about her eyes, and spasms were frequent and violent. A marked difference, appreciable to the touch, was noticed in the temperature of the two sides. From December 4th to the 13th she was unconscious, appearing to sleep at times, and occasionally very restless, delirious, and violent. Plantar and patella reflex were absent; there was cutaneous anæsthesia at first, and incontinence of urine and fæces during the greater part of the time. On the 5th the tetanic spasms could be increased in frequency and severity by pressure upon the left side of the abdomen. Consciousness returned on the 13th, and during the next few days control of the bladder and bowel was regained. On the 18th there was a slight relapse, and erythema appeared on the arms, which had vanished next day. On January 3rd the chimney of her room caught fire, the fright causing a return of tetanic symptoms, which had passed off by evening. She now steadily improved till January 12th, when her temperature was 110°; a second record taken immediately afterwards gave 98·4°. She remained under observation till April 1st, improving all the time. She would occasionally exhibit outbursts of temper, and would sometimes remain sulky for two or three days. On one occasion there was a threatening of a return of the symptoms, which soon passed off. She slowly regained her strength, and, although highly sensitive and emotional, was, on leaving, otherwise quite well.—Dr. ORMEROD mentioned a case in a middle-aged woman in which the temperature used to rise in places to 116°; this patient, amongst other nervous symptoms, had delirium.—Mr. BERNARD O'CONNOR asked whether antifebrin was used.—Dr. HALE WHITE had collected all the recorded cases, seventeen in number; he contended that such cases could be explained on physiological knowledge concerning thermic centres in the brain. A German had recently written on the various modes in which deception may be practised. No cases had been observed in males, who could deceive as well as females.—Dr. DAWTREY DREWITT contended that such sudden falls in temperature as occurred in Dr. Clemow's case were physical impossibilities.—Dr. STEPHEN MACKENZIE said the temperature might be taken on the two sides simultaneously, and also by using two thermometers on the same side. This detected the fraud in his own case of hyperpyrexia (120° F.).—Dr. BROADBENT said his attitude was one of suspense of judgment. If the cases were real, and not due to deception, then the thermic centres must literally "blow hot and cold" in the same parts.—Dr. CLEMOW, in reply, said precautions had been taken to prevent deception, but he had himself taken the temperature a few times only; he had not used two thermometers in one axilla. The temperatures were always registered in the axilla.

Mr. R. CLEMENT LUCAS read a paper on the Congenital Absence of an Upper Lateral Incisor Tooth as a Forerunner of Hare-lip and Cleft Palate. He said the tendency of deformities to repeat themselves in succeeding generations, and even to exaggerate their defects, rendered an early recognition of their presence of some professional importance. He alluded to a family history he had published in the Guy's Hospital Reports for 1880, where he had traced eighty descendants of a woman who had supernumerary fingers and toes, and found that 30 per cent. were so affected. A case showing the hereditary tendency in hare-lip and cleft palate had come under his care in August of this year. A woman who had been successfully operated upon married, and had six children. The second child and the sixth presented the same deformity as the mother, the others escaping. The object of this paper was not, however, to discuss the repetition of pronounced deformities, but to show the danger of a deformity partially developed and likely to pass unobserved. He wished to point out (what he did not think had hitherto been described) that the congenital absence of an upper lateral incisor tooth may foretell the probability of cleft palate and hare-lip in a succeeding generation. He had been most careful to exclude any possibility of error through decay or extraction of the tooth in question. He illustrated his paper with three cases. The first, a man with congenital absence of the lateral incisor on the left side, had a daughter presenting precisely the same defect. The second, a woman aged twenty-five, who had a congenital absence of the right upper lateral incisor, brought her fifth child with right hare-lip. The third, a woman aged twenty-three, having congenital absence of the left upper lateral incisor, brought her first child suffering from hare-lip and cleft palate on the left side. His observations were few, and had extended over ten years, but the association of these defects was too remarkable to go unrelated. Had he been able to examine both parents, which was seldom possible in hospital practice, it is probable he might have collected more cases. Now that attention had been drawn to the observation, it was likely that more cases would be collected. The author held the following deductions to be irrefragable: That the congenital absence of an upper lateral incisor tooth resulting from an arrest of development is to be regarded as a malformation closely related to hare-lip and cleft palate, and capable of transmitting each or both of these deformities to a succeeding generation.—A Dental Member said that absence of the lateral incisor was of very common occurrence.—To this Mr. CLEMENT LUCAS replied that the frequency of the loss was not an explanation of the absence of the tooth.

MEDICAL SOCIETY OF LONDON.

Radical Cure of Hernia.—Hysterical Tremor and Contracture.—Persistent Branchial Cleft.—New Form of Truss.—Myxœdema.—Dizziness.—Plastic Operation for Ectropion.

THE meeting of this Society on Nov. 28th was a "clinical evening," and many cases of interest were shown. The chair was taken by the President, Dr. J. Hughlings Jackson, F.R.S.

Mr. BOWREMAN JESSETT read notes of two cases of Radical Cure of Hernia. The first case was a man aged fifty-seven, a beadle, who had a double scrotal rupture for twenty years. An incision two inches in length was made over the external abdominal ring, the sac was exposed and separated from the surrounding structures as high as the internal ring; it was then opened and some omental adhesions detached. The neck of the sac was twisted and tied with a ligature of silkworm gut, which was first made to transfix it, in order to

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prevent the possibility of slipping. The body of the sac was cut off and the ligatured stump fixed in the external ring, the pillars of which were sutured together. This served the double purpose of effectually plugging the ring and of preventing the possibility of the stump retracting from the ligature around it. The same procedure was carried out on the opposite side, and the patient made a speedy recovery, being enabled to return to his work, wearing a light truss as a support. The second case was one of large femoral hernia in a woman of six months' standing. The sac was exposed, a large mass of omentum removed, and its stump returned to the abdomen. The body of the sac was then detached, the neck twisted, transfixed, ligatured, and fastened in the crural opening. The method was advocated as being less painful and dangerous than that adopted by Mr. Wood, and preferable to obliterating the sac by the injection of irritant fluids. The importance of detaching the sac as high as possible, of opening it before applying a ligature, and of fastening the stump in the wound, was insisted on.—Mr. BERNARD PITTS said that in two of the cases he had operated on there was a tendency to relapse. After operation patients were enabled to wear a truss with greater comfort.—Mr. WALSHAM had operated on many cases, but had only had one relapse, a case of large umbilical rupture. He advocated entire closure of the pillars by suture as being preferable to blocking the ring with the pedicle.

Dr. ORMEROD showed a woman, aged twenty-nine, who was suffering from Hysterical Tremor of the Hands, with tonic contracture of the flexors of the fingers and toes. The illness commenced fifteen months previously, the patient having then rheumatic fever. The tremor, which developed after a fit and had lasted six months, consisted chiefly in an up-and-down movement of the wrists and forearms; it was more marked during attempts to use the hands, and was very slight during sleep. The contracture existed two months, developing first in the left hand after a fit, and in ten days spread to the right hand and both feet. The thumbs were unaffected; the toes were clenched, like the fingers, rendering walking difficult. She had been treated by tonics, faradisation, and static electricity.

Mr. W. PYE exhibited a case of Symmetrical Branchial Fistulæ in a child nine months old. One of the openings he had proved by probing to lead into the lower part of the pharynx; the other, he suspected, did so also. The only other abnormality noticed was a trifling arrest of development of the mid-phalanx of each little finger.—Mr. PICK referred to a case in which a patient, his mother, aunt, and two sisters all had branchial fistulæ. The application of the actual cautery would not bring about occlusion of them.

Mr. PYE likewise demonstrated the application of a New Form of Truss, which took its bearing on the pubic bone. Anteriorly and laterally it was made of a band of gun-metal, which could be easily moulded by the patient; behind it was completed by a broad elastic webbing.

Dr. SAVILL brought forward the case of a man, aged thirty, the subject of Myxœdema. He presented the expressionless aspect, scanty hair, slow and feeble movements, great susceptibility to cold, and subnormal temperature characteristic of the disease; in addition he had complete loss of memory. The quantity of urine per diem, specific gravity, and amount of urea were all below normal, the latter markedly so; there was no albumen. Soon after coming under observation he had profuse hæmorrhage, apparently from the prostate gland. There was no paralysis, and common sensation, though much delayed, was otherwise good. The power of comprehension and reasoning were fair, but volition was feeble. He was not emotional or melancholic, and had no definite delusions. The pulse tracing showed a low tension, and there was neither enlargement nor appreciable atrophy of the thyroid gland. The disease was sufficiently rare in the male to make this example of interest; Dr. Savill was aware of only nineteen recorded cases, or 13·5 per cent. of all those published. Slowness of all the mental processes was a usual condition of the disease, and some cases had shown signs of insanity in the latter stages, but he was not aware that loss of memory had been so marked and isolated a feature as in the case he described. Hæmorrhage might now be regarded as one of the symptoms of the disease; the slight irritation of catheterism seemed to have determined its seat in the present instance.

Dr. C. E. BERVON showed a woman, aged fifty-three, who was suffering either from Myxœdema or from Stagnant Œdema after Erysipelas. She had been under the care of Dr. Gowers for the effects of a blow on the right side of the head from being thrown against the wheel of a bathing machine, inflicted seven years ago. She had no weakness or paralysis at the time, but complained of pain in the right side of her head and body. Six months afterwards she had œdema of the eyes, and four years later still an attack of erysipelas. The puffiness of the eyelids had increased of late and she had become more feeble. The face was pale, the cheeks high coloured, the expression mournful, the skin slightly dry, the speech slow and monotonous, and her general condition one of mental hebetude. She felt the cold, her hair had come out, and she had lost several teeth.—Dr. FELIX SEMON and Dr. BRISTOWE considered the second case to be one of "stable œdema" after erysipelas.

Dr. HERRINGHAM exhibited a man, aged twenty-nine, who for two years had had Dizziness on throwing his head back. As long as his head was level he felt nothing, but he had on two occasions fallen backwards when inadvertently looking upwards, and had to give up being shaved owing to a feeling, when his head was laid back, that the ceiling was coming upon him. He had occasional vertical pain in the head for about three years, and for two months continual nausea and vomiting; there was no optic neuritis or paralysis, nor had there ever been any convulsion; the knee jerks were rather brisker than usual, and there was a tendency to ankle clonus. A cerebellar tumour was suggested to explain the symptoms.—Dr. HUGHLINGS JACKSON referred to a case in which pressure on a diseased ear caused sickness, with movements of the eyes towards the same side.—Mr. JAMES BLACK advocated the administration of quinine combined with hydrobromic acid.

Mr. SPENCER WATSON showed a case of Ectropion which had been treated by a plastic operation. The ectropion had followed the contraction of a lupoid scar on the cheek. A flap was dissected from the temporo-malar region, and placed in the gap left by dissecting up the lower lid, and the result was excellent.

OBSTETRICAL SOCIETY OF LONDON.

A SPECIAL MEETING of this Society was held on Wednesday, Nov. 23rd (Dr. John Williams, President, in the chair), for the discussion of the treatment of extra-uterine gestation during the latter months of pregnancy.

A paper was read by Dr. Herman on Delivery by the Vagina in Extra-uterine Gestation. The author said that no general rules could be applied alike to all cases of extra-uterine gestation and at all periods of their history. Different cases required different treatment, and individual cases required different treatment at different periods in their history. The object of the paper was to consider in what cases and at what time an extra-uterine gestation cyst might with advantage be emptied through the vagina. The author first related a case under his own care. The patient was forty years of age. The extra-uterine pregnancy was preceded by a long period of sterility. Symptoms like those of rupture of the sac occurred at about two months' pregnancy. Fœtal movements ceased at eight months' pregnancy. At nine months spurious labour pains occurred, and lasted nearly a month, and these labour pains were accompanied by spontaneous dilatation of the cervix. Then the pains went off, the breasts diminished in size, and the cervix contracted. To attain certainty as to the diagnosis, the cervix was subsequently dilated, and this dilatation was followed by febrile disturbance. The cyst was then opened per vaginam, the child removed, and the cyst frequently washed out with carbolic solution. The placenta came away on the sixteenth day. Two months and a half afterwards the cyst had completely closed. The author had collected thirty-three cases in which an extra-uterine gestation cyst had been emptied by the vagina, and from an examination of them he drew the following conclusions: 1. The operation of opening an extra-uterine gestation sac by the vagina early in pregnancy, before rupture has taken place, by the cautery knife or otherwise, is a dangerous and unscientific proceeding. Abdominal section ought always to be preferred to this. 2. Soon after rupture has taken place, when interference is called for to arrest hæmorrhage, abdominal section is more likely to succeed than vaginal. 3. When rupture has taken place, and the effusion of blood is followed by pyrexia, the indications for incision of the vagina are the same as those in hæmatocele from any other cause. 4. At, or soon after, full

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term, before suppuration has taken place, there may be conditions which indicate delivery by the vagina as preferable to abdominal section. These are, 5, when the fœtus is presenting with the head, breech, or feet, so that it can be extracted without altering its position, and, 6, when it is quite certain, from the thinness of the structures separating the presenting part from the vaginal canal, that the placenta is not implanted on this part of the sac, and it is not certain that the placenta is not implanted on the anterior abdominal wall. 7. If the child cannot be delivered by the vagina without being turned, abdominal section should be performed. 8. No attempt should be made to remove the placenta. 9. The after-treatment should consist in frequent washing out of the sac. 10. After suppuration has taken place, the spontaneous opening of the sac into the vagina is one of its more favourable terminations.

A paper was then read by Dr. CHAMPNEYS on Primary Laparotomy (that is, Abdominal Section in the Latter Half of Pregnancy, the Child being alive) in cases of Extra-uterine Gestation. The operation was performed in the seventh month of pregnancy for persistent and increasing pain and orthopnœa. The placenta was left; drainage was attempted, but the wound could not be kept open. The decidua was discharged on the twenty-fourth day. All went well till the thirty-second day, when symptoms of the separation of the placenta began, and the patient died, with symptoms of septic intoxication, eleven weeks and a half after operation. Post mortem the placenta was found detached; no hæmorrhage of importance had taken place; it lay in a nest of intestines and adjacent organs.

Dr. JOHN WILLIAMS then related a case of Extra-uterine Pregnancy, in which abdominal section was performed during the life of the fœtus at the thirty-fifth week of gestation. The patient was thirty years of age, and had had one child nine years before. She was admitted into University College Hospital when about four months pregnant. For six months she had suffered from almost continuous hæmorrhage, but this ceased about the time that conception took place. She then suffered from attacks of pain in the right iliac fossa, and when pregnancy had advanced into the fourth month she had severe pain in that place, hæmorrhage from the uterus, and general peritonitis. A decidual membrane was also expelled. When admitted into hospital in February, 1885, she was suffering from peritonitis. She remained in hospital till August. The growth of the cyst and of the placenta was observed and described. In the thirty-fifth week the abdomen was opened and a living child removed; the placenta was left. The subsequent progress of the case towards recovery was detailed.

Mr. DORAN showed specimens which illustrated the changes which the placenta underwent after term, and he related a case under his care. The patient menstruated for the last time in April, 1885. In January, 1886, labour pains and metrorrhagia occurred. Diagnosis was uncertain for several reasons. In April, 1886, an exploratory operation was performed. A very malignant-looking tumour was exposed, dark-red in colour, and on plunging in a trocar no fluid escaped. Believing that the tumour was malignant, Mr. Doran proceeded at once to remove it, lest fatal hæmorrhage should occur before its vessels could be secured. In raising the tumour it burst posteriorly, and a large fœtus escaped. A clamp was passed round the base of the tumour, and it was cut away. The patient died, probably owing to injury to the intestine. The dark-red mass in the front proved to be placenta hypertrophied and much altered.

Mr. KNOWSELY THORNTON was happy to be able to agree in the main with the propositions formulated by Dr. Herman; with the first and second he entirely agreed. He thought that the third was hardly precise enough, as there might be great differences of opinion as to the treatment of hæmatocele under such conditions; he should be strongly in favour of abdominal section. He did not know the grounds Dr. Herman had for believing in the absorption of the fœtus, but he knew from clinical observation that the blood effused in these cases was not readily absorbed, absorption being very different to that with which we are familiar in large fresh outpourings of blood such as hæmatoceles. As to the question of operation through the vaginal wall, he doubted whether in most cases the diagnosis could be as easily made as Dr. Herman would lead one to suppose, and he did not think the risk of injuring a coil of intestine was a small one, though this was not mentioned by Dr. Herman. He thought that, with the present means of controlling hæmorrhage, the possibility of the placenta being situated on the abdominal wall need not be such an alarming complication of abdominal section as to influence the choice of operation. Passing to Dr. Champneys' case, he would say that the whole question of primary laparotomy hinged on perfect diagnosis, and, knowing how often there was something wrong with the child in these cases, he would disregard it altogether and simply consider the mother, and urge that operation should follow at once on certain diagnosis. The whole difficulty was in making such certain diagnosis. He could not understand Dr. Champneys' treatment of the placenta. If it was left, there ought to be certainty of asepsis (very difficult to attain in these cases), or an opening should be kept till the placenta was discharged. Dr. Champneys knew it was attached to intestines, the very situation of all others in which it was likely to become septic or a source of danger. His own cases on the table were mostly excluded, owing to the restriction of the debate to a certain class of cases.

Dr. W. S. GRIFFITH showed a series of specimens from St. Bartholomew's Hospital museum, and also a six months' fœtus, removed by Dr. Godson by vaginal incision about ten days after the death of the fœtus. The head presented at the posterior vaginal fornix, and was delivered by craniotomy. The placenta was detruded on the sixth day and removed. There was no hæmorrhage at or after the operation. The parts were kept aseptic by frequent irrigation and iodoform, and the patient left the hospital within three weeks after the operation.

The PRESIDENT said that hitherto the difficulties in the treatment by laparotomy of extra-uterine pregnancy while the fœtus was alive had been the risk of septicæmia and of hæmorrhage. Antiseptics had greatly reduced the former, and the danger of hæmorrhage, in so far as was known, remained the same. Hæmorrhage was of two kinds, one occurring during the operation from injury to the placenta, and the other after the operation from separation of the placenta. Further observations might enable us to diagnose the presence or absence of the placenta on the anterior abdominal wall, and to avoid it in performing the operation. The danger from the second form occurred in the same degree after the death of the fœtus, and no safe way of dealing with it was known. The power of diagnosing the placental site would contribute greatly to the more successful treatment of these cases.

Mr. LAWSON TAIT regretted the restriction of the debate to a certain class of cases only. He felt that little was left for discussion. There were three points about which something might be said. The first was as to the fear of meddling with the placenta, and he entirely agreed with what had fallen from Mr. Knowsley Thornton, and differed from the remark made by the President, that with our modern appliances we had no need to fear hæmorrhage. Mr. Tait had recently operated on a case in which the placenta had to a large extent left the ruptured Fallopian tube and obtained attachment to the posterior wall of the uterus and some coils of intestine. When disturbed, pretty free arterial hæmorrhage took place. The stripping of the placenta was proceeded with as far as necessary, the bleeding points were touched with solid perchloride of iron, and no more hæmorrhage was heard of, and the patient made a good recovery. The next point of interest was the growth of the placenta after the death of the fœtus. Mr. Tait used to disbelieve that this growth occurred, but there could be now no question that it did so in a large number of these cases. This being so, what was the use of destroying the fœtus by electricity, as the placenta continued to grow, and it was not the fœtus that was a source of danger, but the placenta? The third point was the difficulty of diagnosis, and his experience was precisely that of Mr. Thornton, but he never allowed any uncertainty to stand in the way of trying to save his patient, and he in doubtful cases opened the abdomen.

Dr. GALABIN and Dr. GRAILY HEWITT made some remarks, and then Dr. HERMAN, in reply, said that it was impossible to adduce evidence that absorption of the fœtus and effused blood took place, because such cases recovered. He thought that many cases of pelvic hæmatocele that ended in recovery were probably due to unsuspected extra-uterine gestation. Leopold had made some experiments on animals that supported this opinion. He opened the uterus in animals a little way advanced in pregnancy and turned the embryos into the peritoneal cavity. He found that they were absorbed. Dr. Herman was inclined to agree with Mr. Thornton, that if a

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hæmatocele required opening, it was better to open it by the abdomen than by the vagina, unless the latter course was specially indicated. He did not think there was difficulty in recognising the fœtal head when it occupied Douglas's pouch and the placenta did not intervene. The sutures could often be felt, and then there need be no fear of wounding the intestine. The condition of the placenta was of great importance. There were two kinds of placentæ met with in extra-uterine gestation. One kind was thin and spread out, having extensive attachments difficult of complete removal, and much more difficult at term than at the fourth month, as in Mr. Tait's case. There were others in which the placenta formed a thick solid mass, and in this kind the vascular attachments to the maternal structures were much less extensive, and the placenta could be removed without great difficulty. He had exhibited such a one to the Society which he had successfully removed quite easily. The placenta shown of Dr. Champneys' case was similar, and he gathered that it was so loose that it might have been removed. Mr. Thornton had exhibited another, Mr. Doran's was another instance, and there was another in the museum of the Royal College of Surgeons. Judging from the cases at present known to him, he thought this placental growth took place after the death of the fœtus. It would help greatly in treatment if we could diagnose the condition of the placenta before operation.

Dr. CHAMPNEYS, in reply to Mr. Thornton, said that both the paper and abstract plainly stated that, with the exception of four transient rises of temperature during the first six days, the temperature was normal, and the patient remained well for thirty-three days. He thought this was evidence that the operation was aseptic. Mr. Thornton had said that the author should not have allowed the wound to close. As a fact, he had done his best to prevent it. He left the cord hanging out, and put two large drainage tubes in. When the cord became adherent to surrounding parts, and the drainage tubes absolutely blocked by organised lymph, he felt powerless to prevent it. In Dr. Braithwaite's case the placenta never came away, and in other cases the placenta has not only lived but grown after the death of the fœtus, and he did not know why the placenta in his case should not do the same if kept aseptic, which he had no doubt it was. In another case he would act as he had done in this, except that he should operate a second time if need be, and try to remove the placenta. He had pointed out that in several respects his case was unique, and thus he was deprived of the guidance of other cases.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A MEETING of this Society was held on Nov. 22nd at University College. The following papers were read and discussed.

Dr. MOTT showed Microscopical Sections and Microphotos to illustrate the shape and size of the cells of Clarke's column in the dog, monkey, and man. He pointed out that by making vertical as well as transverse sections he had been enabled to determine the size of these cells and their connexions. The cells were either distinctly bipolar or vesicular, with large and distinct axis cylinders and processes. The long axis of the cell was placed vertically, and the cells were connected below with fibres of the postero-external column, and above by fibres, which in vertical sections could be traced outwards and upwards to the direct cerebellar tract. This point was further supported by numerous pathological specimens which showed degeneration of either of the upper or lower segments of nerve fibres, according to the position of compression, in relation to Clarke's column. Dr. Alexander Hill commented upon the measurements of the cells given by Dr. Mott, and said the anterior vesicular columns were the first to develop, whilst Clarke's column came later.—Professor STEWART asked some questions, and Dr. MOTT replied.

Professor WINDLE then read a paper upon the Arteries forming the Circle of Willis. Two hundred cases were examined, and abnormalities found in eighty-one. The anterior communicating artery was often double; once three were found. Occasionally a third anterior cerebral artery (arteria cerebralis anterior media) was present, and came from the anterior communicating. Twice one of the anterior cerebral arteries was absent in the right side. The commonest abnormality of the posterior cerebral arteries was their origin from the basilar. On the whole, the blood-supply of the left side of the brain was less complete than the right; also the absence or diminution of the left posterior communicating artery might help to explain the lodging of embolism in the left middle cerebral arteries.—Mr. BLACK mentioned a case in which the internal carotid artery made a complete bend before entering the skull.—Professor MACALISTER mentioned cases of divided basilar arteries, and said that the evidence went to show that all median arteries were formed by fusion.

Professor Sir WM. TURNER, F.R.S., then communicated a paper by Mr. R. Howden upon the Variations in the Hippocampus Major and Eminentia Collateralis in the Human Brain. The paper was illustrated with numerous drawings and casts of brains, and went to show that the usual position of the eminentia collateralis was sometimes occupied by a depression, or that the eminence might extend down the middle horn of the ventricle. When the hippocampus major was small its fissure had little depth, but, as a rule, the direction of the various fissures, and not their depth, determined the prominence of the elevations caused by them in the interior of the brain.

Professor Sir WM. TURNER also communicated a paper by Mr. David Hepburn upon a Needle in the Spinal Canal transfixing the Roots of the Spinal Nerves. The paper was accompanied by a specimen, and it was probable that the needle, which was really an inch and a half long, had been in the spinal canal some time.

The following specimens were then shown and demonstrated:—1. Methods of preparation, preservation, and mounting: (*a*) mounting of certain dried preparations; (*b*) moist method for dissections and museum preparations; (*c*) method of preparing the brain (Professor Struthers). 2. Specimens of (*a*) Rider's bone; (*b*) series of specimens of permanently separated acromion process, simulating fracture; (*c*) series of preparations of the variety in which the right subclavian artery arises last from the arch of the aorta (Professor Struthers). 3. The lungs in *situs inversus* (Professor Thane). 4 Separation of acromial and coracoid epiphyses (Professor Curnow).

It was announced that the next meeting would be held in February, at King's College.

ÆSCULAPIAN SOCIETY.

A MEETING of this Society was held on Friday, Oct. 21st, Dr. J. F. Woodroffe, President, in the chair.

Dr. ALEXANDER MORISON read a paper on the Mechanism of Cyanosis, including a synopis of seventy-five collected cases of cardiac malformation. This paper was the sequel of one read before the Society on Feb. 18th on the case of a child, aged seven years, in whom fatal cyanosis was found on post-mortem examination to have been associated with the following physical condition. The ductus arteriosus was closed, the pulmonary artery narrowed to an eighth of an inch, the septum ventriculorum imperfect at its base, the aorta arising at this point from both ventricles. Cyanosis was present from birth, and had become most marked during the last two years. It was attended with severe attacks of dyspnœa. Dr. Morison regarded the state of the ductus arteriosus in relation to the pulmonary artery as most important. The former channel was open in forty-six of his collected cases, closed in eighteen, and doubtful in the rest. He found that in the first group cyanosis appeared earlier, and the duration of life was shorter than in the second. As regards the mechanism of cyanosis, he considered the chief though not the only agency at work was a diminution of the aspiration exercised by the lungs.

Dr. JOSEPH W. HUNT read notes of a case of Cerebral Syphilis. J. C —, male, aged thirty-six, had partial right hemiplegia and pain along the left side of the head. Later the left third nerve was paralysed. There was atrophy of the left optic disc (the patient had only one eye). Subsequently, aphasia, with right facial paralysis, appeared. The intellect was impaired. All symptoms, except the optic atrophy and in some degree the left ocular paralysis, disappeared under large doses of iodide of potassium. The diagnosis was: basal gumma pressing on the left third nerve and crus cerebri, afterwards involving the region of the pons Varolii. The exact significance of the aphasia, mental weakness and optic atrophy, however, remained somewhat doubtful.

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NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

A MEETING of the above Society was held on Oct. 13th, Dr. G. H. Hume, President, in the chair.

The Honorary Secretary, Dr. OLIVER, read the annual report of the past year, which was highly satisfactory, both as regards the finances of, and the number of members in, the Society—the latter being 163.

Dr. MURPHY exhibited a patient upon whom he had performed Gastrostomy by Tillaux's method on Sept. 10th for Cancer of the Œsophagus, and a woman upon whom he had performed Glossectomy for Cancer of the Tongue. Dr. Murphy, in his remarks, drew attention to the rarity of cancer of the tongue in women, a point touched upon by subsequent speakers, as also the period when operation should be performed, the feeling of the President and Dr. Murphy being that so long as pulpy food could be swallowed it was undesirable to operate.

Dr. DRUMMOND exhibited three patients suffering from Locomotor Ataxia, all men. The first had been ill for two years, had suffered much from gastric crises, was now myotic, *but still retained his knee jerk*—a point of great importance, considering the length of time he had been ill. The second patient had paralysis of the third nerve of the eye on one side, with paralysis of the sixth and partial paralysis of the third on the other side; whilst in the third patient, a young man of twenty-three, and who had been ill for four years, the illness had begun with paralysis of the third nerve.—Dr. WATSON of South Stockton raised the question of the relationship of locomotor ataxia to injury, giving particulars of a case which had come under his care.—Dr. DRUMMOND thought that in many of these cases the ataxia preceded the injury.

Mr. PAGE exhibited a Calculus removed from the bladder of a child, aged four years, by the suprapubic method. The incision was made one inch above the pubes; the bladder was not sutured, and within fourteen days the boy left the infirmary quite well. Mr. Page's remarks gave rise to an interesting discussion as to the comparative methods of lithotomy—the lateral and suprapubic. Drs. Hume, Anderson, Murphy, and Flynn took part in the debate.

Dr. MURPHY exhibited a Testicle and a portion of Omentum removed by a man in operating upon himself for strangulated hernia. In spite of the severity of the self-inflicted wounds (the patient was at the time a lunatic), the man made a good recovery, but still remains an inmate of the asylum. The instrument used was a razor.

Dr. OLIVER exhibited a Thoracic Aneurysm which had caused death by pressure upon the trachea. The aneurysm, about the size of a pigeon's egg, arose from the posterior part of the arch of the aorta; it had incorporated itself with the trachea, causing a distinct bulging in the interior of the trachea just above the division into the main bronchi, obliterating almost the calibre of the tube. The patient was admitted suffering from asphyxia, and Mr. Waldy, then house physician, at once performed tracheotomy, inserting a small œsophageal tube past the aneurysm. The patient lived several hours after the operation. During life there was absence of the ordinary physical signs—viz., bruit and dulness on percussion.—Drs. Philipson and Drummond made corroborative remarks.

Mr. RUTHERFORD MORISON exhibited Cystic Ovaries and Tubes removed by Abdominal Section. The patient made an excellent recovery, in spite of the unsatisfactory state of her health immediately prior to the operation, being extremely blanched from severe hæmorrhages.—Dr. OLIVER gave in detail the medical history of the case, and supported Mr. Morison in his remarks upon the diagnosis and treatment.—Dr. MURPHY, who had also been present at the operation, raised the question as to whether the cysts were not of the class described by Rokitansky.

Dr. DRUMMOND showed a specimen of Tumour of the Pons, secondary to Sarcoma of the Jaw, removed by Mr. Morison seven years previously. The tumour was, like the original, a spindle-celled sarcoma.—Dr. GIBSON raised the question as to the propriety of regarding it in the pathological sense as being *really* secondary.

Mr PAGE read a paper on "Ankylosis of the Temporo-Maxillary Joint treated by Excision of the Condyle." The operation had been most successful, the patient having quite regained the power of movement of the jaw.

Dr. OLIVER read a paper on Recent Advances in Gynæcological Medicine; after which Dr. GIBSON followed with remarks of a very valuable character, contrasting the present with the past treatment of uterine disease, and showing that we were entitled to speak of the present mode as an advance upon the latter.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Oct. 27th, Dr. de Bartolomé, President, in the chair.

Aortic Aneurysm.—Mr. PRIESTLEY showed a specimen of Aneurysm of the Arch of the Aorta bursting into the Trachea, from a patient of Dr. Bartolomé's. He had been a miner and a heavy drinker; no history of syphilis, acute rheumatism, or Bright's disease. Complained only of cough and dyspnœa. Had a double aortic murmur; no area of dulness; no aneurysmal murmur nor pressure symptoms. During a fit of coughing he was suddenly seized with profuse hæmoptysis, and died immediately. Post-mortem: Aortic valves much thickened; aorta undergone calcification; posterior wall had yielded and formed a pouch one inch and a half long, which, pressing on the trachea, had finally burst.

Charcot's Disease of Shoulder.—Mr. RECKLESS introduced this patient, a man aged forty-seven. For eight or nine years he had been the subject of locomotor ataxy. For six months pain had been experienced in the shoulder. He has never had any ataxic symptoms referable to the upper extremity, but when first seen three weeks ago the movements of the left arm were limited to underhand movements. He was markedly ataxic, and was obliged to support himself with his arms whenever he rose from his seat. Patellar reflex was abolished; pupils were extremely contracted, and had the Argyll-Robertson reaction. The left shoulder looked fuller than its fellow; it was flattened under the acromion process, and the finger could be pushed well in under the process. The head of the humerus was plainly visible under the clavicle. On extending and rotating the arm, the head readily slipped into the axilla with a grating noise; it was easily replaced.—Remarks were made by Mr. Garrard and Mr. Atkin.

The Surgical Treatment of Empyema.—Mr. ARTHUR JACKSON read a short paper on this subject, in which he called attention to the method adopted by Ambrose Paré for the management of such cases; how similar it was to the treatment of the present day, and in some particulars almost in advance of it. The various opinions of the great surgical writers, differing as they do on every, or nearly every, essential point, was commented on; and the careful consideration of the results, of interference with the anatomical arrangement of the thoracic cavity by bone forceps, drainage tubes, frequent streams of carbolic acid, and other restless treatment was strongly urged.—The President, Mr. Reckless, Mr. Garrard, Dr. Gwynne, Mr. Pye Smith, Dr. S. Roberts, Mr. Atkin, and Dr. Hargreaves joined in the discussion which followed.

Specimens.—Mr. JACKSON showed a Calculus, removed that day by suprapubic operation. The boy had very crooked legs and distorted pelvis, and the operation performed was indicated as the most suitable. Mr. Jackson also showed a Ruptured Anterior Tibial Artery dissected out, from a case of compound fracture of the leg, followed by gangrene.—Mr. SNELL showed a boy with Dislocation of Lens into Vitreous, of several months' duration. The eye was quiet.

PRIZES FOR ESSAYS ON MEDICO-LEGAL SUBJECTS.—The Medico-legal Society of New York announces the following prizes for original essays on any subject within the domain of Medical Jurisprudence or Forensic Medicine: 1. For the best essay, $100, to be known as the Elliott F. Shepard Prize. 2. For the second best essay, $75. 3. For the third best essay, $50. The prizes to be awarded by a commission, to be named by the president of the Society, which will be hereafter announced. Competition will be limited to active, honorary, and corresponding members of the Society at the time the award is made.

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Notices of Books.

Contributions to Clinical and Practical Medicine. By A. T. H. WATERS, M.D., F.R.C.P. Lond., Consulting Physician to the Liverpool Royal Infirmary, late Professor of Medicine in University College, Liverpool. London: J. & A. Churchill. 1887.—We could not notice any book at present more opportunely than this work of Dr. Waters, dealing chiefly with diseases of the chest, and dealing with them as only a physician can who has at once a special aptitude for investigating such cases and a large field of clinical observation and practice. Dr. Waters' authority in such matters is already well known, and the present volume only tends to confirm it. We shall best indicate the nature of the work by giving the title of the chapters:—Chapter 1, Researches on the Temperature in Phthisis and some other Diseases; Chapter 2, Pneumonia (Clinical Lecture); Chapter 3, Bronchitis and other Diseases in the Bronchial Tubes; Chapter 4, On Certain Cases of Lung Disease resembling Acute Phthisis (Clinical Lecture); Chapter 5, On Cancer of the Lungs (Clinical Lecture); Chapter 6, Pleuritic Effusion (Clinical Lecture); Chapter 7, Pleuritic Effusions—their Treatment by Tapping (Clinical Lecture); Chapter 8, Empyema (Abstract of Clinical Lecture); Chapter 9, On Cases of Peri-hepatic Abscess; Chapter 10, On Alpine Winter Climates. The volume ends with a table of 151 cases of pneumonia. It is difficult, and indeed unnecessary, to particularise in commending a work of such great practical value, and which should be a familiar book of reference with practitioners in the great class of common diseases of which it treats. Not the least striking chapter is that on pneumonia. This disease and its treatment have been the subject of much discussion of late years. Few subjects illustrate more strikingly the improvement in medical practice. And few contributions to their illustration are more valuable, or have a firmer basis in experience, than those of Dr. Waters. When we say that of his 151 cases only eleven died we shall have justified these statements. It is still more striking to notice the nature of the eleven fatal cases. No. 7 died from sudden and extensive effusion into the pleura, after convalescence from pneumonia had set in. No. 55 was admitted in a sinking state. No. 81 had evidence of previous phthisis, and a cavity was found in one lung at the necropsy. No. 82 was a woman of worn-out constitution, who sank from excessive diarrhœa. No. 84 had gangrene. No. 109 was admitted in a state of exhaustion, and died within two days. No. 118 was double pneumonia in a very intemperate man, death occurring on the third day after admission. No. 131 was also very intemperate and tubercular. No. 132 was also intemperate. No. 138 was the case of a woman admitted with rheumatic fever with hyperpyrexia. No. 141 died within two days after admission. Such cases and conditions baffle the best treatment; but they do not detract from the significance of 140 recoveries. The favourable tendency of the disease is recognised by Dr. Waters. In no case was venesection used. In twenty cases only was antimony given, and these were twenty of the early number of the series. In the large majority of the cases stimulants (ammonia and brandy) were given. In some cases of debilitated constitution, high temperature, and quick pulse, quinine is considered by Dr. Waters a very valuable agent in pneumonia; externally large mustard and linseed-meal poultices. In every case nutrients are freely allowed. Dr. Waters has seen recovery at nearly eighty years. We have exhausted our space in noticing this important part of the book. But other chapters are deserving of equal attention—notably those on Pleuritic Effusions, and their Treatment, on Cancer of the Lung, on Cases resembling Acute Phthisis, and on Alpine Winter Climates. We advise our readers to study the book for themselves.

Public Health Reports. By Sir JOHN SIMON, K.C.B., F.R.S. Edited by EDWARD SEATON, M.D. Two Volumes. London: J. & A. Churchill.—Few books could be more welcomed by those members of the medical profession and of the public generally, who are interested in the promotion of public health, than these two volumes that have, under the editorship of Dr. Seaton, been issued by the Sanitary Institute of Great Britain. The matter which they embody comes from the pen of a master in his specialty; the writing is always to the point, and often very forcible; and the whole story shows well the steps by which the Public Health Department of the City of London, and later on of the State, was organised and placed on a permanent footing. The work also supplies a great need; for, owing to the small issue of Sir John Simon's annual volumes when he was medical officer to the Privy Council, it has been found impossible by students and others to get access to some of the reports for which there has been great demand. For many years the valuable work on the History and Practice of Vaccination has been out of print, and we are glad to find it reproduced. And when we add that nearly all the principal papers and reports which Sir John Simon contributed during an active career to the subject of public health and preventive medicine are included in the two volumes now published, we shall best have indicated the value which attaches to their issue in the present form. The principles on which Sir John Simon based his teaching and his administration have stood the test of many years' practical experience, and they will at every page be found underlying the advice he has given, whether in relation to our own current preventable diseases, or to those foreign infections which are a source of danger to this country. We would only add that Dr. Seaton has been most successful in his capacity as editor.

The Anatomy of Surgery. By JOHN M'LACHLAN, M.B., M.R.C.S., for some time Demonstrator in the School of Medicine, Edinburgh. Edinburgh: E. & S. Livingstone. 1887.—This work is a great improvement on a former small text-book of Surgical Anatomy written by the same author. It is expressly intended for students preparing for final examinations in Surgery, at which surgical anatomy is required, especially if operations on the dead body form a part (as they always should) of such an examination. Dr. M'Lachlan has now written a very handy manual, clear, precise, and well arranged. The only objections we would make are to the numerals (1) (2) (3) &c., and the letters (*a*) (*b*) (*c*) (*d*) &c., being so freely used as to look like aids to memory rather than facilities of arrangement; and to the title of the book. Notwithstanding the author's special pleading in the preface, we prefer a well-known title like that of Surgical Anatomy to that chosen by Dr. M'Lachlan. The "Anatomy of Surgery" is not justifiable on the same grounds as the titles given to either the "Anatomy of Melancholy" or the "Anatomy of Drunkenness."

Atlas des Maladies de la Peau (Dermatologie et Syphilographie.) Par SILVA ARAUJO, Médecin de la Policlinique Générale (Service des Maladies de la Peau et Syphilis); Membre titulaire de l'Académie Impériale de Médecine. Rio de Janeiro. 1887.—We welcome the first three numbers of this Atlas with great pleasure, and especially at the hands of so earnest and ardent a worker as Dr. Silva Araujo, whose labours on Elephantiasis Arabum and allied affections associated with filariæ are known in this country. This publication is a healthy sign of the earnestness and talent with which dermatology is being studied in a quarter of the globe which cannot but yield valuable results. The text is of much interest, and the adoption of the French language will make the Atlas widely available. The plates (Favus of the Scalp, Tinea Sycosis) are on the whole excellent, but perhaps a little too highly coloured. The third plate consists of phototypes of Elephantiasis Arabum in different stages of cure.

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Differential Diagnosis of the Diseases of the Skin, for Students and Practitioners. By CONDICT W. CUTLER, M.S., M.D., Assistant Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-door Department, &c. New York and London: G. P. Putnam's Sons. 1887.—The intention of the author in this neat little volume is to assist the student and practitioner in making a correct diagnosis by setting before him, in tabulated form, the characteristic symptoms of such skin diseases as are most liable to be confounded one with another. The author has had considerable experience in this kind of work, and has already published a "Manual of Differential Medical Diagnosis." The idea is well carried out, and a careful examination of the text shows us that the different points are mostly well selected, and put in as correct a manner as is possible in a work of this kind.

The Asclepiad. No. 16, Vol. IV.—The most important article in this number is the "Clinical History of Scarlet Fever." Dr. Richardson adduces facts to show that scarlet fever occurs not unfrequently during the first and second years of life, and that the mortality of the disease is really greatest during the period of infancy, if by this term we understand from one to five years of age. The influence of meteorological conditions in relation to scarlet fever is considered, and the conclusion is corroborated that the disease most frequently occurs in autumn. The electrical conditions of the atmosphere do not appear to exercise any appreciable influence either on the frequency or on the fatality of scarlet fever. As to the recurrence of this fever, the author tells us that he himself has thrice suffered from undoubted scarlet fever. He discusses the influence of locality on the fatality of scarlet fever, and the relative mortality of scarlet fever compared with other diseases. Many other points are raised in this excellent article, which concludes with a chapter on treatment, wherein is recommended a gargle of deodorising and healing properties, whose chief constituent is peroxide of hydrogen. "The Physiology of Good and Evil" is in the author's own especial vein. We may quote the following sentences: "The scientific reading of the word *evil* includes the acts and impulses of that lower human nature which my Mentor defines as shaped in iniquity and conceived in sin. This is a necessary part of the theory that man, the highest of the living developments, is an evolution from a lower life, and is a continuous evolution towards something more exalted than himself as he now exists." "John Brown and the Brunonian System" is the title of the Biographical section, with a portrait of this worthy, who flourished in the last century. In the "Opuscula Practica" the question is put: "What is the physiological explanation of being in and out of condition?" The answer given is to the effect that "out of condition" depends on the products of chemical action being retained in the body and causing the nervous centres to lose their activity.

A Handbook of Roller Bandaging. By FANNY E. FULLAGAR. Pp. 24. London: Griffith and Co. 1887.—It is stated in the preface that this *brochure* has been published "with a view to rendering the nurse proficient in the mystery of the roller bandage, and to enable her to refresh her knowledge of those details from time to time." It seems well adapted to the latter purpose, but we doubt the possibility of it accomplishing the first. Proficiency in bandaging can only be attained by constant practice. This is, indeed, well laid down in the concluding paragraph of the handbook: "I would urge upon all who really wish to bandage well to keep up their knowledge by making a point of practising it. Many complain that 'they have no one to practise on'; but surely there can be no difficulty in getting some friend who would not mind having a head, arm, or hand bandaged now and then."

The American Journal of Psychology. Edited by G. STANLEY HALL. November, 1887. Vol. I., No. 1. Baltimore: N. Murray.—This new journal has started well. The first paper in its original department is very good and instructive. It is an article on the "Variations of the normal Knee Jerk, and their relation to the activity of the Central Nervous System." Dr. Lombard is to be congratulated on the intelligent manner in which he has carried out his elaborate research, and also for the suggestiveness of his thoughts. The other original articles are good, but of less interest to medical men. The editor and Yuzero Motoro have written on the "Dermal Sensitiveness to Gradual Pressure Changes." Christine Ladd Franklin's article on "A Method for the Experimental Determination of the Horopter" is of much interest and of considerable ingenuity. "The Psycho-Physic Law and Star Magnitudes," from the pen of Dr. Jastrow, is a learned discussion of a high physiological kind. The second department of the volume on psychological literature is copious and very good, as also are the notes which constitute the third section. If this first number is a foretaste of what is to follow, we feel little doubt of the success of the new psychological journal.

The Transactions of the Northumberland and Durham Medical Society.—This Society is evidently doing good work. The cases recorded and papers published in its Transactions are of considerable merit, and the discussions thereon are interesting and instructive. The list of members of the Society is a long one (173) for a provincial association. The president is Dr. Hume, and the hon. secretaries are Dr. Thomas Oliver and Dr. J. D. Farquharson. Dr. David Drummond, Dr. G. H. Philipson, Dr. Hume, Mr. Black, Dr. Limont, Dr. Mantle, Dr. Oliver, and Dr. Murphy are active members of the Society, which discusses every conceivable topic of medical, surgical, or obstetric interest.

Forbidden Fruit for Young Men. By Major SETON CHURCHILL. Jas. Nisbet and Co.—This little book treats a difficult subject in a thoroughly sensible and dignified manner, a deeply religious tone, devoid of all cant, running through every page. No unnecessary details are given. The writer points out that the difference between those who lead a moral life and those who do not is a difference of self-control, not one of feeling. As other and stronger impulses, such as that of self-preservation, are successfully held in check, there can be, he argues, no reason why the sexual passion should not be controlled. He speaks strongly of the cumulative effects of the sin of unchastity, and how it leads in time to an unsatisfying necessity. He deplores the expensive style of living which modern civilisation has brought about, and looks on this as a great bar to early marriage, and thus a great incentive to immorality. Various excellent practical hints as to diet, abstinence from intoxicating liquors, ablutions, exercise, &c., are given.

Analytical Records.

TOKAYER.

(J. PALUGYAY & SONS, PRESSBURG.)

A GENEROUS and very luscious wine, with fine bouquet and delicate flavour. Its alcoholic strength is that of a wine, but in character it more resembles a liqueur. It contained in 100 volumes—

Alcohol	11·60
Residue obtained by drying at 212° F. ...	25·70
Mineral salts	0·46

The alcohol is equal to 20·3 per cent. of proof spirit. The residue is a syrup, which of course cannot be accurately dried. It contains a very large quantity of sugar.

CHATEAU PALUGYAY—VINUM HUNGARIÆ.

(J. PALUGYAY & SONS.)

A generous natural wine of fine flavour and bouquet, and somewhat high alcoholic strength. Tastes and smells cannot

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be described in words, but the wine seems to us to resemble some Burgundies. It is certainly unadulterated, sound, and delicate.

Alcohol ... ... (Equal to 23·4 proof spirit.)	13·35
Residue	2·76
Mineral salts	0·223

TOKAYER WEIN.
(J. PALUGYAY & SONS.)

This may be described as a dry Tokay. It will commend itself to all who appreciate the Tokay flavour, but who cannot stand the extreme sweetness of the other brands.

Alcohol ... ... (Equal to 20·6 proof spirit.)	11·80
Residue	2·76
Mineral salts	0·21

VIN DU ROI.
(J. PALUGYAY & SONS.)

This wine resembles the last in flavour and bouquet, but is much less sweet. We found in 100 volumes—

Alcohol ... ... (Equal to 21·7 proof spirit.)	12·40
Residue	11·27
Mineral salts	0·212

FOUNTAIN GROVE—ZINFANDEL.
(LAY CLARKE & CO., SANTA ROSA.)

This is a good, sound, unfortified, and unadulterated wine. Partial analysis gave the following quantities in 100 volumes:—

Alcohol ... ... (Equal to 22·4 proof spirit.)	12·75
Residue obtained by evaporation at 212° F.	2·77
Mineral salts	0·223

ROWNTREE'S HLECT EXTRACT OF COCOA.
(H. J. ROWNTREE & CO., YORK.)

This is a strong and pure cocoa extract. It contains no added starch or sugar, and is easily soluble, or rather miscible, even with cold water. It is free from acrid taste, and deserves commendation.

SALT REGAL.
(FRITZ & CO., CASTLE-STREET, LIVERPOOL.)

This is a curious preparation, and one upon which we are unable to give a decided opinion. It appears to be an effervescent saline aperient mixture, and it also contains alkaline permanganate, as is shown by the absorption spectrum and by chemical tests. But it also contains some other ingredient, probably belonging to the aromatic series, which gives a broad absorption band and fluoresces when treated with potash.

New Inventions.

BALLIN'S IMPROVED FUR RESPIRATOR.

THIS invention consists of a simple piece of fur lined with Welsh flannel, and it certainly possesses the merit of effectually warming the inspired air, besides being sightly and light. The only objection that occurs to us is in the liability of this material to become laden with dust and other impurities abounding in a fog-laden atmosphere, and the difficulty in ensuring a sufficient amount of cleanliness. At the same time, no respirator is free from such drawbacks, for which the wearers have an obvious remedy. The makers are Maw, Son, and Thompson.

"THE HYGIENIC PROTECTOR UNDER-VEST."

A SPECIMEN of the above article of clothing has been submitted to us for our opinion of its value. Undoubtedly it is of great importance that the lumbar and abdominal regions should be well protected from chills, which are apt to be encountered in such a variable climate as ours. And this end seems to be conveniently and efficiently secured by this under-vest, which, made of the finest wool, is provided with an extra layer at that part which covers the loins and abdomen, and so renders an independent bandage unnecessary. The patentee is Mr. J. S. Wells, Nottingham.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

FRIDAY, NOVEMBER 25TH.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

THE Council proceeded with the consideration of the case of Mr. Allbutt. At the last sitting of the Council, Mr. Robert Lamb Wallace, appearing for Mr. Allbutt, had concluded his address on behalf of his client.

The PRESIDENT asked what was the wish of the Council as to the admission of strangers during the further progress of the case.

Dr. AQUILLA SMITH said the proper course was that strangers should withdraw, and such explanations as Mr. Muir Mackenzie had to give ought to be reserved for the Council. He moved that strangers should withdraw.

Dr. LEISHMAN seconded the motion. Anything that Mr. Muir Mackenzie might have to say would not be so much in the form of reply as in that of advice.

Sir W. FOSTER said that the Council, who were in the position of a jury, had heard the case of Mr. Allbutt argued in public, and it was only right that the reply to that argument should also be made in public.

Dr. HERON WATSON could not admit that the Council occupied the position of a jury. They were the judges. They had heard a statement of the case made, and required no argument with reference to the arguments which had been laid before them further than that they might require advice upon any legal point in coming to a conclusion with regard to their sentence. He should support Dr. Smith's motion.

Dr. HUMPHRY said the position was this: Arguments in favour of Mr. Allbutt had been laid before them, which arguments would of course go before the public, and it was only right that their own counsel should have an opportunity of answering before the public such of those arguments as he might think right. The case would come imperfectly before the public unless that course was adopted, and it was therefore exceedingly desirable that strangers should be present to hear any reply which Mr. Muir Mackenzie might intend to make.

The motion was put to the Council, and declared to be lost.

Mr. MUIR MACKENZIE then addressed the Council, and in doing so he said he should, subject to any directions he might receive, confine himself simply to his functions as a lawyer, and not attempt to comment upon any questions of fact which had arisen during the inquiry. This matter arose under the 29th section of the Medical Act of 1858, which provided that if any registered medical practitioner should, after due inquiry, be adjudged by the General Council to have been guilty of "infamous conduct" in any professional respect, the General Council might direct the Registrar to erase the name of such medical practitioner from the Register. The matter brought to the attention of the Council in this case was the publication by a registered medical practitioner of a book entitled "The Wife's Handbook," and in the terms of the notice given to Mr. Allbutt it was stated that information had been laid before the Council by which he was charged with having been guilty of "infamous conduct in a professional respect"—viz., that he, being the author of this book, "did print, publish, and publicly sell, or procure to be printed, published, and publicly sold, copies thereof in London and elsewhere at so low a price as to bring such work within the reach of youth of both sexes, to the detriment of public morals." At the very outset of the inquiry a very important question arose, and one upon which there might be a great deal of argument—

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viz., whether the publication of a book in this way was "infamous conduct in a professional respect" which came within the cognisance of the Council at all. It might be suggested that it was only the conduct of a medical practitioner towards a patient, or, as had been said, the case of a solicitor towards a client. Any question of that kind as to the competency and the duty of the General Council to judge upon this question was, he thought, fully set at rest by the decision of the Queen's Bench in the case of *ex parte* La Mert, decided in 1863. In that case the question was whether the General Council had jurisdiction to remove the name of a practitioner from the Register for publishing a book which the Council had adjudged to be an immoral and indecent publication. In that case the Council removed the practitioner's name from the Register, and then an application was made to the Queen's Bench for a mandamus to the Council to restore the name to the Register on the ground that they had no jurisdiction to entertain the question. It appeared from La Mert's evidence that he received a letter from the Registrar of the Council communicating a statement committed for their consideration, purporting to show that he had been guilty of "infamous conduct in a professional respect" "in publishing or causing to be published an indecent and unprofessional treatise, entitled 'Self-preservation, a popular treatise on the Cure of Nervous and Physical Debility.'" On receipt of this letter, Mr. La Mert applied to be heard by counsel, but that was refused under the then bye-laws, and he was informed that he would be heard either by himself or his solicitor. He thereupon wrote an answer to the charge, which was laid before the Council, and in the result the Council passed a resolution erasing his name from the Register. It was contended on behalf of the applicant that he had not been guilty of "infamous conduct" in any "professional respect," and further that there had been no due inquiry as to the allegation made against him. Lord Chief Justice Cockburn, in giving the judgment of the Court, said, "We are all agreed that Section 29 of the Act makes the Medical Council the sole judges whether a medical practitioner on the Register has been guilty of 'infamous conduct in any professional respect.' They have decided that the applicant has been guilty of such conduct in respect of the publication of this book. The Legislature, considering them the best judges in such a matter, have left the matter in their arbitrament, and therefore we cannot interfere." The proceedings in that case were initiated precisely as in the present case—namely, by a letter communicating to the Council the publication of a treatise which it was alleged was indecent and unprofessional. The Council under its then procedure erased the name of the practitioner from the Register. The point was taken before the Court that this particular class of offence did not come within Section 29, and the judges, giving the widest interpretation to the section, said it was the intention of Parliament to make the Medical Council the sole judges whether the publication of such a treatise was or was not "infamous conduct in a professional respect." Since that decision there had been certainly one, and he believed other cases, in which the Council had acted upon it, and in the face of that decision he advised the Council that it was not only within their competency, but their bounden duty, to inquire whether in their opinion this treatise was, to use the words quoted in that case, "indecent and unprofessional." As to the advisability of the Council exercising jurisdiction of this kind, he pointed out that since the Act of 1858 the Legislature had, in the only way in which it could, signified its approval of the exercise of this jurisdiction by the Council, for by the Act of 1878 the powers of the Council were extended to the Dentists' Register. The very words of the section were also used in an Act of Parliament passed in 1874, which gave jurisdiction to the Society of Apothecaries to remove licentiates from their body on the same grounds, and if it was thought that the exercise of this domestic jurisdiction was in any way inexpedient, the Legislature had the whole constitution of the Medical Council under its review in 1886, and yet by the Act of that year they did not in any way touch the judicial power which the Council enjoyed. That being so, there was only one question for the Council to determine—which, perhaps, might be subdivided into two parts: whether the practices described as inculcated in Chapter 7 in the publication entitled "The Wife's Handbook" were calculated to promote immorality; and whether Mr. Allbutt, in publishing this book, was guilty of "infamous conduct in a professional respect." That was the sole issue for the Council to determine, taking, of course, the book as a whole. These were questions of fact, and must be decided wholly without reference to any attacks that had been made upon the person who had brought the matter before the Council; and of course it would be remembered that the person on whom those attacks were made was not before the Council, and had had no opportunity of making any statement to controvert them. He should not be so impertinent as to discuss any matter connected with questions of fact dealt with in the work itself, because that was a matter peculiarly and exceptionally within the province of the Council, and one which the Legislature had deputed to them alone as the supreme judges of what was or was not professional misconduct. With reference to the article in the *Fortnightly*, which was written by Mr. Montague Cookson, he said it might be in the recollection of those who read that article that it raised a question open to a great deal of criticism as to whether it was wise to treat such matters in the columns of public journals; that, however, was immaterial, but he would read one passage, and what he thought must be the only passage to which Mr. Wallace would have referred in suggesting that any part of that treatise had any sort of similarity to the book which was now being discussed. The subject of Mr. Cookson's treatise was "The Morality of Married Life," and he said at the end of the paper, after having called attention to the miseries resulting from improvident marriages: "The object of this paper would be greatly misunderstood if it were thought that I intended to propose any panacea for the many ills of the times. My aim is much more simple—namely, to point out that the conditions of our existence are far more elastic than is commonly believed. I hold that this elasticity consists in the limitation of the number of the family by obedience to natural laws, which all may discover and verify if they will, and that such limitation is as much the duty of married persons as the observance of chastity is the duty of those that are unmarried. One of the main wants of the day is, as I conceive, the formation of a sound public opinion on this subject. Once started, it would gather force rapidly, and at last effect a social revolution of the highest importance—a revolution of which the course would not be traced in blood or riot, but in man's moral, intellectual, and material growth. The change cannot take its rise in that quarter where it would yield the most beneficial results—amongst the lowest strata of the English people. It must begin, in the first instance, with those above them, and, indeed, with the most educated of these. Let men co-operate to this end, and the opinions here expressed will soon ripen into a creed, which will be the watchword of no sect or party, will fetter no freedom of thought, but be accepted as God's later teaching to His creatures, and a symbol of common devotion to the welfare of humanity." It was really asking too much of the credulity of the Council to ask them to compare such a passage as that with the passages in the book which Mr. Farrer, in his opening of the case, had read to the Council. Moreover, it was a strange argument to ask the Council to withhold its judgment in this case, in which they were inquiring into the conduct of a medical practitioner under the section of the Act, because the Council had not thought fit to prosecute Mr. Montague Cookson, who was not a member of the profession, for publishing that article.

Strangers were then directed to withdraw. On their readmission,

The PRESIDENT stated that the Council had agreed to the following resolutions:—"That in the opinion of the Council Mr. Henry Arthur Allbutt has committed the offence charged against him—that is to say, of having published and publicly caused to be sold a work entitled 'The Wife's Handbook,' in London and elsewhere, and at so low a price as to bring the work with the reach of the youth of both sexes, to the detriment of public morals. That the offence is, in the opinion of the Council, infamous conduct in a professional respect. That the Registrar be hereby directed to erase the name of Mr. Henry Arthur Allbutt from the Medical Register."

THE CASE OF MR. H. F. PARTRIDGE.

The REGISTRAR stated that Mr. Partridge had been summoned to appear before the Council on that day, but did not appear either in person or by any representative.

Mr. WHEELHOUSE moved, and Dr. MATTHEWS DUNCAN seconded, that the report from the Dental Committee in

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regard to this case be received and entered in the Minutes. This motion was agreed to.

Mr. FARRER stated that in this case the Council had on June 2nd, 1886, directed the erasure of Mr. Partridge's qualification and name from the Register. There was an undoubted power in the Council under the Medical Act of 1858 to withdraw names from the Medical Register where all the qualifications had been taken away; but, unfortunately, this by some oversight was not repeated in the Dentists Act. Mr. Partridge subsequently applied for a mandamus to restore him to the Register, and this was granted on June 15th last on the ground that his case had not been decided on the merits of the case. That decision was affirmed on appeal, and Lord Esher, in delivering the judgment of the Court, said that although the mere fact of a person having broken that which he undertook to do with his local authority, and having been in consequence struck off their Register, did not entitle anybody to strike him off the Register without inquiry, yet these facts brought him within the jurisdiction of the Medical Council, and if they were of opinion that what he had done was disgraceful in his professional capacity—and he should say himself that a deliberate and persistent breach of this obligation would be disgraceful conduct, upon which they might come to the conclusion that he had been guilty of disgraceful conduct—then, after giving him the opportunity of being heard before them, they might erase his name from the Register. Lord Esher therefore not only suggested but encouraged, and almost called upon the Council to consider the case on its merits. The Report of the Dental Committee contained the following statement of fact:—

"The name of Henry Francis Partridge, with the qualification of Lic. Den. Surg. R. Coll. Surg. Irel. 1878, was placed on the Dentists' Register on December 20th, 1878. He did not claim registration on account of his having been in practice before the passing of the Dentists Act, and cannot now be registered as having been in practice at the passing of that Act. On July 2nd, 1885, the Royal College of Surgeons in Ireland withdrew or cancelled the diploma granted by them to Partridge, and a letter dated July 4th, 1885, notifying that fact, was addressed by the Secretary of the Council of the Royal College of Surgeons in Ireland to the Registrar of the General Medical Council, and at a meeting of the Executive Committee on July 10th, 1885, it was resolved that the Registrar be directed to make application to the Royal College of Surgeons in Ireland for information as to the cause of withdrawal of the diploma. The President and Council of the Royal College of Surgeons in Ireland withdrew or cancelled the diploma of Mr. Partridge because of his having, in violation of his undertaking given to that College, attracted business by advertising in connexion with the Ladies' Dental Institution, South Kensington. At a meeting of the General Medical Council held on June 2nd, 1886, it was decided as follows:—That the qualification of H. F. Partridge be erased from the Dentists' Register; that the name of the said H. F. Partridge be also erased from the Dentists' Register. The Ordinances of the Royal College of Surgeons in Ireland forbid advertising, and Mr. Partridge, both before his admission to examination for his diploma in Dental Surgery, and again after passing his examination, and before he obtained his diploma, signed a declaration that so long as he held such diploma he would not attract business by advertising or any other practice considered unbecoming by the College, and agreed that his diploma should be cancelled on its being proven that he had done so. Mr. Partridge has broken such pledge by advertising whilst he was still holding the said diploma, and he did so after repeated warnings from the College. And, further, in answer to the first of such warnings, he apologised, and stated that he was willing to comply with the laws of the College. On June 15th, 1887, the High Court of Justice, at the instance of Mr. Partridge, granted a mandamus to the General Medical Council to restore his name to the Register of Dentists. On August 1st, 1887, on appeal by the General Medical Council, such decision was confirmed, and the mandamus directed to issue. The name and qualification of Mr. Partridge have been restored to the Dentists' Register pursuant to such mandamus. Mr. Partridge still continues to advertise."

Mr. PARTRIDGE, though not appearing in person, had sent in a written statement in which he stated that at the time of signing the arbitrary contract imposed upon him—namely, not to advertise—he did not anticipate being visited with blindness, neither did he think any objection would have been taken to his advertising his institution on precisely the same principles as medical men advertised self-supporting homes &c. He denied that his advertisements could be described as "disgraceful." He was at a loss to understand the object of the present inquiry, having thought that the question had been finally settled, and his obligation fulfilled by returning his diploma. He regretted having violated his undertaking with his College, but no other course was open to him. Considering that he had been in the profession for nearly a quarter of a century, long before the Act of Parliament or the Register was ever dreamt of, he thought the treatment to which he had been subjected was exceedingly arbitrary, amounting to persecution.

Mr. FARRER explained that the question before the Council was not that of advertising, but whether Mr. Partridge had behaved disgracefully in violating the undertaking which he gave to the College of Surgeons of Dublin.

The Council then deliberated in private, and on the readmission of strangers,

The PRESIDENT said the Council had agreed to the following resolutions:—"That, in the opinion of the Council, Mr. Henry Francis Partridge has committed the offence charged against him—that is to say, wilfully violated the declaration made and subscribed by him, whereby he declared that as long as he held the diploma in dental surgery of the Royal College of Surgeons of Ireland, he would not attract business by advertising or any other unbecoming practice. That the offence is, in the opinion of the Council, disgraceful conduct in a professional respect. That the Registrar be directed to erase the name of Henry Francis Partridge from the Dentists' Register.

THE APOTHECARIES' SOCIETY AND THEIR DIPLOMA IN PUBLIC HEALTH.

With reference to the motion brought before the Council by Mr. Carter for the registration of the Diploma in Public Health of the Apothecaries' Society of London, upon which it was resolved on the motion of Dr. Heron Watson to take counsel's opinion, Mr. Muir Mackenzie now stated that in his opinion the Apothecaries' Society of London was not a body that could in accordance with the Medical Act (1886) grant a diploma in Public Health.

With the permission of the Council the motion made by Mr. Carter on this subject was withdrawn.

FOREIGN DEGREES.

Dr. HUMPHRY moved the adoption of the report by the Committee on the evidence which should be required in regard to foreign medical diplomas presented for registration by registered medical practitioners. The committee recommended that the Registrar should be authorised to register the several degrees of those applicants who had complied with the requirements of the Council, and that any incomplete applications, when made complete, and also all future applications, should be submitted either to the Council or to the Executive Committee, the results in the latter case to be reported to the next meeting of the Council. The fee to be charged for the registration of superadded foreign degrees should be £2. A number of applications had been received from registered practitioners for the registration of colonial degrees as additional qualifications, but in the opinion of the committee such degrees were not registrable under Section 16 of the Medical Act (1886), which mentioned "foreign" degrees only. They might hereafter become registrable in the future Colonial Register.

Dr. QUAIN seconded the motion, which was agreed to.

The Council then adjourned.

SATURDAY, NOVEMBER 26TH.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

THE EXPENDITURE OF THE COUNCIL.

Mr. WHEELHOUSE moved that the report from the Income and Expenditure Committee be received and entered on the Minutes.

Dr. HUMPHRY seconded the motion, which was carried.

The report stated that the committee had already in their interim report, dated May 12th, 1887, stated the items of income and expenditure of the Council, and indicated the necessity for a reduction of the expenditure, expressing the opinion that this would be best effected by lessening the expenses attendant upon the meetings of the Council. The committee deferred, however, making any proposal as to the method of effecting that reduction until the report of the Pro-

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cedure Committee should have been considered by the Council. By the increase of the number of members of the Executive Committee from six to eight, the total annual expenses of that committee would be increased by about £100. The report continued: "It is hoped that by the addition to the numbers of the Executive Committee, and the increased duties imposed upon it, as well as by the appointment of the Education and the Examination Committees, the transaction of the business of the Council will be facilitated, and the time of the Council will be proportionately saved. Still, it is too soon to express a confidence that the expenses attendant on the meetings of the Council will in the future be materially reduced. Hence, with a view of to some extent reducing the expenses of the meetings of Council, the committee recommend—1. That the allowance to members for travelling expenses should in future be the amount approximately paid by them according to the following tariff, instead of according to the present method of payment. This alteration will affect a saving of about £50 at each meeting of the Council, and a corresponding diminution at each meeting of the Executive Committee and of the English Branch Council.

Table showing Data in regard to Travelling Allowances to Members of Council.

No. of Members.	Place.	Return Ticket.	For what time available.	Suggested Amount to cover Return Fare and Sundry Expenses.	Present Amount allowed.
1	Aberdeen ...	£8 13 6	1 month	£7 7 0	£9 9 0
1	Birmingham ..	1 13 6	1 month	2 2 0	3 3 0
1	Cambridge ...	0 15 10	1 month	1 1 0	2 2 0
1	Dingwall ...	7 10 0	1 month	8 8 0	9 9 0
7	Dublin	4 15 6	1 month	5 5 0	8 8 0
3	Edinburgh ...	5 9 6	1 month	6 6 0	9 9 0
3	Glasgow... ...	5 10 3	1 month	6 6 0	9 9 0
2	Leeds	2 11 6	Unlimited	3 3 0	4 4 0
1	Liverpool ...	2 18 0	Unlimited	3 3 0	4 4 0
1	St. Andrews ...	6 1 9	1 month	7 7 0	9 9 0

2. That any member of a Branch Council residing more than two hundred miles from the place of meeting of the Branch Council shall receive a fee for the day of going to and also for the day of returning from the meeting, in addition to the fee for the day of attendance. 3. That the above tariff for payment of travelling and recommendation for payment of members of Branch Councils should come into operation with the new year. The committee have considered the question of the reduction of the fee paid to each member of the Council for attendance at the meetings of the Council, but, while they feel that the question of the reduction of the fee may arise in the future, they are not prepared, at present, to make a recommendation on the subject. With reference to the recommendation of the Executive Committee of date July 25th, 1887 (Vol. xxiv., p. 354, Clause 4c), that the Registrar's salary be increased by £100 yearly, the committee, having in view the general question of the future expenditure of the Council, are not prepared at present to recommend an increase of more than £50 a year."

Sir W. FOSTER moved the adoption of the report. It was somewhat extraordinary that this motion should not have been made by the chairman of the committee.

Dr. HUMPHRY said he could not the least in the world commend the report to the Council. He was not very proud of his name standing at the head of it. (Hear, hear.) It did so stand because, as chairman, he was bound to submit the results of the committee to the Council, but he should be only too glad if the Council referred the thing back again to the committee. He did not think it was at all an adequate report.

Mr. TEALE having seconded its adoption,

Dr. AQUILLA SMITH moved as an amendment that it be considered paragraph by paragraph.

Dr. QUAIN seconded the amendment, which was put to the Council and lost by eleven votes against ten.

Dr. LEISHMAN then moved a second amendment, "That the report by the Income and Expenditure Committee be referred to that committee for further consideration." His objection to the report as a whole was the small result which seemed to have ensued from the deliberations of the committee. It reminded him of a man who, having been possessed of considerable means, resolved himself into an income and expenditure committee in order to consider how he could best reduce his expenditure, and, after very mature consideration, he came to the conclusion that the only way in which he could diminish it, the excess being some thousands of pounds, was by giving up *The Times* and taking in the *Daily Telegraph*. (Laughter.) The only point in the diminution of expenditure made in the report was in an item in which there was really no excess. It was quite true the travelling allowance to members coming from a distance was in excess of the actual railway fare, but the hotel allowance was considerably less than would be spent without the least extravagance in a good London hotel, and therefore, taking them together, the actual expenditure was about balanced. He had not the slightest objection to diminish this allowance, but there were other directions in which the report might have given useful information. The Council would have done well if they had adopted as their text what their friend Dr. Quain very frequently pressed upon them—viz., that time was money (hear, hear), and if anything was to be done to reduce its expenditure, it would be by an economical and careful expenditure of its time. He thought, looking to the increased number of powers of the Executive Committee, that a second meeting of the Council in the course of the year need only be had recourse to under exceptional circumstances.

Dr. HERON WATSON seconded the amendment.

The amendment having been supported by several members of the Council,

Dr. HUMPHRY thought Dr. Leishman's proposal might be accepted without further discussion. (Hear, hear.)

Dr. HERON WATSON said it would be of great advantage to the committee to hear the remarks of as many members of the Council as possible, so that they might be assisted in coming to a conclusion when they brought up the report.

Dr. QUAIN said that there were many other points that had been brought before the committee, but they were deferred until the results of the suggestions made by the Procedure Committee had been seen. Those points were the diminution of the frequency of the meetings of the Council; that the daily meetings of the Council should be five hours instead of four; that the allowance to members for travelling expenses should be the amount actually paid by them instead of fixed sums as at present; that the fee of five guineas allowed for each day's allowance at meetings should include hotel expenses, whereby a total annual saving of about £500 would be obtained; and that luncheon should no longer be provided at the expense of the Council, whereby a saving of at least £100 a year would be effected. It was also recommended that the General Council's fees should not in any one year exceed £1700. He hoped that, if the Council did not adopt the whole report, they would at any rate accept the second and third recommendations, which were only a matter of justice to the members of the Branch Councils.

Dr. HUMPHRY was very disappointed that the committee had only been able to arrive at results so utterly inadequate to meet the real circumstances. He thought that far too great an amount of money had all along been expended upon the meetings of the Council; money which might have been appropriated in other ways for the benefit of the profession, and not simply put into their own pockets. The expenses of the Council for this year would be about £3000, which was a great deal too much. It must also be remembered that the income would probably not increase, whilst the expenses would be increased by about £1000 annually for the inspection and visitation of examinations, in accordance with the resolution of the Council. He could not see his way to doing away with the November sitting; but, on the other hand, he should be glad to see the payment to members reduced, or even that there should be no payment at all. The Council would then be in a much better condition.

Dr. TUKE agreed that the idea of reducing the number of their meetings was entirely utopian, and that the only way in which they could legitimately reduce the expenditure was by a reduction of the fees paid to members. The fees paid were at once too small and too great: too small, inasmuch as they did not represent in any way the loss which the large proportion of the Council sustained in attending its meetings; and too great, looking to the revenue of the Council. He hoped that the committee would take into consideration whether it would not be a wise and proper method to give up these fees altogether, for any smaller reduction would be ridiculous under the circumstances. He also suggested that it would be a proper thing to recommend that the various corporations who sent repre-

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tatives to the Council should be asked to bear some amount of the expenses.

Sir WALTER FOSTER was very glad to see the universal desire for economy that had been developed in the gentlemen representing the corporations. For years past they had been receiving their hundreds a year, but having been overtaken by a sense of their past conduct (laughter) they were now anxious that the profession should reap more benefit from the money that had been obtained from them for registration purposes. He congratulated the Council upon that happier condition of mind, though he was sorry it had come so late. With reference to the fees themselves, he was not acquainted with any body that was not paid that gave the same average attendance that was given at the Council; and there was this advantage in paying members—that it increased their sense of responsibility. He was not, therefore, in favour of absolutely giving up the fees. He was, however, in favour of giving a harder day's work for the money received, and suggested that the Council should sit from 10 A.M. to 1 P.M. and from 1.30 to 6 P.M., for in that way they might reduce the number of Council meetings very considerably, and so reduce the expenses. Another reform that might be introduced was this—that the constituent bodies of the Council should pay their own representatives.

Dr. STRUTHERS thought the £5 5*s.* a day might be reduced to £3 3*s.*, and that at any rate the meetings might commence an hour earlier.

Mr. MCVAIL supported the suggestion that the Council should meet at ten in the morning, for in that case the business which had extended over five days might have been finished in two.

Mr. MITCHELL BANKS also supported this suggestion. He had no objection in the world to every reasonable cutting down of fees, but he believed the public would not grudge any reasonable expenditure providing they got a proper amount of work.

Dr. HAUGHTON, as a member of the committee, wished to state that the committee did consider a number of the suggestions that had been made, and, amongst others, the most important question raised by Sir Walter Foster, which, he thought, was the real solution of their difficulty—namely, that the corporations and other bodies should pay their own representatives. He should support Dr. Leishman's proposal to send the report back to the committee for further consideration.

Dr. HERON WATSON said if the reduction of fees was deemed to be necessary he would agree to it, but he would rather do away with them altogether. Five guineas a day could in no way represent the loss to gentlemen round that Board, and by doing away with them altogether they would at the same time do away with an allegation—which he regretted to think had again and again been made public in some papers,—that the Council sat there for a long session for the purpose of pocketing a miserable fee. The recommendation that they should sit more than four hours a day was a valuable one, but he could quite understand that to gentlemen residing in London who were members of the Council it was a matter of extreme difficulty to arrange this, and some consideration should be given to their requirements.

The PRESIDENT said there was not a single suggestion made that had not been previously considered, and on which there was not something to say on both sides. He was sure, however, that the discussion had been extremely valuable, and he hoped that through it they might see a way to diminishing the expenses of the Council.

The amendment was then put and agreed to, and on the motion of Dr. QUAIN, Professors Macnamara and Leishmann were added to the committee.

On the motion of Dr. QUAIN the Standing Orders were suspended for the consideration of two of the recommendations in the report with reference to the payment of members of Branch Councils and to the increase in the Registrar's salary.

It was then moved by Sir WALTER FOSTER, seconded by Dr. PETTIGREW, and agreed to: "That any member of a Branch Council whose duty in attending such Branch Council involves absence from home of more than one day, shall receive a fee for each day so occupied." Dr. QUAIN moved that the Registrar's salary be increased by £50 a year, in accordance with the recommendation in the Report, and in doing so called attention to the fact that scarcely a week passed in which the London members were not called upon to act on behalf of the Council. That was a matter that ought to be taken into consideration.

Dr. STRUTHERS moved as an amendment: "That the increase of the Registrar's yearly salary be £100 per annum, as recommended by the Executive Committee."

Dr. BANKS seconded the amendment, which was put to the Council and carried.

It was moved by Dr. PETTIGREW, seconded by Dr. MATTHEWS DUNCAN, and agreed to: "That the nomination by the Scottish Branch Council of Dr. J. Batty Tuke as a member of the Education Committee be approved."

It was moved by Mr. TEALE, seconded by Dr. QUAIN, and agreed to:—"That it be referred to the Executive Committee to consider under what circumstances a registered medical practitioner would render himself liable to the censure of the Council in reference to the employment of unqualified assistants."

It was moved by Dr. STRUTHERS, seconded by Dr. BANKS, and agreed to: "That the opinion of counsel be obtained in regard to Section 21 of the Medical Act (1886), as to whether the person to be examined for the diploma referred to in the section must be a registered practitioner before being admitted to the examination."

The Registrar called attention to the fact that, on the first day of the present session, he had laid on the Council table proof sheets, from 1 to 256, of a general index to vols. i. to xxiii. (inclusive) of the Council's Minutes, which he had for some time had in preparation, and that to these proof sheets he had prefixed a note indicating that they were submitted for the purpose of showing members of the Council the form in which this index is drawn up, and of soliciting from any of the members suggestions for the correction or improvement of the index.

This concluded the business of the Council.

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.

THE autumn general meeting of this Association took place on Wednesday, Nov. 23rd, at 49, Berners-street, London, Sir Thos. Crawford, K.C.B., Director-General, A.M.S., President, in the chair.

The Council reported further proceedings with reference to the exclusion of those holding Irish medical degrees and the higher diplomas of the King and Queen's College of Physicians and the Royal College of Surgeons in Ireland from English hospital appointments.

Professor Yeo, on behalf of the Council, moved (1) that the name of a newly elected member shall not be entered on the roll until the first subscription be paid; and (2) that the second paragraph of Rule 11 be altered, so as to read as follows: "There shall be two other Association dinners each year, at such times and places as the Council may determine."

The Secretaries reported that the number of members in the Association had now reached 515.

A vote of thanks to the President for his assiduous and valuable services to the Association was proposed by Professor Yeo, seconded by Dr. Jones, and carried unanimously. A vote of thanks to the General Apothecaries' Company for the use of their premises was also passed.

In the evening the Association dined at the Holborn Restaurant, Sir Thomas Crawford in the chair, and Sir B. W. Foster, ex-president, as vice-chairman. A telegram was received from Dr. Bridgewater, President of Council of the British Medical Association, regretting his being unable to be present as a guest. After the usual loyal toast, the President proposed "Our Guests," which was responded to in witty and happy terms by Professor Pettigrew, F.R.S., and Dr. M'Vail (Glasgow), members of the General Medical Council. Dr. Macnaughton Jones then proposed the toast, "The Universities and Licensing Bodies," coupling with it the name of Professor MacAlister of Cambridge (President-elect of the Association). The toast of the evening, "The Irish Medical Schools and Graduates' Association," was ably given by Professor Struthers of Aberdeen; and Professor Jacob of Dublin replied. Professor Humphry of Cambridge gave "Our Chairman," in his usual graceful and eloquent way. The proceedings were varied and enlivened by songs, sung by Messrs. Payne and Baly and Dr. Macan.

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THE LANCET.

LONDON. SATURDAY, DECEMBER 3, 1887.

IN the last three issues, in the most prominent position of this journal, we have directed attention to a new feature of medical teaching under the seemingly harmless guise of popular literature. We have marked with sorrow and with indignation the action of some even of our personal friends in the profession in lending the authority of their status as qualified medical men to a practice which, however specious or well intended, is at once discreditable to its promoters and injurious to the general public. We refer, of course, to this latest departure in cheap journalism, which aims at instructing each and any reader, without distinction, in the details of disease and its treatment, apparently without regarding the fact that such instruction is in truth illusory, since it must be very partial, and may consequently at any point in its practical application result in serious mischief. We know that it may be contended by the promoters of this work that there are matters with which the physician has to do which also lie within the sphere of domestic management, and may therefore serve him as a text for popular disquisitions. The general truth of this argument no one will dispute, and we do not. There are subjects connected with the hygiene of the nursery, the school room, the kitchen, and the house generally, which are everyone's concern, and which by a natural process inevitably tend to diffuse themselves into the common stock of human knowledge (although it must be remembered that the medical attendant of the family can be consulted on these matters and is fully capable of giving reliable advice). All this we freely allow, and we can well believe that those of our medical brethren who appear for the time being to dissent from us in the present discussion imagine that these round terms describe the true position with regard to this matter. We wish in the most distinct and emphatic manner to warn them that it is not so. It is when we come to the enunciation of details, when we actually view in conjunction the human body and the external influences, healthy and unhealthy, to which it is subject, that the responsibility of using or misusing knowledge is clearly seen. We are then conscious of standing upon a borderland in ethics, ethics not of our profession merely but of the immeasurably wider society of mankind. We then see that it is one thing to expound in public the principle of healthy living, but quite another to assume the office of popular instructor in the treatment of disease. Physical perversion, like moral perversity, can only be effectually reckoned with on intimate acquaintance. It surely follows, accordingly, that those who reason otherwise in practice, and avow that matters of practical therapeutics can be rightly offered to and accepted by an ignorant or partially instructed [redacted] is the lesser evil), but of what, [redacted] an offence of the most [redacted] well-being, [redacted] to which we have referred two have appeared during the past month, both professing to contain articles written upon "Health and Disease" by well-known practitioners in medicine. Another cheap paper which has been in existence some few months, and was originally promoted from philanthropic motives connected with the medical charities of this metropolis, has been slowly drifting into that course which we condemn, and has become the medium of an attempt to popularise medicine. We may add that when this paper first appeared we most cordially approved of the work which it was intended to perform, and testified as much in our columns. It has now, however, changed its sub-title, and has openly avowed its intention to teach the practice of medicine. How much philanthropy has to do with this new departure we must leave others to determine. The literary contents of the paper to which we refer are of the most heterogeneous character. Sermons, discourses on physiology, palmistry, bacteriology, enigmas, fever, *food*, Ruskin, vaccination, the action of remedies in disease—that hunting ground of adventurous empirics,—serial stories for young people, microbes, puzzles, and acrostics, are blended week by week in one incongruous whole. There is a "pulpit" for the oracles of medicine, a corner for hospital matrons, a children's corner, and a whole page which acts as an advertising handbill, in which, without permission, for they dared not give it, the names, titles, official addresses, and special departments of the staff of almost every hospital in London are cornered, so to speak, in a body—penned, as it were, for selection by a supposed discriminating and astute non-professional public, to the professional injury of all those whose names do not appear in the list—a startling matter indeed. For the paper is not a medical production. True, it contains articles on medicine and surgery, but these are half buried, as we have shown, among puzzles, novels, and songs; and the sum of all this matter presents itself as a means of interesting and instructing—whom? Not "practitioners" merely, but along with them families, parishes, clergy, congregations, and that illimitable body the charitable public. Let the object of this penny paper be what it may, we cannot in duty do less than describe it as a striking presentation of cleverness divorced from wisdom in its endeavour to transfer the solid realities and responsibilities of medical treatment from those who can understand them to those who cannot.

A later issued periodical is one of a like stamp with its fellow, and is, we suspect, an offshoot from the one to which we have just referred. It is younger, smaller, and, as one would naturally expect, is as yet hardly so confident in its advances. Progressing step by step, it but feels its way so far, and babbles somewhat for a serious effort in medical teaching; but it, like its neighbour, bears in front the hard and brazen polish of advertisement, disclaimed and yet allowed, and shines in all the glory of papers contributed or promised by owners of titles conferred by corporate authorities in medicine and surgery, who are thus, without leave asked, assumed as its sponsors. Under this patronage, unwilling though it be, and a lay editorship we find reproduced in a milder form the same congeries of professional information, with children's songs, cookery receipts, remarks on emotion, and infantile jokes. As yet there is little in the way of medical teaching, but this

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implies perhaps a greater degree of intellectual development than the venture can at present be said to possess. Doubtless it will come with the stage of ossification of epiphyses, for we are promised rules for guidance in "disease" as well as health.

Another paper to which we desire to draw attention is a modified form of the other two. Its claim for existence is also popular medical teaching, and its proprietor and editor is "a physician," whose identity is, however, a tolerably open secret.

As regards the intrinsic literary qualities of these publications, it might be allowable to take up an attitude of unconcern. We cannot, however, ignore the evil influence which they are calculated to exercise over the wholly unrestricted circle of readers to which they appeal, and which they aim at instructing in the elements, and as much more as possible of the art, of self-healing. It is to be hoped that this scheme to provide advice and medicine, but not medical attendants, for the general public may not incense that large body of medical practitioners whose existence it threatens, and whose livelihood it endangers, to such an extent as to injure that great metropolitan charity whose interests we all have so much at heart by the withdrawal of their support, which has so much contributed to its present success. Nor can we forbear from addressing another appeal to those of our brethren who, from what motive we cannot say, are lending their countenance and freely exposing their fair fame and names in defence of a journalistic scheme alike so prejudicial to the public good and so discreditable to the medical profession. What more can we say than has been said to warn them of the unwisdom of their present proceedings? Out of a sincere conviction that the course they are now pursuing is for them and for all concerned as mischievous as it is professionally unseemly, we have plainly put before them our views in the foregoing remarks. We would again earnestly request them to give these their most careful consideration. Let them be advised, in the common interest of themselves, their profession, and the sick who rely upon their skill, to withdraw their countenance from an undertaking which, if persisted in, must bring discredit and dissatisfaction to all concerned in it. Otherwise it is obvious that the authorities from which they derive their qualifications to practise cannot much longer shut their eyes to a matter so seriously affecting the honour and dignity of the profession.

IN his Morton Lecture Sir JAMES PAGET dealt in his usual felicitous manner with a question which, although not new, is now more full of interest than ever—the nature of cancer. He stated the case for its infectiveness, its dependence upon some specific organism implanting itself in a suitable soil, not only with more confidence, but with more fulness of supporting evidence and eloquence, than had previously been given. He, however, with a true scientific instinct, only formulated his views as a working theory, and by no means contended that the theory must be accepted as demonstrated, or the only one explaining the facts already known to us. The analogy between cancer and some of the specific diseases has been often dwelt upon, and it was a favourite theme of the late CAMPBELL DE MORGAN. But in recent years so many diseases, some of which were not generally recognised as infective, have been proved to be associated with the presence and development of micro-organisms that it is most reasonable to search eagerly for some like cause for cancer. The fact that careful observers like BALLANCE and SHATTOCK have failed to discover any cancer bacillus or cancer microbe of any kind is of the same importance as other negative evidence, and in no way closes the discussion. Indeed, almost while writing the intelligence comes that a German observer believes he has succeeded in recognising a cancer organism. To this matter, however, we refer in another column. Sir JAMES PAGET always states his case so forcibly and so charmingly, that it is difficult to resist the temptation to at once yield to the apparently inevitable and adopt his conclusion. And in this case we doubt not that many of his hearers and readers even went beyond the lecturer, and made up their minds that, as a matter no longer admitting of doubt, cancer is a microbe disease. Among other points which apparently tell against this view is the complicated structure of malignant tumours. When we compare cancer with tubercle, or any other of the undoubtedly infective diseases, we cannot but be struck by the fact that, while in the latter the growth is of the very simplest kind—an irritative hyperplasia of indifferent cells,—in cancer, the cells may be of the simplest, though their arrangement is often most definite. Further, it is noteworthy that, while the structure of a primary cancer is usually, perhaps we might say invariably, largely influenced by that of the tissue in which it grows, the structure of the secondary deposits shows little, if any, of this peculiarity. No doubt these facts may be capable of an explanation in conformity with the theory of the infective nature of cancer. But they are at variance with what we know of other infective diseases. Then, too, the question comes, Are we to believe that every form of malignant tumour recognised by the histologist has its own special microbe? From Sir JAMES PAGET'S allusion to the galls on the oak leaf we imagine that is his view, and that a squamous epithelioma of the anus owns a different cause from that of the columnar epithelioma of the rectum. There is nothing inherently improbable in this. Whatever may be the ultimate answer to the question of the origin of cancer, the important part played in its causation by the condition of the tissue of the part will remain unaffected. Should a cancer-germ be demonstrated, its harmlessness, except in a suitable nidus very specially prepared for its growth, is undoubted; and the discovery will have but little influence on the views now held on the heredity of the disease and other similar points.

Our columns have recently contained many letters on the question of the contagiousness of cancer, and no doubt the view that it is contagious will gain somewhat from the stress now laid upon its probable infective nature. Were its contagiousness proved, that would carry with it the fact of its being an infective disease. But we must say that the evidence in favour of its being contagious is far short of proof. Many of the cases published are probably coincidences; some of them may be shown to be only the similar results of one common cause. It is certain that, if contagious at all, it is so only to a very slight extent, that

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all attempts to inoculate it have failed, and that cases appearing to support the view of its contagiousness are quite rare. Stress has been laid upon the instances in which epithelioma of the penis has occurred in the husbands of women with cancer of the uterus; but when we remember the great frequency of carcinoma uteri, it would be strange indeed if among the husbands of so many women some cases of cancer of the penis did not occur. Undoubtedly the evidence in reference to its inoculability must be received with caution, because the most ardent supporters of its infective nature must admit that a suitable nidus is an indispensable condition for the growth of the tumour, and until our experimenters have determined wherein this suitability of the tissues lies, and have tried the results of inoculation upon such suitable tissues, the negative evidence at present forthcoming is by no means conclusive.

We cannot close this article without some reference to Mr. CLAY'S work with Chian turpentine. The interest excited in this treatment by that gentleman's earlier articles has to a very large extent subsided, and the hopes once entertained that at last the cure for cancer had been found have been surrendered as failure after failure with the drug was experienced and reported. But Mr. CLAY has persevered in its use. He recorded last year a case of a gentleman, whom two of the most experienced surgeons in London had pronounced to be the subject of advanced epithelioma of the tongue. Under the Chian turpentine treatment he was cured. And last month we published a further short paper, containing no less than four cases in which the diagnosis of cancer was made by other surgeons, in one case confirmed by microscopic examination of a growth removed. All of these cases were first improved and then cured by Mr. CLAY'S treatment. What can be said of such cases? Were they *all* instances of mistaken diagnosis? If so, they were examples of disease which must in many other instances be mistaken for true cancer, and which ends fatally unless submitted to Chian turpentine. We think that, in spite of the many cases in which the drug has been shown to fail, the extreme importance of the question warrants a careful re-examination of all the evidence Mr. CLAY can produce. Whether this should be done by a committee, as in the case of the Hydrophobia Commission, or by individual observers, or by the staff of the Middlesex Hospital, who have unequalled opportunities of testing the value of Chian turpentine or any other drug for cancer, we are not prepared to state. But surely the matter ought not to be allowed to remain any longer in its present unsettled and unsatisfactory condition.

THE greater part of the time at the disposal of the General Medical Council, during the session which has just terminated, has been devoted to the consideration of the conduct of certain members of the medical and dental professions. The offences with which they have been charged have not been of the same type; they have varied between a serious indiscretion and a misdemeanour. The Medical Council have but one punishment for all offences which are brought to their notice—the removal of the name of the accused from the Register. In all cases where a previous conviction has taken place in a court of law the question of removal admits of no discussion; it is the natural sequence of the conviction. But in a case in which a practitioner is charged with "infamous conduct in a professional respect," the nature of the offence requires the closest consideration. It may well be argued that conduct less open to censure than that which can be regarded as "infamous" deserves the only punishment which the Council are empowered to inflict; that the members of an honourable profession must maintain a higher standard than that which falls short of the description embodied in the Medical Act if they are to be deemed worthy to be enrolled among its members; or in other words, conduct which is not "infamous" may still merit the removal of a name from the Register.

The Council are, however, necessarily guided by the law, and hitherto they have shown no desire to punish offenders beyond its limits. The cases before them during the autumn session have comprised that of a medical man convicted of publishing a false, scandalous, and defamatory libel; another who had been proved in a court of law to have availed himself of his position as medical attendant to create disunion between husband and wife, and to commit adultery; a dentist who had been guilty of persistent advertising, contrary to his distinct and repeated undertaking; the writer of a book of an undesirable nature; and a practitioner who had acted as "cover" to an unqualified assistant. The last placed himself in the hands of the Council, and promised that he would not further offend. It is obvious that no justification can be found for a practice which leaves sick persons solely under the care of unskilled persons, and giving to the latter a fictitious position, which is calculated to mislead those who seek their aid. The Council have dealt leniently with the case, and have decided to accept the assurance that this practice would be discontinued. There cannot, we think, be two opinions that removal from the Register would be well merited by such action, and it may be anticipated that future delinquents will receive a more severe punishment at the hands of the Council. In the remaining cases the General Council had, we think, no alternative but to purge the Register of the names of the offenders. A strenuous appeal was made on behalf of the practitioner accused of publishing a book which was *contra bonos mores*, not only by his counsel, but also by those who sympathise with efforts to limit the growth of population. We need not discuss the larger question under which the defendant sought to shelter himself; the point which the General Council had to decide was whether the character of the work which he published was detrimental to public morality placed as it was within the reach of the youth of both sexes. This, indeed, was their verdict; and the Council had we hold, no option but to regard this conduct as "infamous in a professional respect."

The opinion of counsel has been adverse to the application made by the Society of Apothecaries to grant registrable diplomas in Public Health. The 21st clause of the Medical Act of 1886 enables such diplomas to be granted by any College or Faculty of Physicians or Surgeons, or University, in the United Kingdom, and it is, we presume, held that the Society of Apothecaries does not come within this category. The delay is probably but temporary; the Society will, doubtless, appeal to Parliament to remedy this disability, and there is no reason why they should meet with opposition.

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The last act of the Council was to adopt the Report of the Committee on the Registration of Foreign Degrees in Medicine. Henceforth, therefore, all foreign degrees in medicine which the General Medical Council are satisfied have been obtained after proper examination will be registered in cases where the holder is already on the Register by virtue of English, Scotch, or Irish qualifications. The effect upon English degree-conferring bodies will probably not immediately be seen, but it is likely that a larger number of practitioners will eventually seek this means of acquiring titular distinction; whether this will be done at the expense of British universities requiring residence, or whether foreign graduates will be recruited from the ranks of metropolitan students who are unwilling to present themselves at the University of London, the future must determine.

Annotations.

"Ne quid nimis."

THE HOSPITAL SUNDAY FUND.

THE meeting of the members of the Council of the Hospital Sunday Fund held at the Mansion House on Monday to receive the report of the Council promises well for the coming year of the Fund. This report, together with the discussion thereon, are printed in full on page 1138. The new Lord Mayor, the Right Hon. P. de Keyser, for the first time took his place in the chair, and was supported by the Lord Bishop of London, Sir Sydney Waterlow, and a very large meeting of the Council. The Lord Mayor gave very hearty expression to his sympathy with the Council, and his desire to imitate his predecessors in doing all that he could to uphold and increase its prosperity. The Bishop of London proposed that Sunday, the 10th of June, should be set apart for the great collection of the year. Besides, the meeting was large and representative of all creeds and classes. In the last fifteen years this Council has been the means of raising well on to half a million of money for the hospitals of London, or an average of £31,572 a year. It is satisfactory to find that the last years have been the best years, and that more was raised in the present year, in spite of the many calls of the Jubilee, than on any previous occasion. In the first four years of the Fund—on the whole, prosperous years—£111,075, were raised; in the last four—years of great depression—£154,656 have been raised—a difference of nearly £40,000. Four per cent. of the sum realised is set apart to purchase surgical appliances in accordance with Law 12. This is a great boon to the lame and the halt and the blind. These appliances include 299 trusses, 238 elastic stockings, 176 pairs of spectacles, 123 surgical boots, 162 spinal supports, 92 surgical boots with irons, 61 leg irons, 45 Martin's bandages, 21 poroplastic jackets, 37 artificial eyes, 37 artificial arms, 24 walking instruments, &c. The Fund is singular in its inexpensiveness, the working expenses only amounting to 4·200 per cent. of the gross receipts. There is still room for ingenuity in devising methods and arguments for the increase of the Fund. There is some reason to hope that the time of starvation of hospitals is coming to a close, and to the generous we would say that no channel more diffusive and discriminating could be chosen for their gifts than the Hospital Sunday Fund.

UNIVERSITY OF ST. ANDREWS: ELECTION OF ASSESSOR.

A KEEN contest is being waged for the above office as between the Right Hon. Viscount Cross, G.C.B., and Dr. John Duncan, M.A., LL.D., Senior Surgeon and Lecturer on Clinical Surgery to the Royal Infirmary of Edinburgh. Viscount Cross represents the interests of the Divinity and Arts Faculties of the University, and Dr. John Duncan the interests of the Science and Medical Faculties. In a general council like that of St. Andrews, where the science and medical graduates so largely preponderate, the result should not be doubtful, the more especially when, as in the present instance, several of the divinity and arts professors favour a scheme by which science and medicine would be virtually transferred to Dundee, and St. Andrews deprived in a good measure of its science and medical chairs, than which nothing could possibly be more disastrous. As is well known, the other Scottish Universities have greatly prospered because of the fostering and developing of their medical and science schools. The medical and science graduates of the St. Andrews General Council have now an opportunity of giving medicine and science in the old University a very substantial lift, and no doubt many will be glad to avail themselves of that opportunity. In politics both candidates are Conservatives, but politics in such appointments are very distinctly contra-indicated. It is well known that the fact of the appearance of Sir R. Cross in the field four years ago was due, not to any wish on the part of his proposer to benefit the University, but simply to capture the votes of a section and throw out Dr. Richardson. The two candidates, Dr. B. W. Richardson and Dr. Cleghorn, had been duly proposed and seconded, and the affair was supposed to be over, when suddenly one of the opponents of Dr. Richardson brought forward Sir R. Cross, for the avowed purpose of affecting the result by the introduction of a political element.

RANK OF ARMY MEDICAL OFFICERS.

WHEN the subject of the abolition of the term "relative rank" was being hotly discussed, we expressed our opinion that the Secretary of State for War might without difficulty devise some measure by which the relative status of the medical officers would be clearly defined and placed beyond the reach of cavil on the part of the few military officers who professed to believe that their military rank had been taken from them by the Royal Warrant of the 1st of January. Mr. Stanhope from the very first declared that the Warrant involved no such change, and that the rights and privileges of the medical officers remained untouched. With a view to put the matter beyond question, he has now intimated to the Royal College of Surgeons of Ireland that "in future, whenever a medical officer's name appears in the *London Gazette*, on appointment or promotion in the department, his corresponding military rank shall be announced, together with his departmental rank." It appears to us that this will place the matter beyond doubt, and that Mr. Stanhope has fully redeemed his pledge that no injury should result to the medical officers from the change in the wording of the Warrant. Of course this mode of dealing with the subject will not give satisfaction to those who, despising their professional status, are anxious to hide it under a title of *honorary* military rank, which they would share with the departments having no such claim as they have to consideration on the grounds of professional attainments and of the risks they incur in common with combatant officers. Such a change would, in our opinion, tend to lower the position of the medical officers. Under the existing system they have secured to them all the substantial advantages enjoyed by officers of the corresponding military ranks, without the assumption of titles which

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could hardly fail to give rise to the impression that, instead of being members of a learned profession and scientific corps, they were merely combatant officers.

TOTAL BLINDNESS FROM CORTICAL LESION.

THE experimental researches of Munk and others have demonstrated that the centre for visual perceptions exists in the occipital lobes, and many clinical observations tend to corroborate this conclusion. Nevertheless, much yet requires to be accomplished, both experimentally and clinically, before this region of the brain can be completely mapped out into its functional areas. An interesting observation by Bouveret is published in the current number of the *Lyons Médical* (No. 46). The patient was a man aged seventy-two, who was found holding on to the trunk of a tree, having clearly been overtaken by a cerebral accident. He was able to walk, but with difficulty; his speech was not natural, and he could not give his address. On physical examination by Bouveret one day later, the patient was found not to be febrile; the intelligence was impaired to some degree, but there was no word-deafness. The pupils were moderately dilated, and acted but slightly to light. The man appeared to be totally blind. There was no motor aphasia; memory, however, is said to have been greatly deranged. The motility and sensation appeared to be unaffected; the cranial nerves were healthy; the optic discs were healthy. The urine contained a trace of albumen. There were no signs of valvular heart disease. The man lived for seventeen days after the onset of the brain disease; five days before death slight left hemiplegia, with contracture, appeared, the left arm and leg being affected, but the face not perceptibly. The necropsy demonstrated the existence of atheroma of the cerebral arteries; both posterior cerebral arteries were atheromatous and occluded by grey-red clots of firm consistence, and adherent to the walls of the vessels. In connexion with these arterial obliterations were found two areas of softening, of unequal extent, on the lower and internal aspect of the brain in the occipital region. The softening destroyed the cortical substance on the internal aspect of both occipital lobes. The cuneus was involved on both sides, and a large extent of the under surface of the temporal lobe in front of the calcarine fissure, but more on the right side than the left. The kidneys were the seat of an interstitial change. The left ventricle was very hypertrophied, and two thrombi undergoing softening were found in the heart; and from these, it is thought, emboli were derived which set up the thrombosis in the posterior cerebral arteries.

SMALL-POX AT LEICESTER.

DURING the past few days five cases of small-pox have been discovered at Leicester, all in the same family, the ages of the sufferers ranging from four to eighteen years. The first case was a boy aged seventeen, who on or about the 7th ult. had a very slight eruption, which was thought at the time to be chicken-pox. About twelve days ago—that is, early last week—three others of the family had a similar eruption. All these four had been well vaccinated, and the attack in each case was an abortive one, hence it was not until the youngest child, aged four years, sickened and an unmistakable rash of small-pox showed itself that the true nature of the disease was suspected by the medical attendant. This last patient is unvaccinated, and the attack is a severe confluent one. The origin of the infection has not yet been discovered, no small-pox having existed in the town for some two years. Suspicion points to the father of the present sufferers having brought it from Warwickshire, he being at work there and coming home to his family on Saturdays, but there is as yet no certainty about this, and further inquiries are being made. All the patients were in the hospital within a very short time of the cases coming under the notice of the borough medical officer of health, together with five others of the family who have not yet shown symptoms. These latter are being kept in quarantine. The house where the outbreak occurred and its contents have been thoroughly and efficiently disinfected, and the bedding &c. destroyed.

THE DEATH-RATE IN IRELAND.

THE last published Annual Report of the Registrar-General for Ireland showed that the death-rate in that portion of the United Kingdom in 1886 was 17·9 per 1000 of the estimated population, and was 0·4 below the mean rate in the preceding ten years, 1876-85. The recorded death-rate in England and Wales during last year was 19·3, and 0·8 below the preceding ten years' average. It would appear, therefore, that the Irish death-rate was 1·4 per 1000 below the death-rate in England and Wales; or in other words, it might be said that, in equal numbers living, 108 deaths occurred in England and Wales to each 100 in Ireland. Before accepting these figures, however, as correctly representing the relative mortality of these two portions of the United Kingdom, it is necessary to inquire whether there are any differences in the age-distribution of the populations, which might cause, at any rate a part of, this divergence between the two death-rates. Bearing in mind the marked proportion of emigration from Ireland that has taken place in recent years, consisting mainly of young adults, we should be prepared to find some wide differences in the age distribution of the remaining population, compared with that of the English population, which has not been subjected to so heavy an emigration rate. The Irish annual report, unfortunately, affords no assistance in determining the effect of its age-distribution upon the death-rate of the country, and does not even give a table of death-rates at different ages, which should find a place in every annual report, either local or national, upon health condition and mortality statistics, as the disturbance caused by variations in proportional age-distribution is thus, in great measure, eliminated. If we calculate from the census reports for England and Ireland, and compare the proportions of the population of those countries living at twelve different groups of ages, we find in the Irish population a considerable deficiency of children under ten years, and of adults aged between twenty-five and forty-five years, whereas at all other ages the proportions exceeded those that prevail in England. Perhaps the most noteworthy feature in the differences of age-distribution in the population of the two countries is the marked excess of elderly persons in Ireland. In each 1000 of the Irish population in 1881 there were 133 persons aged upwards of fifty-five years, against but 105 in England and Wales. If we carefully test the effect of this difference of age-distribution upon the death-rate, we find that the unfavourable effect upon the Irish death-rate of this excessive proportion of elderly persons is only partially counteracted by the small proportion of children under five years, and that the Irish death-rate in 1886 was 1·35 per 1000 in excess of what it would have been if the age-distribution of the population had been the same as it is in England. Stated in another way, if the age-distribution of the population in Ireland last year had been the same as it was in England, the Irish death-rate would have been but 16·5 per 1000 instead of 17·9. Therefore, after due correction for the effect of the different age-distribution of the population in England and in Ireland, it appears that the mortality during 1886, in equal numbers living, was as 117 in England to 100 in Ireland, instead of as 108 to 100, which was the proportion shown above without this correction for differences of age-distri-

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bution. It may be assumed, therefore, that mortality in England exceeds that in Ireland by 17 per cent., and it becomes necessary to inquire what is the probable cause of this low death-rate in Ireland. It was for many years accepted as a fact, upon the authority of the Registrar-General's office, that a not inconsiderable proportion of deaths in Ireland escaped registration. As the Registration Act for Ireland was amended a few years ago with a view to secure more complete registration of births, deaths, and marriages, it is possible that civil registration in recent years has been much less defective than it was before the passing of the Amendment Act, and it would be interesting to know whether this is the view of the Registrar-General of Ireland. The low death-rate in Ireland, however, may probably be attributed mainly to the generally rural character of the Irish population. At the time of the last census in Ireland there were but three cities (Dublin, Belfast, and Cork) with a population exceeding 50,000 inhabitants, and but five other towns with populations exceeding 20,000 persons. When, therefore, the small proportion of urban population of Ireland receives due consideration, it would appear that the death-rate of that country should rather be compared with the rate in the rural districts of England, which in 1886 was 18·1 per 1000, and did not materially differ from the recorded rate last year in the whole of Ireland—namely, 17·9. It is evident that the recorded death-rates in England and Ireland, unless corrected for difference of age-distribution, are not fairly comparable.

TREATMENT OF THORACIC ANEURYSM BY THE INTRODUCTION OF WIRE.

M. CHARMEIL of Lyons (*Revue de Médecine*, Aug. and Nov. 1887) has collected the details of fifteen cases of aortic aneurysm in which "Moore's method," as he terms it, was employed, from the original case in the Middlesex Hospital to three previously unpublished cases in the practice of M. Lépine. Although not one of the fifteen cases has resulted in the cure of the aneurysm, M. Charmeil concludes that the practice itself does not involve any direct danger to the patient, and that the results ascertained at the necropsies have been encouraging. Clinically the treatment has nearly always been followed by local improvement, as well as by relief of subjective symptoms. He therefore thinks the method is justifiable and worthy of continued trial, and indicates as essential to its favourable practice a preliminary exploration of the aneurysm by means of acupuncture needles the use of the watch-spring of Bacelli introduced through a flattened cannula, and the most rigid adoption of antiseptic precautions. At the same time recourse should be had to Tufnell's dietetic treatment.

SCARLET FEVER AND MEASLES AT CLEATOR MOOR.

WE have for some time past noticed with regret the failure of the Cleator Moor Local Board to act according to the advice of Dr. Eaton, their medical officer of health, as to the closing of the schools, with a view to preventing a spread of scarlet fever and measles. The decision was arrived at very deliberately by a majority of five votes, three of which were given by members who were also school managers, and the schools remained open. We now find that up to Nov. 16th of this year there have been fifty deaths from zymotic diseases, as opposed to six during 1886, and that 743 cases of zymotic sickness have occurred, the attacks being mainly amongst young children. It is all but impossible to conceive of circumstances which could have led to worse results; and as the diseases went on extending, we can all understand the attitude of remonstrance which Dr. Eaton felt himself constrained to adopt. Now the sanitary authority have again refused to close the schools for a sufficient time to secure their proper cleansing and disinfection; and, in view of this, Dr. Eaton has informed them that it is obviously useless for him to attempt to influence them further in their doings, and that the responsibility must altogether lie with them. Dr. Eaton has all along done his duty, and he has now acted in a dignified manner. Article 94 of the Education Code of March 6th, 1882, distinctly implies that school closure shall be a matter to be dealt with under "medical authority," but by Article 97 it leaves the burden of responsibility with the sanitary authority, and the Cleator Moor Local Board must bear it.

POISONING BY CHARCOAL FUMES.

AN inquest was held recently at Petton, near Haschurch, on the body of George John Fry, aged ten. The deceased and his sister were put to bed in a room which contained no fireplace. As the apartment had been recently papered, the mother sought to counteract any possible effects of damp by placing in the room a bucket of burning wood ashes. On the following morning the deceased was found lying under the bed quite dead, his pupils being dilated; his little sister lay unconscious, with her face close to the bottom of the door. To this particular position she undoubtedly owes her life. Both children had vomited. The report of the evidence taken at the inquest states that the medical man who was called in attributed death to poisoning by carbonic acid gas. There seems little doubt, however, that the lethal effects were mainly due to carbon monoxide, although probably other oxidation products, to some degree, were factors in causing dissolution. The coroner and jury expressed their sympathy with the bereaved parents, who had acted kindly but unwisely. It is curious that past experience of such catastrophes as the above has not warned people of the danger that lurks in a charcoal stove. If the members of our School Boards require proof of the desirability of carrying out technical education, they may find it in the painful narrative now related.

CHILDREN'S WINTER DRESS.

THERE is a tolerably general impression in many quarters that in order to promote the health of children it is advisable to subject them to a "hardening" process. The meaning of this term it is needless to explain further than to say that its aim is to encourage native energy by opposition, to engender strength of mind and body by early participation in the struggle for existence. The principle is in itself a wholesome one, and is not without its parallel in the history of nature's processes. Care is most necessary, however, in its application. Without such care it may be, and frequently has been, overdone. In particular must it be remembered that all success in the adoption of this plan in education depends on the possession by a child thus trained of a basis of sturdy physical vigour. A delicate child, if treated after the same method, would languish and probably succumb. We have been led into this train of observation by noting the frequency with which one finds children of both sexes and of different ages, constitutions, and positions in life treated after one uniform prescription of hardy training. We would now concern ourselves particularly with that aspect of the question which has to do with clothing during such inclement weather as prevails at present. That considerable variation of opinion should obtain among parents with regard to this subject is only to be expected. Here, it may be said with truth, is room for the wise exercise of private judgment, and here we may in many cases find occasion to apply the maxims of the hardening system. So much may safely be granted, but we must not forget that certain essentials cannot be dis-

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pensed with under any plan adopted. Among these the maintenance of bodily heat and dryness is all-important, and certain of the most prevalent customs of domestic life incline us to believe that the fact is but slightly understood. The hat, for example, is often, in the case of girls, far too light and too cool. Instead of straw, we would substitute some form of woollen material, just as boys, with few exceptions, are commonly provided with hats of wool or felt, which are at once light, comfortable, and suitably protective against weather. Under-clothing is another matter which does not as yet receive adequate attention. We still find the linen shirt or chemise worn very commonly next the skin. This is an error in personal hygiene which cannot under any system be excused. Summer and winter, indeed, present no material difference as regards the choice of an under-garment. Lighter or heavier, the material certainly should vary in accordance with the degree of external cold; but throughout the year no other substance is so wholesome or so preventive of chill as a woollen fabric. Of the feet we need, perhaps, hardly speak. For them, as for the rest of the body, a casing of wool is the prime requisite; and, indeed, the use of this material as a general investment for the skin will be allowed by members of the profession generally to be the great regulating principle in arranging the dress of children, whatever the view most approved in their physical education.

SANITARY CONDITION OF MARGATE.

WE learn with much satisfaction that the Town Council at Margate have at last awakened to the necessity of protecting the lives and health of the residents and visitors to this town. At a meeting, which was held on Tuesday, it was resolved that a drainage scheme for the whole borough should be provided without delay, and a committee was appointed to learn the systems in use in other places with a view to the adoption of that which is most suitable for the requirements of Margate. The Town Council have undoubtedly done wisely in deciding to remove from Margate the opprobrium from which the town now suffers. If they honestly carry out their intentions, it will not be long before Margate attains the high reputation to which it is entitled by its situation.

SMALL-POX IN RIO DE JANEIRO.

IT appears from the Monthly Bulletin on the mortality in the city of Rio de Janeiro, issued by Dr. J. Pires Farinha, that a remarkable epidemic of small-pox was recently prevailing there. These monthly returns show that in the first eight months of this year 2003 deaths from this disease were recorded within the city. The deaths both in January and in February numbered 74; in the following months they rapidly and steadily increased to 699 in August, the return for which month is the last that has yet come to hand. The population of the city is estimated at 400,000 persons, and the above-mentioned 2003 deaths from small-pox in the first eight months of this year were therefore equal to an annual rate of 7·5 per 1000 persons living. It may be noted that this death-rate from small-pox is more than three times as great as that which prevailed in London during the severe epidemic in 1871. The return shows that of these 2003 deaths from small-pox 1178 were of males and 825 of females; this inequality in the deaths of males and of females would probably be explained by the difference between the numbers living of each sex, as it appears from the census taken in 1872 that the population of the city at that time included 134,653 males and only 94,090 females. This marked inequality in the numbers of the two sexes would appear to occur principally between the ages of fifteen and thirty-five years, for of 715 deaths from small-pox occurring at these ages 517 were of males and only 198 of females. The small proportion of small-pox deaths occurring among children under five years of age, compared with those of adults, points to some exceptional features in this small-pox epidemic in Rio de Janeiro, of which Dr. Farinha's Monthly Bulletin does not afford the necessary explanation.

CONGRESS ON TUBERCULOSIS.

As we announced last week, an interesting gathering will take place in Paris from July 25th to 31st, 1888—viz., a Congress of Medical Men and Veterinarians to promote the scientific study of Tuberculosis in Man and Animals. The organising committee includes M. Chauveau as president, M. Villemin as vice-president MM. Butel, Leblanc, Nocart, Rossignol, Cornil, Grancher, Lannelongue, and Verneuil as members of the committee, and M. Petit general secretary. Certain questions have been prepared by the committee, but members of the Congress can also communicate papers on the subject apart from these. One day will be given up to anatomical demonstrations in M. Cornil's laboratory, another to examinations and necropsies on tuberculous animals at the Alfort College. The subscription for membership is 10 francs, and entitles the member to a copy of the Transactions of the Congress. The sittings will be public, all communications and discussions being in the French language. The questions proposed by the committee are: 1. On the dangers arising from the use of meat and milk of tuberculous animals; and preventive measures. 2. The races of man, species of animals, and organic media with respect to their liability to tuberculosis. 3. On the paths of introduction and propagation of the tubercular virus in the economy; and prophylaxis. 4. On the early diagnosis of tuberculosis in man and animals. Communications are specially invited on the subjects of heredity; contagiousness; experimental tuberculosis; variations in animals; the means of diagnosis between the lesions caused by Koch's bacillus and those due to other microbes, parasites, or foreign bodies; tubercular affections complicated with lesions produced by other microbes; mode of formation of giant cells; evolution of local tuberculosis; agents destructive of Koch's bacillus; the local and general methods which may arrest the extension of experimental tuberculosis; and the value of surgical treatment in the tubercular affections. Further particulars may be obtained of the General Secretary, Dr. Petit, 11, Rue Monge.

TOUTING PRACTITIONERS.

WE are flooded with handbills, cards, &c., announcing the cheap terms or the prodigious skill of their authors for the cure of all varieties of disease. In one case, advice and medicine are to be had for one shilling, children sixpence; in another, it is announced that a children's medical club will be opened in a grocer's shop, and that members, for one penny per week, will be entitled to free medical attention &c.; in a third, a simple card in a newspaper is made to do duty, inserted for weeks in succession in the leading papers of a large provincial town; in a fourth, a medical man—we will presume a very young one—advertises his address and terms on a card which is obviously meant for free distribution. For the present we treat these devices without reference to names; but we may not always be so considerate. If gentlemen of a liberal profession think it fair to violate all its traditional manners and methods, they must not be surprised if they are advertised a little more widely than they intended themselves to be. One of these gentlemen magnifies himself greatly. His experience, he tells his patient readers, is "as extensive as any physician in the West-end; such a man's fees for each piece of advice given is from one to three guineas, whereas Dr. [illegible]

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charges no fee at all if treated at the surgery, *but just enough to pay for the best drugs"!* The benevolence of such practitioners excites more astonishment even than their skill. But, seriously speaking, touting practitioners are becoming a nuisance and a discredit, and will have to be dealt with either by the licensing bodies to which they owe their diploma or by their medical brethren.

THE BACILLUS OF WHOOPING-COUGH.

DR. AFANASIEFF has succeeded in finding and cultivating what he believes to be the true bacillus of whooping-cough. This microbe differs distinctly from all other bacteria which have been described. It is somewhat like Friedländer's pneumonia bacillus, but is shorter and thinner than the latter; besides, in gelatine it does not form nail-shaped cultures, those which are produced having no hemispherical head. Its potato cultures, too, are quite different from those obtained from Friedländer's bacillus. Afanasieff's bacillus exhibits a remarkable degree of vitality, for jelly cultures that have become dry and have been kept for four months, appearing under the microscope to be more or less destroyed, are still capable of producing fresh cultures when fresh media are inoculated from the dried mass. Dr. Afanasieff's researches were chiefly made from the sputum of some of his own children, who were affected with whooping-cough. The mouth was well washed out with a permanganate solution, and the mucus coughed up after the next paroxysm or two examined. In this mucus, after staining with methyl-violet, and in the pus-corpuscles contained in it, the bacilli could be seen with a magnifying power of from 700 to 1000 (Zeiss's eye-piece 3 or 4, $\frac{1}{17}$ oil immersion objective) as short rods, sometimes single, sometimes in twos, or even in short chains running in the direction of the mucus, sometimes again in small clusters. Their length was from 0·6 μ to 2·2 μ. Of course other bacteria were found. Pure cultures, however, were easily made on agar-agar, meat-peptone jelly, potato, &c. Dogs and rabbits were inoculated with a fluid culture mixed with chloride of sodium solution, some by means of injections into the trachea, others by direct injections into the lungs. All the animals were seriously affected, and many of them died. The symptoms were somewhat similar to those of whooping-cough, including cough, dyspnœa, and redness of the eyes. Many of the cases were complicated by broncho-pneumonia. On examining the bodies of those animals which died, the mucous membrane of the air passages was found much reddened, and coated with a tenacious clear mucus, in which, as well as in the pneumonic patches in the lungs, the bacilli were found. Similar appearances and the same bacilli were observed in the bodies of children who had died from whooping-cough. As to treatment, inhalations and spray of various antiseptic drugs would appear to afford the most ground for hope in relieving and shortening this complaint. The author points out that the quinine, benzoin, and other substances which have been used as applications to the nasal mucous membrane by Michael and others, under the idea of combating a reflex affection, are really, perhaps, beneficial from their property of destroying bacilli.

CHOLERA INTELLIGENCE.

No official intelligence is now published as to cholera in Southern Europe. From New York we learn that the passengers of the steamer *Britannia*, from Naples, who had been in quarantine since Oct. 18th owing to an outbreak of cholera on board, were permitted to land on Nov. 26th. There is also intelligence to the effect that, owing to the outbreak of cholera in Chili, communication between that country and the neighbouring States will be closed during the present month.

MEDICAL GRIEVANCES IN BELFAST.

THE *Northern Whig* of Belfast, of Nov. 21st, contains a very able address to the Medical Defence Association by Dr. Lindsay, the president. This address suffices to show that in medical matters, as in others, Belfast knows its own mind, and is very likely to realise its just claims to consideration. Dr. Lindsay deals chiefly with the grievances of Belfast under the new reign and *régime* of the Royal University. One chief complaint is that sudden and great alterations of the medical curriculum are sprung upon students in the middle of their course of study, contrary to the implied contract between Universities and their *alumni* that great changes shall not operate retrospectively. According to Dr. Lindsay, there are something like four pages of alterations in the recent Calendar of the University, affecting students who began their studies on different conditions. Another alleged grievance is the imperfect representation of Belfast in the Examining Board of the Royal University. At the recent examinations 60 per cent. of the successful candidates for the degree of M.B. were from Belfast, and yet there is only one Belfast examiner in thirteen. No wonder that Dr. Lindsay should complain. And the measured and dignified language in which he does so gives irresistible cogency to his case, and even to that part of it which claims a University for Belfast. He deals with the argument that there is not sufficient clinical material in Belfast for a great medical school, by arguing that such material exists in much larger degree than in Edinburgh, the largest British medical school. He regrets that, so far, difficulties have proved insurmountable in the way of bringing the union hospitals into use as a field for clinical study. But he still hopes for success, and points out that other great fields have been opened in the Belfast District Lunatic Asylum, the Ulster Eye, Ear, and Throat Hospital, &c. Other speakers criticised the curriculum of the Royal University. Not the least satisfactory part of Dr. Lindsay's address was his vindication of the character of medical students.

POISONING WITH COCAINE.

SINCE the first employment of cocaine as a local anæsthetic, frequent notes have directed attention to serious symptoms which appear to have been attributable to it These symptoms agree, in the main, in most of the recorded cases. Ordinarily the individual becomes deadly pale, and is found to be almost pulseless; occasionally throbbing in the head is mentioned; more usually there is faintness or giddiness, which may pass on to complete loss of consciousness, followed by severe prostration or continued giddiness. Severe vomiting and abdominal cramp are said to have resulted from taking nearly five grains of hydrochlorate of cocaine. In spite of this record, however, some scepticism exists concerning its toxic influence. It has been suggested that most of the symptoms may be regarded as resulting from fright of an impending operation. The smallness of the dose which has ordinarily caused alarm lends some weight to this hypothesis, although it would not explain the occurrence of vomiting. The last recorded case comes to us in too fragmentary a condition to be of much service in determining the question. We learn from an evening contemporary that M. Laborde communicated to the Physiological Society of Paris the fact of one of his colleagues having "narrowly escaped death from a dose of cocaine taken for the purpose of having a tooth extracted." The dose taken is not mentioned, nor is the time stated that elapsed before the alarming symptoms commenced, but we are told that "he became deadly pale, completely lost consciousness for a while, suffered intensely for some time, and had the sensation of approaching death." Although undoubtedly interesting, the account leaves much to be desired. At best it

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suggests the need for a certain amount of caution in the use of cocaine, and also for fresh investigations to determine the conditions under which such toxic results are to be feared. The value of cocaine as a local anæsthetic is too great to allow vague suggestions of danger to pass unchallenged and unexplained.

SCARLET FEVER AND MEASLES IN BOLTON.

THE town of Bolton is suffering from an extensive prevalence of scarlet fever and of measles. Of scarlet fever 227 cases have been notified, and of these 62 have been removed to the infectious hospital, the remainder being dealt with in their homes. There are also some 200 cases of measles scattered about the town. From one school nearly one-half of the scholars have been absent, but the managers hesitate to take the step of closing it. The real value of school closing as a preventive measure lies in its application at the right moment; and hence the Education Department do not leave it to the managers to decide, but require the school to be closed on the instruction of the sanitary authority, who, in such a matter, are naturally advised by the medical officer of health. And not only so, but, though the managers may appeal against the closure, they are obliged to carry the instruction into effect pending the decision on their appeal. Such diseases as scarlet fever and measles are to a large extent distributed by the aggregation together of children in schools; and whilst it is of importance from one point of view that education should not be needlessly interfered with, it is equally imperative that the health and lives of children should not be sacrificed to a mere desire to promote mental culture, and to procure the full grant allowed by the central department for a large average attendance. When half a school is already absent through ill-health, this latter consideration hardly comes into play; for whilst no allowance is made for absent children in deciding as to the amount of grant, total closure of the school on medical authority is kept in view.

DEATHS UNDER ETHER.

A RECENT fatality under ether calls for comment. The verdict returned was "Death from syncope while inhaling ether," and so rarely is death occasioned by heart failure during the administration of this agent that one is led to inquire how such a casualty could be brought about. The patient, a female aged forty-five, was the subject of malignant disease of the mamma, and was actually undergoing an operation at the hands of one of the staff of the Hospital for Cancer, Brompton, when the death occurred. Ether was given by means of Mr. Clover's inhaler, and no premonitary symptoms of danger occurred. The patient's pulse suddenly flagged, and her face became cyanosed. The most strenuous attempts at resuscitation failed in their object, although persevered in for some time. Death from syncope under ether sometimes occurs at the very outset of the administration, and is then due to the excessive strength of vapour employed. In the later stages of ether narcosis, death from syncope is nearly always brought about by the non-admission of air; the patient is, in fact, semi-asphyxiated, and the heart, enfeebled by disease, is unable to stand the additional strain thus imposed upon it. Clover's excellent rule to raise the face-piece from the patient's countenance at every sixth respiration cannot be too strongly insisted upon, as when it is put into practice the danger of ether syncope is reduced to a minimum. Much as deaths under anæsthetics are to be deplored, there remains the comforting reflection that when ether is administered with proper precautions, and by a competent person, *who does not allow his attentions to be diverted from his patient*, little danger exists, at least from cardiac failure. The presence of valvular lesions of the heart does not contra-indicate, but rather calls for the employment of ether; and so the existence of "disease of the heart" recorded in the case of which we treat goes to show that ether was rightly employed. Of course, *arterial* disease is another matter, and graver risks are incurred by the use of ether when such is known to be at all extensive.

GLASGOW CENTENARIANS.

THERE has just died in Glasgow an undoubted centenarian, Miss Jane Gibson, probably the oldest inhabitant of the city, and one of the few links which connected Glasgow society of last century with that of to-day. Miss Gibson was born on May 22nd, 1785, and died on Nov. 25th, 1887, aged 102 years and 187 days. She came of an old family, and had led an active and intellectual life, being a member of the brilliant literary circle which graced Edinburgh in the early part of this century. To the last she retained the cultured tastes she then acquired. Until within a few days of her death her faculties, with the exception of her hearing, remained unimpaired, and she managed her household and business affairs herself. The *Glasgow Herald* points out that Miss Gibson was one of four undoubted centenarians of our day. All four were of the upper class, all four were women, and the two oldest of them were spinsters. First in the race was Ann Wallace, one of the twenty-one children of John Wallace of Kelly; she was born on July 1st, 1770, and died unmarried on Feb. 25th, 1873, aged 102 years and 239 days. Next to her, and distanced by 52 days, came Miss Gibson, referred to above. Isabel Ewing, daughter of William Ewing, Bailie of Glasgow, came next; she was born on March 25th, 1755, and died on Sept. 28th, 1885, aged 100 years and 187 days. Finally came Jean Brown, daughter of Alexander Brown, Dean of Guild of Glasgow, who was born on Nov. 15th, 1774, and died on Nov. 27th, 1874, aged 100 years and 12 days.

THE PROPERTIES OF ACETANILIDE.

MM. DESTRÉE and SLOSSE, of Dr. Desmeth's clinic in Brussels, have recently addressed themselves to the solution of some questions concerning acetanilide or antifebrin which have hitherto been left unanswered, or regarding which only contradictory observations have been published. Though acetanilide was credited with a microbicide action by Krieger on the ground of its success when used with collodion as an antiseptic application in surgery, Miquel has published some observations in the *Annales de l'Observatoire de Montsouris*, showing that considerable quantities of acetanilide may be introduced into broth cultures without hindering the development of colonies. In order to test this alleged property of the drug, MM. Destrée and Slosse inoculated a number of tubes of alkaline and slightly acid gelatine with bacterium aeriginosum in the Hygienic Laboratory of the Brussels University. In six days' time, when the gelatine in some control tubes had become liquid, that in the tubes containing 1 or 2 per cent. of acetanilide was still quite solid and unchanged in colour, presenting only a slight cloudiness near the surface, in which portion the microbe was seen by the microscope. It therefore appeared that the acetanilide, though it had retarded the development of the bacterium to a very marked extent, had by no means destroyed it. Regarding the effect of acetanilide on the vaso-motor nerves, Anseroff, in a paper read before the Moscow Congress last winter, showed reasons for believing that it acted as a stimulant to the vaso-dilator nerves. MM. Destrée and Slosse, however, after injecting one thigh of a frog with the drug, cut off the two thighs of the animal, and noted that the blood flowed much more freely from the limb that had not been injected than from the one which had, thus

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showing that the acetanilide had had a vaso-constrictor effect. The effect on the blood has been studied by various observers. Hinsberg and Kast, and also Weill, have shown that ordinary medicinal doses do not affect the blood, but five or six grammes given to a medium-sized dog produced cyanosis, due to the transformation of the hæmoglobin of the blood into methæmoglobin. Hinsberg and Kast, and also Murray, found that the blood pressure is augmented by acetanilide, and Reise speaks of the pulse as being increased in tension. Hare (*Detroit Therap. Gaz.*), on the other hand, found the reduction of temperature frequently accompanied by a diminution of the intra-arterial pressure, which, however, was interrupted by sudden and inexplicable augmentations. MM. Destrée and Slosse carried out a series of observations on rabbits with a Ludwig's kymograph in the Physiological Laboratory of the University of Brussels, and found that the pressure in the carotid could be lowered from forty-five to thirty-one millimetres by three injections of one centigramme of acetanilide. The reduction appeared, however, to be temporary only.

DESTRUCTION BY ARTIFICIALLY INDUCED DISEASE.

THE proposal attributed to M. Pasteur that colonists should call disease to their aid for the extermination of rabbits has properly shocked the sensibilities of the world. It has already been compared to the poisoning of wells in a hostile country, a mode of warfare which would be considered disgraceful to any civilised nation. The suggestion that artificially induced disease should be utilised for the killing of the lower animals could hardly have originated in the mind of a medical man. We hope this will be clearly understood, and that no mistake on this point will allow Medicine to be accused of a thought so foreign to her best teachings. If disease came to be regarded as a means of war against pests, it would perhaps not be long before the revolting proposal were entertained by hostile nations for the "removal" of their enemies. Civilisation places some restrictions upon the actions of individuals, and certainly a proper sentiment recoils from the proposal to thus misuse medical knowledge.

MERCER'S HOSPITAL, DUBLIN.

FOR a considerable time past, as the medical profession in Dublin are aware, there has been a great want of harmony among the medical staff of this institution. This at last culminated in a notice of motion by Dr. Knight to the effect that Mr. E. Stamer O'Grady (the senior surgeon) should be removed from the hospital by reason of his having acted against the duty of his office and the general interest of the corporation. Accordingly an inquiry of a most exhaustive nature was held by the governors, all parties being represented by counsel, and, at the termination of the evidence, which was most voluminous, the inquiry was adjourned to the 28th ult. (last Monday) in order to hear counsel on both sides. Owing, however, to the illness of the assessor it has been further adjourned to the 12th inst., when it seems extremely probable that some kind of compromise will be effected between the litigants. Certainly, so far as the interests of a charitable institution are concerned, it is of vital importance that the hospital staff should work in harmony for the future or new men be appointed in their place. It is unnecessary, even if we could spare the required space, to enter into the series of charges made against Mr. O'Grady by his colleagues; they, however, may be said to consist chiefly of a certain irritability of temper, harshness to the nurses and house-surgeon, and want of concord with the other members of the staff. We have read carefully all the evidence, and are compelled to come to the conclusion that the various allegations are indeed very petty, and certainly most inadequate to demand the resignation of an accomplished surgeon, such as Mr. O'Grady undeniably is. The trivial complaints and evidences of alleged bad temper and incompatibility have been dilated on *ad nauseam;* but it has never for a moment been put forward that Mr. O'Grady has ever failed in professional ability, or shown any languid interest in the prosperity of the hospital with which he is connected. This being so, it would, in our opinion, be contrary to the claims of justice, and would unquestionably furnish a bad precedent, if the governors—or rather a majority of those gentlemen—were to remove the defendant, and thus cause irreparable injury to his professional reputation. We sincerely trust, for the sake of an old institution, of the medical staff generally, and of the interests of the community at large, that an amicable understanding may be come to between Mr. O'Grady and his colleagues; and that for the future all parties may work harmoniously together, and by every means in their power combine to advance the reputation and well-being of Mercer's Hospital.

FEVER IN LONDON.

THE number of cases of scarlet fever admitted into the hospitals of the Metropolitan Asylums Board during the week ending Nov. 26th showed an increase upon the previous week, the numbers being respectively 191 and 174, thus showing that the epidemic followed the course indicated by the experience of previous years. Fresh cases are now again diminishing, and it may be expected that this decline will be steadily maintained until the termination of the epidemic. Enteric fever is, however, increasing, the patients admitted during last week being twenty-six, or twelve in excess of the preceding week. No case of small-pox or typhus fever was reported, the metropolis having remained free from the latter disease for some weeks.

HYDROCHLORIC ACID IN GASTRIC JUICE.

A SATISFACTORY reaction for hydrochloric acid in gastric juice appears still to be an unsupplied want. M. Ewald has brought forward a new reagent for the detection of free hydrochloric acid. It is composed of one part of vanillne, two parts of flucoglycine, and thirty of alcohol. On warming slowly the liquid to which the reagent is added, there appears a beautiful crimson-red colour if the liquid contains hydrochloric acid in not less proportion than ·05 gramme per litre. Lactic acid does not give this reaction.

PARTNERS ON A HOSPITAL STAFF.

THE question is sometimes asked whether it is for the good of a hospital or an infirmary that two or more members of a family or a firm should be on the honorary staff. It is evident that in some circumstances two partners may be so specially fitted for such an appointment, or so markedly superior in skill and experience to their competitors, that it would be an injury to the institution and an injustice to the patients to refuse to elect them. It is, however, equally evident that there are grave disadvantages in allowing the working of a hospital to fall in an undue measure into the hands of any one individual, and perhaps still more of any one family or firm of partners. One of the important objects for which hospitals are maintained is the aid they afford in the diffusion of medical knowledge. It is a good thing to have this benefit shared by as many practitioners as possible. Anything like a clique on a staff is thoroughly bad, and seriously interferes with the proper working of a hospital. It would be undesirable to make any rigid rule in such a matter as this, but we can hardly imagine any circumstances in which it

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would be right to have more than two members of a family or firm holding office at the same time; and when the claims of rival candidates for a post are fairly balanced, the fact that one of them is connected with an acting member of the staff should, as a rule, be held of sufficient importance to turn the scale against him.

HEREDITY AND NURTURE.

MR. FRANCIS GALTON'S first lecture on Heredity and Nurture at the South Kensington Museum on Saturday last called together a large audience, composed in part of the ordinary students of the school, but also including several doctors and actuaries interested in the subject. The lecturer dealt mainly with methods of exact human measurement, using the word "measurement" in its widest sense. He exhibited improvements upon the instruments employed at the Health Exhibition in 1884, and showed an instructive series of curves indicating the strength of pull, the swiftness of blow of arm, the weight, the height, the breathing capacity, and the keenness of sight deduced from observations upon a very large number of individuals. In conclusion, he urged the need for a permanent anthropometric laboratory, with a library of family records and biographies, thinking that the library might ultimately become a most important store-house of materials for the study of hereditary faculty. Mr. Galton caused some amusement by a "curve" he had constructed from the data given by Sir James Paget in his well-known paper upon "What becomes of Medical Students."

MEDICAL HONOURS.

THE Queen has been graciously pleased to give orders for the appointment of the following, amongst other officers, to be Companions of the "Distinguished Service Order":—Surgeon-Major Thomas William Patterson, Medical Staff; Surgeon-Major Robert de la Cour Corbett, M.D., Medical Staff; Surgeon-Major Frederick William Wright, Indian Medical Service, Bengal; Surgeon Alfred William Frederick Street, Indian Medical Service, Bombay; Surgeon Alexander Peers Adams, Indian Medical Service, Madras; and Surgeon William Ainley Sykes, Indian Medical Service, Bengal. The Queen has also been pleased to direct that these distinctions shall take effect from July 1st, 1887.

AN INTERESTING PROBLEM.

CAN a man cough himself to pieces? At an inquest recently held on an inmate of the Borough Asylum, considerable interest was attached to the finding of a broken rib in the body of the patient. The doctor who gave evidence endeavoured to point out that under some abnormal conditions bones may be broken during life by muscular efforts, or even by the act of violent coughing. The coroner, in commenting upon this, appeared to have much difficulty in recognising the existence of such an unusual occurrence, and naïvely stated to the jury that they would doubtless have equal hesitation in appreciating the learned theory that it was possible for a man to cough himself to pieces! A perusal of the writings of Dr. Weir Mitchell and Prof. Charcot will show that spontaneous fracture of the bones in locomotor ataxy is not uncommon; the importance of this in medico-legal inquiries is worth remembering, and throws much light upon questions affecting the treatment of the insane.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. André J. Duval, of Geneva, author of a classical work on the History of Medicine.—Professor Fechner, of Leipsig.

THE CROWN PRINCE OF GERMANY.

SIR MORELL MACKENZIE continues to receive highly satisfactory reports as regards the present condition of the Crown Prince of Germany. The slight enlargement of the left submaxillary gland which took place at the end of October was followed by a similar swelling on the opposite side after the occurrence of œdema in the early part of November. Considerable diminution has taken place in both these swellings. Sir Morell Mackenzie considers that in view of the fact that there has been no actual microscopic proof of the existence of cancer, the diminution in the size of these swellings is not without a certain degree of clinical importance.

ALLEGED DISCOVERY OF A CANCER BACILLUS.

As might have been expected, the statement so widely circulated a week ago, to the effect that Dr. Scheuerlen of the Charité Hospital, Berlin, had discovered "the cancer bacillus," has received much qualification. It has since been declared that the inoculated animals have not exhibited any evidence of cancerous formation, and it is hinted that the experiments are very incomplete, and the "discovery" has been announced "more with regard to the present circumstances than to scientific accuracy." Should this be the case we may refer Dr. Scheuerlen to the inquiry conducted by Messrs. Shattock and Ballance, and communicated some months ago to the Pathological Society. He will find there a series of arguments in favour of the parasitic theory of cancer, but, on the other side, he will see that these investigators failed in obtaining any distinctive micro-organisms, by the cultivation process from either healthy or diseased tissues. They did occasionally get evidence of contamination with bacteria, and it would be well to know what precautions were taken by Dr. Scheuerlen to avoid such contamination. Messrs. Shattock and Ballance suggest that the parasite is not bacterial, but possibly allied to the lowest protozoa; and the want of confirmation of the discovery of the bacillus will harmonise with their negative results.

CHROMOGENIC MICRO-ORGANISMS.

IT has been found that ·03 per cent. of a gramme of corrosive sublimate prevents the colouration of artificial cultures of the pyocyanogenic microbe and of the fluorescent microbe of the rabbit's intestine, whilst it requires ·04 per cent. to arrest the growth of the bacillus. MM. Roger and Charrin, having determined this fact, point out its possible application in the antiseptic system, since it may be practicable to render the microbe harmless without destroying its life, and consequently perhaps without killing the vital tissues in which the germ may be growing.

MEASLES IN THE HEBRIDES.

THE effects of an epidemic of measles in a population living in insanitary conditions, and presenting to some extent a virgin ground for the poison, are well illustrated by the serious and fatal outbreak of the disease in the Hebrides, more especially in the small island of Eriskay. This island, which forms part of South Uist, lies in the sound between South Uist and Barra, and contains a population of about 480, living on sixty small crofts. As these crofts are too small to support so many, nearly all the able-bodied men and many of the young women go every summer to the fishing on the east coast of Scotland. At Fraserburgh, in July and August last, measles broke out among those engaged in this work, and three girls from Eriskay died. Others brought home the infection in September, and since then the increase has spread widely.

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In Eriskay eight people have died in less than two months, two of these being strong men. The disease has entered almost every house. The infection was carried to Barra, where several deaths have occurred. In South Uist also over 100 persons are at present ill. Bad feeding, bad housing, and want of proper attendance seem to account for the unusual fatality of the epidemic.

PHARYNGEAL VEINS.

ON the posterior and lateral walls of the pharynx a network of veins exists, having very unequal meshes. The principal efferent vessels empty themselves into the internal jugular veins, and communicate superiorly with the pterygo-palatine vessels, median and posterior meningeal. The plexus is the terminal for numerous veins which proceed from the muscles, and especially of the mucous coat of the pharynx, beneath which they form the submucous network. MM. Bemiar and Lapeyre have studied specially this network, which is found to present at the level of the inferior part of the posterior wall of the pharynx a very remarkable deep plexus, not described by authors, and merely mentioned by Cruveilhier. It is constant, and met with at all ages. It exists between the mucous coat in front and the inferior constrictor muscle behind, whilst the inferior angle of the middle constrictor partially conceals it. Irregularly oval in shape, its larger extremity is superior; it is composed of an agglomeration of a large number of veins ranged one against another, frequently anastomosed; and into it run veins from the pharyngeal mucous membrane, which form fine arborisations around it.

THE TREATMENT OF HEADACHES BY NITRO-GLYCERINE.

DR. TRUSEVICH publishes in the *Ejenedélnaya Klinicheskaya Gazeta* a series of observations on the effect of nitro-glycerine on headaches. He adopts in the main the classification of headaches made by Dr. Day, whose work he translated into Russian, in which language it has already gone through two editions. The preparation generally used was the 1 per cent. alcoholic solution, though in a very obstinate case the 10 per cent. solution was used, two drops being first given, and after an interval of two minutes three more. The result of this heroic medication was that the patient, a girl of fifteen, became pallid, and her pulse very weak; however, a little water and some smelling salts quickly revived her, and she was none the worse. The nitro-glycerine had no effect on the headache, which was of a persistent character, and was probably due to some organic lesion, perhaps an affection of the cranial bones. As a rule, two or three one-drop or two-drop doses of the 1 per cent. solution placed on the tongue at intervals of a very few minutes sufficed to arrest the headache. The conclusion arrived at was that all cases which depend entirely, or almost entirely, on a vaso-constrictor neurosis are immediately curable by nitro-glycerine. In cases where the cerebral anæmia is partly due to deficiency or poorness of blood, milk, iron arsenic, quinine, and other tonic remedies are of course required in addition to the nitro-glycerine. The chief indications for the successful treatment of migraine by nitro-glycerine are pallor of the face and a paroxysmal character of the pains, also their augmentation on pressure of the carotids, and their diminution when the head is lowered. In "nervo-hyperæmic headaches" nitro-glycerine is useful, but it only acts indirectly by dilating the vessels in other parts of the system, and thus relieving the congestion in the cerebral vessels. It is positively injurious in headaches depending on passive hyperæmia. On this subject, however, Dr. Trusevich promises a future article. As a rule, he thinks that if nitro-glycerine fails to relieve, the prognosis is probably bad, as the pain is generally due to some organic lesion, such as thickening of the fibrous coverings following chronic alcoholism or syphilis, or to some osteophyte caused by periostitis, or, lastly, to morbid changes in the cranial bones. In some headaches of rheumatic origin nitro-glycerine appears to have some effect, but Dr. Trusevich thinks that in others massage would probably be more beneficial. Where headaches are due to heart, lung, or to hepatic disease which causes passive congestion in the cerebral vessels, nitro-glycerine cannot be expected to do much good.

EPIDEMIC INSURANCE MOVEMENT.

AN excellent system of insurance against the small-pox prevalent in Sheffield has been set on foot by workmen in more than one factory. It having come to their knowledge that some of their fellow-workmen continued their attendance at the factory, although they came from infected houses, they called a meeting, at which it was decided that pending the period of danger a levy should be made, amounting to 2½ per cent. of each man's average earnings, so as to provide a fund out of which any man coming from a house where there was small-pox could be paid his average weekly wages, until it was certified that there was no further risk of infection. The example is worthy of imitation for diseases other than small-pox.

ENDO-LARYNGEAL EXTIRPATION OF BENIGN GROWTHS.

IN the account published last week of Professor Schnitzler's paper on Malignant Degeneration of Laryngeal Papillomata, the accidental omission of a negative made it appear that Professor Schnitzler discountenances endo-laryngeal operations. This is on the face of it so contrary to practice, that few, we hope, have been misled by the statement. Indeed, Professor Schnitzler stated the exact opposite, for he intimated that the occurrence of such malignant degeneration, even if favoured by repeated attempts at removal, should by no means be held to condemn endo-laryngeal extirpation of benign growths. The rarity—sufficiently exemplified in the remarks made at the discussion—of malignant degeneration is of itself sufficient to prove that external irritation plays little, if any, part in the morbid change.

PHYSIOLOGY OF RENAL SECRETION.

SOME time ago Max Hermann stated that the secretion of the kidneys varied on each side. It was objected to his experiments that reflex influences consecutive to exposure of the ureters might explain the difference. Zuelzer has studied the question in a case of vesical ectopia. Iodide of potassium, given by the mouth, appeared in the urine from one ureter at a different time from that of the other side; salicylic acid showed the same difference. Chemical analysis also proved that the proportions of urea, phosphoric acid, and sulphuric acid differed on the two sides. Great differences were observed in the quantity and density of the urine discharged from the two sides respectively. This difference leads Zuelzer to think that the composition of the blood in the aorta is far from being uniform.

FOREIGN UNIVERSITY INTELLIGENCE.

Halle.—Dr. Friederich Kretsch has qualified as *privat-docent* in Otology.

Marburg.—Professor Roser will retire at the end of the winter session, when he will have been fifty years in practice.

Moscow.—A Clinic for Mental Diseases has just been opened under Professor Kojevnikoff. This is said to be the

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first clinic of the kind opened in any Russian university, though something of the kind exists in connexion with the St. Petersburg Military Medical Academy.

Munich.—Dr. Tappeiner, Professor in the Veterinary School, has been appointed Extraordinary Professor of Pharmacology in the University.

Zurich.—Professor H. v. Meyer celebrates the fiftieth anniversary of his promotion to the degree of Doctor of Medicine on Dec. 2nd. The medical students have been preparing a grand festival *commers* for the occasion.

ILLNESS OF LORD LYONS.

FROM the bulletin published on the morning of the 1st inst. it appears that Lord Lyons, of whose illness our readers will be aware, passed a quiet night, and that his strength is fairly maintained. An account received at the time of our going to press states that no change has taken place in his lordship's condition.

THE large number of seventy-four students have enrolled their names for a course of lectures on Diseases of the Ear just begun by Dr. Thomas Barr at the Glasgow Ear Hospital. When it is considered that this is an optional course of study, and that in their professional examinations students are not tested as to their knowledge of this branch of study, such an attendance must be considered as most satisfactory, and is a good indication of the quality of students attending the Glasgow medical schools. The ordinary attendance on this course in the past has been from ten to twenty, so that the contrast this year is very striking.

A PETITION has been presented to Her Majesty in Council by the Royal College of Physicians of London and the Royal College of Surgeons of England praying for the grant of a Charter under the style of "The Senate of Physicians and Surgeons," with power to grant degrees in medicine and surgery. The petition will be considered by a committee of the Privy Council on Jan. 16th.

THE House Committee of the London Hospital have, at the request of their Imperial Highnesses the Crown Prince and Princess of Germany, granted permission to Mr. Mark Hovell, assistant aural surgeon of the hospital, to attend the Crown Prince during the remainder of his illness, without his incurring the loss of his appointment.

WE understand that Dr. Bruce Low, M.D. and C.M. Edin., medical officer of health for Helmsley, Yorks, and Treasurer of the Yorkshire Association of Health Officers, has been appointed by the President of the Local Government Board to a medical inspectorship of that Board.

ON the 24th ult. Dr. Watkins of Newton-le-Willows met with a serious accident whilst driving. The horse shied at some object, and the unfortunate gentleman was thrown out of his conveyance, falling on his head and sustaining concussion of the brain.

THE Bradshawe Lecture will be delivered at the Royal College of Surgeons on Wednesday next, Dec. 7th, at 4 P.M., by Sir Joseph Lister. The subject will be "On the present position of Antiseptic Treatment in Surgery."

ON the 19th ult. an inquest was held at Newcastle-under-Lyme, on the body of a man aged sixty, who died on the previous day from blood-poisoning caused by the scratch of a cat.

Pharmacology and Therapeutics.

SALOL, BETHOL, AND NAPHTHOL.

GOSPODIN VILENTS of Dorpat has published an account of some researches he has been making, with a view of determining the therapeutic value, from a veterinary point of view, of some new drugs. The salols, he finds, lower the temperature in healthy animals, but in large doses salol gives rise to toxic symptoms. This class of bodies, too, does not behave alike with different species of animals. Bethol, which is naphtholol-salicylic-ether-naphthol, $C_6H_4 . OH . COO . C_{10}H_7$, and which is prepared by the action of oxychloride of phosphorus on a mixture of β-naphthol and salicylate of soda at a high temperature, appears to have a beneficial action in intestinal affections. For injection into the bladder or uterus salol is preferable. Bethol does not appear to have much power of destroying parasites (entozoa) or bacteria. The author thinks that the salols will displace salicylic acid for internal use. The former bodies have, however, a peculiarly toxic action on cats, and they must evidently be prescribed in general with caution. Naphthol in its crude state always contains carbolic acid; pure β-naphthol dilates the vessels in frogs, and acts as a muscle rather than as a nerve poison. It increases the peristaltic action of the bowels when administered by the mouth or subcutaneously. It seems to have anti-helminthic and cathartic properties.

STROPHANTHUS.

Strophanthus having been as yet but little employed in Russia, Dr. A. Kazem-Bek writes to the *Vrach* strongly recommending its trial in cardiac cases, both on the ground of his clinical and physiological observations, and from the experience of foreigners of various nationalities. He gave it in several cases both of organic and functional disease occurring in private practice, and was much pleased with its results in all except one case. Its beneficial effects in the alleviation of dyspnœa, and of both bronchial and cardiac asthma, were very marked. The heart's contractions became much less frequent, the circulation of the blood improved, and the quantity of urine excreted was greatly augmented. In consequence of the amelioration in the general condition, and perhaps owing to a direct action of strophanthus on the brain, the patients obtained prolonged and quiet sleep. Indeed in some instances drowsiness overcame them shortly after they had taken a dose of the drug. In experiments on dogs, too, a similar soporific action was observed. From the physiological observations made by Dr. Kazem-Bek, he concludes that strophanthus is not a mere muscle poison, but that it exerts an influence on the terminal branches of the vagus in the cardiac ganglia, and on these ganglia themselves. Were it not so, he says, atropine administered subsequently to strophanthus would not produce acceleration of the cardiac beats, but strophanthus administered after atropine would diminish the frequency of the heart's contractions, but neither of these results ever obtained in his experiments. The increase in the blood pressure caused by strophanthus does not, he believes, depend on the cardiac contractions, since it rises, while the contractions continue perfectly unchanged.

ARSENIC IN CHLOROFORM.

Scholvien has detected traces of arsenic in many samples of chloroform. This may be accounted for by the presence of arsenic in the sulphuric acid or manganese used in the preparation of the chloride of lime with which the chloroform has been made. He suggests that in order to examine a suspected sample for arsenic the chloroform should be stirred with absolutely pure dilute potash, then evaporated and the residue tested by Marsh's process. When arsenical chloroform is distilled, Scholvien is positive that all the metal remains behind, none passing over with the distillate.

ICHTHYOL.

Ichthyol has now been in use some years, and bids fair to maintain its original reputation as a valuable medicament of very wide application. It is employed pure in rare cases, but more frequently in solution in water, oil, or glycerine of the strength of 20 to 50 per cent., for external applications

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in bruises, sprains, rheumatism, burns, chilblains, &c. It may be administered internally in 1 per cent. solution, or in the form of pills, in cases of chronic skin disease, gastric affections, and rheumatism. As a spray in 10 per cent. solution it has been employed in the treatment of throat and nasal affections. Ointments of various strengths are compounded for external inunction in erysipelas and rheumatism. An alcoholic ethereal solution of the strength of 10 per cent. has been successful in relieving neuralgia when sprayed on the painful region; stronger solutions are used for sciatica and lumbago. Plasters and fomentations of ichthyol are also used, and a soap is made for preserving the skin and relieving chapped hands and kindred ailments.

PHTHALATE OF MORPHIA.

Herr Bombelon, writing in the *Pharmaceutische Zeitschrift*, strongly recommends the phthalate in preference to other salts of morphia for dispensing and hypodermic use. It is prepared in the form of small vitreous laminæ, and by a process similar to that by which other "scale preparations" are produced.

EMULSIONS.

The *Monthly Magazine of Pharmacy* quotes a suggestion of a German pharmacist as to making emulsions. First pour 7½ parts of water into a phial, then 10 parts of almond oil, and next 5 parts of the best gum arabic in very fine powder, and shake energetically. After a while add gradually water to make up 100 parts. The resulting emulsion will be faultless.

ACONITINE.

In a recent Dutch work by Dr. van Renterghem, it is stated that there exist no less than eight different kinds of aconitine in the various European markets, differing from one another to such an extent that some samples are several hundred times more poisonous than others.

OXALIC ACID IN SPIRIT OF NITROUS ETHER.

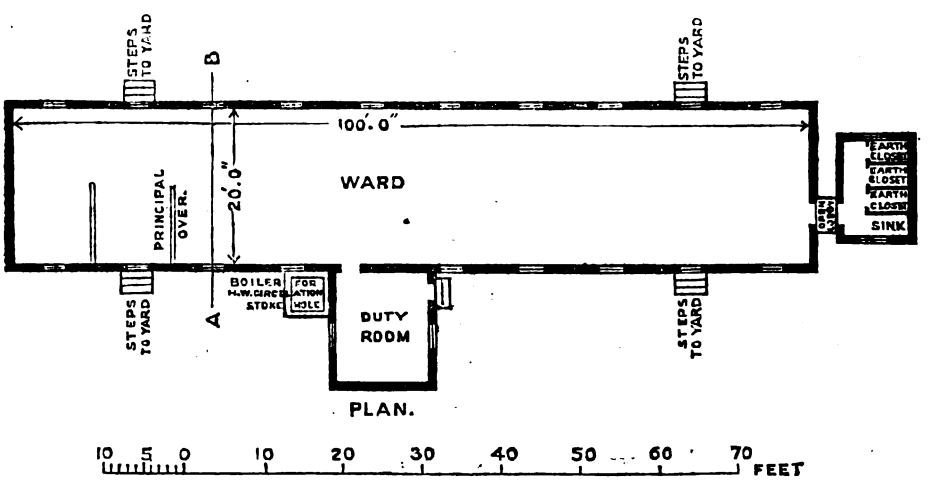
A German chemist has found that large quantities of oxalic acid exist in the residue of the still with which spirit of nitrous ether has been prepared. It is possible therefore that it may sometimes form an unlooked for impurity in this compound.

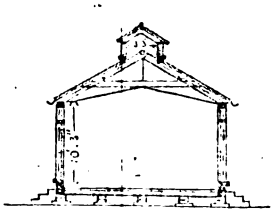
TEMPORARY HOSPITAL ACCOMMODATION.

THE demands upon the Metropolitan Asylums Board for increased hospital accommodation has led to the erection of temporary huts on the grounds of the different hospitals, of which those at Homerton are especially deserving of commendation. The huts at this institution are five in number, four being 90 ft. and one 100 ft. long, the width of each being 22 ft. They are constructed entirely of wood on small brick piers, and the floors are raised about a foot above the ground. The boarding both of the roof and walls is double, with an interspace of four inches, and the roof boarding is covered externally with tarred felt. All the woodwork is left plain; there is no painting, staining, or varnishing. The windows are French casements opening down to the ground, and above each window is a hopper fanlight, which can be opened at will. In addition to the window ventilation, there is a louvred ventilator, which is permanently open, running the whole length of the apex of the roof. The ventilation is therefore very ample, and in mild weather, when all the French windows are open, the patients may almost be said to be treated in the open air. The temperature of each hut is maintained by hot-water pipes connected with a small boiler outside. Leading out of the ward is a small kitchen, provided with a sink, a gas stove, and a gas-heated bath. The closets, which are earth commodes, are placed in a small annexe connected with the ward by a covered way, which is quite open at the sides. The huts are admirably adapted for hospital purposes, and the architect, Mr. Keith D. Young, has acted on Dr. Collie's suggestion as to the character of ventilation required for patients suffering from infectious diseases, and has kept the cost within very narrow limits, the total expenditure being about £20 for each thousand cubic feet, this amount, under the special circumstances of the ventilation, being found sufficient for one bed. As evidence of the rapidity with which the huts can be erected, it may be stated that they were occupied within less than a week of the order being given to Messrs. Lascelles, the builders. The accompanying sketches show the planning and arrangement of the different parts of the hut, as well as the dimensions.



SIDE-ELEVATION.





SECTION A.B.

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HOSPITAL SUNDAY FUND.

A MEETING of the Council of the Metropolitan Hospital Sunday Fund was held on Monday last at the Mansion House, under the presidency of the Lord Mayor.

Sir SYDNEY H. WATERLOW said he desired, before the regular business commenced, to propose a resolution expressing the deep regret of the Council at the loss they had sustained by the death of their esteemed colleague, Sir William McArthur, who had been a member of the Council ever since its establishment in 1873, and a member of the Distribution Committee for the same period. Those who looked at the list of distribution from year to year, and were aware that they were not made until after a most careful examination of the accounts of each hospital and dispensary, would understand something of the labours of the Distribution Committee, and of the greatness of the loss sustained in the death of Sir William McArthur.

The Rev. Canon FLEMING seconded the motion. He stated that he had been chaplain to Sir William McArthur during his year of office, and he had known and esteemed him long before. He had a deep knowledge of his character, and all who knew how good and genial and zealous he was, not only in regard to the Hospital Fund, but in every good work, would deeply deplore the loss which all the churches had sustained in his death.

The motion was unanimously adopted.

The LORD MAYOR desired to say a word or two before calling upon the secretary to read the report. He begged to assure the Council, in taking the chair for the first time as Lord Mayor, that it was his earnest desire to do everthing to promote the interests of the very important work they had in hand. He should do everything he could during his year of office to follow the example set by his predecessors; and he hoped that the Mansion House would be in the future as it had been in the past—the home of that great enterprise. Whenever it was possible, he should be glad to preside at the meetings of the Council.

The report of the Council was then read, and ran as follows:—

The fifteenth year of collecting this Fund is noteworthy as being the Jubilee year of the reign of Her Majesty Queen Victoria. On Dec. 13th, 1886, by resolution of the constituents in annual general meeting assembled, the Council for 1887 was elected; and at the same meeting the usual invitations to co-operate in the collection of the Fund for 1887 were ordered to be issued to the representatives of all congregations within the metropolitan area. The Council met on Jan. 27th, 1887, under the presidency of Sir Reginald Hanson, Bart., LL.D., F.S.A., Lord Mayor, and elected the Committee of Distribution, the General Purposes Committee, and the Special Committee for the Jubilee year. At the same meeting of the Council, Sir Edmund Hay Currie and Richard B. Martin, Esq., were re-elected honorary secretaries, and Henry N. Custance, Esq., secretary.

The committee appointed to make arrangements for Jubilee year, having held a large number of meetings, recommended the Council to continue the new departure of last year in holding public meetings in different parts of London during the week immediately preceding Hospital Sunday. Meeting were accordingly arranged, and speakers secured for resolutions previously prepared by the committee at the following places—viz.: The Mansion House, E.C.; St. Mary Newington, Parochial Hall, S.E.; Paddington Vestry Hall, W.; Hampstead Vestry Hall, N.W.; the Rink Hall, Blackheath, S.E.; Lambeth Palace Library, S.E.; Shoreditch Town Hall, E.; St. Andrew's Hall, Newman-street, W.; Kensington Town Hall, W.; The Wellington Hall, Islington, N.; Westminster Town Hall, S.W.; Stratford Town Hall, E.; and the People's Palace, Mile-end-road, E. The Presidents at the several meetings were—his Royal Highness the Duke of Cambridge, K.G., &c.; his Grace the Archbishop of Canterbury; his Grace the Duke of Argyll, K.G., &c.; the Right Hon. Sir Reginald Hanson, Bart., LL.D., &c., Lord Mayor; Very Rev. the Dean of Westminster; Lord William Compton; the Right Rev. the Bishop of Bedford; Sir William Plowden, K.C.S.I., M.P.; Major Ross, M.P.; the Rev. Walter Abbott, M.A., vicar of Paddington; the Rev. H. W. Barlow, B.D., vicar of Islington; John Meesom, Esq., Mayor of Stratford; and Henry Green, Esq.

The fund of 1887 has reached £40,607 7*s.* 8*d.*, as compared with £40,399 7*s.* 7*d.* collected in 1886, and with an average of £31,572 7*s.* 9*d.* in the last fifteen years. The Rev. Canon Fleming, of St. Michael's, Chester-square, again heads the list of contributors with £1028. The Rev. C. J. Ridgeway, of Christ Church, Lancaster-gate, comes next with £802 6*s.* 7*d.*, and the Rev. Dr. Forrest, of St. Jude's, South Kensington, is third with £802.

Years.	Amounts.	Congregations.
1873	£27,700 8 1	1072
1874	29,936 17 10	1217
1875	26,396 2 0	1120
1876	27,042 11 4	1089
1877	26,082 19 1	1165
1878	24,904 19 6	1171
1879	26,501 4 1	1176
1880	30,423 18 10	1225
1881	31,856 6 2	1268
1882	34,146 2 5	1337
1883	33,935 5 3	1414
1884	39,329 16 6	1522
1885	34,320 8 5	1597
1886	40,399 7 7	1595
1887	40,607 7 8	1633

The Committee of Distribution met on Feb. 1st, and determined the various forms and circulars to be filled up by the representatives of hospitals and dispensaries seeking to participate, in conformity with Law V., page 4, and on July 16th made the following report:—

Annual General Report of the Committee of Distribution to the Council of the Metropolitan Hospital Sunday Fund, 1887.

Your committee have the honour to recommend the payment of awards to the 158 institutions enumerated in the appendix to this report, being an increase of four since last year, and of fifty-three since the first awards were made in 1873. The total amount available for distribution, after allowing sufficiently for liabilities and the usual current expenses, is £39,125. Of this total, £37,525 is now recommended to 108 hospitals and 50 dispensaries. Four per cent. of the total collected—viz, £1600—is set apart to purchase surgical appliances, in obedience to Law XII. (page 5), in monthly proportions, during the ensuing year. Your committee recommend that all payments to the Fund after this date be carried to the credit of next year's fund. In compliance with an order of the Council, and for the special use of its members, Tables of Statistics have been prepared as usual, showing an analysis of the number of beds in hospitals, the cost of patients both at hospitals and dispensaries, the proportionate expense of management, as well as other valuable information, and copies are now sent to every member of the Council. The number of deputations representing committees of various institutions invited to confer with your committee, and to offer explanations on matters of apparently unsatisfactory character, was reduced from fourteen to nine. Five of these deputations attended, and in two cases your committee agreed to raise the award. Three institutions sent replies, but did not attend; and one made no reply. Three institutions which have been less than three years established, and hence could not comply with Law IV. (page 4) by furnishing balance sheets for three years, had to be refused. One application from an institution, being neither hospital nor dispensary, was also refused. Your committee regret to add that they have felt it their duty to make no award to one hospital, owing to unsatisfactory management. The committee have to express their great regret at the death of their colleague Mr. Lionel L. Cohen, M.P., prior to the completion of their work.

REGINALD HANSON, Lord Mayor, { President and Treasurer.

SYDNEY H. WATERLOW, Vice-President.

JOHN D. ALLCROFT, F. H. NORMAN, THOMSON HANKEY, W. SEDGWICK SAUNDERS, M.D., EDWARD C. HODGE, WM. MCARTHUR, ALFRED WILLETT.

On July 25th the Council was specially summoned to receive the report of the Committee of Distribution, and unanimously passed the following resolutions:—1. That the report of the Committee of Distribution for the year 1887 be, and is hereby, approved; and that the

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several awards recommended be paid as soon as possible. 2. That the cordial thanks of this Council be, and are hereby, given to the chairman and the other members of the Committee of Distribution, for the labour they have bestowed in the preparation of the awards to hospitals and dispensaries, &c., and for the very efficient report of their proceedings. 3. That the cordial thanks of the Council be, and are hereby, given to the Right Honourable Sir Reginald Hanson, Bart., LL.D., F.S.A., &c., Lord Mayor, who, as President and Treasurer of this Fund, has, in this special year of Jubilee, given so much untiring attention and valuable time to ensure the success of the collections, and has thus enabled the Council to distribute a larger amount than in any previous year. 4. That the cordial thanks of the Council be sent to his Royal Highness the Duke of Cambridge, and to those noblemen, members of Parliament, and other gentlemen who so ably pleaded the cause of the hospitals and dispensaries of London in connexion with the Hospital Sunday Fund during the "Hospitals Week" of 1887. 5. That the cordial thanks of the Council be, and are hereby, conveyed to the editors of newspapers and to other members of the press, who gave valuable assistance in reporting proceedings at public meetings during the "Hospitals Week" of 1887 and also at other times, with a view to advance the success of this Fund. 6. That the Special (Jubilee year) Committee are hereby authorised to disburse to the several representatives of institutions who gave their time and services to further the success of the meetings during the "Hospitals Week," various amounts which in the aggregate shall not exceed £100.

The Council desire to express their thanks to the executors of the will of the late Dr. Wakley, Editor of THE LANCET, for the payment of his legacy, on June 1st, of £1000.

The working expenses have amounted to £1713 15*s.* 2*d.*, being 4·200 per cent. of the gross receipts, as compared with 3·942 per cent. last year, and with an average of 3·698 per cent. in the previous fourteen years; this increase has arisen from the special efforts of the Council in this Jubilee year.

The Council desire to express their thanks to the clergy and the ministers of all religious denominations for their valuable co-operation in pleading the cause of Hospital Sunday before their several congregations, with the marked success that has resulted this year; and also to Messrs. Hart Brothers, Tibbetts, and Co. for having again gratuitously audited the yearly accounts.

Letters of recommendation for in- and out-patients to the several hospitals and dispensaries, enumerated in the Appendix, are given, on their application, to the representative ministers of contributing congregations, and to others whose names appear printed in this report, so far as the supplies in the hands of the secretary will admit. It is an instruction to the secretary not to issue letters or recommendations except for the benefit of residents in contributing districts. In respect of applications for admission to convalescent hospitals, and for in-patients to chest hospitals, the name, age, and address of each patient must be given in writing.

Letters of recommendation for patients requiring surgical appliances are also given, in the following way, to the representative ministers of any contributing congregation for the use of its members and others whose names appear printed in this report:—1. Application must be made in writing to Mr. Custance, the secretary, giving the name, age, and address of the patient, and stating the nature of the appliance required. An estimate must also be sent, for the committee's approval, in all cases where the appliance asked for is likely to cost more than one guinea. 2. A proper form of recommendation will then be supplied to the members of the Council or to the minister of religion who makes the application. This recommendation will be available at the hospital or dispensary named thereon. 3. On presentation of the recommendation at the hospital or dispensary named, the secretary, or officer on duty, will inform the applicant which member of the staff will prescribe for the case, and see the appliance properly fitted. 4. The member of the staff who prescribes for the case will state where the required appliance is to be obtained. 5. As soon as the appliance has been properly furnished, and fitted to the satisfaction of the surgeon prescribing for the case, an invoice, with the cost shown, and bearing either the hospital or dispensary stamp or the initials of the secretary to vouch for its correctness, is to be sent to Mr. Custance, who will, in due course, make payment for the same. 6. Not more than £5 shall be paid for any one appliance, without the sanction of the vice-president and one of the honorary secretaries.—N.B. As the applications for surgical appliance orders are so numerous, the committee are only able to sanction a certain proportion from month to month.

By order. HENRY N. CUSTANCE, Secretary.

Mansion House, E.C., Nov. 28th, 1887.

The Right Hon. Sir Reginald Hanson, Bart., LL.D., &c., Lord Mayor, Treasurer, in account with the Metropolitan Hospital Sunday Fund.

Dr. *Receipts for the year ending Oct. 31st, 1887.*

1887.	£	s.	d.	£	s.	d.
To balance at Bank of England, Nov. 1st, 1886	2820	8	3			
,, cheque drawn, not presented	13	10	6			
	2806	17	9			
,, balance in hands of secretary	2	0	9			
				2,808	18	
,, collections made at sundry places of worship	36,391	18	11			
,, collections at schools	84	18	7			
,, donations, including £77 15s. for surgical appliances	3073	8	9			
,, Legacy of the late J. Wakley, Esq., M.D.	1000	0	0			
,, interest on deposit	57	1	5			
				40,607	7	8
				£43,416	6	2

Cr. *Payments for the year ending Oct. 31st, 1887.*

1887.	£	s.	d.	£	s.	d.
By awards to 101 hospitals	33,999	16	7			
,, awards to 7 institutions	1,031	5	0			
,, awards to 50 dispensaries	2,309	7	6			
,, surgical appliances	1,820	15	0			
				39,161	4	1
,, printing and stationery	265	4	2			
,, stamps and postage	112	1	6			
,, advertisements	266	5	9			
,, salaries and wages	621	17	7			
,, special expenses in connexion with "The Hospitals Week"	437	4	9			
,, sundries	11	1	5			
				1,713	15	2
,, balance at Bank of England, including £1175 available for surgical appliances	2,536	15	9			
Less cheque drawn, not presented	1	4	0			
	2,535	11	9			
,, by balance in hands of secretary	5	15	2			
				2,541	6	11
				£43,416	6	2

Audited, and found correct, this 17th day of November, 1887.

(Signed) HART BROTHERS, TIBBETTS, & Co.,
Chartered Accountants, 14, Moorgate-street.

A statement of the number and various kinds of "surgical appliances" ordered from the Hospital Sunday Fund during the year 1886–7 is appended to the report. From this statement it appears that 299 trusses and 238 elastic stockings were distributed, whilst applications for spectacles, surgical boots, artificial eyes, abdominal belts, leg irons, &c., were responded to in considerable number.

Sir SYDNEY WATERLOW, in moving that the report be approved and ordered for publication, expressed a hope that the work of the Council during the year had been satisfactory, not only to the members who had taken part in it, but to the public at large. A larger amount had been raised during the year than on any previous occasion, which was no doubt in a great measure owing to the fact that the late Lord Mayor took (as the present Lord Mayor had promised to take) the deepest interest in the work, and did all he could, both inside the Mansion House and outside, to bring the Fund up to a sum which should be fairly creditable to the city and to the metropolis. He could not move the resolution without calling attention to a part of their work which, as many members would recollect, they had some difficulty in arranging—viz, the distribution of surgical appliances. More than 1500 persons had been relieved in that way without trouble or effort of their own beyond that of making known to the medical man or the minister of the district that they wanted such appliances. They had thus been relieved of the cruel work of running about from one end of the metropolis to the other to get the requisite number of letters, thirty or forty being sometimes needed before they could obtain the necessary relief. When it was remembered that so many persons had been thus relieved by means of the small sum set apart for the work, it would, he thought, be generally acknowledged that that part of their scheme had been worked satisfactorily. They had, of course, had many more applications than they could meet; but they had done their best to relieve those cases that had been recommended by ministers who had preached for the

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Fund, and whose recommendation it was thought was entitled to the greatest consideration, since they only sent in the names of those with the details of whose cases they were thoroughly acquainted.

The motion, having been seconded, was unanimously agreed to.

The following gentlemen were recommended for appointment to fill vacancies on the Council:—Rev. S. B. Burnaby, Hon. and Rev. Carr-Glynn, Sir Reginald Hanson, Mr. A. L. Cohen, Mr. C. G. Montefiore, Alderman Whitehead, and Archdeacon Richardson.

The LORD MAYOR said he regretted that it would be impossible to hold the annual meeting at the Mansion House, as the repairs and decorations it was undergoing would not be completed in time; but arrangements had been made for holding it in the Old Council Chamber at the Guildhall.

Sir E. HAY CURRIE moved that the meeting be held on Monday, Dec. 12th, at 3 o'clock P.M. He did not know that there was any burning question to bring before the meeting, but it was important that it should be held, as it gave their constituents the only opportunity they had of expressing themselves on the general policy of the Hospital Sunday Fund.

Dr. GLOVER seconded the motion, which was unanimously adopted.

The Bishop of LONDON moved that Sunday, June 10th, be selected as Hospital Sunday for 1888.

The Rev. Canon FLEMING seconded the motion, which was adopted.

Sir E. HAY CURRIE, in moving a vote of thanks to the Lord Mayor, said that the action taken by his lordship and his predecessors proved that the Hospital Sunday Fund was no mushroom institution. It had borne the heat and burden of the day for fourteen years, and had increasing claims upon the public support.

The motion, having been seconded, was unanimously agreed to.

The LORD MAYOR, in acknowledging the compliment, again expressed his regret that he was unable to receive the members at the Mansion House at the annual meeting, but he hoped to have that honour under more favourable circumstances.

The proceedings then closed.

SANITARY LEGISLATION IN ITALY.

A FEW days hence the Senate of the Italian kingdom will be engaged in discussing the new code for the better surveillance of public health throughout the peninsula. Pending the official issue of that important enactment, the following details as to its scope and bearing will not be without interest.

In the Home Department there will be created a General Board of Public Health, and, conjoined with this, an office of sanitary technology, with laboratories fitted up for every requirement of sanitary inspection. In every province of the kingdom there will be a provincial medical officer (*medico provinciale*), invested with sanitary functions, in addition to the present Provincial Council of Public Health (*Consiglio Provinciale di Sanità*). In every commune not the chief town of the province the syndic will have a sanitary advising assessor (*consiglier sanitario*). Each commune will also have a medico-chirurgical and zoo-iatrical staff, consisting of physicians, surgeons, veterinarians, and pharmacists. Communes with over 10,000 inhabitants will have a municipal medical office to provide for the efficient working of the hygienic and sanitary service. Under its second chapter the Code defines the functions of the General Board of Public Health, which board will exercise authoritative surveillance over the health interests of the communes, including their sanitary offices, over public works involving sanitary risks, over rice-culture, and such like. Its third chapter treats of the powers invested in the Superior Board of Health for deciding questions in dispute between the communal and the sanitary authorities, and between these latter and the provincial health officer. The fourth chapter takes cognisance of the newly instituted *medico provinciale* and his functions. These will have a wide range, and will include questions of hygiene, medicine, and pharmacy. The *medico provinciale* is nominated by Royal decree, after due certification by competitive trial of his qualifications. The seventh chapter defines the functions of the Communal Sanitary Council, which is nominated by the prefect and selected from among the medical practitioners in the commune. Its duration will be of three years, and it may be re-elected. It exercises surveillance over the interests, hygienic and sanitary, of the Commune. The eighth chapter describes the functions of the medico-chirurgical, pharmaceutical, and obstetrical staff, or *assistance publique*. The ninth chapter dwells on the zoo-iatric staff, and provides that every commune, chief provincial town, *arrondissement*, or locality having over 20,000 inhabitants shall have one or more veterinary surgeons; while every other locality not coming under the above category as to size shall have one veterinary surgeon, either by itself or conjointly with a neighbour locality. The tenth chapter defines the duties of the sanitary officer. The Code, which is introduced by the Prime Minister, Signor Crispi, also deals with the hygiene of soils and dwelling-houses, of beverages (natural and artificial), and of the lower animals, besides giving practical directions as to a sanitary police service.

The Italian Senate is at present, through a committee appointed *ad hoc*, considering the provisions of the Code, preparatory to a general discussion on the committee's report. The discussion will have much interest for the English sanitarian, whose experience, as embodied in official and non-official publications, has been largely utilised for this new legislative enactment, so long expected and so imperatively required.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria in the Pwllheli Rural District, by Dr. PARSONS. This district in Carnarvonshire is, apart from the old borough of Nevin, mainly of a scattered character, and during the past ten years its diphtheria death-rate has been more than three times that for England and Wales generally. In 1886 there were 24 reported cases and 7 deaths; but owing partly to the absence from the district of the medical officer of health at the time of the inspection, and to linguistic difficulties in this remote part of the Principality, no special information was forthcoming bearing upon the etiology of the disease. Incidentally the general sanitary circumstances of the district came under review; and it was found that although on account of the natural configuration of the district and its scattered character no public works were called for, yet that the authority had been very slow in dealing locally with questions of water supply, drainage, and other matters. Notably, damp sites and filthy surroundings of houses were observed, many of the dwellings being in a bad state of repair and needing adequate means of ventilation; and it was felt that conditions such as these had, in all probability, had some distinct influence in the causation and in the observed increasing severity of the disease.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

West Sussex Combined District.—Dr. Kelly's report relates to the health during the past year of eleven different districts, and in each case the mortality at groups of ages, the infant mortality, and the effect of season on health and in the death-rate are considered. The improvements as to water supply and drainage are set forth; the work done under the dairies and cowsheds order is also explained; and in certain instances such exceptional occurrences as the prevalence of enteric fever at Lancing College, which occurred in July, 1886, and on which we commented at the time, are discussed in detail. On the whole combined area the death-rate for 1886 was 16·4, and the birth-rate 27·8 per 1000 living, the former being somewhat higher than it has been since 1876, when it stood at 16·5. The zymotic class of diseases caused deaths at a rate of 2·4 for every thousand living; but, in discussing this class, Dr. Kelly wisely reminds his authorities of the very dissimilar character of the diseases which have been grouped together in it, some being the current catching infections, such as small-pox and scarlet fever; others not at all catching in the same sense, such as

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diarrhœa; and the various members of the group differing almost as far as it is possible in point of causation. The whole record, with its excellent meteorological mortality and other tables, forms a further volume of a very complete sanitary history of the districts included within the combination.

Bolton Urban District.—In common with many towns, Bolton exhibited last year a higher death-rate than usually, the rate being 23·1 per 1000. During the year the infectious hospital had a satisfactory history, and its increasing popularity was shown by the admission into it of no less than 208 patients. Of these, 193 were cases of scarlet fever, amongst whom only 2 died. A further addition to the sanitary organisation of the borough has been the provision of a Washington Lyon disinfecting apparatus. The record of sanitary work carried out is a satisfactory one, and amongst the matters receiving constant and increasing attention is the state of dairies, cowsheds, milkshops, and bakehouses.

Huddersfield Urban District.—Huddersfield has maintained a comparatively small death-rate for some years, that for 1886 having been 19·5 per 1000. During the year 39 cases of small-pox came under observation, and the control of the disease was largely effected by the aid of hospital isolation. An unusual number of cases of diphtheria were also noticed, 12 attacks terminating fatally. Of scarlet fever 370 cases occurred, and Dr. Cameron expresses the opinion that had the hospital provision sufficed to grapple properly with the beginning of the epidemic in 1885, the prevalence of 1886 with its 33 deaths might have been avoided. One inspector is now almost exclusively engaged in the systematic visitation of houses with respect to their sanitary state, a duty the importance of which it would be difficult to exaggerate. In the general summary of improvements effected, it is shown that the change for good has been most marked as regards the diseases which it has been possible to isolate, whereas in infectious cases where no such practice has been possible improvement has been much less obvious.

Ilfracombe.—Dr. Slade-King opportunely reminds his readers of the advantages which Ilfracombe affords as regards climate. Thus, whilst last winter the thermometer was on several occasions nearly down to zero in many parts of England, only two degrees of frost were registered at Ilfracombe, and that on one date only. The mean temperature during December last was 42·7°F., with a range of 8·2°, and the record given of the flowers which blossomed in open air last February suffice to prove the comparative mildness of the climate. The death-rate for 1886 was 14·7 per 1000, including visitors, and 13·2 on the resident population.

Glanford Brigg Rural District.—The ironstone villages of this district have an unenviable notoriety for excess of death. Thus, in 1886, whereas the rate of mortality under one year was 13 per cent. of registered births in other parts, it reached 20 per cent. in those villages. Diphtheria was fatal during the year, and it was found necessary to close the schools before the disease could be arrested. Amongst the directions in which future work is needed we note the absence of good drinking water in many of the villages, and in some instances Mr. Moxon advocates the extension of rain-water storage to meet an admitted difficulty in procuring a supply. Some improvements have been effected in the matter of sewerage, and the inspector of nuisances supplies a good list of work done in his department. The general death-rate on a population of about 31,000 was 17·3 per 1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5726 births and 4158 deaths were registered during the week ending November 26th. The annual rate of mortality in these towns, which had been 20·0 and 21·1 per 1000 in the preceding two weeks, further rose last week to 23·5. During the first eight weeks of the current quarter the death-rate in these towns averaged 20·3 per 1000, and was 0·8 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·8 in Leicester, 16·1 in Wolverhampton, 16·5 in Cardiff, and 16·9 in Norwich. The rates in the other towns ranged upwards to 29·6 in Halifax, 30·6 in Preston, 31·6 in Newcastle-upon-Tyne, and 34·4 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 402 and 404 in the preceding two weeks, rose last week to 480; they included 126 from scarlet fever, 115 from whooping-cough, 92 from measles, 44 from "fever" (principally enteric), 44 from diphtheria, 41 from diarrhœa, and 18 from small-pox. No deaths from any of these zymotic diseases were registered last week in Wolverhampton or in Cardiff, whereas they caused the highest death-rates in Sheffield, Bolton, Bradford, Derby, and Blackburn. The greatest mortality from scarlet fever occurred in Bolton, Sheffield, Preston, Bristol, Blackburn, and Birkenhead; from measles in Blackburn, Birmingham, Bolton, Bradford, and Derby; from whooping-cough in Norwich and Oldham; and from "fever" in Preston. The 44 deaths from diphtheria in the twenty-eight towns included 31 in London, 3 in Manchester, and 2 in Portsmouth. Small-pox caused 16 deaths in Sheffield, 1 in Bristol, and 1 in London, but not one in any of the twenty-five other large provincial towns. The metropolitan hospitals receiving cases of small-pox contained 13 patients on Saturday last, against 16 at the end of the previous week. The number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital at the end of the week was 2764, against 2737 on the previous Saturday; the cases admitted were more numerous than in the previous week. The deaths referred to diseases of the respiratory organs in London, which had been 506, 438, and 461 in the preceding three weeks, further rose last week to 560, and exceeded the corrected average by 90. The causes of 89, or 2·1 per cent., of the 4158 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bradford, Preston, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·9 and 22·0 per 1000 in the preceding two weeks, further rose to 23·5 in the week ending Nov. 26th; this rate corresponded with the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 18·8 and 19·4 in Dundee and Perth, to 24·4 in Glasgow and 25·8 in Paisley. The 580 deaths in the eight towns last week showed a further increase of 39 upon the numbers returned in recent weeks, and included 30 which were referred to whooping-cough, 13 to measles, 12 to "fever" (typhus, enteric, or simple), 11 to scarlet fever, 8 to diarrhœa, 4 to diphtheria, and not one to small-pox; in all, 78 deaths resulted from these principal zymotic diseases, against 74 in each of the preceding two weeks. These 78 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·4 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 26 in each of the preceding four weeks, increased last week to 30, of which 15 occurred in Glasgow, 6 in Greenock, and 3 in Edinburgh. The deaths from measles, which had slowly increased in the preceding five weeks from 5 to 8, further rose last week to 13, and included 5 in Edinburgh and 4 in Dundee. The deaths referred to "fever" rose from 6 and 11 in the previous two weeks to 12, and included 7 in Glasgow, 2 in Edinburgh, and 2 in Paisley. The 8 deaths attributed to diarrhœa showed an increase of 2 upon the number in the previous week. The 11 fatal cases of scarlet fever, on the other hand, had declined from 17 and 16 in the previous two weeks to 11; of these 3 occurred in Dundee, 2 in Glasgow, 2 in Edinburgh, and 2 in Leith. The 4 deaths from diphtheria also showed a decline from recent weekly numbers. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 107 and 144 in the preceding two weeks, further rose last week to 156, and were 31 above the number returned in the corresponding week of last year. The causes of 75, or nearly 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 31·0, 32·1, and 34·6 per 1000 in the preceding three weeks, declined again to 33·8 in the week ending November 26th. During the first eight weeks of the current quarter the death-rate in the

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city averaged 29·9 per 1000, the mean rate during the same period being but 19·7 in London and 19·2 in Edinburgh. The 229 deaths in Dublin last week showed a decline of 5 from the high number in the previous week; they included 11 which were referred to scarlet fever, 8 to measles, 6 to whooping-cough, 3 to "fever" (typhus, enteric, or simple), 3 to diphtheria, 2 to diarrhœa, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had been 45 and 29 in the preceding two weeks, rose again last week to 33; they were equal to an annual rate of 4·9 per 1000, the rate from the same diseases being 2·8 in London and 2·6 in Edinburgh. The fatal cases of scarlet fever, measles, and whooping-cough showed an increase upon the numbers returned in the previous week, while the deaths referred to "fever" and diarrhœa were less numerous. The 3 deaths from diphtheria corresponded with the number in the previous week. The deaths of infants were less numerous than in the previous week, while those of elderly persons showed a further increase. Seven inquest cases and 5 deaths from violence were registered within the city; and 55, or nearly a fourth, of the deaths occurred in public institutions. The causes of 45, or nearly 17 per cent., of the deaths in the week were not certified.

THE SERVICES.

WAR OFFICE.—Grenadier Guards: Surgeon William Campbell, M.B., from the Scots Guards, to be Surgeon-Major, in succession to Brigade Surgeon A. G. Elkington, retired (dated Nov. 5th, 1887).—Scots Guards: Surgeon Robt. Ashton Bostock, Medical Staff. to be Surgeon, vice W. Campbell, M.B., promoted into the Grenadier Guards (dated Nov. 30th, 1887). Army Medical Staff: Surgeon-Major John Albert Anderson, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon (dated Nov. 30th, 1887).

ADMIRALTY.—Staff Surgeon Solomon Kellett has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Nov. 25th, 1887). In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Solomon Kellett has been placed on the retired list of his rank (dated Nov. 25th, 1887).

The following appointments have been made: Staff Surgeon C. C. Gooding, to the *Agamemnon;* Surgeon L. H. Kellett, to the *Rover;* Surgeon J. A. Vasey, to the Portsmouth Division of Royal Marines; Surgeon E. A. Spiller, to the *Duncan;* Surgeon R. A. Fitch, to the Royal Marine depôt at Walmer, temporary; Surgeon J. L. Thomas, to the *Britannia,* temporary; Mr. Charles F. Downman to be Surgeon to Her Majesty's Coast Guards for Burnham and Roach River Stations; and Mr. Denis Hassett to be Surgeon and Agent at Kilmore.

RIFLE VOLUNTEERS.—13th Lancashire: Acting Surgeon W. Anderton resigns his appointment (dated Nov. 26th, 1887).

Correspondence.

"Audi alteram partem."

SIR JAMES PAGET'S "MORTON LECTURE" ON CANCER AND CANCEROUS DISEASE.

To the Editors of THE LANCET.

SIRS,—Those who, like myself, listened to Sir James Paget's recent lecture at the Royal College of Surgeons must have felt no less charmed with its eloquence than with its philosophy. But being desirous of instituting a scientific inquiry into the origin of cancer—which term I hold should be regarded as synonymous with "malignant disease"—I was disappointed that Sir James, instead of dispelling the mist which surrounds many of the phenomena of cancer, should, in my humble judgment, have added fuel to a controversial topic, first, by declining to recognise certain truisms, and, secondly, by introducing a number of side issues, which must seriously complicate the main question.

Sir James has purposely declined to express in unequivocal language any tangible opinion on the nature of cancer, but the report of his very able lecture will leave no room for doubt in the minds of those who read it that he considers cancer to be a blood disease and of micro-parasitic origin. Unprepared at present to refute Sir J. Paget's theory, I must content myself by saying that what observations linked together by him in a particular manner may appear in favour of it, will, if viewed from a different standpoint, oppose it. *In limine,* I go further than Sir James, and define cancer or malignant disease as a distinct focus or growth, whose component cells have arisen from normal cells, and which begin to infiltrate and consume healthy adjacent cells, the new growth sometimes generalising by the lymphatic and sometimes by the vascular system. Such is cancer regarded from its clinical aspect, and I submit that the disease is a distinct entity, clearly distinguished from every other pathological condition with which we are acquainted; this definition, further, separating the malignant from the non-malignant tumours. Sir J. Paget rightly remarks that the space between innocent tumours and cancers is filled with examples of intermediate forms; but if we pursue his reasoning a little further, the isolable fatty tumour merges into the ill-defined fatty tumour, and thence into ordinary adipose tissue, which is a normal constituent of the body, and, in common with all other normal tissues, has developed from a parent cell—the human ovum.

In lectures which I delivered at the Cancer Hospital in March, 1886,[1] I endeavoured to substantiate the local theory of the origin of cancer. Let me now say that from that time to this I have not seen a single case of cancer the occurrence of which could not be explained by some source of local irritation. The drawing exhibited here shows an



example of symmetrical epitheliomatous growths invading the eyelid. Sir James Paget and his school will consider this an instance in favour of the "constitutional" or "blood" theory, but to me it seems only a rare example of cancer occurring by two distinct foci in *parts which, being symmetrical,* have been exposed to the same source of local irritation. Whilst describing cancer as local in its origin, and maintaining that it should be classified as a local disease, it is not antithetical to admit the hereditary element as a factor in its production—e.g., that congenital phenomenon, the supernumerary digit, is typically a local condition proved to depend upon hereditary transmission.

Since this or like examples might be shown to descend from parent to offspring, I cannot believe that such transmission is effected through the agency of the blood, but through the impregnated ovum, from which every cell in the body of the offspring is ultimately formed, and this appears the explanation of the "numerous cases in which the cancer in the offspring is not in the same part as it was in the progenitor," every cell in the offspring inheriting the predisposition from the progenitor, but the disease beginning only at a focus ultimately exposed to a superadded excitation. Since my lectures were reprinted, by your courteous permission, from THE LANCET in a pamphlet form, I submitted them to Sir W. Gull, who very kindly favoured me with the following terse exposition of his views on the subject:—

"As the ovum differentiates into organs and the parts of organs, there is carried the hereditary force for good and for evil. Hence the local characteristics of the individual, expressive of the stock from which it came (heredity). The constitutional tendency is, therefore, *expressed locally,* as the voice of a man is that of his family, but this depends upon the structure of the larynx. Cancer, as this would

[1] Cf. THE LANCET, 1886, vol. i., pp. 682, 825.

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lead us to believe, though in a sense inherited, is so only from the local disposition of certain parts. Practically, therefore, it begins locally, and may and must be thought of in its first occurrence in the system as a *local disease*."

Finally, whilst disinclined to join issue with Sir James Paget upon every point, his statement that we have not yet found a method for either the prevention or the cure of cancer cannot be allowed to pass unchallenged, for instances in which the disease has been cured are familiar to most practitioners; and though there is no common method applicable for the prevention of all kinds of cancer, there are recognised principles to be adapted to many of its varieties. As examples, let me cite the premonitory induration of the tongue or lips in elderly subjects caused by irritation from the stumps of teeth, or by smoking, which will often spontaneously resolve upon removal of the exciting cause. Leucoma or psoriasis of the tongue, dependent upon local irritation coupled with syphilitic taint, may be resolved by antisyphilitic treatment sedulously carried out. Where cancer is presumed to be about to commence in the scrotum of a sweep, change of employment and cleanliness should be insisted upon, and suitable local treatment employed. *Cessante causâ, cessat effectus.*

I am, Sirs, yours faithfully,

CHARLES E. JENNINGS, F.R.C.S. Eng.

Upper Brook-street, Grosvenor-square, W., Nov. 19th, 1887.

"THE NATURE OF SMALL-POX."

To the Editors of THE LANCET.

SIRS,—The fact that Mr. Birdwood has had almost unequalled advantages for acquiring a special knowledge of small-pox naturally directs attention to his theory. Mr. Birdwood asks us to believe that the pocks in small-pox develop from spores adhering to the skin of the patient who has been exposed to a spore-laden atmosphere. And he asks us to believe this on the strength of two statements.

The first statement is that this hypothesis accounts for the distribution of the pocks. Those who have examined many cases of small-pox in the unvaccinated must have been struck by the copiousness of the eruption on the back as compared with the abdomen. And this difference is much more striking than the difference between the number of pocks on the exposed parts and on the back. But, according to Mr. Birdwood's theory, in the race for spores the face and hands should be first, and the rest nowhere.

The second statement is that "on the unprotected the number of pocks does depend on the circumstances of exposure." That would, if proved, be a very interesting fact. But much definite evidence must be brought forward before anyone can effect so revolutionary a change in the general belief. Few would positively deny that it is conceivable an unprotected person might be more seriously attacked by small-pox after nursing a hæmorrhagic case than after passing a discrete case in the street, but the general effect of small-pox experience on the minds of medical men is to bring about a strong belief directly opposed to Mr. Birdwood's. Instances of the severest confluent small-pox where the patient and his friends cannot even guess the source of infection are very common in small-pox hospitals, and everyone who has seen families brought into small-pox wards, sometimes in groups, must have noticed the remarkable variations in the severity of the different cases from one household. It is highly probable that unknown personal "idiosyncrasies" have far more to do with the character of the attack than have the circumstances of exposure.

Having thus seen objections to the acceptance of Mr. Birdwood's two statements in support of his theory, one may look at the arguments against it, and in favour of that which is usually accepted.

1. Small-pox, scarlet fever, typhus, measles, and chicken-pox all begin with illness followed by eruption. As regards the *copiousness* of the eruption: scarlet fever rather prefers the neck, chest, and abdomen; typhus the sides of the chest and abdomen; measles the back; and chicken-pox the chest and back. Why should small-pox be classed by itself because it prefers the face, wrists, and back? The theory that the poison is spread by the circulation does not explain this preference, but neither does it explain the selections of the others. In this respect these maladies are all on a par, and one can find no reason for removing small-pox from acute febrile diseases.

2. In small-pox the initial fever is severe for two or three days before the pocks appear. Until an hour or two before the actual eruption no unusual sensation whatever is felt in the skin. Why then attribute so striking a general fever to an as yet non-existent irritation in the skin? The common theory keeps the cart behind the horse, and does not attempt to make the pocks account for a fever which precedes them.

3. In many cases of small-pox the line of pressure of a garter, waistband, brace, &c., is traced out by an extra number of pocks. The circulation theory explains this naturally, because a congestion occurs in such places when the pressure is removed, and it is easy to suppose that there would therefore be a great pock-formation. But on the spore-adhering theory these are the very parts where pocks should be fewest.

4. In many cases of hæmorrhagic small-pox the pocks are few, ill-developed, and never get beyond the early papular stage, whilst over nearly the whole surface of the body violent redness, rapidly becoming purple, shows the extraordinary skin hæmorrhage that takes place. In such cases the post-mortem examination reveals that singular distribution of internal hæmorrhages which is peculiar to small-pox, and of which the hæmorrhage into the substance of the wall of the pelvis of the kidney, not merely, as usually believed, into the cavity of the pelvis of the kidney, is the most striking example. To explain such occurrences on his theory, Mr. Birdwood must suppose absorption and subsequent circulation of the organisms, thus tacking the old theory on as an occasional necessary adjunct of the new.

5. When formerly small-pox virus was intentionally placed in a patient's skin, the process was followed in a day or two by the appearance of one or more papules. The patient then wandered into no spore-laden atmosphere, but awaited events in his room, and about eight days later a general crop of papules appeared. Are we to suppose that the primary papule used its central depression, like a volcano its crater, to pour forth spores which the patient then rearrested and developed into his general eruption? It is hardly necessary to suggest other points, such as the occurrence and locality of initial rashes. So great are the objections to Mr. Birdwood's theory, that one cannot but continue to class small-pox with the other acute febrile diseases, which it resembles in so many points; and also to confess, with Sir James Paget, that "we cannot tell why small-pox is especially manifested on the skin."

I am, Sirs, yours truly,

JAMES STRUTHERS, Jun., M.B., C.M. Aberd.

Lewisham, Nov. 1887.

NEPHRECTOMY.

To the Editors of THE LANCET.

SIRS,—I regret that I was prevented from attending the last meeting of the Royal Medical and Chirurgical Society to discuss Mr. Warrington Haward's interesting case of nephrectomy, as I had promised. It would seem from the youth of the patient, and from the fact that one kidney was healthy, the case was well selected and one eminently favourable for surgical interference; and those who have Mr. Haward's acquaintance know that in trusting to his manipulative skill the patient had secured one safeguard against the accidents inseparable from surgery. The ill result must therefore, I think, be attributed to the operation chosen. Two reasons are given for the choice of the abdominal operation in preference to the lumbar: (1) the mobility of the kidney; (2) its size. The first of these operators may for the future entirely disregard. The mobility of the kidney, so far from necessitating an abdominal operation, renders the lumbar operation much more easy to perform. In support of this, I may mention that two years and a half ago I removed through the loin a kidney full of stones, which dropped so low in the iliac region that the fingers could be pressed in between it and the ribs; and when the patient lay on the opposite side it fell across the umbilicus. This was the easiest nephrectomy I have yet performed. The second reason I am unable to gauge, as no measurements are given; but of this I am certain, that very much larger tumours may be removed by the loin than surgeons have been inclined to attempt, if they will adopt the oblique crucial incision I have always advocated. This consists of an oblique incision parallel with the last rib, and a finger's breadth below it, followed by a

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vertical, corresponding to the margin of the quadratus lumborum, extending from the upper edge of the last rib to the iliac crest. Tumours containing fluid may be always reduced in size by tapping before being removed, and a large suppurating kidney should be drained before nephrectomy is undertaken. Experience has shown that the ureter, however thickened, causes no trouble, and may be left in the wound secured with a simple catgut ligature. The stitching of this to the surface must add a danger both immediate and remote. One speaker referred to a kidney so adherent that he thought it would be impossible to remove it from the loin. I believe a kidney, however adherent, may always be so removed, if the capsule be left behind. There is a patient leaving Guy's Hospital to-day quite well, whose left kidney I removed about five weeks ago. It had been suppurating for nine years, and was closely adherent to the colon and surrounding structures. To have removed it together with the capsule would have been certain death, but it was stripped out without much difficulty from within the capsule. I have now removed five kidneys in succession through the loin without a death, and this success depends not on the operator, but on the operation (which, speaking generally, should almost always be lumbar), and on a proper selection of cases suitable.

I am, Sirs, your obedient servant,

R. CLEMENT LUCAS, B.S., F.R.C.S.,
Senior Assistant Surgeon to Guy's Hospital.

Finsbury-square, Nov. 28th, 1887.

CHIAN TURPENTINE AND CANCER.

To the Editors of THE LANCET.

SIRS,—It is now some seven years ago since Professor Clay gave to the profession, through the medium of your journal, the welcome intelligence that at last a specific cure for cancer had been found in Chian turpentine; and I think it may without fear of contradiction be asserted that no remedy has had a fairer trial at the hands of his *confrères* or more grievously disappointed them. It is true that Mr. Clay endeavoured to get over the discrepancy by alleging the impurity of the drug used, but doubtless many like myself still continued their observations with the genuine article as supplied by Southall of Birmingham, to find the result still the same.

Notwithstanding the almost unanimous condemnation of the treatment, I find in a later paper of Mr. Clay's (THE LANCET, vol. ii. 1881, p. 1033) these words: "An enlarged experience, however, has confirmed the statements made in my original paper, and I have now the satisfaction of being able to declare that I have nothing to withdraw or to qualify as regards the statements I then made as the result of observation as to the effects of Chian turpentine in uterine cancer." From time to time he has favoured his professional brethren with repeated cures of cancer by this remedy, and even so recently as in your last week's issue three more examples are given. But what about the failures? In the interest of the public at large, such claims as Mr. Clay makes for Chian turpentine ought not to pass unchallenged by those who differ from him. Unfortunately, examples of cancerous disease are only too common upon whom this remedy (supplied, if necessary, by his own chemist) might be tested by a tribunal in whom the profession at large would have confidence, and the doubt once and for all resolved. If this drug came out of the ordeal triumphantly, then I feel sure there would not be a single dissentient to Mr. Clay occupying a position not inferior to Jenner or Harvey as one of the greatest benefactors of our species; but if, on the contrary, it is wholly useless as a remedy, then let it drop into a well-merited, and not too premature, oblivion.

I am, Sirs, yours truly,

Nottingham, Nov. 21st, 1887. GEORGE ELDER.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—With your permission I should like to say a few words in reply to Mr. Holmes' sweeping condemnation of the power possessed by the Council of Surgeons of electing to the Fellowship Members of twenty years' standing, two in each year. If as many as that, or more, should present claims arising from the work done during that twenty years, which claims are open to the investigation and criticism of the Council, I think it would be out of all reason to reject them on the ground of there having been no examination. How many of the Fellows who have gained their position in the only way Mr. Holmes would recognise, and have not been engaged in teaching or lecturing, would be able to retain it if, after twenty years of active practice, they were asked to undergo a second, similar to that which gave them their qualification? In my own case, the twenty years were spent in active and successful practice as a hospital surgeon, and though so many things practically useless were probably forgotten that an examination would have been difficult to pass, I yet believed that on assuming the position of consulting surgeon to the same institution I should not be asking too much in seeking to be recognised as a Fellow. So, I presume, thought the six gentlemen who, as already Fellows, signed my application. I believe in my own year mine was the only application, and I do not think these have ever been very numerous. But if they were to seek the honour, and were to present the same testimonials, I do not think the status of the Fellows would be so lowered by granting it, as Mr. Holmes seems to think.

I am, Sirs, your obedient servant,

Dec. 1st, 1887. J. H. GRAMSHAW, F.R.C.S. (by election).

PHARMACEUTICAL WEIGHTS AND MEASURES.

To the Editors of THE LANCET.

SIRS,—Since the introduction of the *cental* system (which, it may be surmised, is a step towards the future decimal system) into the Pharmacopœia, our weights and measures for surgery use have become troublesomely obsolete, so much so that it is with difficulty that the general practitioner who dispenses his own medicines can now do so without great waste of valuable time and much mental labour, in having to reduce his drachms and ounces to minims or grains. Solutions that were formerly prepared as so much per *drachm* or *ounce*, have become now so much per *cent.* It is a matter of surprise that the vendors of our weights and measures have not been sufficiently alive to the wants and requirements of the times, and sufficiently enterprising to supply a demand which is now seriously felt, for weights marked in grains, and measures in minims, in grades of tens and hundreds, instead of the old-fashioned and now virtually obsolete scruples and drachms, and fluid drachms with their halves. I would suggest that weights be now made according to the following gradation: 1, 2, 3, 4, 5, 10, 15, 20, 25, 30, 40, 50, 60, 100, 250, and 500; that minim measures be graduated on the left hand in drachms and half-drachms, and on the right hand be marked in grades of 10 minims up to 200, the first 100 having intermediate or 5-minim lines; that ounce measures be graduated on the left in ounces and half-ounces, the first half-ounce being subdivided into drachms, the second into two drachms; and on the right in 25, 50, and 100 minims; and that half-pint measures be graduated on the left in half-ounces and ounces, and on the right in grades of 100 minims. Some recognition of the old system, it is obvious, should be retained, and, although only recommended above for fluid measures, the requirements being greater, might also be adopted for the new weights; for instance, the 20 gr. weight might be stamped on the obverse side with the old symbol, ℈j; the 30 gr., ʒ ss.; the 40 gr., ℈ij., and the 60 gr., ʒj.

Were the above weights and measures possible to be obtained, and supplied through the ordinary channels, the labour and mental calculation saved to the busy practitioner would be immense.

I am, Sirs, yours truly,

Dovercourt, Nov. 1887. W. W. HARDWICKE.

THE PREVENTION OF PUERPERAL SEPTICÆMIA.

To the Editors of THE LANCET.

SIRS,—An ounce of fact is worth a ton of theory, gaseous or sagacious. Here is a single fact. It occurred in connexion with the case of extra-uterine gestation—a note regarding which appeared a fortnight ago, and also to-day in your columns. There could be no doubt as to septic

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infection" (whatever the phrase stands for) being derivable from this patient, as she was septicæmic from decomposition of the placenta before its entire separation from the sac.

The next point is, that at one of the dressings, after separation had fairly begun, I removed, partly with dressing forceps partly with my fingers, a considerable piece of the decomposing placenta. My fingers were malodorous, showing their skin to have been soaked with micro-organism excrement and decomposition products, even after washing with a solution of perchloride of mercury, of moderate strength, in the room.

On going home I found a message from a midwife, asking me to help a case over for her with the forceps. I purified my hands in the course of about three minutes by using (1) soap and warm water with the nail-brush; (2) remembering how the stench of uterine cervical cancer is got rid of from the examining finger by turpentine, I washed my hands with turpentine, using the saturated nail-brush, then more soap and water, and finally rinsing in a solution of iodine. I washed my hands and instruments at the patient's in iodised hot water, and used fresh carbolic oil for lubrication. The patient, a multipara, got up, I am informed, as I did not require to see her after delivery, on the celebrated "ninth day," and made a perfectly good recovery, being now quite well.

A case of this kind (my own cases also at the time were non-septicæmic), where a good deal of vaginal manipulation took place, and where the fingers were, not half an hour before, in a septic state, answers various questions. It is not a merely providential escape from the production of what is pedantically and euphemistically termed "heterogenetic" septicæmia. "Rash!" some who have been wittily described as having "passed the climacteric," and so are unchanging in their views, will exclaim. I reject the imputation, for I have faith founded on fact in appropriate antisepticism properly performed.

I am, Sirs, your obedient servant,

ARCHIBALD D. MACDONALD, M.D. Edin.

Liverpool, Nov. 28th, 1887.

ELECTION OF ASSESSOR IN THE UNIVERSITY OF ST. ANDREWS.

To the Editors of THE LANCET.

SIRS,—I trust you will permit me to appeal to my fellow-graduates of this University in support of the candidature of Dr. John Duncan as the Assessor in the contest now going on. The high position which this gentleman holds, whether regard be had for his professional or his academic distinction, eminently qualifies him for the post, added to which, being on the spot, he will be enabled to attend all the University court meetings, which it will be wholly out of the power of his opponent, Viscount Cross, to do, as must be well known. I am, Sirs, yours obediently,

JOSEPH ROGERS.

Montague-place, Russell-square, London, Nov. 30th, 1887.

"IS CANCER CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—I have been looking over my "Cause of Death Certificates" from March, 1883, to present date, and if you think the following cases, which have happened in my own practice, worth a corner in your valuable journal, I should like to bring them before the notice of the profession, as I think they might perhaps interest some of your many readers:—

E. G., aged 51 ...	Cancer of breast	... March, 1883.
H. H., aged 58 ...	Cancer of breast	... July, 1883.
J. D., aged 54 ...	Cancer of testicle and stomach	... Oct., 1884.
H. C., aged 56 ...	Cancer of uterus	... March, 1885.
G. W. B., aged 66 ...	Cancer of rectum	... Oct., 1885.
M. D., aged 55 ...	Cancer of uterus	... Jan., 1886.
T. C., aged 48 ...	Cancer of tongue	... Aug., 1886.
G. T., aged 74 ...	Cancer of rectum	... March, 1887.
E. C., aged 31 ...	Cancer of vagina and uterus	... April, 1887.
E. J., aged 58 ...	Cancer of breast	... May, 1887.
S. P., aged 65 ...	Cancer of stomach	... Sept., 1887.

The discharges from some of these cases were incessant and extremely offensive, in spite of the utmost cleanliness, and not only the rags, but the houses were saturated with what I may perhaps be allowed to call "cancer smell," strong carbolic acid lotion and other disinfectants being constantly necessary to enable the inmates to remain with the patient. In each of my cases, husbands, relatives, and nurses are all at the present time in perfect health. Some of them certainly complained occasionally of the smell going down their throats and "settling on their stomachs," as they called it, which was not surprising; but these symptoms readily yielded, at my suggestion, to a strong glass of brandy-and-water.

As there are always two sides to every question, would it not be well to collect evidence if we can, and see on which side the balance in favour of or against the contagion theory lies? I am, Sirs, yours faithfully,

L. NICHOLLS, M.R.C.S. Eng., L.S.A. Lond.

Bury St. Edmunds, Nov. 28th, 1887.

To the Editors of THE LANCET.

SIRS,—In a thesis written for the M.D. (Camb.) degree in June last, I made reference to the above subject; and, in support of my belief that malignant diseases are contagious, not only by immediate contact as mentioned by Sir Peter Eade, but also in a wider sense, I ventured to record the following, which occurred in my practice about two years ago: In a fen district, nine miles from any town or railway, and three from the nearest village, and with very few dwellings in it, three labouring men, all beyond middle age, living at separate houses and working together on the same farm, were each the subject of malignant disease within a comparatively few weeks of one another. Two of them had malignant disease of the stomach, and died at their own homes, the third had malignant disease of the œsophagus, and died at University College Hospital, where he was sent for surgical treatment. In the same thesis I wrote of the possible part played by the lymphatic system in the reception and ultimate development of the particular cell or cell products, which probably is the form the contagious material takes.

I am, Sirs, yours faithfully,

WM. GROOM, M.D. Cantab., &c.

Wisbech, Nov. 17th, 1887.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

A MEDICAL MAYOR FOR DURHAM.

MR. W. C. BLACKETT, a general practitioner in the ancient and cathedral city of Durham, has been elected Mayor. Mr. Blackett was apprenticed to the late Dr. Green of Durham, and is an old pupil at St. Thomas's. While assistant to Dr. Green, in 1849, during the cholera epidemic he rendered exceptional services in many places in the county of Durham. He afterwards settled in practice in Durham, and entered the municipal body, having previously pledged himself to keep aloof from all cliques and parties. After twelve years' service he left the Council, and at the end of nine years went back again. Then he retired to avoid the turmoil of a contest at a time when small-pox was prevalent, in order to prevent the spread of the disease. Mr. Blackett, who is in the prime of life, has reached now every honour in the power of his city to bestow, being Alderman, Justice of the Peace, as well as honorary Surgeon-Major to the 4th Durham Rifles. He is a keen sportsman and supporter of all manly games, such as cricket, quoits, football, boating, and swimming, as well as a benefactor to all local friendly societies.

FEBRILE EPIDEMIC IN THE NORTH.

For the last month an epidemic of a peculiar nature, whether as regards its frequency or some of its symptoms, has prevailed here. The patients are generally adults, taken ill, as a rule, with a rigor or slight chill; this is followed by feverishness and headache (the latter often severe), suggesting typhus. There is very little cough, and but trifling mucous irritation. Constipation is always present, and the high temperature continues for nearly a week. Muscular pains are complained of, and the head symptoms often include transient delirium. While the practitioner is perhaps considering what form of fever he has to deal with, the symptoms rather suddenly subside, but the convalescence is

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slower than that observed after an ordinary cold. The absence of catarrh and sore throat in so many cases is remarkable. The affection is decidedly infectious, visitors paying one short call to a convalescent being often attacked within twenty-four hours. The weather in the north has not been at all severe.

A PROVIDENT MEDICAL ASSOCIATION FOR NEWCASTLE.

A meeting of practitioners to consider the desirability of founding a Provident Medical Association (on the lines of those existing in Leicester, Sunderland, Reading, and other large towns) was held in the library of the Royal Infirmary in this city last week. Dr. Philipson presided. The project gave rise to considerable discussion, but ultimately a resolution was agreed to to appoint a general committee of inquiry to see how far the proposed association was compatible with the existence of medical charities in the city, some of which are already to a great extent provident.

Newcastle-on-Tyne, Nov. 30th.

DUBLIN.

(From our own Correspondent.)

THE ENTRIES AT THE DUBLIN MEDICAL SCHOOL.

THE following is the official return of anatomical students for the present session:—

School.	Session 1887-8.	Session 1886-7.
Trinity College	219 ...	225
Ledwich	196 ...	217
Carmichael	165 ...	181
Royal College of Surgeons ...	134 ...	129
Catholic University	90 ...	80

From these figures it will be seen that, compared with last session, there is a decrease of six at Trinity College, twenty-one at the Ledwich, and sixteen at the Carmichael respectively. On the other hand, there has been an increase of five at the College of Surgeons, and ten at the Catholic University. Last year there were 832 anatomical students, this year 804, or a decrease of 28 on the general total.

PRECAUTIONS AGAINST SMALL-POX.

In consequence of the recent outbreak of small-pox in the south-east of Dublin, posters have been placarded about the city at the instance of the Public Health Committee of the Corporation. Various suggestions are made to the citizens, more particularly the poorer classes, urging the necessity of vaccination, and the desirability of sending every case of small-pox to the Cork-street Fever Hospital, so as to prevent the disease spreading. Other recommendations are also given, which have been found useful on similar occasions.

MERCER'S HOSPITAL, DUBLIN.

This inquiry has been adjourned to Dec. 12th, when it is believed that a basis of compromise between the contending parties will be brought before the governors for ratification.

ROYAL COLLEGE OF SURGEONS.

Dr. J. Wallace Boyce, late medical officer of Stillorgan dispensary, has been presented with an address, accompanied by a valuable gift, by the inhabitants of Stillorgan and its neighbourhood.

Mr. Rowland Scovell, M.B. T.C.D., has been elected house-surgeon to the Monkstown Hospital, co. Dublin.

Dublin, Nov. 29th.

BELFAST.

(From our own Correspondent.)

BELFAST ROYAL HOSPITAL.

FROM the report presented at the ninety-fifth annual meeting of the Belfast Royal Hospital, held recently, we learn that during the year ending August 31st there were 2238 intern patients (more than 100 in excess of last year), while in the extern department there were 15,237 patients treated. During the year Dr. Ross (physician), Dr. Byers (gynæcologist), Dr. Browne (surgeon), Dr. Nelson (ophthalmic surgeon), and Dr. J. A. Lindsay (assistant physician), having vacated office, were unanimously re-elected. The amount needed to secure Mr. Foster Green's generous offer to build a new wing to the Throne Hospital is not yet raised, but the Board of Management hope that before the year is ended the needful sum will be contributed. The small hospital already at work under Dr. Lindsay's medical care has been most successful. The hospital commenced the year with a deficit of £1048 8*s.* 2*d.*; at the close there is a balance against it of £581 8*s.* 1*d.* In addition to the sum of £354, the sum of £4100 has been invested during the year. From the medical and surgical staff report we gather that of the intern patients 965 were medical and 1273 surgical, while of the extern cases 2995 were medical and 12,242 were surgical. The intern and extern cases together numbered 17,445. Clinical instruction was given in the wards to 141 students during the winter, and to 82 during the summer session.

THE BELFAST MEDICAL STUDENTS' ASSOCIATION.

The opening meeting of this Association was held on the 22nd ult., when the President for the present session (Dr. J. A. Lindsay) gave a very interesting address. A lengthened discussion then took place in reference to the new regulations of the Royal University, which have given rise to the utmost dissatisfaction among the Belfast medical students. It was pointed out that these changes acted most unfairly in being retrospective, and attention was drawn to the fact that when students wrote to the officials of the University asking for explanations of these new changes, they received most oracular or diverse opinions. A resolution was passed unanimously that a sub-committee of the Association be appointed to take counsel's opinion as to the legality of these new regulations being enforced in the case of those students who entered before these changes were published. It is rumoured that further alterations in the regulations are about to be suggested to the Royal University by the Standing Committee. I need scarcely say that these perpetual changes made by the Royal University are causing many of those who in the north of Ireland were favourable to it to be utterly dissatisfied. They feel that matters will never be right until there is a University of Ulster, with its head-quarters in Belfast.

BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY.

The session of the Belfast Natural History and Philosophical Society was opened in the Museum on Nov. 9th, when the President, Dr. Letts, Professor of Chemistry in Queen's College, delivered his inaugural address, before a crowded audience, on "Pasteur's Life and Researches." Dr. Letts gave a most admirable account of Pasteur's great scientific discoveries, and dwelt especially on his method of treating hydrophobia, a subject of interest to the audience, as the fact that several Belfast children bitten by a mad dog have been recently treated by M'Govern has directed attention to the matter.

EPIDEMIC OF PNEUMONIA AND SORE-THROAT.

A large number of cases of pneumonia have of late occurred in Belfast, several of which have proved fatal; while at the same time a great many cases of sore-throat, accompanied with high fever and great prostration, have been met with. It is believed by many that the prolonged dry season, by preventing the proper flushing of the drains, may have had something to do in the causation of these diseases.

THE BELFAST LYING-IN HOSPITAL.

An endeavour is at present being made to pay off the debt incurred in making some additions to this hospital. Mr. Foster Green has promised a handsome donation if all the money is raised by the beginning of the new year.

THE BELFAST MEDICAL SCHOOL.

We understand that the number of medical students is about the same this year as it was in the preceding session. There are 214 medical students at Queen's College, and about 130 at the Royal Hospital.

The annual dinner of the Ulster Medical Society was held on Wednesday evening, Nov. 23rd, in the Royal Avenue Hotel, the President (Dr. Ealer) in the chair. There was a large representation of the profession present, and amongst the guests were Surgeon-Major Grose and Dr. J. W. Moore of Dublin.

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PARIS.

(From our Paris Correspondent.)

THE DEATH OF DR. CAUVY.

THE death of Dr. Cauvy, who was inoculated in the month of July at the Pasteur Laboratory, has given rise, as usual, to a difference of opinion between Pasteurians and non-Pasteurians. Some of the medical papers having inserted a short note stating the bare fact that Dr. Cauvy had succumbed to rabies after the preventive treatment, the *Bulletin Médical* publishes the extracts concerning this case from the register of the laboratory, together with the history of Dr. Cauvy's illness furnished by Dr. Sabatier. The first document is as follows:—"Dr. Cauvy (François), forty-six years of age, of Béziers (Hérault). Bitten the 29th of June, 1887, on the back of the first phalanx of the right first finger. Bite very superficial; had not bled. No treatment had been applied. The dog had bitten his master while he was endeavouring to force it to drink, and had put his hand in its mouth. Rabies was recognised by M. Gillis, veterinary surgeon at Béziers, and the dog died on the 3rd of July. Dr. Cauvy was treated from the 5th to the 15th of July." The history of the case is contained in the following letter from Dr. Sabatier to Professor Grancher:—

"Béziers, Nov. 4th, 1887.

"Most honoured Professor,—I feel it my duty to inform you of the very unexpected (*presque foudroyante*) death of a patient who I am told was treated by the anti-rabic inoculation. The patient in question was Dr. Cauvy, whom you may remember to have seen at the Pasteur Institute last July. Dr. Cauvy died on Nov. 3rd, and this is what I have gathered and observed concerning the short and terrible illness of our unfortunate *confrère*. Dr. Cauvy had no morbid antecedents. He was subject to migraine. His father was gouty, his mother died of cancer of the stomach, and his only son of tubercular meningitis. For about a fortnight Dr. Cauvy had been suffering from severe pain in the head, which did not prevent him fulfilling his duties. He attributed this pain to neuralgia, and treated it with small doses of antipyrin. On the evening of Nov. 2nd slight movement was remarked, and a few fits of guttural cough. On the 3rd, after a quiet night, Dr. Cauvy awoke, apparently well, and breakfasted as usual, according to his custom, upon coffee with a little bread. At a quarter-past seven he complained of violent pain in the head, and at once lost consciousness, and was seized with convulsions. I saw him at half-past seven: intelligence was abolished; the pupils largely dilated and insensible; respiration stertorous, difficult and irregular (*entre coupée*), the lips covered with a frothy bloody saliva. The four limbs were thrown about by tonic convulsions and contractured, the upper extremities in flexion, the thumb also flexed upon the palm of the hand, the lower extremities in forced extension. The pulse was strong, regular, and 70 to the minute. The temperature, in the absence of a thermometer, appeared normal. At half-past eight a flaccid paralysis of the four limbs replaced the contracture. At a quarter past nine the contracture and convulsions returned. The pulse and breathing ceased suddenly, and the patient died of syncope and asphyxia. These symptoms of bulbar apoplexy caused a great impression upon me, on account of the special circumstances attending the case. Should they be attributed to rabic intoxication, or are they to be considered as manifestations of this disease (bulbar apoplexy) in its last period? If not troubling you too much, I should be much obliged to know your opinion.

"I am, yours, &c.,

"11, Rue de la Coquille, Béziers." "DR. SABATIER.

M. Grancher has replied that in his opinion Dr. Cauvy did not die of rabies, and the *Bulletin Médical* remarks there was no symptom of this disease. Considering that Dr. Sabatier's letter must have been in Professor Grancher's hands on November 5th—that is to say, within two days of death—it is regrettable that Professor Grancher should not have thought it desirable to obtain a portion of the medulla and prove his assertion by inoculation.

HYPNOTISM BEFORE THE FRENCH LAW.

A schoolmaster has recently been charged, at the assizes of the Nièvre, with indecent assaults upon children under his care. At the previous sessions he had admitted the offence, but declared he had acted under the influence of an irresistible impulse. The court had in consequence postponed their decision, pending the medical examination of the accused. The medical witnesses have concluded that the case is one of hysteria, and that hypnotic sensibility being developed in a high degree, the subject is only responsible to a limited extent; and an intelligent jury pronounced a verdict of acquittal. It would be interesting to know whether these enlightened experts would have come to the same conclusion had the assaults in question been made upon their own children, and what would then have been their views on hypnotism.

TANACETIC AND TRUE RABIES.

After having in two previous notes communicated to the Academy of Sciences, which were duly reported in THE LANCET, (1) the biological effects of the essence of tanaisia in developing accidents of false rabies, compared with those of true rabies, after injections of this substance into the veins of rabbits, and (2) the preventive action of the hydrate of chloral in tanacetic and in true rabies—the author, Dr. Peyraud, has now come forward to make known the results of the experiments undertaken by him to verify the preventive action of the essence of tanaisia against true rabies. If, says the author, one submits to the action of the rabic virus of rabbits on which had been previously practised during six, seven, and eight days injections of the essence of tanaisia, the development of rabies is prevented in these animals. None of those to which this preventive treatment had been applied eight months ago, have been affected with rabies, whereas two rabbits that were inoculated with rabic virus without their having been previously subjected to the tanacetic injections succumbed to true rabies, one very rapidly, and the other more tardily. Whence the author believes that he has discovered in the essence of tanaisia an effectual remedy against true rabies.

THE MINERAL WATERS OF FRANCE.

The French have long been trying to be independent of the mineral waters of Germany, and the Hydrological Society of Paris has discovered that France is the only country in Europe which is capable of providing all that concerns thermal therapeutics. For instance, according to the above society, the waters of Royat perfectly represent those of Ems; those of Châteauneuf and Bourbon-Lancy are similar to the waters of Baden-Baden and of Wiesbaden, Chatel-Guyon can rival Kissingen and Marienbad, and Saint Nectaire replaces advantageously Niederbronn.

AN EPIDEMIC OF MEASLES.

An epidemic of measles has broken out at Lille, and is reported to be committing great ravages, particularly in the most populous districts of the town. Several fatal cases have occurred, attributable to the disease itself, or to other complications.

A PROPOSED NEW FACULTY.

Owing to the importance that the School of Medicine at Marseilles has attained, the Municipal Council of that city has petitioned the Government for permission to raise it to the rank of a Faculty.

THE BACILLUS OF CANCER.

In a paper read before the Medical Society of Berlin last Monday, and which is published in to-day's *Semaine Médicale*, M. Scheurlen gives an account of his experiments with the cancer bacillus. His conclusions are as follows: (1) There exists always in cancerous tumours a bacillus which can be isolated; (2) the spores of this bacillus are met with in all microscopical preparations of cancerous tissues; (3) inoculations upon animals with pure cultures of this bacillus always give rise to the formation of cancerous tumours; (4) there is consequently a causal relation between this bacillus and cancer. The bacillus in question is from 1·5 to 2·5 μ long and 0·5 μ wide. The spores are all of the same size, 1·5 μ by 0·8 μ, of ovoid shape, slightly green, and shining. The bacilli move like the weight of a pendulum round a centre.

ANTIPYRIN, A SPECIFIC FOR SEA-SICKNESS.

M. Emile Ossian-Bonnet, in a note to the Academy of Sciences, states that he has given antipyrin in sixty instances for the relief of sea-sickness, and with unfailing success. In most cases one gramme and a half is sufficient, and when

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this is not enough, a second dose never fails to produce the desired effect. In exceptional instances where the medicine cannot be absorbed by the stomach on account of the vomiting, a hypodermic injection of one gramme suffices.

Paris, Nov. 30th.

QUARANTINE AND SANITATION AT TRIESTE.

(From our Special Correspondent.)

FROM a political, commercial, and strategical point of view, Trieste is certainly one of the most important ports in the Mediterranean. It is seeking to obtain a position similar to that which was once enjoyed by Venice. The railway lines and the passes through the Alps are so combined as to lead the natural flow of commerce to Trieste. Thus the size of the town, the number of its inhabitants, and also of commercial and other men who are constantly obliged to visit Trieste, are greatly increasing. Under such circumstances, the sanitary condition of this—the principal—Austrian port becomes more and more a matter of interest to all Europe. The fact that so great an outlet to the Mediterranean was, like Marseilles, invaded by the cholera is an illustration how the sanitary condition of such a port may affect the general comity of nations. There were in the Trieste district 893 cases of cholera recorded and 554 deaths. This, however, comprises a large outlying rural district, and the number of deaths is very much increased by the inefficient care taken of the inhabitants of small villages. Thus, though the mean proportion of deaths was equal for the Trieste district to 62·3, it equalled 76·1 in the village of Prosecco. The English colony, numbering 240 persons, completely escaped, though there were two English sailors who arrived ill in port.

At the town hospital Dr. Lustig adopted a system of treatment which, it is maintained, produced very good results. In two litres of an infusion of chamomile he introduced twenty grammes of tannin, from one to five centigrammes of corrosive sublimate, and from twenty to forty grammes of rum. These two litres were suspended a considerable height above the bed. At the end of a tube he fixed a long one of vulcanite, nozzled, which he passed up the rectum to a distance of ten or more inches. The contents of the enemata, by gravitation, thus gradually found its way into the intestines. The peculiarity of the treatment consisted chiefly of the considerable volume of liquid used and the great distance the nozzle was forced into the intestines. Both the evacuations and the sickness were checked by this method. The statistical data of the hospital establishes that 325 cholera patients were admitted. Three died before they could be seen, and twenty-five were in a dying condition. Fifty more were in an advanced stage of asphyxia. Nearly all the cases had already suffered more than once, and generally several days, before they were brought to the hospital. Ten were cases of dry cholera, with no evacuations, or very few. Of these 325 cases, 117 were treated with the enemata, as described above. Eighty-three recovered, while fifteen patients treated with subcutaneous injections of morphia all died.

The fear of cholera has led to the imposition of quarantine regulations, and in the Gulf of Trieste, since October, 1884, to May, 1887, no less than 1049 ships have been retained and placed under medical observation. The crews of these ships numbered 6671 persons, and there were also 288 passengers. The shipping thus detained amounted in tonnage to 93,400 tons. At the present moment ships coming from southern Italian ports are placed under observation for seven days. But if these same ships touch at Venice or any northern port before they reach Trieste, then they are not subjected to any sort of detention. Passengers coming overland may also enter the town without the slightest interference. The authorities themselves who carry out these quarantine regulations recognise that they are absolutely useless and vexatious. They are enforced solely to satisfy the ignorant sections of the native population, and to prevent panic.

The population of Trieste, now estimated at 154,000, shows a very high death-rate. It is now 37 or 38 per 1000, but has been known to reach the appalling figure of 52 per 1000. In 1886 the deaths from phthisis and from diseases of the respiratory organs were equal to almost 31 per cent. of the entire mortality; and this is attributed to the very trying winds that prevail at Trieste. From a sanitary point of view, the town is comparatively free from bad smells; the streets are well paved, many of them broad, and well opened to light and air. The drainage, of course, is very much below the English ideal, but still is much better than in many French towns that have a lower death-rate. Also, it should be remarked that the strictest measures are taken to prevent the spread of zymotic diseases. Medical men are obliged to report all infectious cases; and a board with the name of the disease is hung up on the street door of the house, and also on the door of the room where the patient is nursed. When the patient dies or is cured, the room is fumigated, then cleaned and white-washed, and the bedding either destroyed or taken to the town disinfecting stove. Considering these precautions, it is remarkable that the death-rate should remain so high; but, at the same time, it should be noted it is falling. For the first quarter of this year it amounted to 34·7, which is in any case better than the previous records. The supply of water was stated to be good, though of very hard quality. There is a very considerable amount of poverty, and, of course, the improper nursing of children accounts in a great measure for the high death-rate. It cannot be said, however, that health questions are neglected at Trieste, and there is every reason to anticipate a marked improvement in no distant future.

Trieste, October 30th.

Obituary.

CHARLES LOUDON BLOXAM, F.C.S.

WE regret to announce the death of Professor Bloxam of King's College on the 28th ult., at the age of fifty-six. The late professor had taught in the Chemical Department of the College for thirty-three years, having been appointed Demonstrator of Chemistry in 1854, Professor of Practical Chemistry in 1856, and Professor of Chemistry, in succession to Professor W. A. Miller, in 1870. He was also Professor of Chemistry for many years at the Royal Military Academy, Woolwich, and also at the Artillery Institute at Woolwich, and he held the latter appointment up to his decease. He was one of the ablest practical chemists in Great Britain, a fluent and able lecturer, and a most genial and pleasant colleague and teacher. In addition to some papers in the chemical journals, he was the author of "Bloxam's Chemistry," a new edition of which is about to be published, and of "Laboratory Teaching," a much-liked practical text-book, which has passed through many editions, and he re-edited and considerably improved "Bowman's Practical Chemistry." He was buried in Charlton Cemetery on the 1st inst.

HENRY JEPSON, F.R.C.S.

THIS gentleman, who died on the 23rd ult., was the youngest son of the late Rev. George Jepson, Prebendary of Lincoln Cathedral. He was born on Sept. 13th, 1797, and was consequently in his ninety-first year. His early education was conducted at the Lincoln Grammar School, and upon leaving it he entered as a student at the then united hospitals of Guy's and St. Thomas's. He took the degrees of M.R.C.S. and L.A.C. in 1819, and was subsequently admitted a Fellow of the College in 1863. After qualifying, he practised for a year or two at Colnbrook, and then removed to Hampton, where he soon attracted round him a large circle of friends, among whom may be numbered the late Sir Charles Clarke, Sir Andrew Halliday, Dr. Bright, and others. After a successful career he retired from active practice about four years ago. By the poor he was much beloved, and his death will be greatly felt by them. He was formerly district medical officer for the Kingston Union, and surgeon to the Kingston Dispensary and the Royal Humane Society.

THE salary of Dr. Gayton, the medical superintendent of the North-Western Hospital, has been increased from £400 to £500 per annum.

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Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on Nov. 24th, the following degrees were conferred:—

BACHELORS OF MEDICINE.—Arthur Lumsden Marshall, Clare; Richard Tanner Finch, Pembroke; Henry Skelding, Gonville and Caius; Cyril Hutchinson Walker, Jesus.

BACHELOR OF SURGERY.—Henry Skelding, Gonville and Caius.

SOCIETY OF APOTHECARIES.—The following gentlemen having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society in November, 1887:—

Beckett, Louis, Aberdeen-road, Highbury.
Bulger, Alfred James, Wellington-road, Dudley.
Bokenham, T. Jessop, Albury Lodge, Cheshunt.
Cunningham, John, Rudgrave-place, Egremont, Cheshire.
Flux, George Belben, Harley-street.
Fullard, John, Burnt Tree, Tipton.
Snape, E. A., St. Mary's Vicarage, Bury St. Edmunds.
Spong, Harry, Manston House, Crossgates, near Leeds.

The following gentlemen passed the Surgical portion of the examination.

Coulton, John James, London Hospital.
Cox, W. A. Spencer, Owens College, Manchester.
Cunningham, John, Liverpool School of Medicine.
Evans, Evan, St. Bartholomew's Hospital.
Hayward, Gerald Cobden, Middlesex Hospital.
Hicks, John Sidney, London Hospital.

VACCINATION GRANT. — Dr. Clarke, of Street, Somerset, has been awarded the Government grant for efficient vaccination in his district.

AT the annual meeting of the supporters of the Edinburgh Medical Missionary Society on the 24th ult., it was reported that during the past year the total income had amounted to £3957, and the expenditure to £5132.

AT the ninth annual festival dinner in aid of the funds of the East London Hospital for Children and Dispensary for Women held on the 24th ult., subscriptions amounting to £1739 were announced by the secretary.

THE Dental Hospital of London, Leicester-square, has received £1000 from its medical staff and lecturers, towards the £5000 required for the extension of the hospital, rendered absolutely necessary in consequence of the large increase in the number of patieuts.

HOSPITAL SATURDAY FUND.—At a meeting of the Board of Delegates of this fund held on the 26th ult., it was unanimously resolved that the sum of £10,000 be distributed among the London medical charities, the largest amount yet awarded.

NORTH LONDON UNIVERSITY COLLEGE HOSPITAL.—It has been decided to hold a fancy dress ball in aid of the funds at the Hôtel Métropole on the 9th of February next. A festival dinner with the same object will also take place at the same hotel early in the following May.

MEDICAL ATTENDANCE ORGANISATION COMMITTEE.—A meeting will be held at the rooms of the Society of Arts on Tuesday, Dec. 6th, at 4 P.M., to consider the report of the above Committee upon the medical attendance of the working classes, and the relation of provident dispensaries to hospitals. The meeting, we are informed, will be a public one, and a full and free discussion of the questions brought forward is desired.

HEREFORD INFIRMARY.—The ceremony of laying the foundation-stone of a new children's ward in connexion with this institution took place on the 23rd ult., in the presence of a large assembly of supporters of the charity. The new building, which is being erected at an estimated cost of £3000, will consist of two storeys, containing on the ground floor accommodation for sixteen beds, and on the upper floor dormitories and apartments for the nurses.

THE WILLIAM F. JENKS PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The first award will be made by the committee for the best essay upon "The Diagnosis and Treatment of Extra-uterine Pregnancy," as soon after January 1st, 1889, as may be practicable. The prize is of the value of $250, and is open to all the world. Papers for competition must be written in English, and be presented by the said date. The prize essay is to become the property of the College.

THE sixth annual meeting of the members of the West of Scotland Sanitary Association was held on the 25th ult., when highly satisfactory financial and general reports were presented and adopted.

ROYAL SOCIETY.—At the anniversary meeting of the members of the Royal Society on the 30th ult., the following, amongst others, were elected office bearers and members of the Council for the ensuing year:—Professor Michael Foster, secretary; Sir W. Bowman, Bart., Professor Arthur Cayley, Professor David Ferrier, and Arthur Gamgee, M.D., members of the Council.

PRESENTATIONS.—At a concert held at the Assembly Rooms, Talysarn, Carnarvonshire, on the 11th ult., in connexion with the Nantlle Vale Branch of the St. John Ambulance Association, Colonel Ruck in the chair, Mr. H. J. Roberts, M.R.C.S., of Penygroes, was presented with a handsome case of surgical instruments by the members of his "First Aid" men's class, and a valuable present of surgical works by the ladies of his "Nursing" class. Mr. J. H. Jones, M.R.C.S., of Talysarn, was likewise presented with a similar present of books by the ladies' "First Aid" class, in recognition of their services as gratuitous lecturers. Certificates were presented at the same time to a great number of successful pupils.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARMSTRONG, ARTHUR JAMES MACKENZIE, has been appointed Medical Superintendent of the Plaistow Hospital, Plaistow (Metropolitan Asylums Board).

BROOK, W. F., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin to St. Thomas's Hospital.

BULSTRODE, H. T., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., has been reappointed Non-Resident House-Physician to St. Thomas's Hospital.

COLLINS, A. W., M.B.Vict., M.R.C.S., L.R.C.P.Lond., has been appointed Chloroformist to the Liverpool Royal Infirmary, vice W. M. Bristow, M.R.C.S., L.R.C.P., resigned.

COLMAN, HENRY, L.R.C.P.Lond., has been appointed Medical Officer for the Fifth District of the Devizes Union.

COOK, S. B., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin to St. Thomas's Hospital.

COOKE, E. W., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat to St. Thomas's Hospital.

CRISP, E. H., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Ear to St. Thomas's Hospital.

DAY, DONALD D., M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Medical Officer to the Norwich Dispensary, vice Firth, deceased.

FAWSSETT, F., L.R.C.P., M.R.C.S., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

GOODDY, E. S., L.R.C.P., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Special Department for Diseases of the Eye to St. Thomas's Hospital.

HILLIARD, R. HARVEY, M.D., F.R.C.S.E., has been appointed Honorary Surgeon to the Buckinghamshire General Infirmary.

HINNELL, J. S., M.R.C.S., L.S.A., has been reappointed Clinical Assistant in the Special Department for Diseases of the Eye to St. Thomas's Hospital.

HOBHOUSE, E., M.B., B.S.Oxon., M.R.C.S., has been appointed Resident House-Physician to St. Thomas's Hospital.

HYSLOP, THEO. B., M.B., C.M.Edin., has been appointed Assistant Medical Officer to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster, vice H. G. Taylor, M.D.Lond., deceased.

JONES, H. S., M.R.C.S., L.S.A., has been reappointed House-Surgeon to St. Thomas's Hospital.

KENYON, GEORGE HERBERT, M.B., C.M.Ed., has been appointed Medical Officer for the Hooton Pagnell District of the Doncaster Union.

NAIRN, R., L.R.C.P., M.R.C.S., has been appointed Non-Resident House-Physician to St. Thomas's Hospital.

ORD, W. W., M.A., M.B., B.S.Oxon., M.R.C.S., has been appointed Resident House-Physician to St. Thomas's Hospital.

PARROTT, T. G., M.R.C.S., L.R.C.P.Lond., has been appointed Honorary Surgeon to the Buckinghamshire General Infirmary.

PRIMROSE, ALEXANDER, M.B., C.M. Edin., has been appointed Pathologist and Chloroformist to the Paddington-green Children's Hospital, vice Gerard, resigned.

RICHARDSON, ADOLPHUS J., M.A., M.B. Cantab., M.R.C.P. Lond., M.R.C.S., has been appointed Physician to the Sussex County Hospital, vice Shadwell, resigned.

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KILBURN, MAIDA-VALE, AND ST. JOHN'S-WOOD GENERAL DISPENSARY. Honorary Medical Officer.

KING'S COLLEGE, London.—Professor of Dental Surgery and Surgeon-Dentist to the hospital.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E. Junior Resident Medical Officer. Salary £30 per annum, with furnished apartments, board, attendance, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.—Assistant Physician.

NEWPORT (MON.) ODDFELLOWS' MEDICAL AID ASSOCIATION.—Medical Officer. Salary £140.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, E.—Junior House-Surgeon. Salary £30 for six months.

PONTEFRACT DISPENSARY.—House-Surgeon. Salary £130 per annum, with furnished rooms, coal, gas and attendance.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer. Salary at the rate of £60 per annum, with board and lodging in the hospital.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House-Surgeon.

ST. GEORGE, HANOVER-SQUARE, PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £100 a year, with furnished rooms and an allowance of £32 a year for servants' coals, and gas; also a percentage on members' payments, estimated to be £28 per annum.

ST. GEORGE'S HOSPITAL, Hyde-park Corner, W.—Assistant Physician.—Assistant Surgeon.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House-Surgeon. Salary £50, with board, lodging, and washing.

SOUTHPORT INFIRMARY AND LOCAL DISPENSARY.—House-Surgeon. Salary £100 per annum, with board, furnished rooms, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

CORRY.—On the 27th ult., at Drumquin, co. Tyrone, the wife of William Corry, M.D., J.P., of a son.

DAUNT.—On the 25th ult., at Pierpoint, Lindfield, the wife of Elliot Daunt, M.R.C.S., L.R.C.P.Lond., of a daughter.

DE MÉRIC.—On the 26th ult., at Lyndhurst-terrace, Weymouth, the wife of Fleet-Surgeon E. V. De Méric, Royal Navy (retired), of a son.

MARRIAGES.

COLE—RAWLINGS.—On the 24th ult., at Christ Church, Surbiton, William Robert Newton Cole, M.D., to Ellen, eldest daughter of the late Rev. Jas. Rawlings, M.A., Rector of St. Pinnock, Cornwall.

MACVICAR—ROBERTSON-MACDONALD.—On the 7th ult., at the Parish Church, Northam, S. D. MacVicar, L.R.C.P.Ed., L.R.C.S.Ed., to Ada J., widow of the late W. D. Robertson-MacDonald, of Kinlochmoidart, and daughter of the late Thomas Littledale, of Highfield.

SUTTON—DUNSFORD.—On the 28th ult., at the Parish Church, St. Helier's, Jersey, Alexander Arthur Sutton, L.R.C.P. Ed., L.F.P.S. Glas., Army Medical Staff, to Annie Aubert, eldest surviving daughter of the late Gen. H. F. Dunsford, C.B., Bengal Staff Corps.

DEATHS.

DE CASTRO.—On the 23rd ult., at The Engadine, Torquay, Devon, James Cato De Castro, M.D., F.R.C.S., aged 63.

JEPSON.—On the 23rd ult., at Hampton, Henry Jepson, F.R.C.S., in his 91st year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, December 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—8 P.M. Mr. J. Bland Sutton: Some cases of Abnormal Fissures about the Mouth.—Mr. Storer Bennett: An Extraordinary Example of Tooth Development.—Mr. Penfold: An Antiseptic, the Fluosilicate of Sodium.—Dr. Elliott: Some New Instruments.—Mr. Dennant: An Intercepting Bag in Nitrous Oxide Gas Administration.—Mr. E. Lloyd Williams: Pathology of Alveolar Abscess.

SOCIETY OF ARTS.—8 P.M. Mr. H. H. Statham: The Elements of Architectural Design. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Thorowgood: Cardiac Failure.—Dr. Stephen Mackenzie: Chyluria (with exhibition of a case). At 8 o'clock Dr. Mackenzie will give a demonstration of (1) Living Filariæ Sanguinis Hominis; (2) Some of the Developmental Changes in the Mosquito; (3) A Nematode Worm mistaken for Filaria Sanguinis Hominis.

Tuesday, December 6.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Specimens: Dr. Bedford Fenwick: Fatty Degeneration of Heart from Intra-abdominal Pressure.—Mr. Hutchinson: Arsenic Cancer.—Mr. Treves: Stricture of Intestine following Tubercular Ulcer.—Mr. W. Sibley: Tuberculosis in Birds.—Dr. F. C. Turner: Syringo-myelia.—Dr. Norman Moore: Carcinoma of Common Gall-duct.—Mr. Bull: Rare Form of Fracture of Lower End of Femur.—Dr. Ormerod: Partial Perforation of Skull-cap in Cerebral Tumour. Card Specimens by Messrs. Makins, Bull, Eve, and Dr. Hebb.

Wednesday, December 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Sir. J. Lister: The Present Position of the Antiseptic Question (Bradshawe Lecture).

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Malins, Mr. Bluett, and others. Dr. Herman: (1) A case of Eclampsia of Pregnancy, with Observations on the State of the Renal Function; (2) A case of Bright's Disease during Pregnancy.—Dr. Lewers: Note on the Post-mortem Appearances of a Phlegmon of the Broad Ligament.

SOCIETY OF ARTS.—8 P.M. Mr. P. L. Simmonds: The Chemistry, Commerce, and Uses of Eggs of Various Kinds.

Thursday, December 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Living and Card Specimens at 8 P.M. Mr. T. H. Bickerton (Liverpool): Two cases of Fragments of Glass in the Anterior Chamber.—Mr. Marcus Gunn: Peculiar Foveal Reflex in connexion with Amblyopia in Myopia.—Mr. Quarry Silcock: Case of Large Exostosis of Orbit (and other cases).—Mr. Emrys Jones (Manchester): (1) An Unusual Complication after Subconjunctival Tenotomy of the Internal Rectus; (2) Persistent Hæmorrhage in the Anterior Chamber after Iridectomy for Chronic Glaucoma.—Mr. J. B. Lawford: On Congenital Defect of External Ocular Muscles.

Friday, December 9.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Mr. Percy Dunn: Clinical Society of London.—8.30 P.M. Dr. Barlow: Cases of Acute Enlargement of the Thyroid Gland.—Dr. Coupland: Hydatid Cysts of Left Lobe of Liver.—Mr. Owen: Hydatid Cyst on Convex Surface of Liver encroaching on Thorax.—Mr. Treves: Peculiar Mode of Rupture of a Hydatid Cyst, with case. Living Specimens by Mr. H. W. Allingham and Dr. Herringham.

Saturday, December 10.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Lectures
ON
FIBROID DEGENERATION AND ALLIED LESIONS OF THE HEART, AND THEIR ASSOCIATION WITH DISEASE OF THE CORONARY ARTERIES.

BY JOHN LINDSAY STEVEN, M.D.,
ASSISTANT TO THE PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF GLASGOW; ASSISTANT PHYSICIAN, GLASGOW ROYAL INFIRMARY; AND ASSISTANT TO THE LECTURER ON PATHOLOGY IN THE WESTERN INFIRMARY OF GLASGOW.

LECTURE I.

INTRODUCTORY.

THE condition of the heart wall, the consideration of which is to form the main object of the following remarks (viz., a development of what appears to the naked eye to be fibrous tissue in the midst of the muscle substance), is one which most English authorities would probably class under the term "chronic interstitial myocarditis," but which is frequently, though not invariably, to be referred to a cause quite different from that indicated by this term, implying as it does inflammatory action of a chronic kind. This fibrous transformation is most frequently met with in the left ventricle, may not be at all apparent either on the external or internal surface of the cardiac wall, and generally, though not invariably, occurs in association with widespread degenerative changes of the arterial system, obviously involving in most instances the coronary arteries of the heart. Besides the change just referred to, a more acute process of the nature of softening is also frequently met with in association with the same degenerative arterial changes or with embolism; and although the appearances of this acute condition are very different from those of fibrous change, yet the operating cause is so obviously similar that the two must frequently be regarded as different stages of the same affection, or as differing from one another only in degree. The details of the cardiac lesions thus briefly referred to, and of fatty degeneration as associated with arterial disease, will be described in due course, but in the meantime it will be necessary to give some account of our previous knowledge of fibroid disease of the heart.

HISTORICAL AND CRITICAL ACCOUNT.

The conditions of the heart wall (especially fibrous transformation[1]), which form the subject of these lectures, have long been described by special observers, but it is only of recent years that what appears to be, in most instances, their true pathological significance has been hinted at, and that much more on the part of continental than of English physicians. From the time of Morgagni downwards frequent references are to be found in medical literature to a fibrous condition of the heart-wall, apart from the lesions met with in connexion with the valvular apparatus. It is to be noted, however, that in many of the earlier writings reference is made to those conditions only where the fibrous change had advanced so far as to be visible on the surface, without requiring any special dissection of the muscular tissue for its exhibition. Thus Morgagni,[2] in his twenty-seventh letter, which treats of "Sudden Death from a Disorder of the Heart," article 17, after giving illustrations of calcareous plates in the substance of the heart, writes as follows: "For it is certain that the fleshy fibres of the heart themselves sometimes degenerate into a tendinous hardness. Albertini, therefore, saw in some bodies 'that the substance of the heart from the basis to more than half its extent had become tendinous, as it were, both in consistence and colour; which kind of metamorphosis I have it in my power to confirm, if there were any occasion, by an observation of my own.'" It will thus be seen that the condition has been recognised from the earliest days of pathological anatomy, and it is interesting in the light of modern research to observe that the term "degenerate" is used in the description of the change. It is not to be supposed, however, that the term necessarily meant the same to Morgagni that it does to us.

Towards the end of the last and the beginning of the present century medical literature abounds in communications on the subject of aneurysm of the heart, a condition which is very apt to follow upon the morbid condition at present under review. These records are therefore of great interest in the present investigation, and a few of the more important may be shortly referred to. Dr. Matthew Baillie[3] in his work on Morbid Anatomy describes a case of aneurysm of the left ventricle, and refers to the rarity of the condition. He explained the occurrence of the aneurysm by the muscular tissue at the apex being thin and weak, and so unable to resist the impulse of the blood against it. In 1817 Portal[4] published a long article on the subject of cardiac aneurysm, mainly from an etiological point of view. Among the different causes which he states as giving rise to aneurysms of the heart, the following may be mentioned: (1) the formation of false membranes inside and outside of the heart; (2) engorgement of the coronary arteries and veins; and (3) serous and purulent infiltrations. In the second of these it would seem as if we had a hint of the relationship which exists between a diseased condition of the coronary arteries and the development of cardiac aneurysm, but, so far as I can gather, the author simply refers to a dilatation of these vessels as one origin of aneurysm, and not to any nutritive change in the muscular tissue. About the same time important observations were published in France by Breschet[5] and Reynaud.[6]

Another very important paper in connexion with this subject from an historical point of view is that of Mr. John Thurnam on Aneurysm of the Heart.[7] Although, like the others just referred to, not directly bearing on the subject of fibrous transformation of the heart, the essay is very important from the fact that many of the cases were found to be associated with what is called "fibrous degeneration" of the heart-wall. With regard to the causation of the "fibrous degeneration" itself, the views adopted are pericardial adhesions and rheumatic inflammations. But nowhere is there found any allusion to the state of the coronary arteries as an etiological factor, nor are there any references to fibrous change as a morbid state of the heart-wall *sui generis*, and apart from aneurysm. Although in several of the cases the coronary arteries are mentioned as ossified, no opinion is expressed as to the probable relationship of this to the aneurysmal state. Interesting statistics are also given by Thurnam as to the situation of the aneurysm. Out of 74 cases, 58 were situated in some part of the left ventricle; and "the 67 aneurysms which occurred in the 58 cases, omitting one case in which this is not mentioned, may as regards situation be thus distributed: at or near the apex of the ventricle, 27; in different parts of the base, 21; in intermediate portions of the lateral walls, 15; in the interventricular septum, 3. ..... To conclude these observations on the situation of the aneurysms of the left ventricle, the only general conclusion that we can come to appears to be that the thinnest parts of its walls, or the apex and highest part of the base, are those which are much more frequently than any others the seat of the disease." This in general agrees with the observations of more recent writers and also with my own. It will thus be seen that in the record of Thurnam's cases we have a most important contribution to the literature of this subject from a pathological as well as from a historical point of view. In 9 cases the muscular tissue was the seat of more or less extensive "fibro-cellular degeneration," caused by inflammation it was supposed. If the disease was present to such an extent as to cause aneurysm in so many of the cases, we have strong reason for supposing that in its slighter manifestations, which are easily overlooked, it may occur much more frequently. The fibro-cellular degeneration, however,

[1] I use the terms "fibroid degeneration" and "fibrous transformation" as synonymous, and I think the latter is more scientifically correct. It is a real transformation into fibrous tissue with which we have to deal, so that the term "fibro'd" seems rather cumbrous.

[2] The Seats and Causes of Diseases investigated by Anatomy, in Five Books. Translated from John Baptist Morgagni, by B. Alexander, M.D. Vol. i., p. 845. London: A. Millar, 1769.

[3] Morbid Anatomy, by M. Baillie, M.D., London, 1793, p. 17.; see also his Plates (1799), Plate iii., Fig. 1.

[4] Sur les Aneurysmes du Cœur.

[5] Recherches et Observations sur l'Aneurysme faux consécutif du Cœur. Répertoire d'Anatomie et de Physiologie Pathologique, 1827, vol. iii.

[6] Reynaud, Journ. Hebd. de Médecine. 1829, vol. ii., p. 363.

[7] Medico-Chirurgical Transactions, 1838, vol. xxi. p. 187.

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Births, Marriages, and Deaths.

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DAUNT.—On the 25th ult., at Pierpoint, Lindfield, the wife of Elliot Daunt, M.R.C.S., L.R.C.P.Lond., of a daughter.

DE MÉRIC.—On the 26th ult., at Lyndhurst-terrace, Weymouth, the wife of Fleet-Surgeon E. V. De Méric, Royal Navy (retired), of a son.

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SUTTON—DUNSFORD.—On the 28th ult., at the Parish Church, St. Helier's, Jersey, Alexander Arthur Sutton, L.R.C.P. Ed., L.F.P.S. Glas., Army Medical Staff, to Annie Aubert, eldest surviving daughter of the late Gen. H. F. Dunsford, C.B., Bengal Staff Corps.

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JEPSON.—On the 23rd ult., at Hampton, Henry Jepson, F.R.C.S., in his 91st year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, December 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—8 P.M. Mr. J. Bland Sutton: Some cases of Abnormal Fissures about the Mouth.—Mr. Storer Bennett: An Extraordinary Example of Tooth Development.—Mr. Penfold: An Antiseptic, the Fluosilicate of Sodium.—Dr. Elliott: Some New Instruments.—Mr. Dennant: An Intercepting Bag in Nitrous Oxide Gas Administration.—Mr. E. Lloyd Williams: Pathology of Alveolar Abscess.

SOCIETY OF ARTS.—8 P.M. Mr. H. H. Statham: The Elements of Architectural Design. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Thorowgood: Cardiac Failure.—Dr. Stephen Mackenzie: Chyluria (with exhibition of a case). At 8 o'clock Dr. Mackenzie will give a demonstration of (1) Living Filariæ Sanguinis Hominis; (2) Some of the Developmental Changes in the Mosquito; (3) A Nematode Worm mistaken for Filaria Sanguinis Hominis.

Tuesday, December 6.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Specimens: Dr. Bedford Fenwick: Fatty Degeneration of Heart from Intra-abdominal Pressure.—Mr. Hutchinson: Arsenic Cancer.—Mr. Treves: Stricture of Intestine following Tubercular Ulcer.—Mr. W. Sibley: Tuberculosis in Birds.—Dr. F. C. Turner: Syringo-myelia.—Dr. Norman Moore: Carcinoma of Common Gall-duct.—Mr. Bull: Rare Form of Fracture of Lower End of Femur.—Dr. Ormerod: Partial Perforation of Skull-cap in Cerebral Tumour. Card Specimens by Messrs. Makins, Bull, Eve, and Dr. Hebb.

Wednesday, December 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Sir. J. Lister: The Present Position of the Antiseptic Question (Bradshawe Lecture).

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Malins, Mr. Bluett, and others. Dr. Herman: (1) A case of Eclampsia of Pregnancy, with Observations on the State of the Renal Function; (2) A case of Bright's Disease during Pregnancy.—Dr. Lewers: Note on the Post-mortem Appearances of a Phlegmon of the Broad Ligament.

SOCIETY OF ARTS.—8 P.M. Mr. P. L. Simmonds: The Chemistry, Commerce, and Uses of Eggs of Various Kinds.

Thursday, December 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Living and Card Specimens at 8 P.M. Mr. T. H. Bickerton (Liverpool): Two cases of Fragments of Glass in the Anterior Chamber.—Mr. Marcus Gunn: Peculiar Foveal Reflex in connexion with Amblyopia in Myopia.—Mr. Quarry Silcock: Case of Large Exostosis of Orbit (and other cases).—Mr. Emrys Jones (Manchester): (1) An Unusual Complication after Subconjunctival Tenotomy of the Internal Rectus; (2) Persistent Hæmorrhage in the Anterior Chamber after Iridectomy for Chronic Glaucoma.—Mr. J. B. Lawford: On Congenital Defect of External Ocular Muscles.

Friday, December 9.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Mr. Percy Dunn:

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Barlow: Cases of Acute Enlargement of the Thyroid Gland.—Dr. Coupland: Hydatid Cysts of Left Lobe of Liver.—Mr. Owen: Hydatid Cyst on Convex Surface of Liver encroaching on Thorax.—Mr. Treves: Peculiar Mode of Rupture of a Hydatid Cyst, with case. Living Specimens by Mr. H. W. Allingham and Dr. Herringham.

Saturday, December 10.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Lectures
ON
FIBROID DEGENERATION AND ALLIED LESIONS OF THE HEART, AND THEIR ASSOCIATION WITH DISEASE OF THE CORONARY ARTERIES.

BY JOHN LINDSAY STEVEN, M.D.,
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LECTURE I.

INTRODUCTORY.

THE condition of the heart wall, the consideration of which is to form the main object of the following remarks (viz., a development of what appears to the naked eye to be fibrous tissue in the midst of the muscle substance), is one which most English authorities would probably class under the term "chronic interstitial myocarditis," but which is frequently, though not invariably, to be referred to a cause quite different from that indicated by this term, implying as it does inflammatory action of a chronic kind. This fibrous transformation is most frequently met with in the left ventricle, may not be at all apparent either on the external or internal surface of the cardiac wall, and generally, though not invariably, occurs in association with widespread degenerative changes of the arterial system, obviously involving in most instances the coronary arteries of the heart. Besides the change just referred to, a more acute process of the nature of softening is also frequently met with in association with the same degenerative arterial changes or with embolism; and although the appearances of this acute condition are very different from those of fibrous change, yet the operating cause is so obviously similar that the two must frequently be regarded as different stages of the same affection, or as differing from one another only in degree. The details of the cardiac lesions thus briefly referred to, and of fatty degeneration as associated with arterial disease, will be described in due course, but in the meantime it will be necessary to give some account of our previous knowledge of fibroid disease of the heart.

HISTORICAL AND CRITICAL ACCOUNT.

The conditions of the heart wall (especially fibrous transformation[1]), which form the subject of these lectures, have long been described by special observers, but it is only of recent years that what appears to be, in most instances, their true pathological significance has been hinted at, and that much more on the part of continental than of English physicians. From the time of Morgagni downwards frequent references are to be found in medical literature to a fibrous condition of the heart-wall, apart from the lesions met with in connexion with the valvular apparatus. It is to be noted, however, that in many of the earlier writings reference is made to those conditions only where the fibrous change had advanced so far as to be visible on the surface, without requiring any special dissection of the muscular tissue for its exhibition. Thus Morgagni,[2] in his twenty-seventh letter, which treats of "Sudden Death from a Disorder of the Heart," article 17, after giving illustrations of calcareous plates in the substance of the heart, writes as follows: "For it is certain that the fleshy fibres of the heart themselves sometimes degenerate into a tendinous hardness. Albertini, therefore, saw in some bodies 'that the substance of the heart from the basis to more than half its extent had become tendinous, as it were, both in consistence and colour; which kind of metamorphosis I have it in my power to confirm, if there were any occasion, by an observation of my own.'" It will thus be seen that the condition has been recognised from the earliest days of pathological anatomy, and it is interesting in the light of modern research to observe that the term "degenerate" is used in the description of the change. It is not to be supposed, however, that the term necessarily meant the same to Morgagni that it does to us.

Towards the end of the last and the beginning of the present century medical literature abounds in communications on the subject of aneurysm of the heart, a condition which is very apt to follow upon the morbid condition at present under review. These records are therefore of great interest in the present investigation, and a few of the more important may be shortly referred to. Dr. Matthew Baillie[3] in his work on Morbid Anatomy describes a case of aneurysm of the left ventricle, and refers to the rarity of the condition. He explained the occurrence of the aneurysm by the muscular tissue at the apex being thin and weak, and so unable to resist the impulse of the blood against it. In 1817 Portal[4] published a long article on the subject of cardiac aneurysm, mainly from an etiological point of view. Among the different causes which he states as giving rise to aneurysms of the heart, the following may be mentioned: (1) the formation of false membranes inside and outside of the heart; (2) engorgement of the coronary arteries and veins; and (3) serous and purulent infiltrations. In the second of these it would seem as if we had a hint of the relationship which exists between a diseased condition of the coronary arteries and the development of cardiac aneurysm, but, so far as I can gather, the author simply refers to a dilatation of these vessels as one origin of aneurysm, and not to any nutritive change in the muscular tissue. About the same time important observations were published in France by Breschet[5] and Reynaud.[6]

Another very important paper in connexion with this subject from an historical point of view is that of Mr. John Thurnam on Aneurysm of the Heart.[7] Although, like the others just referred to, not directly bearing on the subject of fibrous transformation of the heart, the essay is very important from the fact that many of the cases were found to be associated with what is called "fibrous degeneration" of the heart-wall. With regard to the causation of the "fibrous degeneration" itself, the views adopted are pericardial adhesions and rheumatic inflammations. But nowhere is there found any allusion to the state of the coronary arteries as an etiological factor, nor are there any references to fibrous change as a morbid state of the heart-wall *sui generis*, and apart from aneurysm. Although in several of the cases the coronary arteries are mentioned as ossified, no opinion is expressed as to the probable relationship of this to the aneurysmal state. Interesting statistics are also given by Thurnam as to the situation of the aneurysm. Out of 74 cases, 58 were situated in some part of the left ventricle; and "the 67 aneurysms which occurred in the 58 cases, omitting one case in which this is not mentioned, may as regards situation be thus distributed: at or near the apex of the ventricle, 27; in different parts of the base, 21; in intermediate portions of the lateral walls, 15; in the interventricular septum, 3. ..... To conclude these observations on the situation of the aneurysms of the left ventricle, the only general conclusion that we can come to appears to be that the thinnest parts of its walls, or the apex and highest part of the base, are those which are much more frequently than any others the seat of the disease." This in general agrees with the observations of more recent writers and also with my own. It will thus be seen that in the record of Thurnam's cases we have a most important contribution to the literature of this subject from a pathological as well as from a historical point of view. In 9 cases the muscular tissue was the seat of more or less extensive "fibro-cellular degeneration," caused by inflammation it was supposed. If the disease was present to such an extent as to cause aneurysm in so many of the cases, we have strong reason for supposing that in its slighter manifestations, which are easily overlooked, it may occur much more frequently. The fibro-cellular degeneration, however,

[1] I use the terms "fibroid degeneration" and "fibrous transformation" as synonymous, and I think the latter is more scientifically correct. It is a real transformation into fibrous tissue with which we have to deal, so that the term "fibroid" seems rather cumbrous.

[2] The Seats and Causes of Diseases investigated by Anatomy, in Five Books. Translated from John Baptist Morgagni, by B. Alexander, M.D. Vol. i., p. 845. London: A. Millar, 1769.

[3] Morbid Anatomy, by M. Baillie, M.D., London, 1793, p. 17.; see also his Plates (1799), Plate iii., Fig. 1.

[4] Sur les Aneurysmes du Cœur.

[5] Recherches et Observations sur l'Aneurysme faux consécutif du Cœur. Répertoire d'Anatomie et de Physiologie Pathologique, 1827, vol. iii.

[6] Reynaud, Journ. Hebd. de Médecine, 1829, vol. ii., p. 363.

[7] Medico-Chirurgical Transactions, 1838, vol. xxi. p. 187.

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does not seem to have been regarded by Thurnam himself or by others as an independent morbid state; and one of the objects which I have at present in view is an attempt to establish that in fibrous transformation of the heart wall we have a diseased condition which has as much right, from a clinical as well as from a pathological point of view, to be considered an independent affection of the heart as fatty degeneration, or even as certain valvular lesions.

Another reference in regard to this subject, important from an historical point of view, may be found in the work of Dr. Ramadge on the Heart.[8] In the chapter on Carditis he refers to a condition called "induration of the heart," said to be one of the results of inflammation attacking the muscular or intermuscular cellular tissue. "Sometimes," he adds, "the consistence of the organ is fibrous or tendinous; sometimes cartilaginous." Similar brief references to the condition may be found in most other text-books on heart disease, up till the present time.

Coming now to more recent times, it is found that this condition of the heart-wall has been abundantly observed and described by English physicians and pathologists, although, so far as I can find, the relationship of the change to obstructed coronary circulation has been almost entirely overlooked, and, as a general rule, it has been attributed to chronic myocarditis, probably not without truth, in a certain number of cases. In 1872 the attention of the profession in England was strongly directed to this subject by the Lumleian Lectures of Dr. Richard Quain on the Diseases of the Muscular Walls of the Heart.[9] Under the name "connective tissue hypertrophy," Dr. Quain enters into a full consideration of this affection of the myocardium. No one can read these lectures without seeing that the author was very strongly of opinion that the morbid state originated in an inflammatory action. "The origin," says he, "of the disease is unquestionably to be sought for in a chronic interstitial inflammation or hyperplasia." But he does not seem to recognise any influence on the part of the coronary arteries in bringing about fibrous transformation, although, in describing fatty heart, he points out that "there are no communications between the two coronary arteries; and hence in obstruction of one no collateral circulation can be set up." The strength with which the inflammatory theory is inculcated is further seen in the remarks on treatment: "In connective tissue hypertrophy, if we could diagnose it in its early stage, remedies likely to subdue the inflammatory state in which it takes its origin might have a beneficial influence." Here and there, too, statements which seem to contradict one another are met with, as if, on the whole, the true significance of the condition were not perfectly clear to the mind of the lecturer. Thus: "In connective-tissue hypertrophy the freedom of contraction of the fibres is restrained by the surrounding new tissue, and such a heart is dynamically weak. It would seem, so far as present observation goes, less likely to dilate than the simply degenerated heart"; whereas in the section on aneurysm of the heart he speaks of "the production of a fibroid cirrhotic state which yields to the internal pressure."

During the twenty years which preceded the delivery of Quain's Lumleian Lectures numerous cases of this transformation of the heart wall had been recorded in the current medical literature, to a few of which I may refer in some detail, in order to give some indication of the predominating opinion in the profession concerning the lesion. In 1854 Dr. W. T. Gairdner[10] reported a case of ossification of the coronary arteries, with tendinous degeneration of the heart; and I may add that this is one of the few records that I have been able to consult in which any mention is made of the coronary arteries. In the great majority of cases recorded the state of the coronary arteries is not mentioned, and therefore one is justified in coming to the conclusion that they had not been specially examined. In the Transactions of the Pathological Society of London is contained a rich collection of cases, a full reference to all of which is to be found in Dr. Hilton Fagge's communication, to be immediately referred to. Dr. Bristowe,[11] in recording a case of what is undoubtedly fibrous transformation, states that the cause in all probability was pericardial adhesion, and explains the production of the fibrous material by supposing that a deposit of lymph capable of organisation had been deposited between the fibres, the condition being thus comparable to a cirrhosis. No mention is made of the state of the coronary arteries. Again, Dr. T. Henry Green[12] records a case of sudden death, in which a patchy deposit of fibroid tissue was found in the left ventricle. The aorta and cerebral arteries were atheromatous, but the state of the coronary arteries is not described. The view expressed by Green in his pathology as to the mode of production is that it is secondary to an inflammatory process, commencing either in the peri- or endo-cardium. Interesting cases, from our present point of view, are also recorded by Bence Jones, J. W. Ogle, Whipham, Payne, Wilks, and Moxon.[13] Some of these cases, however, described by the contributors as fibrinous masses in the heart wall, I would regard as examples of the acute process—i.e., of infarction of the heart, which, as I have already indicated, is closely related from an etiological point of view to fibrous change. Moxon, however, in recording a case,[14] regards the fibrinous mass in the heart-wall as coagulated blood, which had been effused into a partial rupture, and he distinctly recognises the state of the diseased coronary artery as a cause of the rupture. With the exception of Dr. Moxon's case, the state of the coronary arteries is not described in those referred to above; and, although the relationship between diseased arteries and localised patches of extreme "fatty" change (as it was considered) in the myocardium had been made abundantly clear by Quain and others, it does not seem (judging from the records) to have struck many of the observers that there was any necessary connexion between arterial disease and the morbid state at present under review.

Without doubt one of the most important monographs on this subject is that of the late Dr. Hilton Fagge on Fibroid Degeneration of the Heart,[15] which may be said to contain the sum of British experience of, and teaching on, this subject up till the year of its publication—1874. The paper contains the results of much labour and thought, and in many places is to be regarded as a forecast of still more modern views on the subject; but a most striking feature is that in the midst of the most cogent reasoning on the pathology of the condition, not a word should have been said as to the etiological significance of obstructed coronary circulation. The first part of the paper gives the record in a very perfect way of eleven cases of the affection, whilst in the latter part the author states his opinions of the pathology of the condition, a few of which may be briefly referred to in order to give an idea of their wide scope. "For it is to be observed," says he, at page 89, "that this affection never attacks the whole heart at once, nor even the whole of a single chamber. It is always more or less localised, and sometimes invades only a very small tract." Such a statement seems to me to be a very strong argument in favour of the circulatory theory of its origin. At page 90 he says, "In the early stage, however, it sometimes seems that a retrograde change in the muscular fibres of the heart advances more rapidly than the growth of the fibrous tissue that should accompany it"; and he goes on to show how a softening, not unlike a pyæmic abscess in appearance, may be produced in some cases. It is very strange that he should have argued in this way, and yet not have suggested any connexion between obstruction of the coronary arteries and the lesion in question. We must, however, regard these statements of Dr. Hilton Fagge as forecasts of the still more modern views and observations of Weigert and Huber on this subject. He goes on to speak of the frequency with which aneurysm is due to this affection, and to point out how rupture of the heart, so frequent in local fatty degeneration of the muscular fibre, very rarely occurs in this condition. I think, however, that this statement must be received with some hesitancy, for, as I pointed out about two years ago in a paper on Rupture of the Heart, there is good reason for believing that many cases are not due to localised fatty change at all, but to infarction. "With regard to the *causes* of fibroid disease of the heart," says he, "we seem to be at present completely in the dark." He discusses in detail the influence of pericarditis, syphilis, &c., and points out that fibroid change of the heart-wall may be a cause of sudden death.

As I have already indicated, the relationship existing between diseased coronary arteries and localised extreme fatty degeneration (leading to rupture in some cases) had

[8] Asthma, and on Diseases of the Heart, by F. H. Ramadge, M.D. Second Edition. London: Longmans, Brown, Green, and Longmans. 1847. Page 359.
[9] THE LANCET, vol. i. 1872, pp. 391, 426, 459.
[10] Monthly Journal of Medical Science, Edinburgh and London, 1854, vol. xix., p. 79.
[11] Pathological Transactions, vol. vi., p. 148.
[12] Ibid., vol. xxv., p. 47.
[13] Ibid., vol. iii., p. 281; vol. vii., p. 169; vol. viii., pp. 128, 132, and 139; vol. xv., p. 87; vol. xxi., pp. 103 and 115; vol. xxii., p. 190.
[14] Ibid., vol. xvii., p. 70.
[15] Ibid., 1874, vol. xxv., p. 60.

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been insisted on by Quain and others many years ago; but to show that the possibility of disturbed coronary circulation setting up other morbid states of the cardiac wall (more nearly allied if one may judge from the descriptions given to the conditions forming the subject matter of the present remarks) was an idea which occurred to one of the greatest living masters of our art in the earlier years of his work, I may here briefly refer to Sir William Jenner's paper on Congestion of the Heart.[16] In this communication, which was made to the Royal Medical and Chirurgical Society of London, he writes: "The principal object of this paper is to call the attention of the Fellows of the Society to the occurrence of congestion of the muscular tissue of the heart; to the most common and direct consequences of that congestion—viz., induration, toughening, and thickening of the walls of the heart; and to the influence which those changes of texture exercise as predisposing causes on the development of permanent dilatation of the heart." The chief interest and importance of this paper are clinical, for it seemed to me, in reading it, that the pathological details were somewhat vague and indefinite, and my main object for referring to it at this point is to show, on the authority of a great clinical observer, the necessity of considering the condition of the coronary circulation in all affections of the heart.

In 1881 a most important paper on Fibroid Degeneration of the Heart was read by Dr. Charlewood Turner at the London meeting of the International Medical Congress.[17] In this paper he gives a minute description of the appearances, naked eye and microscopic, of three cases which he had the opportunity of carefully studying. In this article the influence of obstructed coronary circulation as an etiological factor in the production of fibrous transformation is, so far as I have been able to examine, for the first time categorically mentioned in English medical literature. "Other facts," he says, "suggest the possibility of the origination of localised fibroid degeneration as a result of arterial obstruction, or of venous thrombosis from injury to the vessel from overstraining the walls of the ventricle." And he further shows how some of Dr. Hilton Fagge's cases point to the same thing. From all points of view Dr. Turner's article must be regarded as a most valuable and original contribution to the literature of the subject. In the latter portion of his observations he deals with the generalised form of fibroid degeneration which is met with in dilated hearts, and which may contribute to cardiac failure, but which is a subject beyond the scope of my present investigation.

Having so far dealt, in as complete a manner as has been possible for me, with the work of the more recent English observers, it now becomes necessary that I should give some short account of the foreign literature of this subject which I have been able to consult. In the writings of two German observers—viz., Professor Weigert[18] and Dr. Carl Huber,[19] I have met, for the first time, with what appears to me to be an accurate and tenable explanation of the relationship existing between obstruction of the coronary arteries and the formation of fibrous patches in the walls of the heart, and I do not think I can do better than give a brief abstract of the views expressed by these gentlemen. My friend Professor Weigert, in his observations on the infarction of the heart, has shown that, where the circulation is slowly interfered with by sclerosis of the arteries, atrophy, with destruction of the muscular fibres, takes place without injury to the connective tissue. The shrunken fibres are thus set off by the stringy connective tissue, and this process, he considers, really constitutes the so-called chronic myocarditis. In such cases he has good ground for believing that the vascular change caused the destruction of the muscular fibres as a primary factor. If, however, the arrest of the circulation is more sudden in its onset, then yellow dry masses similar to coagulated fibrine make their appearance. Often the tissue appears quite normal (sometimes the transverse markings being quite apparent), but the muscular fibres and the connective tissue show no nuclei—a necrosis has occurred. Around these masses, as a reactionary phenomenon, abundant round and spindle cells are found.

Weigert's observations, which I have just noticed, appeared in the course of a long paper on the general subject of the Occurrence of Coagulation in the Tissues, and were followed by those of Huber in 1882. In Huber's paper the whole question of the so-called chronic myocarditis is discussed in a broadly scientific spirit, and his facts and conclusions are so convincing that it is difficult, after a careful perusal of the article, to arrive at any other opinion than that the condition of the coronary arteries must be regarded as one of the most important etiological elements in the production of the morbid changes at present under consideration. He bases his opinions on eighteen cases given in the paper, and a number of others which he thought it unnecessary to record, in all of which the fibrous changes associated with distinct vascular disease were well marked; and, in addition, he gives brief details of four or five others, in which the acute affection or infarction of the heart wall was distinctly present. He describes the lesion as the occurrence in the heart-wall of lines or streaks of firm, tendinous, glancing tissue running parallel to the muscular fibres, and somewhat depressed beneath the level of the cut surface of the surrounding muscle. It is mostly observed in the median layers of the cardiac parietes, and is often not to be seen beneath the endocardium or pericardium. This is precisely the condition that I have observed in my own cases. He further remarks that the process, as it presents itself anatomically, is what is most commonly regarded as chronic myocarditis, and that until quite recently syphilis, rheumatism, or inflammation spreading either from the endo- or peri-cardium was regarded as its cause. He then proceeds to show by very cogent reasoning, as it appears to me, that in a very large proportion of cases indeed the lesion must be looked upon as primarily a vascular one. It therefore becomes at once evident that, from a strictly scientific point of view, the terms "chronic myocarditis," "indurative interstitial myocarditis," &c., are, as has been mentioned at the outset, in a large majority of cases misleading.

Since the foregoing remarks were originally penned, the splendid work on Medicine by Dr. Hilton Fagge has appeared, and one cannot help referring to the universal feeling of sorrow experienced by the entire profession when the gifted author was so suddenly called away before seeing the end of his labours. In the article on Fibroid Disease of the Heart,[20] it will be found that Dr. Fagge had fully appreciated the value of Weigert and Huber's researches, and saw in them an explanation of many of his own carefully recorded cases. He refers to myocarditis, syphilis, and thrombi as causes, but obviously places most importance on the relationship existing between fibroid change and disease of the coronary arteries; and, referring to two of his own cases of infarction of the heart, he writes the following sentence: "Thinking over these two cases, I have long seen clearly that the peculiar change in the muscular tissue must be the primary affection, and that the fibroid development must be secondary." He then proceeds to speak of the light thrown upon the condition by the researches of Weigert and Huber.

Ziegler[21] has also very fully described acute necrosis of the heart-wall under the name of "myomylacea cordis," and has clearly related this change to obstructed coronary circulation; and the connexion is also insisted upon by Birch-Hirschfeld[22] in his large work on Pathological Anatomy.

The subject of interstitial myocarditis has also excited considerable attention on the part of French physicians, and in 1880 an account of a case was published by M. Déjérine.[23] In looking through his paper, I find that the case was one of anæmia complicated by aphasia &c.. At the post-mortem, the heart was found to be the seat of interstitial myocarditis, which was also stated to be primitive. As the consequence of the myocarditis, which he supposes to have been due to the anæmia, clots were formed in the cavities of the heart, which explained the occurrence of the aphasia. Holding the opinions which I have already indicated as to the pathology of fibrous transformation of the heart wall, I would rather be inclined to regard the interstitial myocarditis as also the result of embolism, and the description of the morbid appearances is in some places distinctly suggestive of infarction.

[16] On Congestion of the Heart and its Local Consequences, by William Jenner, M.D. (Med. Chir. Trans.) London, vol. xliii., p. 199.

[17] Transactions of the International Medical Congress, Seventh Session, vol. i., p. 427. London: J. W. Kolckmann. 1881.

[18] Ueber die pathologischen Gerinnungsvorgänge. Von Prof. Dr. Carl Weigert (Leipzig). Virchow's Archiv (1880), Band lxxix., p. 106.

[19] Ueber den Einfluss der Kranzarterien-erkrankungen auf das Herz und die chronische Myocarditis. Von Dr. Karl Huber. Virchow's Archiv (1882), Band lxxxix., p. 236.

[20] The Principles and Practice of Medicine. By the late C. Hilton Fagge, M.D., F.R.C.P.. Vol. ii., p. 32. London: J. and A. Churchill. 1886.

[21] Lehrbuch der allgemeinen und speciellen pathologischen Anatomie. Vol. i., p. 408. Jena: Gustav Fischer. 1881.

[22] Lehrbuch der pathologischen Anatomie. Von Dr. F. V. Birch-Hirschfeld. Zweite Auflage. Zweiter Band, 1 Lieferung. Leipzig: F. C. W. Vogel. 1883. Page 66.

[23] Note sur un Cas de Myocardite Interstitielle Primitive. Le Progrès Médical, 1880, No. 39, p. 781.

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Dr. Wickham Legg's Bradshawe Lecture on Cardiac Aneurysm[24] is a most valuable contribution to our medical literature, and one of very considerable importance as regards my present subject, because in discussing the etiology of "fibroid disease" he differs from the views of Huber and Cohnheim. He makes no mention of Weigert's paper on Coagulation Necrosis, in which the theory was first promulgated, and which was published the year before Cohnheim's on the Results of Obstructing the Coronary Arteries of the Heart. His first objection is as to the age of Huber's patients, and he mentions several young persons who had the disease, and in whom the coronary arteries were reported healthy. Now, in going over cases of this disease, I have been struck by the fact that in very many the state of the coronary arteries is not mentioned at all, and unless there be a specific statement, at least in the earlier recorded cases, I think we are justified in concluding they were not specially examined. His next objection is that in a case of Greenfield's the orifices of the arteries were obstructed without producing any result, except generalised molecular fatty change. Now, I am strongly of opinion that a distinction must be drawn between cases where the orifice is obstructed and cases where individual branches are occluded. In the former class of case, I think, resulting fatty degeneration is the rule. His next objection is as to the anastomosis of the cardiac coronary arteries, and this objection I will examine further on. As has been observed, the paper is a most valuable one, and the views of so careful an observer must be thoroughly taken into account, in order to arrive at any conclusion as to the true nature and cause of this interesting disease.

I have thus endeavoured to give some account of the history of our knowledge of fibrous transformation of the heart. In addition to the articles noticed above, several important papers, some of them of great clinical interest, have recently appeared, but space forbids me to do more than simply mention them. Thus we are indebted to O. Rosenbach,[25] E. Leyden,[26] Albert Robin,[27] C. Paul,[28] and others.

In Dr. Byrom Bramwell's large recently published work on Diseases of the Heart, the subject of fibroid degeneration is included in the chapter on chronic myocarditis, "which," he says, "for practical purposes may be considered as synonymous with fibroid degeneration." In the long account of the etiology and pathology of the condition, not a hint is given of the possible direct connexion which this lesion may have with disease of the coronary arteries or obstruction of these vessels. The author points out, however, that long-continued venous engorgement of the heart-wall may have an influence in its production, and this statement is of importance in connexion with Sir William Jenner's paper, to which I have already referred. The absence of any reference to the causal influence of the coronary arteries in so large and valuable a work shows that the true etiology of a large section of such cases has not as yet been fully comprehended. I do not wish to assert that an abnormal condition of the coronary circulation is the cause of all fibroid conditions of the heart. Far from it; but so far as my experience and that of many others go, it is directly responsible for a very large number, in which anything of the nature of an inflammatory course of events cannot come into court. It is also further obvious that to many cases the term "chronic interstitial myocarditis" cannot logically or scientifically be applied. I am decidedly of opinion that the influence of the coronary arteries in producing many of the well-known lesions of the myocardium has not been sufficiently recognised, and if the publication of the present lectures has the effect of directing greater attention to these vessels among English physicians and pathologists my purpose will have been amply fulfilled. In Dr. Bramwell's article on "Aneurysm of the Heart" its association with fibroid change is fully recognised; and in the account of the author's case of rupture of the heart it is pointed out that the branch going to the ruptured area was obstructed. It is therefore somewhat strange that the great importance of the coronary arteries in all affections of the myocardium should not have been more clearly stated and strongly insisted upon.

[24] Some account of Cardiac Aneurysms. Being the Bradshawe Lecture, read Aug. 18th, 1883, by Wickham Legg. London: J. and A. Churchill. 1884.

[25] Centralblätt für die medicinischen Wissenschaften, 1886, No. 33, p. 678.

[26] Ibid., 1884, p. 651.

[27] Sur les Ruptures du Cœur. Gaz. Hebdom. de Méd. et de Chirurg., Dec. 18th, 1885, No. 51, p. 829.

[28] Aneurysme du Cœur. Gaz. Hébdom. de Méd. et de Chirurg., March 6th, 1886, No. 10, p. 165.

A CASE OF TYPHLITIS.

BY J. F. W. SILK, M.D. LOND.,
AND
JAMES F. GOODHART, M.D., F.R.C.P.

THE following case of acute inflammation of the vermiform appendix, succeeded by perforation, general peritonitis, and death, seems not unworthy of being placed on record.

Percival T——, aged twenty, a clerk, was first seen on Saturday, Oct. 22nd, at 6 P.M., and found on his back in bed with legs drawn up, face expressive of anxiety and suffering, and complaining of pain and tenderness in his abdomen and inability to pass urine; the pain was obviously of a rhythmical or griping character, and during the paroxysms the face was distorted and the hands pressed to the sides of the abdomen.

The history obtained was as follows: He was an accomplished athlete, but had not attended the gymnasium for some months, till on the evening of Oct. 19th he indulged in a prolonged course of gymnastic exercise, and recalls distinctly a fall on his abdomen across the parallel bars, which was followed by a feeling of sickness and giddiness. He felt a little stiff and sore about the abdominal muscles after his exertions, and as this feeling did not pass off, he took the next evening (20th) a couple of rhubarb pills, which produced a slight watery evacuation the following morning (21st), but did not relieve the pain. On this day the abdominal pain became gradually more intense, and was referred mainly to the hypogastrium; he felt cold and inclined to shiver, and had a frequent desire to micturate, but could not always succeed in passing any urine. There had been no sickness. Early in September he had sought advice on account of some indefinite pain in the right side, but from this he seems to have completely recovered. With this exception he has always enjoyed robust health. His father died at the age of fifty-six of (?) consumption. His mother is gouty and emphysematous.

On examination his abdomen was found to be uniformly, though slightly, distended and tympanitic, more or less tender all over, and especially painful over the hypogastrium. Tongue large, moist, flabby, and coated with a thick creamy fur. Pulse large and bounding. Skin moist. Has passed flatus freely and been somewhat troubled with flatulence. Has passed no urine for the previous twelve hours, but the bladder does not seem distended. Ordered poultices to abdomen, and small quantities of beef-tea, milk, and ice. To take fifteen minims of nepenthe every four hours. In the evening he passed a small quantity of high-coloured urine with difficulty, had some tenesmus, but only passed a small quantity of flocculent fluid.

October 23rd.—Restless last night; slept, but perspired very freely. Abdomen measures thirty-one inches round umbilicus; less tender; coils of intestine can be felt through the abdominal walls. Pulse weaker, but still full. Temperature 101·8°. Has been slightly sick after beef-tea. Much troubled with flatulence and tenesmus. Has micturated once only, but urine not obtainable for examination. Very thirsty. Profuse perspirations continued throughout the day.

24th.—Seen in consultation with Dr. Goodhart. In much the same condition as on previous day, but weaker. Pain is now chiefly referred to the left groin and flank. The abdomen is much distended and tense, although he has not now any of the pinched expression of peritonitis; nor is the abdomen markedly tender on palpation. The intestinal coils are visible, and we were inclined to think that peristalsis was palpable, but of this we were not quite sure. The urine is still passed with difficulty, and contains a trace of albumen. The rectum contains scybala. The heart and lung sounds are normal. Temperature 100°. Pulse 100, full, anything but peritonitic in its characters. He has not been sick for some hours. Tongue flabby, with thick creamy fur; sweating profuse and rather sour. Fifteen grains of salicylate of soda to be added to each dose of medicine. A small enema of warm water returned, bringing with it much flatus, and giving great relief; another given four hours subsequently brought away a few scybala.

25th.—Decidedly worse. Meteorism marked. Sickness very frequent and violent; vomit gradually becoming distinctly stercoraceous. Occasional slight hiccough. Tongue small

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and dry. Same trouble with urine; catheter drew off only two ounces. Sweating ceased. Pulse small; temperature 99°. He was given a hypodermic injection of morphia (one-third of a grain) at 6 and 10 P.M., and nutrient enemata every third hour, at first with considerable benefit.

26th.—The vomiting and meteorism subsided, but symptoms of collapse, with cold extremities, jactitation, sighing respiration, &c. supervened, and death ensued at 6 P.M.

Examination of abdominal cavity, fourteen hours after death.—A few greatly distended coils of intestine, small and large, filled the abdomen. The whole of the peritoneum was dull and injected—the visceral portion in definite lines, the parietal more irregularly; omentum reduced to a mere shred; coils of intestines slightly adherent to one another through the medium of a glutinous stringy material. These appearances were but slightly marked in the upper portion of the cavity, but increased in intensity from above downwards. In the pelvic cavity the whole of the contained viscera was matted together by means of a layer of tough whitish-grey lymph the thickness of blotting paper. A little thin purulent material of (?) fæcal odour was contained in the pelvis. The appendix vermiformis was of a deep purple colour, in great contrast to the semi-transparent intestines, and slightly distended. About its middle there was a small circular opening with everted sloughing edges, communicating freely with the bowel on the one hand and the general peritoneal cavity on the other, and large enough to admit the tip of the little finger. From the point of contact of this opening in the appendix with the adjacent peritoneum, to which it was very slightly adherent, the inflammation appeared to spread mainly downwards, but also over the whole peritoneal surface. Permission to examine the other viscera could not be obtained; but no signs of tubercle could be made out, nor were the abdominal glands enlarged.

On closer examination the specimen shows a very intense inflammation of the entire appendix. From the orifice of the ulcer, which is situated about the middle of the appendix, the mucous surface is an ashen grey, and sloughy. It is apparently part of this that has given way; the remainder is intensely injected. It contains nothing. The cæcum is healthy, and the ileum also. In the latter the patches are congested, but not swollen; and the colour is, one may suppose, due to the disturbance of circulation owing to the neighbouring severe inflammation.

Remarks by Dr. GOODHART.—This case is quite a common one, but we think it worth recording because it is so instructive in several ways. And first of all in this, that we consider it to traverse, in a way well worth remark, a statement of Dr. Hilton Fagge in his in many respects inimitable work on Medicine. Dr. Fagge writes: "I have indeed a strong conviction that no case in which the disease can be diagnosed as being seated in the cæcum ever terminates fatally if judiciously managed.....Even when typhlitis presents itself clinically under the guise of intestinal obstruction or of diffused acute peritonitis, I believe that it scarcely ever destroys life if judiciously treated." Far be it from us to attempt in any way to minimise the importance of treating these cases by opium, nutrient enemata, or fluid food, and the avoidance of purgatives. Many a case has certainly been killed by the incautious administration of an aperient. But it cannot be too much insisted upon that these cases are excessively treacherous as regards their symptoms. There were times in the course of the illness in this case when the symptoms were not by any means decisively peritonitic; when all vomiting—by the bye, never very urgent until death was imminent—had ceased; when he had a full pulse and thickly furred tongue, as of some acute febrile disorder. Moreover, it will be within the experience of some of us, no doubt, that typhlitis sometimes presents itself under the guise of a severe pyrexia, so that it has been mistaken altogether for typhoid fever. I have seen several such only cleared up at the post-mortem; and were I to write an article on typhlitis, it would certainly be my business to insist that it is a question in a certain proportion of cases whether they die by the febrile disturbance of the inflamed gut or by the collapse of the peritonitis. And it is very important to insist upon this in the present day. If one were to say nothing about the case, and simply to expose the ulcerated appendix that was removed after death to the light of our knowledge of surgery, without doubt it would provoke the remark, "What a pity the abdomen was not opened and the appendix removed," and we have no wish to turn away from that aspect of the case. One should always be on the look out for localising symptoms in these cases which may enable us to attack them surgically; but I am equally sure from a long experience, and this case bears it out, that in a large number it is impossible to come to any sufficiently definite opinion; and it is impossible to suggest so serious an operation as opening the abdomen unless one can be fairly positive. Even when so there will still be some where the febrile disturbance steps in to unsettle the decision, and I am by no means sure that this is solely the consequence of the disease of the appendix or that it would be dissipated by the removal of that viscus. We discussed these points at the bedside of this poor patient, and we neither of us had any doubt that, whatever might be the cause of the peritonitis, there was nothing at that time that precluded recovery—I personally thought things looked most favourable—and nothing in the symptoms that would allow of our entertaining the idea of opening the abdomen. Thus it is with many another case. Now everything looks hopeful, hardly even critical, and an operation has not come within the horizon; a few hours pass by and the patient is moribund, and the sun of surgery for that case has set. And that is the difficulty of practice.

One word may be added concerning the pain in peritonitis: it is an exceedingly treacherous guide to the localisation of the malady. Others have noted that with disease in the region of the cæcum the pain may yet be experienced chiefly in the left groin, and so at one time it was in this case. The early and persistent inability to pass urine is also worthy of remark. It is a symptom of peritonitis that is well known as an occasional occurrence, but in this instance was peculiarly marked, and in conjunction with the pain at one time present on the left side might well have caused a mistaken diagnosis.

ALBUMINURIA IN THE APPARENTLY HEALTHY.

BY ALEX. W. STIRLING, M.D., C.M.

THE following notes are taken from a paper presented as an M.D. graduation thesis to the University of Edinburgh in the beginning of May. In it I considered the cases of albuminuria of the apparently healthy which had already been published, the experiments which had been made and the reasons why few of them were of value, as well as the theories which had been advanced in connexion with the subject; but in the space now at my disposal I am able to introduce only a brief notice of some of the points there discussed more fully.

Table I. will give at a glance the general results of observations made on the occurrence of albuminuria among boys. The greatest care was taken that no error should spoil the results, and at least four different reagents were used to test each specimen of urine, no urine being passed over till I was completely satisfied whether a precipitate were albumen or not. The reagents used were: (1) Heat and acetic acid, which I prefer to any of the others. There is little fear of making the solution too acid in these cases. (2) Nitric acid in the cold. (3) Roberts' brine test, sulphate of magnesia and nitric acid. (4) Picric acid. Also, sometimes, (5) potassium mercuric iodide, and (6) ferrocyanide of potassium. But the first four were used for every urine, and were added by means of pipettes. The boys concerned in this special investigation belong to one of the large training ships on the Thames, and only those in good health were examined. The urine was passed always at 9 A.M., about three hours after rising, at which time albumen will almost certainly be discovered if present at all during the twenty-four hours. It was found in 77 of the 369 boys examined, and I ascertained by several subsequent experiments that, speaking generally, it was not a passing condition, but present at the least for months. The quantities of albumen varied from a slight cloud to one-sixth of the column in the test tube, and in one case—not, however, one of the ship boys—I have seen on several occasions as much as one-half. The urine was generally pale and watery; the specific gravity averaged about 1020; the reaction varied from neutral to strongly acid; deposits, except urates, were rare, though uric acid and oxalates were sometimes present. A considerable number of specimens were examined for tube casts, but with the exception of once or twice, when hyaline casts were doubtfully present, none have been

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found. It will be observed, on looking at the table, that the effect on boys of blowing instruments is very marked, a fact which had not been pointed out till I wrote the thesis from which these notes are taken, and which Professor Grainger Stewart, since reading my dissertation, has confirmed in a paper read before the Royal Society of Edinburgh. I have attributed this to the effects of backward pressure on the renal vessels. That it is not due to the age of the boys is evident from the fact that the percentage is higher among the band boys at all ages; and that the length of time during which they have been in the band makes a considerable difference is brought out at the age of sixteen, where the total percentage of albuminurics not in the band is, if anything, less than that at fifteen, while of those in the band at sixteen, who had played for about nine months longer than the boys fifteen years old, the percentage with albuminuria is higher than at the latter age by 5·5. Dr. Lauder Brunton has referred the albuminuria of cold bathing to pulmonary spasm, and Dr. Schreiber has shown by experiment that compression of the thorax in young subjects for ninety seconds will cause albuminuria; while Dr. Ralfe, in criticising Leube's experiments on the effect of exercise, says that the weight of the soldier's accoutrements upon the chest may have been a cause in the production of the albuminuria. M. Stichel of Paris has seen blindness produced by the playing of wind instruments—due, he says, to passive cerebral congestion, with a similar condition of the retina and choroid. It is a difficult thing to decide whether or not masturbation may have anything to do with the albuminuria of adolescents. I requested the chief officer to give me the names of some of the boys whom he knew to be guilty of this habit. He sent me thirty-seven, and on comparing them with my list I found that in the urine of fourteen of the number albumen had been found. It may be that the renal vaso-motor centre is weakened by the habit, but that it is not practised by all adolescent albuminurics I am satisfied.

The following is, in a few words, the daily cycle of the albuminuria as I first observed it in 1881, and my experience since has assured me that it is the common one among adolescents. The urine is usually found to be absolutely free from albumen while the patient remains in bed, and it makes its appearance within a variable but generally short time after the assumption of the erect posture, and independently of food and all other conditions. The albumen continues in the urine for, it may be, only an hour or two, or perhaps in varying quantity throughout the day, but as a rule it is disappearing in the afternoon, and is entirely gone by bedtime. It may be made to disappear at any time by merely lying down, and will not occur in the urine throughout the day if the patient keep quiet in bed; though if he rise towards evening, when the albumen is generally absent or scarce, it will be found to be present in quantity larger than is common at that hour, though not always in so great amount as is found under ordinary circumstances in the morning. The ingestion of food has little effect in producing the albumen, and *it is not breakfast which causes the frequency of its appearance in the morning.* Sometimes I have seen a slight rise after a meal, but this is trivial and by no means constant. I had boys brought ashore to the infirmary and confined to bed, and then albumen was absent from the urine till they got up, breakfast or other meals having no effect. I have made very many and various experiments in connexion with this subject, all tending to prove the same thing. One case, not a ship-boy, lived entirely on milk for thirteen months on account of the albuminuria, but that had not the slightest effect in reducing the quantity. The experiments which are said to show that albumen may pass through the urine in a perfectly normal condition of body seem to be insufficient, and it is more probable that there is always some change in the epithelium or blood supply of the kidney, through nervous action or direct irritation, before this is possible. When due to the irritation of crystals, the albumen probably comes from the convoluted tubes, and not from the glomerular epithelium, as it has been said to do. Cases of albuminuria which have been published as due purely to the presence in the blood of a more diffusible albumen formed during digestion show, I think, little evidence of this being the *sole* cause, and are in reality more likely to be dependent upon vascular changes in the kidney peculiar to the period of digestion, to a reflex action on the renal vessels from the digestive canal, or to a deficiency of the barrier power of the epithelium, the result possibly of some previous illness, and so slight as to pass only albumens more than ordinarily diffusible. That there do exist degrees of deficiency in this power of the epithelium is probable from the occurrence of those cases in which the albumen has been found to consist entirely of the more diffusible paraglobulin, or else we must conclude that the apparatus for preventing the passage of paraglobulin is separate from that concerned with serum-albumen. The amount of the urea excreted has no relation to the albumen whatever, the relative amounts of these varying indefinitely, and the actual quantity of urea being usually normal. Exercise, as by walking &c., thoroughly tried in one case, did not have any effect in producing albuminuria, unless complete exhaustion were also produced. When lying in bed in the late morning, when it would certainly have been abundant had he been upright, he worked hard for twenty minutes with a heavy weight without causing the slightest trace to appear. The one thing which does have an intimate relation to the albumen is the rising to the upright position; and so constant has this proved itself that I have proposed the name "postural" for this form of albuminuria. I have also endeavoured to explain its cyclical character in accordance with this fact. The theory of Dr. Pavy, who first applied the term "cyclic" to it, is that it may be compared to the daily variation in the excretion of phosphates in the phosphatic diathesis (which name is sometimes given to a deposit of earthy phosphates, which is not at all uncommon in health and even in acid urines, and which I some years ago ascertained by quantitative analysis not in the least of necessity to indicate an increased excretion of phosphates, even when the fluid has been as white as milk from their presence), and also to the daily rise and fall of the body temperature, neither of which, Dr. Pavy[1] says, have so far been found susceptible of explanation. He therefore concludes that the albuminuria is an illustration of a "physiological cyclic change." The following I wish to offer as another explanation of the periodicity of the condition:—When the individual in question is recumbent, the renal vessels are nearly on a level with the heart, there is no great column of blood to be supported, and this, along with the absolute rest of the sleeping condition, tends to a state of easy circulation through the kidney. The vessels are able to contract gently on the blood, the tendency to congestion which they experience during the day is removed, and by morning they are quite unaccustomed to the necessity of any special effort to keep up a normal state of matters. Then comes the time to rise; the patient jumps from bed, a sudden rush of blood takes place to the kidney, the vessels are thrown into a state of wide dilatation, and they, or perhaps I should rather say the nerves which govern them, receive a shock which they are unable to resist, and for the time being they are more or less paralysed. How long this condition of paresis may last depends partly on their power of recuperation, and partly also on the stress which is afterwards laid upon them. If these are favourable to recovery, we may find the urine cease to be albuminous in a few hours after rising; or if not, it may continue in greater or less quantity throughout the day, increased at intervals by any new stress laid upon it, such as by meals. These, however, may have an opposite effect by stimulating or supplying nourishment to the tissues, as has been exemplified in at least one case. Then sometimes it has been noticed that if a patient be in bed during the day and get up towards evening, the albuminuria has not been so marked as if he had risen on first awaking, probably because the greater excitement of the waking condition and the strength supplied by food had gently accustomed the renal vessels to a state of greater activity without paralysing them, so that they were, so to speak, not surprised on the change of position taking place, and were better prepared for the strain consequent upon it.

I cannot at all agree with Dr. Ralfe that the one cause of this albuminuria is an increased hæmolytic action of the liver, for I have seen no evidence at all to bear that out, nor have I been able to find any fat or metallic-looking spangles such as have been described by Teissier,[2] and which cause him to believe that the pathology of the condition is an over-action of the liver. Neither is a high tension of the arterial system a common feature of these cases, the reverse being more usually found. It is unusual to find the heart enlarged or its impulse accentuated, and the pulse is often soft and yielding. I annex a sphygmo-

[1] THE LANCET, vol. ii. 1885, p. 706.
[2] Ibid., March 26th, 1887; and Lyon Médical, March 13th, 1887.

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TABLE I.—GENERAL RESULTS OF OBSERVATIONS MADE ON THE OCCURRENCE OF ALBUMINURIA AMONG BOYS.

Age.	Total number of boys.	Number of albuminurics.	Number of boys not in band.	Number of albuminurics not in band.	Number of boys in band.	Number of albuminurics in band.	Apparent effect of band.	Average length of time (in months) in band.
12	20	1, or 5·0 per ct.	19	1, or 5·2 per ct.	1	0, or 0·0 per ct.	0·0 per cent.	3·0
13	59	6, or 10·2 ,,	54	5, or 9·2 ,,	5	1, or 20·0 ,,	10·2 ,,	9·3
14	88	14, or 16·0 ,,	71	6, or 8·4 ,,	17	8, or 47·0 ,,	38·6 ,,	18·0
15	147	43, or 29·4 ,,	112	19, or 17·0 ,,	35	24, or 68·5 ,,	51·5 ,,	21·2
16	55	13, or 23·6 ,,	49	8, or 16·3 ,,	6	5, or 83·3 ,,	57·0 ,,	30·7
Totals	369	77, or 20·8 ,,	305	39, or 12·8 ,,	64	38, or 59·4 ,,	46·6 ,,	—

TABLE II.—GENERAL RESULTS OF OBSERVATIONS MADE ON THE OCCURRENCE OF ALBUMINURIA IN CHILDREN AND ADULTS.

—	Ages under 10.			Ages from 10 to 20.			Ages from 20 to 30.			Ages from 30 to 40.			Ages from 40 to 50.		
	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.
Ship-boys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Workhouse ...	6	4	66·6	5	5	100·0	2	1	50·0	2	1	50·0	4	3	75·0
Cement works...	—	—	—	4	1	25·0	10	1	10·0	9	3	33·3	3	—	—
Ship's officers ...	—	—	—	—	—	—	1	—	—	5	1	20·0	4	1	25·0
Brewery	—	—	—	—	—	—	7	—	—	4	—	—	—	—	—
Totals	6	4	66·6	9	6	66·6	20	2	10·0	20	5	25·0	11	4	36·4

TABLE II.—(*continued*).

—	Ages from 50 to 60.			Ages from 60 to 70.			Ages from 70 to 80.			Ages from 80 to 90.			Ages from 90 to 100.		
	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.	Number examined.	Number of albuminurics.	Percentage of albuminurics.
Ship-boys	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Workhouse ...	—	—	—	7	6	85·7	8	6	75·0	6	5	83·3	1	1	100·0
Cement works...	2	1	50·0	1	—	—	—	—	—	—	—	—	—	—	—
Ship's officers ...	1	1	100·0	—	—	—	—	—	—	—	—	—	—	—	—
Brewery	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	3	2	66·6	8	6	75·0	8	6	75·0	6	5	83·3	1	1	100·0

SUMMARY.

—	Total number examined.	Total number of albuminurics.	Total percentage of albuminurics.	Average age.	Age varying from—
Ship-boys	369	77	20·8	14½	12 to 16
Workhouse	41*	32	78·0†	50	5 to 94
Cement works	29	6	20·7	31	14 to 66
Ship's officers	11	3	27·3	39	29 to 54
Brewery	11	—	—	28	21 to 36
Totals	461	118	25·6	32½	5 to 94

* Of these 26 were females; average age 34·7, varying from 5 to 94.

† This large percentage is probably due to the numbers of subjects at the extremes of age. It is probable that there is some atrophy of renal structure in the very old, and among the men enlarged prostate may produce some irritation of the urethra which may be sufficient to account for some cases. Many of these cases have been examined three times, and the albumen was present on each occasion.

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graphic tracing of the most marked case of "functional" albuminuria which I have met with, one in whose urine I have often seen as much as one-half of the column in the test tube to consist of solid albumen. This is a case of a young gentleman now aged twenty-three, whom I have had under observation for six years, and who, though the albuminuria is as marked as ever, has fairly good health, which has not deteriorated during that time. His retina was perfectly healthy, blood in good condition, and his chief trouble was constipation and griping pains in the abdomen, accompanied by a languid state of body. (See sphygmogram.)



Most of my cases have complained of nothing whatever, but have been growing boys; and though the majority of them have had measles, a history of scarlet fever, diphtheria, or the other illnesses usually supposed to be capable of leaving behind them unpleasant traces on the kidney, has not been at all common.

By way of treatment I have used iron, arsenic, strychnia, ergot, arbutin, digitalis, &c., but the beneficial effect of any of them is not sufficiently distinct to be discussed among these notes.

With regard to the advisability of insuring cases of cyclic albuminuria, I have suggested that, in the present state of our knowledge, the most satisfactory method of dealing would be for the companies to accept an apparently healthy albuminuric at a high premium, agreeing however, to rearrange this on their being satisfied of the disappearance of the albumen for such a length of time as would give reasonable expectation of this being permanent.

Lately I have made some further observations, chiefly on older people; and these I give concisely in the form of a table. (See Table II.)

A METHOD OF TREATING POTT'S FRACTURE.

BY E. W. ROUGHTON, M.D. LOND., F.R.C.S.,
ASSISTANT DEMONSTRATOR OF ANATOMY AT ST. BARTHOLOMEW'S HOSPITAL.

IN the condition known as Pott's fracture the displacement which occurs is twofold—viz., (*a*) outwards and (*b*) backwards. The first of these deformities is universally recognised, but the second is often overlooked, I believe, because the ordinary method of putting up this fracture (in back and side splints) hides the displacement backwards whilst the apparatus is on, although it does but little to remedy it, so that when the patient begins to walk he finds that his progression is considerably impeded. An examination of the foot in such a case will show that the heel is much more prominent than it should be, that the concavity of the tendo Achillis is increased, and that the foot, if measured from the anterior margin of the lower end of the tibia to the end of the big toe, is found to be shortened. This appearance is shown in Fig. 1.

The ordinary method of treating Pott's fracture by back and side splints is unsatisfactory, because (*a*) considerable difficulty is found in correcting the outward displacement of the foot, necessitating constant rearrangement of the side splints, and (*b*) the backward displacement is not adequately affected unless so much backward pressure is made on the ankle as to incur the risk of a sore heel. To get over these difficulties Cline placed the limb on an outside splint (known as Cline's splint) and flexed the knee so as to relax the calf muscles. This method answers very well as far as the outward displacement is concerned, but has hardly any effect on the backward one. To remedy the latter I have adopted the following modification of Cline's method. The splint used is an outside splint with a foot-piece (Fig. 2), *padded thickest where the foot-piece joins the other portion of the splint.* Three bandages (made of a double fold of Domett bandage) are fixed by means of safety-pins at the points A, B, and C, and placed in the position indicated in the figure. The injured limb, having the knee flexed, is then laid upon the splint so that the outer edge of the foot is well supported by the thick padding before mentioned, and fixed by the bandages in the manner shown in Figs. 3 and 4. Bandage A is first applied; it passes backwards between the limb and the splint, then turns forwards around the back of the limb and makes traction forwards. This is fixed, and then bandages B and C are drawn tight at the same time. Bandage B passes forwards between the splint and the limb, then turns over the front of the leg and pulls backwards.

FIG. 1. FIG. 2.

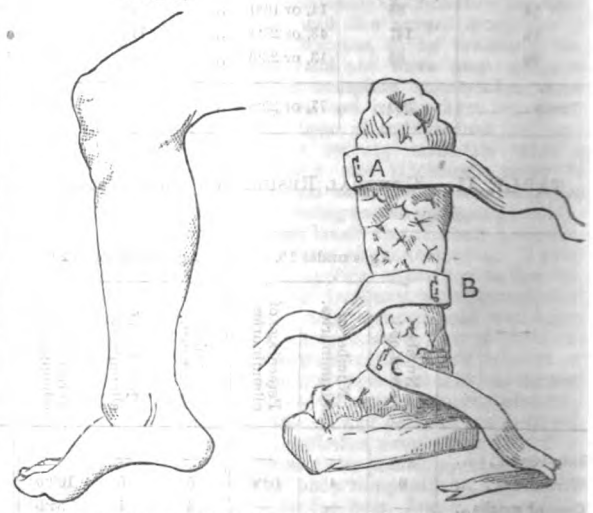


FIG. 1.—Showing the backward displacement of the heel in Pott's fracture.
FIG. 2.—Showing splint with the bandages attached. C is the "heel bandage."

Bandage C (which is the important one) passes from before backwards, between the splint and the limb, *turns over the point of the heel*, and pulls forwards and downwards. Bandages B and C are then fixed by taking another turn around the limb and splint, and fastened with safety-pins (Fig. 4). If necessary, an evaporating lotion may be applied over the inner ankle, which is left uncovered by bandage. Usually in forty-eight hours the heel bandage requires to be tightened, owing to relaxation of muscular spasm. When

FIG. 3. FIG. 4.

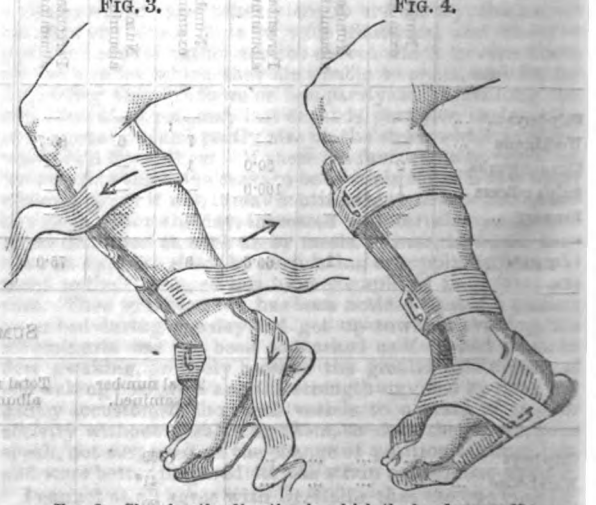


FIG. 3.—Showing the direction in which the bandages pull.
FIG. 4.—Showing the limb fastened on the splint.

the bruising has subsided and sufficient union has taken place, this apparatus is removed and the limb put up in a "silicate" splint, taking care to keep the foot well inverted and at right angles to the leg. After the removal of the silicate splint the ankle may be found somewhat stiff, but this condition may be remedied by manipulation under an anæsthetic.

I have found this method of treating Pott's fracture very

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simple and efficient, the foot and ankle eventually being as useful and shapely as before the accident. The great advantage of the "heel bandage" is that it exerts uniform and slightly elastic pressure in the direction required, and never produces that unfortunate result—a sore heel.

PERSISTENT HIGH TEMPERATURE IN A BOY, DEPENDENT UPON SUPPURATION WITHIN THE TYMPANUM (?)

BY WILLIAM H. DAY, M.D.,
PHYSICIAN TO THE SAMARITAN HOSPITAL FOR WOMEN AND CHILDREN.

A. C. W——, aged nine, was admitted into the Samaritan Hospital under my care on March 23rd, 1887. He was a highly nervous and sensitive boy, with thick lips, pasty face, expanded nostrils, and light hair. The parents and five other children of the family are healthy.

History.—Three weeks before admission he is said to have fallen in the street whilst running, and to have struck himself on the left temple. It is reported that he was picked up in a state of insensibility and carried into a shop. From that time to the present he has not been to school or into the playground. His mother states that after the accident he became very drowsy, sleeping nearly the whole day in a chair, but apparently not ill. He has had headache for a week, and giddiness and "wandering" up to the present. One day at home he was sick and ill, his mother thinking he might be going to suffer from some fever. A week before he fell he was knocked down by a boy and kicked in the groin and stomach. For some days after he complained of pain on micturition.

State on admission.—He complains of pain in the left hip and over the great trochanter, which is tender on pressure, but there is no obvious swelling or heat, and he can flex and extend the limb without pain. He is indisposed to answer any question, being very drowsy, though quite sensible and intelligent. He also complains of headache, and will not expose his face to the light, but hides it under the bedclothes. The abdomen is natural; the tongue is clean; the bowels are costive. There is a good deal of cough, but the physical signs are only those of slight bronchial irritation; no dulness can be detected in any part of the chest; the heart's sounds are normal. Temperature 104°; pulse 100; respiration 36. The urine is of a dark sherry colour, acid, non-albuminous, sp. gr. 1026. A soap-and-water enema was used, which brought away a copious scybalous dark motion. After this, the skin being dry and dirty, he was put into a warm bath. A mixture containing salicylate of soda and solution of acetate of ammonia was given every four hours. He was supplied freely with milk and beef-tea. At 9 P.M. the temperature rose to 104·4°; pulse 124; respiration 36. No complaint was made of any kind.

On March 24th it was reported that he had passed a quiet night, and did not seem quite so drowsy. The morning temperature was 103·6°, the evening 102·6°. On the 25th a grain of calomel was given, followed by an enema, which produced a copious and light-coloured motion. The temperature at 8 A.M. was 101°; pulse 104; respiration 36. At 1 P.M. the temperature rose to 104°. At 5 P.M. he asked for bread-and-butter and a picture-book, but he soon grew tired and relapsed into sleep. There was no pain, vomiting, or thirst. Five grains of antipyrin were ordered every four hours. At 12 P.M. the temperature was 103·4°. On the 26th, at 6 A.M., the temperature was 103°, when five grains of antipyrin were given, and in two hours it fell to 101·4°; throughout the day it did not exceed 102·6°. The boy enjoyed looking over books, and the only noticeable symptom was undue disposition to sleep. The temperature during the following day varied between 102° and 103·4°, and he invariably roused himself from his drowsy condition after being sponged with cold water. The same physical signs of bronchial irritation were present. The antipyrin was omitted. On the 28th the bowels freely acted. At 3.30 P.M., when the temperature reached 103·4°, he was put into a bath at 90°, which was gradually cooled down to 70° by the addition of cold water. He remained in the bath seven minutes, and when removed to bed, between blankets, the temperature was lowered to 98·6°. At 7.15 it rose again to 103°, when he had another bath. At 7.40 it was 100°; and at 12 P.M. it had risen to 101°. On the following day (29th), at 9.40 A.M., the temperature being 103°, he had another bath for five minutes, when it fell to normal. At 1 P.M. the temperature rose to 104°, and again he had a bath for five minutes, when it fell to 101°, and he became rather livid about the face and hands. At 3.30 the temperature was 103°, and he had a renewal of the bath for five minutes. Ten minutes afterwards the temperature was 98·6°. At 5 P.M. it rose to 103°, and the bath was repeated with like effect. At 7 P.M. the temperature rose again to 104°, and he had another bath. The patient has never had any distinct delirium, and complains now of no pain anywhere. He enjoys his food, but is very pale. When the temperature rises there is no change in his general condition. The morning and evening temperature was 102°; the pulse was regular and good; urine dark sherry colour, acid, sp. gr. 1024, non-albuminous. Cold sponging of the face, body, and extremities was performed three times a day. On the 30th, the temperature being 103° at midday, he was placed in a bath for five minutes. Two grains of quinine were given. At 5.30 the temperature was 104°, but after being in a bath for five minutes he became rather livid and his feet were cold. The temperature was 102°. At 8 P.M. the temperature ran up to 104°, when he had a final bath for seven minutes, the mercury falling to 100°. Pulse 88. The quinine was repeated. On the 31st he complained of pain at the lower part of the sacrum, and was fearfully alarmed at any attempt being made to examine it, his leg being instantly drawn up, and even the weight of the bed-clothes being insupportable. Throughout the day the temperature remained at 103°, notwithstanding cold sponging and quinine. On April 1st he seemed equally distressed, shrieking out and complaining of pain in his hip and sacral region. He was terror-stricken when local examination was attempted. At 1 P.M. the temperature was 105°. The boy admitted later in the day, when seen by myself and Mr. Marmaduke Sheild, that if it were not for the pain in "the back" he should be well, and with a little encouragement he was persuaded to get up and run about the ward. A careful examination was at this time made for disease of the hip or pelvic bones, or caries of the spine, but none of these conditions were detected. In the morning of April 2nd he appeared unable to move, but when his tea was brought to him he sprang up and took it greedily. The highest temperature during the day had been 101°; he had coughed slightly. No remedies seemed to control the temperature for any length of time. On the 3rd, in the early morning, his temperature was 100°, but at 2 P.M. it ran up to 104·6°; notwithstanding this, he took his food well and remained remarkably quiet. On examining the chest no dulness could be detected, but loud rhonchi and cooing sounds were universal over both lungs; the cough was now loose and more frequent. He had greatly wasted since admission, but for the last two days there had been sudden and considerable discharge from the right ear, with deafness. On the 6th the highest temperature was 99·6° and the pulse 84. He was ordered a grain of quinine in hydrobromic acid, and liquor strychnia three times a day. Two days later the temperature ran up to 101°, but he sat up in bed and enjoyed his food, and seemed as well with a high as with a low temperature. On the 11th, the temperature being 101° and the pulse 80, I ordered him meat once a day, and for the next five days the morning temperature was normal, the highest evening being 100°. On the 16th his temperature was normal, he slept less, and talked and played with the other children. He rarely coughed, and his chest was perfectly free from bronchial sounds. The appetite was voracious. For the next seven days his temperature was normal both morning and evening. On the 24th visitors came to see him, and the temperature soon afterwards ran up to 104°; he complained of headache, but seemed well, and relished his food. His medicine was omitted, but resumed again on the 28th. The temperature vacillated between 101° and 103° till May 5th, when it became normal. The urine was of a deep sherry colour; sp. gr., 1026; slightly acid, non-albuminous. As a rule, he slept from 7 P.M. till 7 A.M. without moving, and also generally five hours during the day; so that on an average he slept seventeen hours out of the twenty-four. On May 10th the boy got up, and neither morning nor evening did the temperature exceed 98·4°. He had gained flesh, and during the past week colour had returned to his face, and his drowsy condition had disappeared. He was discharged on June 8th. On July 30th

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he was reported well, and had suffered no return of febrile symptoms.

Remarks.—This is an unusual, and in some respects a remarkable, case. Although I have met with several instances of unaccountable pyrexia in adults, and especially in children, I have no record or remembrance of any case resembling in its features the one under consideration. Were the symptoms due to some alteration or disturbance in the nervous centres originating in the fall on the head? Were they dependent upon suppuration in the middle ear, or on some undetected condition of disturbance of the digestive system? There is much to recommend the first view. The boy was of a nervous and excitable temperament, and his condition on several occasions closely approached that of "hysteria" in the opposite sex. Moreover, the extraordinary variations in the temperature were suggestive of a neurotic origin. So, too, there were none of the constitutional signs of fever that would have necessarily accompanied a pyrexia of this kind if dependent on the usual causes. The drowsy and lethargic state has often been noted in neurotic individuals, in some cases leading to trance, or the nine days' wonder of a sleeping girl. Yet we have to recollect, on the other hand, that deeply seated collections of matter are often only signified by curious variations in temperature, and that excessive drowsiness with fever is often symptomatic of ear mischief. The rapid improvement of the boy after the discharge of pus would lend some colour to this view of the case. For the first few days I was inclined to think that pulmonary tubercle might be the slumbering element of mischief in this case, as evidenced by the protracted bronchial irritation. But when this had passed off, and there were no special signs of tuberculosis, it appeared to me improbable. The true import of such a high temperature was indeed doubtful. And in this, as in all such cases, I thought it wise to exercise vigilant supervision, and enjoin the strictest rest of mind and body. A remarkable feature in the case was the tendency to drowsiness and torpor. This was an early and constant symptom, and pointed to some important change in the nervous centres. Throughout the illness there was great lethargy, and during much of the time profound stupor, from which he could not be always roused. He generally lay on his left side, with calm features, and when asleep he had quiet respiration and slow pulse. It seemed whilst this drowsy state continued that he might pass into a comatose condition and die. Such a termination seemed not improbable if the patient was not roused to take nourishment. Pyrexia occurring without the general symptoms of fever is especially likely to occur from slight causes in neurotic individuals. It is quite likely that the true explanation of this case hinges on this observation. A delicate and sensitive lad gets the sequence of events not uncommonly noticed. A blow on the head, some suppuration about the tympanic cavity, possibly old mischief lighted up into fresh activity, and a curious train of febrile and head symptoms supervene. In an older person, or a lad of more stolid temperament, the symptoms would probably have been less complicated; but the case affords a striking instance of the readiness with which the temperature of a boy may undergo curious variations, and the great difficulty we often have in practice to trace such complications to their true origin.

ANTIPYRIN AS AN ANODYNE.

By OSCAR JENNINGS, M.D.

THE remarkable effect of antipyrin in the treatment of pain attracting general attention at present, the following cases may be of interest to the readers of THE LANCET.

1. A middle-aged lady with slight ataxic symptoms, including loss of knee jerk, whose chief trouble consisted of intermitting darting pains in the thighs and legs, and constant burning pains in the heels. She was supposed by consultants to have an arthritic affection of the sheath of the cord. Iodide, quinine, colchicum, salicylates, and electricity in various forms, had been all used without success. Antipyrin proved entirely useless, but the patient was slightly improved by a season at Lamalou.

2. A stout middle-aged female medical attendant, a large [illegible], and unable to get any exercise except in a carriage with her employer, was suffering from subacute gout in the feet. She took four grammes of antipyrin daily for a week without any marked improvement, recovery being slow, and probably independent of the medicine.

3. A stout man, thirty years of age, head waiter in a Paris restaurant, suffering from acute gout, was relieved by the same doses in twenty-four hours.

4. An unmarried middle-aged lady, crippled by double sciatica, which obliges her to use two sticks to get about, and who suffers more or less constantly from pain, had tried everything that could be suggested. She tried antipyrin, and it was unsuccessful.

5. A gentleman, aged sixty-nine, was sent to me for a painful affection about the shoulder, which had resisted all kinds of treatment directed by the most eminent neurologists in America. The malady had been variously described as neuralgia, neuritis, and myositis. The symptoms consisted of periodical paroxysms of pain, recurring at night, with inability to move the arms upwards and backwards (to brush the hair, for instance) without causing painful spasm in the muscle. There was also a dull, fixed pain in the right side, and hypochondriasis. Professor Ball, who had recommended the patient to place himself under my care for an electrical treatment, prescribed iodide of potassium and euonymin, by which the pain in the side was permanently relieved. The improvement about the shoulder joint, however, was slow, and the patient, who had expected to be entirely cured by electricity in a month, was becoming discouraged. Professor Sée's communication appearing at this juncture, it was decided to give antipyrin a trial. At first it had but little effect, but after a few days' administration by the mouth hypodermic injections were used instead, with a satisfactory result. The patient, if not cured, recognised that he was greatly improved in every respect – a statement endorsed more strongly by all his friends.

6. A washerwoman, aged forty-nine, was attending at the clinique of St. Anne with precisely the same symptoms, and, besides limitation of the movements upwards and backwards by pain, there was considerable wasting of the muscles. Faradic electricity had been employed for six weeks with the best effect; the paroxysms of pain were relieved, movement improved, and the volume of the muscles restored. The patient, although at considerable inconvenience to herself, never failed to attend the electrical room for treatment. There remained, however, a dull pain, to which she was so accustomed that it was no longer a subject of complaint, and was only mentioned when she was interrogated upon this point. Encouraged by my experience in the preceding case, I again tried antipyrin hypodermically, with an excellent result. The patient now takes one gramme per day and is free from pain, any movement being possible without uneasiness.

7. Antipyrin being said to relieve pain by lessening the perceptibility of the nervous centres, I thought it might be worth a trial in the morphia craving. I gave it in one case which has been already mentioned in the columns of THE LANCET, but the result was not encouraging. The patient stated that it made the craving worse. This, however, may have been a wilful representation for the sake of obtaining a little more morphia. He said, moreover, that he felt sick and giddy, and, as a matter of fact, he did not look well.

8. Upon the same theoretical grounds I gave antipyrin in one case of sea-sickness with good effect.

9. The most striking benefit I have seen following the use of this drug was in the following case:—An American gentleman, an artist, had been overtaxing both body and brain for some time in order to get a picture finished. He had been working in a cold *atelier*, taking meals irregularly, and was morbidly anxious as to success. He had already lost appetite and become sleepless and restless, when he was seized with violent abdominal pains, accompanied by frequent stools containing blood, cerebral excitement, and subdelirium, with fear of impending death or insanity. He was the more excited when I saw him inasmuch as he had been anxiously waiting for an English doctor the whole afternoon, and was just then threatened with a visitation from no less than three. A colleague who arrived shortly after myself suggested the possibility of typhoid, but, as the management of the case devolved upon me, I accepted the diagnosis of the family, which was visceral rheumatism, ordered a morphia suppository and a mixture containing chloral and bromide to allay the symptoms depending upon the brain. The next day the pain was still severe, although the mental excitement was lessened, and

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the patient begged for a hypodermic injection of morphia, which, he said had been used with benefit upon a previous occasion. This I gave, and was called upon to repeat the dose in the evening. The next morning morphia was again demanded and given, and as I had resolved not to make any more hypodermic injections, I told the patient I could give him no more morphia except in the form of suppositories, and prescribed antipyrin, to be taken in fifteen-grain doses every four hours. The administration was commenced under the influence of the last hypodermic injection, and the pain never returned, the patient rapidly convalescing and leaving Paris shortly after for the United States.

10. I have given antipyrin in one case of zona. The pain disappeared after the third dose of fifteen grains "like a charm," to use the patient's own expression.

11. Of two cases of inflamed painful sore-throat of rheumatic origin, one was greatly relieved.

12. In migraine there can be no doubt as to the efficacy of antipyrin for a time, although, in my opinion, the dose requires to be larger than those mentioned by some correspondents of THE LANCET—fifteen grains at least. I am afraid, however, that the effect will often be found to wear off after a time, or that it will be necessary to increase the dose to an imprudent extent. I know a lady who has been taking antipyrin for migraine for two months, and who already finds that it has lost most of its "magic," although it still procures some relief. M. Norström tells me he has had similar experience.

To sum up. If antipyrin is not an unfailing specific, I have certainly seen it allay pain as speedily and more radically than a hypodermic injection of morphia. Whether any evil results are likely to follow its prolonged use remains, of course, to be seen. There is a good deal of talk at present about the possibility of benzine poisoning resulting from the admixture of this substance with the drug, owing to imperfect preparation, but I must confess that every solution I have used hypodermically has smelt of benzine, and until the end of September, when I purchased an inodorous sample in London, I was under the impression that this was always the case. Like others I have frequently seen giddiness, vertigo, and nausea follow the administration of antipyrin, and ecchymoses and induration at the seat of injection. In one instance where I had associated it with cocaine, according to a formula much used in Paris, the patient felt prostrate and miserable for four or five days. This has never occurred with antipyrin alone.

Paris.

ANTIPYRIN IN THE TREATMENT OF MIGRAINE.

BY W. H. RUSSELL FORSBROOK, M.B. LOND.

So far as I know, the treatment of this troublesome and frequent disease by antipyrin has not been tried in this country. I was induced to try it in the first instance after having read an account of the drug in THE LANCET, written by a German physician, who had given it with success in this and various neuralgias; and I have now myself prescribed it in some hundred cases with an almost magical result. The causes and symptoms of migraine are well known, but its pathology is not so clear, and its treatment by the numerous remedies hitherto recommended has effected little or nothing, in the majority of cases, in shortening an attack. I think, therefore, the misery, depression, and extreme feeling of illness it causes while it lasts, and the almost immediate relief from all this, are a sufficient excuse for venturing to write a short account of my experience of its treatment by this drug.

I have found antipyrin given in fifteen-grain doses every twenty minutes three times consecutively almost invariably removes the pain, depression, drowsiness, nausea, &c., so that in forty minutes, frequently even after one dose, patients express themselves quite well. A single dose, if given during the premonitory signs, will often ward off an attack. Sometimes I recommend another dose in four hours, but not often, as I find the very few cases in which there has not been absolute removal of pain after the third dose, but only partial relief, are seldom further affected. These few cases, however, which are not amenable to the speedy action of the medicine, seem to have the duration of the attack much shortened. One important fact is noticeable, that the period between the attacks has seemed to me to be prolonged; also that succeeding attacks have not been so severe after its administration. The pulse, which is generally slowed during an attack of migraine, appears in some cases to be rendered fuller and quicker. Antipyrin, when given to young women for migraine, sometimes produces a species of intoxication, so that it is as well to be on one's guard; although, so far as my limited experience goes, the only result has been the almost certain and immediate relief from the peculiar pain &c.

According to one theory of its pathology—that of Dr. Liveing,—migraine has a close pathological relation to epilepsy; although one disease is said never to pass into the other. Dr. Liveing thinks that the immediate antecedent of the attack is a state of unstable equilibrium and gradually accumulating tension in the parts of the nervous system especially involved, the paroxysm being somewhat similar to a storm. He considers the seat of the disease to be the optic thalami and the parts between those bodies and the roots of the vagi. Thinking of this close relationship between the two diseases, I commenced to give antipyrin in the headache following an epileptic seizure, and I was glad to find that it acted quite as well as in ordinary migraine in six out of seven cases. I have also prescribed it, following out the analogy, in those cases of epilepsy indicated by premonitory symptoms, or by the so-called aura epileptica, and in the only two cases in which I have tried it I certainly believe that it prevented an attack in one of them; but naturally the drug requires a much more lengthy and searching trial with respect to the headache following an attack of epilepsy, and especially as to its power in the prevention of an attack preceded by an aura, and I merely throw out these hints in the hope that someone with extensive practice in epilepsy will experiment. I have most certainly proved the great value of antipyrin in migraine in my own practice, and I ask others to prescribe it in order to be convinced of its specific action.

Buckingham-palace-road, S.W.

MERCURIC BINIODIDE GAUZE:

A NEW ANTISEPTIC DRESSING.

BY J. C. VOIGT, M.D. EDIN.,
LATE SENIOR RESIDENT MEDICAL OFFICER, BURY INFIRMARY.

SINCE Jan. 1st, 1886, I have used a gauze prepared in the following way. Plain absorbent gauze is steeped in a 1 in 500 solution of mercuric biniodide in iodide of potassium and glycerine: Hydrarg. iod. rubr., 1 dr.; pot. iod., 3 dr.; glycerine, 4 oz.; aqua ad 80 oz. After being well soaked in this solution, the gauze is squeezed out and hung to dry in a darkened room. For irrigation of wounds and washing out of abscess cavities I employ a stock solution of hydrarg. iod. rubr., 2 dr.; pot. iod. 4 dr.; glycerine, 12 oz.; aqua ad 80 oz. This is diluted (with water) from four to eight times before being used. The solutions thus diluted are substitutes for the 1 in 1000 and 1 in 2000 corrosive sublimate solutions. For the dressing of ulcers much weaker solutions—1 in 20,000 and 1 in 40,000—have been employed. The following cases are given as illustrations of the foregoing:—

1. *Right-sided empyema.*—Lilias A——, aged eight years. Empyema opened Jan. 15th 1886. Cavity syringed out with 1 in 10,000 biniodide solution, and drainage tubes inserted. Washed out daily with the solution (diluted to 1 in 20,000 after the third day) and tubes shortened. Drainage tubes removed in three weeks. Patient discharged cured.

2. *Deep cellular inflammation and suppuration under the scalp (after a blow on the head).*—Nancy H——, aged forty-one. Treatment commenced on Feb. 3rd, 1886. High evening temperatures and rigors. Suppuration, involving nearly half the scalp. Free incision and drainage. Syringing with the 1 in 1000 biniodide solution, and dressing with biniodide gauze. Cured by Feb. 15th.

3. Thomas R——, aged thirty-seven. Similar case to the above (after wound of scalp). Here the biniodide solution was substituted for the corrosive sublimate on the third day of treatment, after drainage-tubes had been inserted and counter-openings made. The amount of discharge was noted as being "much less" at the following dressing. The drainage tubes were gradually shortened, and the patient was discharged cured in twelve days.

4. *Large axillary and subclavicular abscess.*—R. W——, aged forty-four. Drainage tubes inserted (after free incision) into axilla, and under pectoralis major. Abscess cavity

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syringed out with biniodide solution, and biniodide gauze dressings applied. Patientdis charged cured in fourteen days.

5. *Suppurating bursæ patellæ.* (Three cases.)—Free incision, with mercuric biniodide irrigation and dressings of biniodide gauze, followed by iodoform and iodol ointments.

6. *Deep abscess of thigh with suppurating bursa patellæ.*—William C——, aged thirty-six, fell and injured his knee on Nov. 5th, and, when seen on Nov. 7th, the bursa patellæ was found enlarged and inflamed, there was considerable swelling round the knee-joint, and the lower and outer part of the thigh was tender to the touch and swollen. When fluctuation could be distinctly made out, an incision four inches long was made along the outer aspect of the lower part of the thigh. A considerable quantity of pus escaped. The bone was found healthy. The abscess cavity, after being well washed out with the 1 in 1000 solution, was drained and dressed with biniodide gauze. The suppurating patellar bursa was also freely opened and drained. The patient was discharged cured in ten days.

7. *Exploratory incisions, elbow, hip, and knee joints.*—Jas. N—— and Wm. L——, aged forty-one and twenty-five respectively. Extensive suppuration round elbow joint, as a result of injury. Free incision along the posterior aspect of the joint. Olecranon process found denuded of periosteum. Pus evacuated and sinuses laid open. Wounds syringed out daily and packed with biniodide gauze. Both cases discharged cured, with partially movable joints, after a couple of weeks' treatment.

8. *Morbus coxæ.*—Albert O——, aged four, seen in February, 1887. A large bulging abscess found surrounding the hip joint. Exploratory incision (under mercuric biniodide irrigation) along posterior aspect of trochanter. Head of femur found in position in acetabulum. More than a pint of thick pus escaped from the abscess cavity, which extended downwards to about the middle of the thigh and upwards under the gluteal muscles. Long, large-sized drainage tubes inserted; biniodide dressings and extension apparatus applied. Abscess cavity syringed out daily, and tubes gradually shortened until removed altogether. Discharged cured on April 5th.

9. *Suppurating knee joint.*—Henry W——, aged eleven. Joint laid open and drained. Irrigation by mercuric biniodide solution. After two months' treatment, joint found anchylosed and wounds healed.

Summary.—As compared with corrosive sublimate, I find that the biniodide dressings give (1) just as efficient antisepsis, (2) less risk of toxic constitutional effects, and (3) less irritation of the parts surrounding the wound.

Southport.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

PRIMARY CANCER OF FEMALE BLADDER; OVARIAN CYSTOMATA; GROWTH REMOVED BY VAGINAL CYSTOTOMY; FRESH GROWTH AGAIN REMOVED BY A SECOND OPERATION; RECURRENCE; SECONDARY GROWTHS IN OTHER ORGANS; THIRD OPERATION; DEATH.

(Under the care of Dr. HERMAN.)

THE following is interesting as the complete history of a vesical tumour. The symptoms produced by the presence of the growth were spread over a long period, and this, with the appearance of the tumour, made it probable at the time of the first operation that it was of innocent character. The report of the microscopic examination was, however, in favour of malignancy, and the repeated recurrences and general dissemination of the disease proved this to be correct. The following notes are by Messrs. Pugh, Lubbock, and Lys, clinical clerks.

S. W——, aged fifty-nine, was admitted into the Victor ward on July 8th, 1885. The patient came to the hospital complaining of passing blood with her urine, of vomiting, and of swelling of the abdomen and legs. She did not know of any relative having suffered from cancer or from any disease resembling it, nor from phthisis. Both parents long lived. She had always lived in the country till the last eight months. Had always been strong and healthy till the present illness. Had all her life worked hard. She first menstruated at thirteen; the flow used to last four or five days, was moderate in quantity, but accompanied with severe pain, beginning two or three days before the flow, relieved on the appearance of the flow, and ceasing on the second day of the flow. She was married at eighteen, but never became pregnant. Menstruation ceased at thirty-four. Her bladder troubles dated from six or seven years back. Then she began to have to strain a good deal in micturition, and her urine was of a deep yellow colour, staining her clothes when it dropped upon them. Two years after this the urine became of a much deeper colour, began to contain small lumps, which she believed to be clots, and there was a sediment after the urine had stood. She could feel the passage of these clots, as they sometimes caused temporary stoppage of the flow of urine. Ever since then she had been passing blood at variable intervals; sometimes she would go as long as eight or nine weeks without passing any, sometimes not so long. The last severe attack was nine weeks ago, when she passed a large quantity of blood, making her feel very weak. Very little has been passed since. About a year ago the abdomen began to swell, and this has especially increased during the last nine weeks. The swelling of the legs began after the last severe attack of hæmaturia. Patient has been losing flesh for some months.

On admission the patient was pale and anæmic, but not much emaciated. Appetite bad; bowels confined. The abdomen was distended by a rounded, firm, elastic, fluctuating swelling; it was dull in front up to five inches above the umbilicus, resonant in the flanks. The circumference at the umbilicus was forty-two inches. Per vaginam, the cervix uteri was found to be healthy; a large solid lump was felt to the left and in front of the cervix. The urine drawn off with the catheter was dark, smoky, neutral in reaction, and contained blood and pus.

July 14th.—The patient having been anæsthetised, an incision was made from the vagina in the middle line through the base of the bladder. Growing from the mucous membrane of the base of the bladder to the left of the middle line was a mushroom-shaped growth. This was grasped with forceps and torn away. The fragments when put together formed a mass as big as a Tangerine orange. The base of the bladder did not seem more fixed than usual to surrounding parts, but owing to the elevation of the uterus (which was pulled up by the abdominal tumour) it could not be pulled down as usual, which made manipulation somewhat more difficult. Hæmorrhage was stopped by syringing with hot water. The incision was left open.

21st.—All pain has ceased. No trace of blood in urine.

31st.—Urine tinged with blood.

Aug. 28th.—Patient anæsthetised; cervix uteri dilated; interior of uterus examined, and found to be healthy. The edges of the wound in the bladder were pared and united by stitches in the usual way.

Sept. 5th.—Stitches removed, opening closed.

25th.—Circumference at umbilicus forty-one inches.

Oct. 9th.—A little blood and pus in urine; no pain. The lump formerly felt through the vagina at the base of the bladder is not now perceptible.

13th.—Discharged.

Mr. Jonathan Hutchinson, jun. (surgical registrar to the hospital), was kind enough to examine the fragments of growth removed. He reports as follows: "The growth was soft, and formed of a very great number of villous processes, so that it was difficult to obtain an extensive section. The processes, however, throughout were of similar structure—vascular fibrous projections covered with columnar epithelium (non-ciliated). Some were broad and short, the greater number of marked tenuity. From the latter the epithelial covering dropped off with great ease. Sometimes one long process appeared to join another. There was considerable round-cell infiltration of the thicker processes, as also of the base from which they grew. In addition to this (forming the most important feature of the tumour) were oval loculi filled with cells which could only be of epithelial origin. This so strongly suggests a tendency to infiltrate that the growth must be regarded as in all probability malignant."

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The patient was readmitted on Jan. 15th, 1886. The urine now again contained much blood, and the patient was more anæmic. The circumference at the umbilicus was forty inches.

On the 19th the patient was put under ether, and the bladder opened from the vagina by a median incision, as before. The finger, introduced through the opening, felt a mass growing from the upper and posterior part of the bladder. This was grasped with forceps and torn away. Just as the growth had been removed, the patient's pulse and breathing stopped. The anæsthetic was withdrawn and a hypodermic injection of half a drachm of ether given. The tongue was pulled forward and an artificial respiration performed, and after this had been done the pulse and respiration returned. The wound was left open. The next day the pulse was small and the breathing hurried. There was no pyrexia.

Feb. 6th.—Edges of opening pared and united by sutures.

14th.—Sutures removed. Patient can retain urine.

March 19th.—Abdomen measures forty-one inches in circumference. Urine free from blood or pus.

27th.—Discharged.

The patient was admitted for the third time on Aug. 21st, 1886. From her leaving the hospital in March until the day of admission, there had been little or no blood in the urine. On that day hæmorrhage came on badly, and the patient therefore sought admission. She was extremely pallid and wasted. A mass could now be felt in front and to the left of the uterus.

On the 24th the bladder was opened as before, through the anterior vaginal wall. There were polypoid growths from the vesical wall, which were removed as far as possible; but there was also much thickening at the base of the bladder. The patient was given a dose of brandy before the administration of the anæsthetic, and another after the operation was finished. She did not seem greatly exhausted. She, however, gradually sank, and died about twenty-four hours afterwards.

The necropsy showed cancer of base of bladder; large multilocular cyst of right ovary, and small one of left ovary; secondary cancerous growths in liver and lungs; uterus healthy; kidneys healthy.

Remarks by Dr. HERMAN.—This case is thought worth publishing as an instance of a rare form of disease—primary cancer of the female bladder. Cancer of the bladder arising by extension of cancer beginning elsewhere is common. According to statistics collected by Féré,[1] the most usual place for primary cancer of the bladder is the base, and next most frequent the posterior wall. In this case the growth began in the base, and when this had been removed fresh growth took place from the posterior wall. As in most cases of the kind, hæmaturia was the most prominent symptom, and the anæmia produced by it the source of most distress and danger. The disease seems, from the history, to have commenced with cystitis: not a common mode of origin. According to Féré, it is rare for generalisation to take place, the local accidents usually causing death, and the average duration of the disease is from eighteen months to two years. Judged by this standard, this case was one exceptionally protracted in its course, and one in which treatment was unusually successful. That the growth, which began in the base of the bladder, was completely removed is evidenced by the fact that at the second operation the growth causing hæmorrhage was from the posterior wall, and not at the place from which a growth had been removed at the first operation. Each operation was temporarily successful in relieving the patient, by stopping hæmorrhage, and they prolonged her life sufficiently for generalisation to take place. The ovarian tumour was not removed, because when the patient was admitted it was thought better to postpone operation for it (as it was not causing distress) until the patient's general condition was better. As time went on it was found by frequent measurement that the tumour was not increasing, and the patient's condition never became what would be desired for a subject of abdominal section. The case illustrates the best method of dealing with intra-vesical disease in the female. It has been often advised and practised to deal with disease of the kind by dilating the urethra, and reaching the interior of the bladder through this canal. This method is far inferior to that of cutting into the bladder through the vagina. It gives less easy access to the disease, and brings with it danger of permanent loss of control over the bladder. If the bladder be cut into from the vagina in the middle line, no important structure can be wounded, the inside of the bladder can be easily reached, and anything required done. The wound made by an incision is easily closed by sutures, in this respect differing from the vesico-vaginal fistulæ which sometimes follow labour, and are due to loss of substance from sloughing. But where there is cystitis it is beneficial to leave the wound open, so that urine and any débris may escape through it. This conduces to the comfort of the patient and the restoration of the bladder to a healthy condition, and the wound will often heal without sutures. Except for diagnostic purposes, for which it is not necessary to dilate further than required to admit the finger, incision of the bladder from the vagina should always be preferred to dilatation of the urethra.

[1] Cancer de la Vessie. Paris, 1881. (Reprint from Progrès Médical.)

CHESTER GENERAL INFIRMARY.

LARGE STRANGULATED UMBILICAL HERNIA; OPERATION DEATH; NECROPSY.

(Under the care of Mr. TAYLOR.)

THE notes of the case are by Mr. Alfred Mann, visiting surgeon.

George M——, aged fifty-three, was admitted at 4 A.M. on Sept. 15th last, suffering from a very large umbilical hernia, which had been showing signs of strangulation some four or five hours before admission. The patient was too ill to give a very full account of his previous history, but it appears that he had suffered from a large umbilical hernia for sixteen years, and had never experienced any symptoms of strangulation before, although never wearing any kind of truss or support. He had been a butler in a gentleman's family for some time, but for the last year or two had had no settled occupation.

When admitted the patient was not vomiting, but had been doing so an hour or two previously. He had considerable pain in the tumour, especially when pressure was made at the margins. The tumour itself was very tense and nodulated, giving the idea of adhesions existing between the contents and coverings of the hernia. It measured 39 inches round its base and 18 inches across at its broadest part. Previous to admission the patient had had five-sixths of a grain of morphia injected hypodermically. The symptoms were not very acute on admission, and under the influence of morphia the pain became much less. At 9.30 A.M. he was seen by Mr. Taylor. He had then just vomited some greenish-looking fluid with a foul smell, but not stercoraceous; the pain also had become greater, and the tumour more tense. By 11 A.M. stercoraceous vomiting had occurred. A consultation was held at 12.30, and herniotomy decided on.

At 3.15 P.M. the patient was put under chloroform, and, with careful antiseptic precautions, Mr. Taylor made an incision about six inches long over the tumour a little to the right of the middle line. The coverings of the hernia were separately slit up on a director, and the sac opened. This was immediately followed by a protrusion of a portion of its contents. A small opening was unintentionally made in the intestine, which caused the ejection of a large quantity of dark, foul-smelling fluid. The neck of the sac was found, and notched downwards with a hernia knife. No attempt was made to return the intestines into the abdominal cavity, but great difficulty was experienced in returning them into the sac. It was only by squeezing out the fluid contents through the opening that had been made in the gut that this could be effected. The intestine having been returned, the sides of the intestinal opening were stitched to the abdominal parietes so as to form an artificial anus, and the wound closed with strong wire sutures. Hypodermic injections of morphia were given after the operation, but the patient soon had a return of the stercoraceous vomiting, and died at 11 P.M. The temperature was subnormal after the operation up to the time of death, which took place rather suddenly.

At the post-mortem examination held on the following day, all the intestine contained in the hernial sac was found to be very much inflamed, and numerous adhesions existed between the contents and the sac. A white line on the intestine showing where the constriction had taken place was found at a distance of three feet from the stomach. The sac itself contained all the ileum, cæcum, and ascending and transverse colon. All this mass of bowel had become bent over the narrow opening into the sac. No fæcal fluid had escaped into the abdomen or into the sac.

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DUNDEE ROYAL INFIRMARY.

SUPPURATIVE GASTRITIS; DEATH; NECROPSY.

(Under the care of Dr. MACLEOD.)

WE are indebted to Dr. Wilson, house-surgeon, for the notes of the case.

C. S——, labourer, aged sixty-three, was admitted in the afternoon of Nov. 16th, 1887, suffering from a supposed first attack of acute rheumatism, brought on by cold. His previous health was good, but he was addicted to the free use of stimulants. About a fortnight before admission he had a rigor, followed by pains all over his body, and pyrexia; the joints of the arms and legs were subsequently affected.

The patient on admission was well nourished; arteries atheromatous. He was suffering from pains in the joints of the arms and legs, increased by movement, but not attended by swelling or redness. Apex beat of heart in fourth interspace, in nipple line; dulness normal. Heart sounds at apex: first sound slightly muffled, also at the base. Percussion clear all over the lungs. Pulse 92, soft; temperature 102·4°. Appetite fair. Tongue dry, and covered with a white fur. Bowels regular. Ordered five grains of iodide of potassium and fifteen grains each of bicarbonate of potash and salicylate of soda every hour for four hours in water.

Nov. 17th.—Morning temperature 98·8°. Urine: sp. gr. 1020, acid, and high coloured; moderate albumen. Dr. Macleod saw the patient for the first time about 11 A.M. He was perspiring freely, with an anxious expression of countenance. Heart sounds natural. Complained of pain in the joints of the arms and legs; no swelling or redness. His mind was confused, and he was labouring under a busy delirium, closely resembling delirium tremens; this was attributed to the salicylate, which was discontinued. Evening temperature 99·2°. Patient noisy and semi-delirious, calling out and trying to get out of bed; all the pains gone. At night the patient began to get very violent, shouting and moving himself about, with delusions and other symptoms of delirium tremens. Forty grains of bromide of potassium were ordered to be taken at once, followed by twenty grains every two hours.—8.45 P.M.: Still as excited as he was at 5.30. Ordered a quarter of a grain of morphia hypodermically.—10.30 P.M.: Noisy and delirious; getting out of bed. Tied in bed, and a third of a grain of morphia given. Went off to sleep in about half an hour, and continued quiet during the night.

18th.—At 2 A.M. the patient was breathing naturally as if in a sound sleep. About 7 A.M. the nurse noticed that his breathing was noisy and stertorous, with rattle in the throat. On examination, pupils were found contracted; no response to stimulation either of the eye or skin. Pulse 132; respiration 28; temperature 104·2°. Rigidity of limbs on right side; left arm and leg flaccid. His head was ordered to be raised and an ice-cap applied.—8.30 A.M.: Temperature 106·2°; pulse 144; respiration 36. Condition much the same. Breathing stertorous. Pupils contracted and fixed. About fifteen ounces of blood removed from arm by venesection. Died at 10.15 A.M.

Necropsy, by Dr. Stalker, pathologist.—Nothing abnormal found in brain. Recent lymphy effusion between arachnoid and pia mater. Heart normal in size; one pericardial adhesion. Narrow liver. A string an inch long from the parietal and visceral layer on left ventricle, also recent vegetations on aortic cusps. Kidneys and spleen normal. Stomach greatly thickened all over greater curvation and round pylorus, where the wall was about an inch thick. On section the stomach wall was found to be divided up into spaces full of yellow pus, between the muscular layer and submucous membrane. Mucous membrane apparently healthy.

Remarks by Dr. MACLEOD.—Gastritis phlegmonosa, or diffuse suppurative gastritis, is a very rare affection almost impossible to diagnose, and very few text-books contain any reference to the disease. Ziemssen, in his "Practice of Medicine," relates one case, the symptoms being pain in the stomach, gradually increasing, vomiting, diarrhœa, general prostration, delirium, ending in coma. In the present case all these symptoms were absent, with the exception of [illegible] ended in coma, and closely resembled [illegible]. The symptoms resembled an attack of [illegible] and the busy delirium I found the patient [illegible] the only time I had an opportunity of [illegible] attributed to the action of the salicylate [illegible] another case of rheumatism. Post-mortem examination, however, disclosed the true state of matters, and the symptoms considered to be rheumatic were doubtless due to pyæmia. The patient was intemperate in his habits. In the absence of post-mortem examination, the case would have been described as one of acute rheumatism, ulcerative endocarditis, and hyperpyrexia.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Fatty Degeneration of Heart from Intra-abdominal Pressure.—Arsenic Cancer.—Stricture of Intestine following Tubercular Ulceration.—Avian Tuberculosis.—Syringomyelia.—Ulcerative Colitis.

AN ordinary meeting of this Society was held on Tuesday last, Sir James Paget, Bart., President, in the chair.

Dr. BEDFORD FENWICK read a paper on Cardiac Degeneration due to Abdominal Disease. He related the case of a woman aged forty-five, who had been married twenty-two years. She presented a uniformly distended abdomen; the cardiac sounds were dull. The ovarian tumour was of great size and solidity, and weighed twenty-two pounds after all fluid had been discharged. The operation wound healed by first intention, but on the eleventh day the patient became very ill and peritonitis set in, followed by death on the twelfth day. The heart muscle was pale, yellow, soft, and friable; the wall of the right ventricle was very thin, but the wall of the left ventricle was of natural thickness. The microscopic sections were made by Dr. Norman Dalton, and showed fatty infiltration and degeneration of the heart muscle. He believed that such a condition could cause rapid death and collapse, and, in fact, was the pathology of twenty-two fatal cases in which the general condition was well marked. He suggested that the effects of direct pressure were the probable causes of the degenerative change, which was proportional to the duration and size of the abdominal mass; such a physical explanation being obvious, there was no need to invoke more obscure agencies. The majority of cases occurred under the age of fifty, and yet fatty degeneration of the ordinary kind was most frequent in males above that age.

Mr. JONATHAN HUTCHINSON made a communication on Arsenic Cancer. The suggestion was made that the administration of arsenic for many years in full doses, as given in cases of psoriasis, could lead to the development of epithelial cancer, having some peculiarities. He showed a drawing of a foot which at first sight might have been thought to be a perforating ulcer, but there was no sinus and no other evidence of its being of this kind. Excision was practised, and the tissues treated with chloride of zinc. It was proved by microscopic examination that the disease had many of the characters of epithelial cancer. There were numerous little corns on the sole of the foot and in the palms of the hand, and undoubtedly due to the use of the arsenic. Microscopically, there was nothing definite as to its being an epithelial cancer. A case was mentioned which occurred in a member of the medical profession; the rough condition of the palms and soles, with the association of soft corns, was well marked. This condition did not develop as a papillary form. After suffering for some years from this condition of the palms and soles, there appeared on the front of the wrist of one hand an ulcer having some of the aspects of a syphilitic sore, but this was negatived on good evidence. The tumour was removed, but it grew afresh on each separate occasion. A course of anti-syphilitic treatment did no good. Amputation of both hands was performed. The patient lived for eighteen months, and died with epithelial cancer in the lungs, supra-clavicles, kidneys, and a rib; these had the characteristic epithelial structure. Such a case tended to prove that arsenic could produce the palmar condition, and perhaps also the cancer. Another case had no skin disease whatever until he took arsenic for a cancerous growth in the neck; arsenic was taken in doses of twelve minims, three or four times a day; a muddy and thick condition of the skin appeared. In another instance, in a female child with pemphigus, where arsenic was prescribed in large doses, a cancer developed on the skin over the crest of the ilium and under the skin of the thigh; it ulcerated, and the patient died at the age of

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twenty-five. Another instance was noted by Mr. Waren Tay, in a clerk aged thirty-four, who had psoriasis and developed a cancerous mass on the scrotum of epithelial sort after taking large doses of arsenic. Altogether, the cases, he thought, went to show that arsenic might and could be a powerful factor in the development of cancer in certain cases.—Dr. EDMUNDS said that in the fens of Cambridge arsenic was taken in large doses for ague, and yet cancer was rare. There was no ague, but cancer was prevalent in Norfolk, where arsenic was presumably not used. He thought that coincidence would explain Mr. Hutchinson's cases.—In reply to a question, Mr. HUTCHINSON said that the arsenic was stopped in the case of the medical man as soon as it was suggested as the cause of the cancer.—Dr. HADDEN said that skin eruptions produced by arsenic were not mentioned in text-books.—Mr. HARRISON CRIPPS said that further evidence was wanted. In the first case, resembling perforating ulcer, the microscope showed that the disease was not epithelial cancer. The psoriasis in the medical man might be regarded as the cause of the cancer from chronic irritation.—Mr. MAKINS suggested that information from Styria would be of value.—Mr. F. S. EVE said that epithelial cancer took on a peculiar form in the palms and soles. In workers in cobalt mines lympho-sarcoma of the lungs and submucous tissue developed. He could perceive no reason why arsenic should not in a similar way set up carcinomatous disease.—Sir JAMES PAGET considered that arsenic might have some influence in accelerating or producing cancer. The whole characteristics of the disease should be taken into consideration in determining its nature; the microscope could not always be trusted in diagnosis. The evidence went to show that arsenic had a very definite influence in the causation of the cancer.—Mr. JONATHAN HUTCHINSON, in reply, said that Dr. White of Harvard University believed that the case was one of psoriasis-cancer. It was exceptional for psoriasis to affect the palms of the hand, and yet arsenic produced the rough and horny condition of this region. In the diagnosis of cancer he would not trust to microscopical evidence. In the case of the medical man continental authorities said the disease was syphilis, so that the absence of microscopic evidence was not conclusive, because in this case at least cancer was certainly present. Arsenic could certainly cause herpes zoster and arsenical eczema; it did not produce symmetrical eruptions.

Mr. FRED. TREVES showed a specimen of Tubercular Stricture of the Colon, removed from the body of a boy aged fifteen years, who was admitted into the London Hospital with the symptoms of chronic intestinal obstruction of six months duration; diarrhœa, colic, and gradually increasing constipation were the chief symptoms. The patient became worse and developed peritonitis, which was treated as a last resource by enterotomy and the formation of an artificial anus in the middle line. At the necropsy the left lung showed caseous deposits at the apex. The stricture existed at the end of the ascending colon, and was of a dense circular fibrous character. Certain characteristics were sufficient to diagnose it as a tubercular ulcer: it was entirely circular, and in vertical direction measured 1½ in.; the contracting medium was the mucous membrane, and this membrane was dissected from the submucous tissue, with a formation of cloacæ, and fenestræ, and tags, fifty in number, some flattened and sessile, others branched somewhat similar to those resulting from undermining tubercular ulcers of the skin of the neck. The submucous tissues appeared to be the chief seat of the disease. The disposition to the formation of stricture was absent if the whole of the mucous membrane were destroyed. Tuberculous disease of this sort usually had very little disposition to form a scar.

Mr. W. SIBLEY read a paper on an Epizootic of Avian Tuberculosis in a farm in Surrey, and showed specimens of the various organs diseased. Much caseating matter was expelled from the bowel, after having been discharged into its lumen from the diseased walls of the intestine, and thus left behind large pouches. The lesions presented the typical forms of bacilli. The disease generally appeared when the birds were about two years old. The whole of the abdominal organs were effected. Mention was made of one such pouch connected with the crop which attained the size of a pigeon's egg. Subpleural nodules were also present, and the larynx and trachea were diseased. Vertebral caries and caseating cervical glands were occasionally observed. Bacilli, apparently identical with those found in human tuberculosis, were present in most of the affected organs. The nodules appeared to have little tendency to break down, but the growths tended to spread and to caseate, forming relatively large tumours. The disease was apparently an example of hereditary transmission.

Dr. CHARLEWOOD TURNER exhibited a specimen of Syringomyelia in the spinal cord of a female, aged twenty-three, who died in the London Hospital from a severe burn caused by falling into the fire during a fit. She had atrophy of the upper limbs, which had been developing for twelve months. There was a large central cavity extending from the medulla oblongata to the upper end of the lumbar enlargement, and a smaller cavity in the right posterior cornu in the lower part of the lumbar region and conus. The cervical enlargement was expanded by a large central cavity with processes along the posterior nerve roots to the surface of the cord. In the dorsal region the cavity was chiefly on the right side of the cord and was smaller. In the mid-dorsal region it was divided into two separate channels in the posterior grey matter of each side. Below, it became again a single channel, in part symmetrical, in part on the right side. When the cavity was central it was divided by an antero-posterior median septum of membrane. The lateral ventricles of the brain were dilated, the left anterior and posterior cornua more so, in correspondence with the predominance of the spinal lesion on the right side, emphasising the observed association of syringomyelus with hydrocephalus. Referring to Leyden's suggestion that hydromyelus arises from unobliterated portions of the posterior limb of the embryonic central canal, Dr. Turner expressed the opinion that the spinal cavity in such cases originated in dilatation of perivascular spaces in the neuroglia—(1) because of the limitation of the lesion, in part or wholly, to the cornua. The division of the channel into two lateral portions, and the presence of a median membranous septum dividing the channel where centrally situated, were indications of the origin of the cavity in the posterior grey cornua in the central extension rather than the contrary course; (2) because the ventricles of the brain, as in a sense perivascular cavities, are, physiologically and functionally, in correspondence with the perivascular spaces in the cord, and become distended in hydrocephalus through serous exudation from the vessel in excess of the outlet of escape; and the watery character of the fluid in syringomyelus shows that this is similarly due to exudation, whereas distension of a closed epithelial tubule in the connective tissue of the cords, though intelligible as a result of the formation of some mucous or colloid substance from the epithelial surfaces, is not intelligible as a result of exudation from the vessel.

Dr. HALE WHITE showed a specimen of Ulcerative Colitis from a man who died with a history of diarrhœa, melæna, vomiting, abdominal pain, and wasting, of a few months' standing. No cause could be found. At the necropsy it was discovered that there was ulceration of the whole of the large intestine, beginning at the cæcum and extending to within four inches of the rectum. The ulceration was universal, leaving, however, irregularly shaped islets of swollen congested mucous membrane. The edges of the ulcer were sharply defined; the floor consisted of exposed transverse muscular fibres. There was no attempt at repair or perforation, no peritonitis or tubercle. The ulceration was least marked in the cæcum and rectum. Dr. Hale White pointed out that, although this condition was occasionally met with, nothing was known as to its origin beyond the vague speculation that it arose in either a follicular or catarrhal ulcer; nor was anything known as to its cause, for it was certainly distinct from dysentery. It appeared to be invariably fatal, and its presence could not be detected during life with any certainty.

The following card specimens were exhibited:—

Mr. MAKINS: Primary Cancer of Bladder.

Mr. BULL: Bladder from case of Prostatectomy and Suprapubic Lithotomy.

Dr. HEBB: (1) Tricuspid Disease—five specimens; (2) Fowl Tuberculosis; (3) Bacilli in Diphtheria.

Mr. F. S. EVE: Ranula illustrating origin from Nuhn's Gland.

MEDICAL SOCIETY OF LONDON.

Cardiac Failure in Pulmonary Obstruction.—Chyluria.

AN ordinary meeting of this Society was held on Dec. 5th, Dr. J. Hughlings Jackson, F.R.S., President, in the chair.

Dr. THOROWGOOD, in order to keep his paper on Cardiac Failure in Pulmonary Obstruction within due limits, confined his observations to the best methods of assisting a weak and

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failing heart under the difficulty of pulmonary congestion and obstruction. It was quite true, as said by many authorities, that cardiac failure was the great cause of death in pneumonia and many other respiratory diseases. Dr. Thorowgood did not agree with Felix Niemeyer that stimulation of the heart must increase the amount of œdema already existing on the alveoli of the lungs in pneumonia; but he did think, from what he had observed, that stimulants were often given too freely and too early in the course of the disease, to the neglect of other remedies. This fact was brought out most in cases of bronchial or catarrhal pneumonia, a disease in which respiratory insufficiency is the principal cause of death. Too much stimulant tended to gorge the right heart with blood, and so did but increase the respiratory distress. In a case narrated, a child aged seven years had a severe attack of catarrhal pneumonia supervening on whooping-cough. When seen she was livid in the face, hardly conscious, and the lungs were full of coarse râles. Champagne and brandy had been freely given, with no benefit. All stimulants were withdrawn, and under the influence of small doses of tartarated antimony in conjunction with sulphate of magnesium, the child made a good recovery. Dr. Thorowgood fully admitted the value of alcohol as a cardiac stimulant, but in cases of bronchitis and pneumonia he considered it important to begin with such a medicine as tartarated antimony with a saline, the intention of this plan being to relax the capillaries, promote secretion, and so lessen the labour entailed upon the heart, the principle being much the same as when we sought to aid a heart failing in an attack of angina by dilating the capillaries with nitrate of amyl. No remedy would equal the tartarated antimony in repeated small doses. The earlier it was given the better; but even in advanced cases it might often be employed with striking effect. It seemed to have, as Stokes of Dublin once said, a specific action over the capillaries of the lung. In small doses it might be stimulant, while in excessive doses it might paralyse, and so cause that congestion of the lungs which Majendie had observed in animals poisoned by the drug. As direct respiratory stimulants, belladonna, nux vomica, and carbonate of ammonium were remedies of proved and undoubted value.—Dr. ROGERS had seen benefit follow the administration of small doses of tartar emetic combined with iodide of potassium.—Dr. ROUTH spoke of the value of nitro-glycerine given with carbonate of ammonia as a cardiac stimulant. He referred to Claude Bernard's treatment with intra-tracheal injections, which went to show the marked absorbent power of the pulmonary mucous surface.—Dr. S. H. HABERSHON said that the rapid effect of strychnia as a motor stimulant was brought out by hypodermic injection, and he alluded to a case of double pneumonia which was greatly benefited by the subcutaneous administration of 1-60th of a grain of the acid sulphate.—Dr. THOROWGOOD, in reply, objected to venesection on the ground that its effect was only temporary. He had found that strychnia prevented pulmonary œdema.

Dr. STEPHEN MACKENZIE read a paper on Chyluria, with remarks on the *rôle* of the Mosquito, and a description of a Nematode Worm in the Urine, mistaken for the Filaria Sanguinis Hominis. The author began by describing a case—that of a gentleman from the West Indies, who had suffered from chyluria since 1876 on and off, and possibly his disease dated much further back, to the age of nine or ten. His urine when first passed was of a rich chocolate colour, but when the blood corpuscles subsided it was left of a rich creamy-milk appearance. It was acid, sp. gr. 1025, contained 0·6 to 0·7 per cent. of albumen, and was free from sugar. It contained no casts. When shaken with ether the suspended fatty matter was removed. After taking benzoate of soda in 80-grain and later in 45-grain doses, it quickly became quite clear. When his blood was examined by day no filariæ were found, but when examined at night living embryo filaria sanguinis hominis were always present. The filariæ were not deceived by a London fog into entering the general circulation in the day-time. He had suffered from what he called "intermittent fever," which Dr. Mackenzie pointed out was probably filarial and not malarial. He also had some enlarged vessels in the groin, which, it was conjectured, were dilated lymphatics—"nævus lymphaticus"—and were probably due to a parasitic habitation in this region. The leaking of the lacteals into the urinary tract probably took place in the kidney in this case. Passing on to the consideration of the *rôle* of the mosquito, the author pointed out how this insect fulfilled the necessary requirements of an inter[me]diary host, by its geographical range, and by its habit of [fee]ding at night when the filariæ were in the blood. It [was], he said, been clearly demonstrated that only a certain [spe]cies of mosquito was capable of nurturing the filaria. [It] had been urged that there was no necessity for a suctorial [in]sect, as the embryos could escape with the urine. It was [sho]wn, however, by the author that the urine was an unfa[vou]rable medium for the embryos, and therefore an unlikely channel for their distribution. He next briefly described the changes taking place during the stay of the [fila]ria in the mosquito, and demonstrated most of these [stag]es from preparations sent by Dr. Manson. Lastly, he described a nematode worm that had been found in the urine in two cases, and mistaken for the filaria sanguinis hominis. He pointed out that it was a bisexual mature worm about 1-30th of an inch long by 1-500th of an inch broad. It was probably a variety of Dujardin's species, Rhabdonema, but how it got into the urine he had no explanation to offer. In conclusion, he pointed out how practically important it was for cases of chyluria occurring in this country to be due to filaria sanguinis hominis, or for the latter to, in any circumstances, get into the urine or blood of persons who had never left this country.—Dr. THEODORE ACLAND said that when in Egypt he met with a case of hæmaturia caused by a nematode worm, which he was unable to identify.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of the above Society was held on Friday, Nov. 18th, Dr. ALFRED HILL, President, in the chair.

Dr. W. N. THURSFIELD read a paper entitled, "Pasteur's System of Preventive Treatment of Hydrophobia," of which the following is an abstract:—A medical officer of health was liable, if not *ex-officio*, at least by custom, to be called upon at any moment to give responsible advice on the important question, "Should an individual bitten by an animal presumably rabid, undergo the Pasteur system of preventive inoculation?" and his object in the following communication was to endeavour to contribute some evidence towards arriving at a sound conclusion on this question. He endeavouring to show how far statistical evidence of results justify confidence in the Pasteur system of treatment, he thought it would be well to remove certain false impressions and misrepresentations which are constantly repeated with reference to the work at the Pasteur Institute, and he regretted with regret that in the recent report of the evidence before the Select Committee on Rabies of the House of Lords, several of these misstatements reappear. To the statement frequently made, that any person offering himself for inoculation at the Pasteur Institute was received and treated without any proof whatever that the dog was rabid, he could give a most emphatic denial. In every case satisfactory evidence that the dog was rabid is required, and when practicable patients were requested to bring or forward the head of the dog. He had himself seen a patient bitten by a dog-bite, but there being no evidence that the dog was rabid, he was refused inoculation, and treated as for an ordinary bite with local applications. In the case of each patient, before commencing the inoculations, full particulars were taken, and a consultation then held by the staff of the Institute as to a line of treatment, which was separately prescribed for each patient on his allotted page in the case-book. In arriving at the prescription, the age and diathesis of the patients, the extent, and nature of the bite, and other matters were considered, and the number, date, and strength of the inoculations were then prescribed, subject to variation or extension if circumstances should make it desirable during the course of treatment. The utmost care and most scrupulous precautions were taken to preserve an aseptic condition, both of the inoculating fluids and of the instruments employed. The syringes were of glass, silver-mounted and with needles of steel, and new syringes were used for each series of inoculations. After each separate inoculation the needle of the syringe was plunged into oil heated to a temperature above that of water, by means of a chloride of calcium bath, and the needle being again plunged into the inoculating fluid the piston of the syringe was passed through sterilised filter paper. And after each series of inoculation the syringe was at once sent back to the maker. These precautions were taken in order to have all its absorbent portions removed and thoroughly cleansed and refitted. Dr. Thursfield then came to the

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a most important point, and one which, and not the real merits of the case, was at the bottom of the most active opposition to the Pasteur system of treatment and of the abuse showered on those who ventured to countenance the system. He alluded to the question of cruelty, and he would endeavour, from his own experience, to show on what a baseless foundation this idea of cruelty, at the Pasteur Institute rests. The practical work of the Pasteur Institute consisted: 1. Of inoculations of rabbits with rabid matter for the preparation of inoculating fluids for treating human beings bitten by rabid animals. Three rabbits were daily so treated. 2. Test inoculations, chiefly performed on guinea-pigs, with a view to test whether animals which had been killed as presumably rabid were really so. 3. Collateral test investigations as to the power of inoculating fluids to prevent the development of rabies &c. The first two proceedings were the only ones absolutely essential to the practical working of the Pasteur system as at present developed, but it was to the third that was due the foundation of the whole system. The inoculations were either intra-cranial or sub-cutaneous. The intra-cranial inoculations were invariably carried out under complete anæsthesia, and with precise antiseptic precautions. As much care was in every case taken, both as regards anæsthesia and antisepsis, in the case of the animals experimented on, as was done in the case of a human being in the best-ordered London hospital. In every case that he saw, the wound healed by first intention, and as soon as the animal had recovered from the effects of the chloroform, in a quarter of an hour or so it would generally eat. As regards the time occupied by the whole proceedings involved in the operation of intra-cranial inoculation, he timed a number of operations, and found that the average time from the moment the animal was placed under restraint until it had recovered from the anæsthesia and was released was as nearly as possible five minutes, of which between ninety and one hundred seconds were taken to produce complete anæsthesia, and the time occupied by the operation itself from the first incision till the wound was sewn up averaged two minutes and ten seconds. As regards the operation of subcutaneous inoculation, although technically vivisections, little pain was involved. This was evident from the fact that the only restraint necessary in dogs was for an attendant to hold the animal between his knees, merely restraining its fore-paws with his hand with occasionally the finger and thumb of one hand placed round the mouth. The demeanour of the dogs generally seemed to indicate quite as much pleasurable anticipation of the lump of sugar which always followed the operation as impatience of the restraint, and he could state most positively that he had seen a dog wag its tail during the whole proceeding. As to the after-results of the inoculations, it was certainly painful to see an animal suffering from purposely induced disease. To take the extreme case of the rabbits, where fatal rabies is the invariable result of the operation, and three of which were inoculated daily, they commenced to sicken on the sixth day after the operation, and died on the ninth. As a matter of fact, they did not seem to suffer much pain. The first symptom is apparent dulling of the mental faculties accompanied by paralysis of the extensor muscles of the hind legs. The paralysis and the dulling of the mental faculties proceeded side by side, and the rabbit died comatose and with general paralysis. He had so far endeavoured to show that as regards careful and conscientious work, carried out on a thoroughly scientific basis, the Pasteur Institute was in every way worthy of confidence. For evidence as to the success obtained they must go to statistics. Statistics there were in abundance, not only from the Pasteur Institute in Paris, but from the Anti-rabic Institutions in Russia, several of which had now been some time in full work; but to properly consider these statistics would necessitate the critical examination of so many points and so many distinct cases that a much larger time than that at present at his disposal would be insufficient. He should therefore confine himself to the statistics of the present year, and chiefly to those of the first six months of the year—that is, up to the end of June; this would ensure that a minimum period of four months would have elapsed since the bite in each case, and in the large majority of the cases a period of over six months. This would cover the ordinary period of incubation, but not the exceptional, though by no means rare, cases in which the incubation was prolonged. From Jan. 1st to Sept. 30th, 1887, 1392 persons had been inoculated at the Pasteur Institute. These 1392 persons had been bitten by the following agents: Dogs, 1294; cats, 74; wolves, 11; pig, 1; donkeys, 4; cows, 3; calves, 2; horses, 2; ox, 1; tame fox, 1; jackal, 1; mule, 1; human being, 1. In 1182 of the persons treated the rabid condition of the animal causing the bite had been shown, either by experimental inoculation, by the fact of some animal or person bitten at the same time developing rabies, or by the certificate of competent veterinary authorities. In the case of the remaining 210, the animals had been suspected of being rabid from symptoms exhibited during life. From January 1st to June 30th of the present year 954 cases were inoculated, and in the case of 805 of these the rabid condition of the animals causing the bite had either been proved beyond question, or certified by qualified veterinarians. Of the above 805 bites, 581 were inflicted direct and without the intervention of clothing, and 69 were on the head or face. A large proportion of the fatal cases were bitten on the face. Up to Oct. 15th, 1887 (after which he had no information), so far as is known, 15 of the above cases had developed hydrophobia, and, taking the percentage on the 805 persons only, this gave a result of less than 2 per cent.; but some of the cases should not fairly be included, having commenced treatment too late. Of the above 15 cases, 3 were British subjects, who had commenced the treatment on the twelfth, eleventh, and sixth day after the bite respectively, and 4 were Spanish subjects, who had commenced the treatment on the thirteenth, thirteenth, eleventh, and twenty-eighth day after the bite respectively. The remaining 8 cases were French subjects, who as a rule commenced their treatment in good time. Now, he was by no means prepared to say that the treatment was inoperative unless commenced before ten days had elapsed, but he attached much value to Mr. Horsley's opinion, that if the inoculations were commenced after the tenth day they were probably too late, and it was certainly not an unfair use of statistics to exclude all such cases. This would bring the mortality down to 10 in 805 cases selected as bitten by animals declared to be rabid on the best authority, or just 1·2 per cent.—In the discussion which ensued, the President, Drs. Drysdale, Saunders, and Renner, Mr. Wynter Blyth, and Mr. Shirley Murphy took part, and Dr. Thursfield replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Hour-glass Contraction of the Stomach.—Phlegmasia Alba Dolens.

THE opening meeting of the Pathological Section of the Academy was held on November 4th, when the President delivered an address on Tetanus.

Dr. FINNY exhibited a specimen of Hour-glass Contraction of the Stomach, occurring in an organ which was the seat of several ulcers. The following were the clinical history and the morbid appearances. Mary M'G——, a domestic servant, aged twenty-nine, was admitted into Sir Patrick Dun's Hospital on May 13th, 1887, in a state of collapse and in great pain, which was referred to the lower part of the abdomen. After reaction had set in, under appropriate treatment, she vomited once, and the rejected matter consisted of tea and milk, but contained no blood. The urine was drawn off, and found to be free from albumen and indican. All her symptoms were those of acute peritonitis from perforation. Death ensued eight hours after admission. Her history was to the effect that she had enjoyed good health up to three weeks previously; but, beyond some slight dyspepsia, she was able to continue her duties as a domestic servant up to the day before admission. The post-mortem examination, made thirty-six hours after death, displayed acute general peritonitis, with flaky lymph and seropurulent fluid, while the stomach was found to be the seat of recent inflammation, as well as of old and firm adhesions to the liver, spleen, pancreas, and diaphragm. At first sight there seemed to be two stomachs, or one with a very dilated duodenum; and this appearance was due to a transverse constriction of the stomach, nearer one-third to the pylorus than to the cardia. On the anterior surface of the cardiac half of the organ, not far from the greater curvature, the origin of the general peritonitis was seen in the existence of a circular, sharply defined, perforating ulcer, the size of a threepenny-piece. On laying open the stomach it was found to have been the seat of several ulcers—(1) that referred to on the anterior wall, which on the mucous aspect measured a sixpence, and had the punched-out characteristic appear-

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ance; (2) a firmly cicatrised, circular ulcer on the posterior wall, near the lesser curvature—which was not in a state of activity—whose floor consisted of the pancreas, to which it was adherent; (3) a small ulcer in a stage of activity lower down in the posterior wall; and (4) an oval ulcer extending three-quarters of an inch from the lesser curvature, transversely to the long axis of the stomach, and in an active stage of destruction of the mucous and part of the muscular coat. This ulcer ran into the circular constriction, which divided the stomach into two unequal bags. The constriction, which was half an inch wide, narrowed the organ so as to admit but three fingers, and had all the appearance, from external examination, of the pylorus. The lesser curvature was not dimpled or much marked, but towards it the greater curvature was drawn at this spot, so as to make two bags of the stomach. Its outside was thickened by old lymph, while on the inside the rugæ of the stomach seemed to run into it, and at its cardiac side was the ulcer referred to as No. 4. Dr. Finny discussed the pathological origin of the constriction, and remarked on its want of agreement with the features depended upon by Dr. W. R. Williams as distinctive of congenital hour-glass contraction. He alluded to the rarity of cases of this deformity of the stomach, the greater number having been discovered in the dissecting-rooms. He also laid stress upon the following, as exemplified by his specimen—(1) the comparative greater danger of an ulcer situated with anterior wall; (2) the coexistence of three ulcers in a state of activity; (3) the possibility of relapse; (4) the encouragement to treatment to be derived from the fact that so many ulcers—about half of those recorded—have been discovered in a state of cicatrisation. There was no history of food having been taken immediately before the occurrence of the great pain. The woman had never complained of any pain in the stomach, or other marked gastric symptom, until three weeks before her admission. She was doing her work as a servant when the sudden occurrence of pain obliged her to seek relief. The case was an example of ulcers painlessly eating their way through the walls of the stomach, and ending in perforation at short notice. The woman had vomited before she came into the hospital, and in consequence of the small size of the opening caused by the fatal ulcer nothing was extruded through it.

Professor BENNETT submitted a specimen of Phlegmasia Alba Dolens. The patient, a girl of fifteen years, was admitted on Sept. 30th, 1886, into Sir Patrick Dun's Hospital, and remained there until June 27th, 1887, when she died. When admitted she had phlegmasia alba dolens in the whole of the left leg, which was distended with white œdema. She was extremely emaciated and anæmic, and her œdemic leg was in strong contrast with the rest of her body. There was great difficulty in assigning any cause for the ailment, pregnancy and parturition being entirely out of the question. She suffered from great gastro-intestinal irritation, which was complicated with vomiting and diarrhœa, accompanied with pain. Three weeks after her admission œdema of the right limb commenced, and the condition of the right leg soon became the same as that of the other. Diagnosis then became easy, it being apparent that there was obstruction of the femoral and iliac veins, and that it had extended up the involved vein on the right side. Clinically the case was an extremely easy one to read, and before the swelling of the right limb occurred it was prognosticated that it would occur. The femoral vein could be felt hard and distended on the left side, and when the œdema on the right side occurred the vein on the opposite side was as firm and hard under the finger as a cord. After this, without any material change in the general system, collateral circulation of the venous system of the abdomen began to establish itself, with a reversal of the blood currents, these being directed towards the thorax instead of the groin. There was then some slight clearing up of œdema, and just a prospect of recovery. Still the gastro-intestinal irritation remained. Then suddenly there came an accession of symptoms, indicating uræmic poisoning. Then there was rapidly developed extreme œdema of the whole body, which pitted rapidly; and finally, with uræmic phenomena, death took place. He would now show what they had guessed at as the cause of the disease, but could not distinguish with certainty. There were two great cylindrical patches, close to each other, in the lower portion of the small intestine, of tubercular ulceration of the intestine, with a great series of enlarged glands infiltrated with tubercular matter occupying the mesentery. There was no tuberculosis of the lung; but the gastro-intestinal phenomena appeared to be produced entirely by the condition of the small intestine. The femoral veins and tributaries were occluded. The vena cava inferior was a complete fibrous cord, shrunk and flattened out. When it was traced up between the kidneys there was found a large, firm thrombus, which had already undergone calcification. Then came the most interesting point in the case. On the surface of the calcified thrombus, and projecting up the occluded vein, with its base between the veins of the kidneys, was a fresh, newly formed thrombus superadded upon it. These thrombi had extended into the renal veins, which were completely occluded in their paths towards the kidneys; and the greater number of the small branches in the substance of the kidneys were also absolutely and entirely occluded. By the second deposit of coagulum on the basis of the old thrombus, and its recent extension into both the renal veins, the fatal issue was brought about, accompanied by the uræmic phenomena of suppression of the urinary secretion, and the rapid development of general anasarca, which was absent in the earlier stages of the case.—Professor PURSER said the chief point of interest appeared to be, what effect the thrombosis of the renal veins produced on the secretion of urine. The idea generally held was that the quantity of urine secreted depended on the pressure of the blood on the renal capillaries. It was not improbable that the diarrhœa was due to degeneration of the bloodvessels—amyloid degeneration; and, if so, the condition of the kidneys would not have been of such a kind as to make the change in the circulation of any value, one way or the other, as regarded the secretion of urine.

The Section then adjourned.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AT the general meeting held on Nov. 4th, Mr. Edward Atkinson, President, in the chair, the following papers were read.

Dr. MYRTLE related two cases illustrating the occasional great difficulty of Diagnosis in the Earlier Stages of Malignant Disease. Case 1: A gentleman aged fifty-four, first seen on Aug. 4th, complaining of a sharp pain at the anus. Examination revealed nothing except a hæmorrhoidal condition, not severe. On Sept. 3rd, he was again seen. Pain worse, associated with severe neuralgic pain in the penis, diarrhœa, and marked deterioration of the general health and appearance. At a consultation, nothing beyond a ballooning of the rectum and laxity of the mucous membrane could be detected by the most careful examination. On the 20th he was seen by a distinguished London surgeon, who diagnosed inflammation of the cellular tissue between the rectum and prostate, and gave a good prognosis. Two days later he was much worse, and another examination revealed a hard nodulated mass high up in the rectum. The patient died on the following day, seven weeks after he was first seen by Dr. Myrtle. Case 2: The patient twelve months ago complained of a peculiar sensation at the lower end of the sternum on swallowing, and of shooting pains about the anterior chest wall, having special difficulty with certain acid fluids. For a time relief was obtained by the administration of cocaine in one-eighth of a grain doses before meals, but soon the dysphagia came on again, grew steadily worse, and hæmorrhage supervened. He was subsequently at various times examined in consultation by physicians and surgeons, and a throat specialist of the highest eminence, whose diagnosis included spasm, neuralgia, a small patch of inflammation and aneurysm of the aorta; and it was not until quite late in the case that a growth occluding the œsophagus and a mass occupying the cardiac end of the stomach were demonstrated. At this time there was complete obstruction of the gullet, and the patient was kept alive for twenty-six days longer by rectal feeding.—Dr. CLIFFORD ALLBUTT referred to the case of a patient who had been in a railway accident, and who was sent for an opinion by the solicitors, who were preferring a claim for damages. The main symptoms since the accident were: steadily continuous emaciation, colicky pain in the hypogastrium, and irregularity of the bowels. There was found upon examination a nodulated mass of malignant disease high up in the rectum. But in these apparently latent cases [illegible] important

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point is the cachexia and wasting, being inconspicuous or absent in cases of spasm, inflammation, or neurosis.—Dr. EDDISON said that in his experience the surgical treatment of malignant stricture of the œsophagus was eminently unsatisfactory, the mortality of gastrostomy being almost prohibitive.

Dr. SCOUGAL read the case of a woman who after a normal labour was seized on the ninth day with pain on the right side of the head and numbness in the first three fingers of the left hand. This was followed by incomplete paralysis of the left side, with transient dysphagia. She gradually became comatose, and the loss of power more marked. Post mortem, a clot was found in the middle cerebral vein; none in any of the arteries or sinuses.—Dr. BRAITHWAITE, who had seen the case, had been unable to arrive at a satisfactory diagnosis. He remarked on the great variation in symptoms in such cases, and referred to a case recorded by Dr. Fordyce Barker, where a clot in the middle cerebral artery had been followed by no symptoms.

Professor DE BURGH BIRCH read a paper on the Analysis of Fluid which was secreted by the Gall-bladder, which had been opened by cholecystotomy in two cases. The fluid was thin and watery, containing no bile elements, but with a faint diastatic power. The ferment could not be isolated, but seemed to be held in the mucin, and was destroyed by acetic acid. The cases had been under observation for many months, and the fluid on every occasion presented the same characters.

Dr. ALLAN showed a case of Leucoderma in which the patches were symmetrical.

Dr. BARRS exhibited a case of Multiple Neuritis. The patient was a young girl, in whom the condition was associated with enlargement of the spleen and marked anæmia.

Mr. WARD showed a case of Generalised Non-ulcerative Gummata of the Skin, of six years' duration.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Nov. 10th, Dr. de Bartolomé, President, in the chair.

Rupture of the Trachea, followed by general Emphysema and Asphyxia.—Mr. GARRARD related this case. A girl aged eight fell on a sharp-edged slate hanging round her neck, bruising the front of the neck. She began to swell at once with emphysema, and was brought to the Rotherham Hospital about an hour afterwards. The emphysema had by then extended to every part of the body, to the fingers, and toes. She died a few minutes after admission. No post-mortem could be obtained, but a distinct depression could be felt just below the cricoid cartilage. Mr. Garrard much regretted that so much delay occurred in bringing the child to the hospital, and thought that, had an early incision been made over the trachea to the injured part, life would have been saved.

Paralysis of Third Nerve after Puncture of Upper Eyelid.—Mr. GARRARD related the particulars also of this case, occurring in a boy aged seven. The patient was introduced. A stick had penetrated the upper eyelid. Recovery from all symptoms had occurred, except that optic nerve atrophy had resulted.—Mr. Snell, Mr. Pye Smith, and Mr. James made remarks.

Amputation at Wrist.—Dr. T. H. MORTON introduced a youth aged sixteen, whose fingers and hand had been caught between hot steel rollers, and were severely crushed and burnt. Amputation of hand was performed at wrist joint; the pisiform bone was removed, but the articular surfaces of the radius and ulnar were left intact. Cellulitis and abscess of the forearm delayed recovery, but the result was a well-cushioned, serviceable stump.

Certain Considerations on Typhoid Fever.—Mr. WEDDELL read a paper with this title. The facts related were observed in the Queensland Emigration Service, and particulars of thirteen voyages were given. The history of the earliest and many subsequent importations of this disease into the Australian Colonies was described from official sources. The conclusions were that, whilst it appears certain that with a large number of people taken from various localities, it is possible, in spite of all precautions, that the germs or contagion of any specific disease may be introduced, yet there is little danger from typhoid on a properly ventilated ship, efficient sanitary measures being observed. The early detection and treatment of tropical diarrhœa was advocated. Even when a distinct link of contagion could be traced, no outbreak of any importance took place unless the people were exposed to conditions which impoverished the blood and exhausted innervation. The accounts of ships quarantined for typhoid seem to show that the putrefaction of filth in a confined space has often been an important factor in the spread of the malady.

Reviews and Notices of Books.

Experimental Researches in Artificial Respiration in Still-born Children and Allied Subjects. By FRANCIS HENRY CHAMPNEYS, M.A., B.M. Oxon., F.R.C.P. London: H. K. Lewis.

THE work before us deals with investigations of the greatest importance, and Dr. Champneys deserves the thanks of the profession for having devoted so much time and labour to the subject, as well as for the extremely able manner in which he has prosecuted his research and marshalled his facts. Like so many byways of medicine and surgery, which are not scheduled by the examining boards or seized upon by the fitful fashion of the hour, the resuscitation of the still-born and of persons in whom respiration is at a standstill has received most inadequate treatment by experimentalists, lecturers, and authors. Dr. Champneys deals only with the matter as regards still-born children, but of necessity he trenches upon the wider ground of the relative merits of the various systems of producing ventilation of the lungs by artificial respiration both in the still-born and in those who have breathed. The first chapter, which with some of the other parts of the book will be remembered as having been contributed to the Royal Medical and Chirurgical Society, gives some highly important and interesting experiments designed to ascertain which method —and nine are investigated—of artificial respiration produces in the still-born the fullest ventilation. Of these nine methods, it is not too much to say that four only are at all well known in this country—Marshall Hall's, Howard's, Silvester's, and Schultze's; of these, the methods of the two first-mentioned authorities are valueless for the resuscitation of the still-born. The actual appea to an experimental test of the remaining methods as far as the still-born are concerned showed that all methods dependent upon the elastic recoil of the chest walls are useless; while Silvester's method, and its modifications by Pacini and Bain, give the greatest ventilation. Schücking's plan Dr. Champneys found no improvement on Silvester; Schüller's and Schroeder's, he believes, are actually prejudicial, and Schultze's, although possessing considerable expiratory vigour, is not to be commended, since the force used in its employment is undesirable in dealing with infants. The question, "What portions of the lungs become expanded under artificial respiration?" was also experimentally tested, and conclusions interesting and important to clinical observers obtained. Chapters 3 and 4 deal with mediastinal emphysema and pneumothorax after tracheotomy, and many of Dr. Champneys' conclusions possess the greatest value alike for the surgeon and the physician. Thus, having shown that mediastinal emphysema may in a certain number of cases follow upon tracheotomy, he proves that pneumothorax results from this through rupture of the mediastinal tissues and escape of air into the pleural cavity. Since the air passes *beneath* the deep cervical fascia, separation of that structure or its division low down favours emphysema, as does bungling in attempting to introduce the tube, whereby the cellular spaces are opened up. The production of mediastinal emphysema is an ever-present danger in tracheotomy, and efforts at artificial respiration are very liable to induce it unless the utmost skill and attention are used to avoid the accident. Expiratory cervical emphysema is also fully dealt with and carefully con-

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trasted with mediastinal emphysema, and the widely different modes of their origin demonstrated. The importance of the pathology of this latter condition has led Dr. Champneys into a most valuable research, and he has arrived at facts of the utmost interest, but upon which we have not space to enter. The concluding portion of the work deals with various practical points occurring in attempts at artificial respiration in the still-born, and apparently dead after tracheotomy, and is far from being the least important. In reviewing this work, we cannot speak too warmly of the skill evinced in planning the experiments and the accurate deduction practised in formulating conclusions. It marks a distinct advance in our knowledge both in pathology and of the details of methods for efficient pulmonary ventilation.

Sprains: their Consequences and Treatment. By C. W. MANSELL MOULLIN, M.A., M.D. Oxon., F.R.C.S. Eng., Assistant Surgeon and Senior Demonstrator of Anatomy at the London Hospital; formerly Radcliffe Travelling Fellow and Fellow of Pembroke College, Oxford. London: H. K. Lewis. 1887.

IN this little work Mr. Mansell Moullin deals with a subject of great importance, and one that deserves far more attention than it generally receives. The term "sprain" is of vague significance, and is used to denote a group of injuries varying widely in their severity and in the structure involved. A "sprain" may be so slight as almost to escape observation, and so severe as to imperil a limb. It may involve any part of the joint proper, or implicate also muscles, tendons, and vessels. But the subject derives still further importance from the gravity of the late results of apparently trivial sprains, and also from a general laxity in treatment. "It's only a sprain" is often heard as an assurance that the injury is not serious, and that its treatment is not difficult or urgent. The author clearly shows the error in this teaching, and, if for no other reason, his book is very acceptable. The various injuries grouped together under the head of "sprains" are described, and their appropriate treatment is detailed. This is carefully, simply, and well done, and the reader of this book must lay it down with a sense of a truer and higher appreciation of the importance of "sprains," both for diagnosis and treatment, and of the questions connected with their diagnosis. Mr. Moullin writes in an easy style, and but a very slight effort is required to follow him. In some places he seems to us to have written as if for men entirely ignorant of human anatomy. This no doubt was an oversight. So far as we have seen, the practice recommended by him is quite safe, and is the best known at present.

On the Growth of the Recruit and Young Soldier, with a view to a judicious selection of "Growing Lads" for the Army, and a regulated system of Training for Recruits. By Sir WILLIAM AITKEN, M.D., F.R.S. Second Edition. Pp. 259. London: Macmillan and Co. 1887.

ALTHOUGH this is professedly a second edition of the *brochure* bearing the same title published by the author in 1862, it is in reality a new and more comprehensive work. During the twenty-five years which have since elapsed important changes have been made in the organisation of the army, which have involved the necessity of enlisting annually more than double the number of recruits required under the previous system. To meet this increased demand it became imperative to lower the standard of height, and as it is impossible to obtain evidence of the age of the recruits who present themselves, this reduction involved the possibility of lads under eighteen years of age enlisting unless some check were introduced. With a view to minimise, as far as possible, the chance of the enlistment of lads unequal to the amount of work required from recruits, the responsibility of ascertaining the height of the candidates was transferred from the recruiting officer to the inspecting surgeon, and specific instructions were laid down as to the minimum chest-girth and weight of those who were to be deemed fit for service. One of the objects of the present volume is to assist the medical officer "to decide the apparent age by comparing the height with the weight, chest-girth and general physical development and growth of the recruit, recognising his antecedents in relation to modifying influences, especially in the search of 'staying power,' of healthfulness of constitution generally, and freedom from disease." This object the author has endeavoured to carry out, and in our opinion very successfully, by a careful examination and statement of "the physical equivalents" which may indicate the age and physique of the recruit, and the influence of certain modifying agencies upon development and growth. He has gone at considerable length into the question of the progressively gradual development of the recruit and young soldier as regards the osseous system and the vital organs which it encloses or protects, and has included in his work a number of valuable tables illustrative of the different points of which he treats. The appendix contains the existing regulations as to age, height, weight, and chest measurement of recruits for the Army and Militia, and extracts from the regulations of the Army Medical Department relative to the examination of recruits. The book is one which deserves the careful study of army medical officers in view of the increased responsibility thrown upon them by the changes in the organisation of the army, and in the mode in which the recruiting service is now conducted. We would also recommend it to the attention of all civilian medical practitioners who may be called upon to perform the duty of inspecting recruits. It is much to be desired that the results of the examinations by the latter were more in accord with those of the army medical officer than the statistics of recruiting show them to be, and this would be very much promoted by a study of Sir W. Aitken's work. It has a good table of contents, and a carefully prepared index. We would suggest, in any future issue that may be called for, the addition of a list of the various tables scattered through the work; this would greatly facilitate reference to information in a condensed form, which might be desired for immediate use by medical officers in the discharge of the duty of examination.

Manual of the Vaccination Law. By a BARRISTER-AT-LAW. London: Shaw and Sons. 1887.

MANUALS on this subject had all got out of date, and some were so ill-arranged that they lacked the simplicity needed for purposes of reference. Messrs. Shaws' manual is free from all these objections; and its introduction alone will make it a very helpful work to public vaccinators and vaccination officers, who, besides having to administer the law in certain respects, have also at times to convince the public of the true value of vaccination. This introduction, which covers some fifty pages, and is compiled by the editor, consists of a short history of vaccination and of the law relating to it; it gives ample evidence to show how the death-rate from small-pox has been diminished by reason of vaccination; it sets forth the grounds on which it is so necessary that vaccination should be performed with the highest degree of efficiency possible; it enters into the reasons which make revaccination so desirable; it explains the circumstances under which vaccination may produce injury; and it deals, amongst other things, with the relative merits of animal and humanised lymph: the several points discussed being supported by means of cases quoted and statistical evidence. In the body of the little work the several clauses of the Acts relating to vaccination are well and usefully annotated, and the several orders as to vaccination, including the New Instructions to Public Vaccinators, are set forth. It is unquestionably the best and most

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useful manual on the subject, and it is clear that its anonymous editor is fully conversant with every detail connected with the administration of the vaccination laws.

Diaries.—We have received further specimens of these useful volumes. Blackwood's Diaries are published in over forty different sizes, and include most convenient descriptions for the office or pocket, at low prices. Charles Letts's series embraces upwards of eighty varieties, and contains an abundance of information which is practically in daily demand. The specimens before us from both these publishers are excellent, and can be cordially recommended to intending purchasers of such books.

SOCIETY FOR THE STUDY OF INEBRIETY.

AN address on the "Effects of Moderate Drinking on the Human Constitution" was delivered at the rooms of the Medical Society of London, on Nov. 23rd, by Dr. George Harley, F.R.S., who began by saying that he thought it might not inaptly be called one of the most burning questions of the day, seeing that the question of temperance is being at present hotly discussed, not only from a social and a medical, but from an individual and a national point of view. And notwithstanding that the majority of men are moderate drinkers—and consequently most patients belong to this class,—very little is as yet known of the effect on the system of small quantities of stimulants, although the effects of large quantities are familiar to all. The great difficulty the profession has in ascertaining exactly what are the real effects of small quantities of alcohol on the constitution arises from the following factors:—1. In no instance are the direct deleterious effects of moderate drinking sufficiently marked to necessitate any special form of treatment in a public institution. 2. Its deleterious influence on the bodily functions are so insidious as often to be attributed to entirely different causes. 3. The effects of moderate drinking manifest themselves in such a variety of different shapes that no single practitioner sees a sufficiency of any one of them to be able to draw reliable conclusions from them. 4. It is only men specially engaged in the treatment of liver, kidney, and brain diseases who come across the severer forms of functional derangements directly traceable to the effects of a moderate indulgence in alcoholic beverages. 5. In addition to which the matter is further complicated by the fact that several collateral problems require to be solved before even the threshold of the inquiry can be passed. Dr. Harley treated the various points in the following order:—The visible, the chemical, the physiological, the pathological, the therapeutical, and, lastly, the dietetical effects of stimulants upon the system.

Firstly: He began by pointing out that the visible and immediate effects of alcohol on the bodily functions, when it is taken in a quantity beyond what the system can tolerate, are those of cerebro-spinal paralysis, as it suppresses every function of the brain, cerebellum, and spinal cord. On the other hand, when taken in moderate quantity its primary effect is that of a cardiac and cerebral stimulant, the cardiac stimulating effect being apparent by the quickening of the pulse and the retinal congestion, while the brain stimulating effect is noticed in the volubility of speech and the restlessness of manner. The primary effect is, however, rapidly followed by the supervention of its paralysing action, as is seen by the special senses of feeling, tasting, hearing, smelling, and seeing becoming obtuse, on account of the impending paralysis of the sensory nerves, the speech becoming thick and the gait unsteady. From a similar incipient paralysis of the motor nerves, coupled with a loss of the coördinating power of the cerebellum. The intellectual faculties likewise exhibit the paralysing action by a diminution of mental grasp, associated with a tottering of the moral control. Even the sympathetic nervous system is not exempt from the paralysing power of alcohol, as is seen, firstly, by the flushed and heated face, and, secondly, by the subsequent cold, clammy, pallid cheek.

Secondly: This action of alcohol on the nervous system Dr. Harley said he believed was entirely due to its peculiar chemical action on blood-nerve-pabulum. Quoting a number of experiments, showing that even such a small amount of alcohol as 5 per cent. completely deranged the functions of the blood, more particularly its power of absorbing oxygen and exhaling carbonic acid, and seeing that every function of organic life is intimately connected with oxidation (for in exact proportion as it is accelerated or retarded are the main functions of the body accelerated or retarded), this asphyxiant action on the blood-nerve-pabulum, he thought, was amply sufficient to account for the gradually obtusing, and ultimately completely paralysing, action of the alcohol on the nervous system.

Thirdly: Dr. Harley next considered the extraordinary effects alcohol in small quantities produces when directly conveyed to the liver through the portal circulation, citing in illustration the experiments of himself and Bernard (who followed him in this respect) on the artificial production of diabetes in animals by the injection of from 10 to 16 centimetres of alcohol and water into the mesenteric branches of the portal vein, and adducing this as an explanation of—

Fourthly: The effects of nipping (not actual drunkenness), as shown by the tables of comparative mortality in the Registrar-General's reports, which conclusively demonstrate that those given to nipping have a six times greater mortality from liver diseases than others, and that the kidneys, heart, and brain are the next three organs which so-called small indulgences in alcoholic drinks cause to become diseased.

Fifthly: From this part of the subject the lecturer passed on to the consideration of the pernicious effects of over-stimulating in cases of dangerous diseases, and pointed out the great difference between the merely stimulating effects of spirits, in the shape of brandy, whisky, gin, and rum, as compared with the nutritive as well as stimulating action of wines and beers in the treatment of exhausting diseases. The use of the latter in all cases where the exhausted patient could take little nourishment he recommended as strongly as he condemned the use of the former in the graver forms of exhausting disease.

After specifying *seriatim* the therapeutical actions of alcohol when taken in different quantities in various diseased states, Dr. Harley turned to the question: Is alcohol a food? To which he replied that although alcohol could not be regarded as a food in the same light as bread and beef, yet in so far as it had the power of indirectly aiding in the sustaining of vital phenomena, more particularly by assisting in the digestion and assimilation of other foods when taken into the stomach in small quantity, he considered it had a legitimate claim to be ranked as a supporter of animal life. Finally, he wound up by saying that, although he was a strong advocate for temperance, he approved of the present social habit of taking wine at dinner parties, for he believed that when taken in strict moderation it was conducive alike to happiness and health, as it made one feel not only contented with oneself, but pleased with one's companions, and consequently materially contributed to one's personal comfort; for, as everyone knows, good spirits are promoters of digestion, as well as whetters of the appetite, while ill-humour is exactly the reverse.

The second of a series of two lectures was delivered by Dr. Norman Kerr on Nov. 30th, in the large room of the Medical Society of London. The subject was "The Different Forms which Inebriety may assume." The lecturer began by defining inebriety or narcomania as a disease of the nervous system, characterised by a very strong morbid impulse to, or craving for, intoxication. When developed, it appeared in varied guise. These forms were first divided into two general groups, periodical and constant inebriety. Of 103 admissions to the Dalrymple Home, 45 were of periodic inebriates. American experience was similar. Among females functional periodical inebriety was the most common; functional perturbation at the various crises of puberty, parturition, lactation, and the menopause being a prolific cause. There were also many varieties of male inebriate periodicity. There were regular and irregular periodicities. Cases were cited illustrative of chronological, weekly, fortnightly, lunar, and other periodic inebriate outbreaks; as well as of the periodicities of occasion, commercial and climatological forms. Among the cases of constant inebriety referred to were those of medical men, clergymen,

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literary and scientific workers, and Christian visitors. Both periodic and habitual inebriates could be classed under two other heads. Inebriety might be social or solitary; some never drink except in "good companie," or they indulge only when alone. The disease of inebriety at times assumed a form determined by some complicatory disorder. There was in this way the inebriety of insanity, as of syphilis, of heat apoplexy, of operations, &c. An extensive group of forms was that where the particular form was correspondent to the particular inebriating agent. Though in many cases the disease existed prior to the manifestation of inebriate symptoms or to consumption of any intoxicant, the subject of the disease loathing the potion itself, the characteristic narcotic and anæsthetic properties of the different inebriants gave a variety of forms of the morbid affection. Alcoholic inebriety was first considered, with its modification by idiosyncrasy, by the strength of the intoxicating principle, by the kind of alcohol, as well as by the variety of beverage. The lecturer here pointed out the varying properties of the heavier and lighter alcohols, the recent outbreak of methylated spirit inebriety, the differences between wine, champagne, beer, and spirituous inebriety, the special features of absinthe intoxication, of cider inebriation, of kava, and other forms. Intercurrent affections of alcoholomania introduced delirium tremens, mania a potu, alcoholic epileptic mania, fatal and non-fatal alcoholic poisoning, chronic alcoholism, alcoholic dementia, alcoholic multiple neuritis, &c. Opium inebriety differed from alcohol inebriety, in being a functional disease without the marked organic lesions observed in the latter, in being a solitary, unsocial habit. in being more continuously indulged in, in being less persistent among females, and, though less perverting to the *morale*, in being more difficult of cure. Opium soothes, alcohol maddens; opium raises, alcohol lowers, temperature. Enormous quantities of opium were taken. Chloral inebriety was increasing alarmingly, was unsocial, and generally associated with alcohol. This was a disease of function, and was affected by both sexes. Chloral, like alcohol, reduced temperature. Chlorodynomania was also spreading; one patient had taken an ounce a day for six years; three and four ounces had also been taken daily. Generally occurring in females, chloroform and ether inebriety were contrasted. Both were increasing. The chloroformaniac led a life of alternate woe and bliss till it crystallised into a protracted misery, was very fatal, and was usually solitary. Etheromania was less terrifying and less fatal, but as imperious. The lecturer narrated cases in London practice, and described the ether intoxication in the north of Ireland. Gelseminum and cocaine inebriety were touched upon, and Dr. Kerr concluded by considering the question, "Is there a true tobacco inebriety?" to which he replied in the negative.

PROVIDENT DISPENSARIES.

A PUBLIC MEETING was held on the 6th inst. at the Society of Arts, under the presidency of Sir T. Spencer Wells, to consider the report of the Medical Attendance Organisation Committee appointed at a conference held about twelve months ago at the same place. This committee, consisting of medical and lay members, recommended a comprehensive scheme of medical attendance for the industrial classes in the metropolis on a self-supporting basis, involving the creation of dispensaries in each district, these dispensaries to form a union with the hospitals. The proposed subscriptions were sixpence a month each for single persons, a shilling a month for a man and wife without children, tenpence a month for a man and wife with children, and threepence a month each for children under sixteen years of age. These institutions, it was suggested, should be available only to persons who could declare that their earnings did not exceed the following rates: For a single person, or a man and wife, an average of 30s. a week; for a family, 40s. a week; and for domestic servants, £15 a year. Persons requiring immediate attendance should pay an entrance fee of not less than half-a-crown, which should entitle them to treatment for one week, after which, if they should continue ill, they should pay not less than a shilling a week if able to call upon the doctor, and not less than half-a-crown a week if visited at home. This higher rate was deemed necessary in order that the dispensaries might retain their strictly provident character. In the opinion of the committee, the indiscriminate manner in which the public are admitted to the out-patient departments of hospitals inflicted great injury on a large number of ordinary medical practitioners, and tended to pauperise the applicants, and to waste the time of the medical staff of the hospitals.

Sir Spencer Wells, in opening the proceedings, warmly advocated the proposed scheme, as calculated to engender habits of prudence and self-reliance in the poorer classes. No doubt the payments were small, but he believed the medical profession did not realise how large they might become in the aggregate.

Mr. Timothy Holmes moved the first resolution, which was as follows:—"That the scheme of the Medical Attendance Organisation Committee for the regulation of provident dispensaries be accepted by this conference as worthy of the support of the working classes of the metropolis, and as offering an equitable basis for the co-operation of the medical profession." He said that any scheme must be necessarily somewhat of a compromise. It was more difficult to deal satisfactorily with this question in London than in country towns, because in the metropolis they were trammelled by the fact that the poor were not only invited but solicited to accept gratuitous medical relief from institutions with which the best-known names in medical science in the country were connected, and the poorer classes could not therefore be made to see at first sight why they should pay for that which could be got for nothing. Therefore the second part of the report as to the means by which provident dispensaries could be connected with the hospitals was of urgent importance. The scale of fees was exceedingly moderate, and one which ought to be within the reach of all poor persons who were not paupers. The only doubt in his mind was whether the scale was sufficient for the wants of the medical practitioner. Another matter upon which the framers of the scheme were very much exercised was the possibility of excluding persons beyond a reasonable scale of earnings from the benefits of the scheme. It was very easy to name a figure of limitation, but in practice it gave rise to very great hardship. The active co-operation of the medical profession was absolutely necessary for the working of the scheme.

Dr. J. Grey Glover, in seconding the motion, said his only doubt was whether the fees were adequate. When they saw handbills issued offering medical attendance for 6*d.* a visit or 1*s.* per week, or the announcement of a children's medical fund at a grocer's shop, it was time something was done to maintain the dignity of the profession. (Cheers.) The hospitals had a splendid chance of increasing their usefulness by co-operating with the promoters of the scheme.

Mr. J. P. Hentsch proposed, and Dr. Paramore seconded, an amendment declaring that, whilst a check ought to be put on the present system of indiscriminate out-door relief, it would not be advisable to adopt the scheme submitted by the committee.

A discussion, in which Mr. R. H. S. Carpenter, Mr. A. P. Hills, and others took part, followed, and the amendment was shortly afterwards put to the meeting and negatived, the original motion being carried by an overwhelming majority.

On the motion of Mr. W. Bousfield, seconded by Dr. Gilbart Smith, it was afterwards agreed to approve of the co-operation of hospitals with provident dispensaries.

The proceedings then terminated.

THE HOSPITAL SUNDAY FUND.—Of the £37,525 which the Hospital Sunday Fund Committee of Distribution recommend be awarded to the 101 hospitals, 7 institutions, and 50 dispensaries, the following are the sums apportioned to the twenty-one London general hospitals hereinafter named:—Charing-cross, £939 11*s.* 8*d.*; French, £208 6*s.* 8*d.*; German, £677 1*s.* 8*d.*; Great Northern Central, £270 16*s.* 8*d.*; Italian, £67 14*s.* 2*d.*; King's College, £1354 3*s.* 4*d.*; London, £3333 6*s.* 8*d.*; Metropolitan, £208 6*s.* 8*d.*; Miller Hospital and Royal Kent Dispensary, £260 8*s.* 4*d.*; North-West London, £260 8*s.* 4*d.*, Poplar, £239 11*s.* 8*d.*; Royal Free Hospital, £885 8*s.* 4*d.*; St. George's, £1875; St. John and St. Elizabeth, £145 16*s.* 8*d.*; St. Mary's, £1822 18*s.* 4*d.*; Seamen's, Greenwich, £572 8*s.* 4*d.*; Middlesex, £1979 3*s.* 4*d.*; Tottenham Training Hospital, £281 5*s.*; University College, £1510 8*s.* 4*d.*; West London, £520 10*s.* 8*d.*; and Westminster, £937 10*s.*

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THE LANCET.

LONDON: SATURDAY, DECEMBER 10, 1887.

WE announced last week that the petition praying for a Charter under the style of "The Senate of Physicians and Surgeons," with power to grant degrees in Medicine and Surgery, had been presented to the QUEEN in Council by the Royal College of Physicians of London and the Royal College of Surgeons of England, and that this petition will be considered by a committee of the Privy Council on the 16th of January in next year. It is doubtless because of the delay in forwarding these documents, which were laid before the Royal Colleges in July last, when the delegates were empowered to carry them into effect, that the consideration of the scheme proposed by University and King's Colleges has not yet been considered. The question of the formation of a university with faculties in other subjects is so intimately connected with the power of granting degrees in a medical faculty only that the schemes could only be taken together, and we hope that no time will now be lost in deciding on the two proposals. The petition and draft Charter now presented are exactly the same as the copies printed by us on July 2nd, and their clauses were thus summarised by us in our editorial columns of that date:—

"The delegates of the Royal Colleges have also submitted for approval drafts of a petition and Charter, and these, having also been passed by the Fellows of the College of Physicians and the Council of the College of Surgeons, will at once be laid before the Queen in Council. By the Charter, which is published in another column, power is sought to form a governing body of forty-eight persons—twenty-four from each College—to be called the Senate of Physicians and Surgeons, to whom shall be entrusted the framing of the necessary regulations and the authority to see that such regulations are complied with. The Council of the College of Surgeons is composed of twenty-four members, and these will, as elected, become the representatives of that College on the Senate, whilst twenty-four Fellows of the College of Physicians are to be chosen, three of them to go out of office annually, but to be eligible for re-election. We cannot but think that this eligibility for re-election is a mistake, for it will allow only a minimum of change, and the Senate will practically become a permanent body, devoid of a sufficient number of young members to enable it to readily adapt itself to changes in teaching and examination. An error similar to that committed by the founders of the University of London should have been avoided. The President of the Senate will hold office for two years, and will be in succession the President of the College of Physicians and of Surgeons respectively, whilst two Vice-Presidents will be elected annually from among the members of the Senate. Twelve members are necessary to form a quorum, and the vote of the majority present is to be decisive. The degrees in Medicine and Surgery are to be conferred on any person who, 'by passing the examinations formerly held by both of the Colleges separately, or by passing the examination held by the Examining Board of the two Colleges, or by passing any other examination to be held by the two Colleges jointly or separately, has already acquired or may hereafter acquire, the qualifications for registration under the Medical Act, and who shall have also complied with such further regulations (if any), or undergone such further examination (if any), as the Senate may from time to time see fit to impose or require.' The past Licentiates of the College of Physicians and Members of the College of Surgeons will by this clause be placed on exactly the same footing as those who qualify in the future, and this just and far-reaching provision will secure a wide amount of sympathy among the members of the profession in favour of the movement. The questions of an additional examination or examinations and of a title are left open for future discussion, and are therefore omitted from the Charter.'

It will be noticed that the term "University" is omitted from both the petition and the draft Charter, but this is scarcely likely to disarm any proposed opposition, for the power of granting degrees has hitherto exclusively belonged to a body with this title. As time has passed on, the objections to a one-faculty University have steadily increased, for the scheme of the two Colleges is opposed by most of the Universities, who demur to this power being granted to corporations; by the Colleges of Surgeons and Physicians in Scotland and Ireland, who desire similar power if it be granted to the London Colleges; by the provincial medical schools, who object to London medical students having degrees conferred on them, with a compulsory term of residence as a condition; and by the Society of Apothecaries, whose diplomates are left out in the cold. These objections will all be presented to Her Majesty in Council before the date fixed for the consideration of the petition. The petition and charter of University and King's Colleges, which have practically received the support of the Association for promoting a Teaching University in London, were printed by us on August 6th, so that the two schemes can be compared by those who take interest in these important educational movements. The University of London has entered a *caveat* against the formation of a new University in London, although its proposed functions and objects are so entirely different from those now discharged by the existing institution, and its statement has also been laid before the Privy Council. This action of the Senate received the support of the majority of the members of a combined committee of the Annual Committee and of the Special Committee on the Constitution of the University on November 25th, and the question will be brought before Convocation at their next meeting in January. It is curious and interesting to note that the University of London alone protests against the formation of a University by the two great teaching institutions in London, whilst all other Universities except London object to the two Royal Colleges of Physicians and Surgeons being empowered to grant degrees. We shall return next week to the Statement which has been forwarded from the Senate of the University of London to the Privy Council and which, together with a petition from the Association of General Practitioners, we print on pages 1186 and 1187.

FORTY years ago CHARLES KINGSLEY told the story of the tailor's life—told of all the degradation and misery which resulted from the employment of middlemen who intervened between the master tailor and his men. Thirty years before, this system was unknown. Masters who received orders employed the working tailors directly, and the work was done in the master's house and reasonable wages were paid. But the times altered, Government

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contracts were let to the lowest bidder, and the system of cutting down prices led to the employment of the middleman, often not a tailor himself, whose sole occupation was to let the work to someone else, and to live upon the profits for which he did not labour. When KINGSLEY wrote his Parson Lot tract on "Cheap Clothes and Nasty," the slang of the trade had already divided the shops into two groups, the "honourable" and "dishonourable," the former employing men on the premises at fair wages, the latter giving men the work to take home at the smallest possible remuneration. But worse than this, the work was not given to them directly, but to a "sweater," so that the profit was divided not between the master and the men, but, to use KINGSLEY'S words, "the sweater and perhaps the sweater's sweater, and a third, and a fourth, and a fifth," had their share of it. Even at this time the honourable shops in the West-end were but sixty, while the dishonourable numbered four hundred and more; while at the East-end the honourable shops were unknown. Ground down by this system, the conditions under which the working tailors lived were heart-rending to a degree; sleeping together, working together in ill-ventilated rooms, working from early morning till late at night, and often through the night, they readily fell a prey to disease, phthisis especially attacking the breathers of the vitiated air in which they lived. Even the paltry wages which they received were taxed to pay usurious rent and high rates of food, which the sweater supplied. The moral and physical degradation was clearly proved; separate public meetings were held of working tailors employed both in the honourable and dishonourable trades, and the appearance of the attendants at these meeetings showed but too plainly to which branch they belonged. The publicity given to the facts to which we have referred aroused considerable interest, the subject was discussed in pamphlets and in newspapers, and at last there seemed some prospect that the system under which human beings starved would be so far modified that Alton Locke and his associates would be numbered with the past.

Forty years ago! And what has happened since? The condition of the working-classes generally has improved, the necessaries of life have become cheaper, the Factory and Workshops Acts have been directed towards the limitation of the hours of labour for women and young people employed in these places, but the sweating system has continued, and the account given by KINGSLEY of the tailors' sufferings is as true now as it was when he wrote the history of Alton Locke.

It is little more than three years since our Commissioner instituted an inquiry among the tailors in the East-end of London, and visited their homes and workshops. He found the "sweater's den" ill-ventilated, over-crowded, and dilapidated; the requirements of the Factory Acts rarely complied with; the inspector's visits rendered useless, for "on the appearance of any stranger the women are often distributed about the private parts of the house—in the bedrooms, kitchens, and so forth. If any question is asked, there is always a ready reply: the one is a niece, the other is a daughter; and if they are working, it is only for the family, and not in the pursuit of their trade." The unfortunate worker, we were told, greedily accepts starvation wages, and even assists his employer to defy the laws instituted to protect him, fearing that by availing himself of our Legislature he may lose the little he is able to earn. Even in factories where the law is complied with, the women are only paid for three-quarters of the day, and if a woman wishes to earn a full day's wage she must work from eight in the morning till eleven or twelve at night. The evils which KINGSLEY described had even become accentuated owing to the immigration of foreigners, mostly of Polish Jews, whose only means of existence was the learning this ill-paid trade.

There is now presented to Parliament the report of Mr. J. BURNETT, the labour correspondent of the Board of Trade, whose duty it was to inquire into the sweating system at the East-end of London, and as the result of his labours the public are enabled to learn the cause of the increasing misery which seems inseparable from the tailor's trade. The demand for cheap clothing has not only reduced the remuneration of the tailor, but has led to a minute subdivision of work, so that we have "cutters, basters, machinists, pressers, fellers, button-hole workers, and general workers all brought to bear upon the construction of a coat," so that the workman who was formerly competent to make the whole garment is replaced by others whose knowledge only extends to a portion, and thus numbers of persons come to be employed who are only required to contribute to a small fraction of the whole. The less complete knowledge that is needed is easily acquired by the foreign immigrant, and as the result thousands of Polish and German Jews have entered into competition with the English tailor, and the sweater is able to sublet his work to these unfortunates at almost nominal wages. The inspectors of factories and workshops have doubtless done their best, but they are obviously unable to control the conditions of work in the numberless places in which it is carried on.

The report teems with evidence that the workers are paid at rates which are insufficient to maintain life for any lengthened period. For a woman to be unable to earn more than seven or eight shillings a week when in work is a common event; thus, a female trouser finisher, who is mentioned, receives "fourpence per pair for large, thick trousers, which she gets from a woman in the same house, who herself gets them from a sub-contractor. She could make six or seven shillings a week at this work." The price for making children's suits, except a little braiding done after the work is sent back, ranges from threepence to elevenpence, with cotton to find. Button-hole workers often get but a halfpenny per hole. The hours of work are dependent upon the requirements of the trade, often lasting from six in the morning until midnight; and one woman told the story how, when the inspector came after hours to a Jew's workshop, she was sent out into the yard and the gas turned out, but that after he had left she was obliged to work two hours longer. For the operative to complain of these conditions is to lose his work; there are but too many others who are glad to obtain it.

The remedies to which Mr. BURNETT directs attention are, mainly, the increased control of the hours of labour and the application of the Factory Acts to men as well as to women, the restriction of the immigration of foreigners, the elimination of the sweating system for work done

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under Government contract, and finally the strict enforcement of the Factory and Public Health Acts. The subject is urgently pressing, and the public must bestir themselves to terminate an evil that has become intolerable. Much might undoubtedly be done if right-minded persons refused to give their custom to any but master tailors who employed directly their own workpeople without the intervention of the sweater, and who provided suitable workshops in which the trade could be carried on. For those whom no other consideration will move, they may well think of the risk of infection to which they are exposed by wearing clothes made under conditions which are absolutely incompatible with health; it is the daily experience of London health officers to find fever and small-pox prevalent in rooms in which the tailor works, and none can tell how many of the unexplained cases of contagious maladies among the rich may not be due to these overcrowded and unhealthy tenements. But whether feelings of philanthropy or fear are to exercise an influence, it is surely time that some strenuous effort was made to terminate circumstances that are a disgrace to our civilisation.

WE appear now to have come to the termination of the fourth year of the European cholera prevalence of 1884-87, and during the year now drawing to a close the epidemic has been much more circumscribed and much less fatal than during either of the three previous years. Apart from a slight recrudescence of cholera in Austria-Hungary early in 1887, the disease has been limited in its manifestations to the southern half of Italy, including the island of Sicily, and to Malta.

The first outbreak that was notified in Southern Europe was the occurrence of a few isolated cases and deaths in the province of Catania, in Sicily, in March last. From that date until July no further intelligence was received, but in the latter month the disease became widely prevalent in the same province, and it extended to several of the neighbouring provinces of the island—namely, those of Girgenti, Syracuse, Catania, and Messina. The southern coast of the mainland also became infected, the disease being as yet limited to the province of Calabria. In all, over 200 fatal attacks occurred in Italy during that month. With the month of August there was a considerable extension of the disease in Sicily, the provinces suffering most being those of Catania, Messina, and Palermo, a large number of inland towns and villages being also attacked. On the mainland the most important extension during August was to Naples and certain places along the gulf, the total record for the disease during the month in Italy being over 700 deaths. But during August Malta also became invaded, and, the disease spreading somewhat rapidly inland to the villages occupied by the natives, as many as 128 deaths occurred. With the month of September a very serious exacerbation of the disease occurred in Sicily, the towns of Palermo and Messina and the province of Catania being principally involved. In Messina alone there were nearly 1900 attacks and over 800 deaths. On the mainland there was also a substantial increase in the fatality. The disease still clung, in the main, to Naples and such places as Pozzuoli and Castellamare in the neighbouring gulf; but there was also some recrudescence in the southern part of Calabria, and notably near Cape Colonne, and a few fatal attacks were reported from Rome. In all, no less than 1500 cholera deaths were publicly notified. In Malta the disease was still steadily maintained, and before the end of the month 141 additional cholera deaths had been registered.

With the month of October there came a decided diminution of the epidemic in Sicily; the outbreak was all but confined to the town of Messina, and the total death-roll for the month fell to fifty-eight. And at the same time no fresh intelligence as to cholera was received from the mainland. But in Malta the epidemic was maintained with much the same severity as had characterised its spread and fatality during the two preceding months, and between 140 and 150 more cholera deaths took place. The month of November brought the epidemic to a close. No fresh cases were reported either from Sicily or from the Italian mainland; by the middle of November intelligence of fifteen additional cholera deaths had arrived in Malta, after which all further news ceased. The total mortality from cholera during the year in Italy, including Sicily, was somewhat over 2200; and in Malta it was 429. This result stands in contrast to a fatality in Italy of 14,299 in 1884, of 3469 in 1885, and of at least 6244 in 1886.

The epidemic has again been replete with lessons teaching the great power of efficient sanitation as the only trustworthy means of combating the disease. Rome, with its unpolluted water services, has again stood the test of imported infection; the incidence of the disease in Naples has been but trivial when compared with that which marked the year 1884, before the city was provided with a proper water supply; and the abandonment by Italy of the system of quarantine by land, and to a large extent by sea, has also been associated with a diminished amount of cholera. On the other hand, Malta, always one of the foremost in imposing stringent quarantine regulations, has found these to fail her; whereas the influence of proper sanitary measures has been shown by the striking immunity from the disease of the garrison, who have clean and decent lodgment, and by the limitation of the epidemic to the worst and most insanitary localities occupied by a native population, who, instead of cleansing their villages and their houses, have been led to trust in the quarantine restrictions imposed by their Government. The lesson thus taught ought not to be thrown away; and it is to be hoped that it may lead to a reconsideration by the Colonial Office of the attitude they hold with regard to this question, in advising the Home Government to give their sanction to a local law which brings about such serious results. Our Government have now refused to allow a troop-ship to be put in quarantine off Suez, and they have thus dealt a first blow at the Egyptian regulations; the same policy should be followed as regards the retrograde measures adopted in our little Mediterranean colony.

In the United Kingdom we have for a fourth year succeeded in preventing cholera from effecting an entrance in our midst, by means of reasonable measures of precaution at our ports, and by the aid of the great impetus to increased sanitary supervision which was brought about by the knowledge of the danger, and by the results of the Government Cholera Survey in so many parts of England and Wales. All vessels coming from infected ports have been

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dealt with by the medical inspection system; means of isolation have been very generally in readiness in case of need; and in no instance has any anxiety occurred, and this notwithstanding the fact that we are, by means of our commerce and otherwise, brought into such constant communication with the countries which, both in Europe and in the East, have been affected with cholera. The past should inspire confidence in our system of prevention, and, having regard to its value in connexion with many other diseases than cholera, it should act as an incentive to us to continue to carry out its principles without relaxation.

AT a time when science is endeavouring to provide for death by sleep for the lower creation, it is not too much to hope that something of the same kind may be provided for man. Dr. B. W. RICHARDSON, the inventor of the lethal chamber which has been erected at Battersea for the painless extinction of the life of the friend of man, the dog, said in his lecture on Euthanasia for the Lower Creation, delivered before the Society of Arts, in which the details of the lethal chamber were described, "that man could never hope to secure for himself so painless and happy a death as had thus come through the hand of science to the lower animal kingdom." And, indeed, the difficulties surrounding the question whether the death of man can always be rendered painless are so great that for the present they seem irremovable. Mr. WILLIAMS, in his work on Euthanasia, published some twenty years ago, argued in favour of the idea. He urged that man ought, as a being having free will and judgment, to claim the right, when death was inevitable, to have the act of death made painless. Mr. WILLIAMS was, if we remember correctly, a schoolmaster by profession, and, although a very able and observant man, had not the practical knowledge of the subject to enable him to work it out in such a manner as to carry conviction of sufficient quality to institute a practice.

The author of "The Right to Die" strikes out somewhat in the same lines, but he also does not appreciate what are the obstacles, moral and legal, against any organised method for conferring on the human subject the boon of a painless death. All lay writers who handle this subject turn to the profession of medicine to settle the difficulty. The doctors are to be the men to give the *coup de grâce* to writhing, or flickering, or hopeless men, women, and children in the throes or agonies of death, and the profession very wisely—nay, even humanely—withdraws from the proposition. The members of the profession feel that it is their duty to prolong life in a very large number of instances to the very last flicker. They sometimes see by this action life restored when all has seemed to be lost. They have, in fact, no correct measure of absolute death short of death itself; and there are cases where death seems actually to have taken place in which there is doubt whether an inappreciable spark of life may not remain and once more declare itself. Such facts as these have ever stood, and promise long to stand, athwart the practice of euthanasia *secundum artem* as a system, if the professors of medical science and art are to be the administrators.

There is, nevertheless, a divine and blessed art at the disposition of every medical man. If the physician or surgeon may not shorten life methodically even under the most pressing circumstances, he may shorten pain and make the inevitable death easy and tranquil. For this reason we rejoice to welcome the new work of Dr. MUNK on "Euthanasia, or the Medical Treatment in Aid of the Dying."[1] We have known Dr. MUNK long as one of our rare medical scholars, and have been always grateful to him for that Roll of the Royal College of Physicians which is sure to place his name on the roll of fame as one of the trusted and trusty writers of biographical history. But here he appears before us in a new light. He has looked up the authority of history to learn how far the physician may advance on the best authority of his profession towards treatment in aid of an easy death; he has added to what he has read that which he himself has observed, and has put into a nutshell the duties of the medical practitioner in regard to euthanasia, in a style as simple as it is classical. His suggestions for treatment are confined to the rules which, applied to the dying, enable the physician so far to make use of remedies of the true narcotic class—alcohol, opium, ether—and of antispasmodics like nitrite of amyl—to the extent of alleviating acute sufferings, and, without hastening death, of making the approach to death peaceable. To this extent medical art may go; no further. If it went further, it would be ever open, in its most innocent development, to the criticism of suspicious relatives and friends; while it might be made the cause of doubts which had a real meaning, and which would of a certainty give origin to many serious legal inquiries. In plain terms, euthanasia, beyond the position in which Dr. MUNK has so judiciously put it, is an impossibility unless the law is allowed to render its extension possible. The study of Dr. MUNK'S little treatise may, however, we foresee, reproduce discussion on a collateral, and to some minds very important, question. There are persons who contend that the law should be so changed that one stricken with a fatal disease—say, fatal malignant disease—might, on his own instance, guard by proper legal instrument everyone else from blame, and thereupon claim the benefit of euthanasia. In any proposed change of law for allowing this practice, the medical profession would undoubtedly have a powerful voice for or against. Yet if the law were changed the position of the profession would remain the same. There is no more reason that a representative of medicine should take part in the production of the euthanasia than anyone else. His diagnosis might determine the fact that the sufferer would die from disease. His evidence might be required to determine that death had taken place. But the State would have to determine the mode of death, and the manner in which it should be carried out. The State would have to appoint a legal administrator, or would permit the applicant for relief from life to take the cup, like SOCRATES, and, mocking ÆSCULAPIUS with all his tribe, wilfully seek his own dissolution.

THE problem of reforming the out-patient department of hospitals, and developing a healthy and creditable provident system of medical attendance on the wage-earning classes, still continues to exercise the minds of a large number of the profession. Twelve months ago, at a meeting held at the Society of Arts, a committee was appointed to report on the subject of assurance as applied to the treatment of the sick.

[1] Longmans and Co.

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The meeting resolved that the future medical attendance on the poorer classes ought to be conducted on the principle of sick assurance, and that the attention of the governing bodies of hospitals and other public authorities be called to the necessity for some check on the indiscriminate provision of medical treatment at hospitals and dispensaries. The committee has been at work twelve months, and has elaborated a scheme which was discussed at a public meeting called for the purpose, on Tuesday, in the Society of Arts, and presided over by Sir SPENCER WELLS. The committee, for convenience, divided its work into two parts: 1. The preparation of a scheme for medical attendance on the industrial classes in the metropolis, to be self-supporting and acceptable to the medical profession 2. The consideration of the desirability of forming a union between the hospitals and dispensaries in each district of London. We shall first briefly describe the chief points of the scheme of attendance. (1) All members to be approved by the medical officer under whom they wish to be placed. (2) A registration fee of one shilling. (3) The rates of contribution to be: single person, 6*d.* per month; man and wife, not having children, 1*s.* per month; man and wife, having children, 10*d.* per month; each child under sixteen to pay 3*d.* per month, not charging for more than four in a family. Persons joining to declare that their average wages do not exceed 30*s.*, or that of the family 40*s.* per week; if domestic servants, their wages not to exceed £15 per annum. Special rules are suggested for persons requiring immediate attendance, and for persons who, on account of exceptional delicacy of health, cannot, with fairness to the medical officers, be admitted as provident members at ordinary rates. The scheme urges that each dispensary be "as far as possible" self-supporting, and that all the medical men in a district be invited to a conference with representatives of local general hospitals, and have power to elect a certain number of representatives on a provisional committee. The second part of the committee's work was a series of resolutions providing for friendly co-operation of hospitals with provident dispensaries, the object being to induce hospital authorities to relegate a large proportion of their out-patients to neighbouring provident dispensaries; to give patients of provident dispensaries with grave diseases and needing hospital treatment ready and certain means of obtaining it, for the mutual advantage of the hospital and of the patient; and finally providing for the use of the dispensaries, under certain restrictions, by students as a field for the study of common diseases.

Such are the principal features of the scheme, which represents a good deal of labour and trouble and a great many meetings on the part of the committee. It will be seen by the report of the meeting in another page that the scheme in its two parts was accepted by a large majority of the meeting, in spite of the opposition of a small minority. It is not pretended, of course, that the remuneration is adequate, though it is better than that of many schemes of private dispensary practice attended with every humiliation of advertisement and low charges, and as a working scheme for the metropolis, where so much gratuitous advice is to be had without adequate check on abuse. Besides, the rate of payment is not necessarily more than a suggestion for a *minimum* rate; it can be raised at any dispensary accordi
local committee. It is undenia
periodical payment suits many person
it easy to pay medical bills, and there
fact that the working classes in London have
out of the notion that they are to have a ph
medicine without payment. The scheme of the c
is on the lines of the best provident dispensaries. Th
a guinea midwifery fee; there is a strict wages limit,
the remuneration to the medical men is infinitely better than that of many co-operating medical societies. If the committee could bring the authorities of hospitals to a hearty acceptance of the part of the scheme which requires the co-operation of hospitals with provident dispensaries, they would do more for hospitals and provident dispensaries than all previous movements for establishing these institutions in the favour of the public.

IN spite of the abundance and nature of the evidence adduced of late years in support of the contention that pneumonia is to be regarded as a specific infectious disorder rather than a disease due to exposure, the argument is not all on one side. Dr. SEIBERT of New York has on more than one occasion forcibly drawn attention to the close relationship that prevails between the occurrence of pneumonia and certain meteorological states, of which the relative humidity of the air is foremost; and his contention has never been satisfactorily answered. A similar line of reasoning is adopted by Dr. BAKER, of Lansing, Michigan, who, in drawing his conclusions, has availed himself of the statistical method to so large an extent as almost to preclude those fallacies which beset the use of this method in its application to disease. In Michigan State there has prevailed for several years a system of registration or notification of disease, whereby returns are made every week by practitioners to the State Board of Health of cases of illness that have occurred in their practice; and by a comparison of such returns, together with the meteorological reports which are made daily in all parts of the State, Dr. BAKER has constructed curves of the monthly incidence of pneumonia as compared with the temperature variations, on the average of the past eight years. The result is a close correspondence in the occurrence of pneumonia and a falling temperature, the only difference being an almost uniform interval of one month between the two curves—i.e., the highest number of cases of pneumonia being reported a month later than the lowest recorded temperature. An almost precisely similar parallelism between the disease and the temperature was shown by Dr. BAKER to obtain in respect to the statistics of the United States army during the war, in the mortality from pneumonia in London during thirty years, and also in the prevalence of bronchitis in Michigan; so that from this enormous field it seems clearly to issue that there is a constant relationship between the disease and the temperature, and, consequently, with the absolute humidity of the air, which varies with the temperature. Granting this as proved, it still remains to explain how the condition of the air inhaled can cause pulmonary inflammation. The old and almost (up to within very recent times) universally accepted notion that pneumonia is caused by sudden changes

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of temperature is not at first reconcilable with the fact that pneumonia prevails more in cold seasons, when such sudden atmospheric changes are less common than in warmer seasons; but it is quite consistent with the fact that in cold weather individuals are always exposed to great variations owing to the difference in temperature between the in-door and out-door atmosphere. Nevertheless, the ancient doctrine of "chill," even when explained by the light of modern physiology as operating through disturbance of the vaso-motor system, and thus producing local hyperæmia of one or other part of organ of the body, is not an adequate explanation. "Congestion" is one of those shibboleths, which are made to cover a great deal of ignorance. Even if local congestions do thus occur, between them and the inflammatory process there is a wide gulf. Hyperæmia may be a stage of inflammation, but inflammation is not the necessary consequence of hyperæmia. As regards pneumonia, it would seem that it is absolutely essential to seek for another factor in its causation over and above mere chilling of the surface and the resulting vaso-motor disturbance; and this factor has been sought in the introduction into the lung of some peculiarly irritating substance. At one time it was thought (e.g., by Dr. DAY of Stafford) that ozone was this substance, but this notion has not been maintained, having but little to support it. Dr. BAKER now advances an even simpler explanation, which involves a relation to the absolute (not the relative) humidity of the air. He points out that since in dry and cold seasons there is a greater exhalation of watery vapour, there must be a tendency under such conditions to the accumulation of non-volatile salts, as chloride of sodium, in the air passages of the lungs. Five-and-thirty years ago Dr. BEALE showed that the pneumonic lung contained an excess of chloride of sodium, and it has generally been thought that this explained the disappearance of that salt from the urine during the progress of hepatisation. But Dr. BAKER does not regard the matter solely from this point of view, and suggests that the presence of this excess of salt operates in exciting exosmosis of serum from the bloodvessels into the air-cells. Clearly, however, this theory is by itself insufficient, as it leaves just as much unexplained as ever the preference of one lobe or lung over another as the seat of hepatisation. As a theory, it has the merit of advancing us one step beyond the mere "chill" doctrine, and is capable of extension to the etiology of bronchitis and broncho-pneumonia as well as of croupous pneumonia. Dr. BAKER, indeed, asks whether the reason of the greater prevalence of pneumonia in warm climates than in cold may not be due to the greater consumption of salt in the former than in the latter, where this article is not needed for the preservation of food. Nevertheless, we find it difficult to admit such a view as a final explanation, which involves, it will be seen, a relegation of the pneumonococcus to the position of an epiphyte; but at the same time every suggestion that aids in the simplification of ideas upon etiology should be welcomed; and the painstaking labour of Dr. BAKER in compiling statistics of pneumonia in relation to meteorological conditions deserves the fullest recognition.

Annotations.

"Ne quid nimis."

ARMY MEDICAL STAFF.

A SOCIETY JOURNAL has just made a savage onslaught on the army medical officers, because, forsooth, in the opinion of the writer of the article, the medical administration is "not only wasteful, but grossly inefficient." This Rip van Winkle appears suddenly to have awakened from a sleep of a quarter of a century's duration, for he believes the whole duty of the army doctors to be to "physic soldiers in the time of peace, and dress their wounds in time of war." He does not appear to have the most remote idea that such a thing as sanitary science exists, and has been cultivated in the army with a success which certainly entitles the officers of the department to great credit. His description of the life of our army medical officer as one "of ease, comfort, and idleness" is very far from the truth. We believe there is no branch of the service which works harder, or has a larger proportion of service in unhealthy climates, than the medical. His description of the medical "officer in a particularly gaudy uniform strutting down the high street of his garrison town" may have been true in the period before the commencement of his long sleep, but it is certainly not applicable to the present day; nor is his remark about the Army Medical Department breaking down in war at all nearer the truth, as was clearly shown at the inquiry presided over by Lord Morley in 1883. The suggestion made by the writer of the article to put the army doctor "on the same footing as the army chaplain, who does his work very well, and very cheaply too," would, if carried out, be most disastrous to the soldiers, for if cheapness is to be the important factor there can be no doubt that the medical staff would then be filled, if filled at all, only by those who were failures in civil life. Cheap they might be as regards money, but extravagantly dear as measured by the lives and health of the soldiers. We have quite as little sympathy as the writer of the article for those medical officers who "are for ever complaining about their 'position' and rank as compared with that of military officers"; but we differ from him in this, that while he would make the remark applicable to the whole department, we believe it to be so only to a small minority. The whole tone of the article gives rise to a strong impression that it has been inspired by those who raised such an unjustifiable outcry at the time of the Egyptian expedition, and who can hardly be expected to forget the signal defeat they experienced in the inquiry then instituted into the working of the departments. It also savours of the hostile feeling towards the medical officers which has on all convenient opportunities been manifested by a certain coterie at the Horse Guards, and which, we had trusted, might be considered among the errors of the past.

THE BLOOD IN DIABETES.

PROFESSOR LÉPINE has lately recorded in the *Revue de Médecine* a case of diabetes which terminated fatally in coma, and in which, for the first time, it was positively shown that in this state the blood loses its alkaline reaction. As far back as 1883, at the debate on diabetes at the Pathological Society, Dr. Ralfe first drew attention to the fact that the symptoms of diabetic coma were not unlike those produced in animals poisoned by an injection of acids into their veins, or whenever attempts were made to diminish the alkalinity of the blood by other means; whence the speaker inferred that the poison concerned was of an *acid* nature, which by decomposition in the urine became converted into acetone. This idea of "acid intoxication" has since

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been generally adopted, and Minskowski has discovered the presence of an acid (oxybutyric) in diabetic urines which is capable of breaking up in aceto-acetic acid, and thus furnishing acetone. This acid does not, perhaps, exist in the blood and tissues in a free state, but is probably combined with some base with which it forms an acid salt. In Professor Lépine's case, intravenous injection of a saline fluid containing about an ounce each of sodium chloride and sodium bicarbonate to three pints of water was employed when the coma first set in. After this there was some immediate improvement from the coma, the pulse rallied, the temperature rose from 96° to 97·5° F., and the patient could speak, but not swallow. Twelve hours afterwards venesection was employed prior to the trial of a fresh injection, when it was found, in spite of the previous injection of a large quantity of alkali, the reaction of the blood was neutral—a clear proof, Professor Lépine thinks, of the acid nature of the disease, and its power to destroy the normal alkalinity of the blood. It may be a question, however, whether the injection of an alkaline bicarbonate into the blood in diabetic coma is a right procedure, for though the reaction of the salt is alkaline, yet its constitution is acid, and, as Dr. Ralfe pointed out some years ago, probably acts as an acid salt in its decomposition with other salts in the body, and so actually tends, after the immediate effect of its alkalinity has passed off, to diminish the alkalinity of the blood. Should this on further inquiry prove correct, it might be advisable to employ neutral sodium phosphate instead of the acid sodium carbonate for intravenous injections.

SCHOOL FEES DURING SICKNESS.

THE case of appeal heard in the Queen's Bench Division against the decision of a County Court judge, who had awarded a schoolmaster compensation for the removal of pupils by a parent on the occurrence of two mild cases of scarlet fever in the school, is of considerable interest to all parents. The congregation of large numbers of children in either private or public schools renders the occurrence of the acute infectious diseases of childhood almost inevitable from time to time, however thorough the precautions of the master may be. It would be unreasonable to expect the schoolmaster to bear the whole loss of such occurrences, especially if evidence is forthcoming that he has exercised all reasonable precautions to guard against the introduction of infectious illness among his pupils. But he might fairly be expected to share with the parent some of the loss that ensues from the removal of a pupil during convalescence, or the withdrawal of non-infected pupils on a threatened outbreak. A parent has of course a perfect right to remove a pupil, and the master has an equal right to stipulate the terms on which he is willing to accept pupils. To lessen the occasional friction between schoolmasters and parents a definite understanding should be arrived at at the commencement of the pupil's career. All parents should stipulate that on the occurrence of any outbreak of infectious illness they should be candidly informed of the nature and extent of the outbreak, nor should they be kept in ignorance of an isolated case. If the withdrawal of uninfected pupils is not considered necessary by the public medical officer of health in whose district the school is located, and the parent nevertheless decides to withdraw a pupil, the schoolmaster could scarcely be expected to incur loss thereby; but if, on the other hand, it is considered desirable, either from the extent or nature of the outbreak, to disperse the pupils, the master may fairly be expected to remit a portion of the school fees. His loss under these circumstances would be considerable, and so would the parents'; for the latter must make provision of a more or less costly nature for the care of a child during the period of the possible incubation of the disease to which the outbreak at school has exposed him. Some definite rule should be established at our public schools on these points, which would be a guide to private schoolmasters. A remission of one-third or half the school fees, according to circumstances, might reasonably be expected whenever the withdrawal of a pupil is considered desirable by the public medical officer of health.

TREATMENT OF HEPATIC COLIC.

OLIVE oil in large quantity is vaunted as a certain cure for hepatic colic due to gall-stones. Dr. Just Touatre of New Orleans has written an interesting account of self-cure of biliary colic and gall-stones, in the second number of a bi-monthly Roumanian journal (*Archives Roumanies de Médecine et de Chirurgie*), whose editor is M. Georges Assaky. The method of procedure was as follows: At seven in the evening a blue pill of the weight of 15 centigrammes was taken, and this was followed twelve hours later by the taking in one draught of twelve tablespoonfuls of olive oil; a quarter of an hour later a similar dose of olive oil was taken, and then the patient addressed himself to sleep on his right side. At nine o'clock the blue pill acted, producing a copious biliary evacuation, but no gall-stones. Three o'clock in the afternoon saw another bilious stool without stones, but from seven in the evening till midnight six stools were passed; the first two contained seventeen calculi of the size of a large pea of conical shape, greyish-yellow aspect, and soft consistence. Altogether sixty stones were evacuated, and six of these had the volume of an olive, and were of a black colour. The passage of these calculi by the cystic and biliary canals was for the most part unattended with pain, a few spasms being felt probably at the time of the movement of the large calculi. An inexpressible relief was obtained from the pains over the liver and shoulder, which had previously caused much distress; the liver also diminished in size. For three months Dr. Touatre enjoyed perfect health, when the trouble commenced again; the olive oil was repeated in similar fashion, and with the result that eighteen more calculi were discharged by the bowel. Since then he has enjoyed excellent health. He admits that some courage is required to swallow the large doses of olive oil.

FEVER IN LONDON.

IN our last issue we noted the temporary increase of scarlet fever during the week ending November 25th, and pointed out that this increase corresponded with the experience of past years. The number of cases admitted that week into the hospitals of the Metropolitan Asylums Board was 191, and during the subsequent week ending Dec. 2nd the fresh admissions numbered 173, showing the return to a general decline. This decline should be more marked during December, so that by the middle of January the number of fresh attacks should not be in excess of the average during the year. The published returns of the last few days show that this result is likely to be attained. The vacant beds on Dec. 7th were 204 in number, in addition to which there were twenty-five beds reserved for special isolation. The opinion we expressed as to the absence of necessity for the newly ordered hospital accommodation was therefore well founded. During last week fifteen cases of enteric fever were admitted into the hospitals, as against twenty-six in the preceding week. Small-pox contributed three cases, one from the Wandsworth and two from the Poplar districts. At the meeting of the Asylums Board which was held last Saturday, Deputy Inspector-General Bostock called attention to the fact that a gentleman living in Paddington had applied at the Fulham Hospital for the admission of his two sons, who were suffering from fever, and on being informed that the hospital had no wards for paying patients, he obtained an

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ambulance from the ambulance station, and thus procured their removal. The circumstance is important as affording further illustration that the hospitals are regarded as the means of isolation not only of poor persons, but of cases of fever occurring in all classes of society. A report of the General Purposes Committee was brought forward by Mr. Scovell, dealing with the reply of the Local Government Board to the Managers' application for authority to remove to their hospitals all persons suffering from fever or small-pox, whose removal should be sought by duly qualified medical practitioners. It will be recollected that the Local Government Board were of opinion that they had no authority to issue such an order, but they pointed out that under certain circumstances the Managers were authorised to receive persons who presented themselves at the hospital gates. The Managers at their last meeting, determined to explain to the Local Government Board that the difficulty under which they suffered was with regard to the admission of cases in the Managers' ambulances, and that 40 per cent. of the patients recently admitted had been received without an order from a relieving officer or master of a workhouse. They therefore desired to impress upon the Board the absolute necessity of taking steps without further delay to obtain from Parliament such powers as would directly authorise the Managers to remove to their hospitals all persons suffering from fever or small-pox, whose removal should be applied for by duly qualified medical practitioners.

THE ELECTRICAL PHENOMENA OF THE SALIVARY GLANDS.

THE electrical phenomena accompanying the excitation of so-called secretory and trophic nerve fibres in the salivary glands of the dog and cat have been studied by Mr. Rose Bradford in the Physiological Laboratory of University College, London. This observer, with Mr. Bayliss, had previously found that in the dog excitation of the chorda tympani caused a large variation, indicating the surface of the gland to become negative to the hilus; and excitation of the sympathetic caused the outer surface to become positive to the hilus, this variation being neither so rapid nor so great as is effected by excitation of the chorda. In the cat excitation of the chorda or of the sympathetic caused a diaphasic variation. Finally, in the parotid of the dog excitation of the tympanic plexus caused the surface of the gland to become negative to the hilus, and excitation of the sympathetic caused the surface to become positive to the hilus. It seemed desirable, as these results were very constant and definite, to continue the work and try to determine, if possible, which of the many changes that occur during the activity of these glands are concerned in the production of the electrical phenomena. In the communication published in the Collected Papers (No. 6) from the Physiological Laboratory of University College, London, Mr. Bradford brings forward evidence to show that the electrical variation of these salivary glands is not directly connected with the vaso-motor changes resulting from excitation. It is concluded that a flow of secretion is intimately connected with a certain definite electrical variation. The first phase is probably due to one or more of the following three causes: (1) the actual movement of the fluid through the cells and ducts; (2) the change in the gland cells which presumably precedes the passage of blood through them; (3) the anabolic changes that are supposed by some observers to follow the excitation of secretory fibres. Mr. Bradford concludes that there is not sufficient evidence to show that the first phase is due to anabolic changes; whereas there is a very considerable mass of facts to show that it is connected with the flow of liquid. The difficulty of estimating the latent period of the actual secretion makes it uncertain whether the variation accompanies or precedes the flow. Evidence is adduced tending to show that the passage of the fluid through the ducts is not the cause of the electrical effects. Hence the first phase is due probably either to the passage of the fluid part of the secretion through the walls of the alveoli, or to the changes in the gland structures that follow the excitation of a secretory nerve and precede the actual flow. The second phase is most likely to be ascribed to the changes in the gland cells leading to the elaboration of the organic constituents of the saliva.

THE CAUSE AND PREVENTION OF FOG.

THE fog of London and of other large towns, it is probable, presents to the minds of the majority of those who suffer from it an idea not much less hazy than the aspect with which it confronts and bewilders their sense of vision. Comparatively few of the afflicted care to inquire into the composition of their tormentor, or even to define its cause with accuracy. They may be aware that it is not all river damp, nor yet all smoke; but the subtleties of chemical analysis, however interesting to the professional inquirer, are for most men lost in a general feeling of present discomfort, which is tangibly aggressive, unfathomable, and unavoidable. Sir Douglas Galton, however, is not one of those who accept the mystery as such, and still less is he disposed to let ill alone and endure what has not yet been cured. At the Parkes Museum a few days ago he discussed at some length the composition, origin, and practical treatment of this master evil of town life. Fortunately his discourse did not partake of the nature of its subject; but, after traversing the details of theory, he was able to point his hearers to certain definite facts of causation, and to advocate remedial measures, which if carried out would doubtless prove to a certain extent effectual. According to Sir D. Galton's estimate, the fog-laden air of London contains four times as much carbonic acid as its ordinary atmosphere. It has been proposed to meet the difficulty by substituting the use of gas for that of coal in cooking and other domestic operations. To some extent this change has been carried out, and we shall probably see it in still wider exercise. A considerable period must elapse, however, before the open fire is done away with in favour of a stove—if, indeed, that day should ever come.

THE REGISTRATION OF PLUMBERS.

AT a dinner of the Company of Plumbers on Dec. 1st, the Master, Mr. F. Machin, was able to give a very satisfactory account of the progress which the Company had made in the examination and registration of efficient plumbers. During the two years in which this duty had been undertaken, as many as 1185 different craftsmen had been registered, the efficiency of these plumbers having been established after careful scrutiny of evidence tendered, the examination of certificates and indentures, and even after absolute practical examination. As many as 753 of the successful candidates were journeymen, many of whom were employed in all parts of the country. With a view to extending this movement to the provinces, local organisations had been formed, and every care was taken to ensure that no local bias should prejudice any candidate. Sir James Paget, in proposing the toast, "Prosperity to Technical Education," dwelt upon the decadence of the system of apprenticeship, and pointed out the need for it to be replaced by technical education, which was spreading over the whole country, and of which the Company had been one of the chief promoters. The progress of science and discovery, he said, had been so great that it was impossible that a man who had been instructed a quarter of a century ago could himself instruct

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an apprentice now in all that was necessary in the course of one profession. The dinner was well attended, among the guests being several medical officers of health. We hear with pleasure of the progress of this movement. The relation which exists between disease and house conditions is daily becoming more recognised, and the main difficulty which has to be overcome is that of the dearth of artisans competent to carry out work in a manner in accordance with the requirements of health. Only recently we have heard that the death of Lady March has been attributed to her having slept in a bedroom which was adjoining a bath-room in which was found an untrapped drain communicating with the sewer. Under good bye-laws and with efficient workmanship calamities such as these in newly built houses would be impossible. But there is still much to be done in the reconstruction of old houses, and there is the greater need for the technical instruction of persons engaged in plumbing and the allied trades.

TREPHINING IN EPILEPSY.

ALL cases of successful cerebral surgery are at present of considerable interest, especially those cases in which procedures are taken for the relief of epileptiform convulsions. In the case which Dr. Oliver of Newcastle-on-Tyne has recently recorded, the interval of time which has elapsed since the operation was performed without the recurrence of the epileptiform seizure makes it probable that the relief afforded by the operation may be judged complete. In this case the epileptiform convulsions came on about a fortnight after an injury to the head in a young and previously healthy lad. After their first development he suffered from them almost daily, whilst he also complained of a painful spot on the right side of the head, a little above and anterior to the ear, which always became more painful just before and often soon after a fit. After a more severe fit than usual the patient would remain powerless for two or three days, as well as being deaf and unable to speak. In these severe attacks it was noticed that the convulsions were more marked on the right than on the left side. Medicinal treatment having been giving a fair trial, it was determined by Dr. Oliver, after consultation with his surgical colleague, to trephine the skull over the painful spot. The moment the bone was elevated the dura mater pressed up through the wound, becoming extremely tense. An incision was then made, and a few teaspoonfuls of serum containing shreds of fibrin gushed out. The membranes and surface of the brain were quite healthy. For about a day after the operation serum continued to escape from the wound in the dura mater, amounting in all to about two or three ounces. Two or three fits occurred on the day of the operation and the day subsequent to it. By degrees, however, days, then weeks, and latterly months, passed without the occurrence of any fit at all. Afterwards the patient was engaged as a clerk, and was confined in a heated atmosphere and had long hours at business. One evening, after a period of six months, he had a fit, but without loss of consciousness, and for a few days after this he had some minor seizures, but these speedily yielded to treatment, and for a period of six months, the date of Dr. Oliver's report, no fit of any kind has again recurred. A somewhat similar case has also been under our observation, in which, however, the epilepsy developed gradually after trephining for a traumatic injury. On opening the wound, a spicula of necrosed bone was removed, and afterwards the convulsive seizures gradually disappeared. It has been urged by some, however, that though some present relief may be gained for a time, the convulsive seizures return sooner or later. However that may be, and a wider experience must be acquired before the point can be definitely settled, still to have obtained almost a complete immunity from attacks that were rendering life a burden to the patient, and even threatening to shorten existence, was a great success; whilst the fact that in Dr. Oliver's case the patient was able to employ himself in such a responsible situation as he did, and for so long a time, leads us to think that, in this case at least, a permanent cure may have been effected.

WORKING HOURS ON THE RAILWAY.

IT is a matter of notoriety that some of the most pronounced examples of overwork have been, and continue to be, furnished by the experience of railway *employés*. That accidents occur from time to time which are more or less directly attributable to mismanagement in this particular is not remarkable. The wonder rather is that we do not oftener hear of them. We are not ignorant that on the railway the observance of a settled scale of working hours is at times a somewhat difficult matter. The length of journeys, unexpected delays from weather and the like, the utility of special aptitudes possessed by particular men and required at a given time, are some of the circumstances which may render the due allotment of time for purposes of work a matter for careful consideration. When, however, we find men employed on trains in the most responsible positions for more than thirty hours at a stretch we are surely justified in crediting their superiors with most culpable negligence. Necessity is said to have no law, and on this principle it seems to be assumed that the driver of a locomotive should be virtually a part of his machine. We fail to see the point, and the public, we are assured, will hardly allow that the personal risk which they incur by such a proceeding can be excused by the maintenance of a solid dividend for the benefit of shareholders. What is wanted is a larger staff of subordinate officials, who shall be available to relieve one another at reasonable intervals. An ordinary working period of twelve hours per day is, we take it, sufficiently long for this class of workmen, as well as for artisans engaged in other occupations.

EXTIRPATION OF THE LARYNX.

AT a recent meeting of the Berlin Medical Society, Dr. Hahn gave a demonstration of specimens of laryngeal carcinoma from cases in which he had excised the whole or a portion of the larynx, and at the same time summed up the ultimate results of his operations. He had performed extirpation, partial or total, in fifteen cases. Two of these are to be considered as cured; one was operated upon seven years ago, being then sixty-nine years of age, and he is still living and well. The operation involved the removal of the cricoid cartilage, the greater part of the thyroid, and part of the hyoid bone and epiglottis, the disease being one of carcinoma keratodes. The other patient was operated upon in May, 1886; here the disease was limited, and the removal confined to one-half the larynx. Dr. Semon, under whose care this patient is, wrote to Dr. Hahn that a small prominence had appeared at the site of the tracheotomy wound, which it is hoped is only a keloid of the cicatrix, but it would of course be carefully observed. A later report from Dr. Semon said that it had undergone no change. Of the remaining cases, there was only one of which Dr. Hahn had no recent information but the last accounts were very unfavourable. All the others were known to be dead; but it must be remembered that in all the cases, with the exception of the one alluded to above, the operation had been resorted to late in the course of the disease. He had that day (Nov. 16th) operated on a patient only thirty-six years of age, the youngest of his cases, whose ages ranged from forty to sixty-nine—mostly over

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forty years. This patient had been suffering from laryngeal trouble for a year, and had been under the care of Dr. Krause. The diagnosis of carcinoma was made by the microscope, and a unilateral excision was performed. (On the 28th Dr. Hahn reports that this case was doing well.) Amongst the preparations which Dr. Hahn showed at the meeting was one where there had been nine previous operations for recurrence of the growth within the space of eighteen months; yet even to the end the lymphatic glands were never involved in this case. Indeed, he remarked that lymphatic infection is unusually late in laryngeal cancer. The most favourable cases are those of carcinoma keratodes; the least, the softer and infiltrating forms. The latter cases had better not be treated by excision of the larynx, but reserved for tracheotomy when occasion arises.

THE ALLEGED CANCER BACILLUS.

THE grounds adduced by Dr. Scheurlen in support of the contention that he has discovered the cancer bacillus were stated in his communication to the Verein für innere Medicin on the 28th ult. The material employed consisted in specimens of mammary cancer removed at operations, and in some post-mortem specimens of cancer of the breast, uterus, liver, and other parts. The tumours were washed in sublimate solution, and the "cancer juice" scraped off the freshly-cut surfaces by means of a sterilised knife. The culture media included pleuritic serous fluid, agar-agar, gelatine, and potato, which were inoculated in the usual way. The bacterial growth was very rapid, forming colourless films on the surface of the fluid, these films gradually assuming a brownish-yellow colour. They were found to consist of bacilli 1·5μ to 2·5μ long by 0·5μ wide, long ovoids, and spore-bearing. They stained readily with various reagents. No bacilli were found in sections of the tumours, but in cover-glass preparations of the "juice" they occurred, some of them within the cells. Six bitches were inoculated in one of the mammary glands, and in two which had died swellings had formed at the seat of inoculation, which swellings consisted of granulation cells and epithelioid cells, together with the bacilli. In the discussion on the paper, Dr. P. Guttmann believed that the case had been proved, but Dr. A. Fränkel criticised it adversely, pointing out that the very rapid growth of the bacilli was against their pathogenic character, and that degenerate cells formed a favourable nidus for bacterial contamination.

THE TOXIC ACTION OF PUTREFACTIVE MATTER.

DR. KOSOROTOFF has been engaged in making researches on the toxic action of putrid substances in Prof. Pashutin's laboratory, and publishes an account of his observations as a "preliminary communication" in some recent numbers of the *Vrach*. Cultures of bacterium termo were prepared from infusions of meat and of kidney beans. With these carefully sterilised saline solutions containing acetate of ammonia, phosphate of potash, sulphate of magnesia, and chlorate of potash, as used by Naegeli, were sown under four distinct sets of conditions. In the first series air was made to bubble constantly through the solution. Here a change was soon apparent, the solution becoming opalescent in ten or twelve hours and quite opaque in twenty-four hours. In the second series the tubes were covered with blotting-paper and were agitated daily. Here the microbes developed, but much more slowly than in the first series. In the third and fourth series air was rigidly excluded, with the result that no opalescence was observed till the fourth or sixth day. Experiments were first made with the microbes themselves, which were injected under the skin and into the veins of dogs. No injurious effects, local or general, were produced. The saline solutions in which the microbes had developed were then introduced in like manner into the circulation of animals. A marked difference was observed between the behaviour of the solutions to which air had had access and those which had been kept closed up. Thus, dogs into whose veins the first or second series of solutions were injected suffered from pyrexia, dyspnœa, vomiting, and diarrhœa with watery or bloody stools; but the general appearance of the animal and the condition of its nervous system was but little affected. The lethal dose of a solution which had been kept for from two to four weeks was ten cubic centimetres per kilogramme of weight. The post-mortem appearances were those of hæmorrhagic gastro-enteritis, with ecchymoses on the serous membranes and some fulness of the cerebral vessels. Under the influence of solutions in which cultures had been developed without access of air, a very different set of symptoms was produced. The animals became at first restless and excited, and afterwards fell into a typhoid condition, being unable to stand, the pupils dilating and consciousness being lost. The temperature fell, sometimes to a considerable extent. All the cases proved fatal, though in some only a very small quantity of the fluid was injected into the veins. The post-mortem examination showed a remarkable fulness of the vessels of the brain and its membranes, with extensive ecchymoses of the latter. Dr. Kosorotoff came to the conclusion that the toxic matter was soluble in alcohol as well as water, and that it was a poison in a chemical sense, not an infectious contagium. He considered, too, that it must be due to synthetic rather than to decomposing action on the part of the microbes.

THE PENDJEH SORE IN SOUTH RUSSIA.

DR. ZVIAGINTSEFF, of Kherson, in South Russia, has met with some cases of cutaneous ulceration which appear to be identical with the disease described by Russians as "Pendjeh sore,"[1] and which is doubtless of the same nature as "Aleppo evil," Baghdad "date mark,"[2] Delhi boil, Lahore sore, &c. Dr. Zviagintseff employed a corrosive sublimate solution for washing the sores, and dressed them with iodoform powder and ointment, a layer of cotton wool being applied over all. In this way they gradually improved in appearance, and finally healed with a dark cicatrix. No bacteriological observations seem to have been made. Auto-inoculation gave a negative result. Dr. Pierson, of the Indian Medical Service, has remarked[3] that this sore is known under different names all along the north-western frontier. His experience was that the only effectual treatment was to apply nitric acid freely to the sore, and to open the small surrounding "nests" with the lancet, putting a tiny drop of concentrated nitric acid into the openings. He also calls attention to the fact that when these sores have existed for a long time they have a permanent dull-brown stain, which renders them liable to be mistaken for syphilitic ulcers.

SMALL-POX AT LEICESTER.

WE are informed that the unvaccinated child whose case was the most serious in the recent outbreak of small-pox at Leicester is now doing well. Four other members of the family in which the disease appeared have been placed in the quarantine wards, one of whom has developed an abortive attack, and another on the 7th inst. showed what are feared to be premonitory symptoms. A few other persons in the town known to have been in the infected house are under strict surveillance and daily observation. One of these had also on the 7th inst. some suspicious malaise, pyrexia, &c., but there is not as yet any certainty whether the case will prove to be one of small-pox.

[1] See THE LANCET, April 10th, 1886.
[2] See a letter from Surg.-Major Pierson, THE LANCET, June 19th, 1887.
[3] THE LANCET, June 12th, 1886.

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H.I.H. THE CROWN PRINCE OF GERMANY.

IT is stated that the physicians in attendance upon the Crown Prince are giving a trial to the treatment suggested by Dr. Freund of Vienna, and based on his analyses of the blood of patients suffering from cancer which showed an excess of sugar. By a rigid exclusion of sugar from the diet, and the substitution of saccharin, it is attempted to reduce the amount of sugar in the blood, and by that means to prevent the malignant growth. Dr. Freund's views have not won general acceptance, and one fact which is strongly adverse to them is that the subjects of diabetes mellitus are not specially liable to be attacked by cancer. We are glad to learn that there has been an improvement noted in the Crown Prince's condition during the last fortnight, and we hope it may continue. The period of improvement corresponds with the adoption of Freund's treatment, and very naturally this has excited hopes that a further continuance of it may be attended with still greater success. Too much stress must not be laid upon daily bulletins in such a case. The daily variations are difficult to appreciate, and the desire to detect improvement is very strong. More trustworthy results are obtained when the progress of a case is tested by careful examinations of the local changes at intervals of two or three weeks.

THE LIQUOR AMNII AND FŒTAL NOURISHMENT.

DR. OPITZ of Chemnitz, in reply to Dr. Ott, who holds that the liquor amnii is concerned in the nutrition of the fœtus, brings forward a case of malformation which is preserved in the museum of the municipal hospital in Chemnitz, which seems to show that the nutrition of the fœtus must be independent of the liquor amnii. An apparently healthy and well-formed child was born, which respired normally and passed meconium and urine. It also sucked, but immediately brought up the milk in a frothy condition. A gum-elastic catheter was introduced into the œsophagus, but it could only be passed as far as the cricoid cartilage, consequently some obstruction of the œsophagus was diagnosed. The child lived six days. At the post-mortem examination it was found that the œsophagus ended abruptly in its middle third. The stomach was filled with meconium. A fine probe could be passed through the cardiac orifice into the trachea.

BIRMINGHAM MEDICAL INSTITUTE: POST-GRADUATE LECTURES.

THREE courses have been arranged for the present winter session. The first of the series, consisting of three lectures on some of the Diseases of the Skin, was delivered by Dr. R. M. Simon, at the Institute, during the month of November. The lectures were illustrated by plates, microscopic specimens, preparations used in treatment, and by the exhibition of living cases. The attendance was very good, and afforded evidence of the satisfactory treatment of his subject by the lecturer.

HEREDITY AND NURTURE.

IN his second lecture at South Kensington, Mr. Francis Galton concerned himself mainly with the limits to the inheritance of ancestral peculiarities, and to the hereditary transmission of disease. He employed a metaphor of vegetation on two islands spreading over adjacent islets, to illustrate family likeness and family differences, stability of type in a population, silent transmission of ancestral characteristics, and blended and mutually exclusive heritages. He explained how laws of inheritance enable us to forecast "schemes" of children, grandchildren, nephews, &c., but do not accurately determine the place of individuals in their respective schemes. In this connexion he exhibited two interesting mechanical arrangements, by means of which the probable heights of male or female children could be determined from the known heights of the parents. In conclusion, he showed the close agreement between the results obtained by himself and by Dr. Reginald Thompson as to the numerical valuation of heredity in the production of phthisis.

PASTEUR'S METHOD SIMPLIFIED.

DR. HÖGYES of Buda-Pesth has published in the *Orvosi Hetilap* an account of some researches he has made on the protection of dogs from rabies by a somewhat simpler method than that employed by Pasteur. He, too, makes use of the spinal cord of an infected rabbit, but instead of drying it to a gradually increasing extent to obtain various degrees of activity, he merely rubs it up with water containing chloride of sodium so as to make solutions varying in strength from 1-10th to 1-5000th. The dog to be protected is injected successively with these, beginning with the weakest. The results appeared to be quite satisfactory, and a complete immunity from rabies to be secured by six of these injections.

ROYAL CORNWALL INFIRMARY.

We regret to learn that the Royal Cornwall Infirmary at Truro still remains without a physician on its staff. About two years ago, on the occurrence of a vacancy, Dr. Williams was appointed to fill the office; but in a short time he resigned it owing to a misunderstanding between himself and the house committee respecting the selection of in-patients. No steps have since been taken to provide the institution with a physician, which must surely be not only a distinct disadvantage to the infirmary itself, if not in direct violation of its bye-laws, but also indirectly a loss to the district.

DIPHTHERIA DURING PREGNANCY.

DR. KOROTKEVICH mentions in the *Russkaya Meditsina* the case of a peasant woman in the fifth month of pregnancy who was attacked by diphtheria during an epidemic which prevailed in the early part of the present year. A child of hers died of the disease. She was treated by means of local applications of salicylic acid and benzoic acid, and recovered in nine days. She was confined at term of a weakly boy. Dr. Korotkevich has only been able to find four cases of diphtheria during pregnancy reported, one by Olivier and three by Dr. Sochaff, who published a paper on the subject in the *Vrach* in 1883.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Karl Dantscher, formerly Professor of Anatomy in the University of Innsbruck, at the age of seventy-five.—Dr. Johanes Nicolaas Ramaer, a distinguished Dutch alienist.

THE PERSPIRATION.

THE result of elaborate research made by M. Peiper yields the following conclusions: The perspiration is more concentrated on the right side of the body; this observation is in accordance with that of Reinhardt; it would be interesting to know whether the opposite was the case in the left-handed. The palm of the hand sweats four times more than the skin of the chest, and the cheeks one and a half times as much. There is a slow increase in the sweat in the afternoon, especially obvious from 8 to 12 o'clock at night. After midnight there is a diminution. Feeding has but little influence on this function. Elevation of the surrounding temperature increases

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the perspiration, and variations of the hygrometric state of the atmosphere have an immense influence on the function. The quantity of water evaporated in a quarter of an hour from a cutaneous surface 25 centimetres square, in a normal individual, is about ·176 of a gramme. In infants the quantity is generally less than in adults. The weight of the body and sex have no marked influence on the perspiration.

THE OPERATIVE TREATMENT OF PERITONITIS.

DR. TRZEBICKY, writing in a Polish journal on the operative treatment of peritonitis, details experimental researches on sixty-seven dogs. From these he concludes that operative treatment s indicated in cases of purulent or septic peritonitis; that the employment of different antiseptic substances leads to results differing from one another. The most suitable liquid for washing out the peritoneal cavity appeared to be a solution of salicylic acid. The greatest care is necessary in cleansing the abdomen externally before the operation is commenced. Dr. Trzebicky does not find it easy to explain the variations in his results, but about the facts he has no doubt.

PATHOLOGICAL SOCIETY OF LONDON.

A SPECIAL MEETING of this Society will be held on Thursday, December 15th, at 8.30 P.M., to receive from Professor Crookshank a report upon an investigation into a Disease of Cows and its relation to Scarlatina in Man. The subject is likely to excite considerable discussion, and many new and important facts are, it is said, to be brought forward.

INFECTIOUS DISEASES COMMON TO MAN AND THE LOWER ANIMALS.

THE next meeting of the Epidemiological Society, which will be held on Dec. 14th, will be one of especial interest, Dr. Klein having promised to read a paper on some of the Infectious Diseases common to Man and the Lower Animals. We understand that the address will be illustrated by the exhibition of numerous microscopical preparations, and we presume that the more recent observations referred to in the reports of the Medical Officer of the Local Government Board will be discussed.

CARBOLIC INJECTIONS IN MALIGNANT PUSTULE.

DR. USPENSKI mentions in the *Meditsinskoe Obozrênie* that he has treated eleven cases of malignant pustule, with only one death, by means of carbolic injections, as recommended by Raimbert. He, however, used a stronger solution than one of 2 per cent., as employed by Raimbert, varying it from 4 to 5 per cent. according to the degree of pyrexia and the gravity of the case. The same lotion was also applied to the pustule externally.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—Dr. C. H. Löhlein, *privat-docent* in midwifery, is to be offered the chair of Midwifery, Gynæcology, and Diseases of Children, which will become vacant by the transference of Professor Runge to Gottingen.

Gottingen.—Dr. H. Schwartz, Professor of Midwifery and Gynæcology, is about to retire at the end of the current winter session. Professor Runge of Dorpat has been invited to accept the chair, and has consented to do so.

Innsbruck.—Dr. Kratter of Graz has been appointed Professor of Medical Jurisprudence.

MR. JONATHAN HUTCHINSON has promised to read an address at the annual meeting of the Cardiff Medical Society in January next.

WE have just received the report of the medical officer of the Local Government Board for the year 1886, being the supplement to the sixteenth annual report of the Local Government Board. It contains matter of exceptional interest. Among others, in addition to the medical officer's own report, are papers on the Statistics of Small-pox Incidence upon the Registration Districts of London relatively to the Operations of the Small-pox Hospitals in the Metropolis, by Mr. W. H. Power; a report by Dr. Klein on the Etiology of Scarlet Fever; a further paper on the Etiology and Pathology of Tuberculosis, by the same author and Mr. Lingard; and the results of investigations into the Causation of Diphtheria, by Dr. Greaswell, Dr. Turner, and Mr. Power. We propose to discuss these subjects at length in future numbers.

THE death is announced of Mr. James Stephens, F.R.C.S., a well-known Manchester surgeon, which took place on the 1st inst. at his residence, Bridge-street, in that city, where he had lived for upwards of seventy years. With the exception of Mr. John Boutflower, he was the oldest medical practitioner in Manchester, having succeeded to the practice of his uncle, the late Mr. Joseph Jordan, founder of the Manchester Medical School.

WE regret to announce the death on the 2nd inst. of Sir William Richard Edwin Smart, K.C.B., M.D., Inspector General of Hospitals and Fleets (retired), after a short illness, at the age of seventy. The deceased joined the naval medical service in 1841, and retired from it in 1877. We hope in our next issue to publish a more detailed account of Sir William s career.

THE Minutes of the recent session of the General Medical Council, with the revised Standing Orders of the Council appended, has been published, and may be obtained, price 3*s.* 6*d.*, by those interested in them.

UNIVERSITY OF LONDON.

THE following statement has been sent in to the Privy Council:—

University of London, W., 1887.

SIR,—I am directed by the Senate of the University to avail myself of the permission given by your letters of the 1st and 15th July, and to lay before my Lords of the Council the following statement on the petition of University and King's Colleges, London, praying for a University Charter:—

The intimate relation which has long subsisted between this University and these Colleges, and the important consequences which may follow in the event of their petition receiving Royal favour, have occupied the anxious attention of the Senate; and they believe that they would be greatly wanting in their duty to the institution placed under their guidance if they did not call to these subjects the attention of the Lords of the Council.

This University and University College, London, were first incorporated by Charters bearing the same date (Nov. 28th, 1836); and these Charters were beyond question parts of one plan, in which the duty of giving teaching of a University character was assigned to the College, and the duty of examining to the University. King's College, which had previously been constituted by Royal Charter, was also affiliated to the University. The affiliation of Colleges subsequently lost its importance, owing to the fact that by the provisions of the new Charter of 1858 attendance at an affiliated College was no longer required, and that the examination rooms of the University were thus thrown open to students wherever educated. University College has, nevertheless, remained in close relationship with the University, and has supplied many of the most distinguished graduates and examiners to the University, and many of its members have been and are members of the Senate; above all the curriculum of instruction in the College has generally followed the lines of the examinations in this University. The connexion between the two institutions has thus been of great value to the University; and the Senate believe that by placing before the College a wide curriculum and a high standard of excellence they have also conduced to the very high position to which the College has attained.

The same observations apply to King's College; but in a lesser degree, inasmuch as the course of that College has been more influenced by the older Universities.

The Senate believe that a serious injury would be done to higher education if these two great London Colleges were to be entirely separated from this University, and were to adapt their courses of teaching, not to the examinations of this University, but to those of a new University in which the authorities of those two Colleges would exercise a dominant influence.

If the precedent which was set, or is supposed to have been set, by the

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grant of the Charter to the Victoria University were followed by the creation of a second University in London, the Senate believe that Her Majesty's Government would find it difficult from time to time to resist similar applications from other Colleges in the country. The Senate fear that the creation of numerous small Universities would be fraught with danger to the cause of the higher education, and that the competition of graduating bodies would probably, if not at once, yet in no very remote future, lower the standard of graduation in a way of which the history of Universities contains numerous examples.

The Senate believe that the work done by the University has been and is of the greatest value to education, not only amongst their own graduates, but even in the older Universities. The width of the subjects embraced, the thoroughness of the examinations, and, above all, the independence of the examiners from all undue influence of the teachers, have had a widespread effect; and the Senate would greatly regret if the extent of this good work were lessened in the future by the withdrawal of a large number of the students of the most eminent Colleges from the examination rooms of this University to those of smaller Universities, where the granting of degrees would be practically in the hands of the teachers, and where the evils which the system of this University has checked would be sure to reappear.

So far as the petition of the Colleges complains of the want of regular communication between the University and the teachers of the higher institutions, the Senate do not desire to call it in question. On the contrary, from a date long prior to the presentation of the petition, or any proposal to present such a petition, both the Senate and the Convocation of this University have been engaged on the consideration of a plan for giving to the professors in the institutions from which graduates proceed an organisation and a larger influence in the counsels of the University. The general approval both of the Senate and of the Convocation has been given to this principle, and both bodies are, as the Senate believe, in substantial accord on the point, though the matter has not yet sufficiently ripened to admit of the presentation to Her Majesty of a joint petition for a Charter to give effect to the plan.

The scheme, which has been generally approved by the Senate, but is still subject to further consideration, proposes to unite into a class, under the name of Associated Colleges, educational bodies, not only in the metropolis, but throughout the country, which from the age of the students, the character of instruction given, and the fact that the Colleges have sent students as candidates for degrees in the University, may be worthy of association with it. It also proposes that the professors of these Associated Colleges, or representatives of the professors, should be gathered together into four groups or Faculties, according as they are concerned with arts, with laws, with science, or with medicine; and each Faculty is to select a smaller body to constitute a Board of Studies, which should aid the Senate and their committees in reference to the subjects of its Faculty. The examiners of the University, or some of them, are to be *ex-officio* members of the Boards of Studies.

The motives of these suggested changes are not far to seek. It was hoped that by giving to the teachers in the Associated Colleges a direct influence on the course of the examinations and a part in the government of the University two advantages would accrue. It would, to use a modern phrase, bring the Senate into touch with the actual teachers, and thereby remove any sense of dissatisfaction which may have been felt on their part, and any difficulty which may now exist in keeping pace with the varying requirements of the higher education; and, secondly, it would, it was hoped, awaken in the teachers of the several Colleges a sentiment of interest in the University which is now too often wanting, and which if created would strengthen its hands.

Furthermore, the Senate believe that such a union of the professors would be very beneficial to the Colleges which they represented, and that the closer connexion between the University and the Colleges would conduce to the benefit of the latter as well as of the former.

The Senate trust that before any radical change is effected in the organisation of the higher education in London the effect of such a scheme as has been sketched in outline will be fully considered by Her Majesty's advisers. The Senate believe that the result of such a scheme would be to unite together in organic relation the teachers of many of the principal Colleges throughout England and Wales, and that the London teachers, by their numbers, their eminence, and their nearness to the seat of the University, would exercise a great influence in its Faculties and Boards of Studies. In this way the Senate believe that the University would still further realise Her Gracious Majesty's opinion, recently expressed, that "it is a body which is eminently qualified to promote the advance of learning throughout her realm." The prospect presented by the alternative scheme now put forward by the Colleges is, the Senate believe, far less hopeful for the interest of education. A number, probably an ever-increasing number, of small universities removed from the beneficial and controlling influence of a great institution like this University, would come to compete for students and graduates with more regard to their number than to the character of their studies, and, if ever the present zeal for education should flag, would probably relaps into that condition of inefficiency into which even the great Universities of this country have at times fallen.

If the scheme for a modification of this University, to which reference has already been made, be carried into effect, the examinations of this University will be conducted as at present by entirely independent examiners, but the teachers will have a means of regularly communicating to the Senate their complaints, their wishes, and their views. If the petition of the Colleges be granted, a University will be constituted in which the whole power of conferring degrees will be in the hands of the teachers themselves.

The desire of many members of the Royal College of Physicians of London and of the Royal College of Surgeons of England to obtain for these bodies or for a body under their control the power of granting medical degrees has been a matter of notoriety for some time past. Though serious objections may be urged to such plan, it would be premature for the Senate to offer any observations upon a scheme which has not yet been put forward; and they only refer to it now as one of the elements of which account must be taken before the present demand of University and King's Colleges can be properly considered.

For this and many other reasons the Senate believe that the petition of University and King's Colleges cannot rightly be regarded as an isolated subject; but should be viewed in connexion, on the one hand, with the past history and future prospects of this University, and on the other hand, with reference to the very complicated conditions of the higher education in London. The Senate are at one with the petitioners in holding that the various teaching bodies in London would greatly gain by union and co-ordination; but they believe that this would be far more satisfactorily obtained under the supervision of such a body as this University than by the establishment of smaller and less responsible graduating bodies. If Her Majesty should think right to inquire into the working of this University, and into the condition generally of the higher education in London, the Senate of this University will do all in their power to assist in the solution of the complicated questions which would undoubtedly arise, and to make fruitful the results of the investigation.

The Senate has no desire to offer to the petition of the Colleges any selfish or captious opposition; but in the belief that issues of far-reaching importance are involved in the prayer of that petition, they desire the opportunity of showing cause before their Lordships why the prayer should not be granted

I am, Sir, your obedient servant,
ARTHUR MILMAN, Registrar.

THE ASSOCIATION OF GENERAL PRACTITIONERS AND THE PROPOSED DEGREE FOR LONDON STUDENTS.

THE following petition has been forwarded to the Privy Council by the Association of General Practitioners:—

To Charles Lennox Peel, Esq., C.B., Clerk to the Privy Council.

SIR,—We have the honour to ask you to lay before the Lord President and the members of the Privy Council an earnest protest on behalf of the Association of General Practitioners against some of the provisions of the Draft Charter for which the Councils of the Royal College of Physicians and the Royal College of Surgeons of England have petitioned. With the general object of obtaining for the students of the English medical schools and hospitals who pass their examination before the licensing bodies of London facilities for obtaining a degree which shall carry with it the title of "Doctor," the Association of General Practitioners is in entire accord. There is unquestionably a great hardship at present upon the licentiates of the London medical examining bodies, who, although possessing a curriculum equivalent to that of many of the British universities which confer medical degrees, have nevertheless no other facilities for acquiring such a degree than those afforded by the Universities of London. The standard of the University of London is expressly placed so high as to make it unattainable for more than a small minority of the London students. It is a degree of *élite*, and placed at so high a standard as to be altogether beyond the ordinary possibilities of the average student, even when thoroughly educated and carefully examined for all the necessities of general practice. In this respect, therefore, the English students are under a great disadvantage as compared with those especially of Ireland and Scotland, and this disadvantage is practically felt because, on the one hand, large numbers of students are thus attracted to the universities of Scotland and Ireland, where they obtain on reasonable conditions the title of M.D.; and, on the other hand, because Irish and Scotch students, who have received their degrees after an examination in no way more difficult than the average examination at present carried on in London by the examining bodies, settle in England, and practise alongside the London licentiates, with the added prestige of the degree and title of M.D., and thus claim a superior social and university status.

While, therefore, heartily concurring in and supporting the petition of the Colleges in principle for facilities for the licentiates of the London examining bodies to obtain the title of "Doctor of Medicine" under reasonable conditions, the Associaton of Practitioners earnestly protests against the attempt which is manifest in the petition of the two Royal Colleges to secure for themselves alone, and for their licentiates alone, a monopoly for such degrees which would operate most unjustly and injuriously to the interests of the public and of the profession in respect to the total exclusion from the further examinations which the Royal Colleges ask to be allowed to institute for the title of M.D. of all those members of the profession who for excellent reasons prefer the licence of the Society of Apothecaries. It must be remembered that the Society of Apothecaries, under the recent Medical Act, applied to the Royal Colleges of Physicians and Surgeons to be included in the combination which these two Colleges have formed for giving licences in Surgery, Medicine, and Obstetrics. A constituency of the Royal College of Surgeons assembled in annual meeting earnestly called upon the College to take that application into consideration, and it is a matter of universal knowledge that the whole voice of the profession was in favour of such a course. It should be remembered also that at an earlier date the two Colleges had, in conference with the Apothecaries' Society, settled a scheme for a conjoint board of examination, by which such combination of these three bodies, and of other examining bodies in England, would have been effected; and after such negotiations had been carried to that point, the Apothecaries' Society, at the instance and with the approval of the two Royal Colleges, applied to Parliament for a special Act, which was accordingly passed, to enable them to take part in such combination. Nevertheless, the Councils of the two said Colleges, who are two small and irresponsible bodies wholly composed of the class of consulting physicians and surgeons, resolved to exclude the Apothecaries' Society from any such combination. The General Medical Council of Education and Registration, after considering the subject, passed resolutions and made representations to the said two Colleges to induce them to alter this most unjust decision, as being contrary to the interests alike of the public and of the profession; but the two Councils once more abruptly declined.

Under these circumstances the Apothecaries' Society completely remodelled their examinations, the General Medical Council appointed its own examiners to supervise and complete the examinations of the Society in all departments, and such examinations are now carried on under the direct supervision and with the assistance of examiners directly appointed by the General Medical Council, in such manner as to afford a complete examination in all the departments of Medicine, Surgery, and Obstetrics.

The Royal Colleges are now asking the Privy Council to do by a side wind that which it directly refused to do in the framing of the Medical

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Act, and that which the General Medical Council, following the voice of the great mass of the profession, also refused to do—namely, to treat the Apothecaries' Society with such injustice as effectually to exclude their licentiates from their just rights and privileges, and, in fact, to destroy the efficiency of the Society as an examining body.

The medical students who present themselves at the close of their career for examination at the Society of Apothecaries, and who become its licentiates, undergo a like preliminary examination with the licentiates of the two Royal Colleges, and such preliminary examination must have the like approval of the same authority—the General Medical Council—in order that they may all be entered on the "Register of Medical Students," which is kept by the General Medical Council. The conditions as to age and preliminary education are the same; the curriculum of education is the same; they are educated during the same number of years, in the same schools, the same hospitals, and by the same lecturers as those who take up the licence of the Royal College of Physicians and the Royal College of Surgeons. The examinations are conducted by Fellows and Members of the said Colleges, and with the aid of the Fellows and Members of the Society of Apothecaries, and of examiners specially appointed by the General Medical Council. They must, therefore, all alike fulfil the now fully adequate State requirements of a uniform minimum qualification.

The Association of General Practitioners ask, therefore, that the serious, inequitable, and unjust action shall not be perpetrated of excluding these gentlemen, similarly educated, similarly examined, and equally qualified, from any further examination for the degree and title of "M.D." in London, such as that for which the petition is now before the Privy Council. They earnestly and respectfully pray that in any Charter which may be granted for that purpose clauses shall be inserted that shall give to the licentiates of the Society of Apothecaries in Medicine and Surgery the same right to present themselves for examination, and if found duly qualified, to receive the title and degree of M.D. as the Royal Colleges ask for their licentiates. It should be noted that in neither case is any further educational curriculum to be imposed, and the only application of the two Colleges is for permission to create a further examination for the new degree. It is submitted that to exclude the licentiates of the Society of Apothecaries, who have passed through the same curriculum with the same teachers for the same time and at the same place as those whom the Royal Colleges propose to examine, would be a totally indefensible attempt to create a special monopoly for these two Colleges for their own benefit alone, and one altogether contrary to public right, public justice, and public interests. The Association of General Practitioners it is proposed to establish, and which it is proposed to call a Senate, is one altogether contrary to the general principles of constitution of such bodies which ought not to be permitted. Under the Draft Charter which is now submitted to the Privy Council it is proposed that the governing body shall be composed of the Councils of the College of Physicians and the College of Surgeons. Now, the Council of the College of Physicians is composed of an entirely self-elected and irresponsible body of members, wholly composed of the class known as consulting physicians, and in this body even the provincial consulting physicians are very slightly represented. The Council of the College of Surgeons is also a body representative only of a very small minority of the great body of licentiates of the College, the members, numbering 15,000, being wholly excluded. In the new governing which it is proposed to set up, these two inadequately constituted and unrepresentative Councils propose to assume to themselves the whole management of the University.

The general practitioners of England are at present totally debarred from representation on the Council of the College of Physicians, and practically debarred from representation on the Council of the Royal College of Surgeons, and it would be most unjust and altogether contrary to precedent that they should, as is now proposed, be also debarred from any representation on the new Senate, which is avowedly created for the express and sole purpose of granting adequate degrees to general practitioners. For the class of consulting physicians and surgeons, of whom the existing Councils are made up, and of whom the new Senate, according to the Draft Charter, would be made up, are fully provided with adequate facilities for graduating at the Universities of London, Oxford, and Cambridge, and the new Charter and new Senate are avowedly asked for with the sole purpose of creating facilities for graduation in medicine for general practitioners. Nevertheless it is proposed that the whole vicious constitution shall be maintained, and that general practitioners, for whom alone this new Senate or University is to be created, shall be wholly debarred from any share in its government or representation on its Council. The new graduates, however capable, however eminent, will in no way be represented. Once given their degrees, they cease to have any voice or vote in the management of the University of which they are graduates. Even if the Councils out of which it is proposed to elect the Senate were more satisfactorily constituted, it would be totally inadequate and unsatisfactory in constitution, but it is especially so considering the extremely unsatisfactory character and constitution of those bodies.

In this respect, also, your petitioners pray that the Privy Council will not allow a constitution of the governing body which is unknown to any other University throughout the kingdom, and which is totally out of accordance with any of the principles on which such governing bodies when created are now constituted. The Council will be prepared to support these arguments and this prayer by deputation, if the Privy Council think fit to receive such deputation, or by any other method indicated. They earnestly pray that the Lords of the Privy Council will not accede to an application containing so many elements of injustice and so contrary to public policy, public interest, and the general feeling of the whole body of the profession, without taking steps to carefully ascertain what is the opinion of the profession on the subject, and without giving effect to the general principles of public right.

It should be mentioned that the two said Councils, of which the constitution has been above referred to, have not in any way submitted this Charter to the large body of their members and licentiates, but have discussed the same in secret councils, and have forwarded it to the Privy Council without submitting it to the professional opinion which they have reason to know would wholly condemn the clauses to which reference is made above.

We have the honour to be, &c.,

C. G. WHEELHOUSE, President.
H. WALTER VERDON, } Hon. Secs.
W. GIBSON BOTT, } Association of General Practitioners.

419, Brixton-road, S.W.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5737 births and 3978 deaths were registered during the week ending December 3rd. The annual rate of mortality in these towns, which had been 20·0, 21·1, and 23·5 per 1000 in the preceding three weeks, declined again last week to 22·5. During the first nine weeks of the current quarter the death-rate in these towns averaged 20·6 per 1000, and was 0·7 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 15·5 in Brighton, 16·2 in Hull, 16·3 in Norwich, and 17·3 in Sunderland. The rates in the other towns ranged upwards to 29·6 in Oldham, 30·4 in Blackburn, 31·1 in Bolton, and 35·6 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 404 and 480 in the preceding two weeks, declined again last week to 443; they included 108 from scarlet fever, 96 from whooping-cough, 69 from measles, 59 from "fever" (principally enteric), 48 from diphtheria, 37 from diarrhœa, and 26 from small-pox. No deaths from any of these zymotic diseases were registered last week in Cardiff, whereas they caused the highest death-rates in Derby, Salford, and Sheffield. The greatest mortality from scarlet fever occurred in Sheffield, Norwich, Bristol, Bradford, Birkenhead, and Salford; from measles in Birmingham, Oldham, Bradford, Nottingham, Blackburn, and Derby; from whooping-cough in Newcastle-upon-Tyne; and from "fever" in Preston. The 48 deaths from diphtheria in the twenty-eight towns included 28 in London, 4 in Birmingham, 3 in Sheffield, and 2 in Portsmouth, in Huddersfield, and in Newcastle-upon-Tyne. Small-pox caused 25 deaths in Sheffield and 1 in Bristol, but not one in London or in any of the twenty-five other large provincial towns. The metropolitan hospitals receiving cases of small-pox contained 12 patients on Saturday last, against 16 and 13 on the preceding two Saturdays. The number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital at the end of the week was 2726, against 2764 on the previous Saturday; the cases admitted showed a decline from the number in the previous week. The deaths referred to diseases of the respiratory organs in London, which had been 438, 461, and 560 in the preceding three weeks, declined again last week to 455, and was 27 below the corrected average. The causes of 89, or 2·2 per cent., of the 3978 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Bolton, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Huddersfield, Halifax, Salford, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·9, 22·0, and 23·5 per 1000 in the preceding three weeks, further rose to 25·0 in the week ending Dec. 3rd; this rate exceeded by 2·5 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 17·1 in Greenock and 21·9 in Edinburgh, to 30·8 and 37·6 in Perth and Paisley. The 624 deaths in the eight towns last week showed a further increase of 44 upon the numbers returned in recent weeks, and included 28 which were referred to whooping-cough, 13 to scarlet fever, 12 to measles, 10 to diarrhœa, 9 to "fever" (typhus, enteric, or simple), 5 to diphtheria, and not one to small-pox; in all, 77 deaths resulted from these principal zymotic diseases, against 74 and 78 in the preceding two weeks. These 77 deaths were equal to an annual rate of 3·1 per 1000, which exceeded by 0·6 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 26 and 30 in the preceding two weeks, were last week 28, of which 14 occurred in Glasgow and 3 in Dundee. The 12 deaths from measles were within one of the number in the previous week, and included 7 in Dundee and 3 in Edinburgh. The fatal cases of scarlet fever, which had been 16 and 11 in the previous two weeks, rose again last week to 13, of which 8 occurred in Glasgow and 3 in Dundee. The 10 deaths attributed to diarrhœa somewhat exceeded the low numbers in recent weeks. The 9 deaths

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from "fever," on the other hand, showed a decline, and included 4 in Paisley, 2 in Glasgow, and 2 in Edinburgh. Four of the 5 deaths from diphtheria were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 107, 144, and 156 in the preceding three weeks, further rose last week to 165, and were 23 above the number returned in the corresponding week of last year. The causes of 81, or nearly 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 34·6 and 33·8 per 1000 in the preceding three weeks, further rose to 35·0 in the week ending December 3rd. During the first nine weeks of the current quarter the death-rate in the city averaged 30·5 per 1000, the mean rate during the same period being but 19·8 in London and 19·5 in Edinburgh. The 237 deaths in Dublin last week showed an increase of 8 upon the number returned in the previous week; they included 13 which resulted from scarlet fever, 8 from measles, 4 from whooping-cough, 3 from "fever" (typhus, enteric, or simple), 2 from diarrhœa, 1 from diphtheria, and not one from small-pox. Thus the deaths resulting from these principal zymotic diseases, which had been 45, 29, and 33 in the preceding three weeks, were 31 last week; they were equal to an annual rate of 4·6 per 1000, the rate from the same diseases being 2·6 in London and 2·0 in Edinburgh. The fatal cases of scarlet fever, which had been 20, 8, and 11 in the previous three weeks, rose again last week to 13, while those of whooping-cough showed a decline. The deaths referred to measles, "fever," and diarrhœa corresponded with the numbers in the previous week. The deaths of infants corresponded with the number in the previous week, while those of elderly persons showed a further increase upon recent weekly numbers. Seven inquest cases and 5 deaths from violence were registered within the city; and 65, or more than a fourth, of the deaths occurred in public institutions. The causes of 36, or more than 15 per cent., of the deaths in the week were not certified.

FRENCH URBAN MORTALITY STATISTICS.

Since the beginning of the present year an official monthly return has been issued by the Bureau de l'Hygiène Publique in Paris, entitled "Statistique Sanitaire des Villes de France et d'Algérie." This return is a most valuable and welcome contribution to the various official returns dealing with the vital statistics of European cities, and gives, with considerable detail, the statistics of all French cities having a population of 30,000 persons and upwards. It is not without interest to note from this return that France contains fifty-one towns, with populations exceeding this limit, and that the aggregate population of these fifty-one towns slightly exceeds six and a quarter millions. In England and Wales at the last census enumeration in 1881, there were forty-seven towns with a population exceeding 50,000 persons, and containing an aggregate population of nine and a half millions. Therefore at the time of the last census considerably more than a third of the population of England and Wales resided in forty-seven towns having a population exceeding 50,000 persons; whereas in France only one-sixth of the population resides in thirty towns of the same minimum population. Even these figures only imperfectly indicate the marked excess of urban population in England and Wales; for while England has twenty-two towns having a population exceeding 100,000, France has only eleven towns exceeding this limit. In any comparison of the mortality statistics of the two countries, it is necessary to take full account of this wide difference between their proportions of urban population. The new French return, valuable as it is, and abundant as is the statistical material it contains, has one marked defect: no totals are given for the aggregate of the towns, and, moreover, only the bare facts are given, without any calculated proportions to population, which are necessary to make the figures intelligible and useful for comparative purposes. Having incurred the labour of casting the facts for the aggregate of the fifty-one French towns, it appears that the mean annual death-rate was equal to 26·1 per 1000 in August and to 21·4 in September, or to 23·8 in the two months. In the twenty-eight English towns (having a minimum population of nearly 80,000, instead of 30,000 as in the French towns) the annual rate during the months of August and September last did not exceed 20·0 per 1000. Thus in the smaller French towns the mortality during these two months showed an excess of 19 per cent. upon that which prevailed in the English towns. It is noteworthy that of the four largest French cities—Paris, Lyons, Marseilles, and Bordeaux—Marseilles is the only one showing a rate (29·1) exceeding the mean rate in the fifty-one towns, while the mean rate in these four largest cities did not exceed 21·7, against 23·8, the mean rate in the fifty-one towns. It is evident, therefore, that the largest excess of mortality in the French towns during August and September last occurred in the smaller towns.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Surgeon Samuel Arthur Crick, M.B., has been placed upon temporary half-pay on account of ill-health (dated Nov. 27th, 1887).

VOLUNTEER MEDICAL ASSOCIATION.—Ambulance Department: The appointment of Acting Surgeon Walter Pearce, M.D., as Instructor to the Ambulance Department of the Volunteer Medical Association, has been cancelled.

Correspondence.

"Audi alteram partem."

SUPRA-PUBIC LITHOTOMY.

To the Editors of THE LANCET.

SIRS,—I am compelled to trouble you with a note relating to the history of supra-pubic lithotomy given by Dr. Dulles in your issue of last week. The reference which Dr. Dulles does me the honour to make is, however, not accurate, and I am sure he has no desire that it should remain so. It is in these words: "And lastly, the conversion of Sir Henry Thompson, who, after long denying its claims, has become one of its most enthusiastic propagandists."

There are two forms of the operation: the old one before Petersen made his modification, and that which has been employed since. I have never denied the claims of either. The old operation I had occasion to perform twice only—once in University College Hospital, and once in private. I always regarded it as a rare and occasional resource for very large calculi, seldom necessary, but certainly had no prejudice against it whatever. The new operation I advocated on the ground of reports respecting it which I had confidence in, even before I had tried it, at my lectures at the Royal College of Surgeons in June, 1884. I stated that Petersen's modification had given "a new and improved position to the high operation," adding that "in the next case for which the knife is required I shall perform the operation on his method." A week after such a case occurred, and I did so, and so introduced the proceeding into this country. I have followed it by twenty-four other cases since, selecting the most formidable cases for the purpose, and am as satisfied with it now as I was at the outset.—I am, Sirs, yours truly,

Wimpole-street, W., Dec. 6, 1887. HENRY THOMPSON.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—Now that the question of compulsory notification of infectious diseases is prominent, it appears opportune to call attention to a Society which is quietly at work in the parishes of St. Margaret and St. John, Westminster. About five years ago Mrs. Johnson, at a meeting held at the house of Archdeacon Farrar, called attention to a Society she had started in Hastings for the notification and prompt discovery of infectious disease, and for dealing with the infected area on scientific principles. She advocated the extension of the system to the metropolis, and forthwith the Westminster Sanitary Aid Association was started in the joint parishes of St. Margaret and St. John. Now, I desire to call the attention of the medical profession

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at large to the objects of this Association, and, further to observe that while in nearly every other part of London a serious epidemic of scarlet fever has been raging, in these two parishes, which contain a population of 60,000, the number of cases notified to the Society have barely exceeded the average of the last four years; and, as far as the above parishes are concerned, there has been really no epidemic of scarlet fever or other infectious disease.

In the last six months of 1886 thirty-three cases of infectious disease came under the notice of the Society's officers, and in the five months from June 29th up to date the number has been thirty-nine. Now, in the absence of all compulsory notification, these figures may appear to have little value; but really the success of the Society has been so great, and has so enlisted the sympathy and co-operation of the medical men resident in the district, that practically the notification of all infectious diseases is immediately communicated to the Society.

We have also the cordial co-operation of the medical officer of health and his sanitary officers, who inform us of every case that comes under their official cognisance; and in return we take immediate steps for disinfecting the infected house, removing in the meantime, if necessary, the healthy occupants to our sanitary house at 1, Edward-street, Vincent-square, while the process of disinfection is being carried out. This is done effectively by our nurse and indefatigable lady manager, Miss Stevenson, who seal up the infected house or dwelling room for at least twelve hours and burn sulphur cakes. All the bedding and clothing, of course, is opened and exposed to the fumes. As a matter of fact, in almost every case Miss Stevenson, by judicious reasoning and persuasion, induces the parents or friends to consent to the removal of the sufferer to the fever hospital, and I am happy to say that, mainly owing to the good work of this Society, the opposition to the Bill for the Compulsory Notification of Infectious Disease has practically died out amongst the tradesmen and shopkeepers in this district, so much so that last week the Sanitary Committee of the Westminster District Board of Works, on the invitation of the Medical Officers of Health Association and the vestry of Kensington, decided to petition the Government to bring in this Bill. It appears certain that in the next Parliamentary session this question will be effectually dealt with, and I cannot but feel proud that in this district we have, so to speak, inserted the thin edge of the wedge, and taken the first step in practically testing the machinery which must be set in motion when this Bill becomes law.

I am, Sirs, your obedient servant,

THOS. BOND, F.R.C.S.,
Member of the Sanitary Committee of the Westminster Board of Works.

The Sanctuary, Westminster, Nov. 28th, 1887.

*** The objects of the Westminster Sanitary Aid Association are to provide female sanitary visitors to teach the practice of disinfection, to promote the removal of infectious cases to hospital, to assist, when local circumstances permit, in the isolation of the sick in their own homes, and, further, to watch over houses in which infectious disease has recently appeared. The Association also aids in the nursing of the sick, in the prevention of attendance at school of children likely to convey infection, in procuring the sanitary improvement of houses in which are found conditions prejudicial to health, and, finally, in enlisting the co-operation of all existing sanitary agencies in the prevention of infectious disease.—ED. L.

SIR JAMES PAGET'S "MORTON LECTURE" ON CANCER AND CANCEROUS DISEASE.

To the Editors of THE LANCET.

SIRS,—In the discussion on Cancer at the Pathological Society in 1873 Sir James Paget stated that since his practice had become exclusively, or almost exclusively private, one in every three was the proportion of instances in which it was possible to discover a history of cancer in the family of his cancerous patients.

The report of the Collective Investigation Committee on Cancer of the Breast shows that 210 returns contained definite statements as to the heredity of cancer. Of these 116 were to the effect that there was no family history of cancer, while in 68 cancer had occurred in other members of the patient's family; the proportion is therefore more than one in three.[1]

From a large number of cases of cancer which I have collected in hospital and private practice, I find the proportion of cases with a family history of cancer is slightly below one in four cases, and in several cases several members in the same family were affected with the disease. Of two of the most striking cases, one was that of a man aged sixty-one, who died of cancer of the tongue, in which the lymphatic glands in the neck were extensively involved. His father died of cancer of the penis, aged sixty-three; his uncle (father's brother) died of cancer of the tongue, aged sixty-three; his father's sister died of cancer of the breast, aged sixty-five; his mother also died of cancer of the uterus. The other case was that of a gentleman who died of a malignant nasal growth; one sister died of cancer of the breast, and another of cancer of the stomach; these three died within a period of fourteen weeks.

The further experience of Sir James Paget evidently has not shaken his belief in the constitutional origin of cancer, or that it is a blood disease and probably of micro-parasitic origin. I have always contended, and the results of my investigation, so far as they have gone, support my contention, that to satisfactorily account for the occurrence of cancer in any individual two factors must be present: the one, as Sir James Paget describes it, general or diffused in a morbid material in the blood; the other local, in some part with which the material produces disease.

No surgeon doubts that the development of malignant disease is nearly always due to local irritation of the part affected; but to prove that the local irritation is the actual cause of the malignant growth, I submit that the same irritation existing in another individual of similar age &c. should produce the same result in the majority, if not in all, cases. This we know is not the fact. What explanation can we give, then, to account for the disease developing in one case and not in the other? I contend there can be but one reasonable explanation, and that is: in the one case the soil is adapted to the growth of cancer—i.e., that there is some morbid condition of the blood which renders the individual liable to the disease; while in the other case there is no such condition of the blood.

The case reported by Mr. Jennings in your last week's issue, in my opinion, illustrates this in a peculiar manner, as it is most rare to find cancer existing symmetrically as he has depicted in any one individual; and while the same cause of irritation might have caused the disease on either side of his patient's face, yet I doubt if such would have occurred had there not been some marked condition of the blood existing.

One word with regard to the treatment of cancer with Chian turpentine. I have given this drug an extensive trial in numerous cases of cancer of the breast, tongue, and uterus. Notwithstanding the patients took this drug on exactly the same lines as laid down by Mr. Clay, I have not seen the slightest good effect in any case of cancer of either the breast or tongue. In some of the cases of cancer of the uterus the patients have expressed themselves as free from pain, and the offensive smell has been lessened; but in no case have I seen the disease cured or otherwise improved. I hope, however, to report on the cases treated by me at the Cancer Hospital by this drug more fully at a future date.

I am, Sirs, yours faithfully,

F. BOWREMAN JESSETT, F.R.C.S. Eng.

Upper Wimpole-street, W.

THE TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—In your issue of the 3rd inst., Dr. Elder of Nottingham, referring to the treatment of cancer by Chian turpentine, says that "seven years ago Professor Clay gave to the profession the welcome intelligence that at last a specific cure for cancer had been found in Chian turpentine." He proceeds to assert that "no remedy has had a fairer trial at the hands of his *confrères*, or [has] more grievously disappointed them." As a mere matter of justice I am bound to

[1] Vide Report, Brit. Med. Jour., vol. i., p. 37. 1887.

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traverse these assertions. I did not declare the discovery a "specific cure" for cancer. I stated in my first communication to THE LANCET that, as the result of experiments carefully made and continued for a considerable time, I had found Chian turpentine beneficial in certain cases of cancer —uterine cases were those especially referred to—in a degree far greater than in the case of any other means then adopted. I said that as the result of using the drug, under the conditions I then specified, the progress of the disease had been arrested, hæmorrhage had ceased, pain had been alleviated, and the growth had finally disappeared. I supported these statements by details of cases, and upon them I based the conclusion that an agent had been discovered by which this terrible malady might be held in check in a manner hitherto unhoped for. In a later paper, I stated my belief, founded upon longer experience, that it was possible to formulate in certain cases a plan for the treatment of cancer which would result in a cure. This conclusion I again supported by the citation and description of cases. Still later, in your journal of the 19th of November of this year, I gave details of other cases which supported my view; and I have also received independent testimony from medical men who have tried the remedy or have watched its trial, and have acknowledged similar results.

To speak of the proclamation of a "specific cure" when the claim put forth was tentative and experimental, and was from time to time supported by the publication of cases open to inquiry, is nothing but an abuse of terms; and, in the presence of the evidence of benefit referred to, it is equally an abuse of terms to speak of the "almost unanimous condemnation" of the use of Chian turpentine in cancer. I have hundreds of letters from medical men and their patients testifying to the great benefit experienced from the treatment. As to the fair trial of the alleged resulting grievous disappointment, I have to say that it is useless to attempt to do what many of those who condemn the treatment have done—namely, to apply it without reference to the conditions which, according to my experience, are necessary to success. I have invariably declared that to be of value the treatment must be adopted in an early stage of the disease, that it must be persistently continued, and that it must be enforced with due regard to all the circumstances of particular cases. It is obviously unjust to the treatment to have recourse to it in advanced stages when, as some medical men have admitted, "the end is near," and then to expect beneficial effects which are obtainable only in conditions affording reasonable hope of advantage. Such an assumed trial is not a fair one, and any condemnation based upon it is valueless. In the face of such statements I must be pardoned if I prefer to adhere to the evidence of my own experience; and here I affirm that, referring especially to uterine cases, only twice out of numerous examples have I seen a cloaca develop when the drug has been properly used, both as to method and time. That, as shown by the Middlesex Hospital Reports, such patients have died from other causes I do not contest, and it is obvious that fatal results occur when the use of the Chian turpentine is complicated and hindered by the use of opium and its derivatives. I cannot too often or too strongly repeat that to give it full and fair effect the remedy must be employed under the conditions which alone in my experience render it operative. If medical men will resort to the remedy at an early period, will persist in its use under apparent difficulties, will avoid opiates, and will give increasing doses, I am convinced that the reported failures will be replaced by records of numerous and most gratifying successes; but if success is to be obtained, the conditions essential to progress must be observed. With reference to your own observations on the subject, I have to thank you for their courteous and considerate tone, prompted by a manifest desire only to arrive at the truth. That is my own desire. I shrink from no test of the cases I have recorded, and from no method of inquiry based upon sound principles and controlled by adequate conditions. I should welcome such an inquiry, but it is obvious that the claims of a large private practice and detachment from hospital work prevent me from conducting investigations such as those by M. Pasteur with regard to hydrophobia. I can only continue my own investigations as cases occur in my practice. These, by their results, confirm my original conclusions in an increasing degree, and I shall, as they progress, be willing to communicate to the profession both the results and the details of the cases upon which they are established. If others will, under the same conditions, adopt the course I have recommended, I do not doubt that their conclusions will confirm my own.

I am, Sirs, yours faithfully,

Birmingham, Dec. 6th, 1887. JOHN CLAY.

To the Editors of THE LANCET.

SIRS,—Mr. Jennings, in your last number, commenting on Sir James Paget's "Morton Lecture," says: "Instances in which the disease [cancer] has been cured are familiar to most practitioners." As I read Sir James Paget's conclusion, it is that in his vast experience he has never yet met an instance of cure. During forty years, in an almost unlimited field for observation, it has never been my lot to see one. If Mr. Jennings or Mr. Clay will lay before the profession a solitary instance in which any cancer infiltrating the textures immediately around its origin, or contamination of the adjacent glands, has been cured by any mode of treatment—not excepting the use of the knife—a result will have been attained not hitherto acknowledged by pathologists. At present I am unable to regard the cases referred to and published by either of these gentlemen as being instances of cancer.

To Mr. Clay an appeal has been made both by Mr. Lawson Tait and myself, as the following extracts will prove:—

"Let him, Professor Clay, submit his cases to his colleagues or other competent observers, that the actual existence of cancer may be beyond dispute; let him cure a single case, and he will have no reason to complain of the congratulations he will receive from the profession in Birmingham or elsewhere."[1]

"I attended at the Queen's Hospital, at Professor Clay's request, and was shown by him three or four cases of undoubted cancer in the breast in various stages of progress, and all of which were being treated by Chian turpentine. I was to see them again in six weeks, and the time having expired I wrote to Professor Clay on the subject. I have his letter by me, dated Feb. 1884, in which he tells me the cases were otherwise ill, and not to be seen, save by possible postponement; and this is all I have been able to gather of Professor Clay's treatment by Chian turpentine of his own cases, submitted for inspection."[2]

Surely there is no time like the present for the "careful re-examination of all the evidence Mr. Clay can produce." These are your editorial words in considering his recent cases. Other correspondents ask for a "tribunal" of inquiry,[3] whose judgment the profession would recognise. It cannot, I venture to think, be a moment too soon to arrest the further administration of a nauseous drug in cases already pronounced hopeless, or to promote its administration by every means in our power.

I am, Sirs, yours faithfully,

Birmingham, Dec. 6th, 1887. OLIVER PEMBERTON.

To the Editors of THE LANCET.

SIRS,—I agree with Mr. George Elder's letter in your last issue, that the claims Mr. Clay makes for Chian turpentine ought not to pass unchallenged by those who differ from him. I have tried the treatment in six cases of uterine cancer and three of cancer of the tongue, and am giving it one more trial at the present time in cancer of the tongue and throat, but as yet I have not seen the slightest benefit derived from the treatment. I am, Sirs, yours truly,

Torquay, Dec. 1887. W. T. BOREHAM, M.D.

THE DIPLOMA IN PUBLIC HEALTH OF THE APOTHECARIES' SOCIETY OF LONDON.

To the Editors of THE LANCET.

SIRS,—As being directly and mainly responsible for the wording of Section 21 of the Medical Act, 1886, which deals exclusively with the registration of diplomas in sanitary science, I would like to state that it was never intended that the Apothecaries' Society and Hall should be permitted to participate in having their diplomas in public health registered—i.e., if these bodies in the future desired to grant such,—and the wildest interpretation of the said section cannot be made to include these bodies; therefore I, for one,

[1] THE LANCET, Oct. 23rd, 1880. Letter from Mr. Tait.
[2] The writer's Ingleby Lecture on Cancer in the Female Breast, 1884.
[3] Mr. Elder's letter, THE LANCET, Dec. 3rd.

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am pleased that the General Medical Council has referred the matter for the opinion of counsel at the instance of Dr. Heron Watson. On the notice paper of the House of Commons, May 17th, 1886, both Sir Henry Holland and Sir Lyon Playfair placed amendments to the Medical Act (1858) Amendment Bill. Sir Henry Holland's clause included "universities or medical corporations of the United Kingdom," which would have, if passed, included the Apothecaries' Society and excluded the Colleges of Surgeons, while the Government clause simply mentioned "any university in the United Kingdom," and excluded all the Colleges and Apothecaries' Societies. Sir Henry Holland's clause was dropped as an amendment, and on my writing to Sir Lyon Playfair to include the various Colleges in the matter of registration, I was informed, in a letter dated May 26th, 1887, that Sir Lyon Playfair had done so; and also by reference to Section 21 my other suggestions were carried out. The section reads—"a diploma, granted by any College or Faculty of Physicians or Surgeons or University in the United Kingdom, or by any such bodies acting in combination, &c." Surely no one can interpret that either of the Apothecaries' Societies is included in this section, and is entitled to registration.

I am, Sirs, yours faithfully,

J. EDWIN COONEY, D.P.H.Camb.,
Late Hon. Sec. Public Health Medical Society.

Vereker-road, West Kensington, S.W., Nov. 26th, 1887.

TREATMENT OF ECZEMA AND PSORIASIS.

To the Editors of THE LANCET.

SIRS,—In Dr. Myrtle's interesting account of his successful treatment of eczema and psoriasis by means of the Harrogate sulphur waters, he relates the case of a surgeon who, when he was approximately well, after reading a paper of mine on Counter-irritation over the Vaso-motor Centres in Obstinately Recurrent Eczema, applied a mustard plaster to his nape, and the eczema was set going again. Now, it is a well-known fact that doctors seldom treat themselves judiciously, and in medicine, as in the affairs of this life generally, it is always best to "let sleeping dogs lie." Dr. Myrtle, however, takes occasion from this case to remark: "With all deference to Dr. Crocker, and whilst concurring in his views as to the influence the vaso-motors have in eczema, I cannot speak too strongly against the application of counter-irritants to the skin of the eczematous for any purpose whatever."

Lawyers have a well-known dictum, that "single cases make bad law," and the same statement holds good for physic. If I were to relate the case of a patient whose eczema had been aggravated by the injudicious use of the Harrogate waters (not a difficult thing to do), and upon that said, "With all deference to Dr. Myrtle, the Harrogate waters should not be used in eczema on any pretext whatever," he would, I think, not only perceive that "all deference" was curiously shown in a flat contradiction of his statements, but also point out that numerous and striking successes showed the utter fallacy of such sweeping statements. The fact is, that every remedy which is worth anything is potent for evil as well as good, and that when a new treatment is being tried the views of the originator as to the selection of the case and the mode of carrying out the treatment should be strictly observed, at all events until the practitioner has some experience of the weapon he is wielding; disappointment is otherwise pretty sure to be the result, and perhaps a valuable aid discredited. Further experience in the employment of counter-irritation over the vaso-motor centre of the affected region in obstinately recurrent eczema has only confirmed and extended my first statements. It should be used when the fresh attack is impending, of which the patient generally has a few hours' notice by his sensations. The attack may thus often be either warded off or greatly mitigated, as many of my cases prove, and other observers can corroborate by independent testimony. The treatment, however, should never be applied when the activity of the eruption is abating, as the last case in my original paper demonstrated. Great relief may also often be obtained where severe paroxysms of itching render the patient's life a misery, as in the following case:—A tall, strong man, aged thirty-eight, came to the hospital with eczema of the scrotum and inside of the thighs of three months' duration. The irritation became so great that even when showing his disease he could not refrain in the presence of all the students from scratching most frantically. A mustard leaf was ordered over the lower dorsal and upper lumbar spines, but he put it on too low down, and only experienced slight relief; another was ordered higher up, and the next note was, "Irritation is much less to-day." A week later a fresh attack with "frightful itching" was coming on, and the mustard was reapplied. It gave him immediate relief for twelve hours, and then there was a slight return of itching for a few hours; after this the eruption and irritation got better, and had continued to do so until his next visit. The treatment had to be repeated twice more before the tendency to recurrence was quite subdued, but after that he got so well that he ceased to attend three weeks from the commencement of the mustard treatment. In another case a man aged fifty-one had acute eczema of the face, arms, and forearms, which were streaming with serous exudation, attended with much itching and burning. He improved at first with topical applications and saline aperients, and then a fresh attack ensued. A mustard leaf was applied over the nape; he felt great relief to the head; the irritation was better next day. The discharge from the face three days later being very great, mustard was reapplied. This stopped the exudation from the face at once, but not from the arms, which ceased gradually; and from that time the case gave no further trouble and required no more mustard, though he was not quite well for some time later.

Such cases as these, which could be corroborated by many others, are not to be pooh-poohed because they do not accord with preconceived ideas. Moreover, it appears that Dr. O'Leary of St. Vincent's Hospital and Dr. Brooke of Manchester have independently used similar treatment with success, but it is not pretended for a moment that every case of eczema will be suitable for this method.

I am, Sirs, yours obediently,

December, 1887. H. RADCLIFFE CROCKER.

THE TREATMENT OF INTESTINAL OBSTRUCTION DUE TO IMPACTED GALL-STONE.

To the Editors of THE LANCET.

SIRS,—I congratulate my friend Mr. Thomas Smith on the success of his case; but I wish to make public an easier way of dealing with such a case than that of opening the intestine. I have used it in one case successfully. It consists in passing a fine needle through the wall of the intestine from below (that is, from the empty part of the intestine) into the gall-stone. The stone is thus easily and immediately split up into fragments and passes readily along the intestine, and the grave complication of opening the intestine is rendered unnecessary. The operation is, in fact, little more than an exploratory incision.

I am, Sirs, yours truly,

The Crescent, Birmingham, Dec. 2nd, 1887. LAWSON TAIT.

LIVERPOOL.

(From our own Correspondent.)

POPULAR LECTURES BY PROFESSORS AND LECTURERS OF UNIVERSITY COLLEGE, LIVERPOOL.

DURING the last three months a course of eight lectures on the Structure and Functions of the Human Body in Health and Disease has been given by some of the professors of the Liverpool University College. It was commenced by Professor Herdman, whose subject was the "General Structure of the Animal Body." Professor Banks followed with the "Nutritive System and Digestion"; and Professor Caton with the "Circulation and Purification of the Blood." Mr. Harvey Gibson discoursed upon the "Nature and Uses of Food," Mr. Paul on "Work and Recreation," Dr. Barron on the "Seeds of Disease," Professor Shaw on the "Structures we Inhabit," Dr Hope on "Common Sanitary Defects and the Diseases associated with them." An attentive audience, varying from 900 to 1000, were present at each lecture.

DEATH FROM HYDROPHOBIA.

Another death has occurred from hydrophobia, the victim being a cabdriver, aged forty-two years, who lived in a

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street in the centre of the city. Three months ago he was followed home by a white fox-terrier; he put it in the cellar for the night, and next morning was feeding it, when it snapped at his right hand and slightly scratched the forefinger. He sucked the scratch, and after putting some wax upon it, took no further notice, following his usual occupation up till the 28th ult., when he complained of being unwell, and stayed at home the two following days. He was removed to the Royal Infirmary, where he died the same day with all the usual symptoms of hydrophobia. A post-mortem examination was made by Dr. Barron, pathologist to the infirmary, who found congestion of the base of the left lung. He removed the spinal cord for microscopical examination.

CITY MEAT SUPPLY, AND THE METHOD OF SUPERVISION THEREOF.

Dr. Hope, the assistant medical officer of health, read a paper at the last meeting of the Medical Institution on a very important subject: "Our Meat Supply, and the means adopted to ensure its wholesome quantity." Some idea of the vast quantity of the work done may be gathered from the following figures, which were circulated among the members. The total quantity of live cattle, sheep, and pigs imported into Liverpool from Canada, United States, Spain and Portugal, and Ireland during the year 1886 was:—

—	From Canada.	United States.	Spain and Portugal.	Ireland.	Total.
Cattle	21,837	47,754	642	268,284	338,517
Calves	7	1	—	4,634	4,642
Sheep and lambs	43,641	2,891	—	410,342	456,874
Swine	70	—	—	128,525	128,595

The following are the quantities (cwt.) of dead meat—viz., mutton and beef—imported into Liverpool from the Argentine Republic, United States, and Canada, during the year 1886:—

—	Argentine Republic.	United States.	Canada.	Total.
Beef (fresh)	1,044	615,088	10,014	626,146
Mutton ,, ...	45,036	5,375	52	50,463

(Excluding bacon, hams, tinned meat, &c.)

The number of animals slaughtered within the city during 1886 at the Abbatoir Company's premises, at the fourteen private slaughter-houses in new parts, and at the seventeen private slaughter-houses in old parts of the city, were:—

—	Cattle.	Sheep.	Lambs.	Calves.	Pigs.
Abattoir	34,586	207,163*	—	16,098	16,320
Slaughter-houses in new parts	4,165	14,685	4,446	365	11,735
Slaughter-houses in old parts	6,353	18,122	5,078	12,080	34,305

* Including lambs.

THE LATE EDWARD PARKER, F.R.C.S. EDIN.

The somewhat sudden death of this gentleman after a short illness was received with much regret by a large circle of professional and other friends. The deceased, who was in his sixty-ninth year, received his medical education in Edinburgh nearly fifty years ago, and, coming to Liverpool, was one of the first surgeons of the then newly established Northern Hospital. He commenced practice later on in Kirkdale, which was then a pleasant suburb northwards of Liverpool, but for many years past built upon and absorbed into the city. In 1845 he obtained the appointment of surgeon to the industrial schools of the parish of Liverpool, situated at Kirkdale, which appointment he held up to the time of his death. He was also for twenty-four years surgeon to the Northern Division of the Liverpool Police, and from 1869 till recently he was surgeon to the borough gaol at Walton-on-the-Hill. He had also at one time a considerable private practice, and, being punctual, exact, and very painstaking, he was enabled to perform all the various duties involved in these public and private engagements with credit to himself and satisfaction to his patients. Some weeks ago he took a chill, which was followed by a severe attack of pneumonia, which, acting upon a somewhat weak heart, compelled him to take to his bed. He was attended by Dr. William Carter, and a few days before his death was able to sit up, and appeared to be approaching convalescence. On the morning of the 1st inst. he was seized with severe abdominal pain, and expressed an opinion to his son that he was dying from perforation of the bowel. This subsequently proved to be correct, an opening being found in the duodenum just beyond the pyloric end of the stomach. His funeral, which at his expressed wish was of the very simplest character, was numerously attended by medical friends and representatives from the Industrial Schools and Liverpool police. Mr. Parker was twice married; he leaves a widow, five sons, and a daughter. Two of the sons are surgeons, one being Mr. Rushton Parker, the well-known Professor of Surgery in Liverpool University College; the other, Mr. Wm. R. Parker, is in practice at Kendal.

WORKMEN'S GRATITUDE TO THE EYE AND EAR HOSPITALS.

The local branch of the Boiler-makers and Iron Shipbuilders' Society have set an example well worthy of imitation elsewhere. They have celebrated the Queen's Jubilee in a manner which, to use the words of a local daily paper, does credit to their thoughtfulness and sense of gratitude. The scheme took the form of a Jubilee voluntary gift from the members of the Society to the Birkenhead Eye and Ear Hospital and the Liverpool Eye and Ear Infirmary. These men are, as is well known, more peculiarly liable to accidents, especially to their eyes and ears. A sum of £21 was subscribed, of which £15 15s. were given to the Liverpool institution and £5 5s. to that of Birkenhead. In addition to this, the former institution was presented with a splendid electric battery, supplied by an eminent London firm at a cost of £10 10s. Such an illustration of the gratitude of working men is most refreshing.

FLOGGING GAROTTERS.

Mr. Justice Day, who presided at the recent assizes as well as the two preceding, is a firm believer in the deterrent power of the "cat," and is averse to long terms of imprisonment, especially for the younger prisoners. Following this view, which so far as this locality is concerned would appear to be well founded, a number of prisoners who had been sentenced to corporal punishment, in addition to short terms of imprisonment, were recently flogged in H.M. prison, Walton-on-the-Hill. The skin is rarely broken, but there is always some cutaneous hæmorrhage where the strokes fall. In a series of eighty cases no ill effects have followed.

Liverpool, Dec. 6th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

FEVER IN NEWCASTLE.

THE febrile epidemic in Newcastle still continues, some practitioners having as many as ten or fifteen cases on their lists. Although the weather has been fine for the season, it has been changeable, high winds alternating with hoar frosts and frequently a damp atmosphere. The death-rate has been high the last few weeks, but I do not think it is so much owing to fever as to a high mortality in the aged and weak. There has been a rather serious outbreak of scarlet fever in the children's wards of the Newcastle Workhouse. Last week as many as 178 had been attacked. Fortunately the type is mild, and I have not heard of any deaths to-day. I hear that the epidemic is subsiding. The disease was, as usual, imported by an outside waif.

GATESHEAD CHILDREN'S HOSPITAL.

The foundation and Jubilee memorial stones of the Gateshead Children's Hospital were laid on Friday last in presence

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of a large and influential assembly. The weather was fine, but a strong piercing wind blew over the site, and made matters were anything but pleasant for visitors to the ceremony. Up to the present sufficient has been received to make building provision for twelve beds and to leave a sum towards the endowment fund, which, it is to be hoped, will soon be augmented.

SPREAD OF SMALL-POX IN YORKSHIRE COLLIERIES.

Considerable alarm is being occasioned by the spread of small-pox in some of the Yorkshire colliery districts, where the small cottages are crowded with lodgers. On Saturday last fresh outbreaks were reported at Birdwell and Broomhill, near Wombell, where on Friday the authorities were compelled to board a cottage round to isolate it. At several large collieries workmen from infected families have been stopped. Serious interference with trade is anticipated.

Newcastle-on-Tyne, Dec. 6th.

EDINBURGH.

(From our own Correspondent.)

ROYAL COLLEGE OF PHYSICIANS.

AT the annual general meeting of the Fellows which took place last week, the election of office-bearers in the College was the chief business of importance. Sir Douglas Maclagan, who has for two years occupied the presidential chair, retires at this time on the completion of his term of office, but retains a deliberative voice in the affairs of the College by his appointment as Vice-President. His place as President has been taken by Dr. R. Peel Ritchie, one of the senior Fellows, whose long experience in the Council and as treasurer to the College has given him an intimate knowledge of its affairs, and whose careful cultivation of its best interests in the past, renders him peculiarly well fitted to act yet more directly as their guardian and conservator during his two years' term of office as President. The other officers of the College are as follows:—Treasurer: Dr. P. A. Young. Secretary: Dr. G. A. Gibson. Librarian: Dr. G. W. Balfour. Curator of Museum: Dr. T. A. G. Balfour. Curator of Laboratory: Dr. J. Batty Tuke.

THE VACANT ASSESSORSHIP AT ST. ANDREWS.

Considerable interest is felt in Edinburgh in regard to the election, now pending, of an assessor of the General Council of the University of St. Andrews, who will represent that body in the deliberations of the University Court. Dr. John Duncan, M.A., LL.D., is one of the candidates for the vacant office, whose high position in the profession in Scotland, no less than the great services he has rendered in favouring the progress and developing the stability of the Edinburgh School, specially point him out as well fitted to hold an important post, in which his intimate knowledge of the Scottish University system and its requirements will make his services invaluable. His opponent, Viscount Cross, has already held office as assessor; and it is felt keenly by medical graduates of St. Andrews that the interests of medicine in that University require a more thorough representation than they could obtain during a layman's tenure of office.

THE VICTORIA DISPENSARY.

Under the above name a new charitable institution has been established in Edinburgh, which bids fair to take a useful place among the medical charities of the city. It is specially devoted to the treatment of consumption and diseases of the chest, for which cases solely it is intended. It will, therefore, in no way trench on the useful work already done among our poorer classes by the many sister institutions now flourishing around it, but rather relieve them from th econgestion of chest cases that tend to bulk too large in proportion to other branches of their remedial work. The want of such an institution has long been felt in the city on account of the great ravages committed by phthisis, particularly in that class of people who, coming from healthy country districts, fall only too easy and too early a prey to the evil influences of the narrowed physical surroundings of their city life. The new dispensary is situated in Bank-street, in the central district of the city, and is fortunate in possessing light and airy waiting and consulting rooms, which have been brightly and tastefully decorated for the reception of patients. The institution has been placed under the charge of Dr. R. W. Philip, whose recent researches on the Etiology of Phthisis, submitted in the form of a thesis for the Doctorate in Medicine to the University, received the University Gold Medal, the highest honour attainable by its graduates. Dr. Philip also received in recognition of his work the Triennial Gunning Prize in Medicine, a bursary recently founded for the encouragement of original research in connexion with the practice of medicine, and awarded to the most eligible competitive thesis presented within the specified period.

Edinburgh, Dec. 6th.

DUBLIN.

(From our own Correspondent.)

ILLNESS OF SIR CHARLES CAMERON.

THIS gentleman was taken seriously ill last week, and for some time his life was in imminent danger. It is gratifying, however, to be able to state that his condition has considerably improved, and it is confidently expected that in a short time he will be able to resume his ordinary duties. I may add that there is no member of the profession in Dublin better liked both by his brethren and the community at large than Sir Charles Cameron, and a termination to his career of usefulness would be regarded as a national calamity.

DEATHS OF BRIGADE-SURGEON GRAY, SURGEON-MAJOR PUREFOY, AND DR. WHISTLER.

During the past week three Fellows of the Royal College of Surgeons in Ireland have died—viz., Brigade-Surgeon Joseph Gray (retired), Surgeon-Major J. W. Purefoy, and Dr. Whistler of Bray. The last-named gentleman met with his death under distressing circumstances, being killed by an accident in the hunting field last Saturday. Surgeon-Major Purefoy had only three weeks since returned from Trinidad, and died after a short iliness. He was buried at Lucan, where his father, the late Dr. T. Purefoy, practised for many years. The funeral *cortège* was preceded by a corps of the Liverpool Regiment, the band playing Chopin's Funeral March and the Dead March in Saul, and was followed by a detachment of the Army Medical Corps, headed by Surgeon-General Hassard, principal medical officer in Ireland, and officers of the Medical Staff serving in Dublin. On the same day the funeral of Dr. Whistler of Bray, who died at an advanced age, took place. The deceased was a graduate in Arts and Medicine of the University of Dublin, and obtained the Fellowship of the College of Surgeons forty-two years ago. He was a well-known figure at the annual meetings of the Fellows of the College of Surgeons, and took an active part in its proceedings.

SCIENCE AND ART MUSEUM, DUBLIN.

Dr. R. Scharff, an assistant to the Museum for some time past, has been appointed to the vacant curatorship. Dr. Scharff studied at Edinburgh, where he obtained the degree of Bachelor of Science, also in London under Professor Ray Lankester, and worked in the British Museum under Professor Flower, F.R.S. He has written many papers on zoological subjects, and for some time acted as vice-president of the Conchological Society of Great Britain and Ireland.

NATIONAL CHILDREN'S HOSPITAL, DUBLIN.

A bazaar and fancy fair in aid of the funds of this hospital will be held next week. There is a debt still due on the institution amounting to £1500, and it is confidently expected that a considerable amount will be obtained for a very deserving charity.

SMALL-POX IN DUBLIN.

Three cases of this disease were admitted to hospital during the week ending the 26th ult., being one over the admissions for the preceding week. There are seven cases at present under treatment in hospital, but so far only one death has occurred.

EPIDEMIC OF MEASLES IN BALTIMORE, NEAR SKIBBEREEN.

An epidemic of measles of a very dangerous type has broken out in this place, and numerous deaths have resulted. A peculiarity of the affection is that it attacks adults as well

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as children; in the latter it is complicated with congestion of the lungs. Dr. Jennings, medical officer of the district, is using every exertion to prevent intercourse with the infected families, as, should the disease spread to the adjacent town of Skibbereen, the results would be very serious indeed.

The total amount collected for the Jubilee Fund in connexion with the Royal Medical Benevolent Fund Society of Ireland has been £129 8s., which, after payment of the necessary expenses, will be distributed before Christmas.

The opening meeting of the Scientific Association in connexion with the Royal College of Surgeons' Medical School will be held to-morrow (Wednesday) evening in the Albert Hall of the College.

Dr. Ball has resigned the post of medical officer to the South City Dispensary District, Dublin Union. An election for his successor will take place on the 20th inst.

Dr. B. Kennedy has been elected resident medical officer and apothecary, North Dublin Union, at a salary of £200 a year, with furnished residence, &c.

Dublin, Dec. 6th.

PARIS.

(From our Paris Correspondent.)

DIPHTHERIA.

ACCORDING to the researches lately communicated to the Academy of Sciences by Dr. Teissier of Lyons, the author believes that diphtheria is, above all, an infectious malady, the germ of which, being transmitted through the medium of atmospheric dust, is absorbed through the respiratory organs. The dust emanating from manure heaps, collections of rags or of straw, are particularly favourable for such transmission, as they constitute excellent media for the culture of the pathogenic germ. The pigeon and the common fowl seem to be the most active agents for the dissemination of the germs from these different infectious foci. Among the other cases which contribute to favour the receptivity of the germ, cold occupies the first place (79 out of 132), Dr. Teissier, however, remarks that the humidity of the air constitutes, without any doubt, a condition extremely propitious for the multiplication and dissemination of the germs of diphtheria.

CONFINED AIR AND THE DEVELOPMENT OF PHTHISIS.

At the meeting of the Academy of Sciences of last week, Professor Brown-Séquard spoke upon a subject that he had commenced in 1869 to demonstrate—namely, the influence of confined air on the development of pulmonary phthisis. The learned Professor had performed experiments on a number of guinea-pigs, which he divided into two series. In the one series, after having inoculated the animals with tuberculous matter, they were placed in the most favourable conditions as to bedding, alimentation, and aeration. They lived at liberty under a shed opening into a garden, and where the bedding was frequently renewed. Not one of them (numbering more than a hundred) was affected by the inoculation. They manifested no sign of phthisis, and remained perfectly healthy. The second series, however, which were inoculated in the same manner, but which were condemned to live in closed laboratories, where the air was confined; nearly all died from phthisis. After having shown the advantages which would accrue to phthisical patients were they to live as much as possible in the open air, Dr. Brown-Séquard presented an ingenious apparatus which he invented in conjunction with M. d'Arsonval, the object of which is to remove from a room the expired air of phthisical patients. This apparatus is composed of several parts, the essential one of which is bell-shaped. It is placed at the head of the patient's bed and put into communication by the aid of a tube with a chimney, heated by gas, or a candle, or a lamp, so as to cause a draught. The chimney, which communicates equally by a tube with the external air, draws all the air proceeding from the lungs of the patient and expels it to the exterior in such a manner that it does not mix with the atmosphere of the room.

THE CLEANSING OF CARPETS.

One of the most prolific sources of the propagation of infectious or contagious diseases is, as you have more than once pointed out, the house carpet, which can retain the germs of these diseases. But as the carpets must be cleaned, and as the practice of beating them in the open air is considered a public nuisance, M. Bunel, the principal architect of the Prefecture of Police, was charged to devise some means by which this nuisance might be reduced to a minimum, or, if possible, entirely prevented. M. Bunel submitted an apparatus in the form of a cylinder to the Council of Public Hygiene, in which the carpets are placed, and by a rotatory motion the dust is dislodged. The advantages of this invention over the ordinary method had been approved of; but M. Bunel soon discovered that the dust and other particles escaping from the carpets, instead of being burned as he thought they would be, were utilised in industry for filling cushions, and the finer particles were employed for coating paper hangings, which give them their velvety appearance. This highly objectionable practice was soon brought to the notice of the police authorities, and on the advice of the Council of Hygiene it is ordained that the dust and particles beaten out from carpets should be collected in closed apparatus and burned; but those who may wish to utilise them should have them previously disinfected and then submitted to a current of steam under pressure at a temperature above 100° C., or of sulphurous acid.

Paris, Dec. 6th.

THE SANITARY CONDITION OF VENICE.

(From our Special Correspondent.)

THE question whether Venice may fairly be described as a healthy town is an open one. The admiration, that at times degenerates into fanaticism, with which everyone possessing any artistic perception must view such a town as Venice is apt to obliterate the consideration of those sanitary matters on which our existence depends. Then comes an epidemic of cholera coupled with exaggerated apprehension. No place, perhaps, has been so often described as Venice, and yet little or nothing is known concerning its sanitary condition. The studies on this town, whether with pen or pencil, are generally art studies. A dissertation on the soil-pipes, drains, and cesspits of Venice seems almost a sacrilege. It is, however, none the less necessary, particularly when we consider that the average death-rate for the twenty years from 1861 to 1880 amounted to 30·3 per 1000 of the population. This period comprises several years of foreign domination, of political struggles and revolutions, when, of course, sanitary matters were greatly neglected. Now that independence and peace have been enjoyed for some years a marked improvement has taken place. According to a pamphlet now in course of preparation at the Demographical Department of the Venice Municipality, the mean mortality for the years 1883 to 1886 was only 25·8 per 1000. Yet the mortality for 1886, which included 640 deaths from cholera, amounted to 28·2. Again, according to local statistics, the death-rate for 1884 amounted to 24·6 per 1000; whereas, in the official Government report published at Rome, the death-rate for this year is estimated at 28·90, 28·49, or 26·98 per 1000, according to allowances made for floating population. Taking the present year, I find, during the first quarter, that 29·2 deaths per 1000 per annum were recorded, and the proportion during the second quarter of 1887 fell to 21·8 per 1000. Probably the average death-rate at Venice is now 26 or 27 per 1000. Comparing Venice with the nineteen principal towns of Italy, with populations varying from half a million to 58,000 persons, Venice stands in a position about half-way between the worst and the best, though there are but seven towns that have a larger population in the kingdom.

On discussing the question of the death-rate with Dr. Alex. Menzies, an English resident physician at Venice, the fairness of comparing English and Italian death-rates was raised. Basing his observations on many years' experience of Italian practice, Dr. Menzies insisted very forcibly on the insufficient nutriment of the native diet. Even the better class lived in a wretched manner. They were vegetarians, and bad vegetarians, for they did not eat enough of those vegetables that are the best substitute for meat. Polenta of inferior quality, as is so often the case, is not equal to Scotch oatmeal. Consequently they were the ready victims of any outbreak of illness. Nor do the people possess sufficient stamina to resist illness. Quick to take alarm, with loss of courage and insufficient nutriment, the system was not able

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to shake off an indisposition which a well-fed Englishman would scarcely feel. Though there is a regular municipal service to inspect all food brought into the town, it is feared, nevertheless, that this is not as fresh as it should be. When the cholera epidemic broke out, some twenty tons of bad food, I was told, had been seized in a day. With similar lack of faith, many persons deny the prevalence of cholera to the extent described. There are a certain number of doctors who are appointed by the municipality to attend on the poor, and their fees amount to about 4s. for each case. When, however, cholera prevails, these doctors receive a fee of £1 for each case,—not for each visit, but for each case. The difference between five francs and twenty-five francs is so great, and the doctors at best are so grievously underpaid, that it is not surprising if, in a country where corruption is not an unknown evil, the public should have suspected that cases were recorded as cholera when the disease was only due to some digestive disturbance, caused probably by bad food. On the other hand, and as opposed to these arguments, it must be borne in mind that the inhabitants of Venice are equally interested, on their side, in making out as good a case as possible for the town, so as not to alarm the foreign visitor, on whose presence and custom they in a great measure depend. It is, therefore, natural that all manner of arguments should be brought forward to lessen the importance of the cholera epidemic. Certainly foreign visitors would not have encountered so grave a risk as many were led to imagine had they gone to Venice when the cholera prevailed. Here, as elsewhere, most of the victims were among the poorer classes—the worst fed and the worst lodged sections of the population. Concerning the food, which is stated to be responsible for many cases of illness erroneously described as cholera, what I saw—not a large quantity—did not seem unfit for consumption. The fried fish shops in the poorer quarters compared very favourably with similar institutions in London. The grease appeared to be of a much better quality than that used in London, and there was a greater variety of fish. In the butchers' shops every piece of meat bore the stamp of the public slaughter-house where it had been inspected; and this is a better system of control than that enforced in England. Visitors may attribute to bad food attacks of intestinal catarrh, which are really due to standing on cold marble floors and to chills caught by going from the heat of the sun into the cool of churches, palaces, or museums.

At Venice, as elsewhere, the high death-rate was attributed to the number of public hospitals and similar institutions, which attract patients from the surrounding provinces. Of course this argument applies also to London, Paris, and other great towns. Nevertheless, it has some weight with respect to Venice; for the proportion of deaths in public institutions for the years 1881-82 amounted to 351 out of 1000 deaths in the town. In 1883 the proportion was 365, and 349 in 1884. On the other hand, in London, during, for instance, the year 1883, the deaths in public institutions amounted to only 205·0 per 1000. This difference, however, may be due not so much to a large influx of patients from the outlying rural districts, as to greater poverty among the mass of the population of Venice itself.

More serious than these questions is the vexed problem of the Venice water supply. In this matter the position of the town is altogether peculiar and exceptional. Wells in Venice are not built so as to collect water from the surrounding soil, but, on the contrary, so as to exclude all such water. Apart from the question of possible contamination, as Venice is built on 114 small islands, divided from one another by 150 canals, all full of salt water, any water derived from the soil would be brackish and undrinkable. A well in Venice consists of an outer well carefully cemented so as to exclude all infiltration. In the centre another smaller well is built. Between the two fine clean sand is introduced. The rain-water collected from the roofs is conducted by pipes to the surface of the sand, and has to filter through till it reaches the bottom of the outer well, and here little holes enable the water to pass into the inner well or channel. In a word, the water supply of Venice consisted of rain water filtered and carefully stored; but in dry seasons this supply would fall short. Then barges were employed to bring water from the river Brenta on the mainland, and the wells thus replenished; now, however, a company has obtained a concession for the water supply of Venice. Iron pipes are placed at the bottom of the lagoon, and the water of the Seriola canal, which is a derivation of the Brenta, brought to Venice, and thus a constant supply is provided to all subscribers. There are reservoirs containing in all 10,000 cubic metres, and the water, under a pressure of three atmospheres, can be delivered to a height of 20 metres. The charge is 60 centimes per cubic metre; but on a very large quantity a reduction is made. There are also 115 public wells where this water is supplied gratuitously. Thus there is no need to fear that the water supply will run short, and in that sense an improvement has been accomplished. Nevertheless, it would have been much safer to have continued to rely on the old system. It suffices to say, not to mention other sources of contamination, that the new water supply receives all the dejections of the town of Padua, with its 47,000 inhabitants. Loud and angry protests have been made against the introduction of water from such a source. Several practitioners have assured me that typhoid fever has notably increased since the new water supply, though I was unable to obtain any statistics either to confirm or to disprove this assertion. The authorities, on their side, assure me that the canal was watched by troops during the cholera epidemic; this precaution, however, would not prevent the town of Padua draining into the Brenta. The best thing that can be said is that it is proposed to alter the source of the water supply, and the municipal authorities believe this indispensable reform will soon be accomplished. There is, however, a tendency to procrastination, and strong public pressure must be brought to bear on this all-important point.

To account for the presence of typhoid fever, however, one is not limited to the water supply. The domestic arrangements are ingeniously contrived to produce the utmost possible mischief. An opportunity was procured me of visiting several houses where cases of typhoid fever had occurred. In one instance, the father, mother, grandmother, and two children lived in one ground-floor room. The flooring had sunk a little below the level of the street, and there were traces of dampness. In the furthest corner of the room there was a sink and a small marble seat. On lifting up the lid of this seat there was seen below it a square masonry shaft. The rough broken pieces of stone or brick were covered with fæcal matter. There was no closet pan, no pipe, only a plain square masonry shaft, and this in a bedroom and living room occupied by five persons! From the sink a pipe went in to this drain and brought back its foul odours. Down this hole the dejections of the typhoid patient were thrown, without any precautions whatever being taken, and without any attempt being made to disinfect them. Over this open drain hung buckets containing water, and round about was the food of the family. When the buckets are empty, they are taken from within a foot or two of a drain soiled with the dejections of a typhoid patient, and thrown down into the public wells and refilled. During the cholera epidemic, the municipality provided buckets and ropes to the public wells, and appointed guardians to watch and prevent persons contaminating the water by casting down their own buckets and ropes. This excellent precaution is now neglected; in fact, I have not seen it applied at any one well, though, of course, I did not visit all the 115 public wells and fountains of Venice.

In another house, where a better class of working men lived, sharing several rooms, and in nowise suffering from overcrowding, I found exactly the same utter want of proper sanitary accommodation. In the kitchen, by the fire, side by side, stood the sink for washing dirty dishes &c., and a marble seat with a circular hole opening into a brick or stone shaft. No pan, no valve, no pipe; as for traps or syphons, of course they were totally out of the question. The closet seat, if such it may be called, was not even walled off from the rest of the kitchen, and, together with the sink-pipe, poisoned the atmosphere of the room. Here also the water buckets stood or were suspended within a few inches of this fever-breeding drain. On inquiry I was informed this was no exceptional case, and that the arrangements of the other houses were the same. The inhabitants were utterly astounded by my questions and investigations. The idea that such things could in any way affect their health had never dawned upon them. This foulness and neglect on the part of the authorities was all the more lamentable as in other respects the homes of the poor are very superior to the habitations of similar classes in the large towns of England. It was impossible not to admire the cleanliness of the bedding, the order of the rooms, the simple neatness of the furniture, the sobriety of the inhabitants, and the care they took of their home. In

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English workman with twice the income could not make half so good a show. That so worthy a population should be allowed to fall victims to a great number of diseases for want of properly constructed waterclosets and waste water pipes is absolutely inexcusable. This is a criticism, however, that does not apply specially to Venice, but also to a number of other Italian towns, and it will be necessary to revert again to the question of domestic drainage in Italy.

In the meanwhile, and so far as the public sewers or drains of Venice are concerned, these afford special advantages. They are very short, and do not communicate one with the other. Houses possessing wells adjoining a canal drain directly into the water. Those situated in the small bye streets drain into a small sewer built under the street. These sewers are constructed below the water level, and are therefore always quite full of canal water. They constitute, in fact, huge syphons. A few houses have cesspools, but this is exceptional. It will be seen, therefore, that the interiors of the houses are not exposed to the ingress of sewer air generated throughout the town. The nuisance is always a local one, and does not come from any distance. The main difficulty arises from the fact that some of the canals are not affected by the tide. The water therefore becomes very foul, and this is still worse with respect to the small water-logged sewers in the bye streets. Some method of flushing these must be contrived; and with a little engineering skill, and the assistance of the flow of the tide in the neighbouring canals, this should not be impossible. The fact also that the water is salt is, of course, a great protection; but even salt water, in time, becomes foul, and measures for its renewal must be taken. If this were done, and a house-to-house visitation instituted for the purpose of destroying all the drain shafts—I cannot call them pipes—such as I have described, Venice would be one of the most favoured towns in Europe. There is no necessity for cesspools or sewers, therefore no need to endure all the dangers of sewer air; but proper closets must be provided for the houses, and in the meanwhile all foul drains should be destroyed. In some houses there are no drains whatsoever—deep vases are employed and emptied straight into the canal. This is infinitely better than a masonry shaft, which retains on its rough sides the greater part of the soil, and thus permanently infects the surrounding atmosphere.

Of course in some of the better houses English water-closets have been introduced; but I very much question the soundness of the pipes into which they drain, and in any case this only affects a very small part of the population of Venice, though it comprises a large proportion of English visitors. Domestic drainage and the water supply are the two greatest stumbling-blocks to the prosperity of Venice. If the town could be improved in this respect, the number of visitors would be greatly increased and the fears of epidemics disappear. For three years Venice has suffered severely from the absence of its usual visitors, who felt that the town was not safe when cholera was at hand. Indeed, the list of epidemics shows that in 1835 there were 661 cases of cholera and 359 deaths; 3519 cases and 1453 deaths in 1836. In 1837 there were again 344 deaths. Twelve years later, in 1849, the cholera returned to Venice, and there were 6642 cases and 3839 deaths. In 1854 an epidemic commenced, and 86 cases are noted, with 59 deaths, which augmented the following year to 1208 cases and 708 deaths. In 1866 there were 202 cases and 125 deaths, and in 1867 508 cases and 333 deaths. In 1873 some 800 cases and 459 deaths were recorded, and finally we have last year's epidemic. There were also small-pox epidemics in 1870-71, in 1880-81, and in 1884-85. It will be seen, therefore, that measures for the prevention of zymotic diseases are urgently required, and that, in defence of public health and public interests, it is necessary to call attention to these questions.

Venice, Nov., 1887.

EGYPT.

(From our own Correspondent.)

THE SCHOOL OF MEDICINE.

THE Ministry of Public Instruction has recently made some important changes in the management of this school. Instead of nearly all students receiving their medical education gratuitously and living in the school at Government expense, the present scheme provides for 100 paying and 100 non-paying students, and forty holders of annual scholarships. After the present generation of students none will be admitted gratis. The scholarships are given after competitive examination to poor youths, and consist of £25 a year, besides immunity from school fees. This is already a great advance upon the time when, forty years ago, Mahomet Ali Pacha had to fill his schools by bringing in children by force and locking them up as prisoners. Much greater care is being taken in the preliminary education of boys for the eight years before they commence the study of medicine, and it is reasonably hoped that in a few years we shall have a much better educated class of young doctors. These reforms are chiefly due to the activity and intelligence of Yacoub Pacha Artin, the Armenian Under Secretary of State for Education. At the Medical School there are now thirteen native professors, two assistant professors, one Syrian to teach English, a Levantine curator of the museums, and several natives for purposes of minor teaching. Several new laboratories have been constructed, but unfortunately the old dissecting-room has been demolished before the new one has been begun, so that there will be no practical anatomy for this winter. Clinical work in the wards is beginning to be carried out, but it is at present chiefly in the form of bedside lectures. During the last five years ten books have been written in Arabic by the professors, the matter being mostly culled from some well-known French author. The books include Zoology, Inorganic Chemistry, Mineral Chemistry, Medicine, Auscultation and Percussion, Diseases of Children, Materia Medica, Midwifery, Diseases of Pregnant Women and Children, and Legal Medicine. No less than six of these ten volumes bear the name of the director of the School, Issa Pacha Hamdy. A work on Anatomy is now in the press, and contains some very good plates. It is greatly to be regretted that insuperable jealousy prevents the use of Gray's Anatomy, which was translated into Syrian Arabic by the American Mission at Beyrout. Three young Egyptians have lately returned here with the M.D. degree of Paris, and have been given appointments in the Sanitary Department. There are now three medical students at Montpellier and one in Paris, who, like those just mentioned, are being educated at the expense of the Egyptian Government. Students are never sent to London on account of the expense, and it is several years since any were sent to Edinburgh from here.

GOVERNMENT SCHOOLS IN GENERAL.

Twelve schools are now placed formally under medical charge of a native oculist and other medical men. In consequence of their reports it has been determined to close all schools during August and September, it being found that the children suffered most during those months from diarrhœa and the heat of the weather. Gymnasiums and military instructors have also been provided in order to improve both *physique* and *morale* of the children. Until quite lately evening studies were carried on with only one candle for six boys, but lamps have now been provided which give a light equal to twenty candles to every six boys. It is hoped that this, together with other sanitary improvements, may help to diminish the eye disease which is still very rife among the scholars. Among minor details, wooden plank beds with wool mattresses have given way to iron beds and spring mattresses. A more important question is the due filtering of Nile water and attempts to lessen the cases of Bilharzia hæmatobia. Little can be done until the children are taught the elements of hygiene and cease to believe that unfiltered water is more healthy than after it is rendered colourless. The following numbers show a decided improvement in the ophthalmia of the various schools:—

Percentage of diseases.	Digestive canal.	Eye.	Respiratory.	Urinary.	Skin.	Various.
1884	29	58·0	12·0	2·0	2·4	8
1885	25	29·0	8·0	1·8	1·0	9
1886	46	23·7	5·9	3·9	3·0	22

THE LATE VALENTINE BAKER PACHA.

The Egyptian police, and a very large circle of admiring friends here and elsewhere, are now mourning the sudden death of General Baker. As some inaccurate accounts

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of his decease have been telegraphed it may be well here to give the correct version. Upon Nov. 5th the General left Cairo for Port Said to meet his daughter, who was arriving from England. For the next four days he suffered from very slight fever, possibly of malarial origin. He had no fever after Nov. 9th, and then spent six days at Suez convalescent. The fever is only mentioned here to show that it had nothing to do with his death. Upon the 16th inst. he steamed up the Canal in a police launch from Suez towards Tel-el-Kebir, and after a quiet day and a light dinner he went to his cabin apparently quite well at 10.30 P.M. At 2 A.M. he called his daughter, complaining of intense pain in the left chest and back, and stating that he had had no sleep on account of the mosquitoes. The pain was of a very oppressive nature, and increased in severity in spite of fomentations, stimulants, liniments, and a small dose of chlorodyne, administered by the ladies present. Pain was also present in the left shoulder and arm, and it was then remembered that the General had complained of this symptom for two days previously. A great sense of faintness, dyspnœa, lividity of face and hands were also noted, and at 5 A.M. death occurred quite suddenly. His sufferings for three hours were very acute, but were borne with uncomplaining fortitude. His ordinary medical attendant was at once telegraphed for from Cairo, and had no difficulty in certifying angina pectoris as the cause of death. The General had had no previous attack of angina, but it was suspected that he had fatty degeneration of the muscular tissue of the heart. During the past two years he had had some sudden attacks of faintness without apparent cause, inability to take rapid exercise on foot or on horseback, and several minor symptoms, which the patient himself thought to be dyspeptic. No valvular disease had ever been discovered, but he had a weak first sound of the heart. His friends, who, like the writer, had witnessed his untiring activity ten years ago during the Russo-Turkish war, had not failed to notice an ever-increasing physical inertia, though his mind retained to the last an able, statesmanlike grasp of every subject submitted to him. He and his family had suffered much while in Egypt. It will be remembered that in the spring of 1884 he was severely wounded at the battle of El Teb, and upon this occasion he remained six hours in the saddle, with a grape-shot weighing four ounces lodged deeply under his right eye. A year later his wife died at Assouan of a relapse during enteric fever, and his elder daughter also succumbed to severe ulceration of the great intestine during convalescence from enteric fever in Cairo. His only remaining child contracted the disease from the same insanitary house, and recovered after a severe attack.

SIMPLE CONTINUED FEVER.

This fever in Cairo has not yet disappeared, but the cases now occurring are of a much milder type, as if at the end of an epidemic. There are two classes of cases—those apparently due to malaria, and well known as sporadic cases every autumn in Egypt, and others associated with a slight erythema of face, fleeting sore-throat, and desquamation of the hands and face. These eruptive cases are very like scarlatina, and are very probably an extremely mild and innocuous variety of dengue.

Cairo, Nov. 21st.

NEW YORK.

(From our own Correspondent.)

CHOLERA IN NEW YORK HARBOUR.

ON Sept. 23rd the ship *Alesia*, from the Italian ports of Palermo and Naples, arrived in the harbour of New York, after a voyage of twelve days. She had on board 560 passengers, and had lost by cholera on the voyage six other passengers. Of those on board, thirty-five were subsequently affected with cholera at quarantine, of whom nineteen died. On arrival the passengers were landed at Hoffman Island, where they were detained under observation, and the sick were sent to Swinburn Island. It is necessary to state that the New York quarantine establishment consists of: (1) The residence of the Health Officer on Staten Island; (2) Hoffman Island, an artificial island, originally constructed for the storage and disinfection of cargo; (3) Swinburn Island, with its hospitals for the cure of the sick, and until recently (4) a floating hospital for yellow fever. This latter vessel has been removed. The passengers of the *Alesia* were first transferred from the vessel to Hoffman Island, which was in a state of wretched dilapidation. Having been partially fitted with two storehouses for goods, it had not been occupied for many years, and had consequently been allowed to fall into decay. The accommodation for passengers was of a most imperfect kind, and it is not surprising that new cases of cholera continued to occur. There was no proper isolation of the sick from the well, any more than there was on shipboard, and the disease finally died out. The passengers were detained, however, for about two months, though the ship was cleansed and allowed to proceed to her destination. Two weeks after the arrival of the *Alesia*, the *Britannia*, of the same line, arrived, and was detained at quarantine, where cases of cholera developed among her passengers, who are at present under observation. No case of cholera has now occurred for upwards of two weeks, and it seems quite certain that the last germs have been destroyed. The arrival of cholera at our port will prove useful, for it has stimulated proper inquiry as to the condition of our quarantine system and its value. The exposure of this country to direct importation of the infection is very great. There are three lines of steamers between the infected Italian ports and this port, which bring thousands of immigrants, who, in general, represent the lowest class of the populations of those cities. Though our quarantine has undoubtedly prevented the immediate landing of immigrants with their infected clothing, and thus saved the country from the threatened invasion, yet the fact has now been demonstrated that the quarantine of this port is altogether unfit for its purpose. Efforts will be immediately taken to have the entire establishment placed in working condition, so that cargo can be rapidly handled, passengers separated and supervised, and the sick promptly treated. The condition of the New York quarantine naturally interests the Western States quite as much as it does New York, for the great mass of immigrants now arrive with railroad tickets in hand, and hence pass on directly to their destination, which is usually some city of the "Far West." It is in western cities, a thousand miles west of New York, where they first unpack their clothing and household goods packed in their Italian homes. Hence it is that the western States manifest such interest in the quarantine of this port.

AMERICAN PUBLIC HEALTH ASSOCIATION.

This body, now one of the most important national associations, has just completed its fifteenth annual session at Memphis, Tennessee. The session was occupied chiefly with questions relating to practical work of the various health boards of the country. The president, Dr. Sternberg, had just returned from Brazil, where he had been investigating the claims of Freire and Valle to the discovery of the germ of yellow fever. He did not indicate the results of his inquiry.

ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council, held on Thursday, the 8th of December, the Minutes of the Council of the 10th of November were read and confirmed.

As recommended by the Museum Committee, the appointment of Pathological Curator was postponed, and the services of Mr. Eve are retained until Midsummer-day next. An additional assistant is to be appointed in the pathological department of the museum to assist in procuring, examining, and preparing pathological specimens, at a salary at the rate of £150 a year; and he will be required to devote to the duties of the office from five to six hours per diem. The three new work-rooms on the fourth floor are to be devoted to pathological investigation by Fellows and Members of the College under the control of the Museum Committee. (This is not intended to include experiments on animals.)

On the report of the Committee of Management, it was agreed that the University of Otago, Dunedin, New Zealand, be recognised as fulfilling the requirements of the Board in regard to professional study for the diplomas of the two Colleges.

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The sixth report, dated Nov. 29th, 1887, of the Committee on the Extension of the College premises, was adopted. The committee recommend the Council to authorise an expenditure of £1179 in providing additional accommodation and fittings for the Library.

Mr. Christopher Heath was re-elected a member of the Court of Examiners in Surgery.

The best thanks of the Council were given to Sir James Paget and Sir Joseph Lister for the delivery of the Morton and the Bradshawe Lectures respectively, and they were requested to publish them.

The Secretary reported the receipt from Messrs. Lawrance, Graham, and Long of the portrait by Richmond of the late Mr. Quain, bequeathed by him to the College. The bust of Mr. Quain, by Woolmer, offered by Miss Dickinson, was accepted with thanks by the Council.

A letter of the 23rd ult. from the Lords of the Privy Council, forwarding a copy of the statement relating to the Supplemental Charter prepared by the Association of Fellows, and requesting to be favoured with any remarks thereon which the Council may have to offer was read, and it was referred to the President and Vice-Presidents to report to the Council at an extraordinary meeting of the Council to be held on Thursday, Jan. 5th.

A letter of the 15th ult. from Mr. Wyndham A. Bewes was read, submitting to the Council the draft of a section which it is proposed to introduce into a Bill for the suppression of indecent publications and advertisements, and inquiring whether the same will meet with the support of the Council. The following resolution was passed: "The Council do not feel prepared to express an opinion on the subject of the proposed section."

Letters from a medical officer of the army were read, requesting the support of the Council on behalf of the officers of the Army Medical Department in their endeavour to obtain military rank and status. The following resolution was passed thereon: "That the Council, whilst feeling an interest in the officers of the Army Medical Department, are not prepared to express an opinion on the questions submitted to them."

The following motion, brought forward by Mr. Hutchinson, seconded by Mr. Bryant, was carried: "That it be referred to a committee to consider and report to the Council on the desirability of altering the regulation relating to the procedure in the election of members of the Court of Examiners, in order that the same may be modified so as to secure that no one be elected unless he receive the votes of a majority of the members of the Council present at the meeting."

The following resolution was also passed: "That, in the opinion of the Council of the Royal College of Surgeons, it is most objectionable that Fellows and Members of the College should allow their names to be advertised in connexion with medical or surgical subjects in popular journals."

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members having passed the final examination for the Fellowship on Nov. 24th, 25th, 26th, and 27th, 1887, were at a meeting of the Council, held on Thursday, Dec. 8th, duly admitted Fellows of the College:—

Taylor, H. H., L.R.C.P.Lond., Consumption Hospital, Brompton; date of Membership, July 22nd, 1880.
Waldy, J., L.R.C.P.Lond., Green-pk., Darlington; July 18th, 1882.
Townsend, S. Chapman, Burleigh-st., Strand; Nov. 14th, 1883.
Thomas, D. L.R.C.P.Lond., Cefnbanal, Tregaron, Aberystwith; April 23rd, 1884.
Murray, G. A. Everett, L.R.C.P.Lond., Chelsea-gardens; April 28th, 1884.
Roberts, J. Reid, M.B.Durh., Suez, Egypt; July 28th, 1884.
Cropley, H. L.S.A., The Hospital, Rotherham; Aug. 6th, 1884.
Smith, F. J., M.B.Oxon, West-st., Finsbury-circus; April 28th, 1885.
Shadbolt, Lionel Pierrepont, L.R.C.P.Lond., Beechcroft, Chislehurst; Aug. 5th, 1885.
Hawkins, F. Stanhope, M.B.Oxon, Trinity-sq.; July 26th, 1886.
Middleton, A. Hancock, M.D., Q.U.I., Athgo-park, Shankill, co. Dublin; January 17th, 1887.

Two other candidates passed the examination, but not having attained the legal age (twenty-five) will receive their diplomas at future meetings of the Council. Three were referred for six months and sixteen for one year.

The following gentleman having undergone the necessary examination in Surgery for the diploma, and, having since obtained a medical qualification was at the same meeting admitted a Member of the College:—

Cunningham, J., L.S.A., Rudgrave-place, Egremont, Cheshire.

At a meeting of the Council of the College on Thursday, the 8th inst., the following gentlemen were elected Examiners under the Combined Scheme for the ensuing year:—*First Examination:* Elementary Anatomy—Messrs. Ballance, Bruce Clarke, Arthur Hensman, W. Arbuthnot Lane, and Charles Stonham. Elementary Physiology—Edwin Hurry Fenwick and William Dobinson Halliburton. *Second Examination:* Anatomy—Messrs. W. H. Bennett, Rickman John Godlee, F. Howard Marsh, and Edmund Owen. Physiology—Messrs. Golding-Bird, B. Thompson Lowne, and Jeremiah McCarthy. *Third Examination:* Midwifery—Drs. William Duncan, Walter Spencer Griffith, George Ernest Herman, John Baptiste Potter. *First Fellowship Examination:* Anatomy—Messrs. Wm. Anderson, Davies-Colley, Rickman J. Godlee, Henry Morris, and Edmund Owen. Physiology: Messrs. Golding-Bird, Benjamin Thompson Lowne, Jeremiah McCarthy, and Gerald Francis Yeo.

ROYAL INSTITUTION OF GREAT BRITAIN.—Mr. and Mrs. Victor Horsley, and Mr. George Lindsay Johnson, have been elected Members of the Royal Institution.

THE governors of the Essex and Colchester Hospital have decided to appoint a paid physician to that institution, at a stipend of £200 a year.

MEDICAL MAGISTRATE.—The name of Mr. G. A. Phillips, M.R.C.S., L.S.A., has been placed upon the Commission of the Peace for the borough of Walsall.

THE death is announced of Mr. John Benjamin Dancer, a Manchester optician, who, it is stated, constructed the first thermometer made in England with any pretensions to accuracy.

SCARLATINA is reported to have broken out among the boys of the *Impregnable* training ship to such an extent that orders have been given countermanding the Christmas holidays, and all the boys have been prohibited from leaving the ship.

HOSPITAL SATURDAY.—On Saturday, Dec. 3rd, the annual Hospital Saturday collection was made for the benefit of the Wolverhampton and Staffordshire General Hospital and of the Wolverhampton Eye Infirmary. For the latter the sum of £226 14*s.* 9*d.* was received, and for the former £1526 1*s.* 2*d.*, being an excess of last year's collection of £210.

THE DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and students of the Dental Hospital and School of Dental Surgery was held on the 3rd inst., Mr. G. Gregson in the chair. Amongst those present were Sir Edwin Saunders, Dr. Julius Pollock, Dr. Pearce Gould, Mr. Morton Smale, Mr. R. Hepburn, Mr. Underwood, and Mr. J. F. Pink (Secretary).

THE SMALL-POX EPIDEMIC AT SHEFFIELD.—During last week forty-two fresh cases of small-pox were removed by the ambulance to the Winter-street Hospital. Thirty-two convalescent patients were also conveyed to Totley. Altogether, during the week, 106 patients, either suffering or convalescent from the disease, were moved to or from the two hospitals in the borough ambulances, under the direction of Dr. Willey.

SANITARY INSPECTORS.—A meeting of the Association of Public Sanitary Inspectors was held on the 3rd inst. in the Westminster Town Hall, under the presidency of Mr. J. H. Alexander, chief sanitary inspector for Shoreditch. It was unanimously resolved to hold the third provincial meeting in Liverpool. Dr. Collingridge, medical officer of health of the Port of London, delivered an address on the Duties of Port Inspectors of Nuisances. A discussion followed.

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VACCINATION GRANTS.—Mr. H. T. Woodd, Calstock, Cornwall, and Mr. George Fisher, Shere, Surrey, have been awarded the Government grant for efficient vaccination in their respective districts, the latter for the fifth time.

SMALL-POX IN SPAIN.—For some time past an epidemic of small-pox has been spreading in Spain. Vaccination is not compulsory, and large numbers of the poorer classes in the towns and rural districts have never been vaccinated. In the first twenty days of November, according to official statistics, 200 deaths from the disease have taken place in Madrid alone, which has a population of about half a million. The majority of cases are under treatment in the civil hospital, but about forty cases have occurred among the troops.

BEQUESTS.—The late Miss M'Keller has left £2000 each to the following hospitals:—The London Hospital, St. Thomas's Hospital, St. George's Hospital, the Westminster Hospital, Charing-cross Hospital, St. Mary's Hospital, and the National Hospital for the Paralysed and Epileptic. At a quarterly court of the governors of the Brompton Consumption Hospital on the 24th ult. the following legacies were announced:—General Ramsey, £200; Major Hooper, £500; Miss M'Keller, £1000 (reversionary); Mrs. Cook, £1000; Miss Hore, £250; Mrs. Pownall, £200; and Mrs. Levien, £500 (duty free). The late Mr. James Wishart, of Leith, has bequeathed £300 to the Edinburgh Royal Infirmary and £250 to the Leith Hospital.

THE SURGICAL AID SOCIETY.—The annual meeting of this Society was held at the City Terminus Hotel on Wednesday last, the Lord Mayor presiding. His Lordship, in congratulating the supporters of the Society on its prosperous condition after the completion of a quarter of a century, stated that the average number of patients assisted each week was 142, the total for the year being 7394, as against 6412 in the previous year. Last year 10,400 surgical appliances had been given to the poor, and the total number distributed since 1862 was 689,704. The annual report gave a very encouraging account of the work of the Society.

BRITISH MEDICAL BENEVOLENT FUND.—The monthly meeting of this useful charity was held on the 29th ult., when there were twenty-six applicants for grants; and the balance at the disposal of the committee would have been overdrawn but for the opportune donation of £20 by an old and valued subscriber. The sum of £142 was voted away to fourteen applicants, and two cases were postponed for further inquiries. Two cases merit mention. In one, a paralysed medical man had a wife and six children entirely dependent upon him, and the sum of £13 was voted and ordered to be sent in weekly instalments of 10*s.*, with leave to apply again in six months; and in the other, a grant was made to enable a widow to obtain needful change for a son suffering from phthisis.

PRESENTATIONS.—On Friday, Dec. 2nd, Dr. Bell, senior medical officer of the Bradford Eye and Ear Hospital, was presented with a large and admirable portrait of himself, which had been subscribed for by a number of gentlemen. The Mayor of Bradford, who made the presentation, said that he was exceedingly glad to act as the mouthpiece of those who thus desired to show their appreciation of the Doctor's unstinted services to the hospital for over thirty years. Dr. Bell, in returning thanks, referred to the constant growth of the hospital, which he attributed to the earnestness of the committee and of the staff. He hoped the portrait might remain in the hospital, which had been the scene of the best part of his public work. Sir Jacob Behrens said the committee accepted the portrait with the greatest pleasure.—Dr. R. Lawson Roberts was on the 23rd ult. presented with a silver salver by the workmen of the New British Iron Company's Wynnstay Colleries, Acrefair Ironworks, and Plasynwerm Brickworks, as a token of their regard and appreciation of his services as the medical officer of the works.

VACCINATION IN EASTBOURNE.—The Local Government Board recently called upon the guardians of the Eastbourne Union to explain the delay attending certain vaccination prosecutions. The guardians have, in their reply, referred the cause to the opposition to the compulsory clauses of the Act on the part of the working classes, to the spread of anti-vaccination literature in the shape of leaflets, to illness amongst infants, and to the removal of families from one district to another.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
Practical Manual of Diseases of Women and Uterine Therapeutics. By H. Macnaughton Jones, M.D., &c. Third Edition. pp. 550, Illustrated.
Proceedings of the West London Medico-Chirurgical Society. Vol. II. Edited for the Council by H. C. Pope and H. P. Dunn. pp. 132.
On Transfusion of Blood and Saline Fluids. By C. B. Jennings, F.R.C.S., M.S., M.B. Third Edition. pp. 133.

BLAKISTON & SON, Philadelphia.
Transactions of the American Surgical Association. Vol. V. Edited by J. Ewing Mears, M.D. pp. 386.

BRAUMULLER, W., Wien.
Jahres-bericht des Wiener Stadtphysikates über seine Amtsthätigkeit. XV. und XVI. S. 1056.

CASSELL & Co., London, Paris, New York, & Melbourne.
Ophthalmic Surgery. By R. B. Carter, F.R.C.S., and W. A. Frost, F.R.C.S. (Clinical Manual). pp. 554, with Chromograph and 91 Engravings.
Vaccination Vindicated; being an Answer to the Leading Anti-vaccinators. By John McVail, M.D., D.Ph.Camb. pp. 176.

CHURCHILL, J. & A., New Burlington-street, London.
Collective Essays on Preventive Medicine. By Wm. Squire, M.D., F.R.C.P.
On Glycosuria. By Wm. Squire, M.D., F.R.C.P.

CLARENDON PRESS, Oxford.
Translations of Foreign Biological Memoirs. I.: Memoirs on the Physiology of Nerve, of Muscle, and of the Electrical Organ. Edited by J. Burdon-Sanderson, M.D., F.R.S. pp. 553.
Annals of Botany. Edited by J. B. Balfour, M.A., M.D.; S. H. Vines, D.Sc., and W. G. Farlow, M.D. Vol. I., No. 2. 7s. 6d.

COHEN & SOHN, Bonn.
Medianschnitt einer Hochschwangeren bei Steisslage des Fötus. Von Prof. W. Waldeyer. Mit 3 Holtzschnitten und einem Atlas von 3 Tafeln.

CORNISH BROTHERS, Birmingham.
Pathology and Treatment of Abortion. By Leslie Phillips, M.D. pp. 113.

GINN & Co., Boston, U.S.A.; W. P. COLLINS, Great Portland-street, London.
Journal of Morphology. Edited by C. O. Whitman, with the co-operation of H. P. Allis, jun. Vol. I. Number 1. pp. 226.

GRIFFIN, C., & Co., Exeter-street, Strand, London.
Foods: their Composition and Analysis. By A. Winter Blyth, M.R.C.S., F.C.S. Third Edition. pp. 640, with numerous tables and Illustrations.

GRIFFITH, FARRAN & Co., St. Paul's Churchyard.
The Bombay Materia Medica and their Therapeutics. By Rustomjee Naserwanjee Khory, M.D. Brux. pp. 600—xxxix. 16s.

HART, H., Oxford.
Miscellanea Medico-Chirurgica. Part II. By H. L. Hussey, F.R.C.S. pp. 58.

JAGO, W., Brighton.
The Chemistry of Wheat, Flour, and Bread, and Technology of Breadmaking. By Wm. Jago, F.C.S., F.I.C. pp. 474.

KEGAN PAUL, TRENCH & Co., Paternoster-square.
A Manual of the British Discomycetes, with Descriptions of the Species of Fungi. By Wm. Phillips, F.L.S. pp. 462, with Illustrations.

KENT & Co., Paternoster-row.
Illustrations: a Pictorial Review of Knowledge. Conducted by F. G. Heath. pp. 380, with 400 engravings.

KIMPTON, R., Wardour-street, London.
A Practical Manual of Venereal Diseases, including Disorders of Generation. By M. K. Hargreaves, M.D. pp. 171. 5s.

LIVINGSTONE, E. & S., Edinburgh.
Manual of Materia Medica and Therapeutics. By William Craig, M.D., C.M.Ed., &c. Fifth Edition, revised and enlarged. pp. 469.

LONGMANS, GREEN, & Co., Paternoster-row, London.
Athletics and Football. By Montague Shearman. With a Contribution on Paper-chasing by W. Rye, and an Introduction by Sir R. Webster, Q.C. pp. 410, with Illustrations. 10s. 6d.

MURRAY, JOHN, Albemarle-street.
Too Late for Gordon and Kartoum. By Alex. Macdonald, F.R.G.S. pp. 359, with maps and plans.
Life and Labour, or Characteristics of Men of Industry, Culture and Genius. By S. Smiles, LL.D. pp. 474.
The Life and Letters of Charles Darwin, including an Autobiographical Chapter. Edited by his Son, Francis Darwin. Second Edition. Three Vols. pp. 395—393—418, with portraits.

PIESSE & LUBIN, New Bond-street, London.
Olfactics and the Physical Senses. By C. H. Piesse. pp. 157.

RAMLOT, E., Bruxelles.
Goutte, Gravelle, leur Complications et leur Traitement rationnel. Par le Dr. J. Boichox. pp. 401.

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SAMPSON LOW, MARSTON & Co., Fetter-lane, E.C.
Are Epidemics Contagious? By John Parkin, M.D., F.R.C.S. pp. 146.
The Volcanic Origin of Epidemics. Sequel to the above. By John Parkin, M.D., F.R.C.S. pp. 146, with map.

SMITH, ELDER, & Co., Waterloo-place, London.
Transactions of the Pathological Society of London. Vol. XXXVIII. pp. 511, with plates. General Index to the Transactions for Vols. XXVI. to XXXVII. pp. 204.

SWAN SONNENSCHEIN, LOWREY, & Co., Paternoster-square, London.
The Microscope in Theory and Practice. Translated from the German of Profs. Carl Naegeli and Schwendener. pp. 382, with numerous Illustrations.

WASHINGTON GOVERNMENT PRINTING OFFICE.
Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Vol. VIII.: Authors and Subjects—Legier—Medicine. pp. 1078.

WOOLMER, T., Castle-street, E.C.
The Creator, and what we may Know of the Method of Creation. The Fernley Lecture, 1887. By W. H. Dallinger, LL.D., F.R.S. pp. 83. 2s. 6d.

A Contribution to the Sectional Anatomy of Advanced Extra-uterine Gestation; by D. Berry Hart, M.D., and J. D. Carter, F.R.C.S.Ed. (Oliver and Boyd).—**Vauclin and other Verses**; by J. C. Grant (E. W. Allen.—**The Hospitals of Paris**; by J. B. James, M.R.C.S. (Bale and Sons).—**Comparison between the Recuperative Bodily Power of Man in a Rude and in a highly Civilised State**; by George Harley, M.D., F.R.S. (Harrison and Son).—**The American Journal of Psychology**; edited by Prof. G. Stanley Hall (Murray, Baltimore).—**On Glycosuria and other Renal Signs of Disordered Nutrition with the Treatment of Diabetes**; by Wm. Squire, M.D. (Churchills.—**Index Medicus, Vol. IX., No. 10.**—**Mitteilungen aus der Medicinischen Facultät der Kaiserlich-Japanischen Universität**; Band I., No. 1 (Tokio).—**Auto-centricism**; by R. Lewins, M.D.; edited by H. L. Courtney (Stewart, Farringdon-street).—**Four Months among the Surgeons of Europe**; by H. Senn, M.D., Ph.D.—**To what Extent can we Classify Vesical Calculi for Operation?** by A. Venderveer, M.D.—**The Italian Registers**; by Fred. Helmore (Masters, New Bond-street).—**Dead, yet Speaketh**; by Dr. Saks (Arrowsmith, Bristol).—**Experimental Study of the Effects of Puncture of the Heart in cases of Chloroform Narcosis**; by B. A. Watson, M.A., M.D. (Philadelphia).—**Filarias encontradas no Coraçio Humano Filariose de Wucherer**; pelo Dr. P. S. de Magalhaes.—**A Complete Series of Sketches in relation to the Petite Culture System and the Working of the Allotments Act, Issued by the Council of the Engineering and Sanitary Association.** 1s.—**Précis du Cours d'Exploration Clinique et de Diagnostic Médical professé à l'Université de Bruxelles**; par le Dr. E. Spehl (1887-88).—**Die Historische Entwickelung der Heilmittellehre**; von Dr. Oscar Liebreich.—**Magazines for December**: Good Words, Sunday Magazine, Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Scribner's Monthly (Christmas Number).—**Wiener impfgegnerische Schule und die Vaccinationsstatistik**; von Dr. J. Körösi (Vieweg und Sohn, Braunschweig).—**Some Observations on Headaches in Children and their Relation to Mental Training**; by W. H. Day, M.D. (Churchills).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABRAHAM, P. S., M.A., M.D.Dub., F.R.C.S.I., B.Sc. Lond., formerly Examiner in Physiology at the Royal College of Surgeons, Ireland, has been appointed Lecturer on Physiology and Histology at the Westminster Hospital Medical School, vice Heneage Gibbes, resigned.

ANNINGSON, BUSHELL, M.A., M.D.Cantab., M.R.C.S., has been reappointed Medical Officer of Health for the Cambridge Urban Sanitary District.

BANHAM, WILLIAM WILFRED, L.R.C.P. Lond., M.R.C.S., has been appointed House-Surgeon to the Sheffield Public Hospital and Dispensary, vice H. Lockwood, resigned.

BARBER, PERCIVAL ELLISON, B.A.Cantab., L.R.C.P.Lond., M.R.C.S., has been appointed Senior Assistant House-Surgeon to the Sheffield Public Hospital and Dispensary.

BOSTOCK, JOHN, M.R.C.S., L.S.A., has been appointed Medical Officer for the Leake District of the Loughborough Union.

BOTHAMLEY, R. BROUGHTON, M.R.C.S., L.S.A., has been appointed Medical Officer of Health to the Bromley (Kent) Urban Sanitary Authority.

CAMERON, MURDOCH, M.D., has been appointed Obstetric Physician to the Glasgow Maternity Hospital, vice Sloan.

COCKERTON, HERBERT, M.R.C.S., L.S.A., has been appointed House-Surgeon to the Boscombe Infirmary, Bournemouth.

DAKIN, WILLIAM RADFORD, M.D., B.S.Lond., M.R.C.P., has been appointed Obstetric Physician to Out-patients at the Great Northern Central Hospital.

FISHER, GEORGE, M.R.C.S., L.R.C.P.Ed., has been appointed Certifying Surgeon under the Factory Act to the District of Shere, Surrey.

KINGSFORD, E. C., M.R.C.S., L.R.C.P.Lond., has been appointed Junior House-Surgeon to the Bolton Infirmary and Dispensary.

MARTIN, J. W., M.D., M.Ch.Q.U.I., has been appointed Honorary Medical Officer to the Jessop Hospital for Women, Sheffield.

SANDERSON & O'RIORDAN, Messrs., have been appointed Surgeons to Messrs. Bolcklow, Vaughan, and Cauty's Steelworks and Blast Furnaces, South Bank, Loftus-in-Cleveland.

SLOAN, SAMUEL, M.D., has been appointed Consulting Physician to the Glasgow Maternity Hospital.

SNELL, WALTER STANNES, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health to the Okehampton Rural Sanitary District.

STACK, JOSEPH G. M. G., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer for the Gosberton District of the Spalding Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—House-Surgeon. Salary £80 per annum, with board and residence.

BIRMINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Board, residence, and washing.

BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Resident Clinical Assistants.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E. — Resident Clinical Assistant. Board and lodging, but no salary.

HOSPITAL FOR WOMEN, Soho-square, W. — Two Clinical Assistants in the Out-patient Department. Fee for the course of three months, £5 5s.

KING'S COLLEGE, London.—Professor of Dental Surgery and Surgeon-Dentist to the hospital.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, E.—Junior House-Surgeon. Salary £30 for six months.

POPLAR UNION.—Public Vaccinator for the Bow District.—Medical Officer for the Bow District. Salary £130 per annum, inclusive of all fees, the guardians providing medicines.

ROYAL ALBERT HOSPITAL, Devonport. — Assistant House-Surgeon. Board and lodging in the hospital, but no salary.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House-Surgeon.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Physician to the Out-patient Department.

UNIVERSITY OF EDINBURGH.—Additional Examiners in the Practice of Physic, Midwifery, Anatomy, and Chemistry. Salary in each case £75 a year, with an allowance of £10 a year for travelling and other expenses in the case of examiners not resident in Edinburgh or the immediate neighbourhood.

Births, Marriages, and Deaths.

BIRTHS.

BOLTON. — On the 21st ult., at Woodborough-road, Nottingham, the wife of Joseph S. Bolton, M.D.Edin., M.R.C.S.Eng., of a son.

BRAND.—On the 4th inst., at Invery, Driffield, East Yorks, the wife of Dr. Brand, of a daughter.

CARR.—On the 27th ult., at Devizes, Wilts, the wife of A. A. Carr, M.R.C.S., of a daughter.

JAKINS—On Sunday, the 4th inst., at 9, Osnaburgh-street, Regent's-park, the wife of Percy Jakins, M.R.C.S., of a son.

SAUL.—On the 29th ult., at Bedford-square, W.C., the wife of Wm. Saul, M.D., of a daughter.

WATSON.—On the 8th inst., at Wood-green, N., the wife of Solomon Geo. Watson, M.R.C.S., of a daughter.

MARRIAGES.

COGAN—MCVEAGH.—On the 1st inst., at St. Osburg's Church, Coventry, Surgeon-Major Thomas Sillery Cogan, Army Medical Staff, to Edith, youngest daughter of Dr. McVeagh, J.P., of The Quadrant, Coventry.

HOBBES—SCOTT.—On the 3rd inst., at St. Lawrence's, Alvechurch, C. E. Hobbes, L.R.C.P., M.R.C.S., L.S.A., to Marian, widow of the late A. C. Scott, of Weston-on-Avon, and daughter of the late Wm. Boulton, Esq., of Bordesley Hall, Worcestershire.

SHEPERD—SODEN.—On the 26th ult., at St. Paul's Cathedral, Calcutta, by the Rev. Arthur Kitchen, Albert Wilberforce Sheperd, L.R.C.S.I., L. & L.M.K.Q.C.P.I., M.C.P. & S.Man., Medical Officer, Disot Circle, Moriani Jorhat, Assam, India, to Elizabeth W. (Dillie), eldest daughter of C. J. Soden, Esq., H.M.C.S., G.P.O., of Dublin.

DEATHS.

FRENCH. — On the 4th inst., at Cunningham-place, N.W., John George French, F.R.C.S., formerly of Great Marlborough-street, aged 83.

HAWKINS.—On the 4th inst., at Woburn, Bedfordshire, Benjamin Lawrence Hawkins, L.R.C.P., M.R.C.S., late Army Medical Service, aged 57.

MARTIN.—On the 29th ult., at Melville-street, Edinburgh, M. J. Martin, M.D., late of Singapore.

PARKER.—On the 1st inst., at Kirkdale-road, Liverpool, Edward Parker, F.R.C.S.Ed., aged 68.

SMART.—On the 2nd inst., at The Firs, Harlesden, N.W., after a short illness, Sir William Richard Edwin Smart, K.C.B., K.L.H., M.D., Inspector-General (retired), R.N., Honorary Physician to the Queen, &c., aged 70.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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Medical Diary for the ensuing Week.

Monday, December 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

SOCIETY OF ARTS.—8 P.M. Mr. H. H. Statham: The Elements of Architectural Design. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. E. Hurry Fenwick: The Reflex Inhibitory Action of Cocaine.—Dr. B. W. Richardson: Acute Pulmonary Paresis.

Tuesday, December 13.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. W. Arbuthnot Lane: The Factors that Determine the Hypertrophy of the Skull in Mollities Ossium, Osteitis Deformans, Rickets, and Hereditary Syphilis.—Mr. J. Bland Sutton: A case of Neurotomy of the Third Division of the Fifth Nerve at the Foramen Ovale.

Wednesday, December 14.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. E. Klein: Some of the Infectious Diseases Common to Man and the Lower Animals.

HUNTERIAN SOCIETY.—8 P.M. Dr. Herman: On the Early Treatment of Extra-uterine Gestation.

HOSPITALS ASSOCIATION.—8 P.M. Dr. J. C. Steele: On the Registration of Nurses.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. A. D. Michael: A New Medium.—Mr. T. B. Rossster: Generative Organs of Ostracoda.—Mr. W. M. Maskell: On the Genus Micrasterias.

SOCIETY OF ARTS.—8 P.M. Sir Philip Magnus: Commercial Education.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M.—Specimens will be shown by Dr. Bedford Fenwick and Dr. Granville Bantock. Dr. Bedford Fenwick: On the Use of Bloodletting in Gynæcological Practice.—Dr. W. Chapman Grigg: Puerperal Convulsions, with Complete Blindness, lasting for several days.—Dr. Jas. H. Aveling: On the Diagnosis and Electrical Treatment of Early Extra-uterine Gestation.

Thursday, December 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

THE PARKES MUSEUM OF HYGIENE.—5 P.M. Mr. Shirley F. Murphy: Scarlet Fever.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Special Meeting. Professor Crookshank: Report of Investigation on a Disease of Cows, and its Relations to Scarlatina in Man.

Friday, December 16.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Mr. A. Wynter Blyth: The Contagion of Cancer. 8.30 P.M. Mr. G. Bischof: Extension of Time of Culture in Dr. Koch's Bacteriological Water Test by Partial Sterilisation, with Special Reference to the Metropolitan Water Supply.

Saturday, December 17.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 8th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 2	30·40	W.	48	46	65	52	42	...	Overcast
,, 3	30·21	W.	46	44	...	50	44	...	Overcast
,, 4	29·93	S.	47	44	...	47	42	...	Cloudy
,, 5	30·01	N.	39	37	52	44	37	·15	Cloudy
,, 6	29·62	S.W.	42	39	51	45	38	...	Overcast
,, 7	29·67	W.	36	34	53	41	32	·03	Fine
,, 8	29·78	S.W.	39	39	...	...	33	·03	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

"INQUEST EXTRAORDINARY."

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to give a short history of the facts in connexion with the post-mortem on the murdered body of Mr. Gold, in order to correct a slight inaccuracy in Mr. Thomas Bond's letter to you appearing in last week's LANCET, and to show that there is a basis of truth in Mr. Coroner Baxter's statement that "the medical men were unable to discover the aperture of entry of the bullet fired into Mr. Gold's body by the murderer Lefroy."

Mr. Gold's body was found in Balcombe Tunnel, and removed to the coach-house at the inn adjoining Balcombe station. Dr. Thomas Byass of Cuckfield saw the body, and was ordered to make the post-mortem examination. In this he was assisted by his son. In his evidence at the inquest, in answer to a question by the coroner, he stated that he could not find any bullet wound in the body. My evidence relating to Lefroy, his reception and treatment at the Brighton Hospital, was next taken, and the coroner then asked me to make an examination of Mr. Gold's body, with a view of finding a gunshot wound. I did so, and Dr. Byass was present at the examination, which was made in the coach-house before mentioned, with closed doors, and a policeman outside to keep the yokels away. The face and body were black with smoke, and much bruised and cut about. After considerable trouble, I found a very small, pinhole wound, a little above the angle of the right jaw. Dirt had settled round the roots of the closely-shaven hairs, so that it was impossible to make out any specks of powder there might be. Dr. Byass did not agree with me as to the causation of the wound, so I cut out a piece of the flesh surrounding the hole and took it away with me. Returning to the inquest room, I stated to the coroner that I had discovered a wound which I thought had been caused by the passage of a bullet. Dr. Byass stated that he did not agree with this opinion. The coroner thereupon asked me to have the skin carefully examined, and, having done so at the hospital the same evening, I informed him by letter that there was no doubt that the wound was gunshot. Next day I took the piece of skin to Scotland-yard, where it was seen by Mr. Bond, who also pronounced the wound as being gunshot. Next day the third examination of Mr. Gold's body was made by Mr. Bond, and I was present and assisted at his request. As he says in his letter to you, the bullet was found lying upon the body of the second cervical vertebra.

Apologising for the length of this communication,

I am, Sirs, yours faithfully,

Liverpool, Dec. 5th, 1887. B. HALL, M.B. Lond.

Dr. Joseph O'Connor.—Relief for the skin irritation in jaundice may usually be obtained by the free use of alkaline lotions, or lotions of carbolic acid, benzoic acid, or borax.

Mr. John J. Weaver.—Raynaud (Maurice): De l'Asphyxie Locale, et de la Gangrene Symétrique des Extrémités (Baillière et Fils, Paris, 1862).

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AN APPEAL TO THE PROFESSION ON BEHALF OF H. O. BAYFIELD, L.R.C.P.ED., L.F.P.S.G.

To the Editors of THE LANCET.

SIRS,—On Feb. 26th, 1886, an attempt was made to poison Mr. Bayfield's wife's mother, at that time resident in his house, situated at Lavender-hill, the poison (laudanum) being found in some tea which had just been made. The police were called in, and, after exhaustively questioning the various members of the household, decided of their own action to take the parlour-maid into custody. It was Mr. Bayfield's opinion that they had arrested the wrong servant, and so strongly did he feel this that he not only refused to sign the charge-sheet and to prosecute, but actually instructed a solicitor to watch the case on behalf of the accused. The magistrate, however, sent the case for trial, and the Treasury took up the prosecution; but when the matter came before the Grand Jury the Bill was thrown out. Shortly afterwards the cook confessed that it was she who had poisoned the tea, with laudanum taken from Mr. Bayfield's surgery, her object being to injure her fellow servant. She was tried, and sentenced to three months' imprisonment.

Now comes the point which I am anxious more particularly to bring before your readers. The arrest of the girl originally charged was the spontaneous action of the police, and Mr. Bayfield had nothing to do with it. In spite of this, however, a firm of solicitors took up the girl's case, and brought an action against Mr. Bayfield for £200 damages for false imprisonment. The Treasury declined to act in the matter; so Mr. Bayfield was left to fight the battle alone. The case came on for trial before Mr. Justice Matthew on Nov. 14th, and the jury without leaving the box found a verdict in Mr. Bayfield's favour. Then came in the old story, and the plaintiff having no means, Mr. Bayfield, although victorious, was left to pay his own costs, which amount to £106 on his solicitor's bill alone, to say nothing of the further heavy incidental expenses. Nor is this all; for the sympathy with the girl amongst her own class, who are unable to draw correct inferences from facts, very injuriously affects Mr. Bayfield's position amongst his poorer patients in this locality.

Is not this a case in which the profession may very fairly be asked to assist? Any medical man who dispenses his own medicines might find himself in a similar position at any moment; and a subscription in aid of the costs incurred by Mr. Bayfield in defending himself would have something more than a merely pecuniary value—coming to him as an expression of sympathy from his own profession, it would give him valuable moral support.

Subscriptions will be received by Ed. Bellamy, F.R.C.S., 17, Wimpole-street; R. F. Frazer, L.K.Q.C.P., &c., Lavender-hill; G. Tandy, L.R.C.P.Ed., 43, Cedars-road, Clapham; Joseph Sutcliffe, L.R.C.P.Ed., 511, Wandsworth-road; Fredk. Hunter, L.R.C.P., Haycroft House, Lavender-hill.

The following subscriptions have been received:—John Williams, M.D., £2 2s.; Ed. Bellamy, F.R.C.S., £2 2s.; Henry James, F.R.C.S., £3 3s.

I am, Sirs, yours faithfully,

HENRY JAMES, F.R.C.S.

31, Sisters'-avenue, Clapham-common, S.W., Dec. 5th, 1887.

Dr. McCall (Morecambe).—The members of the Commission were Sir H. Roscoe, Dr. Lauder Brunton, Dr. Burdon Sanderson, Sir James Paget, Dr. Quain, Mr. George Fleming, and Mr. Victor Horsley (secretary).

Mr. Wm. G. Loveridge will find an article on the subject of his question in our Students' Number, published on Sept. 3rd last.

Dr. J. F. Brice.—It is possible that the remedy acts as our correspondent suggests.

"ETHER IN MIDWIFERY PRACTICE."

To the Editors of THE LANCET.

SIRS,—Under the above heading Dr. S. Grose speaks of the good results derived from subcutaneous injections of ether in (I presume) asphyxia neonatorum. I would like to call his attention to an article entitled "A Few Remarks upon Therapeutics," written by me to the *New York Medical Journal*, Aug. 21st, 1886, and which was extensively quoted by medical journals in this country, and an abstract of which, I understand, appeared in Braithwaite's Retrospect. In a division, "The Inhalation of Ether in Non-expansion of Lung, due to adhesions of pleural surfaces, occurring after pleurisy with purulent effusion, in apneumatosis of children, and asphyxia neonatorum," he will find the following recommendations:—"I can also recommend the use of ether in the asphyxia of newly born infants. It will sometimes succeed when artificial respiration fails. A few drops may be placed upon a piece of absorbent cotton and held to the nostrils. A better method is, after the nares have been cleansed of mucus, &c., to insinuate into either nostril a camel-hair brush previously dipped in ether, and, by titillating its mucous membrane, we, in addition, summon to our assistance the benefit of reflex action."

I am, Sirs, yours faithfully,

Wilkes Barre, Pa., Nov. 22nd, 1887. J. HARRIS JONES, L.R.C.P., &c.

VOLUNTARY BOARDERS IN ENGLISH ASYLUMS FOR THE INSANE.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform the writer if there exists in England any asylum, lunatic hospital, or licensed house in which a person wishing to do so may legally become a voluntary boarder, as in Scotland, with or without the consent of the Commissioners in Lunacy, and without having been at some previous time under certificate of insanity?

I am, Sirs, your obedient servant,

Dec. 5th, 1887. QUÆRENS.

"ROUGH-AND-READY MEDICAMENTS."

To the Editors of THE LANCET.

SIRS,—Adverting to my former contributions on this point, I beg to submit a few more characteristic episodes of this kind, and simply intimating that I will add in connexion with them such explanatory matter only as will suffice for their better elucidation. I will leave them to speak for themselves. They exhibit strong contrasts, from a humanitarian and physiological point of view, with our own more modern as well as more merciful procedures, and they further serve, as I think, to point the moral, even though they do not adorn the tale, of our present therapeutic art and its achievements.

1. Describing the celebrated Cardan's visit to the Bishop of St. Andrew's (Cardinal Beaton?), Randolph, the English Ambassador at the Court of Scotland says ("The History of Scotland," by P. Fraser Tytler, vol. iii., p. 387) that "he [Cardan] practised upon him divers foreign inventions. He hung him certain hours in the day by the heels to cause him to avoid at the mouth what the other ways nature could not expel; he fed him many days with young whelps; he used him sometimes with extreme heats, and as many days with extreme cold."

2. Sir Astley Cooper is reponsible for this story. "A person in this metropolis happened," he says ("Lectures on Surgery," Lond., 1832, p. 73), "to have bow shins. It was a part of his duties to teach ladies to draw and paint, and in the prosecution of this branch of his profession he found his bow shins, as he himself declared to me, a very great evil. He felt that his merits were less fairly appreciated and his instructions less kindly received by reason of the convexity of his shins. He was persuaded, in short, that his bow shins stood between him and his preferment. Under this impression he went to a very noted person in this town, and, showing him his shins, said to him, 'Pray, sir, do you think you can make my legs straight?' 'Sir,' said the doctor, 'I think I can, if you will take a lodging in my neighbourhood. I think I can scrape down your shins and make them as straight as any man's.' A lodging was taken, the father of the patient assisted in the operations, and all three of them—the father, the son, and the doctor—took a turn in scraping down the convex shins. A great deal of rasping was required. An incision of very considerable extent was made in the shin, the integument was turned aside, and an instrument ..... called a rougee was employed to scrape the shin bone..... At last the shell of the bone became so thin, that the doctor said they must proceed no further with that leg. The other leg was then rasped in a similar manner, and thus large wounds were produced in both of the shin bones. The surfaces granulated very kindly, and very little exfoliation of the bones took place, but unluckily the granulations would form bone, so that up-jumped the bones of the shin again. The doctor, however, was not to be defeated, and accordingly put a layer of arsenic over the whole surface. It was in consequence of the effects of this application that I saw the patient. The arsenic was absorbed into the system, and he became paralytic in his arms and lower extremities. A great number of exfoliations took place in his legs, and he showed me a large box of them. I sent him to Bath, where he stayed for some time, and got rid of his paralysis."

3. "The Society islanders had," says Sir J. Lubbock ("Pre-Historic Times," 1st ed., p. 384), "no knowledge of medicine as distinct from witchcraft. ..... When the brain is injured as well as the bone, they have opened the skull, taken out the injured portion of the brain, and, having a pig ready, have killed it, taken out the pig's brains, put them in the man's head, and covered them up." The result does not transpire, but the "treatment" is as simple as it is suggestive, and it is a pity that the missionary, Mr. Ellis, on whose authority he bases it, does not himself testify from personal knowledge to either its soundness or certainty.

I am, Sirs, your obedient servant,

Auriol-road, W., Nov. 28th, 1887. W. CURRAN.

L.K. & Q.C.P.I.—The only consolation we can see in the charges of the unqualified assistant is that they are likely to convey to the poor the best idea of the value of the services offered. As to the questions of etiquette we congratulate our correspondent on his conduct. It is disappointing to find generosity and professional kindness not reciprocated. But that in no degree diminishes the value of such sentiments nor of the conduct which they inspire.

W. Parker, M.B., C.M.—We fear there are no efficient legal means for enabling the removal of such a sign as our correspondent describes.

Horrens.—An article on the subject will be found in THE LANCET of Nov. 20th, 1886.

TREATMENT OF ECZEMA AND PSORIASIS.

To the Editors of THE LANCET.

SIRS,—Having received over 100 letters and post-cards from medical men and patients asking all sorts of questions as to the management and treatment of eczema and psoriasis, kindly give me space to say that I cannot reply to them, that I never prescribe for anyone by post, and that the naphthaline tincture and lotion can be had of Messrs. Schütte and Co., Widmore Quinine Works, Bromley, Kent. The former I have found the best application for very chronic patches of both eczema and psoriasis; I paint it on. The latter I use as a wash in less obstinate cases. I also use Messrs. Schütte and Co.'s dermato-therapeutic quinine lotion in chronic eczema. I have found it by far the best thing I have ever met with for allaying itching and keeping the skin soft.

I am, Sirs, yours faithfully,

Harrogate, Dec. 8th, 1887. A. S. MYRTLE, M.D.

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A CENTENARIAN.

To the Editors of THE LANCET.

SIRS,—Through the kindness of a friend I am able to present to the readers of THE LANCET more than a match in longevity to that of Miss Charlotte Pigot, whose history is given by Mr. Ledgard, of Kirkby, Lonsdale, in your impression of Nov. 5th.

The centenarian whom I wish to mention is Mrs. Sirah Markham, at present living at Roxby, a small village about a mile from Winterton, in North Lincolnshire. Mrs. Markham was born on Royal Oak day in 1785. She was one of nine chidren, and when eleven years of age went to service at 14, Old Bond-street, London, where she stayed until she married at the age of twenty-four years. She was left a widow and a mother at the end of nine months, her husband having died from lock-jaw. After her husband's death Mrs. Markham went as foster-mother to a baby who is now eighty years of age, Mrs. Bridgeman Simpson, of Babworth Hall, Notts. Before Mrs. Markham's second marriage she was a nurse in the Sheridan family, and during her service there she frequently saw George IV., who was a constant visitor at the house. She married a second time when she was thirty years of age, and then with her husband settled in Roxby, where she has lived ever since; he, who was seven years her junior, died fifteen years ago. Mrs. Markham had seven children by the second marriage, and has a great many grandchildren and great-grandchildren. She attends church and Holy Communion regularly, can walk very well without the aid of a stick, but does not extend her walks much further than the church, which is not very far from her house. The old lady is only slightly deaf; seven years ago one of her eyes was injured by a stone which was thrown at it, but with the other she can see to read without the aid of spectacles. She is quite upright in figure, and does not look more than eighty years of age, and has a very pleasant face. My informant tells me that she called upon the old lady on Nov. 19th, and was much struck with her wonderful memory. The old lady would go upstairs to fetch a quilt to show her visitor that Lady Francis Simpson had given her on her hundredth birthday. She said she had got up before 7 o'clock that morning, and had blackleaded both her grates, and had washed the floors and done all the housework herself. She lives alone in her cottage, but a grandson sleeps in the house at night. She has always been very abstemious, and has never smoked. Mr. Elwes of Roxby allows her £15 a year, and other friends are very kind to her. She is wonderfully active and self-reliant. A lady a few weeks ago went to Roxby Church, and walking home with the old lady offered her her arm, which, however, the other declined, and walked on in a most independent manner. When she arrived home she unlocked the door, struck a match, and lit the lamp. When her visitor was leaving she told her to be careful and not fall, as the garden path was rather rough, and in order to ensure the visitor's safety she carried the lamp as far as the garden gate to light her down the village. There is an old lady living near who is about eighty-five years of age, and whom Mrs. Markham treats as a baby, and escorts to and from church. On one occasion, when the younger lady had left her spectacles behind her in the church, the elder said to her, "Wait a moment, I will run back and fetch them for you." On a recent occasion, when a lady and gentleman called upon Mrs. Markham, she apologised to them for not showing them into a room where there was a fire, for she had "got the dressmaker in the house.'—Yours truly,

Lincoln, Nov. 29th, 1887. WILLIAM O'NEILL, M.D.

Medicus should inform the person who is acting so remarkably that unless he desists immediately his conduct will be reported to the College from which he holds his diploma, or to the Medical Council. He should also call upon his friend who introduced the *locum tenens* to remonstrate.

Private Practitioner.—We would recommend our correspondent to write to the medical officer of health, and inform him that he will be happy to give information on any point he desires for the purpose of facilitating the performance of his public duties.

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LETTERS, *each with enclosure*, are also acknowledged from—Dr. Taylor, East Dereham; Mr. Bagaley, Birmingham; Messrs. Morson and Co., Newcastle-on-Tyne; Mr. Guest, Darlington; Mr. Halt, Stoke Newington; Mr. Westwood, Stratton; Mr. Wilson; Messrs. Smith and Co., Manchester; Mr. Stenhouse, Glasgow; Messrs. Burgoyne and Co., London; Mr. Wormald, Manchester; Mr. Blythe, Salisbury; Mr. Madam, Oxford; Mr. Webb, Middlesbro'; Mr. Birchall, Liverpool; Dr. Bolton, Nottingham; Mr. Briggs, Cambridge; Miss Jones, Rhyl; Mr. Hughes, Flint; Dr. Batho, Pontefract; Dr. Taylor, Newcastleton; Dr. Tonks, Willenhall; Dr. Popham; Mr. Nutman, Great Yarmouth; Dr. Brand, Driffield; Mr. Saunders, London; Mr. Watt, London; Mr. Hine; Mr. Hawksworth, Welshpool; Messrs. Cornish, Manchester; Mr. Peirce, Guildford; Mr. Dyer, London; Mr. Brewer, Barnstaple; Mr. Heywood, Manchester; Mr. Appleton; Mr. Oswald, Clapham; Mr. Hill; N. Z., Brockley; M.B., Carlisle; Permanency; M.B., Windsor; Heath; H. T., Forest Gate; Sporting; Deaconess Townson, Chester; Scapula; Alpha; Kappa; Alma; Medicus, Mile-end; Medicus, Kingstown; T., Bath; Surgeon; B. S.; Medicus, Peckham; M. W., Barnsley; Thames; Principal, Southport; Mr. M., Cornwall; J. N.; H. B.; Clare; Beta.

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Lectures
ON
FIBROID DEGENERATION AND ALLIED LESIONS OF THE HEART, AND THEIR ASSOCIATION WITH DISEASE OF THE CORONARY ARTERIES.

By JOHN LINDSAY STEVEN, M.D.,
ASSISTANT TO THE PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF GLASGOW; ASSISTANT PHYSICIAN, GLASGOW ROYAL INFIRMARY; AND ASSISTANT TO THE LECTURER ON PATHOLOGY IN THE WESTERN INFIRMARY OF GLASGOW.

LECTURE II.

DISTRIBUTION OF THE CORONARY ARTERIES OF THE HEART.

As has been gathered from the foregoing considerations, the blood supply of the heart is intimately associated with the causation of the lesions at present under review, and, therefore, before going further it will be necessary briefly to refer to the different views which have been held as to the distribution and anastomosis of the cardiac arteries. Very great differences of opinion still exist as to whether the coronary arteries anastomose or not—some observers holding that the anastomosis between the two vessels is quite abundant and free, others maintaining that it is exceedingly limited or even absent altogether. Amongst the former are to be placed the names of Norman Chevers, Wickham Legg, Samuel West, Krause, and Langer; and amongst the latter those of Hyrtl, Cohnheim, and Joseph Swan. Chevers founds his opinion on a water injection; I think that this is clearly insufficient, and that no reliable conclusion can be drawn from it.[1] Wickham Legg says: "A number of human hearts were collected, and the arteries injected with a blue-coloured size. Nothing was easier than to fill one artery by injecting the other, and communicating branches could be seen passing over the apex of the ventricles....."[2] Samuel West says: "The fact, then, of the very free and complete anastomosis of the coronary arteries is established."[3] It will be admitted that these opinions are most authoritative, and contain the certain convictions of the writers. On the other side of the question, however, the following sentences must be quoted. Joseph Swan says: "Although the coronary arteries communicate at the ring at the base of the heart and at the apex, the communication is not very free; but each can do little more than supply its respective region."[4] Hyrtl seems to have modified his original view that the arteries do not anastomose, and he now admits a capillary anastomosis. Cohnheim held that the arteries were end-arteries, and, with his usual minute care and scrupulous accuracy, has shown that, before coming to any conclusion as to the result of injection experiments, we must take carefully into account the character of the injection fluid used. He found that if a thin fluid, capable of passing easily through the capillaries, were employed, it returned by the opposite artery; but if a thicker fluid, incapable of so passing, were used, it did not.[5] It should be recollected, however, that Cohnheim's experiments were made on dogs, and that, in one of the many canine hearts he examined, he did find a small anastomosing branch. It will be seen, then, that on this question we have on each side a pretty equally balanced consensus of opinion; and, not so much with the hope of finally settling the question as with the object of possibly finding out which side was most likely to be right, I undertook a few injection experiments of the human heart, of which the following is an account. I made in all three careful arterial injections of healthy human hearts, after which they were examined and dissected, and the conditions found were noted at length at the time of experiment or of examination.

Injection 1.—This experiment was carried out on Jan. 17th, 1885; the fluid used was the ordinary histological carmine gelatine mixture, the continuous pressure apparatus being employed, and a maximum pressure of from eight to nine centimetres of mercury was used. The vessels before injection were washed out with salt solution; the mass was thrown into the left coronary artery, and after a short time it flowed from the right coronary in an oozing fashion. The tissue of the left ventricle and auricle was fully injected, but that of the septum and right side scarcely at all. By tracing out some of the branches it became obvious that the main point of communication between the two vessels had been in the apical region.

Injection 2.—In this case an exceedingly careful anatomical injection of both arteries was made, in order that by subsequent examination and dissection any anastomosing branches might be discovered. In this and the succeeding injection, I had the valuable assistance of my friend Mr. A. E. Maylard, B.S. Lond., formerly of Guy's Hospital, and the method employed was that of Mr. H. G. Howse, described in Guy's Hospital Reports. The glycerine and arsenic preserving fluid was thrown into both vessels by the constant pressure apparatus at a pressure of eight centimetres of mercury, and it was particularly noted that there was no return by either artery during the process. The glycerine fluid was of the consistence of mucus. On the following day red lead mixture was thrown into both vessels by a powerful anatomical injection syringe. The vessels to their minutest ramifications filled out well, but there was no return by either artery. A careful dissection was made, and full notes of all the appearances observed were kept. Between the two coronary arteries three very fine and delicate anastomosing branches were discovered, all of them, however, so exceedingly small that a lens was required to trace them—viz.: (1) between the transverse branches on the posterior surface of the auricular ventricular sulcus there were two hair-like connecting vessels; (2) one hair-like vessel passed behind the aorta to connect the auricular branches; (3) a branch connecting the two vessels, which was verified by a lens, was found near the apex on the surface of the right ventricle. Between branches of the same artery only two very small anastomosing vessels were discovered, and both were in connexion with the left coronary. Not one of these connecting branches deserves to be considered as much more than a capillary branch, and had there been any larger communicating vessels it is not easy to see how they could have escaped detection.

Injection 3.—Both vessels were filled with glycerine solution under a pressure of from five to eight centimetres of mercury. The red paint solution was then thrown into the right coronary; the vessel filled out to its smallest branch. A careful dissection failed to find any communicating branch, although there must have been one or two small anastomoses, as in one of the descending branches of the left coronary a minute fragment of the red injection mass was found; and at the time of the glycerine injection one branch of the right coronary was found to be slightly filled while the left was being injected.

I think, therefore, it must be admitted that inosculations do exist between the coronary arteries of the heart, but that these are anything like so large and numerous or of so much importance in maintaining the vitality of the heart when a branch is plugged, as one would gather from the statements of Wickham Legg and West, is, I think, much to be doubted. So far as my experience goes, I would say that the arterial inosculations are so trifling and so far apart from one another that they are quite unable to compensate for vascular obstructions, except in their immediate neighbourhood, and even there only after very considerable destruction of cardiac tissue has occurred. To be of any service in the way of restoring circulation after obstruction the anastomoses would need to take place through the medium of primary and secondary branches, and Strathers has pointed out that Hyrtl only said that the coronary arteries did not anastomose by such branches, a statement with which I perfectly agree. In two of the cases of obstruction of the coronary arteries to be afterwards recorded an injection of soluble Prussian blue was made by Dr. Joseph Coats in order to throw light upon the question of anastomosis. It was seen that the communication between the two vessels was pretty free, but, taken by itself and in the

[1] Guy's Hospital Reports, 1843., p. 109. [2] Loc. cit., pp. 19 and 20.
[3] The Anastomoses of the Coronary Arteries. THE LANCET, vol. i. 1883, p. 945; also Path. Trans., vol. xxxv., p. 66.
[4] On the Bloodvessels of the Nerves of the Heart. The London Medical Gazette, new series, vol. vii., 1848, p. 750.
[5] Virchow's Archiv, vol. lxxxv., p. 508.

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absence of any careful dissection, such an experiment would only prove a capillary, or, if we may so speak, an *arteriolar* anastomosis, the existence of which, I think, must be admitted, but the service of which in compensating for any serious obstruction may fairly enough be doubted.

LESIONS OF THE HEART-WALL, WHICH MAY BE ASSOCIATED WITH DISEASE OF THE CORONARY ARTERIES.

The lesions of the cardiac muscle which are most likely to result from obstructed coronary circulation are—(1) *Fibroid Degeneration;* (2) *Fatty Degeneration;* (3) *Infarction of the Heart,* associated not uncommonly with spontaneous rupture of the ventricular wall. The lesions have been named in what I think to be the order of their frequency and importance, but for certain etiological reasons, which will become apparent afterwards, I prefer, in considering them in detail, to place Fatty Degeneration last. These morbid states, though very frequently occurring quite independently of each other, may be combined in the same heart, as is illustrated by some of the cases to be afterwards recorded.

Fibroid Degeneration.

In the course of the critical review which I have given of the literature of this affection it has been shown that in the minds of most English observers fibroid degeneration and chronic inflammatory change of the myocardium are regarded as practically synonymous terms (at least so it is stated by Bramwell). That this is not so, it is, as I have already said, one of the purposes of these lectures to prove. In a very large number of cases fibroid change is associated with disease of the coronary arteries of the heart, and if this be so then we have to deal with an affection of the myocardium, which may logically be placed in a category *per se*, and which clinically and pathologically has as much right to be regarded as nosologically a separate and distinct affection of the heart as, let us say, fatty heart. We have, I believe, in fibroid degeneration of the heart a morbid condition, the possibility of the presence of which should always be borne in mind by the careful clinical observer as a frequent source of cardiac weakness, and even of fatal syncope.

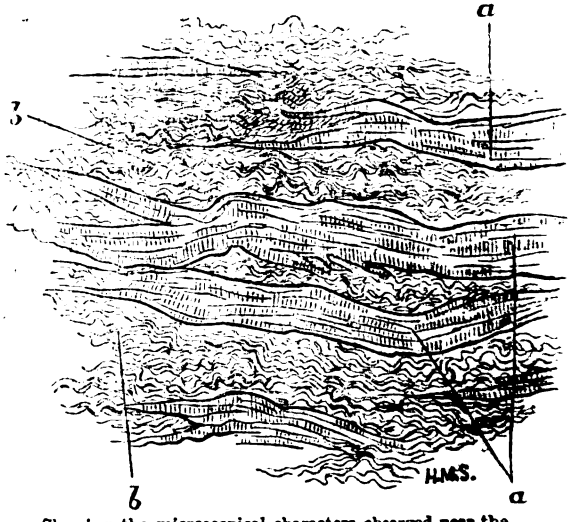
Fibroid degeneration is generally found in the wall of the left ventricle, and the extent of the affection may vary within very wide limits. Thus in some cases we may not find more than a patch or two the size of a split-pea or an almond, or, on the contrary, we may find the entire thickness of a very considerable area of the ventricular wall converted into a dense white fibrous tissue, as is perhaps most strikingly seen in cases of aneurysm of the heart. It is not at all infrequent to find the musculi papillares converted into tough fibrous tissue, and in some cases this may be the starting-point of the disease as regards other regions of the myocardium. In cases where the muscular tissue is extensively changed, as in cardiac aneurysm or fibroid disease affecting the entire thickness of the ventricular wall (see Cases 9 and 10 of the series to be afterwards given), there is not the slightest difficulty in at once recognising the morbid state.

In a very large number of the slighter cases, however, unless the lesion is carefully searched for it is almost certain to be overlooked, and under these circumstances it is only after slicing through the muscle in sections parallel to the surface that the morbid state can be detected. When thus present and discovered in the substance of the muscular tissue, fibroid degeneration presents the following naked-eye characters, which are typical and easily recognised. It occurs as a bright, white, glistening patch of irregular size and shape, and of tendinous character; the cut surface of the patch is usually depressed below the level of the surrounding muscle, and has a streaky, fibrous appearance, the fibres running in the direction of the normal muscular bundles. There is no sharply defined line of demarcation between the healthy and the diseased tissue, the normal passing into the abnormal quite irregularly. These are the appearances as described by Huber, by whom, at Leipzig, my attention was first drawn to the subject, and they are those which I have always seen in cases which I have since examined in this country.

When examined under the microscope the patch is found to be entirely composed of delicate wavy fibrous tissue, often presenting a very finely granular appearance. In well-marked cases—i.e., of fibroid degeneration as distinguished from chronic interstitial myocarditis—no cellular infiltration is to be seen, nor anything in the least suggestive of inflammatory action. The margin of the patch is quite irregular, and the adjoining muscular bundles are more or less broken up and separated from one another by encroachment of the fibroid metamorphosis. The separated muscular fibres at the extremity of the patch are usually pointed, and often become finer and finer until the fibre is lost in the fibroid tissue. Sometimes the muscle-cell seems to be prolonged into a wavy fibre, an appearance very suggestive of the gradual wasting of true muscle substance, only the connective tissue remaining to form part of the morbid area. It is also frequently seen that the muscular fibre itself has a wavy character very similar to that presented by the strands of fibrous tissue. In the midst of the patches isolated and much atrophied muscular fibres are frequently seen, and all the appearances evidently point to a gradual loss of true muscle substance, and to its place being taken by the wavy fibrous tissue. (See Fig. 1.) Minute arterial branches may often be made out in or in the neighbourhood of the patches, and these often give evidence of not being strictly normal, the chief abnormalities observed being a very decided hypertrophy of the muscular coat, and sometimes perhaps a slight thickening of the internal.

Etiological considerations.—In the foregoing remarks enough has been said to indicate pretty clearly my decided opinion that in true fibroid disease (perhaps it might be more correctly termed, as I have already pointed out, fibrous transformation) of the heart we have to deal with an

FIG. 1.



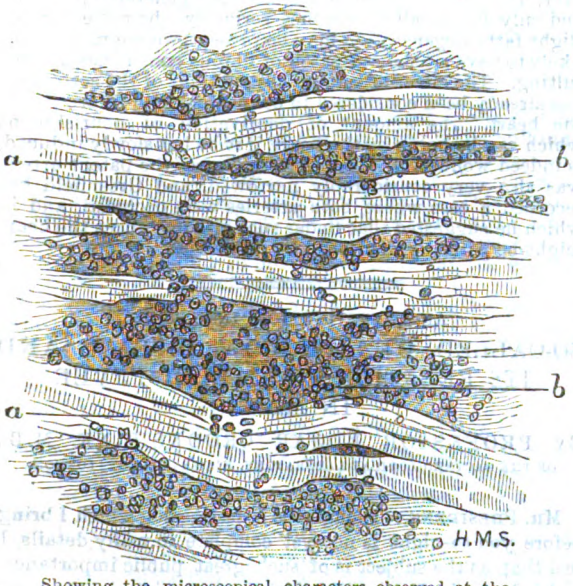
Showing the microscopical characters observed near the margin of a patch of fibroid degeneration. (Zeiss D. Eye-piece No. 3. × 350.) The drawing was made from a section taken from Case 3. *a*, Muscular fibres. *b*, Wavy fibrous tissue.

atrophic process going on in the affected areas, and that this atrophy is directly to be related, in the great majority of cases, to a diseased condition of, and consequent insufficient nutrient supply from, the coronary arteries. Of the very frequent association of fibroid degeneration with diseased or obstructed coronary arteries, the cases given by Huber, and also those to be afterwards recorded in the appendix, leave, I think, no very reasonable doubt. There is also but little difficulty in understanding the relationship existing between the two conditions and in tracing the sequence of events. Owing to the gradual obliteration of a particular branch of the diseased artery, and to the difficulty of establishing collateral circulation, a certain area of muscular tissue is slowly deprived of its necessary blood supply. Under these circumstances the connective tissue, requiring less nourishment and more tenacious of life than the muscle substance, is able to subsist on the diminished nutrient supply, whilst the more delicately and highly organised muscle readily succumbs. The muscular fibres slowly atrophy and disappear, and a fibroid patch is left. The patchy character of the disease is due, I believe, to the fact that all the branches of the coronary artery are not equally affected or obstructed. Fibroid degeneration is thus, in the first instance at least, always a localised affection, and never involves the entire myocardium simultaneously, although neighbouring patches may coalesce, and so give rise to extensive areas. It may

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be associated with fatty degeneration, which, though patchy or mottled in distribution, is generalised and dependent, as I shall endeavour to show, on a general as distinguished from a local deprivation of blood supply. In cases where the arteries are apparently healthy to the naked eye, abnormalities may be discovered with the microscope (see Cases 2 and 3); and in cases where the arteries are actually healthy, branches may be obstructed by emboli, and give rise to the affection in the manner soon to be adverted to (see Cases 4 and 5). Fibroid degeneration of the heart is, I believe, most frequently caused in the manner already described; but there can be no doubt that in a certain proportion of cases we may have fibrous patches in the myocardium which are inflammatory in origin—i.e., we may have a true interstitial myocarditis as opposed to a true atrophic fibroid degeneration.. Case 10 seems to be an illustration of this form of disease. In many cases associated with pericardial adhesions the origin of the affection is inflammatory, and probably an extension from the inflamed serous membrane. In such cases numerous leucocytes are found mingled with the fibrous tissue and lying between the muscular fibres, a condition of matters which is hardly ever found in pure atrophic fibroid degeneration. In cases of syphilis, too, fibroid patches, which have probably resulted from the presence of gummata, have been found in the heart wall; and

FIG. 2.



Showing the microscopical characters observed at the margin of a patch of interstitial myocarditis. (Zeiss D. Eye-piece No. 3. × 350.) The drawing was made from a section taken from Case 10. *a*, Muscular fibres. *b*, Leucocytes and new fibrous tissue.

in Case 10 there was also evidence, especially in the condition of the liver, that the patient had suffered from that disease. In this regard a case of syphilitic disease of the heart reported by Mannino, which had been under the care of L. Federici, is of some interest.[6] Under such circumstances, the development of fibrous tissue in the myocardium obeys the laws which regulate inflammatory new formations in general. To such cases only can the term "interstitial myocarditis" be logically applied. (See Fig. 2.)

Clinical suggestions.—With regard to the clinical aspects of fibroid degeneration of the heart it is much more difficult to speak in definite terms. There is no definite physical sign, so far as I know, by which we can diagnose its presence, and at best we can only surmise its existence by taking a comprehensive view of the whole pathology of the case. As has been seen, it constitutes a very distinct and easily recognised lesion of the cardiac wall, and as such the possibility of its occurrence should always be kept in mind by the careful physician; and this is all the more necessary when we reflect that, if the lesion is at all extensive, it may be a powerful factor in producing cardiac debility, and under certain circumstances, as Fagge and Huber have shown, it may lead to sudden death. In all cases of widespread disease of the arterial system (arterio-sclerosis of the Germans), of cardiac dilatation, and of valvular disease arising in middle life apart from the rheumatic diathesis, the possible influence of fibroid degeneration as one factor in the production of the symptoms should be borne in mind. The symptoms may probably be very similar to those usually ascribed to fatty heart, and I think it not at all unlikely that a number of cases likely to be set down as examples of this affection may be fibroid. Further than this I feel I cannot at present venture to go with regard to the clinical significance of this lesion, as so far my studies with regard to it have been pursued in the post-mortem room, and not at the bedside. I have, however, since the present investigation was undertaken, seen a considerable number of cases in hospital practice in which I strongly suspected the presence of fibroid degeneration, and, if clinical opportunities accumulate, these may perhaps at some future time be recorded in this connexion. With regard to the generalised form of the disease described by Dr. Charlewood Turner[7] I can at present say nothing, as I have hitherto had no experience of it, and no opportunity of examining it. There is only one symptom which should be specially mentioned in connexion with fibroid degeneration, and that is angina pectoris. The association between this and a morbid state of the coronary arteries has been pointed out long ago, and in many of my own cases angina pectoris was a prominent and most distressing symptom.

Infarction of the Heart Wall.

This is a lesion which is to be directly associated with a morbid condition of the coronary arteries, and which very frequently leads to spontaneous rupture of the ventricular wall. The naked-eye appearances of acute cardiac infarction (myomylacia cordis of Ziegler) are sufficiently striking. The area may vary very considerably in size, and the affected tissue is as a rule much softened. In the recent state, when cut into, it presents a brown colour, and its surface is depressed below the level of the surrounding tissue; in severe cases the affected part may be semi-fluid in consistence. The microscopic appearances have been described at length by several observers, and as I shall advert to them afterwards in briefly describing typical cases (see Cases 4 and 5), it is unnecessary to refer to them in detail in this place. The muscular tissue is more or less broken up, and in many places has undergone coagulation necrosis—the nuclei and transverse striæ having disappeared, and the fibres having assumed a glassy homogeneous appearance; there is often a dense infiltration of round cells, probably from inflammatory reaction; the neighbouring bloodvessels are liable to be engorged with blood; and red blood-corpuscles are usually discovered in large numbers lying in the interstices of the tissue.

Etiological and clinical considerations.—Acute softening of the myocardium is almost invariably caused by complete and sudden occlusion of the arterial branch supplying the affected area of the heart-wall. The size of the area and the liability to subsequent rupture are directly dependent upon the size of the obstructed branch, as is illustrated by the cases of rupture recorded in the appendix. As a general rule, cases of infarction leading to rupture are associated with extensive disease of the coronary arteries, where, in addition to the chronic deterioration of nutrient supply, a sudden obliteration of the arterial trunk has occurred—e.g., by the sudden occurrence of thrombosis or embolism. But besides this very serious form of infarction there is also a variety of the affection (illustrated by Cases 4 and 5) in which the occluded vessels are small, and in which the resulting infarctions are also small and may be multiple; and it is necessary before going further that this form of lesion should be referred to at some length. Cases 4 and 5 are good examples of this condition, and a description of the appearances usually present will be given in describing them afterwards. Here also, just as in the slighter varieties of fibroid disease, the lesion, unless specially searched for, may be altogether overlooked, because there may be nothing either on the endocardial or pericardial surface to indicate its presence. In this condition the walls of the coronary arteries may be perfectly healthy, and probably the most frequent cause, as seen in Case 4, is severe endocarditis with abundant loose vegeta-

[6] Brit. Med. Jour., vol. i., 1882, p. 547.

[7] Loc. cit.

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tions of the aortic curtains, giving rise to multiple embolism of the coronary branches. It was once believed that the mouths of the coronary arteries were closed by the aortic curtains flapping against them, and that the arteries were filled by the recoil of the blood after the systole was over and the curtains closed. We are, however, indebted to several observers for showing that the orifices of these vessels are open during the systole, and that the coronaries of the heart receive their blood-supply precisely like the other arteries of the body. Chief among these observers must be mentioned the names of Martin and Sedgwick,[8] and of Worm Müller and Sandborg.[9] There is thus not the slightest difficulty in understanding how under such circumstances embolism of the coronary arteries should be a not infrequent occurrence, and I think it not unlikely that we have in this morbid state a cause of cardiac debility and failure in severe aortic disease, and in other diseases of the heart as well, which has hitherto been overlooked on the part of clinical observers. Embolic lesions of this kind, small and multiple as they are, are not very likely ever to cause rupture of the organ; but it is quite possible to conceive the likelihood of a large embolic occlusion suddenly leading to this fatal result. Such a lesion, too, might be suddenly fatal without rupture, and before any very serious change in naked-eye appearance of the myocardium had been produced; for Cohnheim[10] and others have shown, in the case of dogs, that occlusion of a large coronary branch leads to stoppage of the heart in from thirty seconds to a minute. Minute and multiple embolic lesions, however, may be regarded as intermediate between the slowly progressing and localised atrophy leading to fibroid degeneration, and the sudden suspension of vitality over a large area, terminating in sudden death or spontaneous rupture. In Case 4 I think I have direct evidence of the truth of this statement. In this case, in addition to the small, soft, brown infarctions, there were also numerous minute areas of fibroid degeneration—the explanation of this doubtless being that, after the degenerated muscular substance had been absorbed, a fibrous patch, practically a scar, remained behind. The clinical importance of a morbid process of this kind directly resulting from valvular disease of the heart can hardly, I think, be over-estimated. With regard to the subject of rupture of the heart and its association with obstruction of the coronary arteries it is unnecessary for me now to speak, because I have elsewhere fully discussed the question in all its bearings.[11] Among the cases to be recorded as illustrating the present remarks, three of spontaneous rupture, in which the dependence of the accident on an obstructed coronary branch was undoubted, will be found, and in connexion with these is described all that is necessary to be said with regard to the histology and pathological anatomy of the condition.

Fatty Degeneration.

Fatty degeneration of the heart may frequently be directly associated with a diseased condition of the coronary arteries, although, as is well known, there are very many other morbid states which may give rise to it. In the present connexion it is well to bear in mind the distinction between fatty infiltration and fatty degeneration of the heart. In the former we have, practically, merely an exaggeration of the normal adipose tissue of the organ, in which the muscular bundles are pushed asunder, and caused to atrophy by the growth of the fatty tissue (fatty growth on the heart). In the latter we have a real conversion of the true muscle substance into fat, granular molecules of fat making their appearance in the muscle-cells, first of all in the neighbourhood of the nucleus, and ultimately filling up the whole cell. It is of the latter of the two conditions only that I am now speaking, as I have no evidence to show, nor have I seen it stated, that fatty infiltration of the heart is in any special way connected with disease of the coronary arteries. Fatty degeneration presents itself as yellow flecking or mottling, visible to the naked eye, on the endocardial surface, and generally most typically seen in the left ventricle. It is chiefly, if not solely, caused by any serious deterioration either in quantity or quality of the blood; thus it is almost a necessary concomitant of all profound anæmias, and, as showing the influence of deteriorated quality of the vital fluid, it is also found in connexion with certain forms of poisoning, a circumstance which has been frequently put to the test of experiment. This being so, one does not wonder that fatty degeneration should be frequently met with in cases of disease and obstruction of the coronary arteries, from the organ being thus deprived of its necessary nutrient supply. In several of the cases which form the basis of these remarks fatty degeneration was found along with the fibroid disease, but the fatty change was specially typical in the last two cases of the series—i.e., those in which a whole coronary artery was shut off from its blood supply by reason of complete obstruction at its point of origin. In Case 15 the generalised fatty degeneration was so pronounced as to produce a more than usually prominent naked-eye change; and there can be no doubt that the very serious interference with the coronary blood supply in these two cases was entirely to blame for the widespread fatty change in the muscular fibre. From what I have seen I would be inclined to formulate the following proposition, subject of course to the corroboration to be afforded by more extended observations—viz., in all cases where the main coronary trunk is slowly obstructed, and at last completely occluded at its origin, a generalised fatty degeneration is likely to result, and the cause of this change is essentially similar to that operative in profound general anæmias or phosphorus poisoning—viz., a grave deterioration of the blood supply to the whole organ. When, however, the arteries, though diseased, are generally pervious, and only the smaller branches seriously obstructed, while slight fatty degeneration may be present, we are much more likely to have a localised patch of fibrous transformation resulting. The effect of sudden obstructions of the coronaries has already been considered in connexion with infarction of the heart. The amount of deprivation of nourishment which can be borne by the heart, if it be but slowly induced, is indeed wonderful. In two of my cases the patent artery was also very considerably narrowed, and Greenfield has recorded a case where both arteries were occluded, and in which he suggested that under such circumstances the heart might be partially nourished by imbibition.[12]

[8] Journal of Physiology, 1880-82, vol. iii., p. 165.
[9] Pflüger's Archiv, xxii., p. 408; also Medical Times and Gazette, vol. ii. 1880, p. 623.
[10] Ueber die Folgen der Kranzarterienverschliessung für das Herz, von Prof. Jul. Cohnheim und Dr. A. V. Schulthess-Rechberg. Virchow's Archiv, lxxxv., p. 503. [11] Glasg. Med. Jour., December, 1884.

[12] Med. Times and Gazette, vol. i. 1875, p. 297.

AN INVESTIGATION INTO THE

SO-CALLED HENDON COW DISEASE AND ITS RELATION TO SCARLET FEVER IN MAN.[1]

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MR. PRESIDENT,—Though the investigation which I bring before you to-night is not yet complete in many details, I feel that, as the subject is of such great public importance, and information is awaited with keen anxiety in the agricultural world, it is right that an account of what has so far been done should at once be published, especially as the evidence which has already come to hand has forced me to come to definite conclusions. I would add I feel strongly in investigations which are so strictly pathological that the assembly to whom the results should first be made known is this Society. I desire, therefore, most cordially to express my indebtedness to Professor Brown of the Agricultural Department of the Privy Council for giving me permission to lay this matter before you, and to you, Sir, for having enabled me to do so without any delay.

Origin of the investigation.—I will ask you first of all, Sir, to allow me to remind you of the circumstances which have led to a searching inquiry being instituted by the Agricultural Department of the Privy Council into a disease in cows and its relation to scarlatina in man.

Scarlatina in Marylebone.—On Dec. 18th, 1885, Mr. Wynter Blyth reported to the Local Government Board a sudden and extensive outbreak of scarlatina which was associated with the distribution of milk by a particular retailer in South

[1] Abstract of a Report to the Agricultural Department of the Privy Council, read before a special meeting of the Pathological Society of London, Dec. 15th, 1887.

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Marylebone. The retailer procured his milk from two farms, and there can be little doubt that the milk responsible for the outbreak was derived from a certain dairy farm in Hendon. Mr. Blyth and the medical officer of health for Hendon, Dr. Cameron, were unable to obtain any clue as to the source of infection, and Mr. Power was deputed by the Local Government Board to make an inquiry into the matter.

Mr. Power's diagnosis.—Mr. Power, having come to the conclusion that the milk had not become infected from any human source, proceeded to investigate the condition of the cows. A careful examination was made with a view to detecting any disease among the cows, and it was discovered that there were several on the farm which were suffering from a disease characterised by the appearance of vesicles and ulcers on the teats and udders. At this stage Dr. Klein became associated with Mr. Power in the inquiry, and we are told that their belief in the existence of a constitutional disease among the cows on the farm capable of producing scarlatina among human consumers of the cows' milk became unreserved. Dr. Klein took with him samples of milk, contents of vesicles, and discharges from ulcers, and afterwards two cows were purchased and conveyed to the Brown Institution. At this stage of the inquiry a cowman pointed out to Dr. Klein that he had seen the disease on a certain cow which was one of a batch that had been imported on Nov. 15th from Derbyshire.

Dr. Cameron's account.—In a paper read before the Epidemiological Society, Dr. Cameron gave a detailed description of this cow disease. He pointed out that it was a specific contagious and infectious disease, capable of being communicated to healthy cows by direct inoculation of the teats with virus conveyed by the milker from a diseased animal. Further, he pointed out that the disease was communicable to man.

The disease in man.—A trusty informant received the virus into a recent scratch on the forefinger while milking a diseased cow. General weakness, malaise, and loss of appetite resulted, and after about four or five days a vesicle or small blister appeared on the finger. This broke, and several others formed on the back of the hand. The whole hand and fingers became swollen and inflamed, the inflammation extending in broad lines as far as the elbow. The general disturbance lasted a fortnight.

Symptoms in the cow.—Dr. Cameron regarded the disease in the cow as constitutional, and he pointed out the occurrence of initiatory fever, cough, sore-throat in severe cases, discharges from the nostrils and eyes, eruption on the skin round the eyes and on the hind quarters, vesicles on the teats and udders, and visceral lesions.

Character of the eruption.—The condition of the teats is described as follows:—The teats became enlarged, swollen to nearly twice their natural size, and œdematous. On fingering them there was no feeling of induration. Vesicles or bullæ then appeared on the swollen teats and upon the udder between or near the teats. These varied in number from two to four on a teat, and in size from a pea to a horse-bean. The vesicle contained a clear fluid. The vesicle, Dr. Cameron adds, was not preceded by a hardened papule, but was in the first instance a vesicle or bulla. The vesicles were rubbed and broken on milking, and left raw sores, sometimes red, in other cases pale in colour, with raised ulcerated edges. Sometimes a few accessory vesicles formed around the margin of these ulcerated sores. After the rupture of the vesicle a brown scab formed, which might remain attached for five or six weeks or fall off in ten days or a fortnight, a smaller one forming afterwards. A thin watery fluid exuded from under the scab and the sore ultimately healed. Many scabs varied in size from a shilling to a florin; they were about one-eighth of an inch thick in the centre, thinning off towards the edges. When picked off, the recently healed skin was of a pearly-blue colour, with slight tendency to bleed when the scabs were forcibly detached. According to Dr. Cameron there was no depression of the vesicle or pitting of the skin. The swelling of the teat gradually subsided.

Dr. Cameron's diagnosis from cow-pox.—Dr. Cameron thus sums up the diagnosis from cow-pox: "No hard pimple preceding vesiculation, no subsequent formation of pustule, no central depression of the vesicle, no marginal induration, no areola, and no pitting." In connexion with this, it should be observed that Dr. Cameron acknowledges that not all of his account had been the result of personal observation, and that of necessity some of the earlier symptoms had been learnt from other persons.

Dr. Klein's account.—I will now follow with the account given by Dr. Klein. He states that on the teats and udders of two cows which he investigated there were several flat irregular ulcers, varying in diameter from a quarter to three-quarters of an inch. Some ulcers were more or less circular, others extended in a longitudinal direction on the teat. The ulcers were covered with a brownish or reddish-brown scab. The margin of the ulcer was not raised, nor was there any perceptible redness of the skin around. A small vesicle would make its appearance on a greatly swollen teat, and in the course of a couple of days assume the character of the above ulcers. As a rule, the disease affected the teats; but in some there was also, on the lower part of the udder here and there, an ulcer. In such animals patches denuded of hair were noticed on various parts of the skin, the tail and back particularly. In these patches the epidermis was scaly and the cutis more or less thickened. The animals looked thin, but not strikingly so. In feeding capacity, milking power, and body temperature there was nothing abnormal. Two of these animals, as I have already mentioned, were sent to the Brown Institution.

Post-mortem appearances.—Both were killed, and at the necropsy there were found on one (No. 3) petechiæ under the pulmonary pleura, peripheral lobules congested, and adhesions between lower lobes of lung and costal pleura; in the liver reddish streaks and patches; spleen and kidneys slightly congested; on the placenta petechiæ. In the other (No. 4) there were numerous congested lobules in the lungs, and pleural adhesions; cortex of kidneys congested.

Inoculation experiments.—To study the transmissibility of the disease, Dr. Klein inoculated four calves in the corium of the groin and the inside of the ear with scrapings from the ulcers after removal of the crusts. In calf No. 3 there was vesiculation at the margin of the spot inoculated, and in the centre commencing formation of a crust. On the seventh day each sore on the ear had enlarged to about half an inch in breadth, and was covered in its whole extent by a brownish crust. On the eighteenth day they had all healed up and become converted into flat scars.

The micrococcus of scarlatina.—To search for micro-organisms, Dr. Klein removed the crust from an ulcer on the teat, scraped off the most superficial layer, squeezed the ulcer, and made cover-glass preparations with the exuded lymph. Tubes of nutrient gelatine and nutrient agar-agar were also inoculated. Dr. Klein succeeded in isolating a micrococcus which, after three to six days at 20° C., formed at the line of inoculation small points or granules, whitish in colour and tolerably closely placed. In the depth of gelatine the channel of inoculation was visible as a whitish streak, made up of smaller and larger droplets. The gelatine was not liquefied. Cultivated in milk and incubated for two days at 35° C., the milk was turned solid. Microscopic examination of a culture showed that there were micrococci, diplococci, and shorter and longer chains. In both, after two or more weeks' incubation, very long chains were formed. The micrococci showed a peculiar mode of division. The chains showed branchings, and here and there in a chain the presence of a larger element amongst the smaller ones.

Inoculation with cultivations.—Dr. Klein inoculated two calves in the groin with the cultivated micro-organisms. One calf died in twenty-seven days. No ulcers resulted, as after inoculation with the scraping of the sores; but at the necropsy there were found peritonitis, hæmorrhagic spots on the omentum, congested liver, kidneys, and lungs, petechiæ under the pleura, and pericarditis. In the second calf, on the nostrils and lips and in the hard palate and gums numerous irregularly outlined patches were seen. They were discoloured, brownish, with a very slightly raised margin and a paler centre. This animal was killed, and at the necropsy there were congested lungs, kidneys, and hæmorrhagic patches on the spleen. Thus in neither of these cases was a real ulcer produced as the result of the inoculation of the cultivated organism, but the post-mortem appearances and anatomical features recalled to Dr. Klein the lesions of scarlatina. In the kidney, for example, there were congestion of the cortex, hæmorrhages and glomerulo-nephritis, and granular or opaque swelling of the epithelial cells and infiltration with round cells. From the blood of the heart the micrococcus which had been used in the inoculation was recovered. In view of the evidence, Dr. Klein concluded that the *streptococcus was identical with the virus of the cow disease*, and that it produced a disease very closely resembling that of scarlatina. In a paper read before the Royal Society, Dr. Klein describes how the work was carried on during 1886-87. Dr. Klein

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found in the blood of human scarlatina that a micrococcus was present in four out of eleven cases. The micrococcus proved to be identical in its microscopical appearances and in its characters on cultivation with the micrococcus found in the Hendon cow disease. And by inoculation with a cultivation of the scarlatina micrococcus, he states that a cutaneous and vesical disease resulted, which was identical with that produced in the calves infected with the micrococcus from the Hendon cows.

Dr. Klein's conclusion.—In conclusion, Dr. Klein says:—"It must be evident from these observations that the danger of scarlatinal infection from the disease in the cow is real, and that towards the study and careful supervision of this cow disease all efforts ought to be directed *to check the spread of scarlet fever in man.*"

An eruptive disease is reported.—Cases of an eruptive disease of the cow having been reported to the Agricultural Department of the Privy Council, I received instructions from Professor Brown to undertake a series of researches on the lines indicated by Dr. Klein. The first animal that came under my observation had been purchased and removed to the Royal Veterinary College. This cow I shall speak of as No. 1. She was fairly well nourished, eat well, and was normal in her milk supply. Her temperature was normal on admission, but subsequently rose from mammitis occurring as a complication. There was no desquamation, nor were there in this case any patches destitute of hair.

Character of the eruption.—But there was a characteristic disease of the udder and teats. On the right teats there were numerous sores varying in size from a pea to a penny. The sores were covered with crusts varying in thickness and generally fissured. In some they were flat, in others conical. Some were with difficulty removed with forceps, others were readily detached. The crusts varied in colour from reddish-brown to a very dark brown or almost black. On detaching or scraping a crust there was a granulating and somewhat indurated base. On the right anterior teat there were several ulcers, from which apparently the thick crusts had been detached, and new scabs were forming. On the left posterior teat there were unusually large dark-brown crusts, especially at the extremity of the teat.

Examination for micro-organisms.—Having entirely removed the crusts from some of these ulcers, I squeezed the base, and from the discharge I made a number of inoculations in nutrient gelatine and nutrient agar-agar. I also collected the discharge in capillary tubes and sealed them immediately, and also made a number of cover-glass preparations.

Inoculation experiments.—With the discharge and with scraping from the ulcers I inoculated four white mice, one guinea-pig, and two calves. Of the two calves one was inoculated by scarification on both ears; the other was scarified on the left ear and inoculated on the left groin by making an incision through the corium and rubbing in a scraping from an ulcer. In each ear and in the groin there were positive results. In the large brown calf inoculated in the right ear in two places, one place went through the following changes. On the third day there was apparent vesiculation, and commencing formation of crust. From day to day the crust thickened, and on the eighth day the crust was at its height, and detached at the edges. By removing the scab an ulcer was exposed. There was slight inflammatory thickening. About the thirteenth day the ulcer had quite healed. This corresponds very closely with the results obtained by Dr. Klein. The temperature of the calf was only slightly raised.

Cultivation experiments.—I will now describe the result of the cultivations. The inoculations had been made for the most part in tubes of nutrient gelatine and nutrient agar-agar solidified obliquely. To separate the different organisms that might be present, I employed either Koch's plate-cultivations or Esmarch's method, or I simply drew the platinum needle in a line on the surface of the nutrient medium. Agar-agar tubes, inoculated in this way, were placed in the incubator at 37° C., and gelatine tubes were kept at 20° C. In the course of two or three days a growth commenced along the track of the needle, consisting mostly of china white, yellow, orange, and little dot-like colonies. Examination of the latter with a magnifying glass showed a little darkened centre corresponding exactly with the figure given by Dr. Klein. Cover-glass preparations revealed at once an organism identical in form with that described by Dr. Klein. From these colonies cultivations were established in a number of tubes of nutrient gelatine, and in two or three days, at 20° C., the cultivations gave the peculiar finely dotted appearance which has been figured and described so minutely. These preparations were demonstrated to Professor Brown on Nov. 23rd. This micrococcus grows also in broth and turns milk solid, so that it exactly corresponds with the description and figures given by Dr. Klein of the so-called *micrococcus scarlatinæ*. As I had procured cultivations, the animal was ready to be killed, and Professor Brown was anxious that Dr. Klein should be present at the post-mortem. In deference to Dr. Klein's wishes the cow was conveyed to the Brown Institution, on the condition that due notice was given to enable us to be present at the necropsy.

Another outbreak.—On Nov. 24th I accompanied Professor Brown to see another cow affected with a similar disease belonging to a herd in another county. The affection in this case was not so severe, but it also showed the same characteristic brown or reddish-brown crusts, which on removal exposed a granulating thickened base with exudation of a lymph-like discharge and slight hæmorrhage.

Natural infection.—The cow was suckling a calf, and this calf had previously been suckled by another cow also affected with the same eruption of the udders and teats. The calf had developed flat angry-looking ulcers on the nose and hard palate, and an eruption in the hairy part of the nose near the muco-cutaneous line of union. Cow No. 1 having been sent to the Brown Institution, a second cow (No. 2) was purchased from the same herd as No. 1. This cow also had a calf with suspicious places on each nostril: on the right side an apparent abrasion, and on the left a distinct but thin flat brownish scab. It would appear, then, that these calves had inoculated themselves by sucking the sore teats.

Inspection of an infected herd.—On Saturday, Nov. 26th, I proceeded to the affected farm from which the diseased cows Nos. 1 and 2 had been purchased. On my arrival I made inquiries as to the first occurrence of the outbreak. I gathered that it appeared about the end of September, but it was said that no fresh cows were imported at that time. The disease commenced at a farm which I shall call V. The cows were moved from farm to farm, so the disease spread through all the farms W, X, Y, and Z. In all there were about 160 cows. By examining two milkers I obtained the following history. They said that the teats swelled, were hot to the touch, and very tender. As a result the animals were milked with difficulty. The milkmen resorted to the standing position, as otherwise they and their milk-pails were upset. In some cases the pain on milking was so great that the animals became almost unmanageable and had to be tied by the legs. One man described the pain caused by milking the severe cases as "most barbarous." They stated that a little white bladder would rise up on the teat, which would become as large as a pea or much larger, and then was burst in the milking. As a result a sore formed and became covered with a scab. Matter formed under the scab, and as the scabs were broken in milking, matter and blood would come out on their fingers and get mixed with the milk. Sometimes the scabs would become rubbed off, in other cases they fell off, and finally in four or five weeks the sores would be healed.

The disease in man.—At these farms I found that the disease had been communicated to several of the milkers. They had been inoculated some weeks before my visit, so I had at this stage no opportunity of seeing the early changes. I had therefore to rely a great deal on their description. I will select a few cases.

Cowman R—— showed me a scar on his right hand. He said he was the first to catch the disease. It came as a hard painful spot, which formed matter and then a big scab. He had continued milking ever since, but had no fresh "placea."

Cowman F——, about a month ago, noticed spots which appeared on both hands. His fingers swelled and were painful. He says it came first like a pimple and felt hard. Then it "weeped out water" in four or five days. There were red marks creeping up his arm. There was a sort of throbbing pain, and he could not sleep at night. When I saw him I found on the right hand a scar, but on the left hand there was an ulcer about the size of a shilling covered with a thick black crust. The crust was partially detached and exposed a granulating ulcer. It was the exact counterpart of an ulcer on the cow's teat.

Cowboy H—— had both hands bad about a month ago, first the index finger of the left hand and then the right hand. He says that it came up like a hard pimple, and the

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finger became swollen and red. After a few days it "weeped out" water and then matter came away. Both his arms were swollen, but his left arm was the worst. About a fortnight afterwards he noticed "kernels" in his armpits, which were painful and kept him awake at night. His arms became worse, he could not raise them, and he had to give up milking. He also had a bad place on the lower lip. On examination I found that the axillary glands were still enlarged and tender. He volunteered the statement that the places were just like the sore teats.

H——, the bailiff's son, had a sore on the upper lid of his right eye and left hand. In both places he had previously been scratched by a cat. The right hand had also been infected. It commenced, he says, a fortnight ago. His hands were swollen, red, and hot. He felt very poorly and went to bed. Little spots like white blisters appeared on the back of his right hand; these broke and "rose up" in thick scabs. He was very ill for two or three days, but did not send for a doctor. He had painful lumps at the bend of the arm and in the armpit. He gave up milking, and had not taken to it since.

Absence of scarlatina among consumers of the milk.—As I have said, there were altogether about 160 animals on these farms, and all, or nearly all, had contracted the disease. The milk was drunk on the farms and in the village, but most of it, amounting to eight churns a day—that is, sixty-four barn gallons, or 1088 pints,—was sent twice a day to a large city. Not being distributed in a wealthy neighbourhood, we may roughly estimate the number of persons drinking the milk at about 1500 or 2000. I was informed that there were no cases of scarlatina on the farms or in the village. In the town district in which the milk was distributed there was no epidemic. From these observations and researches, I think that we are justified in concluding that the disease I have described is identical with the Hendon cow disease. For—(*a*) In both cases we have an eruption confined almost entirely to the teats and presenting precisely the same appearance and with the same history. (*b*) In both, the disease is communicated from animal to animal by the virus being conveyed by the hand of the milker. (*c*) In both, the disease is communicable to man when the virus is received into abrasions or scratches on the skin, and produces, judging from the description, a similar disease. (*d*) In both, the disease is communicable by experimental inoculation. (*e*) In both there are occasionally the same constitutional symptoms, slight rise of temperature, eruption on the skin, patches devoid of hair, running from the eyes, &c. (*f*) In both there are streptococci associated with the disease, which are identical in every respect in their microscopical appearances and in their characters on cultivation. And therefore I am of opinion that we are justified in concluding that the Hendon cow disease was not scarlatina in the cow, and that in the Hendon cases the source of infection was from some unascertained human source.

Nature of the disease.—I now pass on to give you my opinion as to the nature of this disease. The appearance of the eruption, especially in the bailiff's son, aroused a suspicion in my mind, and on returning from my visit to the farm I very earnestly questioned some leading veterinary surgeons as to the nature of this disease in the cow. I was assured that it was very common and very well known, though not described in the text-books of veterinary medicine. It was referred by them to various causes. In deference to their opinion I even suggested that if it were an undescribed disease it might appropriately be termed a contagious mammillitis. But my suspicions clung to me, and were strengthened by studying the descriptions of affections of the teats in the cattle, and I expressed to several my disappointment at not having had an opportunity of seeing the earlier stages of the disease in man. I therefore determined to visit the affected farm again and again with a hope of seeing some fresh cases. On Dec. 2nd I was rewarded for my trouble, for in course of conversation with a head cowman my attention was drawn to a lad who was standing at some little distance. I was told that his was a new case, and an examination of his face revealed to me in a moment that my suspicions were well founded, for I was convinced *this disease of the teats of the cattle was the true Jennerian cow-pox.* My first impulse was to carry the boy straight off to London, but the question of accommodation led me to have advice first as to what course I should pursue. I therefore made a drawing of the boy's face, filled a number of tubes with lymph, and spent the rest of the day in visiting a farm I had not previously seen. Here I found a very intelligent head cowman whom I had not interviewed before, and I determined to elicit from him all he knew of this disease in his own words. He said that he had long known this disease of sore teats, and that twenty years ago he had had the sores on his fingers, just in the same way as the lads now on the farm. He added that he had no fear of milking the cows, because he was sure he would not get it again. I then asked him to tell me exactly what occurred in the teat from the very first, and he said that it began as a hard pimple on the red teat, that this got a white head, and then there came a blister with watery fluid, which was subsequently broken in the milking. Another cowman added that he had seen the watery fluid get like "brainy stuff" before the blister was broken. Thus, the history of what occurs must be as follows: First, there is a papule and then a vesicle, with first clear and then turbid contents. The vesicle on or before the turbid stage is ruptured by the hand of the milker, and the normal course of development of the pock is interrupted. The irritation of milking twice daily causes extensive ulceration and consequent formation of large fissured crusts; and thus, instead of getting well in about a fortnight, the disease is prolonged for four or five weeks or longer, and when finally healed there is an irregular scar. It is the hand of the milker which is responsible for the striking differences in appearance from the normal pock, such as the absence of pustule and pitting; but as for the reported absence of the initial papule in the Hendon cases, this is easily accounted for by Dr. Cameron's admission that for the earlier symptoms he relied on the statements of others. No doubt these accounts were incomplete, as in the first milkers' description to me. On returning to London in the evening, I confided my convictions to Dr. Curnow, and asked his advice as to bringing the boy to London. Dr. Curnow very kindly arranged to have him admitted to the Seamen's Hospital, Greenwich; and on the following day (Dec. 3rd) I persuaded the boy to accompany me there so as to have him under observation. I shall not trouble you, Sir, with full details of this case; but his condition at various stages is represented in these drawings. Suffice it to say that it was a most typical pock, and that lymph taken from the vesicle produced in the calves typical vaccinia.

Diagnosis from spurious forms of cow-pox.—The characteristic development of the pock on the boy's face and the production of typical vaccinia in the calf with the lymph were the conditions necessary for proving conclusively that this was the true cow-pox. The spurious forms are local eruptions on the teats, and are some of them communicable to the hands of the milker. They were recognised by Jenner,[2] Hering,[3] and Ceely,[4] and stress was laid on the necessity of being able to diagnose them, as they afforded no immunity from small-pox. There is only one form—the white or blister-pock—which is likely to cause difficulty in diagnosis. This disease is of short duration. The vesicles are only subepidermic, attain their height in twenty-four hours, are not truly umbilicated, and have no areola, and after bursting form a thin scab. There is no fever.

General remarks.—Now, Sir, the question may occur to you, Is this micrococcus identical with the virus of vaccinia? I am devoting my attention to this and to the study of any other organisms which may be present in the lymph. If it be true that the same streptococcus occurs in scarlet fever, diphtheria, puerperal fever, in improperly preserved milk, and perhaps, too, in foot-and-mouth disease, there can be but little doubt that we have only to deal with a micro-organism, which, when cultivated and inoculated in healthy animals, is capable of setting up a septic inflammation. Indeed, the post-mortem appearances observed by Dr. Klein point, in my mind, only to septic complication, which may equally occur in cow-pox, in scarlatina, and in other febrile diseases. I think that the explanation of this micrococcus being found occasionally in scarlatina is that, in severe cases with ulcerated throat, the blood is unable to cope with the invasion of micrococci from the surface lesion. If this be so, the opinion which I wrote early in 1886 concerning the micrococci which had been described in measles applies also to this micrococcus—viz., that in this and in many other cases I only described these organisms as distinct species "from their association with particular diseases, not because they are believed to be

[2] An Inquiry into the Causes and Effects of the Variolæ Vaccinæ, &c. 1798.
[3] Ueber Kuhpocken an Kühen. 1839.
[4] Trans. Prov. Med. and Surg. Assoc., vol. viii., 1840, and vol. x., 1842.

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causally related, for there is very little evidence in favour of that belief as yet, but purely for convenience of reference. In many cases they are probably only septic organisms which have found a pabulum in dead tissue; others appear to be identical with organisms which have been found in pus."[5]

Conclusions.—As the practical outcome of this research, I would strongly urge that prompt measures be enforced for isolating diseased animals, and preventing the spread of the disease through the herd. And as the milk is liable to be contaminated with blood, pus, and discharges from the teats, I consider that it would only be consistent with the most elementary rules of sanitation that only the milk obtained from the healthy cows in the herd should be sent into the market. Such measures, I trust, will lead to the alleviation of much suffering in the cows, ensure greater cleanliness in the milk, and provide another source of vaccine for public use.

THE CENTRAL NERVOUS SYSTEM AND AXIAL SKELETON IN ANENCEPHALOUS MONSTERS.

BY ALFRED W. HUGHES, M.B., M.R.C.S.,
FORMERLY SENIOR DEMONSTRATOR OF ANATOMY, ROYAL COLLEGE OF SURGEONS, EDINBURGH.

THE following description of parts in this comparatively rare form of monstrosity is taken from a seven months' anencephalous fœtus which I recently examined and dissected.

The well-known deficiency which exists on the dorsal surface of the fœtus extended from the head to the sacral region in the form of a broad shallow groove, on the floor of which the spinal cord lay exposed, which terminated above in a well-marked medulla oblongata. The groove of deficiency was broadest at its upper part, and narrowest at its middle, where the sides approached each other, more than at the two extremities. The sides of the groove were formed by the rudimentary laminæ of the vertebræ, which normally grow backwards to enclose the spinal cord, but which here are deficient. In the cervical and lumbar regions the laminæ were distinctly everted and almost in a line with the transverse processes, while in the dorsal region they were turned inwards and approached each other, giving rise to the narrow part of the groove above mentioned, and showing a tendency to the conversion of the groove into a canal as it normally exists. At the upper part, in the occipital region, the groove was bounded by an incomplete ring of bone, formed by a part of the occipital, which I shall again describe more fully, and to this ring of bone a strong fibrous membrane was attached which extended a short distance, partly covering the nervous structures contained in the occipital part of the groove, to which I shall again refer. Outside the ridge formed by the laminæ the skin terminated abruptly, the whole groove being devoid of skin; but covering the various structures lying in the groove was a thin, delicate, transparent membrane, which, traced outwards, was found to become continuous with the skin outside the laminæ, and, traced inwards, became attached to the spinal cord, but which had no attachment at all to the subjacent laminæ, and could with ease be lifted from their surface. This membrane, I have ventured to suppose, is of epiblastic origin, from the connexion which it has with skin and spinal cord, which structures are also developed from the epiblast, while the laminæ, to which it has no attachment, are developed from the mesoblast. The spinal cord extended downwards within an inch of the lower end of the groove of deficiency, and possessed its two well-developed symmetrical halves, separated by a well-marked dorsal fissure, which remained unclosed, and which terminated inferiorly in a rhomboidal space, corresponding probably to the rhomboidal dilatation, which remains for a time at the lower end of the central canal of the cord in a normally developed fœtus. The medulla was well developed, and on its dorsal surface the fissure continuous with that of the cord could be traced up to a well-marked fourth ventricle, overhanging which was a very small yet recognisable cerebellum, which was connected to the medulla by two distinct nervous bands, the inferior peduncles, which partly bounded the fourth ventricle. Lying just above the cerebellum was a large rounded mass (non-nervous), whose nature I at first could not make out, but upon incising it I found it contained a cavity filled with blood, and was therefore of the nature of a venous sinus; to this sinus I shall again refer, as it has certain important connexions. This mass was partly covered by and attached to the fibrous membrane before mentioned. The different nerves which arise from the medulla—the ninth, eighth, and seventh pairs—were well developed, and passed outwards to enter their respective foramina, the auditory also receiving fibres from the cerebellum. On tracing the medulla upwards, continuous with it was found a small mass of brain substance, from which several nerves passed out—viz., the optic, the third, and the fifth; but beyond this no trace of brain substance could be found. I dissected the optic nerve very carefully, and found, on the removal of the roof of the orbit, that the eyeball and parts in relation to it were well developed, with the optic nerve in its normal position, having its dural sheath, which was attached to the margin of the optic foramen. The nerve was traced back to the small mass of brain substance from which it emerged, but the optic commissure was absent, the nerve passing directly forwards to the eyeball of the same side, and having no connexion with the opposite nerve. I could find no trace of the olfactory tract or bulb. This mass of brain substance, from its position, and also from its close relation to the cerebellum, I at first thought was the pons Varolii, but the fact that from it the above nerves emerge suggests the idea that it must represent something more than the pons, for the optic nerve which passed out of it was well marked, and this in its development has no relation to the pons Varolii. It may be noticed that the only parts of the brain which were recognisable were those developed from the posterior primary vesicle—pons, medulla, and cerebellum; but the mass of structure, though extremely rudimentary, which occupied the position of the pons, must have a relation developmentally to the anterior and middle primary vesicles also, seeing that the optic nerve emerges from it, which nerve is developed from the mesencephalon and thalamencephalon, which belong to the middle and anterior vesicles respectively; but the remaining part of the anterior vesicle—viz., the prosencephalon, from which the cerebral hemispheres and the olfactory bulb are developed, seemed to be entirely absent. As to the bones of the head, I have previously mentioned the incomplete ring of bone formed by the occipital, to which a fibrous membrane was attached, and close to which I found a rounded mass of fibrous tissue having a large venous sinus in its interior. This sinus communicated with another sinus on each side, which passed outwards at the junction of the bone and fibrous membrane, and was traced to the jugular foramen. This sinus was therefore the lateral sinus, the central large sinus representing the torcular Herophili, and the parts of the occipital bone here represented are the ex-occipitals and the tabular portion of the bone which lies above the transverse sinus, while the tabular part which lies between the transverse sinus and the foramen magnum was absent, or was merely represented by a fibrous membrane, which had not become ossified. The frontal and parietal bones were well ossified, and formed a flattened compact case, which lay in close contact with the floor of the cranium, the clinoid processes of the sphenoid touching the under surface of the cranial roof; the interval between the floor and roof of the cranium was too small to admit even the handle of a scalpel. Unlike the normal fœtal head, there were no fontanelles, for in the position of the anterior fontanelle the bones forming the coronal, frontal, and sagittal sutures met in a point, the sutures forming a rectangular cross. The same condition existed at the junction of the lambdoid and sagittal sutures in the position of the posterior fontanelle. The floor of the cranium was normally developed. I have but merely alluded to the parts of the brain which are not represented in the fully grown anencephalous monster; but seeing how completely the optic nerve and eyeball are developed, while the rest of the structures developed from the middle and anterior cerebral vesicles are absent, one is naturally led to suppose that these vesicles at one time did undergo a certain amount of development, which afterwards became aborted, giving place to retrogressive changes,

[5] Manual of Bacteriology, p. 201.

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though this opens up a field of investigation into which I must refrain from entering at present, not having the opportunity of examining the brain in this form of monsters from its earliest stages of development.

Flint.

A CASE OF HYSTERO-EPILEPSY SUCCESSFULLY TREATED BY REMOVAL OF DAMAGED UTERINE APPENDAGES.

BY LAWSON TAIT, F.R.C.S., &c.,
PROFESSOR OF GYNÆCOLOGY, QUEEN'S COLLEGE, BIRMINGHAM.

THE husband of this patient, a well-known physician in Rome, applied to me early in August concerning the sufferings of his wife, and he has given me the following history of the case. She was thirty-three years of age last July; she was married at eighteen; the first child was born ten months afterwards, the labour being natural and the convalescence perfect. In 1874 she aborted at the third month, the pregnancy being twins. The cause of the abortion was accredited to an accident, by which she fell downstairs. This abortion was followed by pelvic peritonitis on the right side, which seemed to centre in the Fallopian tube, and she was unable to leave her bed for three months. One year afterwards she aborted again, and on this occasion a similar inflammatory attack occurred on the left side; but she was not so severely ill as on the previous occasion. Her second convalescence, however, was very protracted; she never regained her ordinary strength; was unable to walk without suffering from pain in the pelvic fossa, which was greatly intensified at each menstrual period; and ever after the first abortion she was altered in temperament, and became *exalté* and irritable. For four years after the second abortion marital intercourse had to be avoided on account of the intense suffering it occasioned. In the spring of 1885 she was attacked for the first time with a convulsion, which lasted for about an hour, and similar attacks were repeated for two months, twice in twenty-four hours, which were very violent, sometimes requiring five or six persons to hold her. During the following two months they diminished somewhat in violence, in length, and in frequency, and quite disappeared in May, 1885. During that time she made frequent attempts at suicide, and her husband did not consider it safe to leave her without the constant presence of a nurse day and night, until December of the same year. During 1886 she had no attack, but was very feeble, very highly excited at times, and alternately in a condition of despondency. On Jan. 2nd, 1887, she was suddenly seized with violent trembling, which passed into convulsions, and these lasted for four hours. Similar attacks occurred daily, sometimes twice a day, until the middle of March. On May 15th she was removed from Rome to Lugano, it being her husband's intention, as soon as she was able to travel, to bring her to England for the purpose of having an operation performed for the removal of the uterine appendages. At Lugano she had a period, during which she was worse than ever; for most of the time she was in a condition of convulsion, and for the greater part she was unconscious.

Her husband communicated with me by letter on August 5th, to tell me of her condition. His letter is as follows: "The day before she was to start she was again seized worse than ever, the convulsions lasting from three to four hours, followed by wild delirium; for days she had no sleep. This continued for eight days, then she began to improve, and I was hopeful of getting her to England by easy stages. But ten days since she became worse, and the mania that followed was of a suicidal character. I am satisfied nothing will be of service except removal of the uterine appendages, as those on the right side have been diseased for the last eleven years. During the present attack there has been great tumefaction over the right ovary and tube, with fever and intense pain. Four days since a considerable quantity of fetid, greenish-yellow pus escaped from the uterus; in my opinion it came from the tube. Since then she has been better, and there has been less tumefaction. I cannot operate on my own wife, and I propose that you should do the operation. Please write and tell me when I had better bring her." I replied by telegram, that it seemed to me impossible to move the patient under such circumstances, and that I would run over to Lugano for the purpose of placing my services at his disposal. He replied by telegram to the effect that she was too ill to permit of such delay, and Professor Porro of Milan was called to see her. On Aug. 17th I received from the husband the following letter: "Professor Porro commenced his operation yesterday at 11 o'clock, and finished by abandoning it at a quarter-past 12. He made an incision three inches and a quarter long. He says both tubes and ovaries were so densely adherent that it was impossible to separate them from the mass of organised tissue in which they were embedded. The slighter adhesions he broke up, and then crushed the base of the ovaries with strong forceps, with the hope, he says, of partly destroying their function. He wished me to feel the attachments, but I declined, as I preferred to leave all responsibility with him. She suffers dreadfully. I give her as much morphia as I dare, but there seems no possibility of controlling it entirely. There is constant nausea and vomiting; the pulse is very weak and compressible (80); temperature 99°. If my poor wife recovers sufficiently, and you think there is a possibility of help in the future, I shall bring her to you." She recovered from the operation, and on Aug. 30th I received a letter from the husband to the effect that he was coming over to England to confer with me on the subject of future interference. But on his road he received in London a telegraphic despatch that all the symptoms, including the violent convulsions, had returned with, if possible, greater severity. To continue the history from that day in his own words: "I told Dr. Solaro of Lugano, in whose care I left her, that I expected a return of the convulsions, and in the event of that happening he was to notify to me immediately, when I would return with Mr. Lawson Tait, as the appendages must then be got out at any risk. On Sept. 18th I received a letter from my daughter stating, 'Your worst fears have been realised, the convulsions have returned as bad as ever, and she remains unconscious.' Next morning came a telegram which informed me that four violent convulsions had occurred in thirty hours, and this was followed by another that she was insane. I replied, 'Send to the asylum for help; I leave here to-night with Tait.' I saw him in Birmingham next morning, and he left with me by the next continental express, reaching Lugano on the 22nd. He operated on the 23rd with an incision not over two inches, and removed the appendages from both sides without any apparent difficulty. The operation from commencement to finish occupied exactly nine minutes and a quarter. The patient has had no trouble since; is bright and cheerful; has a better appetite than at any time during the last three years; the expression of the face has entirely changed; the old, haggard, anxious, irritable look has gone, and in the place is a contented, peaceful expression. I can only conclude by saying your skill has saved the reason and life of my wife."

At the operation I found the uterine appendages, as Professor Porro had, densely adherent, both tubes occluded, and contained certainly not more than a teaspoonful each of limpid serum. The patient has had up to the present time no return of her previous symptoms. I can, with such a narrative, only say that it is idle to talk of hydrosalpinx being a harmless condition which may be always left alone.

Birmingham.

FIFTY-FIVE CASES OF OPERATION FOR THE RADICAL CURE OF HERNIA.

BY ARTHUR NEVE, F.R.C.S.E., &c.

As this subject is now being discussed, I venture to summarise briefly the operations in the Kashmir Mission Hospital since 1881.

In that year Dr. Downes (now of Eastbourne) performed Spanton's operation in eight cases, of which one recurred at the time, and I have since seen another with recurrence. In the following year he performed three Spanton's, and three by ligature and excision of the sac (Annandale's operation). Of the latter, one died; of the former, one recurred. In the same year (1882), I performed two Spanton's operations. In 1883 I performed six Spanton's operations, of which one recurred, and two by ligature and excision;

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of these latter, one died of shock. In 1884 there were three Spanton's operations, with one recurrence. The instrument used throughout this and following years was a straight shaft with a spiral point, by which the pillars are alternately pierced. I described the operation in the *Edinburgh Medical Journal*, and published full details of the cases in the *Indian Medical Gazette* for 1883, so will not recapitulate my experience. In 1885 I performed four Spanton's operations, with one recurrence after a year; and two other surgeons also operated on two cases, which rapidly recurred. Last year (1886) eleven Spanton's operations were performed, of which one recurred. This year, up to date, eight screw operations have been performed, of which two were followed by reappearance of the hernia. In one the recurrence was sudden and complete, with some pain. On the same day I performed herniotomy, excised the sac, and sutured the pillars. Another case of excision has since been also successfully performed. The total may thus be tabulated: Screw operations, with Mr. Dunnet Spanton's or the author's modified instrument, forty-eight cases (seven of these are known to have recurred); operations with ligature of the neck, and usually excision of the sac, seven (of these two died).

On these cases I will offer but very few remarks. With regard to the only really *radical* procedure, that of removal of the sac with suture of the canal, it is a somewhat severe measure. Without selection of cases, I doubt whether the mortality would be less than 5 per cent. By careful selection of cases it might not exceed 1 or 2 per cent. With only the latter mortality this operation for the radical cure of reducible hernia is justifiable; but the operator ought to avoid exposing old or weakly persons to an operation which is usually followed by more or less suppuration in the scrotum, and which is liable to graver complications. I consider Spanton's operation a less certain cure, but cannot speak positively on this point. During the last year I have usually removed the screw at the time, merely using it as an instrument for suturing the pillars and neck of the sac with silver wire, which has been left in. But this method seems to me less secure than that of leaving the instrument in for a week or until it loosens. This operation appears free from danger to life; in fact, the statistics collected by Mr. Spanton prove it to be so. Like Wood's operation, the success depends on the skilful application of the instrument. There is perhaps a "knack" in it, which many surgeons without considerable practice might fail to acquire. This should tell against the general adoption of the operation, but affords no ground for decrying its actual achievements. It is, moreover, a simple operation, and one in which the beginner is likely to fail from over-caution rather than otherwise, the operation being simply inert. In my first thirty cases it is likely that 20 per cent. recurred; in my next thirty this percentage is likely to be halved. Any who are interested in this subject should refer to Mr. Spanton's papers in the *Medical Times*, 1885, or to my contributions before referred to.

Kashmir, India.

HYDATID DISEASE OF THE CONVEX SURFACE OF THE LIVER,

DISCHARGING INTO THE PLEURA AND AFFECTING IT SECONDARILY.

BY H. HANDFORD, M.D., M.R.C.P.,
PHYSICIAN TO THE NOTTINGHAM GENERAL HOSPITAL.

THE history of the case is shortly as follows:—A man aged sixty-one, a lacemaker, was admitted under my care into the Nottingham General Hospital, in November, 1886, complaining of troublesome cough, slight muco-purulent sputum, and great shortness of breath, especially on exertion. He was well nourished, and had been a strong man, except for some winter cough for the last few years. His present illness had begun three months previously, and he had been sent into the hospital, with a diagnosis of chronic pleuritic effusion, for the purpose of being tapped. He had the signs of a moderate pleuritic effusion on the right side, but the vocal resonance and fremitus were very little diminished. The liver was not much pushed down, neither was it appreciably enlarged or irregular. He was aspirated, and thirty-four ounces of opaque semi-purulent fluid withdrawn. It was highly albuminous, but did not gelatinise on standing, showing the absence of any large amount of fibrine. Under the microscope very few pus cells were found and no hooklets or membranes, or anything suggestive of hydatid origin. The opacity appeared to be due not so much to pus as to the fatty degeneration of insoluble albumen—that is to say, of a highly fibrinous and albuminous exudation. The chest was aspirated twice again, at intervals of about three weeks, and after two months he was discharged practically well. He worked at his trade for six or eight months, and began to get short of breath again and to be troubled with cough in August, 1887. In the end of September I was asked to see him in consultation with my friend Dr. Stafford. The patient was extremely ill, with the right side almost motionless and dull up to the clavicle. He had the most urgent dyspnœa, febrile temperature, and coated tongue. Next day he became an in-patient again, and about fifty ounces of pus were removed by aspiration. This was examined microscopically, but presented no unusual appearance. There were no hooklets and no membranes. Rather more than a week later, when he had somewhat recovered strength, the chest, which had filled again, was opened by a free incision by my colleague, Mr. Wright. The opening was made in the seventh space, a little behind the posterior axillary line. The ribs were so close together that a small portion of bone had to be removed in order to admit a full-sized indiarubber drainage tube. After five or six days numerous hydatid vesicles appeared in the wound and on the dressings. Their true character was verified microscopically by the laminated hyaline appearance of the cyst walls, and by the presence of numerous hooklets. The cysts continued to be discharged almost daily for about a month; but for ten days or more before his death, which occurred from asthenia, the discharge of hydatids ceased. There never had been any noticeable enlargement of the liver. At the inspection a thick-walled, irregular, indurated, suppurating cavity, large enough to contain about six ounces, was found in the convex surface of the liver, chiefly in the right lobe, but partly in the left, immediately below the diaphragm. It communicated by a smooth, rounded opening, that would just admit the index-finger, with the right pleural cavity. In the pleura, at the root of the collapsed right lung, was a single hydatid cyst the size of a walnut. This was the only trace of hydatid left. There was no evidence of there having been any growth of hydatids in the lung, or any extensive affection of the pleura. The majority of the hydatids discharged through the chest wall—they numbered upwards of 100—must have come from the liver through the opening in the diaphragm mentioned above. The disease was cured, with the exception of the one solitary cyst at the root of the lung, but the patient had not strength to enable tissue repair to progress properly.

With regard to the diagnosis, I should say that the dependence of the chest affection on hydatid disease was not suspected till the vesicles were discharged, and then their origin from the liver was thought probable. The only difficulty during life in accepting a hepatic origin for the cysts was the total absence of bile staining. In a case of hydatid disease of the liver in a lad who was under my care in 1879, and which discharged through the lung, the numerous and large cyst walls which were coughed up were all stained of a bright orange-yellow colour. I have kept the patient under observation more or less ever since, and he is in robust health at the present time. With regard to the relation of the pleural effusion to the hydatid disease, I think it probable that the effusion in November, 1886, was due to contiguity, and that the free communication with the pleura was not established till later.

THE LATE DR. HARVEY.—At a special meeting of the County and City of Cork Medical and Surgical Association, held recently, the following resolution was passed unanimously:—"That we, the members of the County and City of Cork Medical and Surgical Association, having heard with extreme regret of the death of Dr. Joshua Harvey, the founder of the Medical Club, and for many years a very active and esteemed member of the medical profession in Cork, beg to convey our deep sympathy to his family on the death of one who stood so deservedly high in the estimation both of the public and his professional brethren."

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

COCAINE IN THE VOMITING OF PREGNANCY.

By FRANK COLLINS, M.R.C.S.

WITH reference to Dr. William Duncan's recent observations on this subject, I send the following case as an additional item of experience.

On Oct. 26th I was called in to consult on the advisability of inducing abortion in a case of continual and distressing vomiting, complicated with uterine hæmorrhage which the usual remedies failed to relieve. The patient was a primipara, aged twenty-seven, between three and four months pregnant. Vomiting began three weeks previously and occurred several times each day, gradually becoming more frequent until three days before I saw her, when it assumed so distressing a character after taking even liquid nourishment that she had kept nothing down for that period. The bleeding began with the straining fourteen days previously, and continued constant, but slight in quantity, though increased with each attempt at emesis. There was a history of delayed menstruation, but none of other disease. The patient was weak and exhausted, but not collapsed, complaining of "uneasiness," not pain, about the lower part of the abdomen. Pulse fairly good. Vaginal examination revealed a tender spot about an inch above the anterior lip of the cervix, and some tenderness of the cervix itself, from which drops of dark blood were exuding. Pelvic organs otherwise normal. With a tracheal sponge-holder I inserted, through a Ferguson's speculum, a plug of wool soaked in a 10 per cent. solution of cocaine to the depth of half an inch in the cervical canal, and retained it there from one to two minutes, afterwards swabbing the lips of the os all round with the same. The patient had vomited food taken some four hours before, and was expecting to reject some beef-tea taken a quarter of an hour before the operation. This did not occur, and all sense of "uneasiness" had disappeared before I left. Liquid food was taken and retained within an hour, and has been taken regularly ever since. The bleeding diminished by degrees, and the third day after the operation had entirely ceased, and the patient was doing well.

Seven days after the operation I learnt that the patient insisted on getting up and doing her household duties the day after the bleeding stopped. This was followed by a copious return of hæmorrhage, shortly succeeded by uterine pains; and the case will now probably terminate in miscarriage. The efficacy of the treatment appears to be emphasised by the patient's folly.

The points which appear to me worthy of notice are the almost instantaneous relief to the distress and nausea, and the absence of recurrence of those symptoms. Has cocaine some permanent action beyond its transient effect of causing local anæmia and anæsthesia?

Adelaide-road, N.W.

RECURRENCE OF SCARLET FEVER SYMPTOMS.

By STAFF-SURGEON FRENCH MULLEN, M.D.

(Communicated by the Director-General of the Medical Department of the Navy.)

HAVING seen in the THE LANCET of Nov 19th a letter from "M.R.C.S." giving an account of the recurrence of the symptoms of scarlet fever in a child a few days after her discharge from hospital cured of that disease, and the editorial comment that "such cases are undoubtedly rare," I think the following case may be of interest to the profession.

R. C——, aged thirty-five, stoker, presented himself on the evening of Nov. 8th, 1868, at Chatham, complaining of rigors, headache, thirst, and malaise, which symptoms, he stated, had commenced the previous day. The following morning sore-throat appeared, and a bright red rash was uniformly spread over his trunk and extremities. He was immediately sent to hospital, where the diagnosis of scarlet fever was confirmed, and he was retained until Dec. 15th, when he returned to his ship. In the following June (1869) he again suffered from similar symptoms at Portsmouth, and complete desquamation took place. In July (1869), at Portland, the same symptoms recurred, but were milder and of shorter duration. Owing to the improbability of a patient having scarlet fever three times in nine months, the two later attacks were looked upon as a species of erythema, and were treated on board, and though no special precautions were taken, no spread of infection took place.

In this connexion the following case may be worth recording.

G. R——, aged twenty, ordinary seaman, was placed on the sick list at St. Vincent, West Indies, on the evening of Jan. 30th, 1885, complaining of sore-throat, rigors, and malaise; the tonsils were ulcerated and the fauces deeply congested, being of an almost venous hue. Temperature 102°. The following evening a profuse red rash, which did not disappear even on firm pressure, appeared over the whole body, and the temperature rose to 103·6°. The disease ran the usual course; the throat was quite well, and the rash had almost completely faded, save on the inside of the thighs and legs, by Feb. 4th (sixth day), and branny desquamation set in. On this date an eruption of urticaria, but without itching, appeared over the trunk and extremities. It subsided in a couple of days. The patient was isolated on board, every possible precaution being taken. Desquamation was completed by Feb. 17th, on the 19th he suffered from a slight attack of sciatica, and on Feb. 27th he returned to duty. No extension of the disease took place among the crew.

Now this patient had not communicated with the shore from Dec. 9th, 1884, when the ship was at Halifax, Nova Scotia, to the date of his seizure, Jan. 30th, 1885; he had had no washing done on shore, none of his family at home were suffering from scarlet fever (which might have caused it to be conveyed by letter), and I could not find that scarlet fever was present at any of the West India islands visited, so that this was either a case of extraordinarily prolonged incubation (fifty-two days), or it was a species of erythema more severe than has been hitherto described. The eruption of urticaria on the subsidence of the erythematous rash lends support to this view. I may mention that I assured myself of the absence of gonorrhœa, and that the patient had not been taking copaiba, eating shell-fish, &c. The disease ran too regular a course for it to be symptomatic erythema; and so the fact of his having taken two fifteen-grain doses of the salicylate of soda prior to the appearance of the rash would not be sufficient to account for it.

THE MORE FREQUENT USE OF LONG FORCEPS IN LINGERING LABOUR.

By T. WOOD HILL, L.R.C.P., M.R.C.S., L.S.A.

IT is an unquestionable fact that the use of forceps is becoming more frequent, and is answerable for the great amount of relief to many a poor woman in the agonies of labour; so much so, that invariably when a poor creature has once had them used she naturally demands them again. In a highly nervous, excitable woman who dreads the pains of labour, what practice can be more judicious and productive of good than the administration of an anæsthetic and the application of the long forceps, and thus in the majority of cases terminate most cases of lingering labour? From my own practical experience I have seen far greater suffering relieved by such practice than by the old exploded doctrine of allowing nature to perform the task unaided. Certainly in some cases nature will, at a very great expense of acute suffering, terminate its work; not always satisfactorily—ruptured perineum or puerperal troubles may follow. But what is the good of having such scientific instruments at our own command, if we are not to use them in suitable cases? A woman, I maintain, ought not to be allowed to suffer unnecessary pain. Why should she? It has been my pleasure to help many a poor creature out of her trouble by the timely use of the long forceps; in primiparæ their proper use is even more satisfactory. When I look back at the cases of lingering labour that have fallen to my lot, a shudder comes over me to think I was not qualified to help nature. The more I see of difficult labour, the more certain am I that it is our bounden duty as medical men to minimise suffering; use the forceps and save suffering

Earl's-court-road, W.

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SPINA BIFIDA, ACCOMPANIED WITH CONGENITAL MALFORMATION OF THE CERVICAL PORTION OF THE SPINAL CANAL.

BY JOHN H. LOVE, M.R.C.S.

I WAS called suddenly to a case of labour accompanied with flooding. I found the feet born, and the mother flooding. I delivered her of a female child, which was dead, and had its bowels protruding and the umbilical cord gangrenous. I immediately removed a very large placenta, when all hæmorrhage ceased. I found the spine of the child bifid from the second to the seventh cervical vertebra. The tumour (which had burst) surmounting the bifid portion contained a dirty chocolate-coloured fluid mixed with blood; the edges of the tumour were bluish, and had a congested appearance. The spinal cord and nerves were adherent to the walls of the tumour. The bodies and processes of the second, third, fourth, fifth, and sixth cervical vertebræ were deficient. The neck of the child was short, bringing the child's chin close to the sternum. The face and conformation of the head resembled that of a mask. It appears that about a fortnight previously the mother had sustained a great fright; for a son of hers (walking in his sleep) fell downstairs, and was found by her with his feet and legs stretched out, and his head, as it were, pushed down between his shoulders, presenting very much the appearance of this fœtal child when born.

Wolverhampton.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. MARY'S HOSPITAL.

POSTERO-PARIETAL DEPRESSED FRACTURE; HIGH TEMPERATURE; TREPHINING.

(Under the care of Mr. PAGE.)

THE injury to the skull was in this case behind the motor region, and the only symptom, as far as could be told indicative of cerebral disturbance was elevation of temperature, which alone led to the use of the trephine, and which speedily subsided after the depressed bone had been raised. We are indebted to the dresser, Mr. C. Graves, for the notes.

T. P——, a butler, aged thirty-six, said to have been fond of port wine, and some time ago to have been "queer in the head," slipped on Dec. 31st down some doorsteps and struck the back of his head against the scraper. He was unconscious for a moment, and then got up and walked by himself to St. Mary's Hospital. A jagged and bruised semi-lunar wound, an inch long, was found in the right parieto-occipital region, at a point midway between the occipital protuberance and the parietal eminence, about half an inch above the lambdoid suture; and corresponding with the wound, in direction downwards and outwards, there was a small rent in the pericranium, with a line of fracture, and distinct, though very slight, depression of the bone. The wound was cleansed and dressed by the house-surgeon, Mr. Lloyd, who, from the trivial degree of visible depression and the absence of any cerebral symptoms, deemed it unnecessary to adopt further measures. This was about 6 P.M. At 11 the same evening the temperature was 101·2°, and on the following morning (Jan. 1st), when the man was first seen by Mr. Page, it had risen to 104°. Other than the fact that he was perhaps a little drowsy or apathetic in his manner, there was no suspicion of cerebral or meningeal injury. He had no pain, his pulse was 70, he expressed himself as being perfectly comfortable, and asked for more food. The high temperature, however, pointed to something amiss, and Mr. Page decided to trephine at once should no possible cause be found for it in the appearance of the wound. Exposure of the wound revealed a somewhat sloughy and shreddy, but yet quite sweet, condition of the deeper parts, possibly sufficient, it was thought, to account for the temperature. The wound was therefore again very thoroughly cleansed, brought once more into apposition, though without suture or strapping, and dressed with iodoform and wood-wool, it being the intention to trephine on the morrow should the temperature continue high. The temperature rose that afternoon to 105°, but before the evening it had begun to fall, and at 10 the next morning it was down to 99·4°. At the same hour on Jan. 3rd it was 99°, and the man himself felt perfectly well. He had no pain, but he still lay in the same dull, apathetic state, which further inquiry and knowledge of him proved to be merely his habitual manner. All looked well about the wound. On the afternoon of the 3rd the temperature again began to rise. At 6 P.M. it was 102°, at 10 P.M. 103·6°, and at 2 A.M. on the 4th it was 104°. The nurse thought he was "decidedly more drowsy," but he had no pain. There was no constitutional disturbance whatever, and all he complained of was insufficiency of food. There being clearly nothing now in the condition of the wound to account for the high temperature, Mr. Page decided to expose the bone more thoroughly and to raise any depressed portion which he might find. Accordingly, the head having been shaved and made perfectly clean by antiseptic washing, on the afternoon of the 4th he raised a large flap by semilunar incision, which included as its middle third the original laceration. The line of fracture was then found, as it had been feared it might be, considerably greater than it had formerly appeared, extending downwards and outwards in an irregular manner for three-quarters of an inch beyond the depression at first seen, and then returning on itself at a lower level in the form of an irregular V, lying on its side. At the apex of the V the depression was naturally greater than elsewhere; and it being found impossible to lever it up, an opening had to be made by the trephine, but the depressed bone was so tightly wedged down that even then it could not be raised, and a corner had to be sawn across and another portion removed. The resultant opening was of irregular shape—some three-quarters of an inch long by half an inch wide, the centre of it being midway between the occipital protuberance and the parietal eminence, four inches and three-quarters from the external meatus, an inch and a half from the middle line, and two inches and a half above a line drawn from the meatus to the occipital protuberance. The opening was therefore entirely in the parietal bone, and was situated about the posterior part of the temporo-sphenoidal lobe. The dura mater was found uninjured and healthy; and although the pulsation to be felt was but feeble and distant, probably from the position of the part exposed, it was thought wholly unnecessary to make an opening in it, there being no suspicion of subdural or subarachnoid pus. The parts were thoroughly cleansed with perchloride solution, the pericranium was restored to its natural position, a drainage tube inserted, and the scalp sutured into accurate apposition. The operation took nearly an hour, for three times had artificial respiration to be resorted to, because of failure in pulse and breathing. The temperature at 10 P.M. on the day of operation was 101·2°, and at 2 A.M. on the 5th had gone up to 104°; but thereafter it fell steadily to 100°, at which level it remained during the day. On the 6th it was down to normal, with one exception at 10 P.M., when it was 100·4°; but from this time onwards there was no further rise, nor did anything interfere with the immediate closure of the wound in those parts of it where recent and clean incision had been made. The lacerated part closed by secondary union, and his long stay in the hospital, until March 28th, was due to the continuance of slight discharge, which came from one corner, and which was kept up, not by any necrosis of bone, but by the irritation of a bad piece of catgut with which some vessel had been tied. His stay had this advantage, that it gave the opportunity of frequent examination, and of watching for the development of any symptome, sensory or motor, of brain lesion. Special regard was paid to his sight, but his optic discs, his fields of vision, and colour sense were throughout normal; his mental faculties were not impaired, no anæsthesia was ever detected, and the senses of taste and smell were perfect, although on March 6th it was thought that that of smell was not quite so good on the left side as upon the right. The difference, however, was not so marked as to lead to any suspicion of central mischief.

Remarks by Mr. PAGE.—This case is thought deserving of record, not for any light it throws on localisation of function in the convolutions of the brain, but as an instance

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of disturbance in the cerebral equilibrium manifesting itself by elevation of temperature. The sequence of events shows that there was nothing in the wound to account for the rise, and it is most unlikely that any inflammation of brain substance, such as is found when there is surface suppuration, could have disappeared so rapidly after the pressure of bone was removed. The membranes were healthy, and so in all probability were the convolutions beneath. The depression of bone was insufficient to injure these subjacent structures; but, nevertheless, it was enough to affect the chief nerve mass in such a way as to upset the equilibrium which in health, and in a healthy state of these centres, subsists between heat adjustment, heat production, and heat loss. To follow the hypothesis of Dr. MacAlister in his Gulstonian Lectures, there was disturbance in the thermotaxic nervous mechanism, whereby a high temperature was developed, yet without fever. Speaking of this thermotaxic mechanism, he said that no one, as far as he was aware, had been able to say it was at this spot or at that. "Least and last developed, its organisation is necessarily the most imperfect," as it is necessarily the first and most easily disturbed of the three parts—thermolytic, thermogenic, and thermotaxic—into which he divides the thermal nervous system. The high temperature in the case here recorded may have been, it is thought, of this kind, and, if the interpretation be not erroneous, makes the case worthy of some attention. Suffice it here, in the inevitable uncertainty there must be upon this point, that a fracture of the skull in the posteroparietal region, with an amount of depression which by itself would hardly have called for operation, without visible injury to the parts beneath, was seemingly the cause of a high temperature, that that high temperature gave the sole indication for trephining, and was insomuch in all probability the means of saving the patient from more than one form of future danger.

When last seen (June 18th) the man was quite well, but more recent efforts to find him have been unsuccessful.

ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

FOUR CASES OF AMPUTATION THROUGH THE THIGH.

(Under the care of Mr. NANKIVELL.)

FOR the following notes we are indebted to Dr. R. T. Bowden, assistant resident surgeon.

CASE 1. *Compound fracture of both thighs in a man aged forty-seven, from railway accident, with compound depressed fracture of skull and other injuries; amputation through upper third of both thighs; secondary hæmorrhage and ligature of the femoral artery in the stump; recovery.*—J. M——, aged forty-seven, a navvy, was run over by a train on July 30th, 1887. He was admitted into the hospital an hour and a half after the accident, when he was found in the following condition. The right thigh had been completely severed from the body by an oblique wound passing through the lower half of the femur; the left leg was in a hopeless condition, the whole tibia being crushed, while there was an extensive lacerated wound laying open the knee joint, and the femur was fractured above the condyles; there was also a compound depressed fracture of the skull, involving the frontal and parietal bones on the right side, and the soft parts over the sacrum were extensively bruised. The general condition of the patient was bad, he was very much exhausted from pain and loss of blood, with small quick pulse, but was quite conscious.

Although the case seemed hopeless it was thought right to give him what little chance could be afforded by operation. Accordingly ether was administered, and Mr. Nankivell amputated both thighs through their upper third, by anterior and posterior skin flaps, with circular division of muscles; the stumps were dressed with eucalyptus and iodoform oil. During the operation, which lasted fifty minutes, the patient's condition improved considerably, the stimulating effect of the ether being very marked. No attempt was made to elevate the depressed fragments of the skull, as the depression was not great and there were no head symptoms; the wound was merely united by a few stitches and dressed with eucalyptus oil. In the evening he was very sick, and half a grain of morphia was given hypodermically. The following notes were subsequently taken:—

July 31st.—Slept fairly well last night. Feels comfortable. Stumps dressed. Temperature this evening 102·6°.

August 1st.—Doing well. Slept last night after a hypodermic injection of morphia. Stumps quite healthy. Temperature 100°.

2nd.—Stumps dressed; looking well. Complains of severe pain in the lower part of the back. Skin of right buttock red and very tender. Ordered a water pillow. Temperature this evening 99·8°.

5th.—A bed-sore has formed over the right buttock, where the skin was injured at the time of the accident. Dressed with zinc ointment.

12th.—Stumps doing well. The greater part of both wounds has healed by first intention. Stitches taken out. Bed-sore healing slowly.

22nd.—A large abscess which had formed over the sacrum was opened this morning. Stumps almost healed.

Sept. 5th.—This morning slight hæmorrhage commenced from the left stump; it proceeded from a cavity on the outer side of the stump, which had never healed. The bleeding was stopped without difficulty by a compress and bandage.

6th.—Hæmorrhage recommenced, and as it was much more severe than on the previous occasion, ether was given, and the stump being laid freely open, the femoral artery was exposed, with a small hole in it, about an inch above the lower end, from which the blood proceeded. A ligature placed just above this point did not arrest the hæmorrhage, as a large branch was given off a little lower down, and the collateral circulation had been fully established, so the vessel was tied above and below the opening, and divided between the ligatures. The wound was united by stitches, and dressed with eucalyptus and iodoform oil.

From this time the patient progressed satisfactorily. A large bed-sore formed over the sacrum where the skin had been injured at the time of the accident, and gave some trouble, but by the use of water pillows and careful dressing it healed slowly. He is now (Dec. 1st) practically well, and will be leaving the hospital very shortly; had it not been for a small abscess which formed in the left stump, he would have gone out some weeks ago.

CASE 2. *Compound fracture of the left femur and punctured wound of the right thigh; amputation through the upper third of the left thigh; secondary hæmorrhage from the right thigh, and ligature of the femoral artery; recovery.* C. B——, aged sixteen, was run over by a trolly on July 28th, and was admitted into the hospital an hour afterwards. On the left side there was a compound fracture of the femur into the knee joint and lacerated wounds of the thigh; there was also a second fracture of the femur a little above the middle. On the right side there was a punctured wound extending completely through the fleshy part of the thigh, and passing near the femoral artery; the skin of the calf was almost completely torn off, exposing nearly the whole of the gastrocnemius muscle, and the first metatarsal bone was dislocated from the internal cuneiform.

Ether was given, and the left thigh amputated through its upper third. The stump was thoroughly washed out with carbolic lotion (1 in 20) and dressed with antiseptic gauze. The wounds of the right thigh and leg were carefully united by stitches and dressed in a similar manner, and the dislocation of the metatarsal bone was reduced without difficulty. In the evening thirty-five minims of liquor morphiæ were given, and the patient had a good night.

A few days afterwards the skin of the right calf began to slough and a large healthy ulcer was left. With this exception all went well until August 9th (twelfth day), when, without any warning, violent hæmorrhage suddenly commenced from the wound in the right thigh. A tourniquet was at once applied by the nurse, which stopped the bleeding; but as soon as this was slackened blood again came out in jets. Ether was therefore given, and the wound laid freely open, when the femoral artery was exposed; in one part of its course a small hole could be seen, from which blood spurted whenever the pressure of the tourniquet was removed. The vessel was tied with catgut above and below the wound, and divided between the ligatures; the external wound was sewn up, and a drainage-tube inserted. The patient after this recovered steadily, the large ulcer on the right calf healed slowly under the influence of Martin's bandage and frequent applications of solid nitrate of silver, and on Nov. 2nd he was discharged from the hospital.

CASE 3. *Gunshot wound of the head of the tibia opening the knee joint; amputation through the knee joint; recovery.*—E. A——, aged thirty, a labourer, was accidentally

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shot in the leg on Sept. 7th, and was admitted into the hospital five hours afterwards. The external wound was on the outer side of the right leg, about three inches below the knee joint. A thorough examination under ether showed that the upper end of the fibula was blown away, while nearly the whole charge of shot had lodged in the head of the tibia; numerous small holes, caused by isolated shot, surrounded the main wound. It seemed probable that the joint was opened, for a distinct grating sensation could be felt on moving it, and a bystander stated that some watery fluid (synovia) ran out immediately after the accident. A large number of shot were extracted and an artery, probably the peroneal, that had been wounded, was tied. The wound was stuffed with lint soaked in eucalyptus and iodoform oil, and a back splint put on.

For a few days the man progressed favourably, but then suppuration occurred in the joint, and amputation was rendered inevitable. Accordingly, on Sept. 12th Mr. Nankivell amputated through the knee-joint, making a long posterior flap, and removing the patella. Two drainage tubes were inserted and antiseptic dressings put on.

The subsequent history of the case presents no point of special interest; the wound healed rapidly, though recovery was somewhat delayed by an abscess which formed in the stump; but on Nov. 8th the patient was able to leave the hospital.

CASE 4. *Compound fracture of the femur into the knee joint complicated by delirium tremens; amputation of thigh; death.*—H. B——, aged fifty-six, a railway porter, was admitted on Aug. 30th, having slipped on the pavement and fallen half an hour before. There was a very oblique fracture near the lower end of the right femur, and the sharp edge of the upper fragment had made a small wound through the skin. The fracture seemed to extend right into the knee joint, which was somewhat distended with fluid.

Ether was given, and by means of extension and manipulation the fragments were got into fairly good position, and a long splint was put on, with extension, and the wound dressed with compound tincture of benzoin.

The next day the man pulled the splint off, and it was reapplied. A few days later he became wildly delirious, tore the bandages off, and made frequent attempts to get out of bed. A liberal diet without any stimulants was ordered, while chloral and opium were given freely; but for nearly a week the greatest difficulty was experienced in preventing him getting out of bed, and it was absolutely impossible to keep the fragments at rest. The joint had become acutely inflamed, but the condition of the patient forbad amputation. On Sept. 12th, however, there was a slight improvement in his general condition, and the thigh was amputated through its lower third. He bore the operation well, and for some days seemed to improve a little, lying quietly in bed and talking rationally; then the delirium returned; chloral was given, but with very little effect; paraldehyde was also tried, but seemed almost useless. He then gradually sank, and on Sept. 22nd he died.

Remarks.—The above cases all occurred within a space of six weeks, and they illustrate several points in connexion with the surgery of the lower extremity. Case 1 is very interesting. It is usually considered that amputation through the upper part of the thigh for railway accident is almost surely fatal; but here we have a recovery after amputation through the upper third of both thighs, and the case is the more remarkable on account of the age of the patient and the severe injuries he received to the head and back. It would be interesting to know if any similar cases are on record. The secondary hæmorrhage was apparently due to the ligature having been placed just below the point where a large branch was given off, so that not sufficient space was left for the formation of a clot. In Case 2 the injuries were of a somewhat similar nature, though less severe, and the age of the patient was much more favourable for recovery. It is certainly unusual to have an amputation of the thigh on one side and ligature of the femoral artery on the other. In Case 3 it was not quite certain whether the joint was involved or not, but in any case primary amputation was contra-indicated at the time of admission owing to the exhausted condition of the patient. It was five hours after the accident before he reached the hospital, and during that time he had lost a large quantity of blood. Any immediate operation would probably have been fatal, while secondary amputation proved most successful. Case 4 shows the difficulty of treating a bad fracture when complicated by delirium tremens; at first the skin wound was very small indeed, but the struggles of the patient soon made the whole end of the upper fragment protrude, rendering amputation inevitable.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Causes of Hypertrophy of Skull in Rickets, Mollities Ossium, Syphilis, and Osteitis Deformans.—Neurotomy of Third Division of the Fifth Nerve at the Foramen Ovale.

AN ordinary meeting of this Society was held on Tuesday last, Mr. G. D. Pollock, F.R.C.S., President, in the chair. A few words expressive of sorrow and regret on the decease of Sir George Burrows were given from the chair.

Mr. W. ARBUTHNOT LANE read a paper on the Factors that determine the Hypertrophy of the Skull in Mollities Ossium, Osteitis Deformans, Rickets, and Hereditary Syphilis. The author called attention to the desirability of separating the direct from the indirect effects of morbid conditions or diseases, especially in the case of those above enumerated. He referred to papers in the *Journal of Anatomy and Physiology* and in the Guy's Hospital Reports for 1887, in which he had explained the mechanical factors that determine the character of the deformities of the bones of the lower extremities in mollities ossium, rickets, and osteitis deformans. He had shown that these deformities are preceded and produced by a yielding of the sacrum in such a way that the lumbo-sacral articulation is displaced forwards and downwards from its normal relationship to the iliac bones and hip joints. This alteration in the position of a joint through which the whole superjacent weight of the head, trunk, and upper extremities is transmitted from that normally occupied by it, necessitates, when the erect posture is assumed, that the hip and knee joints be flexed, and a consequent tendency for the long bones of the leg to yield in a vertical antero-posterior plane. He had also demonstrated the factors that determine the yielding of these long bones in a vertical transverse plane. He obtained his first clue to the conclusions at which he had arrived from a study of the changes that the skeleton undergoes in old age, and of the laws governing them. He attempted to prove that the factors that determine the thickening of the skull in mollities ossium, congenital syphilis, rickets, and osteitis deformans are purely mechanical, and that the hypertrophy is not the direct product of the morbid condition or disease, but a vigorous attempt, and sometimes the only attempt, on the part of the organism to retain its most important organ as free from the direct result of the disease as possible. He referred to a paper in the Transactions of the Pathological Society, 1884, in which he had disputed Rindfleisch's theory of the processes which ensue in the skull in mollities ossium, and detailed the arguments by which he arrived at his conclusions—namely, that in mollities ossium the thickening of the skull is dependent upon an endosteal, and later upon a periosteal, deposit of decalcified lamellæ of fibrous tissue, this being not a direct product of the condition, but an effort on the part of the organism to oppose and limit the baneful influence of the process of decalcification in so far as it affects the cranial vault. He applied the same arguments to the analogous condition of the skull present in osteitis deformans, rickets, and congenital syphilis, with the object of showing that in them also the thickening of the skull was (in a similar manner) a process of repair and not a direct result of the disease.—The PRESIDENT referred to cases of curving of bones, and said that the new formation of bone took place on the concave side and thus strengthened the shaft; perhaps the new growth of bone in the convexity of the skull was of a somewhat similar nature.—Dr. ANGEL MONEY said that the explanation offered by Mr. Lane was ingenious but teleological, for we do not know that nature is so kind as to provide for all accidents.—Mr. HOWARD MARSH considered the paper suggestive. He referred to the strengthening of curved bones by the formation of buttresses of new bone in the concavity of the curve as perhaps due to an actual irritation. It was curious to observe how rickety bones became excesively thickened and how curved bones ulti-

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mately become straight.—Mr. LANE, in reply, thought that a mechanical explanation was not a teleological one.

Mr. BLAND SUTTON contributed a case of Neurotomy of the Third Division of the Fifth Nerve at the Foramen Ovale. This paper contained the details of a case in which a man, aged sixty-four, suffered from frequent and severe attacks of epileptiform neuralgia, due to implication of the branches of the inferior maxillary division of the fifth nerve in a mass of epithelial cancer of the cheek. An operation was performed, and the third division of the fifth nerve divided as it issues from the skull. The difficulties encountered in this procedure were detailed, which ended in the subsequent ligature of the common carotid artery. Notwithstanding this, and in spite of the man's age, he recovered from the operation, was deprived of the neuralgic seizures, and lived in comparative comfort until he succumbed to his cancerous malady eight months later.—Mr. WALSHAM thought that the operation should not be lightly undertaken. He had stretched many of the branches of the inferior maxillary division of the fifth nerve. The inferior dental, the gustatory, the buccal, and the auriculo-temporal were the branches he had stretched, the first one six times. Stretching and not division should be employed; even in excision the nerve ends might grow together again. Stretching, though efficacious for some time, might in some cases not be permanent. He had removed Meckel's ganglion on one occasion, but this proved ineffectual.—Mr. HOWARD MARSH asked what artery was supposed to have been the source of the bleeding for which the common carotid artery was tied. In many cases ligature of the external carotid would be sufficient.—Dr. T. N. PEARSE asked what influence was exercised ultimately on the malignant growth by the division of nerves.—Mr. BLAND SUTTON said occasion for such an operation would rarely arise. The cancer had already implicated the muscles of mastication, so there was no need to pay attention to the motor nerves. The lingual nerves were often divided for carcinoma of the tongue. The internal maxillary artery was divided. Malignant growths possessed no nerves, and were not under the domination of nerves. Perhaps the ligature of the artery diminished the growth of the cancer.

CLINICAL SOCIETY OF LONDON.

Acute Enlargement of the Thyroid Gland in a Child.—The Surgery of Hydatid Disease of the Liver.

THE last ordinary meeting of the year of this Society was held on the 9th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

Dr. THOMAS BARLOW read a case of Acute Enlargement of the Thyroid in a Child. The case was that of a boy aged three, previously healthy, and just recovering from a slight attack of erythema nodosum. The day after he had been taken out of doors he had a little nasal catarrh, and complained of pain in the neck. A slight enlargement of the thyroid gland was found. The whole gland was involved, but the left lobe more than the other parts. The enlargement increased, and gave rise to much pain and considerable dysphagia, and was attended with pyrexia as high as 103°. The acute phase lasted four days, and the total duration of the enlargement was about a fortnight. Great relief was obtained by the application of a single leech over the centre of the swelling. After the subsidence of the fever there was very great anæmia and some tendency to collapse, but the boy made a complete recovery to health after three weeks stay at the seaside. A summary of the literature of the subject was given in regard to acute enlargement of the gland as distinguished from goitre strictly so called. Besides the idiopathic, traumatic, and metastatic forms described by Lucke, reference was made to the epidemic variety recorded in connexion with French garrisons, and to thyroiditis occurring as a complication or sequel of acute and subacute rheumatism, and also of ague. The present case, from the fact that it succeeded upon erythema nodosum, might be considered to belong to the rheumatic variety, but no other rheumatic phenomenon was observed, and its severity was greater than that of the recorded rheumatic cases, the duration of which in their acute phase was not longer than forty-eight hours. On the whole, it seemed best to place the present case provisionally in Lucke's idiopathic group, and to accentuate its association with slight nasal catarrh and sequence on exposure to cold when in an anæmic condition.—Dr. STEPHEN MACKENZIE knew of a case. The patient was a young man of weakly health, but not really ill, since he attended a racecourse on the day of his sudden death, which resulted from an acute enlargement of the thyroid pressing on the trachea; a recent hæmorrhage into the thyroid gland and large white kidneys were found at the necropsy.—Mr. BERRY had seen a great number of such cases, and chiefly on the Continent—in Auvergne and in Switzerland. He had seen one in South Wales in a boy aged fourteen; the enlargement was rapidly fatal. A second case occurred in Wiltshire, in the person of a young girl who died from dyspnœa rather suddenly after a few weeks. In a similar case at Reading, also in a boy aged fourteen, he had secured the thyroid gland for the Royal College of Surgeons' museum. The occurrence of these fatal cases at puberty was a noteworthy point. Of twenty-seven cases in which the acute enlargement caused death, and in which no opening except tracheotomy was attempted, twelve occurred between the ages of thirteen and sixteen. Enlargement of the thyroid, not fatal, could, of course, occur at any age, sometimes very early, and even congenitally. The earliest age at which he had seen it was two years and a half. The relationship of acute thyroid enlargement to rheumatism was interesting; he had observed a case in the course of chorea; treatment with arsenic was followed by a cure. Although females were most frequently affected with goitre, still these fatal cases were as common in males as females. Of thirty-two cases, seventeen occurred in girls and fifteen in men. He asked why Dr. Barlow had come to the conclusion that in his case the enlargement was evidently not of the same nature as ordinary goitre; the microscopical changes were similar in all cases examined.—Dr. ANGEL MONRY considered that rheumatism was a cause of acute thyroid enlargement running a similar clinical course to the other manifestations of rheumatism. He related a case of a young lady in whom arthritis, erythema, and heart disease had occurred. He contended that in the rapid onset and rapid subsidence, with absence of chronic enlargement, we had characteristics which distinguished these idiopathic and rheumatic cases from ordinary goitre.—Dr. BARLOW, in reply, was interested in Mr. Berry's information, but drew attention to the distinction between cases such as he had described, in which pyrexia occurred and the thyroid swelling ran through a definite cycle and subsided completely, and ordinary cases of goitre in which more or less chronicity obtained.

Dr. COUPLAND read notes of a case of Hydatid Cyst of the Left Lobe of the Liver, which was radically cured by operation. The patient, a tall and pallid youth, aged seventeen, was admitted into the Middlesex Hospital on Jan. 22nd, 1887. For two years he had been getting weak and suffering from constipation, and for three months had noticed in addition a small and rather tender swelling in the upper part of the abdomen. Beyond his lassitude and somewhat hypochondriacal tendency, there was nothing special in his general condition. In the epigastrium there presented a hard nodule, the size of a nut, slightly tender, apparently connected with the left lobe of the liver, with which it moved freely on inspiration. The cardiac pulsation was also transmitted to it, especially during expiration. The liver was not enlarged; there was no jaundice. The patient remained under observation for nearly two months, without any failing of his general health, or any apparent change in the size or character of the small swelling. The diagnosis seemed to rest between a stationary innocuous growth or a shrivelled obsolete hydatid cyst, and exploration was decided on, with the view as much of relieving the patient's anxiety as of clearing up the diagnosis. Mr. Gould performed the operation on March 24th, and a hydatid cyst of the size of an orange was found embedded in the left lobe of the liver, projecting mainly on the posterior surface, but also to a slight extent on the anterior, where it formed the nodule previously observed. The cyst was punctured, and clear hydatid fluid containing numerous scolices evacuated. The cyst wall was then firmly stitched to the peritoneum, the abdominal parietes freely incised, and a drainage tube inserted. The case did well, and on April 3rd the collapsed hydatid was extruded; it contained two or three small daughter cysts free within it, besides having its endocyst thickly studded with scolices. Two days later the tough and fibrous adventitious cyst wall was also extruded. The cavity rapidly granulated, and the patient left the hospital on the 28th for a convalescent home. When seen a month later he was in excellent health. Thus the

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exploration in this case resulted in the radical cure of the disease, the cystic nature of which it was not possible to determine by ordinary methods. The very solid nature of the presenting nodule prevented any recourse to the aspirator prior to the operation, whilst the lad has been saved the risks of rupture and suppuration by resorting to the exploratory incision in preference to leaving the case alone as one of "abdominal tumour of uncertain nature." Hydatid cysts are far less common in the left than in the right lobe of the liver, and it is rare for one to be treated by free incision in so early a stage. Although doubtless simple puncture might have sufficed to have lulled the parasite, there can be no question of the advantage of total eradication, if, as such a case seems to show, it can be made with almost equal impunity.

Mr. EDMUND OWEN read a case of Hydatid Tumour on the Upper Surface of the Liver successfully Tapped and Drained across the Pleural Space. A married woman, aged thirty-four, who was born and had lived all her life in London, came under Dr. Broadbent's care in May, 1886, on account of pains in the region of the right hypochondrium, and constant sickness. There was great fulness in the region of the liver, with dulness on percussion, which reached from the fourth rib nearly to the umbilicus. The right lung was greatly elevated and compressed. The hepatic tumour was smooth and hard, and gave no wave on impulse; it did not move with respiration, nor with any change of the patient's position. Aspiration removed thirty ounces of clear fluid, which contained no hooklets. In June another tapping was made, but with no result. In July, as the tumour was increasing, it was again tapped in the seventh space, sixty-eight ounces of bile-stained fluid coming away. This contained an abundance of hooklets. In the beginning of 1887 the patient was again admitted into the hospital. The tumour had increased, and there was danger of the cyst bursting into the thorax. Several aspirations were performed, with fairly satisfactory results. It was decided that the hydatid cyst, which was completely hidden behind the lower ribs on the right side, and was probably occupying the upper surface of the right lobe of the liver, must be incised and drained. On Feb. 14th this was done by making an incision in the eighth intercostal space, opening the pleural cavity. Air rushed freely in; the finger, introduced, readily felt the diaphragm, which was bulging up along the inner surface of the chest wall, but the lung itself, completely collapsed, could not be reached. The phrenic pleura was then incised, and with it the diaphragm. The finger, passed through the diaphragm, came at once upon the tense cyst, from which a considerable amount of fluid was withdrawn by aspiration, so that some of its surface might be dragged through the opening in the diaphragm and up to the skin wound. There it was fixed by four hare-lip pins, so that the wounded phrenic pleura might become glued to the wounded costal pleura; and that the cyst might be subsequently incised and drained without risk of leakage into the pleural space. The wound was dressed with wood-wool pads. On the fourth day (the patient's temperature never having reached 100°) the dressings were removed, and the cyst was incised. Bile-stained fluid escaped, and with it pieces of cyst wall, like rotten wash-leather. A large flanged drainage tube was inserted, and daily the cyst was washed out with warm iodine water, large pieces of cyst wall escaping. The woman made a complete and uninterrupted recovery. The pneumothorax gradually disappeared, as did also a slight effusion of fluid into the chest, and when Dr. Broadbent saw the patient a short time since she was well and fairly strong, whilst the lung had descended to its proper level. He alluded to a case in which Mr. Godlee a few months later had traversed a healthy pleural space to evacuate a lung abscess. In the latter case sutures had been employed to stitch the margins of the wound in the phrenic pleura to those of the wound in the costal pleura, but Mr. Owen was of opinion that hare-lip pins were more handy than sutures, and quite as effective for the purpose, and he would prefer them to sutures if ever he had to fix the lung to the chest wall, before proceeding to deal with a suppurating pulmonary cavity. It would be an interesting question as to how long it would take for the wounded and approximated pleural surfaces to become securely fixed by adhesive inflammation; perhaps it would be an affair of hours rather than of days. The tolerance with which the pleura submitted to the intrusion, the rapidity with which absorption of air and inflammation effusion from the space occurred, and the perfect manner in which the lung resumed its function after long-continued compression and after operation, were important and cheering features in the case, and offered further proof, were that needed, that the healthy pleura was as amenable to surgical trespass as was the synovial membrane of the knee joint or the peritoneum itself.

Mr. TREVES read a case of Extra-peritoneal Rupture of a Hydatid Cyst of the Liver. The patient, a married woman aged twenty-one, was "hugged" by her husband, who seized her round the waist and lifted her three times from the ground. She was immediately seized with intense abdominal pain, became very faint, and was sick. For thirty-six hours she was unable to lie down, and would not allow her clothes to be removed. Twenty-four hours after the injury a swelling made its appearance under the ribs of the right side. This swelling in time extended to the left of the median line. It was dull on percussion, but did not fluctuate. It was not affected by posture, was evidently below the subcutaneous tissues, and was not intra-muscular. The case was diagnosed to be one of subperitoneal hæmorrhage. No bruising was apparent, and no ribs were fractured. The patient had enjoyed good health, had never had a day's illness, had not suffered from jaundice, and had had no abdominal swelling. The tightness of her stays served to prove the last point. The swelling diminished at the end of a month. It now was more defined, was under the right ribs, and about the size of a child's head. It fluctuated, and could not be separated from the liver. The application of pressure, in the form of Martin's elastic bandage, caused a rise of temperature on each occasion of its employment. At the end of the second month the patient had become emaciated, and the swelling was very prominent. The tumour was incised close to the margin of the ribs. Hydatid fluid escaped, suppuration supervened, and the patient died, greatly emaciated, three months from the time of the injury. The necropsy showed that a hydatid cyst had formed in the posterior part of the right lobe of the linea close to the diaphragm. This had been ruptured by violence. The fluid had found its way into the subperitoneal tissues of the anterior abdominal wall. On the development of a second cyst—the one incised—the extravasated fluid had receded. The hepatic tissue of the right lobe was almost wholly destroyed. The case affords an example of extra-peritoneal rupture of a hydatid cyst of the liver.

Dr. ANGEL MONEY related a case of empyema due to hydatids that had been under his care at the Chest Hospital, Victoria-park. The patient spat up a translucent, jelly-like substance and laminated membrane with a great quantity of pus. Mr. Macready was called in, and excised a portion of the ninth rib; a large cavity was found in which abundance of hydatids existed, and were discharged at the operation to the amount of two large basinfuls. The hole in the diaphragm leading into the hydatid cyst in the right lobe of the liver was easily felt. A perfect recovery ensued. — Mr. GODLEE drew attention to the difference in the doctrine of treatment in this country and in Australia. In the latter country surgeons found aspiration to be sufficient, whereas in England subsequent operation was often necessary. He described various methods of procedure which could be employed, and expressed an opinion in favour of drawing the sac out, aspirating, and then extirpating it.—Mr. HARRISON CRIPPS had treated three cases. The first one by simple aspiration, which had to be repeated in a few months when pus was found, but the patient did well. Trocar and drainage were employed for the second case, and with success. The third case was explored as an obscure abdominal tumour; the hydatid was found, and its sac opened, a pint of pus escaping, after which the sac was removed entirely. Another cyst was discovered opening into the first; this was also opened up and removed, with a good result. In suppurating cysts it was best to open and remove the cyst wall.—Dr. DUFFIN had had two cases of hydatid in the left lobe of the liver. He did not believe in removing much fluid by the aspirator, but only enough to lessen the tension of the sac. In the first case, which happened in a girl, aspiration alone was successful. In the second, in a woman, the cyst suppurated and a free incision had to be made, when the numerous daughter cysts gave rise to some difficulty, but ultimately the case did well. In ordinary cases he would draw off only half an ounce if the cyst contained about thirty ounces. A secondary enlargement often followed, and then the fluid became albuminous. Really nothing

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should be done for this secondary swelling, at least for some time, because gradual absorption was the usual consequence. If the swelling persisted for a long time, then further interference would become necessary. The second puncture was more dangerous and apt to set up the very thing which it was our object to avoid.—Mr. BARKER pointed out that in Russia, where cases of hydatid cysts were comparatively common, opinion was greatly in favour of performing the operation in two stages. He mentioned one surgeon who had not had a death in operations so carried out, whereas he had lost two patients by emptying the sac at once. He suggested that corroborative evidence on this point would be very useful.—Mr. HOWARD MARSH related the case of a boy where he had cut down on the cyst and sutured it to the margin of the abdominal wound. Some weeks later he opened the cyst, and the lad had done remarkably well. In another case at St. Bartholomew's Hospital he had sutured the sac to the wound and left it for five or six days, and he felt very strongly that that was the better course to pursue. He said that it really did not amount to making two operations of it, for opening the sac was a painless proceeding. He added that the general opinion of English surgeons was in favour of the two-stage operation. He had aspirated in children several times, and in one or two cases no recurrence had taken place, but recurrence did sometimes take place.—Dr. BROADBENT said that in a considerable proportion of the cases he had seen, simple aspiration had been sufficient to effect a cure. He could recollect at least half-a-dozen cases in which he had subsequently seen the patients. He mentioned that cysts varied in character, and said that he had remarked that when there were quantities of daughter cysts suppuration was very likely to take place; whenever the fluid came away easily, retrogression might be expected. In one case the struggles of the child caused laceration of the walls of the cyst and escape of the fluid into the abdomen. This, however, was absorbed, and the child got well. He was unable to reconcile this case with that related by Mr. Treves.—Dr. COUPLAND, in reply, said that most of the cases he had seen in which aspiration was employed, either suppurated or refilled. He suggested that one advantage of a free incision was that the presence of other cysts might be detected.—Mr. EDMUND OWEN, in reply, said he was disappointed that the discussion had not turned more on the extension of the cysts into the thoracic cage. As to the best operation to be performed, he said that in abscess of the liver it might be advisable to open the sac directly, but, on the whole, he preferred the method of doing the operation in two steps. He thought that there was no necessity for waiting so long or even for a few days, seeing that a few hours probably sufficed to obviate any danger of the fluid escaping into the abdomen.—Mr. TREVES, in reply to the President, said that the post-mortem examination of his case left no room for doubt as to its nature. He added that absorption did take place to some considerable extent.

The following living specimens were shown:—

Dr. HADDEN: Dry Tongue.

Dr. HERRINGHAM: (1) Atrophy of Thigh Muscles from Rheumatic Neuritis; (2) Chronic Atrophy of Leg in a Boy.

Mr. ALLINGHAM: Excision of Knee-joint.

MEDICAL SOCIETY OF LONDON.

Osteitis Deformans.—Acute Pneumoparesis.

AN ordinary meeting of this Society was held on Monday last, Dr. Hughlings Jackson, F.R.S., President, in the chair.

Dr. ELLIOTT of Hull contributed a paper on a rare case of Osteitis Deformans occurring in a young man aged twenty-seven, in whom the disease lasted about twenty-one months, and was probably complicated by multiple sarcomata in the skin and deep organs. The paper was read by Dr. Samuel West.

Dr. B. W. RICHARDSON read a paper on Pneumoparesis, which he defined as an acute form of disease usually confounded with pneumonia, in which the symptoms are due to sudden failure of nervous stimulus to the vascular pulmonary systems, nutritive and respiratory. After the recital of the cases, the author defined pneumoparesis as a progressive congestion of the minute pulmonary circulations with infiltration into the vesicular structure, ending in fatal cases by gradual asphyxia. Pneumoparesis is unattended by pyrexia, and is preceded by a distinctive train of nervous symptoms, consisting of emotional excitement, erythema fugax, extreme physical prostration, with short cough and little expectoration. The mind is impressed with the idea of impending death, but is neither alarmed nor anxious. There is no acute pain at any stage. The physical signs are dulness, commencing, as a rule, in the bases of the lungs, but sometimes in patches or centres, with fine crepitation at first, soon becoming moist, and in the later stages bronchial râles. The symptoms run a rapid course, and one that is usually fatal. If the organic nerves entering by the root of the lung could be divided, the phenomena witnessed would be those of pneumoparesis. Some years ago, by synthetical research, the author produced an artificial pneumoparesis in one of the lower animals, the rabbit, by placing it in an atmosphere charged with vapour of amyl nitrite, and he showed coloured drawings taken at the time of the condition of the lungs in different stages of the induced disease. In these cases the pulmonary paresis was caused by the action of a chemical substance on the organic nervous structures, and recovery followed upon the withdrawal of the cause, but the effects while they lasted were identical physically with those which had been described from the disease in the human subject. Pneumoparesis in the human subject, according to the author's view, is a disease having its seat in the organic nervous centres which in health regulate and control the pulmonary circulations. It is as yet an open point whether the failure commences in the nutritive circulation derived from the bronchial arteries rising from the thoracic aorta, or in the respiratory circulation of the pulmonary artery. This was a subject very rarely, if ever, studied, in relation to pulmonic affections, but it called for the minutest attention, especially in the disease now under consideration. On the whole, Dr. Richardson thought that in this instance the failure was first developed in the nutritive pulmonary vessels, and that the embarrassment in the respiratory circulation was secondary. Leaving this question as *sub judice*, he next spoke on the nature of the nervous lesion which led to the primary failure. This might be due *(a)* to mechanical injury, pressure or shock to the nervous-supplying centre or its plexuses; *(b)* to the generation within the body of some chemical product, which, like amyl nitrite, reduces to paresis the organic nervous supply; *(c)* to hereditary failure or premature exhaustion of the nervous-supplying centre under exhausting or depressing influences. The last-named view was that most favoured by the author, and we have only to let the mind become accustomed to the thought of the possible arrest of nervous stimulus in the pulmonary circulations as we do to other organs, and the fact of pneumoparesis is one of the most simple and clear forms of nervous failure and resultant structural lesion. But how wide a field it opens for observation. "Probably," Dr. Richardson said, "most of the aged or infirm die, as by natural anæsthesia, from pneumoparesis, under the added influence of cold, privation, fatigue, fear, grief, or some other temporary depressing cause." The treatment of pneumoparesis formed the concluding part of Dr. Richardson's paper. In this section he detailed the modes of treatment which had been followed in the cases under his observation. The treatment had been tentative in each case, for no rational and radical line of treatment had yet even been foreshadowed. In one case ergot was given, but without effect; in another the ammonia treatment had been employed with nux vomica, but with equal want of success. In the treatment of the third case, digitalis had been administered when the circulation was rapid, but it was impossible to say that it did any useful service; in fact, in spite of all treatment the symptoms ran an unbroken course. The record was discouraging; the "pathies" one and all were nowhere, and in short, in this as in many other instances, it would seem as if treatment receded just in proportion as a more precise knowledge of causation and cause advanced. The problem is clear, but how is it to be solved? The problem is: Given a condition in which the organic nervous supply of the pulmonary circulations is suppressed or exhausted from any cause, how shall the central failure be restored? In another case Dr. Richardson stated that he should administer oxygen by inhalation at 75° F., with the object of prolonging life and of giving time for a natural restoration of nervous balance; but even this would not be a radical cure, although in the right direction. Meanwhile he had fulfilled his present task if he had defined the disease pneumoparesis and drawn attention to a problem of cure which is most likely to be solved, *consilio animorum*,—

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Dr. DOUGLAS POWELL said the cases reminded him of pneumonia without fever, and also of certain cases of bronchitis and pneumonia which terminated fatally from "drowning" of the pulmonary tissues by exudations and secretions into the ultimate air passages. In treatment strychnia and digitalis might be useful, and also the inhalation of oxygen, which he had used in a severe case of lividity with some apparent good effect.—Dr. C. H. ROUTH thought the cases resembled atelectasis pulmonum, and suggested that amyl nitrite and electricity might prove useful in treatment.—Dr. HUGHLINGS JACKSON remarked that he regarded acute pneumonia as a form of herpes zoster of the vagus nerve. Muscarine contracted the vessels of the lungs, and atropine antagonised this action, according to Brunton.—Dr. SAINSBURY spoke of the value of oxygen in diseases of the lung.—Dr. F. L. BENHAM considered the cases to be of pneumonic nature.—Dr. ANGEL MONEY was reminded by the cases of the rheumatic and other vaso-motor œdemas; he also held that there existed a mutual tension between peripheral and central organs, and this principle might be made available in suggesting rational treatment, as well as affording better views of the pathogenesis of disease.—Dr. THOROWGOOD spoke of cases of pulmonary engorgement of rapid onset, one of which was saved from a fatal issue by emetic doses of ipecacuanha.—Dr. SAMUEL WEST suggested myocarditis with heart failure and pulmonary thrombosis as possible recognisable causes of such symptoms as Dr. Richardson had described.—Dr. RICHARDSON, in reply, said amyl nitrite should not be used, and electricity was difficult, if not impossible, to apply rationally. He hoped to lay the subject of treatment by oxygen before the Society at a future date.

OPHTHALMOLOGICAL SOCIETY.

Unusual Complication after Subjunctival Tenotomy of the External Rectus.—Persistent Hæmorrhage in the Anterior Chamber after Iridectomy for Chronic Glaucoma.—Congenital Defect of External Ocular Muscles.

AN ordinary meeting of this Society was held on the 9th inst., Mr. J. W. Hulke, F.R.S., President, in the chair.

Dr. A. EMRYS-JONES (Manchester) read a paper on an Unusual Complication after Subjunctival Tenotomy of the External Rectus, relating to a girl aged ten, in whom both internal recti were divided for alternating convergent strabismus. Immediately after division of the left rectus there was profuse hæmorrhage into Tenon's capsule, leading to well-marked proptosis. A firm bandage was applied, and two hours later the proptosis was more marked, the pupil was widely dilated, inactive to light, and perception of light very doubtfult; the optic disc was very pale. From this time rapid improvement took place, and recovery was eventually complete.

Dr. EMRYS-JONES also read a case of Persistent Hæmorrhage in the Anterior Chamber after Iridectomy for Chronic Glaucoma. The patient was a man aged sixty-three, whose right eye was almost blind, and with + 1 tension; in the left eye, vision $\frac{6}{18}$, and the field of vision much contracted. The optic nerve was cupped. Iridectomy was performed on Oct. 24th, 1882. Free hæmorrhage followed, and the next day the anterior chamber was full of blood, and no trace of iris could be detected anywhere. There was scarcely any improvement in a fortnight. One month after operation the hæmorrhage had subsided considerably, and the outline of the pupil could be detected. The improvement was excessively slow, and it was not until Dec. 16th that an ophthalmoscopic examination could be made, when the vitreous was found to be clear and the optic nerve much cupped. There was cardiac disease, and the patient died on Jan. 17th, 1883, from double pneumonia. Mr. Haynes Walton had written something about this condition in his book when treating of injuries to the eye from mechanical causes.—The PRESIDENT asked what method of subconjunctival tenotomy had been employed in the first case, for he could not recall a similar accident. The hæmorrhage in the second case was persistent, and the blood retained its colour as in cases of diabetes.—Mr. ADAMS FROST had seen a similar accident to the first case.—Mr. ERNEST CLARKE had a similar experience, and thought it resulted from cutting too close to the sclerotic.—Mr. HULKE said Von Graefe intended that the tendon should be cut as close as possible to the globe of the eye.—Mr. LAWFORD had seen severe bleeding follow tenotomy, and give rise to proptosis and duskiness of the lids. A sudden effort on the part of the boy in whom the case occurred caused a fresh hæmorrhage, which subsequently subsided completely.—Dr. BRAILEY had seen similar accidents, and once optic nerve atrophy resulted therefrom. Perhaps there was rupture of one of the ciliary arteries, from too free use of the tenotomy hook. Von Graefe's operation was not likely to cause the accident.

Mr. LAWFORD read notes of four cases of Congenital and Hereditary Defect of Ocular Movements which had been under his care at St. Thomas's Hospital. These cases included a father and three of his seven children, the remaining four being unaffected. The three children who were the subjects of this congenital defect were Nos. 2, 4, and 7. In all four patients there were present the following symptoms—almost complete bilateral ptosis, loss of upward and downward movement of the eyeballs, and very defective lateral movement. Visual acuteness and accommodative power were good, and there were no ophthalmoscopic changes. None of the patients presented any other congenital defect, and they were healthy in every other respect. He referred to published records of similar cases, in some of which post-mortem examinations had been obtained, and drew attention to the fact that the ocular muscles, and not their nerves, were the structures at fault. These muscles had in some instances been absent; in others, though present, they were occasionally ill-developed, and generally shorter than the average measurement, while in almost every case their insertions into the sclerotic were displaced more or less backwards, the greatest degree of displacement being 2·5 mm.—The PRESIDENT said that it was difficult to say whether the muscles were primarily at fault, or whether there was defective innervation of muscles; disease in early life might produce such effects.—Mr. QUARRY SILCOCK supported the last idea, and related the case of a boy in whom the eyeball was not noticed to be fixed till the age of three years, and after a general illness which might have been infantile palsy, with a localisation in the eyeball muscles.—Mr. HENRY POWER spoke of the solidarity between nerve and muscle; the condition might be looked upon in some cases as a reversion to an earlier type; turtles and other reptiles had little movement, and perhaps some mammals might show an absence of the levator.—Dr. ANGEL MONEY objected to the principle of so-called reversion to an earlier type, and preferred to speak of an arrest of development.—Mr. BRAILEY said that the development of ocular muscles was not known; he did not think the reversion theory would hold good in the present instance.—Dr. SEYMOUR SHARKEY and Mr. DOYNE thought that the term reversion was a useful one.

The following living and card specimens were shown:—

Mr. SILCOCK showed a case of Exostosis arising from the Inner Side of the Orbit; sight had been early affected and was almost completely lost.—Mr. HULKE thought an explanation should be made; in one case in his own experience the tumour proved easy of removal.—Mr. HENRY POWER had had considerable difficulty in removing an exostosis from the roof of the orbit.—Mr. NETTLESHIP, in reply to Mr. Silcock, said the sight failed after the proptosis had been present one year.—Mr. SPENCER WATSON considered exploration would be necessary; but caution should be used not to employ too much force in chiselling, &c.

Mr. GUNN: A peculiar Foveal Reflex in connexion with amblyopia and myopia, so-called "policeman's lamp."

Mr. NETTLESHIP showed an ophthalmoscopic drawing from a case of Night-Blindness, with white dots scattered over the fundus.—A discussion followed relative to whether these spots were identical with those seen in Tay's choroiditis.

OBSTETRICAL SOCIETY OF LONDON.

Eclampsia of Pregnancy, and the state of the Renal Function.—Bright's Disease during Pregnancy.

A MEETING of the above Society was held on Wednesday, Dec. 7th, Dr. John Williams, President, in the chair.

Dr. GRAILY HEWITT showed a specimen of Columnar Epithelioma of the Cervix Uteri which he had removed by the écraseur.

Mr. G. M. BLUETT exhibited a specimen of Insertio Velamentosa. The cord was attached to the membranes about four inches from the nearest edge of the placenta.

A report was read on several tumours that had been shown

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to the Society, Dr. John Williams' specimen was a pure fibroma, Mr. Meredith's was a fibro-myoma, and Mr. Malcolm's appeared to be a fibroma of the "youngest" type, including very new connective tissue.

Dr. HERMAN read a case of Eclampsia of Pregnancy, with observations on the state of the Renal Function. The author related a case of eclampsia coming on about the end of the seventh month of pregnancy. The patient recovered from the eclampsia, and the pregnancy continued for a fortnight afterwards, when labour spontaneously came on and a living child was born. During the lying-in period the patient twice had an erythematous rash, but except for this convalescence was undisturbed. The temperature during the eclampsia did not exceed 100°. The urine was daily collected, and examined quantitatively throughout. During the seizures it was small in quantity, of high density, but with a low percentage of urea, and containing much albumen. As the eclamptic seizures and the stupor following them passed off, first the percentage of urea rose, and then the quantity of urine and of total urinary solids ascended to the normal, and the quantity of albumen diminished. But the albuminuria did not disappear until after delivery; it sank from one-fifth before delivery to a trace on the third day after delivery, and disappeared on the sixteenth day. A slight increase in the albuminuria coincided with the erythema. The albumen was mainly paraglobulin. The author thought that the facts of the case tended to show that the disturbance in the renal function was due to altered pressure in the vessels, rather than to changes in the renal cells. The eclamptic symptoms subsided when only slight improvement in the renal function had taken place, which showed how large a margin of safety there was in the conditions under which the kidneys ordinarily worked. In an appendix, Dr. Herman communicated another case, which showed a similar alteration in the renal function—viz., during the eclamptic period a great decrease in the excreta of urea, not only absolute, but relative to the quantity of the urine and its specific gravity, the excretion of urea rapidly rising after the eclamptic symptoms had passed off.

Dr. HERMAN next read a case of Bright's Disease during Pregnancy. The author described a case of Bright's disease, manifested by œdema, headache, and albuminuric retinitis, occurring in pregnancy, and treated by the induction of labour in the eighth month of pregnancy, about seven weeks after the commencement of symptoms. The excretion of urea daily was measured during the weeks preceding and following delivery. The author compared the ascertained excretion of urea in this case with that in a case of eclampsia previously communicated by him to the Society, and showed that, in the case of Bright's disease without eclampsia, the amount of urea excreted, although below the normal, and below the amount excreted by the eclamptic patient after the disappearance of the eclamptic symptoms, was yet considerably larger than the amount excreted by the eclamptic patient at the time the symptoms of eclampsia were present. The author said that the view that "eclampsia is due to deficient excretion of urea, and the occurrence of eclampsia in a woman suffering from Bright's disease depends on the amount of urea excreted," was not a novel one. But it rested on inference, and had been little, if at all, supported by direct observation, because it was seldom that the opportunity for observation occurred in circumstances favourable for accuracy. These cases were evidence in support of that view. The author also called attention to the resemblance between the two cases in respect of the facts that the excretion of urea was larger during pregnancy than during the lying-in period, and that rapid diminution in the amount of albumen present in the urine followed delivery. He also drew attention to the different kinds of albumen present in the two cases: in the case of eclampsia (coming on in a subject who appeared to be previously healthy, and ending in complete recovery) the albumen was mainly paraglobulin; in the case of Bright's disease there was a copious precipitate of serum-albumen, but very little paraglobulin. This was in accordance with the views of Ralfe and of Maguire. In the case now reported, the Bright's disease was still present three months after delivery.

Dr. GALABIN thought that much light might be thrown by careful observations such as Dr. Herman's on the obscure points in the relation of puerperal convulsions to albuminuria. His own observations were in favour of the view that an essential element in the pathology of most cases of eclampsia is a poisoning of the nerve centres by the retention of products, not necessarily urea, through defective excreting power in the kidneys. Urea had been injected into the circulation of animals without ill effect; and in uric acid we had an example of a product much more scanty than urea, but capable in the human subject of producing more ill effects. Possibly there might be some still more poisonous substance among those present in very small quantity and now classed as extractives, the excretion of which failed when that of urea failed. He did not know what vascular condition of the kidneys Dr. Herman considered it to be which produced scanty excretion of water and was the cause of eclampsia. The only vascular condition which could produce such an effect would be one of low pressure and anæmia. He thought there was evidence to show that in many, if not all, cases of eclampsia the secreting cells of the kidney were affected as well as the circulation. 1. In fatal cases he had always found alteration of the cells evident on microscopic examination. 2. Although in many cases the albuminuria disappeared rapidly after delivery, this was not universally true. In about one-fourth of the cases he found that although the proportion of albumen rapidly diminished, yet a little remained so long as the patient was under observation. In one case he had found it persist nearly two years after eclampsia in a first pregnancy, yet the patient had recovered perfectly and went through subsequent labours without either albuminuria or eclampsia. It appeared that in some cases eclampsia was associated with Bright's disease, somewhat chronic in its after effects, but not necessarily incurable.—Dr. GRAILY HEWITT thought the remarkable frequency with which primiparæ suffered from eclampsia indicated that extreme tension of the abdominal contents in first pregnancies was an important factor. He had observed good results follow placing the patient so as to take off pressure of the uterus from the spinal region, and by procuring copious watery stools by means of compound jalap powder. Dr. Braxton Hicks had observed that sometimes albuminuria occurred first after the onset of eclampsia. Was it not probable that this albuminuria was the result of intra-abdominal tension from the spasmodic action of the abdominal muscles? He mentioned a case in which eclampsia occurred first after labour and ended fatally. One kidney was found the size of a walnut, and the other much diseased.—Dr. CLEVELAND thought that in puerperal eclampsia connected with defective elimination of urea, some decomposition of the urea took place before its toxic effect on the nervous system was manifested. In uræmic coma such decomposition was evidenced by the urinous or ammoniacal odour of the breath. He thought it of more importance to note the deficiency of urea than the presence of albumen in the urine. He would have liked some explanation of the mode in which pressure on the kidneys is said to produce eclampsia in primiparæ. He thought that in some cases there was sudden congestion of the organ, which impaired its eliminating function and produced albumen in the urine.—Dr. HANDFIELD-JONES thought that the disturbance of the renal function in eclampsia was often due to changes in the circulation of the kidney. He had met with a case in which normal urine was passed by the patient half an hour before delivery, and within three hours puerperal convulsions manifested themselves and bloody urine was passed, the urine becoming almost solid on boiling. This appeared to be due to vaso-motor disturbance, such as is met with in other regions.—Mr. JACOMB HOOD narrated two cases which he had seen lately. In the first the urine before delivery contained five-eighths albumen, and there was much œdema of the legs and abdomen. Labour was induced, and the patient did well until the sixth day, when she had convulsions for three hours and a half. Only a trace of albumen was found afterwards, and the patient was convalescent on the fourteenth day. In the second case, after the patient had been twelve hours in labour, blindness was complained of, and five minutes later strong convulsions ensued. The patient was delivered with forceps under chloroform, and after this there were six convulsions, and the patient did not recover consciousness for four hours after delivery. The urine was drawn off, and contained one-fifth albumen. On the fifth day after delivery there were three more convulsions, and the temperature rose to 101°. She was treated by free purgation and sweating, the latter by means of warm pack and pilocarpine. The albumen disappeared the day after delivery, but reappeared on the fifth day after

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the convulsions. The sight gradually returned, and the patient was convalescent on the fifteenth day.—Dr. BOXALL said that in the majority, if not all, of the fatal cases of puerperal eclampsia which had come under his notice, the cortical portion of the kidney, if not diminished in area, was pale and anæmic, whereas the pyramids were congested, swollen, and standing up above the general surface of the section, and it seemed probable that the engorged bloodvessels of the pyramids lying between the tubules may exert pressure from outside to such an extent as to diminish the lumen of the straight or collecting tubules, and so prevent the free outward flow of fluid formed in the cortical portion, just as inflammation of the nipple offers an impediment to the escape of milk from the breast. He thought that congestion of the pyramids in association with anæmia of the cortical portion would appear to be sufficient to produce the variations observed in the urine.—Dr. PARAMORE thought that the impressionable nervous system was generally present in cases of eclampsia, which occurred so frequently in primiparæ, and when often in excellent health. For this reason he considered chloral and bromide of potassium were invaluable drugs in these cases.—Dr. HERMAN, in reply, agreed with Dr. Hewitt that we much needed information as to the typical course of puerperal eclampsia. This disease was so very acute, running its course within forty-eight hours, that extremely frequent observations were necessary in order to get a true picture of the phenomena. Eclampsia was not a common disease, and most cases could only be observed at the patient's homes, where very detailed and frequent record was impracticable. But for this consideration he should have waited till he could bring forward a larger number of cases. He did not attach so much weight as Dr. Galabin did to the objections made to the uræmic theory of the disease. Experiments on animals in which urea was injected into the blood without harm following he did not think conclusive, because the animals had healthy kidneys and could excrete the urea. He did not think that increased pressure within the abdomen was the sole casual condition, but he thought that the greater frequency of eclampsia in first pregnancies and at the end of pregnancy rendered it probable that pressure was one of the casual conditions, and this view was supported by the rapid diminution in the amount of albumen which almost always quickly followed delivery. Even if albuminuria persisted, there was generally a drop in the amount of the albumen. If the views of Ralfe and of Maguire as to the significance of the presence of paraglobulin and serum-albumen respectively in the urine should be shown by observation in a large number of cases to hold good, they would prove of great value in prognosis. He did not think that all cases of eclampsia were alike, for on post-mortem examination the renal changes met with were of the most various kinds: acute nephritis, large white kidney, granular kidney, dilatation of ureters and pelvis of kidney, were each met with, and in some cases there was no naked-eye appearance of kidney disease.

Notices of Books.

Dental Caries, and the Prevention of Dental Caries. By HENRY SEWILL, M.R.C.S. & L.D.S. Eng.—There are three different views of dental caries. In one the disease is assumed to be no disease whatever, but merely the result of chemical solution of the dental tissues, and therefore dependent both in its origin and its progress on the uncontrolled action of physical and chemical laws. Another hypothesis is that the teeth, being a part of a living organism, profoundly modify the progress of the disease; and a third, that caries is of inflammatory origin and comparable to caries of bone. Mr. Sewill gives a terse and lucid argument in favour of the purely passive condition of dentine during decay. He relies partly on the statement that caries will and often does take place in natural teeth mounted on artificial dentures or pivots, and that the naked-eye and microscopical changes are precisely similar to those seen in ordinary cases of teeth. On this point, however, there seems to be some discrepancy amongst observers. Tomes says that he has not seen a sufficient number of cases to be quite sure; Magitot, on the other hand, considers the "translucent zone" as characteristic of caries of living teeth. The fact that the dentine is evascular has often been used as an argument against its capability of inflaming—following the now exploded dictum, "where there are no bloodvessels there can be no inflammation." That some changes do take place in dentine during its disintegration is shown by various facts—the increase in sensibility, the hardening and pigmentation under favourable circumstances. Mr. Sewill gives some practical information about the prevention of caries with reference to constitutional and local treatment.

The Diagnosis and Treatment of Eczema. By TOM ROBINSON, M.D., L.R.C.P. Lond., M.R.C.S. Eng., Physician to and Lecturer at St. John's Hospital for Diseases of the Skin. London: J. & A. Churchill. 1887.—It appears in the dedication of this book that Dr. Robinson's chief objects in adding to the literature of eczema have been "to clear the ground of a number of words which are simply emblems of imagination," and "to connect together the morbid processes which we find occurring in the skin and mucous membrane, so that we may be enabled to peep through the veil and show that the causes of eczematous inflammation are identical with those that operate in all other forms of disease." Further he desires "to present the varied canvas of eczematous inflammation as an intelligible whole, to trace out the causes of this variety," and lastly to relieve suffering. However praiseworthy his objects and desires, we are sorry we cannot commend the work. There is little that is original, except perhaps the conception of the eczematous diathesis.

Lumley's Public Health Act. Annotated by WILLIAM PATCHETT, Q.C., and ALEX. MACMORRAN, M.A., Barrister-at-Law. Third Edition. London: Shaw and Sons. 1887.—The fact of the second edition of this work, which was only issued late in 1884, having for some time past been out of print, affords one of the best indications of the value that is set upon it. The present edition brings the legal aspect of public health up to current date, including as it does all the more recent statutes relating directly or indirectly to the subject. But the main value of the work attaches to the annotations to the several sections of the Acts dealt with, and the editors have evidently spared neither time nor pains in making these as complete as has been possible. Thus, in dealing with Sec. 157 of the Public Health Act, 1875, as to the making of bye-laws to control the construction of dwellings &c., they have covered no less than eight pages with matter that must be of the greatest value to those who are in any way concerned with the administration either of the law or of a code of bye-laws on this subject. The legal definition of the terms included in the statutes, the more important decisions that have been given on the subject, and the limits which are imposed on sanitary authorities in the matter, are all set forth. So also, in dealing with sections that relate to the prevention of the spread of infection, the same method is adopted, instances being cited to show the extent to which these clauses may be trusted by sanitary authorities and their officers in their endeavours to control infection. A considerable number of the original annotations have been modified or enlarged according as such circumstances as new legislation has rendered change imperative. The volume is necessarily bulky, for in order that it should in itself constitute a library of reference as to the statutes and decisions affecting public health, a copious index and a well-arranged table of cases are included within it; and it appears to us to be, without question, the most complete work relating to the subject with which it deals.

"Dead, yet Speaketh." By Doctor [illegible], Bristol: [illegible]-smith. London: Simpkin and Marshall. [illegible]

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written by a physician in his leisure moments, of which, as a rule, members of our profession have not too many. Its interest centres in the close correspondence of unfolding events with the details of a vivid dream which is represented to have occurred to the narrator, and in which his friend, a young barrister, was seen to plunge a knife into the breast of an aged man at the instigation of the nephew of the victim, and in the presence of a sleeping girl of surpassing beauty, the prize to be won by the foul deed. The plot is simple enough, and the working out of its parts does not demand the exercise of a large amount of ingenuity. The *dénouement*, though making virtue triumphant, is, we think, somewhat abrupt and disappointing. One would like to find that villainy was not only defeated but adequately punished, whereas in this tale the villain simply drops out of view. Though two of the characters belong to the healing art, the story is refreshingly free from medical technicalities. The writing, too, displays in some places considerable power, and in others there are touches of quiet humour, as in the description of the bearing of different members of a country coroner's jury when about to engage in the momentous duty of "viewing the body." Spite of several indications of the prentice hand in the construction of the story, the book is very readable.

L'Ospedale Lina. Dott. Eduardo Salvia, Rendiconto Statistico. 1881-86.—The Lina Hospital was founded in Naples in 1880 by the Duchess Teresa Ravaschieri Fieschi for children. Dr. Salvia now publishes an account of the work done during the first quinquennial period of the hospital's existence. The total number of in-patients was 361, of whom a large proportion seem to have been admitted for surgical operations. Resection of bone and osteotomy were performed very frequently, considerable use being made of Macewen's osteotome. Forty-two children were operated on for vesical calculus, lateral perineal section being invariably the method selected. Of this number, three cases proved fatal—two from peritonitis and one from pneumonia. In all the cases chloroform was given, the operation was performed in the dorsal position, and Dupuytren's tube left in the wound.

An Index of Surgery, being a concise classification of the Main Facts and Theories of Surgery for the use of Senior Students and others. By C. B. Keetley, F.R.C.S., Senior Surgeon to the West-London Hospital. Fourth Edition. London: Smith, Elder, and Co. 1887.—The fact that a fourth edition of Keetley's Index of Surgery is called for is a sufficient proof of the favour with which it is regarded by "senior students and others." Only minor additions and alterations have been made in this edition, but they have been sufficient to keep it up to date, and to make it worthy of the reputation won by the earlier editions.

Précis du Cours d'Exploration Clinique et de Diagnostic Médical. Par le Dr. E. Spehl. Fasc. 1 to 3. Bruxelles et Paris: Lebegue and Cie.—Dr. Spehl is issuing in parts the text of his class instruction in practical medicine at the Brussels University. The three fasciculi before us include the substance of nearly three out of the twenty-four lectures of which the course consists. They contain a general description of clinical topography, the method of examination and interrogation of the patient, and the examination of the urine. There is nothing to call for special comment, for the character of such a work can hardly be estimated from such small instalments. A judgment will be formed better when the whole is completed. The scheme drawn up by the author seems to lack nothing in the way of detail.

Letts's Diaries, &c., published by Cassell and Co., offer a most complete supply of time-saving publications to meet the requirements entailed by the infinitely varied engagements and occupations of professional and commercial life, as well as of domestic economy. These diaries, date-books, wallets, &c., are all excellently got up, being securely bound to resist the effects of constant use the whole year round, while the fulness and intelligent arrangement of their contents leave nothing to be desired. With such aids to methodical work, negligence or slovenliness in its performance would seem to be wholly inexcusable.

METROPOLITAN HOSPITAL SUNDAY FUND.

The annual general meeting of the constituents of this Fund was held in the Old Council Chamber, Guildhall, on Monday last, under the presidency of the Lord Mayor.

The Lord Mayor, in opening the proceedings, congratulated the meeting on the circumstance that the past year had been the most successful in the history of the Fund, and expressed a hope that it would long continue its course of usefulness and benevolence.

Sir Sydney H. Waterlow said it could be well understood that it was a great gratification to him for the thirteenth time to propose the resolution asking their constituents to affirm and adopt the report which the Council had presented. The annual advance in the collection was a subject for congratulation. It had not been one continual progress, because that institution, like all others, whether founded for philanthropic, political, or social purposes, had its trials in the beginning. It had in its earlier years to win the confidence of the public and to make them feel that it supplied a want, and that the work that it undertook to perform was done honestly, conscientiously, faithfully, and usefully. The collection of 1887 was the largest that had been made, and the progress of the last six years had been very great. In 1874 the amount was £30,000, and in 1880 it had only reached £30,423—a very small percentage of increase; but it had since risen from £31,850 in 1881 to £40,607 in 1887, or 20 per cent., as against 2 per cent. in the previous six years. From 1874 to 1880 there was practically no increase in the number of congregations. Commencing with 1072, they rose only to 1225 in 1880, but in 1881 they rose to 1268, and in 1887 to 1633. (Cheers.) This showed that the work of the Fund progressed, and that ministers of all denominations were to an increasing extent coming to the conclusion that the best method of collecting money for the relief of the sick poor in their large hospitals and dispensaries was to do so on Hospital Sunday, seeing that by that means it would be collected and distributed at the smallest possible charge. Looking to the work that the Fund had to deal with, they found that in 1874 there were 104 institutions claiming to take a share of the funds collected. In 1887 there were 157 hospitals, dispensaries, cottage hospitals, and convalescent homes taking a share of the Fund—an increase of nearly 50 per cent. He did not mean to say that there had been fifty-three great hospitals established in London since 1873, but there had undoubtedly been many more convalescent homes, a class of institution that was growing into favour, and which the public had come to feel were an absolutely necessary adjunct to large hospitals. These convalescent homes had done more for the sick poor of the metropolis than even the hospitals themselves, for the hospitals never finished their work. They might cure a man of the acute evidences of disease, or by means of some operation he might be comparatively restored to health, but then he was often turned out in a condition in which he was unable to go back and win his bread, and he frequently broke down in endeavouring to do so. On the other hand, if they could send a man for three or four weeks to a convalescent home the work would be complete, the man gaining, with good food and good air, that strength which enabled him to become again the breadwinner of the family, from which by accident he had been taken away. (Cheers.) While the Fund had only increased 28 per cent., the number of institutions relieved had increased nearly 50 per cent. What he wished the public to understand was this: that, though they did not want more hospitals, they did want more money to enable the beds in existing hospitals to be utilised. (Cheers.) The first cost had been incurred; they had the hospitals, but many of them had not funds enough to admit as many patients as they had beds to accommodate. The great want of the present day was money to enable

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them to fill the vacant beds, and it was one of the first Christian duties of the people each one to subscribe according to his means, however trifling, to accomplish that object. (Hear, hear.) One of the new branches of their work was setting apart a certain percentage of the money for the purchase of surgical appliances for the relief of persons who, having undergone all that hospitals and surgeons could do for them, required instruments, which the funds of hospitals, as a rule, could not purchase, and for which too frequently they had to apply to the general public. The Council of the Fund felt that this was a part of their work which ought not to go uncompleted. As matters at present stood, a duty of labour and pain was thrown upon the poor sufferers to which they ought not to be subjected—the duty of flying from one subscriber to another to get ten, twenty, or thirty tickets before they could receive the surgical appliance which they needed, too frequently causing an injury to the patient in the process of obtaining the instrument. The Council had deducted a certain percentage from the Fund during the last four or five years for this purpose. During the present year £1600 had been deducted, by means of which some 1500 persons had been relieved with instruments of various kinds, each costing from 5s. up to as much as £6 or £7. The patient had now no trouble except to go to the minister of the district in which he lived—Nonconformist or Church of England. The minister then sent the recommendation, and, if it was properly endorsed and certified, the secretary signed the order, which the patient presented at the nearest hospital or dispensary, and then obtained without further trouble the instrument necessary, fitted under the direction probably of the surgeon who treated the case. He ought not to close without referring again to the generosity shown by the late Dr. Wakley, who in the year 1886 gave them a donation of £1000. Dr. Wakley was deeply interested in the Fund, and no one perhaps was more competent to judge of its value than he, because he was the able editor and proprietor of THE LANCET, a journal dealing especially with the class which would bring all hospital matters under his own cognisance. Dr. Wakley gave them £1000, and he had by his will left them £1000, which had been paid during the past year. He referred to this as an evidence that the man most competent to judge felt that there was no charity in which his money would go so far as it would in the Hospital Sunday Fund for the relief of the sick poor of the metropolis. (Cheers.) He understood that some communication had been received from some of their friends referring to the fact that by their report and returns it was shown they did not contribute to some districts in London as much as they received from those districts. Certainly not. (Hear, hear.) How could the poor of the East-end contribute all that the wealthy denizens of the West-end could contribute? The establishment of the Fund was for the very purpose that the wealthy might contribute to the poor, and that the poor might receive the help of those who were able to afford it. (Hear, hear). He therefore hoped that contributors living in the West-end would feel that there had been a right appropriation of the money which they had given. They had also been asked whether they ought not to have a representative on the Council for each denomination. There were fifty clerical members of Council and 1633 contributing congregations. He understood that the denomination that had raised the question had four contributing congregations. They could not give a representative to every four congregations, seeing that the proportion of representatives to congregations was about 3 to every 100. The Fund was not administered with the slightest idea of anything sectarian. (Cheers.) They wished to make it a universal fund, and one of its great advantages was that it brought Christians of all denominations into harmony and union on the one day selected for Hospital Sunday. The universality of the Fund was one of its greatest recommendations. He begged to move, "That the report of the Council for the year 1887 is hereby received and approved."

The Rev. Dr. ALLON, in seconding the motion, said that Sir Sydney Waterlow was to be congratulated on the success of the Fund, which was the child of his own benevolent purpose. It was an object altogether apart from denominational considerations, and he protested against the introduction of such topics in connexion with the Fund.

Mr. T. NICHOLS asked whether any precaution was taken against the abuse of the charities assisted by the Fund. It was within his knowledge that there were many recipients of charity who were well able to pay small ordinary medical fees. He would suggest that after an applicant had once been relieved he should take away some form to be filled up, in order to prevent abuse.

Mr. READ contended that the Fund was not only a benefit to the poor, but to the rich, since they obtained the benefit of the large experience which hospitals afforded to medical men in regard to the different modes of medical treatment.

The motion was then agreed to.

Sir E. HAY CURRIE moved, "That the laws of the constitution which have been in force during the past year be continued." He said that they were all most grateful for what was done by the clergy and the congregations in aid of the Fund, but he hoped it would not be considered that £40,000 a year was anything like an adequate sum to be contributed by the wealth of London to such a purpose. Deducting the £1000 given by each of three large congregations and the £1000 legacy of Dr. Wakley, and dividing the balance between 1600 congregations, the amount contributed by each of them would be seen to be very small.

The Rev. RHODES BRISTOWE, in seconding the motion, expressed a hope that the practice of some churches of deducting from the hospital collection a certain amount for ordinary church expenses would be abandoned.

Mr. NELSON HARDY wished to draw attention to the manner in which the laws had worked in one particular direction. South London, which was more like the East-end than the West, and where the congregations were mainly poor ones, contained about one-fourth of the population of London, and it contributed about one-fourth of the total amount given to the Fund by the churches. But the entire amount given by the Fund for the treatment of the sick poor generally in South London (not including Greenwich Hospital, which was intended for particular classes) was £260. Adding the amount given to special hospitals and dispensaries, the total sum was £2696, as against £31,000 awarded to the rest of London, excluding in both cases convalescent hospitals. The result was that the hospitals of South London, so far as Hospital Sunday was concerned, were simply starved. Many poor patients had to go to hospitals north of the river, and their friends were thus put to unnecessary trouble and expense in going backwards and forwards. Hospitals like Guy's and St. Thomas's had not funds to accommodate all who applied, and many of the sick poor were finding their way into the workhouse infirmaries, where serious operations, such as ovariotomy, were now sometimes performed. It might be said that the hospitals in South London did not require help, but that was a mistake. Guy's, which formerly had an income of £40,000, had now only a steady income of £26,000; and the consequence was that 200 beds, which would be available for the treatment of the sick poor, were now empty.

Sir SYDNEY WATERLOW said that Guy's Hospital had been told that they could apply to the Fund if they liked, but they had declined to do so.

Mr. NELSON HARDY said that he had been informed by the treasurer that Guy's Hospital intended to apply next year. If, however, they were treated according to the existing laws, they would probably get so small an amount that it would be hardly worth while to apply. He thought, therefore, that a *primâ-facie* case had been made out for some inquiry into the working of the laws as they at present stood. He did not doubt that the laws had been admirably administered, but he would venture to move as an amendment, "That the laws as at present in operation be provisionally adopted, and that the attention of the Council be requested to the contrast between the receipts from South London churches and the awards to the South London hospitals and dispensaries, and that they be asked to consider what changes, if any, are desirable in the rules for the administration of the Fund."

The Rev. H. SWITHENBANK seconded the amendment. He said that he represented 5000 persons in the south of London, mainly poor people, and he was constantly sending sick persons to hospitals with recommendations from the Fund, but in almost every case they had to go across the water. He had no right of access to Guy's Hospital, though it was within easy distance.

Sir SYDNEY WATERLOW hoped that the meeting would not throw back upon the Council any question with regard to the appropriation of the money received in one locality to the wants of another. Any application from hospitals or dispensaries in the south of London would always be considered and justly dealt with. The treasurer of Guy's Hospital was told that he could apply to the Fund, subject to

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the condition that their accounts were rendered in order that the Committee of Distribution might have the opportunity of investigating them, and determining whether upon its merits the hospital ought to receive a grant. When that condition was complied with, any application from Guy's Hospital would receive careful attention.

Mr. H. BURDETT said that the people in South London had relied upon the great endowed hospital of Guy's to provide all the necessary accommodation for the sick free of cost. They ought to be very careful before interfering with the present administration of the Fund, which had worked so well, and he hoped that the amendment would be withdrawn, or, if pressed, would not be carried.

Mr. A. L. COHEN said that, as a governor of Guy's Hospital, as well as a member of the Council, he thanked Mr. Nelson Hardy for his intervention, and he also thanked the Council, and Sir Sydney Waterlow in particular, for insisting upon an exact formulated statement of the accounts of the hospital. If twenty years ago its accounts had been overhauled by the critical eyes of the Council, very probably the hospital would not now be in its present plight. He trusted that it had turned the corner, and was getting into better order. He hoped, however, that Mr. Nelson Hardy would withdraw his amendment, and be content for the present with the useful discussion which had taken place with reference to it.

The Rev. J. R. SIMPSON expressed a hope that Mr. Cohen's suggestion would be adopted. He was quite sure that the matter would receive the best attention of the Council.

Mr. HARDY then withdrew his amendment, and the motion was agreed to.

The Rev. J. F. KITTO moved: "That the Council for the year 1888 be constituted as in 1887, with the following alterations—viz.: The Rev. S. B. Burnaby, M.A., in the place of the late Rev. Prebendary W. G. Humphry, B.D.; the Rev. the Hon. E. Carr-Glyn, M.A., in the place of the Rev. P. W. N. Bourne, M.A.; the Rev. Archd. Richardson, D.D., in the place of the Rev. R. Maguire, D.D.; Colonel Sir Reginald Hanson, Bart., LL.D., &c., in the place of the Right Hon. P. De Keyser, now Lord Mayor; Mr. Alderman Whitehead, in the place of the late Sir William McArthur, K.C.M.G.; Alfred L. Cohen, Esq., in the place of his late brother Lionel L. Cohen, Esq., M.P.; Claude Goldsmid-Montefiore, Esq., in the place of John G. Pitcairn, Esq.; and that the other retiring members be re-elected for 1888." He desired to echo the sentiment of Dr. Allon that anything like division into denominational parties should not be tolerated in the constituency. The real constituency of the Fund was the whole of London, and not any particular part of it.

Dr. HARE seconded the motion, which was agreed to.

On the motion of the Rev. C. J. RIDGEWAY, seconded by the Rev. M. BARLOW, it was resolved—"That the 10th day of June be fixed for Hospital Sunday of 1888, and that the cordial co-operation of all ministers of religion within the metropolitan area be again invited in the usual way."

On the motion of Dr. FORREST, seconded by Dr. GLOVER, a vote of thanks was passed to the Lord Mayor for presiding. His lordship having briefly acknowledged the compliment, the proceedings terminated.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

[FIRST NOTICE.]

IN the recently issued annual report on the proceedings of the Medical Department of the Local Government Board Dr. Buchanan returns once more to the question of the diffusion of small-pox around metropolitan small-pox hospitals. Reading between the lines, it appears that his present remarks on the subject, and the great mass of materials which are embodied in a summary intended to show the more important data on which Mr. Power's conclusions were based, have been produced on the present occasion because of the insertion of Dr. Bridges' comments in last year's volume, and because of certain other criticisms which are held not to have been properly considered. It will be remembered that Dr. Bridges accepted the view that the hospitals did mischief, but he clung to the opinion that the evil was brought about by direct human communication, and not as the result of an aerial diffusion. We have often pointed out that this view can no longer be sustained, and, unless it could have been enforced on grounds that were in no way open to question, there certainly was nothing to justify an official suggestion that the official view of the Medical Department might, after all, be wrong. But the grounds alleged were weak in the extreme, and their publication has enabled Dr. Buchanan to express his view of them. Taking the principal criticism—namely, the circumstance that in one quadrant around the Fulham Hospital, containing 121 houses, no cases of small-pox were observed during an epidemic period of four months, a result which, it is implied, could hardly have been brought about if any aerial diffusion took place,—Dr. Buchanan retorts that his critic, who supports the direct communication theory, must have altogether forgotten the circumstance that the particular quadrant referred to actually contained the route and the only one by which all direct human communication with the hospital took place. Other criticisms of this aerial theory have been equally worthless, based as they have been, not on data as to the immediately surrounding population, but on statistical evidence as to the incidence of small-pox on registration districts.

Dealing with such critics, and especially with Dr. Bridges' memorandum, which was inserted at the President's request, Dr. Buchanan now asks his chief to allow him to request his future readers not to misrepresent him, or to hold him "incapable of seeing that what is true of five is presumably in a measure true of three or two, and so forth"; and he once more asserts that his department professes to have established a doctrine concerning the means of small-pox spread that is applicable for the practical purposes of the inhabitants of London, and that affords to hospital authorities, if they choose to recognise it, better opportunities than they before had of preventing the unquestioned danger incurred by those who live near to small-pox hospitals. The opportunities referred to, and especially the one which deals with a complete alteration in the system of small-pox construction, ought to be recognised. Much money has been spent on these hospitals; their method of administration has been modified to meet the views of the "direct human intercommunication" theory, but where small-pox aggregations take place the danger of diffusion still remains.

Typhus is another disease which has received a good deal of attention during the year reported on. It is a disease which, when once it gets a footing in a thickly crowded community, is most difficult to eradicate, and its appearance in 1886 naturally gave cause for anxiety. Some seventy districts were, in consequence, visited; and at the onset it became evident that many of the younger medical practitioners, including health officers, not having had experience of typhus, failed properly to diagnose the disease. Some gave the name of typhus to other forms of continued fever; and others, again, were unaware that they were dealing with typhus until it had spread fatally in their midst. In all, true typhus was found to be prevailing in seventeen important centres of population, its incidence being mainly in the most crowded and miserable localities; and it was in some instances discovered in precisely the same places that had been the scenes of its occurrence in past times. In many of these places it was necessary to point out anew that if sanitary authorities wish to keep their districts free from typhus, they must, above all, deal with the question of overcrowding, and be prepared in advance with such means of hospital isolation as shall enable them to place the first attacks under circumstances which will not constitute a danger to the community. There are few outbreaks that respond so easily to early and complete isolation as do those of typhus fever.

The whole subject of scarlet fever in connexion both with milk and with bovine disease is fully discussed in the report, but this subject is discussed in another part of our present issue.

The history of cholera during 1886 is also recorded in detail by way of supplement to the story told of the earlier parts of the epidemic of 1884-87 which has already appeared. And to this is added a final record of the cholera survey, which aimed at securing for places especially liable to cholera, either by reason of their position on the coast, or on account of known defects in their sanitary condition and administration, all such immunity as immediate measures of sanitary reform could be expected to provide. We have often referred to this survey, and we would again remark that though its details may be uninteresting, yet the principles underlying it are those which have tended so much to free this country from conditions favourable to the spread of cholera, and which have already brought about results which would have been impossible under a quarantine system.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 17, 1887.

THE interest excited by the etiological inquiry initiated by Mr. POWER and Dr. KLEIN, and completed by the researches of the latter, which have just been published in the 15th Annual Report of the Medical Officer to the Local Government Board, will be in no degree lessened by the report which was made on Thursday last to a special meeting of the Pathological Society by Professor CROOKSHANK, and which we publish in another column. Although we are unable this week to report the discussion at the Society, it may be well to direct attention to the question at issue between Professor CROOKSHANK and Dr. KLEIN, which forms so interesting a sequel to the original investigations. That inquiry, it will be remembered, commenced exactly two years ago, and resulted in the tracking of an epidemic of scarlet fever in North-West London, with painstaking care and conclusiveness, to a milk-farm at Hendon, and in the absence of any evidence of external contamination to the milk of certain cows suffering from an infective disease of the teats and udder. It is this "Hendon cow disease" that Professor CROOKSHANK states he has still further investigated, with somewhat remarkable result a result which does not confirm the notion of its scarlatinal nature. Yet it is well known how thoroughly Mr. POWER excluded every possible source of contamination of the milk before he came to the conclusion that the bovine and human disease were related. As to the cow disease, Dr. CAMERON analysed minutely its clinical characters, and declared it to be a specific contagious disorder differing from other somewhat similar affections to which the cow is liable; whilst Dr. KLEIN showed that the cutaneous and visceral lesions of the affection in inoculated animals presented a striking similarity to the lesions of scarlet fever. He succeeded further in discovering and isolating a micrococcus, the characters of which, upon cultivation, were perfectly distinctive, and by inoculation of cultures obtained ample evidence that the lesions referred to depended upon the presence of this microbe. His later researches were directed to human scarlet fever, and resulted in the detection of the same "micrococcus scarlatinæ" in the blood and tissues of patients. His inoculation experiments were numerous and all to the same purport, and he succeeded, both by inoculation and feeding with cultures of the micrococcus obtained from the human scarlatinal patient, in inducing a definite general disease in calves which bore a great resemblance to that observed in the Hendon cows. Thus it would seem as if the connexion between the human and bovine disease had been fully proved, wanting only the crucial but inadmissible test of human inoculation with the bovine virus—a test, by the way, which is equally inapplicable in the case of other infective diseases of the human species the bacterial origin of which is beyond dispute.

It was hardly to be expected that results so remarkable and far-reaching should have escaped criticism. They involved not merely the discovery of the scarlatinal contagium, but the implication of the most useful of domestic animals and most universal of articles of food in the propagation of the disease, to an extent which demanded very thorough investigation before acceptance. That milk is unfortunately a ready medium of contagion is proved by numberless instances of epidemics of typhoid fever, diphtheria, and scarlet fever traced to its use; but hitherto the milk-infection has been attributed to a human source. The result of Dr. KLEIN'S inquiry has then been to direct especial attention to the nature of the affection from which the cows at Hendon suffered; and to stimulate the Agricultural Department of the Privy Council to an inquiry of which Professor CROOKSHANK'S report forms the first fruit. Dr. THIN, in an able criticism upon the subject, delivered at the Dublin meeting of the British Medical Association, dwelt at length upon this side of the question, introducing new evidence from competent observers of the malady. He confirmed Dr. CAMERON'S statement that the affection is currently styled "cow-pox" by those who have the charge of the diseased animals; but neither Dr. THIN nor Dr. CAMERON considered it to be the true form of cow-pox, of which since JENNER'S day many counterfeits or spurious forms have been recognised. Indeed, Dr. CAMERON specially points out that in the Hendon cow disease there is neither a papular stage nor a subsequent pustule, and there is also an absence of such characteristic features of cow-pox as the central depression of the vesicle, marginal induration, areola, and ultimate pitting of the skin; in fact, in hardly any point did the two conditions approximate. In the light of Professor CROOKSHANK'S results, these statements are, it will be seen, of great importance, if only as showing the difficulties which JENNER must have encountered in his discovery of vaccination. The criticism of Dr. THIN and others extended beyond this point, and dealt with the evidence adduced by Dr. KLEIN from his bacteriological research. It may suffice here to say that this amounted to the suggestion that the micrococcus was nearly allied to streptococcus pyogenes, and was therefore probably the result of accidental contamination: whilst some thought that the conclusion of its scarlatinal nature had been too hastily arrived at. We need not dwell now upon the concurrent investigation by Drs. JAMIESON and EDINGTON into scarlet fever, and their discovery of a bacillus scarlatinæ; for, interesting as that line of inquiry is, it has no direct bearing upon the precise subject dealt with by Professor CROOKSHANK—viz., the relation of the Hendon Cow Disease to Scarlatina in Man.

Whatever value may be assigned to the pathological resemblances between the bovine and the human disease—and Dr. KLEIN has pointed out that the cutaneous and visceral lesions are very similar,—it cannot be contended that in their clinical features there is much similarity. In the cow a limited local eruption of highly contagious properties, with slight or no concomitant fever, can hardly be said to resemble the acutely febrile exanthematous malady in man. The characters of the cow disease appear to be definite enough, and Professor CROOKSHANK was requested to examine into examples of an affection which he identified with this disease. Nor did the grounds of identity rest solely upon the clinical phenomena. Pro-

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fessor CROOKSHANK followed the same procedure as Dr. KLEIN, and by inoculations and cultivations arrived at the same results. He found the same micrococcus, as the cultures proved, which Dr. KLEIN had found in the Hendon cows and the scarlatinal patients; but the results of the post-mortem examination of the diseased animal are reported by Dr. KLEIN to be wholly different from the lesions he had previously observed. Then followed the investigation by Professors BROWN and CROOKSHANK of another and very extensive outbreak of the same disease, in which its locally contagious characters were extremely well hown, both in animals and in those who milked them. Inquiry, however, failed to reveal any cases of scarlet fever among the consumers of the milk from this large number of diseased animals. The question obviously turns upon the point whether the disease in this outbreak was the same as that first observed, and both similar to the Hendon cow disease; for although Professor CROOKSHANK does not state whether he isolated the streptococcus in this instance, he is evidently quite convinced himself of the identity of all these cases. The upshot of the inquiry is, however, most remarkable—sufficient to justify the unusual step of a special meeting of the Pathological Society; for, if all these cow affections are identical, this discovery would sever the chain of evidence adduced by Mr. POWER and Dr. KLEIN in support of their contention that the Hendon cow disease is scarlatina. It is not a fortnight since proof was afforded in the person of a farm lad, who had contracted it from the cow, that the disease observed by Professors BROWN and CROOKSHANK is indubitably cow-pox. Professor CROOKSHANK seems to have had suspicions of this as the inquiry progressed, and he evidently did not consider that the differences alluded to by Dr. CAMERON sufficed to separate the Hendon outbreak from true cow-pox. If Professor CROOKSHANK be right as to the identity of his cases and those at Hendon, as well as in the determination of their nature, then the current terminology of the farm has proved to be correct, in spite of the disclaimers of skilled scientific investigators; and the suggestion is forced on the mind that vaccinia in the present day is not so rare as has been imagined. At the same time it is highly improbable that the micrococcus which was discovered by Dr. KLEIN is the vaccine virus; for nothing can be plainer than the evidence he advanced in support of its existence in the blood and tissues of scarlatinal subjects. Professor CROOKSHANK promises further investigation on this point, but it is clear that he inclines to the view which Dr. THIN propounded that this microbe is a septic organism, and therefore only accidentally related to either cow-pox on the one hand, or scarlet fever on the other.

In the elaborate and exhaustive paper upon "Some of the Infectious Diseases common to Man and the Lower Animals," which he read before the Epidemiological Society on Wednesday, Dr. KLEIN devoted a considerable space to scarlet fever, and not only replied to such criticisms as those of Dr. THIN, but also by anticipation to the inquiry in which Professor CROOKSHANK has had a share. He pointed out that there were known to him seven kinds of streptococci, including S. pyogenes and S. scarlatinæ, which bore a close resemblance to one another in their growth, but which on careful study of the rate and mode of growth in various media could all be differentiated. One of these was the microbe yielded by the disease in the cow alleged to resemble the "Hendon cow disease." Dr. KLEIN stated that the only points of similarity between the two affections rested in the ulceration of the teats and udders. Professor BROWN had enabled him to make post-mortem examinations of some of the animals, and the result was an absence of the marked visceral lesions which had been found in the Hendon cows. Therefore he was not surprised that no cases of scarlet fever had been traced to the milk of the cows in the late outbreak. He also met the objection that the disease of the Hendon cows bears so little clinical resemblance to human scarlatina, by citing the instances of cow-pox and small-pox, of woolsorters' disease and malignant pustule, of scrofula and lupus and tuberculosis, in man and animals, as showing that diseases owning the same origin may assume different forms in different conditions. If, then, Dr. KLEIN be right, his opinion that scarlatina is one of the infectious diseases communicable to man still holds the field; but if Professor CROOKSHANK be right—and the vital importance of the subject requires that his conclusions should be thoroughly sifted—then the connexion between cow disease and scarlatina must of necessity fall to the ground, and the remarkable facts in support of the doctrine gathered in the first inquiry must be attributed to coincidence. The evidence adduced by Mr. POWER seemed irresistible in its logical sequence, and it is difficult to detect a fallacy anywhere in the chain of argument. We trust that the discussion at the Society, which is in progress as we go to press, will aid considerably in clearing up the question, which is of such moment to the community, and that more light will have been thrown upon the numerous vesicular diseases of the cow's udder which have been so long confused under the head of "cow-pox." In any case, it cannot but be useful that attention should be directed to the existence of these contagious diseases of the cow, so that every means may be adopted to prevent the spread of such disease in a herd or the dissemination of milk from infected animals.

IT has been said that typhoid fever has no geography. Its prevalence, no doubt, has a relation to heat, and there is more of it in tropical, semi-tropical, and temperate climates than in cold ones; still, allowing for differences of degree, it seems to prevail everywhere. Whether its causes are invariably the same in all countries may be, and is, a disputed point, but that it is a disease amenable to the operation of sanitary measures is wellnigh universally acknowledged. The deaths from this disease in England from 1861 to 1870 were at the rate of 19,000 per annum; whereas from 1871 to 1880 they fell to 7000 per annum; and at Frankfort-on-the-Main and at Dantzic we have statistical proof of the remarkable decline of this disease since the introduction of proper systems of sewerage and water-supply into those cities. Our attention has been called to this subject in connexion with a report thereon by the members of the Central Board of Health for the colony of Victoria, which has been presented to both Houses of Parliament by command of his Excellency the Governor. Typhoid fever is never altogether absent, but the colony has this year been visited by an epidemic. The same law

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that holds good for England and America equally applies to Australia—viz., that typhoid fever chiefly prevails towards the end of the summer, and especially in autumn, and after periods of long drought. But the members of the Central Board of Health in their report rightly dwell on the fact that seasonal influence, after all, is merely an exciting, and not the originating, cause of typhoid fever. "It only co-operates with certain other auxiliary conditions which are favourable to the spread of the disease, but none nor all of these can in any true sense originate it." No subject has been more keenly discussed in recent times than the question of the causation of typhoid fever, with the practical outcome that it is considered an eminently preventable disease.

The members of the Central Board of Health of Victoria do not pretend to advance anything new in theory or pathology. They are content to accept the doctrines promulgated by some of the best minds of the medical profession in Europe and America, which BUDD very succinctly summed up in the words, "Contagion is the master-fact of its history"; and they proceed to explain and illustrate in what particular sense and through what instrumentality the contagium may exert its influence. As regards the extent to which the disease prevails in the colony, which can only be estimated approximately from the number of deaths, it appears that the mortality from typhoid fever in the colony last year was 522, the whole population being a very little over 1,000,000; and the mortality for the half-year, from January to June inclusive, for the present year amounts to 281 deaths in Melbourne and its suburbs alone. Dr. JAMIESON, contrasting Melbourne and its suburbs with the chief towns of England, shows that in 1879 the mortality from fever in twenty of the principal towns, including London, was at the rate of 2·9 per 10,000 of the population; whereas in Melbourne and its suburbs, on the average for ten years, it was at the rate of 7·3 per 10,000.

The Central Board calculates that on an average 3133 persons suffer from typhoid fever in Victoria every year, and that 470 of the cases end fatally; hence they are justified in sarcastically adding the remark that the disease has been very appropriately called "colonial fever." The Central Board then points out what are the "preventable causes," and how they can be "prevented." They first speak of the general apathy and ignorance that exist in regard to the subject, and under the head of "insanitary conditions" they enumerate various details with which our own experience in this country has rendered us familiar—such as improper disposal of nightsoil, contamination of water, milk infection, inaction of local boards, inadequate remuneration and inefficient action of local health officers, badly constructed dwelling-houses, and want of compulsory notification and power of isolation of contagious diseases. The members of the Central Board of Health wind up their sound and practical report by putting a few points prominently in the foreground as necessary to the effectual suppression of typhoid fever: compulsory notification, isolation, prompt removal by special service, destruction of typhoid excreta, general cleanliness, speedy abatement of nuisances, cleansing drains, abolishing cesspits, and protecting water-supply.

No uncertain sound pervaded the message given by Mr. FRANCIS GALTON in his recent popular lectures on Heredity and Nurture at South Kensington Museum. Strictly mathematical and logical throughout, he spoke forcibly out of the fulness of knowledge necessarily resulting from consideration of the life histories he has been collecting during so many years. The whole tendency of the thought actuating his work has been the accurate determination of future possibilities from the data afforded by the present condition. The accuracy of the forecast is, of course, open to question. When examining height, weight, or strength, as in testing mental power or knowledge by examination, we obtain merely an actual measure of the present condition, but we are hardly in a position to predict with certainty what will be the future outcome of that condition. The most that can be said is that the individual possesses so many units of strength, knowledge, &c., and from these his "class place," as compared with other individuals under similar conditions of age, &c., can be readily ascertained. The value is entirely of present limitation. All experience shows that, however soothing a knowledge of our present state may be, yet humanity will never rest satisfied with this, but will press for a prognosis. The three dimensions of life measurement are the past, the present, and the future; of these, undoubtedly the one of greatest interest is that which has yet to be revealed, and it forms a subject of endless speculation, since it necessarily possesses an element of uncertainty. So far as our individual future is concerned, Mr. GALTON'S measurements fail to be of very much help; they may determine the quantity, quality, or nature of work that can be performed, estimating the "output" of the machine, and so preventing the twofold waste of latent power and of useless struggle; they may serve as a guide for the healthy development of the young; they may determine the relative position of the individual, class, or nation—that is, they may inform us whether we are living in an age of progress or retrogression; but even while indicating the lines along which progress or retrogression is taking place, they can obviously take no count of the future variations likely to ensue from so-called "chance" external circumstances. They cannot predict that the powers which are latent shall ever be employed; they cannot ensure the continued development of strength or of mental faculties. External circumstances must constantly arise capable of damping the ardour of youthful aspirations, and thus cramping and limiting the "output." The disturbing influences at work to overthrow all calculations are by no means overlooked by Mr. GALTON; but when all is said and done, we have still to make the individual application of a general law, and it is precisely here that the doctrine of averages fails to give very much comfort. The statement that one in seven dies of consumption may not disturb the equanimity of a healthy man, but will fill a hypochondriac with dismay. The sick are very apt to take a pessimistic view of their own ailments, and it is impossible to reassure by statistics which merely record a low rate of mortality. It may be a matter of curiosity to know the probable heights of our future sons and daughters, but this interest will be lost upon those who realise that they have no prospect of a family. In other words, while doctrines of averages may be, and undoubtedly are, correct when estimated from a consideration of a sufficiently large number of facts, they can be of very little value in isolated cases. For purposes

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of treatment, every case has to be studied, not merely as belonging to a special class, but for its definite characteristics, which render rational therapeutics something higher and better than a mere record of symptoms to be met by particular drugs. If this were the be-all and end-all of medicine, a carefully compiled dictionary of symptoms and treatment might with safety be placed in the hands of any intelligent but uneducated member of the laity. Statistics have a certain value which we would not venture to deny, but observations of classes will never supersede in value or importance the observation of the individual.

Mr. GALTON has avowedly no concern with existing disease; he looks rather to the future chances of disease, and he estimates these mainly from the family history and the personal condition. These two elements represent the past and the present out of which the future is to be built. If his facts can be proved, and there appears to be no loop-hole for disproof, then there cannot be two opinions as to the validity of his conclusions. He aims at the improvement of the human race by what might be termed the judicious choice of parents. Considering what he calls the enormous "output" of babies per annum, this is certainly a question worth considering. *Eugenism* (meaning goodness in birth and in rearing) is essentially to be desired. By public opinion much can doubtless be done to promote *eugenism*, if the public can only be sufficiently educated to recognise and desire the best means of forwarding such high aims. But this is not the whole battle. Excuses will always be made for special instances of unwise marriages, even though the probable issue may be doomed to serious disadvantages, which can be estimated, from a business point of view, by the extra premium ordinarily demanded by assurance offices when one or other parent has been the subject of disease such as phthisis. Mr. GALTON spoke warmly on this question, perhaps the only aspect of the case he could conveniently present to a mixed audience. Every medical man has probably been consulted about the propriety of marriage under other conditions in which there is a fair prospect of the sins of the fathers being carried as a curse to the next generation. Responsibility presses heavily upon medical practitioners when the results of undue complaisance may be so extremely disastrous. None the less, however, have such questions to be faced boldly; and if, as Mr. GALTON remarked, the pulpit is silent upon the physical influence of one generation upon the next, it is but right to demand speech from those who know the vast importance of the subject in all its bearings. Sanitation is good, and will, we hope, tend to the general improvement of the human race. Gymnastic exercises, when properly controlled and reasonably practised, will also develop capabilities which are but too often stunted and allowed to degenerate as a side condition of our civilised life in large towns. But above and beyond both of these, we cannot too clearly emphasise the national importance of means of checking ill-assorted marriages of persons afflicted or threatened with hereditary complaints. Such marriages too often result from gross ignorance of their probable consequences, and the lesson for the medical profession to take seriously to heart is the need for individual boldness on their part in warning patients of their almost criminal folly at the very time when they may expect congratulations. It will demand self-sacrifice on their part to realise the full bearings of their sad inheritance, and to avoid contributing to the sum of sickness and misery in the world. Our course, however, is clear, and may readily be gauged by consideration of our duties in times of epidemics, when our prime object, the arrest of the spread of disease, shines brightly before us. Knowing, as we do, that certain physical conditions will all but inevitably be transmitted in the event of marriage, we ought not to avoid any occasion of speaking firmly and forcibly to prevent the production of a sickly race.

THERE has been no more satisfactory meeting of the friends of the Hospital Sunday Fund than that of Monday in the Guildhall, under the presidency of the Lord Mayor, of which a full report appears at pp. 1225 to 1227. This is the real testing meeting of the year, in which the Fund takes its rise *de novo*. The Council is created for a year only, and the laws are enacted for a similarly definite time. Unless the consenting churches should see fit to renew their benevolent organisation in favour of the Fund, the whole machinery of Council, laws, and collection would collapse, and with it the £40,000 or so that go to reinforce the scanty coffers of our metropolitan hospitals. The meeting of Monday was not a meeting of the Council, but of the constituency which creates the Council and regulates its action. To this meeting representatives of all the contributing congregations are admitted, and it is on this occasion that any delicate or burning question which affects hospitals, or which exercises the public mind in relation to them, is apt to arise. One or two such questions were raised at the meeting on Tuesday, and disposed of with much good sense and good temper. One of these had reference to the precautions taken by hospitals to prevent the abuse of their charity by persons capable of paying ordinary medical charges The answer of Sir SYDNEY WATERLOW was that this was rather a question for individual hospitals than for the Council of the Hospital Sunday Fund, although it was one to the importance of which the Council was not insensible; also, that with regard to any matters of doubt in the administration or merits of hospitals, the Council had the power, which it frequently used, of asking interviews with managers. Mr. NELSON HARDY raised a question, which he had previously alluded to in our columns, as to the disproportion of the sum raised for the Fund in certain parts of London to that distributed to the hospitals of the same part. The point had been also mooted at one of the summer meetings of the Fund prior to Hospital Sunday, and was properly relegated to the constituents' meeting. Mr. HARDY'S speech was all that could be desired. It was a clear and good-tempered statement of the fact that South London gives more to the Fund than it receives. It gives well on to a quarter of the Fund, and it gets back again for its hospitals and dispensaries little more than a twelfth. The speech of the seconder of the motion, the Rev. H. S. SWITHENBANK, was equally reasonable. Both he and Mr. HARDY declared that in consequence of the Council not giving a grant to Guy's grave cases on the south side of the river had to be treated in the Poor-law infirmaries, or recommendations had to be asked from the Council for hospitals at a distance—

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a practice which was injurious to the patients. The meeting was so satisfied with the working of the existing laws of distribution that it declined to modify them. But Mr. HARDY expressed himself quite satisfied with an assurance given, on the suggestion of the Rev. Mr. SIMPSON, that the case of Guy's, with its 200 vacant beds and diminished rent roll from agricultural depression, should receive the earnest consideration of the Council. It was not a little remarkable that even Mr. COHEN, a governor of Guy's, while grateful to Mr. HARDY, entirely approved the decision of the Council, and expressed the hope that by careful management Guy's would be able still to preserve its independence—an independence on which it and South London generally are to be congratulated. It cannot be too often repeated that the south of London has been greatly favoured by two largely endowed hospitals, and that the generosity of GUY, who lived more than a century since, has left wealthy men of that district free to distribute their liberality more widely. What is now wanted is a wide imitation of the munificence of GUY on the part of those having or leaving great sums of money. Out of such heaps hospitals should be greatly favoured until every empty bed and vacant ward is filled with the victims of suffering whom hospital rest and skill might restore to comparative health. Small subscriptions are not to be despised, and it is to be hoped that the Hospital Sunday Fund will yet grow to larger proportions, as it has lately increased. It must be remembered that private generosity has in this country to do what is done in other countries by the State or by municipal rates. We cannot more opportunely recall this fact than at the present time, and in a month of winter when the rich and the poor meet together, and when the rich have no pleasure greater than that of mitigating the miseries of poverty, especially when they are emphasised by those of disabling sickness. The Council of the Hospital Sunday Fund is again charged with the high duty of receiving and distributing a great collection, and we wish for it every success, not only on Hospital Sunday, but as a medium of large gifts and legacies to one of the best of all causes.

Annotations.

"Ne quid nimis."

THE ATTEMPT TO POPULARISE MEDICINE.

IT is satisfactory to know that the arguments which have been brought forward in THE LANCET during the past few weeks to combat an ill-considered attempt to teach to all and sundry the "dangerous little" of medical treatment have not been used in vain. That endeavour we then described, and we still regard, as being charged with a power of incalculable injury to the general public whom it presumed to instruct. It ignored entirely what constitutes the very core and essence of accurate and safe practice—the cardinal principle that personal examination and skilled diagnosis are as absolutely essential to the successful use of remedial measures as the remedies themselves. They are, indeed, even more essential, for though a given form of treatment, as expressed in drugs and the like, may be dispensed with and substituted by some other, the fundamental principles which distinguish between the proper and improper use of all such remedies cannot be thus lightly used. They are incorporated with every detail of practice, and requiring as they do, for a just understanding of their significance, a sound knowledge of all the sciences subsidiary to medicine and of medicine itself, it is impossible that they can be duly appreciated or applied by any man save the trained and qualified medical practitioner. We have therefore no hesitation in condemning as hostile to the well-being of the lay population, as it is obstructive to the better purposes of judicious practitioners, the effort of more than one cheap semi-medical journal to secure a credulous public against the need of medical attendance by offering it such fruitless half knowledge as can be communicated through the popular press. It is, we assert, as we have already said in a former issue, impossible to treat the serious responsibilities of practice as if they were mere accessories to general education. Medicine is, probably without exception, the calling for which an accurate and lengthy professional training is absolutely indispensable in order to justify its practical application. It is not to be merely read up from a book or learned from popular lectures. It is no mere joinery or smith's work with tools and material—no matter of common shrewdness or business capacity such as the mind of any capable and industrious man may compass. It deals with structures the most delicate, highly organised, and sensitive, which the mind of the Creator has contrived, with tissues rendered interdependent and intersensitive by the most intricate anatomical and physiological relations. Above all, it takes in hand the great question of life and death, and assumes the high privilege of determining the course of disease. Is all this to be lightly committed to a body of unqualified laymen, simply on the ground that they can read and think? Yet this is the real issue of the late new departure in popular medical journalism. We would not at all fetter the free exercise of opinion in the matter, but would only ask that judgment may be allowed a voice in the minds of those who possess it. Meantime, we think we may congratulate the medical profession on the ground which has been taken up by the great majority of its members on this question. In particular, we feel that the action of the Royal College of Surgeons at its last meeting, when this matter was discussed, calls for universal commendation. On that occasion the decision of the College was shortly given in the following terms: "Resolved that, in the opinion of the Council of the Royal College of Surgeons, it is most objectionable that Fellows and Members of the College should allow their names to be advertised in connexion with medical or surgical subjects in popular journals." We, and at the same the public generally, are thus assured that, whatever misunderstanding has deceived some gentlemen connected with the College as to the practical result of the attempt to supply a popular version of the principles or practice of medicine, in whole or in part the representative members of their body have not been parties to the same error.

DR. KLEIN ON DISEASES OF MAN AND THE LOWER ANIMALS.

THERE was a large gathering of members and visitors at the Epidemiological Society on the 14th inst., to hear Dr. Klein's paper upon "Some of the Infectious Diseases common to Man and the Lower Animals." It was, as the President, Dr. Thorne, remarked, a masterly production, and although of unusual length, it was attentively followed by the meeting. The diseases described by Dr. Klein included cow-pox, foot-and-mouth disease, hydrophobia, glanders, diphtheria, actinomycosis, anthrax, tuberculosis, and scarlet fever, and specimens in illustration of the various microbes of these diseases and their cultures were exhibited. A few points in the paper can only now be alluded to. As to cow-pox, Dr. Klein mentioned the difficulties of its production

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by variolous inoculation of the cow, and explained these difficulties by the suggestion that if cow-pox be modified variola, then such artificial inoculation was not the right way to infect the animal, but that the virus should be introduced by the respiratory and digestive tracts. Similarly, foot-and-mouth disease, which is transmissible by contact, and indirectly through milk, is very difficult to inoculate artificially. As to hydrophobia, he pointed out that the conditions of Pasteur's prophylactic were not yet fully determined, that in animals subcutaneous inoculations were variable, and that a material factor in the way of obtaining definite results in man is the wide range of the incubative period, which may bear some relation to the intensity of the virus. The instances of transmission of diphtheria from animals were characterised as being very contradictory; but the bacteriology of glanders and actinomycosis was shown to be fully determined. As to anthrax, the dangers arising from the exposure of the bacilli to the air, when they give rise to the spores whose resistance is so marked a feature, were fully pointed out, and the precautions to be taken to prevent the spread of the disease from infected carcases were detailed. Dr. Klein also showed that when human beings are infected by the bacillus itself the result is a local disease—malignant pustule; but when by the spores, which gain entrance through the respiratory and digestive tracts, the result is mycosis intestinalis, or a general infection, such as is seen in woolsorters' disease. The differences between bovine and human tuberculosis were shown to rest not only in the distribution of the anatomical lesions, but in the size of the bacilli and their distribution in the tissues, as well as in the comparatively greater virulence of bovine tubercle as compared with human, on inoculation of rabbits and guinea-pigs. Such differences may, however, only be due to the difference in the environment of the bacillus; and although there was no direct evidence of the transmission of the disease by the consumption of flesh or milk of infected animals, he thought it safer to reject the use of such a food supply. Allusion was also made to fowl tuberculosis, and the practical reminder given that birds so infected were often well nourished, and therefore liable to be sent to the market. The tubercular nature of scrofula and lupus was held to be conclusively settled. Coming to scarlet fever, Dr. Klein briefly referred to the evidence which had led to the discovery of the micrococcus scarlatinæ in the Hendon cow disease, and said that, when all the evidence was known, critics would be not quite so positive as they had been. He dealt at some length with Dr. Thin's criticisms, which he did not think were based upon sound data; and, as stated elsewhere, declared that the characters of a cow disease now under investigation, which had been affirmed to be the same as the Hendon cow disease, differed from it in many essentials. He referred also to Dr. Edington's discovery of a bacillus, which he maintained could not be held to be proved until the microbe had been found in the circulating blood—e.g., in the heart — before the third day of the attack, and also in the cutis before desquamation. He knew of five different septic bacilli which resembled in their characters the Edinburgh bacillus, and yet had never detected the latter in any of his numerous investigations into scarlet fever. The etiology of this disease was extremely difficult, and no criticism or researches into it should be shunned; only it ought to be made without prejudice, and in a scientific spirit. Prof. Brown, in moving a vote of thanks to Dr. Klein, repudiated the notion that in their inquiries there was any antagonism between the two Governmental departments, and instanced how on this, as on many occasions, each department had sought and received the aid of the other. Professor Axe seconded the vote, which was carried by acclamation. The debate was then adjourned on the motion of Sir J. Fayrer, seconded by Dr. Buchanan, and it was announced that it would be opened at the next meeting by Professor Brown.

THE LATE SIR GEORGE BURROWS.

SIR GEORGE BURROWS, M.D., F.R.S., Hon. Fellow of Caius College, Cambridge, Physician in Ordinary to Her Majesty the Queen, and Consulting Physician to St. Bartholomew's Hospital, died at an early hour on the 12th inst., in his eighty-seventh year. Sir George, after receiving his early education at Ealing, attended for two years the lectures of John Abernethy at St. Bartholomew's Hospital, and at the end of that time proceeded to Caius College, Cambridge, where he obtained a Tancred Medical Studentship and graduated as tenth wrangler in the Mathematical Tripos of 1825. He was elected a Fellow of his College, and Junior Mathematical Lecturer. He afterwards returned to St. Bartholomew's, and having qualified, studied his profession for some time at the University of Pavia, in Paris, and in Germany. During his stay in Italy he had abundant opportunities for watching the epidemic of Asiatic cholera, then freshly imported into Europe; and upon its making its appearance in London in the year 1832, he was placed in charge of the auxiliary hospital established by the governors of St. Bartholomew's to meet the exigencies of the outbreak. This was his first official connexion with the institution. A little later, in 1834, he was appointed the first assistant physician, to take charge of out-patients, and was associated with Dr. P. M. Latham as joint lecturer on the Science and Practice of Medicine. In 1841, upon Dr. Latham's enforced withdrawal from ill-health, he became sole lecturer, and was promoted to the full physiciancy, an office which he held till 1863, when he retired from the acting staff and was elected the first honorary consulting physician. At the Royal College of Physicians he was nominated for all the principal lectureships, and filled in turn the offices of member of Council, Censor, College representative on the General Medical Council, and, finally, with the unanimous voice of the Fellows, President of the College. During his tenure of office as President — namely, in 1874 — he was made a baronet. Having been appointed Physician Extraordinary to Her Majesty the Queen in 1870, he became Physician in Ordinary in 1873, on the death of Sir H. Holland. He was a member of the Senate of the University of London, and President of the General Medical Council, and of the Royal Medico-Chirurgical Society, and of the British Medical Association.

TYPHOID FEVER IN FRENCH AND ENGLISH TOWNS.

BEYOND a general impression that typhoid fever is very generally prevalent in France, no official statistics showing the actual mortality from this disease in different parts of that country were, till quite recently, available. The monthly bulletin, "Statistique Sanitaire des Villes de France," which is now issued by the Public Health Bureau of the Department of Commerce and Industry, gives precise information of the monthly mortality from this disease in each of the fifty-one French towns having a population of 30,000 persons or upwards. It will be interesting to compare the mortality from typhoid fever in these French towns with that recorded in the twenty-eight large English towns dealt with in the Registrar-General's Weekly Return. During the three months of July, August, and September last, the deaths from typhoid fever in the fifty-one French towns above mentioned were reported to be 1342, and equal to an annual rate of 0·86 per 1000 of their population. Now, in the twenty-eight large English towns the death-rate during the same period from "fever" (including besides typhoid fever, typhus, and ill-defined forms of fever) did not exceed 0·23 per 1000 of the estimated population, the highest

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rates in the several towns being 0·41 in Birkenhead, 0·50 in Salford, 0·63 in Preston, and 0·64 in Portsmouth. Let us now consider, in greater detail, the death-rates from this disease in the French towns. The rates in the four largest towns were 0·58 in Paris (against 0·17 in London), 0·46 in Lyons, 2·31 in Marseilles, and 0·60 in Bordeaux; the mean rate in these four towns was 0·76, against 0·86 in the whole of the fifty-one towns, showing that the mortality from this disease was not so high in the four largest as it was in the other large French towns. If we calculate and compare the rates from typhoid fever in these smaller towns, we find some remarkably high rates. In Havre, with a stated population of 111,277, the deaths from typhoid fever were 39 in July, 108 in August, and 110 in September, or 257 in the third quarter of this year; this gives an annual rate of 9·24 per 1000 of the population. The annual rate during these three months was 1·62 in Rouen, 2·24 in Montpellier, 2·79 in Angoulême, and 2·27 in Avignon. Judged by this sensitive standard—the death-rate from typhoid fever—it is evident that the sanitary condition of a large number of the French towns, other than the largest towns, is eminently unsatisfactory. There is, however, every reason to hope that the publication of this monthly health-bulletin will serve to stimulate public interest in France in health matters, which would inevitably lead to sanitary progress, now so much needed.

THE TIME IT TAKES TO THINK.

MEN in all ages have been familiar with the fact that thought is habitually more active and more speedy in the case of some persons than of others. Whether in the exercise of the imaginative or the reasoning faculty, or in the action of that guiding purpose of life which we call the will, the general truth of this observation has been always evident. As we come to a higher stage in human development, with its corresponding increase of intelligence, it is not remarkable that the mind should seek to subject itself to a closer scrutiny, and to catalogue more exactly the results of its introspection. This has happened with regard to the question before us. In particular has the period which intervenes between the impact of impressions from without and the visible response of the will in muscular action or other mode of expression become of late years a subject of careful investigation. Since the first quarter of the present century, when the comparative speed of visual observation was chronicled in the case of the astronomers Bessel and Struve, the varying rate at which the mind responds to the numerous impulses which reach it from the outer world has been measured with some exactitude. Most of our readers are familiar with the term "reaction" period. They will recognise it as expressive of the whole interval between the action of a stimulus, of whatever kind, and the visible response of the individual affected by it. They will also perceive in the period of "reduced reaction" that interval shortened by the space of time allotted by experimental precision to the transit of purely sensory and motor impulses — the period, namely, which changes the one into the other, and represents in the mind the average time required to think and to will. Discoveries not now very recent have taught us that the ordinary duration of this period is, in the case of simple impressions, about one-tenth of a second, and that where the impression is rendered complex by affording the mind a choice of sources to which it may be referred, the time required is increased by about another tenth of a second. An equally interesting side of the subject, however, is that which exhibits the force of impressions as modifying the rapidity with which they are accepted and, in familiar phrase, digested by the mental centres before they are visibly transformed into action. The rapidly energising power of sudden fear, joy, hope, and desire is thus explained. So likewise the contrary effect of some of these emotions may be explained as being due to a stunning effect produced by the causes which give rise to them upon the mental centres. It is also manifest that the energy of the mental reaction must largely depend upon the reserve of force in those centres at the time of activity. They must not be overtaxed by prior stimulation and excessive use; if their response is to be a vigorous one, they must be well nourished and have seasonable rest. There is therefore, even in these psychological minutiæ, a moral for the times—namely, that if we would preserve our mental efficiency amid the changing pressure of circumstances, we must by occasional recreation withdraw the mind from too continuous application.

SMALL-POX AT LEICESTER.

SINCE last week another of the persons reported as being placed in quarantine has developed a mild attack of small-pox, making the seventh member of the family who has contracted the disease. With the exception of the youngest, all were vaccinated, and all these six have had an attack of the mildest description. One other case has occurred in the town, this being a young man who had visited the infected house, and as he was one of those who had been under daily observation he was removed to hospital upon the earliest appearance of the disease. This patient had been vaccinated, and the attack is a very mild one. On Saturday, Dec. 10th, another case was discovered just outside the limits of the borough, and this patient was promptly removed to the small-pox hospital, and his wife and four children placed in quarantine wards. This man appears to have contracted the disease at Sheffield. On the 14th yet another case, a man, was discovered in the same district of the borough as that in which the former cases occurred, though the connexion between these several attacks has not been traced. Ten cases are now in hospital. Owing to the almost entire absence of infantile vaccination in the town, some little difficulty was experienced in promptly obtaining vaccine lymph for the revaccination of those whom it was deemed advisable to revaccinate.

ACUTE THYROIDITIS.

THE thyroid gland may be the seat of an acute inflammatory enlargement running a definite course without suppuration and terminating in perfect recovery. In these clinical characters we find a resemblance to ordinary mumps. Dr. Barlow read a paper on "Acute Enlargement of the Thyroid Gland" at the last meeting of the Clinical Society, and he related the case of a little boy, aged three, in whose thyroid gland an attack of inflammation occurred, which lasted altogether about a fortnight. The child had just previously suffered from erythema nodosum on the legs, and it was whilst recovering from this affection, and after having been out in the park, that the thyroid enlargement commenced in association with a nasal catarrh, of which the chief symptom was a discharge of thin glairy mucus. Reviewing the literature of the subject, Dr. Barlow arrived at the conclusion that his case must be regarded as coming under the "idiopathic" class of Lucæ, and although there had been erythema nodosum, still the absence of arthritis and heart disease or other genuine rheumatic manifestations formed a warranty for not considering the case as of true rheumatic nature. Some observers, chiefly abroad, have noted a rheumatic swelling of the thyroid having a definite relationship with well-founded rheumatism; and Dr. Angel Money quoted a case of this character from his own experience. Mr. James Berry narrated many interesting particulars concerning acute enlargement of the thyroid gland; and some of these having a fatal ending might tally with cases like the one narrated

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by Dr. Barlow, in which the enlargement at one time had a threatening aspect. Nevertheless, the definite cycle run by cases of rheumatic and idiopathic descriptions must, we think, be held to differentiate them from ordinary goitre, in which the mode of commencement may be acute, but the course always chronic, and showing recurrent tendencies. The perusal of Dr. Barlow's paper will raise the reflection that the causation of acute thyroid enlargement is as imperfectly known as it is seemingly various.

CONSTRUCTION OF THEATRES.

IT is a hopeful sign that the Royal Institute of British Architects has devoted an evening to the discussion of the important subject of the construction of theatres. The construction of theatres must be similar in principle to that of all buildings devoted to large public gatherings, and, as the right of public meeting is just now much exercised by the British public, the proper construction of the rooms in which these meetings are held is of paramount importance from the treble point of view of convenience, health, and safety. Mr. Ralph Nevill, who furnished the paper upon which the subsequent discussion was based, seems to have given much thought to his subject, and many of the points upon which he touched were treated with marked ability. As far as the question of convenience is concerned, Mr. Nevill rightly insisted that the triangular form, with the stage at the apex, was best, as affording an uninterrupted view to each member of the audience. The little matter of placing the seats in the stalls alternately, so that the persons in the back row can see between those in the row in front, is from the point of view of comfort most important. The remarks as to the dangers of long straight staircases were certainly true, and it should be the aim of architects to lessen the length of staircase as much as possible. It is probable that in case of panic from fire there is less danger in ascending an easy gradient than in descending. The importance of this point is very great, but we do not notice that Mr. Nevill touched upon it in the course of his paper. We are glad to see that Mr. Nevill recognises the fact that, although the electric light does not foul the air of the theatre to the same extent as gas, it does not assist in the ventilation as the latter illuminant can be made to do. The admission of fresh air and the outlet of foul air, are, after all, the most important points in the construction of theatres, and we are convinced that the draughts, which are the chief characteristic of the modern theatre, are certainly due to the fact that architects do not attack this point with sufficient courage, and the air not being admitted in sufficient quantity in the right places, it must rush through the wrong ones and thus cause draughts.

WHAT CONSTITUTES COMPETITION AFTER THE SALE OF A PRACTICE?

MR. JUSTICE CHITTY has just delivered judgment in a case of dispute between the buyer and seller of a practice concerning the subsequent attendance of patients within the prescribed area by the vendor, who, notwithstanding that the agreement which he signed contained a clause providing that he should not "in any manner whatsoever, directly or indirectly, enter into competition with" the purchaser, thought that so long as he did not solicit practice he had still a right to attend any of his old patients who might desire it. In support of this view, it was stated that these patients preferred him to the purchaser, and that, indeed, they would not have sent for the latter, who was the plaintiff in the action, under any circumstances, so that he really lost nothing, and the defendant, the vendor, had not entered into competition with him. To this the judge very properly remarked that, though these patients might have preferred the defendant to the plaintiff, it was impossible for anyone to say that under no conceivable circumstances would he send for a particular medical man, also that the competition, if not active and direct, was indirect, and was thus of a kind which was definitely excluded by the covenant contained in the agreement. This view was strengthened by the existence of a peculiar clause in the agreement, by which the vendor was entitled to retain certain patients whose names were specially marked in a list, and consequently by inference he was prohibited from retaining any others. Judgment with costs was given for the plaintiff—i.e., the purchaser,—and an injunction issued to restrain the vendor from infringing any more upon his rights.

MENTAL AFFECTIONS AND AURAL DISEASE.

SUFFERERS from noises in the ears are sometimes greatly distressed by the tinnitus, and cases of suicide have been ascribed to sheer desperation resulting from an inability to get relief from the everlasting noise. Ménière's disease and some cases of epilepsy are attributed to disease in the ear setting up changes in the central nervous system. The question is still unanswered whether actual mental disease, mania or melancholy, may not be produced by aural disease, apart from any annoyance due to tinnitus or deafness. Coarse diseases, such as otorrhœa, suppuration in the mastoid cells, perforations of the drum, polypi, waxy concretions and foreign bodies, are easy of recognition and can be appropriately treated generally by simple surgical methods. But nervous affections due to irradiation from the obscure aural mischief are not always so open to treatment, because the changes in the ear are more subtle, but none the less real. Sometimes an obstruction of the Eustachian tube may be the chief cause of tinnitus, owing to unpoised atmospheric pressure leading to excitation of the labyrinth and acoustic nerve by actual compression. M. Boucheron believes that, besides vertigo, epilepsy, and other nerve troubles, mental disease may be originated, and simple inflation of the middle ear has been followed by a cure.

"ARSENIC CANCER."

As the mind is naturally caught by the curious and by the threatening, so we cannot avoid alluding to the subject which Mr. Jonathan Hutchinson raised at the last meeting of the Pathological Society. We fear, however, that at present further light is required before our knowledge can be considered satisfactory. Many amongst us having a strong belief in the efficacy of arsenic know well its power to produce disease; but, judged from the discussion at the Pathological Society, some do not appreciate the influence of arsenic on the skin. The skin *par excellence* is the tissue on which arsenic has perhaps its most marked influence; besides improving, it may spoil the complexion, rendering it muddy and unsightly. This latter action is also manifested in all parts of the skin, and may lead to the development of soft corns, not warts, in the palms of the hand and soles of the feet, where a roughened condition also grows up under the influence of this most potent drug. So far Mr. Jonathan Hutchinson goes with safe step on sure ground, but the next move onwards towards the belief that arsenic can produce epithelial cancer is less secure. It cannot be said outright that arsenic may be the chief cause of epithelial cancer, but we think the position almost impregnable if it be maintained, as, indeed, Sir James Paget and Mr. Hutchinson strongly held, that arsenic may prove one of the causes of epithelial cancer in certain constitutions. Nevertheless, arsenic will not fall into disrepute, for

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at the worst it is only when continued for many years in very full doses that the drug is alleged to have so deleterious an action. Such a revelation, if it ever comes, will only make medical practitioners more careful in prescribing arsenic.

FEVER IN LONDON.

SCARLET FEVER is continuing to decrease in London, and the Metropolitan Asylums Board's hospitals are relieved of the pressure of the last few weeks. The Board may therefore look forward to a period of comparative rest during the early months of next year, unless circumstances should show the necessity for them to provide for some other malady than that which has recently taxed their resources. Expressions of approval have been during the last week bestowed by the press upon the Managers for the energy they have shown in extending their accommodation in proportion to the demands made upon it, and it must be admitted that these encomiums have been well deserved. Londoners have chosen to treat cases of scarlet fever in hospital, and the only Board which could undertake this duty has freely exercised its powers to meet their requirements. At the same time, the London Fever Hospital, which is largely dependent upon the support of a charitable public, has been supplementing the work of the Metropolitan Asylums Board by providing for patients of a somewhat higher social grade than those which usually seek admission into the hospitals of the Managers. Small-pox shows a tendency to obtain a footing in the eastern districts of London, and during last week one person suffering from this disease was removed to hospital from Bethnal-green, and two from Poplar. The amount of prevalence of enteric fever remains much the same, fifteen cases having been removed during the week. Typhus has again appeared, a lad aged sixteen developing this disease in the district of Limehouse. Hitherto the character of the weather has not favoured the production of typhus, and it may be hoped that the comparative absence of the disease from London up to the present time augurs that the winter will pass without any special prevalence.

THE FATALITY OF TIGHT-LACING.

IN our issue of June 25th we drew attention to the abuse of tight-lacing, which possesses for many wearers of the corset such a fatal attraction. Shortly before that date an inquest held upon the body of an elderly female revealed the fact that death had resulted from this practice. Only a few days ago a nearly similar instance was recorded. In this case, a young lady who suffered from fatty infiltration of the heart died suddenly while dressing hastily after a hearty meal. Here also tight-lacing played a prominent part in determining the fatal result. We had hoped that sensible reflection upon the bad effects of this injurious custom, as illustrated in the history of a former generation, might have impressed upon the would-be fashionable the obvious teaching of experience. The cases just quoted, however, are probably but a representative minimum of a larger number which do not come before the coroner's court, and the evil they exemplify, though certainly less general than of yore, still continues to act as a potent cause of ill-health. It is hardly necessary to repeat at length the causes which render this abuse of the corset so effectively mischievous. Pathologists have a clear perception of all that is implied in its doubtfully graceful discomfort. The displacement of almost all the organs in the chest and abdomen, the compression of several of these upon the heart and great vessels, and the restriction of breathing space which is thus entailed, have in their eyes no beauty, but the sad aspect of feebleness wilfully acquired, with the promise of a lifetime as brief as it is practically useless.

HEREDITY AND NURTURE.

IN his third and concluding lecture at South Kensington, Mr. Galton dealt with the influences of various kinds of nurture, training, and occupation on the average vigour, longevity, and disposition of large classes of persons. He considered that the surroundings influence future generations rather than the present. With a diagram he indicated the relative proportions of early and late marriages in Germany, England, and European Russia, showing the enormous preponderance of late marriages in the first, and of early marriages in the last; considering that, when other things are equal, early marriages are followed by large families, he led up to the amusing conclusion that the "output" of Russian babies reached a thousand a day. From Dr. Ogle's report upon the death-rates of varying ranks, he illustrated his remark that the quality of stock varies with the status of the parents. He then proceeded to the unforeseen and wide consequences of apparently small reforms, instancing the smallness of families in France since the law regulating the equal division of property. In strong terms he then dealt with the prevailing want of statistical imagination and our consequent carelessness as to undoubted social duties, considering that the marriages of phthisical persons should be prevented by public opinion, if not by more stringent measures. He thought that obvious sanitary neglect should be treated as manslaughter, and that legal restraint should check the pursuit of any line of conduct whose average ill effect has been ascertained. In approving terms he referred to the establishment of professorships of physical culture at Amherst and Harvard Colleges in America, and quoted from a correspondent at Wellington the opinion that the "cultivation of man as a whole, and not only in part," should be encouraged by the bestowal of degrees. In New Zealand it would appear that a prize has already been awarded to the "best-made man." Of the value of gymnasia in the hands of medical men rather than of professional athletes, and of the importance of more rigid school hygiene, he also spoke enthusiastically. In conclusion, he gave a brief retrospect indicating his belief in the theoretical possibility of raising the standard of the race by a study of the influences that tend to *eugenism*, a word implying goodness in birth and in rearing.

THE CASE OF LINNELL.

THE death of Linnell, which took place at Charing-cross Hospital, was the result of pyæmia, consequent on a compound fracture of the femur into the knee joint. The injury was sustained during the Trafalgar-square demonstration of Nov. 20th. The coroner's jury found "that there was nothing to show how the fracture was caused," and considering the conflict of testimony given at the Court, this portion of their verdict commends itself to one's approval. Several witnesses deposed that the deceased never varied his statement that the injury was caused by a fall, whilst others asserted that he attributed it to a furious charge of the mounted police. As regards the discrepancies in the medical evidence, we must note that the post-mortem examinations were made at different dates, and, considering the changes likely to occur in tissues affected by injury and disease, the various statements may be reconciled. That a compound fracture of the femur, in which the soft tissues must have been extensively lacerated, should be accompanied by the appearances of bruising is only natural, and we hold that it might be extremely difficult to determine the ultimate cause of the bruises. There was certainly nothing in the medical evidence to convince us that the bruises were produced by the kick of a horse, although a fracture of the femur implicating the knee joint was more likely to have been caused by direct than by indirect

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violence. The coroner exercised a wise discretion when he decided to close the inquest with the evidence before him, for it is not likely that further medical investigation would have thrown additional light on the case.

SMALL-POX IN THE PROVINCES.

WE are now approaching the period when, in the ordinary course of events, an epidemic prevalence of small-pox may be expected. In most of our former outbreaks the provinces have suffered subsequently to the metropolis, but this winter a number of small-pox centres have been established in various parts of the country. The epidemic in Sheffield has acquired very serious proportions, and it has become diffused in many instances around the borough. The guardians of adjoining unions have, however, established special conveniences for vaccination, and it is to be hoped that these may aid in staying further diffusion of the disease. In November 180 fresh cases were admitted into the Winter-street Hospital, and the Corporation are complaining that the Local Government Board do not, with sufficient promptitude, aid them in establishing a separate temporary small-pox hospital in a more isolated position. Loans for such purposes cannot be obtained except after a certain statutory interval for notices and a public inquiry, and even if there has been no other or unnecessary delay, this alone must prevent hospitals erected in an emergency from being ready for an existing epidemic. The fact is, that to all having recent information as to the behaviour of urban small-pox hospitals it has been obvious that the borough infectious hospital in Sheffield was a wrong place for the aggregation of small-pox, and it is a pity that this fact was not faced before the present urgency arose. Apart from Sheffield, suspicious occurrences of small-pox have taken place in many parts of the provinces, the South Yorkshire colliery districts being specially implicated. But in the neighbourhood of Bristol a substantial and serious epidemic is in progress. Barton-Regis seems to have been first affected, and the authorities unfortunately attempted to deal with it by means of the very imperfect arrangements existing at the workhouse, the result being a most unfortunate spread amongst the unhappy inmates of the union house Then the authorities took in cases from Bedminster, which made matters worse; and at the present moment they appear to be at their wits' ends to know what to do. We trust the true lesson may be learnt—namely, that accommodation for small-pox amongst all classes must be of a special character, unless sanitary authorities want to diffuse the disease by aggregation of the sick. So far, 105 known cases have occurred within the city and county of Bristol, and the Corporation are doing what they can, by isolation and otherwise, to grapple with the disease.

ALLEGED CASE OF DIPHTHERIA IN A DISSECTING ROOM.

SOME little excitement has been caused in Lyons by the death of a medical student from diphtheria, which, according to the newspapers, he contracted from a subject he had been engaged in dissecting. To this assertion the dean of the Faculty wrote a distinct denial, stating that the bodies of patients dead of diphtheria are never sent to the dissecting room. This, however, did not satisfy everybody, for a rejoinder appeared, signed "A group of *externes*," declaring that the child whose body had been dissected had died of croup. According to *La Province Médicale* the cause of death was meningitis. Though the practitioner who sent the case to the hospital had diagnosed it as one of diphtheria, the house physician had been unable to find any evidence of diphtheria, and the little patient died the same night that it was admitted. Even if the child had had diphtheria, *La Province Médicale* thinks it is extremely doubtful whether the theory of infection could be maintained, for it is not by any means certain that dead diphtheritic membrane can convey infection, especially after the lapse of eight or nine days, which was the period that had intervened between death and dissection. In addition to this, the unfortunate student had not touched the thorax or throat, having been engaged merely with the brain.

THE HOT-AIR BATH IN THE TREATMENT OF ANTHRAX.

IN the course of a prolonged coroner's inquiry into a fatal case of woolsorters' disease, which occurred recently at Bradford, Dr. Bell, who had charge of the patient, stated that he had him removed to the infirmary in order that the treatment by hot-air baths might be satisfactorily carried out. This line of treatment is based on the fact that the bacilli anthracis are destroyed at a high temperature. Dr. Bell stated, in reply to questions by the coroner, that if a case were sufficiently early treated by hot-air baths there would be good hope of recovery; indeed, in the case in question he was unable to cultivate the bacilli found in the blood, and concluded that they had been killed. With respect to this point, it has been shown by Davaine and others that the development and spore-producing power of the bacillus anthracis is hindered at a lower temperature than will actually kill the adult microbe. Davaine found that non-diluted anthrax blood required subjection to a temperature of 51° C. (123·8 F.) for a quarter of an hour before it lost its virulence; but Dr. Bell's statements indicate that a much lower temperature will suffice—viz., 107° or 108° F.

NURSES.

NURSES have good reason to believe that their calling and their class are looking up. There is perhaps a little fear of their being too much "nursed," and we are not surprised to see indications that they are conscious of this risk, and showing a desire to be a little more independent. There certainly is now a large number of women with sound knowledge of nursing work and of what is wanted to place the workers in a sound and satisfactory position before the public; and it would seem well that, if nurses are to be educated and organised, they should debate the question of their own education and organisation with as little interference as possible. We presume it is with some such views that a number of ladies met on Wednesday, Dec. 7th, on the invitation of Mrs. Bedford Fenwick, late matron at St. Bartholomew's Hospital, to discuss the advisability of forming an association for the mutual help of all women engaged in nursing the sick and for the advancement generally of their professional usefulness, both to medical men and the public. The representative nature of this movement may be gathered from the list we publish in another column of ladies who have consented to act on an executive committee of a British Nurses' Association, which it was resolved to form. It is premature to express a definite opinion on the views of the matrons and others assembled at the residence of Mrs. Bedford Fenwick, but they may confidently rely on the support of the profession in any well-conceived plan for raising the education and status of nurses. Nobody can be satisfied with the existing state of things. Many of the present nurses, though immensely more efficient than their predecessors, are still inadequately trained, and show strange limitations of knowledge and education even in their peculiar work. The public are ready to pay, and are actually paying, considerable sums for professional nurses, and it is only fair that nurses should be able to provide guarantees of efficiency. A short time ago we commented on the importance

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attached to nursing in American cities. In almost all of these a register of nurses is kept, and in most cases a two years' hospital training is required as a condition of admission to the register. There is an extensive feeling that some such system of registration must be established here. At the meeting of ladies on the 7th inst. a feeling was expressed that the training must be real, and must be more prolonged than in many of our nurse-training institutions. The object of these ladies, indeed, is to command the respect of the medical profession, and through it of the public. There is reason to believe that they have already secured the support of many leaders in the profession. It is probable, however, that both the question of nurses and of midwives will soon have to be considered by the Legislature, and that some authoritative medical body must have legal power to deal with them in the public interest. We hail the meeting referred to above as a sign that we shall soon have an organised system for the education and certification of nurses.

BACTERIOLOGY OF SMALL-POX.

PROFESSOR J. HLAVA describes in the *Sbornik Lekarsky*, a Bohemian medical journal, the results of some microscopical and bacteriological researches he has lately made on the contents of variolous pustules and the blood and viscera of small-pox patients. In four out of five cases streptococcus pyogenes was found in the blood and viscera. In the skin and in the pustular contents there were found, in addition, staphylococcus albus, saccharomyces (Proteus Zenkeri), and staphylococcus citreus cereus. The identity of the micro-organisms found with pyogenic microbes was demonstrated experimentally, but none of them produced small-pox. Professor Hlava believes that the variolous poison produces characteristic changes in the epithelium of the skin, and that in consequence of these pyogenic cocci invade the dermis, being carried thither by the circulation, which they enter through abrasions of the surface of the pharynx and larynx, which, he says, are invariably to be met with in small-pox patients. Thus variola would appear to be, in the majority of cases, a disease due to a mixture of infections, variolous and pyogenic, the latter class of infection entering the body subsequently to the former.

COMPENSATION FOR DEFECTIVE DRAINAGE.

DAMAGES for injury brought about by defective sanitary states of dwellings are by no means common, and for this reason alone it is worth recording that towards the close of last month £100 were awarded as compensation to a gentleman who had lost his daughter by reason of the defective drainage of the house he occupied. We are not aware of the particular circumstances of this case, but as a general principle we think that the responsibilities of landlords who seek to make gain by letting houses which are, in point of health, unfit for human habitation need to be strongly pressed home; and every such case as the above aids in this direction.

STRANGE INCIDENT AT CORDOVA.

LAST week Dr. Middleton of Scarborough, who was on his way to Tangier, halted with his companions at Cordova. Leaving his fellow travellers at the hotel, Dr. Middleton, accompanied as a guide by a gipsy, visited the cathedral, than which there are few more attractive buildings in the world, for when Cordova was the capital of the Moorish realm in Spain it was the great mosque of the city. He had begun to descend the narrow winding staircase of the tower, followed by the gipsy, when suddenly the latter attacked him from behind, nearly strangling him with one arm, while with the other hand he took two dollars from his intended victim's pocket, and wrenched his walking stick away. Dr. Middleton then drew his revolver and fired two shots over his shoulder, one of which entered the gipsy's mouth, the other taking a downward course through his body. The shots were fatal, and, covered with blood, Dr. Middleton descended and gave notice of the occurrence to the police, who, on their arrival at the scene of the tragedy, found the dead thief still holding in his hand the stick and the dollars. Dr. Middleton was arrested, but has since been released on bail. The gipsy had, it appears, the worst of reputations, and a most significant fact is that he was companion two years ago to an Englishman visiting the cathedral tower, who was found dead at its foot. The case was then supposed to be one of suicide, but, looked at in the light of Dr. Middleton's experience, it is now viewed differently.

THE PORT OF LONDON.

DR. COLLINGRIDGE reports favourably on the health of the port of London during the first half of this year, and although cholera has been again prevalent on the Continent, no cases were found amongst the shipping. He is evidently profoundly discontented with the action which is being taken by the Metropolitan Board of Works professedly to deal with the nuisance arising from the filth-laden river, and he declares that any so-called deodorisation of the sewage must be useless in the absence of precipitation. Referring to the isolation of the infectious sick, he rightly regards it as an anomaly that the Public Health Act should enforce removal to hospital for preventing the spread of disease to others, and yet make it permissible to charge the patient for the cost of his maintenance in hospital. Hence he advocates the abolition of all such payments, whether from the sick or the masters of vessels.

DONDERS MEMORIAL FUND.

AT the last meeting of the Ophthalmological Society a report was read from the Council recommending the appointment of a committee of its members to act in agreement with delegates of other scientific societies in establishing a "Donders Memorial Fund" in this country. The object of this fund is to assist in commemorating in some way the name of Professor Donders, who has done so much for biological science and ophthalmology; and the occasion chosen is his necessary resignation of his chair in the Utrecht University on attaining his seventieth birthday. The committee appointed by the Society consists of Mr. J. W. Hulke (president), Dr. W. M. Ord (treasurer), Messrs. Seymour G. Sharkey and R. Marcus Gunn (secretaries), Messrs. Jonathan Hutchinson, Henry Power, and W. A. Brailey, with power to add to their number.

TYPHOID FEVER IN YORK.

THE city of York has now for some time past had a certain notoriety in connexion with an excess of typhoid fever, and according to Mr. North, the medical officer of health, there were during the third quarter of this year just twice the number of attacks that prevailed during the corresponding period of last year. It is now long since Sir John Simon wrote on typhoid fever as the typical filth disease, and this recurring excess of the disease in York is unquestionably associated with an excess of filth about the houses of the Yorkshire city. Indeed, referring to both typhoid fever and diarrhœa, Mr. North plainly tells his sanitary authority that they must choose between the abolition of foul middens, privies, and filth receptacles on the one hand, and the infliction of periodic attacks of these diseases on the other. It is to be hoped that the York public will themselves so far appreciate the importance of the subject as to place on

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their Town Council those who object to the retention of antiquated methods of fouling the air about houses, and who will do all they can to maintain a higher standard of health among the community whom they represent. In the meantime a committee has been formed to ascertain the results of action already taken in other large towns to remedy similar evils.

PORTRAIT OF SIR WILLIAM JENNER, BART., K.C.B.

WE are enabled to state that the sum already subscribed will more than meet the expense of the portrait and the two replicas, one of which is to be presented to the Royal College of Physicians, and the other to University College, to which Sir William Jenner was for many years physician. The committee purpose to keep open the subscription list a short time longer, and should the surplus at their disposal prove sufficient, it is their intention to have the portrait engraved and to present a copy of the engraving to each subscriber The treasurers are Charles J. Hare, M.D., 15, Manchester-square, and George Pollock, Esq., 36, Grosvenor-street.

ALEXANDER'S OPERATION IN BELGIUM.

DR. THIRIAR of Brussels, in a note in *La Clinique*, records the case of a lady who, having prolapsus uteri, and being unable to wear pessaries, as they always occasioned a good deal of suffering, willingly accepted the proposal of Alexander's operation of shortening the round ligaments. This was accomplished without serious difficulty, rigorous antiseptic precautions being taken; but Dr. Thiriar, finding the resistance to traction considerable, thought it wise to limit the shortening to about five centimetres, though Alexander mentions ten to twelve centimetres as being the amount to be aimed at. The patient made an excellent recovery, being catheterised regularly at first, and being kept strictly in a recumbent posture for three weeks. Dr. Thiriar mentions that this operation was first proposed and practised on the cadaver by a Belgian surgeon, Professor Deneffe of Ghent, in 1864, who made one abortive attempt to perform it on the living subject. It was not till 1881 that Dr. Alexander proved its feasibility.

THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

THE Town Council of Wigan are seeking powers from the Local Government Board to borrow money for the purpose of building a new infectious disease hospital, or, as some of the members of the sanitary committee are pleased to call it, a "sanatorium." At the same time, in the same provisional order, they seek powers "to alter and amend the Wigan Improvement Acts of 1874 and 1880, enabling the corporation to make bye-laws compelling the notification of infectious disease within the borough, or otherwise enforcing such notification." This clause caused some discussion in the council chamber last week, because it was felt by some members to be "interfering with the liberty of the subject," and by others that it should not be rushed through without ample discussion by the ratepayers, and that also information should be sought from other towns as to the working of compulsory clauses. It was, however, decided, by fourteen votes to ten, that the corporation should go on with the provisional order as it originally stood, the mayor making an eloquent speech in favour of the same, pointing out that the death-rate of the town was conspicuously high, and that other towns in which compulsory notification was in force had stamped out, or nearly so, infectious disease. How this will be done in Wigan, provided the authorities get these powers, is difficult to say, for at the present time they have no hospital with anything like adequate accommodation, and it will take at least twelve months before one can be built and equipped, for a site for the same has not been found or finally fixed upon. The last time that Wigan sought these powers the opposition was so strong that the Bill had to be abandoned. If Wigan is to obtain such powers, which no doubt are beneficial for curtailing epidemics of infectious diseases, the town should at once equip a proper hospital for means of isolation, and should also throw the onus of notification on to the householder.

THE HEALTH OF THE CROWN PRINCE.

OWING to an unfavourable change having, we regret to learn, taken place in the laryngeal symptoms of his Imperial Highness the Crown Prince of Germany, Sir Morell Mackenzie has been summoned to San Remo. He left London on Wednesday morning, and would arrive at his destination on Thursday night.

CHRONIC GLANDERS SIMULATING SYPHILIS.

DR. SAKOTSKI, writing in the *Meditsinskoe Obozrênie*, describes the case of a young soldier who suffered from ulceration of the palate, which extended into the nasal cavity, and destroyed the inferior turbinated bones. This was followed by a tumour of the eyebrow, by pains in the knee and ankle, suppuration of the left ear, and a metastatic abscess on the back of the right hand. There was at times some evening pyrexia. The case was looked upon as probably syphilitic for about two years. Then nodules and œdema began to appear on the face, and it was believed that it was glanders. After death, which was due to exhaustion, Dr. Vigandt made a microscopical examination of sections of the nodules, and also examined the ichor of the ulcerated surfaces, finding bacteria resembling those described by Löffler and Schutz, but he was unable to prove them to be the true cause of glanders.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Max Michael Eulenburg, founder of the well-known Orthopedo-gymnastic Institute in Berlin, at the age of seventy-six.—Professor Arthur Christiani, of the Physiological Institute of Berlin, a great authority on the physiological action of electricity, on the physiology of the nervous system, and on that of the sense of hearing.—Dr. K. Langer, Professor of Anatomy in Vienna.—Dr. Joh. Alexander Chrastina, dean of the Doctoren-Collegium of the Medical Faculty of Vienna.—M. Rambaud, assistant Professor of Clinical Medicine in the Faculty of Lyons.—August Stromeyer, one of the oldest German chemists of eminence, in the eighty-first year of his age.—Dr. Carl Passavant, the African traveller at Honolulu, at the age of thirty-three.—M. le Dr. Giraudet, Professor of Anatomy in Tours.—Dr. A. de Almeida of Oporto.

THE WOMEN'S JUBILEE FUND AND NURSES.

THE public will anxiously await the decision of the Committee appointed by Her Majesty for working out a scheme for improving the condition of nurses labouring among the sick poor. The scheme is being matured by the Duke of Westminster, Sir James Paget, and Sir Rutherford Alcock. Nursing the poor is a branch of work of the very highest importance, and is largely done by ladies, who sometimes of their own limited means subscribe generously to the maintenance of the Associations in connexion with which they work. The vital points to be ensured are that the money shall be so placed as to command the confidence of the public and benefit the sick poor, as well as those who nurse them in their straitened homes under every disadvantage.

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FOREIGN UNIVERSITY INTELLIGENCE.

Kazan.—Dr. V. Razumovski, *privat-docent*, has been promoted to the Professorship of Operative Surgery.

Lyons.—The professors of the four Faculties have arranged to issue a quarterly volume of Proceedings. In this way it is hoped that the claim of Lyons to possess a complete and autonomous university may be kept before the public, and that the authorities in Paris, whose regulations are looked upon as rather clogging the wheels of the provincial Faculties, may be induced to concede to some extent the principle of decentralisation. The special point of trouble at present is connected with the "modified Bachelor of Science" examination, which all medical students are compelled to pass.

Marburg.—The Professorship of Surgery which will become vacant at the end of the current winter session is likely to be offered to Professor Braun of Jena.

SIR JOHN PULESTON, M.P., presiding on the 13th inst. at the annual meeting of the Royal Albert Hospital, Devonport, said he regretted the action of Parliament in repealing the compulsory clauses of the Contagious Diseases Acts, and announced his intention at the commencement of the next session to introduce a Bill in Parliament entitled "The Retention in Hospital Bill." It would apply only to women who came to the hospital voluntarily, but would compel them to remain there until they were cured.

AN inquest was held in Marylebone, on the 7th inst., concerning the death of Mr. J. G. French, F.R.C.S., when the jury returned a verdict of "Death from syncope." The deceased, who was eighty-three years of age, was found dead in bed on the 4th inst.

IT is announced that the successful series of *Tableaux Vivants* lately exhibited at the New Club, Covent Garden, will be repeated at 3 P.M., on the 22nd inst., for the benefit of the funds of the Middlesex Hospital.

WE have received a copy of the petition of the Master Wardens and Society of the Art and Mystery of Apothecaries of the City of London, which we hope to be able to reproduce in our next issue.

DR. H. W. G. MACKENZIE, resident assistant surgeon to St. Thomas's Hospital, has been appointed Medical Registrar.

SOME OF THE

INFECTIOUS DISEASES COMMON TO MAN AND THE LOWER ANIMALS.[1]

BY E. KLEIN, M.D., F.R.S.

THE following is a brief abstract of the more interesting portions of this paper:—

Jenner's views as to the relation of human variola and cow-pox are so well known that it is unnecessary for me to enter into them, and likewise Ceely's classical papers in the Transactions of the Provincial Medical and Surgical Society and Dr. Badcock's results have more than once been discussed and commented upon. Ceely, by direct inoculation of human variola into heifers, has succeeded in two instances in producing vesicles identical with those of the natural cow-pox, and in transmitting the lymph from them into generations of human beings as vaccinia; he has thus proved that vaccinia is a modified human variola, having obtained this modification by its passage through the cow. Now it is known that the French Commission under Chauveau arrived at a different conclusion. They were unable to produce such a result as Ceely did by inoculating calves and heifers with human variola; in some instances they assert to have produced a papular eruption at the seat of inoculation; the matter of such papules when inoculated into human beings produced, again, variola. They concluded from these experiments that human variola is transmissible to the bovine species as variola, but does not produce vaccinia. That this conclusion does not necessarily follow from the experiments of the French Commission has been very ably argued by the late Dr. Seaton and others. All that can be said of the work of the French Commission is that their attempts to produce vaccinia by means of human variola were negative. I can fully appreciate these negative results, because some years ago I have myself had opportunity, under the late Dr. Seaton and under the late Mr. Ceely, to make such inoculations on a large scale. Over thirty milch cows and heifers had been inoculated with lymph of human variola; fluid condition and dried on points, taken from cases of confluent small-pox in different stages; clear lymph, purulent lymph, and crusts. Every animal was inoculated in from six to twelve places, each place being made up of a number of simple or crossed incisions about half an inch or more, and a large quantity of lymph was rubbed into each place of inoculation. Many of the animals were thus repeatedly inoculated. But in no instance was there produced a vesicle, or anything comparable to a cow-pock. We concluded from these experiments that to obtain a positive result an unknown additional condition is required, which was absent in our experiments. I am afraid that as long as the present uncertainty as to the exact nature of the virus of vaccinia and variola remains, no clear experimental proof will be obtainable, unless it be that a different method of experimentation with variola lymph is employed than has hitherto been followed. As regards the first—i.e., the nature of the virus—various assertions have been made from time to time, without, however, bringing us much nearer to the exact understanding. F. Cohn has, many years ago, ascertained the presence of micrococcus of the character of streptococcus in the lymph of variola and vaccinia; Sanderson confirmed this; Weigert found micrococci in the lymph of the vesicles and lymphatics of the variola eruption; Pohl Pineas described them also in the tissue of the epidermis of vaccinia. Dr. Paul Guttmann isolated, by cultivation after the modern methods, three different varieties of micrococci from the lymph of vaccinia and variola; so did also Dr. Buist. I show you here a streptococcus which is constantly present in human vaccinia, which corresponds to one of the streptococci isolated by Guttmann, and which he regards as the vaccinia streptococcus. Quite recently it has been, however, maintained that none of the species of micrococci hitherto isolated by the gelatine method can be the virus of vaccinia, but that it probably is some other organism not capable of growing in gelatine. The fact of the matter is, no one has yet succeeded in making a successful inoculation experiment with any of the organisms isolated from either variola or vaccinia. In saying this I am quite aware of the assertions of Dr. Buist, who claims to have succeeded in this; but reading his statements, and comparing them with his experiments, I think you will agree with me that they do not carry a great amount of conviction.

[The subjects of *hydrophobia* and *diphtheria* were then discussed by Dr. Klein, who then proceeded to the consideration of *scarlet fever*. He said that it would, no doubt, be in the recollection of the Society that at the end of 1885 and the beginning of 1886 an extensive outbreak of scarlet fever occurred in Marylebone, which Mr. Wynter Blyth has traced to be due to consumption of milk coming from a particular farm at Hendon. Mr. Power supplemented this by finding that cases of scarlet fever occurring also in other districts of the metropolis were likewise to be referred to the milk of the same farm. With Dr. Cameron, medical officer of health of the Hendon district, Mr. Power was able to exclude all and every accidental contamination of the milk of this farm from human source. Mr. Power had further shown "that only certain sections of the milk supplies within the farm, and eventually certain cows, as having to do with the infectivity of the milk."] The report of Mr. Power is known to you, and I think you will agree with me that in reading it, and following from step to step the clear and precise observations of Mr. Power, we cannot refuse admitting the correctness of his conclusions. It is not

[1] Read at the Epidemiological Society of London, on Dec. 14th.

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my object or my place to defend Mr. Power's conclusions—he is quite capable of doing so himself; but I will undertake to say this, that to an unbiased reader the methods by which he arrived at those conclusions are unimpeachable, and the proof amounts almost to a mathematical demonstration..... A point that our opponents have brought forward refers to a disease in the cow which, it is alleged, is the same, and has the same origin, as the Hendon disease, but has not produced infection of human beings with scarlatina. Now let me first remind you what the conditions of the Hendon disease were. I will quote the concise summary given by the medical officer of the Local Government Board, in his Report of 1885-86, pp. vi. and vii.: "In the end," says the medical officer, "he (Mr. Power) has demonstrated beyond reasonable doubt the dependence of the milk-scarlatina of December on a diseased condition of certain milch cows at the farm; a condition first introduced there in the previous month by some animals newly arrived from Derbyshire; and he finds strong circumstantial evidence for believing that the later phenomena of this dependence were brought about through the extension of the diseased condition of one set of animals to another set, after the fashion of an infection." This disease in the Hendon cows manifested itself in the following symptoms:[2] ulcerations covered with scabs on the teats and udder, ulceration, scabs, scurfiness, and loss of hair in patches in different parts of the skin; the animals were thin, and exhibited slight cough, but showed no rise of temperature. The viscera of two animals killed showed: slight pleuritis, with recent fibrinous deposits and adhesions; congestion and extravasations of blood in many lobules of the lungs; discoloured softened patches in the liver tissue; ecchymoses and petechiæ in the tissue and in the capsule of the spleen; swelling of, and extravasations of blood in, the lymphatic glands; congestion and glomerulo-nephritis of the cortex of the kidney; in some also interstitial new growth. With the material of the ulcers the disease was reproduced in the skin of calves; from the tissue of the ulcers of the Hendon cow an organism was isolated by cultivation, of which the characters in the depth and on the surface of gelatine, on agar-agar mixture, in broth, milk, and on blood-serum, were minutely studied, and hereby its identification became possible. This streptococcus, when inoculated into calves, produced a visceral and sometimes cutaneous disease, mild in character, and which very much resembled that of the Hendon cows. With this organism, by feeding or inoculation, a disease ending fatally in a large percentage was produced in grey house-mice: from the heart's blood of these the same micrococcus was recovered by cultivation. Professor Axe has presented a report to the Agricultural Department of the Privy Council Office, in which he states that in two different localities cows had been affected with ulceration of the teats and udders, and that the disease had been introduced at the same time into these localities by infected cows coming from the same dealer in Derbyshire, that had supplied those incriminated first cows to the Hendon farm, but in those two localities no scarlet fever had been produced amongst the consumers of the milk. Now let me here say that this dealer in cows in Derbyshire had at first stoutly refused any and every information to Mr. Power; but some months afterwards, when this investigation at the Hendon farm had to a great extent implicated the stock of this Derbyshire dealer, he had altered his mind, and offered all the above information. It would seem, in such a case, that some corroboration of the statements and observations of the Derbyshire cow-dealer should have been forthcoming. I do not question for a moment that Professor Axe had correctly reported what he heard and saw as to the ulceration on the teats and udders in the two herds, and that he had been told and had observed that the disease spread in each herd, and that it was introduced there by cows coming from the dealer in Derbyshire above mentioned. But what I should like to be permitted to question is the reliance that ought to be placed on the information offered by the above Derbyshire dealer—i.e., whether about the same time and from the same stock that he supplied cows to the Hendon farm he also supplied those two other localities. That the disease observed in these two localities is the same as that at the Hendon farm there is no evidence whatever; sores and ulcers on the teats and udders of cows of an infectious character are known in veterinary pathology, and they are known to be of various kinds. In connexion with this I will mention one striking coincidence that refers to this Derbyshire dealer. It will be, no doubt, in your recollection that an extensive outbreak of scarlet fever occurred at and about Wimbledon at the end of the last and the beginning of this year. This epidemic was traced distinctly to milk coming from a particular farm. Now the curious thing about this farm is that it belongs to a dairy farmer of the name of Keevil, who happens to be the brother of our Derbyshire dealer, and who had received some of his cows from this same dealer shortly before the outbreak of scarlet fever in Wimbledon. The way that this Wimbledon milk had received the contagium has not been ascertained by Mr. Power, but the fact that the Wimbledon dairy farmer Keevil had got cows from the Derbyshire dealer Keevil, who had supplied the Hendon farm, is, I think, extremely suggestive. Owing to the kindness of Professor Brown, I have been enabled quite recently to observe a cow which belonged to a herd in which a contagious ulcerative disease of the teats and udders prevailed, which was supposed to be the same as that of the Hendon cows. No cases of scarlet fever have been known in connexion with these cows. The ulcers on the teats were very extensive, superficial, irregular, and covered with brown crusts, the teats themselves much swollen. Taking off the crusts and scraping the superficial part of the ulcers, and then taking material from the deeper part of the ulcer and inoculating gelatine, I succeeded in isolating four different species of micrococci—(*a*) micrococcus citreus; (*b*) micrococcus aurantiacus; (*c*) staphylococcus pyogenes; (*d*) a micrococcus, which in plate cultivation, on the surface and in the depth of gelatine, presented characters resembling the micrococcus scarlatinæ, obtained from the Hendon cows and from human scarlet fever. But it soon became apparent that it is an altogether different species; it grew much more slowly, and its colonies (minute circular dots) are much more transparent than those of the Hendon cow organism; further, while the micrococcus of the Hendon cow and of human scarlet fever grows well in broth, producing after two days at 35° C. a distinct turbidity, and also well on the surface of agar-agar mixture, as isolated whitish dots; the micrococcus in question isolated from the ulcer of Professor Brown's cow does not show any growth on agar-agar mixture, or in broth, even after a five days' sojourn in the incubator at 35° C. The animal in question was killed after about a fortnight, when the ulceration and swelling of the teats were still considerable. The left hind-quarter of the udder was found very tense, and greatly swollen; on incision, a large quantity of thick, grumous pus was found in this portion. The lungs were normal, the spleen was normal, the liver exhibited a few whitish irregular spots, and the kidney presented a few fatty patches on the surface of the cortex; none of the lymphatic glands showed the hæmorrhage into their substance. During life the animal had, all the time while under observation, high temperature, varying between 105° and 104° F.; and no wonder, seeing the extensive suppuration that was going on in the udder. There can, then, be no question that this cow did not show the same disease that was observed in the Hendon cows, nor was the same organism obtained. Two other cows were kindly given me by Professor Brown, and also in these the same condition was present and the same result was obtained by culture and in the post-mortem examination.

The last point of opposition urged is that of the so-called bacillus scarlatinæ of Edinburgh. Dr. Edington has isolated from the epidermis during the stage of desquamation of scarlet fever cases a bacillus which he considered to be the bacillus of scarlatina. He maintained that this bacillus is present in all cases of scarlet fever in the blood before the third day; it then disappears from the blood in order to appear in the skin, whence it is discharged into the epidermis, and here forms spores during the stage of desquamation. In the first place, let me remind you that various species of bacilli and micrococci have been hitherto isolated from the epidermis of the normal skin. In the second place this bacillus of Edington has not been found in all early cases of scarlet fever by a committee of the Medico-Chirurgical Society of Edinburgh, appointed to test Dr. Edington's assertion, only in the blood taken from a prick in the finger of two out of ten cases of scarlet fever on or before the third day. Anyone acquainted with the modern methods of bacteriological inquiries will agree with me when I say that there is no difficulty whatever for anyone who devotes the necessary time to it to isolate by the modern exact

[2] The description given by Dr. Cameron of the Hendon disease is admittedly and to a large extent based on various statements by different persons who in previous years and at different localities maintain to have observed a disease in cows similar to the Hendon disease.

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methods new species of bacilli or bacteria in any material he chooses to select ..... The point, therefore, in the present state of bacteriological researches is not whether in any morbid material of the body this or that new species is present, but whether in its distribution and its action it bears any definite relation to that morbid process. Now everyone acquainted with these fundamental conditions will understand that one of the first and essential conditions would be that a microbe which is to bear any relation to scarlet fever must be found in the blood or tissues in a definite distribution. Examining the desquamating epidermis and finding a new species of bacteria may mean nothing more than this—viz., that to those several species already known to exist in the epidermis, another species has been added, which, in itself, is no doubt an interesting discovery, as much as, for instance, is a new species of diatome or a new beetle in a locality where no one has seen it before. But this new addition to the list of bacilli in the epidermis may have nothing whatever to do with the scarlet fever. This so-called bacillus of scarlatina is a bacillus which belongs to a well-defined group of species which in former years would have been considered as bacillus subtilis—viz., rods of a certain length and thickness, mobile; they have a tendency to form long chains or leptothrix; they grow rapidly in broth, and form here on the surface a scum, which is already well developed after twenty-four hours; the scum thickens during the next days, and becomes corrugated, the fluid itself remaining clear, but gradually becoming brownish—the more brown the longer time elapses; they liquefy rapidly gelatine, and after some days form also here a scum on the surface; they form in a few days a corrugated scum on the surface of solid agar-agar mixture; they grow rapidly in milk which is curdled, and by which a white precipitate is formed, while the fluid, at first turbid, gradually becomes clear; on its surface there is a thick pellicle. In plate cultivations in gelatine, the bacilli form minute whitish colonies, at first—i.e., during the first day angular, after thirty hours or more gradually liquefying the gelatine, and forming circular colonies of liquefied gelatine with an opaque or slightly granular outline, and a central, whitish spot due to precipitate of masses of bacilli. On potato they grow rapidly, and form a more or less corrugated layer, gradually turning brownish. Now I know of five different species; all notoriously septic bacilli, which show these characters besides the Edinburgh bacillus; they show, nevertheless, slight differences, and may be considered as different species, but as to those general characters just mentioned, there is no doubt they belong to the same group of organisms. To sum up, then, the Edinburgh bacillus, judging by its mode of growth, clearly belongs to a group of species of bacilli which are notoriously septic bacilla. It has been found in a small percentage of cases of scarlet fever in blood taken from a prick of the finger; its spores occur in the epidermis of cases of scarlet fever, amongst other species of bacteria; it has no action when the bacilli or spores are injected subcutaneously, and in a pure state, into animals. You will, I think, agree with me that after such evidence, it would be quite unjustifiable and premature to call this bacillus the bacillus of scarlet fever. This whole question of the etiology of scarlet fever is no doubt an extremely difficult one, and only by combined work on an extensive scale, and by careful and accurate methods, can we hope to get at the truth of the matter; and in these efforts no criticism should be shunned or objected to, but, on the other hand, it must be criticism made in an unprejudiced and scientific spirit.

COMPLIMENTARY BANQUET TO SIR ALFRED GARROD, M.D., F.R.S.

ON Tuesday, Dec. 6th, Sir Alfred Garrod was entertained at a complimentary banquet by the members of the medical profession resident in his native town, Ipswich. The chair was occupied by Dr. Caleb Rose, and the vice-chair by Mr. George Cordy Edwards, almost every practitioner of the town being present. The health of the distinguished guest was given by one of the senior surgeons of the hospital (Dr. Elliston), who referred to the high honour conferred upon Sir Alfred by Her Majesty, in selecting him as one of the few distinguished physicians who had received the prestige of knighthood in her Jubilee year, a distinction which reflected credit upon himself, and redounded to the honour of the town in which he was born and educated, and received his early medical education. The Ipswich school was proud to claim Sir Alfred Garrod as an old boy. After leaving school, he was apprenticed to the late Mr. Charles Hammond, one of the then surgeons of the East Suffolk Hospital. Thence he proceeded to University College, London, graduated at the University of London in 1843, and became successively attached to University College and King's College Hospitals as physician. He was now consulting physician to King's College Hospital, a Fellow of the Royal Society, and had for many years been known as a most successful teacher of materia medica and therapeutics, besides being one of the most actively employed of the physicians of the day. Dr. Elliston referred to the well-known works of their visitor, and particularly to his treatise on Gout and Rheumatic Gout, which, he thought, entitled him to grateful and lasting recognition. Sir Alfred had done for the elucidation of these allied diseases what Jenner had done for continued fever. The toast was most warmly received, and Sir Alfred Garrod, in response, spoke of his pleasing recollections of his early life at Ipswich, and of the pleasure he felt in responding to the invitation to visit them after so many years' absence. He recalled to memory the names of many able physicians and surgeons who were then living and practising, but are all dead, although he was pleased to see several of their descendants present.

BRITISH NURSES' ASSOCIATION.

A REPRESENTATIVE gathering of the matrons of the metropolitan hospitals and infirmaries, and other well-known members of the nursing profession, was held at Mrs. Bedford Fenwick's residence on Saturday last, to discuss the advisability of forming an Association for the mutual help of all women engaged in nursing the sick, and for the advancement generally of their professional usefulness both to medical men and the public. At this meeting it was pointed out that a heterogeneous Association was attempting to legislate for the nursing profession, and had issued regulations for the registration of nurses, which, it was considered, were degrading to them as a body. Furthermore, that there are now about 15,000 nurses in the United Kingdom, isolated individuals, who, with their scanty salaries, can do little to help themselves or each other if incapacitated by illness or age from further work. After some discussion, it was unanimously agreed that a British Nurses' Association should be formed, having for its objects (1) the obtaining of a charter that will enable the Association to examine and register nurses and to confer degrees; (2) the starting and carrying on of a journal of the Association, which shall be exclusively devoted to the interests of nurses; (3) the devising of schemes for annuity pension, and sick funds for nurses; (4) the formation and managing of a convalescent home and holiday house for nurses; (5) the founding and managing of almshouses for superannuated nurses; and (6) the organisation of conferences on questions relating to the nursing profession. Bye-laws were passed, a general council constituted, and an executive committee appointed, on which the following matrons at once consented to act: Mrs. Deeble (Netley Hospital), Miss Hogg (Haslar Hospital), Miss Stewart (St. Bartholomew's Hospital), Miss Jones (Guy's Hospital), Miss Thorold (Middlesex Hospital), Miss Wood (Children's Hospital), Miss Sutcliffe (Women's Hospital), Miss Clarke (Western Fever Hospital), Miss East (National Hospital), Miss Mollett (Chelsea Infirmary), Miss Close (Kensington Infirmary), Miss Beachcroft (Lincoln County Hospital), Miss Rogers (Leicester Infirmary), Miss Gibson (Brownlow Hill Infirmary. Liverpool), and Miss Huxley (Sir Patrick Dun's Hospital, Dublin). Mrs. Bedford Fenwick, lately matron of Bartholomew's Hospital, and five other ladies were also nominated to act with the above. The movement has, we are informed, been warmly welcomed, and is assured already of influential support.

A MEETING of the supporters of the Surgical Aid Society was held on the 7th inst., the Lord Mayor presiding, when satisfactory reports of the progress of the Society were presented.

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5542 births and 3746 deaths were registered during the week ending December 10th. The annual rate of mortality in these towns, which had been 23·5 and 22·5 per 1000 in the preceding two weeks, further declined last week to 21·1. During the first ten weeks of the current quarter the death-rate in these towns averaged 20·6 per 1000, and was 0·9 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 15·6 in Plymouth, 15·9 in Brighton, 16·8 in Huddersfield, and 17·5 in Hull. The rates in the other towns ranged upwards to 29·9 in Blackburn, 30·3 in Portsmouth, 31·5 in Oldham, and 33·2 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 480 and 443 in the preceding two weeks, were last week 448; they included 116 from whooping-cough, 91 from scarlet fever, 77 from "fever" (principally enteric), 73 from measles, 44 from diphtheria, and 20 from small-pox. These zymotic diseases caused the lowest death-rates last week in Cardiff, Halifax, and Plymouth, and the highest rates in Portsmouth, Birmingham, Sheffield, and Derby. The greatest mortality from whooping-cough occurred in Wolverhampton, Portsmouth, and Newcastle-upon-Tyne; from scarlet fever in Blackburn, Huddersfield, and Oldham; from "fever" in Preston, Newcastle-upon-Tyne, Blackburn, and Bolton; and from measles in Nottingham, Birmingham, and Derby. The 47 deaths from diphtheria in the twenty-eight towns included 27 in London, 3 in Brighton, 3 in Manchester, 2 in Portsmouth, and 2 in Sheffield. Small-pox caused 17 deaths in Sheffield, 2 in Bristol, and 1 in Hull, but not one in London or in any of the twenty-four other large provincial towns. The metropolitan hospitals receiving cases of small-pox contained 10 patients on Saturday last, against 16, 13, and 12 on the preceding three Saturdays. The number of scarlet fever cases in the Metropolitan Asylums Board hospitals and in the London Fever Hospital at the end of the week was 2667, against 2764 and 2726 on the previous two Saturdays; the cases admitted also showed a decline from the numbers in recent weeks. The deaths referred to diseases of the respiratory organs in London, which had been 560 and 455 in the preceding two weeks, further declined last week to 408, and were 79 below the corrected average. The causes of 73, or 1·9 per cent., of the 3746 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Sheffield, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had steadily increased in the four preceding weeks from 19·9 to 25·0 per 1000, declined again to 22·7 in the week ending Dec. 10th; this rate exceeded, however, by 1·6 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 16·5 and 19·4 in Leith and Perth, to 23·9 in Glasgow, 24·4 in Aberdeen, and 32·5 in Paisley. The 567 deaths in the eight towns last week showed a decline of 59 from the number in the previous week, and included 29 which were referred to whooping-cough, 14 to scarlet fever, 14 to measles, 13 to diarrhœa, 5 to "fever" (typhus, enteric, or simple), 4 to diphtheria, and not one to small-pox; in all, 79 deaths resulted from these principal zymotic diseases, against 78 and 77 in the preceding two weeks. These 79 deaths were equal to an annual rate of 3·2 per 1000, which exceeded by 0·7 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 30 and 28 in the preceding two weeks, were last week 29, of which 17 occurred in Glasgow and 6 in Edinburgh. The 14 deaths from scarlet fever showed a further slight increase upon the numbers in recent weeks, and included 6 in Glasgow, 5 in Dundee, and 2 in Perth. The fatal cases of measles, which had been 8, 13, and 12 in the previous three weeks, rose last week to 14, of which 6 occurred in Leith, 5 in Dundee, and 3 in Edinburgh. The 13 deaths attributed to diarrhœa showed an increase upon the low numbers in recent weeks; 7 were returned in Glasgow and 3 in Edinburgh. The 5 deaths referred to "fever" were fewer than in any recent week, and included 2 in Glasgow and 2 in Edinburgh. Three of the 4 fatal cases of diphtheria occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had increased in the preceding four weeks from 107 to 165, declined again last week to 143, and were 1 below the number returned in the corresponding week of last year. The causes of 60, or nearly 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 34·6, 33·8, and 35·0 per 1000 in the preceding three weeks, further rose to 35·6 in the week ending December 10th. During the first ten weeks of the current quarter the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 19·8 in London and 19·7 in Edinburgh. The 241 deaths in Dublin last week showed a further increase of 4 upon the numbers in recent weeks; they included 15 which resulted from scarlet fever, 6 from measles, 4 from "fever" (typhus, enteric, or simple), 3 from whooping-cough, 3 from diarrhœa, and not one either from small-pox or from diphtheria. Thus the deaths resulting from the principal zymotic diseases, which had been 33 and 31 in the previous two weeks, were again 31 last week; they were equal to an annual rate of 4·6 per 1000, the rate from the same diseases being 2·6 in London and 3·2 in Edinburgh. The fatal cases of scarlet fever, which had been 20, 8, 11, and 13 in the preceding four weeks, were 15 last week. The 6 deaths from measles showed a decline of 2 from the number in each of the previous two weeks. The deaths from the other zymotic diseases scarcely differed from those in the previous week. The deaths of infants showed a slight increase, while those of elderly persons were fewer than in either of the previous two weeks. Five inquest cases and 3 deaths from violence were registered within the city; and 57, or nearly a quarter, of the deaths occurred in public institutions. The causes of 37, or more than 15 per cent., of the deaths in the week were not certified.

Correspondence.

"Audi alteram partem."

ALBUMINURIA IN THE APPARENTLY HEALTHY.

To the Editors of THE LANCET.

SIRS,—I have read with considerable interest Dr. Stirling's able paper on the above subject in your issue of the 10th inst.; but should, however, like to make a comment on one point, concerning myself, with regard to it.

Dr. Stirling remarks that he cannot agree with me "that the one cause of this albuminuria is an increased hæmolytic action of the liver." From this I fear that in my paper on the subject, published in THE LANCET of Oct. 23rd, 1886, I did not make it sufficiently plain that I intended this to apply only to that form of functional albuminuria which strongly resembles hæmoglobinuria in its paroxysmal character, and with which, indeed, I believe it is allied. This paroxysmal albuminuria has not always a marked cyclical character, since it may occur indifferently at any period of the day, and sometimes is continuous for days together, though the effect of a meal is generally to be observed by an increase of the amount of albumen in the urine. Its most marked feature is the feeling of malaise, frequently accompanied by sallowness, coming on suddenly in a person apparently previously healthy. The sample of urine next passed contains albumen, and is also characterised by containing more urea and urobilin, and in being of a higher specific gravity than the generality of samples passed by the same individual. The attack may pass off at once and the succeeding samples be free from albumen, but usually there is persistence for some days. In addition to the three cases published in THE LANCET, I have now under observation a member of our profession in whom the malaise, when it occurs, is well marked, and whose urine invariably shows the above-men-

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tioned characteristics; for in a long series of observations I have noted that the albuminous urines are always of a higher specific gravity and contain more urobilin than any that he sends me when his urine is free from albumen. In his case the beneficial effect of arsenic is well marked, since the albuminuria disappears more rapidly when he takes a mixture of iron and arsenic than with iron alone.

It is, however, to this *paroxysmal* form of functional albuminuria alone that I would refer increased hæmolytic action of the liver as "the one cause." Indeed, in my work on "Diseases of the Kidneys," pp. 535—540, I have enumerated several other conditions which may cause functional albuminuria in persons apparently healthy, and which I have classified under the following heads, as due to (1) derangements of digestion; (2) disturbed innervation; (3) altered conditions of the blood.

With regard to Dr. Stirling's interesting observation respecting the albuminuria of adolescents, and the difficulty of deciding whether or not masturbation has anything to do with it, I may mention that in a case brought to me last summer, subsequent microscopic examinations of the urine has demonstrated the presence of spermatozoa in the albuminous morning urines.

Another interesting point in connexion with functional albuminuria that requires working out is the connexion subsisting between functional albuminuria and micro-organisms. In two cases at least has my attention been drawn to freshly passed albuminous urines containing micro-organisms, which were not to be found in non-albuminous samples passed by the same individual.

I am, Sirs, yours faithfully,

CHARLES HENRY RALFE.

Queen Anne-street, W., Dec. 12th, 1887.

THE TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—The value or the worthlessness of Chian turpentine in the treatment of cancer is a subject of such vast importance that it is obvious that any testimony brought forward with regard to it should be of undoubted and unbiased accuracy. It is for this reason that, after much hesitation, I feel reluctantly compelled to correct the report of one of the cases published by Professor Clay in THE LANCET of the 19th ult. Of this case (the last of the series) Mr. Clay remarks, "these notes should be highly appreciated, as the case is unique in regard to independent testimony, combined with a thorough and incontestable diagnosis." The report itself states that "this was a case of undoubted epithelioma, as shown microscopically"; and in your editorial article of the 3rd inst. stress is laid on this, as being "a case confirmed by microscopic examination of a growth removed." The case in question was, with the exception of a short interval, under my care from the beginning to the end of the illness, and I now venture to place before your readers a brief but correct account of its nature, and will leave them to form their own judgment as to how far the above conclusions are warranted by the facts.

The patient, a lady at the menopause period of life, was subject to attacks of menorrhagia. During one of these, having imprudently exposed herself to cold, a severe attack of pelvic peritonitis was the result. After the more acute effects had passed away, there remained considerable thickening in and around the walls of the uterus, which was markedly retroflexed; the thickening was especially marked in the cervix, where there was found at one part on the margin of the os a spot of suspicious hardness. The patient was sent to Brighton to convalesce, and on her return much of the general thickening was found to have disappeared, but the indurated spot on the cervix still remained, and in addition a new feature was for the first time observed. Appearing in but not extending beyond the os was a small papillary growth, having its base within the cervix at a point corresponding to the induration. I may state, however, that this was the first occasion on which a speculum was used, so that the growth may have been in existence for a considerable time previously. I expressed my fears as to the cancerous nature of the case to the patient's son, and she was taken by him to see Mr. Thornton. The report made to me was that Mr. Thornton considered the growth to be of the nature of an enlarged granulation; that he had removed it, and cauterised the base. The case now for a time passed out of my hands. Some time later, on making inquiries, I was informed by the lady's son that the growth had been examined microscopically, and that *no cancerous elements had been discovered.* After a considerable interval I was again requested to see the patient, as it was feared the growth had returned. This I found to be the case, and the patient was once more taken to see Mr. Thornton. The report brought to me (in both instances verbally) was to the effect that Mr. Thornton had pronounced the case to be one of cancer, and did not advise any operative interference. I now suggested that, as Chian turpentine was at this time making some stir, there could be no harm in giving it a trial. The patient was accordingly put under this treatment, which was continued for a year with short intervals of rest. During this time the induration disappeared, and the general health became completely re-established, but the growth (which had *not* been removed by Mr. Thornton on the second occasion) remained, and, for aught I know to the contrary, still remains *in statu quo.* Certainly when I last examined the patient, about eighteen months after commencing the turpentine treatment, there was no change observed in it. Whatever the true nature of this growth may be, I feel bound to confess that the result of the treatment was such as to impress me very strongly in favour of Chian turpentine, and I am now watching with great interest its effects on a case in which there can exist no reasonable doubt of the presence of cancer. The result, whether favourable or not, I shall, with your permission, report in due course in the columns of THE LANCET.

I am, Sirs, yours truly,

Leytonstone, Dec. 10th, 1887. J. KING KERR, M.D.

To the Editors of THE LANCET.

SIRS,—The point at issue between Professor Clay and myself is not whether he declared Chian turpentine to be a "specific" or a "cure" for cancer; but that, with very few exceptions, the profession at large have failed to get the results his treatment gave promise of, and I ask of him, in common with others of greater weight, an opportunity of having his diagnoses and results verified. Physician to a large hospital, one would naturally imagine that during the seven years this remedy has been prominently before the profession many opportunities would have occurred to Mr. Clay of proving to his colleagues the wonders he had wrought; and yet in your last issue Mr. Oliver Pemberton states that an appeal addressed to him on the matter failed to get a satisfactory response; whilst in his letter of the 10th inst., he writes in one part that he is "prompted by a manifest desire only to arrive at the truth"; further on he declines to take part in an inquiry on the ground that "it is obvious that the claims of a large private practice, and detachment from hospital work, prevent me from conducting investigations such as those by M. Pasteur with regard to hydrophobia."

These objections might be easily overcome. There are doubtless members of the staff of one or other of the hospitals in Birmingham who would for such an important investigation as the one suggested place a sufficient number of beds at his disposal, where all the conditions he asks for could be obtained without seriously trenching upon his private work.

So far as I am concerned there is no personal feeling in this discussion; but it is the outcome of failure after failure from the exhibition of Chian turpentine in uterine and other examples of cancer, upon the lines laid down by Professor Clay in his papers.

The time is ripe for this investigation, and should Professor Clay refuse the just demand of the profession, then only one verdict on the matter can be given.

I am, Sirs, yours truly,

Nottingham. GEORGE ELDER.

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Pemberton, I still adhere to my statement that "instances in which the disease [cancer] has been cured are familiar to most practitioners," and am surprised that during forty years, in an almost unlimited field for observation, it has never been his lot to see one.

Allow me to refer your readers to the notes of a case of cancer of the breast,[1] reported by Dr. F. A. A. Smith, where

[1] THE LANCET, 1887, vol. II., p. 565.

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a primary operation was performed in 1868, the diagnosis being verified by microscopic examination of the tumour after its removal, and where secondary growths have occurred in the cicatrix in 1887—i.e., after an immunity of nineteen years. I wish Mr. Pemberton would define the sense in which he employs the term "cure," and state whether he considers in the case now cited that Dr. Smith "cured" his patient of "cancer" in 1868. Will Mr. Pemberton also inform me in what sense "cancer infiltrating the textures immediately around its origin" differs from cancer as defined by myself in your issue of the 3rd inst.;[2] and how he recognises clinically the commencement of the process of "contamination of the adjacent glands"?

From the evidence before us I cannot at present regard certain cases treated after Mr. Clay's method other than instances in which cancer has been cured, and his success has led me to try Chian turpentine numerous times at the Cancer Hospital. Though unable to point to a single instance in which cancer has been yet cured in my own practice by the internal administration of Chian turpentine, either alone or in combination with local applications—and the value of the latter must not be underrated,—my experience has caused me to regard the remedy as valuable. It checks discharge and hæmorrhage, and allays pain. It would also be most unfair were I to neglect to state that the cases in which I have administered Chian turpentine—and beneficially—were all unsuited for operation on account of the extent of the disease. Had the drug therefore been exhibited at an earlier date, the natural course of the disease might have been arrested. I have employed the drug in a case of perineal fistula, where it acted similarly to copaiba and cubebs.

This observation suggests the possibility that if Chian turpentine will operate favourably upon cancer, its allies may be found possessed of similar or more potent properties. Let me add that, for my part, I am determined to continue an unprejudiced trial of Chian turpentine, and to publish the results at a later period. In the meantime, I should be happy to assist others, having the same object in view, in making careful diagnoses of cases in which cancer presumably exists before the exhibition of the remedy.

I am, Sirs, yours faithfully,

CHAS. E. JENNINGS.

Upper Brook-street, Grosvenor-square, W., Dec. 10th, 1887.

ANTIPYRIN IN THE SICKNESS OF PREGNANCY.

To the Editors of THE LANCET.

SIRS,—I have recently had an opportunity of testing the value of antipyrin as a moderator of the reflex excitability of the nervous centres in a case of obstinate vomiting of pregnancy. Mrs. ——, a lady now in the sixth month of her fourth pregnancy, has been suffering from this annoyance for the last ten weeks. All the usual remedies have been tried without any success, and the sickness when I advised antipyrin commenced every day as soon as the patient awoke, about 7 A.M., and continued at intervals until midday. The first morning the medicine was used it was immediately vomited, and the sickness continued as usual. I then advised that a dose (of fifteen grains) should be taken the last thing at night. The following morning the patient felt comfortable, and got up without being sick; but shortly afterwards the nausea was experienced, and although another dose of antipyrin was taken it did not remain upon the stomach, and for the rest of the morning there was the usual sickness. The dose was then doubled, and I recommended that in the morning the medicine should be taken before any attempt was made to move out of bed. This controlled the sickness until 10 A.M., when it again recurred, and lasted a couple of hours. Not thinking it advisable to push the administration of antipyrin, under the special circumstances of the case, beyond two doses of thirty grains each, I advised the patient to remain content with this half-result.—I am, Sirs, yours sincerely,

Paris, Dec. 12th, 1887. OSCAR JENNINGS.

ETIOLOGY OF PNEUMONIA.

To the Editors of THE LANCET.

SIRS,—In reference to an article on pneumonia dealing with the views of Dr. Baker (of the United States) on its causation, it may be mentioned that an investigation into the statistics of chest diseases in the British army would probably fully confirm his statements. The doctrine of chill from external cold had been generally accepted for practice, and on its authority the introduction of the wearing of flannel shirts by the soldiery was strongly recommended and carried into use. The result in the diminution of cases and mortality from chest complaints caused by exposure to weather was surprising, and has continued equally successful. There may be discovered other agencies, chemical and vital, acting along with and influencing pneumonia, and developed by the vital disturbance that then takes place in the lungs; but experience leads to the belief in the atmospheric agency of cold applied directly to the outside of the chest, and that it (presupposed to be an entity) then penetrates by conduction through the walls of the chamber to the pleuræ, and then into the lobules of the lungs lying next to them. All the vessels are at first contracted to their finest calibres, both on the skin and in the lungs, and so remain for hours probably, causing the feeling of chill. Next, on the patient's removal to house or hospital, with a warmer air, reaction sets in, the circulation rushes into the emptied vessels, already weakened, distends them, and produces the stagnation and effusion called inflammation.

I am, Sirs, yours truly,

J. W. BLACK, Surgeon-Major.

Royal United Service Institution, Whitehall, London.

[2] THE LANCET, p. 1142.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—Will you kindly insert the enclosed resolution, passed at our Council meeting on December 8th?

"Several cases having been brought before the Council in which alleged errors of diagnosis had been publicly reported, and consequently affecting the professional characters of district medical officers and others, the Council trust that more consideration will be shown by medical officers of health and medical superintendents of public institutions in the expression of any adverse opinions."

I am, Sirs, yours truly,

Dec. 14th, 1887. J. WICKHAM BARNES.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

THE HEALTH OF NEWCASTLE.

THE high rate of mortality prevalent for some time in the city of Newcastle-on-Tyne has been a foremost subject of conversation here amongst all classes. The daily press also has freely ventilated the matter, and indeed the whole machinery of inquiry has been set a-going down to "interviewing," and all sorts and conditions of practitioners have been pressed to give "their views." In the few remarks here set forth I may say I have not been "interviewed," that my experience of Newcastle extends over twenty-seven years of practice, and that I have freely conversed with men in the profession and others who take an interest in sanitary matters. The principal factors in producing the late high figures in the death-rate are: the geographical position of Newcastle, standing as it does in the narrowest part of England; the late meteorological conditions, mostly characterised by change — not, indeed, intense cold, but cold, with damp, hoar frosts, succeeded by a rising thermometer and westerly or south-westerly wind, veering often to the north and north-east; and, again, fogs—frosts not usually so common here at this season. Add these conditions to a clay soil, on which this city is built, and we have some of the strongest causes for general ill-health in the community. Unlike other cities, the best or more fashionable quarters are not in the west, but in the north and east end. The west end of the city is built on a good slope, and in most parts on high ground, and has rather a better foundation as regards the character of the clay. In some of the north districts the clay extends down fully nine feet, so that in damp weather there must be a greater retention of moisture. The School Board regulations have been blamed for much of the illness. I do not agree with this, for it will always be to the interest of the School Board and its officers to keep up a good standard of health, as securing a good general attendance; but boards are not very sensitive bodies, and I may leave the

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defence to its able secretary. I believe that what may be called the "bureaucratic" management of the city is not without its faults; disease is often concealed for fear of notification and inspection, with removal of patients and beds. I believe too little attention is paid to cleanliness by the people since these new sanitary arrangements came into vogue, and all or too much is left to the town or landlord to do. The middle and the working classes of Newcastle have a partiality for new streets and new houses, and they will remove in droves to damp, even wet, unfinished houses and streets for no other apparent reason than that they are new, and for this they will leave well-drained streets and well-dried houses. I must, in closing, refer to the habits of a large number of the working classes. Let anyone stand near any one of our numerous "long bars"—which are such a curse to this city- just before they close, and see the stream of heated, excited, and poorly clad men, women, and children rushing from the vitiated and hot atmosphere into the cold air on their way to their wretched homes, and he will wonder no longer that the death-rate is high in Newcastle. Children, too, are both badly fed and clothed, which cannot fail to produce a train of disease. In our markets on any Saturday night infants in arms and older children can be seen partaking with their parents of raw tripe, black puddings, and stale fruit, to be washed down on their way home at the "long bars."

Newcastle-on-Tyne, Dec. 12th.

EDINBURGH.

(From our own Correspondent.)

THE MEDICO-CHIRURGICAL SOCIETY.

AT the last meeting of the Society, held a week ago, two interesting cases of myxœdema were exhibited by Professor Grainger Stewart and Dr. John Thomson. Mr. Annandale demonstrated by means of an admirable cast of the face a new method of restoring the nasal bones to their proper position in cases of profoundly depressed fracture. A transfixing metal wire draws forward the bones with the nasal processes of the superior maxillæ, taking its leverage from a sheet of lead-foil which covers the nose, and at the same time moulds the soft parts and retains them in their natural formation till healing is completed. An extensive paper was presented by Dr. Symington on those physiological variations in the position of the liver which depend upon the alteration in the size of the stomach consequent upon its varying degrees of distension. This paper was richly illustrated by casts, models, and drawings of frozen sections, exhibiting the liver *in situ* in the various postures normally assumed by it, and disposing of certain erroneous impressions regarding its position in the body that have crept into some of the text-books. The paper was received very favourably by the Society, several of the clinical teachers present referring to the extreme importance of the anatomical data referred to as a basis for physical diagnosis. Dr. Skene Keith demonstrated the apparatus employed in the treatment of uterine fibroids according to the method of M. Apostoli, and read a paper dealing with the matter systematically, with copious clinical notes appended, narrating his own and Dr. Thomas Keith's success in following the method. In the discussion that followed, the palm certainly fell to Dr. John Duncan, who, after a passing reference to his own work in the application of electricity to surgical cases, considered carefully the wide question of the action of electric currents as applied to the living tissues. In his opinion a clear distinction must be drawn between the electrolytic and corrosive effects specially valuable in surgical cases, and the neurotic and alterative manifestations produced by the current as applied to uterine neoplasms. Success in applications of both sorts must depend on a recognition of the wide difference of the results desired in the two categories of cases; for whereas in the former, which must be called surgical electricity, certain clearly defined physico-chemical results are aimed at; in the latter, which is strictly a department of medical electricity, the result desired is of a subtle, and as yet undefined, nutritive nature; in the former the current must be strong, concentrated, and local in its field of activity; in the latter more disseminated as regards the whole growth attacked, and not of such strength as to produce electrolytic effects.

THE UNIVERSITY COURT.

The University Court have adopted a proposal aimed at extending the benefits of University teaching to a wider circle than those whose intention it is to enter one of the learned professions. By enacting that a matriculation fee of five shillings shall qualify would-be lay students to enter the precincts of the University, and to enrol themselves in certain of the classes, they have opened a channel of useful activity to many who have been hitherto entirely debarred from the higher paths of education; and at the same time, while still guarding important professional courses from an inundation of "the profane," there can be no doubt that they are enhancing the value and vitality of some of the less crowded courses of lectures by placing them within the reach of many who will gladly avail themselves of so prized an opportunity of self-improvement.

THE ROYAL SOCIETY.

The Royal Society is evincing a stronger desire to develop the medical side of its activities than has been the case for some time. At one stage in its career it was greatly famed for the excellent medical and botanical papers contributed by its Fellows; and it is an evidence of a wish for a return of the halcyon days of those particular branches which relate to medicine that has prompted the unanimous election to seats on the Council of two such energetic representatives of our profession as Drs. Batty Tuke and Sims Woodhead. Their appointment is well timed, since they may well add valuable matter to the Transactions and Proceedings by making them the organs for the publication of work from the new College of Physicians' laboratories over which they preside—the one as curator, the other as superintendent.

Edinburgh, Dec. 13th, 1887.

DUBLIN.

(From our own Correspondent.)

THE ACTION OF THE COLLEGE OF PHYSICIANS AGAINST THE APOTHECARIES' CONJOINT SCHEME.

TO-DAY (Tuesday), before the Vice-Chancellor, application was made to fix the mode of trial of an action by the President and Fellows of the College of Physicians in Ireland against the Governor and Company of the Apothecaries' Hall in Ireland. The College of Physicians wish to have it declared that the defendants are not entitled to hold a qualifying examination under the Medical Act, 1886, or to grant a diploma in respect of medicine within the meaning of the Act, or to hold a qualifying examination in connexion with the Royal College of Surgeons in Ireland. Further, that the Registrar of the Irish Branch Council shall not register any diploma granted jointly by the Apothecaries' Hall and the Royal College of Surgeons. Counsel having appeared for the various parties interested in the matter, the Vice-Chancellor fixed the hearing to take place before him on affidavit. This action for an injunction by the College of Physicians is almost universally condemned by the profession, but as the trial cannot much longer be delayed any detailed comment on the proceedings may be left to a future occasion.

SCIENTIFIC ASSOCIATION, R.C.S.I.

The opening meeting of the second session of this Association, which has been formed in the interests of the students attending the medical school of the College and other medical schools in Dublin, took place last week. The President for the ensuing year (Professor Stoker) delivered an interesting address, which was principally directed to the dangers and inutility in many cases connected with the use of O'Beirne's long injection tube.

ALLEGED TREATMENT FOR HYDROPHOBIA.

The McGauran treatment of this dread disease has of late attracted attention by the persevering way in which it has been brought forward by some credulous people in the north of Ireland as absolutely infallible. It is remarkable that not a single medical practitioner living in the district in which Mr. McGauran resides has the slightest faith in the alleged cure. Surely, if there is any truth whatsoever in the alleged cures, the particulars of at least one well-authenticated cure should be forthcoming. But no; up to the present there has not been one, and the offer of £50 by

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Dr. Thompson, of Omagh, has failed to obtain such. On the other hand, there are very many undisputed cases of persons bitten by rabid animals having died after treatment by the McGauran method. Until a well-authenticated case of recovery by this method is recorded, a discreet silence on the part of its advocates would be advisable.

BRITISH DENTAL ASSOCIATION.

The first meeting of the Irish branch of the British Dental Association was held last week in the Royal College of Surgeons. The President (Mr. D. Corbett), in his address, said that the labour and duties they had undertaken as members of the British Dental Association were by no means light and insignificant; therefore they must individually, and conjointly with the parent Association, exercise all their influence to compel outside members of the profession to adopt that reform which a conscientious acknowledgment of what the public expected from the educated and honest practitioner of the day should beget. He saw around him young practitioners, and to them he would more particularly address his concluding observations. When urging them forward in the pursuit of knowledge, in the language of a well-known author, he would say "Seek greedily that knowledge which would comfort them, adorn them, and never quit them, which would open to them the kingdom of thought and all the boundless regions of conception, as an asylum against cruelty, the injustice, and the pain that might be their lot in the outer world; that which would make their motives habitually great and honourable, and light up in an instant a thousand noble disdains at the very thought of meanness and of fraud."

THE DERRY MAYORALTY.

At a meeting of the Derry Corporation held last week, Sir William Miller, M.B., surgeon to the County Derry Infirmary, was unanimously elected Mayor for 1888. Sir William Miller, it may be added, has declined to receive any emolument during his year of office.

CASE OF ALLEGED POISONING BY A MEDICAL MAN.

The Cork Grand Jury last week found a true Bill against Dr. Philip Cross, who is charged with having poisoned his wife last June. The trial is proceeding.

The annual ball in aid of the funds of the Dublin Orthopædic Hospital will, it is announced, take place in the New Leinster Hall on the 11th of January next.

Dublin, Dec. 13th.

BELFAST.

(From our own Correspondent.)

THE QUEEN VICTORIA CONVALESCENT HOME.

OF the many schemes that in Belfast were brought before the public to celebrate Her Majesty's Jubilee, none have succeeded so well as that put forward by the Ladies' Committee of the Hospital for Sick Children—to provide a Convalescent Home in connexion with the hospital. The sum aimed at was £3200, and already there is £2500 promised and subscribed. Last week a most successful amateur concert was given, and a sum of over £70 was raised by it for the Convalescent Home. It is very strange that, although this hospital contains forty-five beds, and has an immense extern department, and although students have attended the cliniques given by the physicians and surgeons every year since 1875, the Senate of the Royal University do not see the fairness and necessity of recognising this hospital as a teaching institution in connexion with the Royal University. The number of students who are attending the hospital this year is as large as that of last session.

THE BELFAST MEDICAL STUDENTS' ASSOCIATION.

At a largely attended meeting of the members of the Medical Students' Association, held on Dec. 6th, the following resolutions were passed unanimously:—"1. Whereas the principle adopted by the Royal University of altering their regulations and curriculum, and of making these alterations affect students already matriculated, has been a source of much confusion and injustice in the past, and still continues so, it is resolved that we, the Belfast Medical Students' Association, respectfully protest against this principle as subversive of confidence in the University, and manifestly a breach of confidence on the part of that body. 2. That the members of the Belfast Medical Students' Association respectfully desire to call the attention of the Senate of the Royal University to the fact that since the institution of the third examination there is not a single Belfast man on the list of examiners for the degree examination in medicine. In making this representation they do not wish in any way to reflect on the fairness of the examination, but only to claim the privilege of having one or more of their teachers on the Examining Board." After these resolutions had been passed, a discussion took place on the Best Text-books for Students, which was introduced by Dr. Byers, and on the Importance of Case-taking, which was opened by Dr. Calwell. This Association, under the presidency of Dr. J. A. Lindsay, is, during the present session, in a very healthy and vigorous condition, and is a pleasant bond of union between the students.

THE BELFAST DISTRICT LUNATIC ASYLUM.

The question of the proposed enlargement of this institution came up for discussion at a meeting of the governors on Dec. 12th. Mr. Nugent (inspector) gave his opinion in favour of going into the country for a new site, and building a new asylum altogether in preference to the project of adapting a workhouse, should such a building become available for the purpose. This new building would be a sort of annexe to the present asylum. Mr. Nugent thought it would be more satisfactory and more economical to erect a new building, as workhouses were unsuitable for such purposes, and to render them available the expense of the necessary alterations would be very considerable. Finally, after a long discussion, it was decided to postpone the whole question for three months, and in the meantime a deputation is to wait upon Mr. Balfour, the Chief Secretary for Ireland, for the purpose of inquiring what are the intentions of the Government in reference to the proposed measure for the amalgamation of Irish Poor Law Unions. When the report of this deputation is received the question will again come up for discussion, and probably for final settlement.

Belfast, Dec. 13th.

PARIS.

(From our Paris Correspondent.)

MICROBES AND EXPIRED AIR.

WITH reference to the note on confined air and the development of phthisis by Professor Brown-Séquard, which was published in my letter of last week, I may here give the summary of a communication read by Professor Bouchard at the following meeting of the Academy of Sciences on behalf of MM. T. Straus and W. Dubreuille, tending to prove the absence of microbes in expired air. Lister was the first who made the observation that the air introduced into the pleural cavity after a simple fracture of the ribs (without any exterior wound) produced effects very different from, and infinitely less grave than, those resulting from a pneumothorax consecutive to a penetrating wound of the chest. This fact, he added, was to him a mystery, until—thanks to the germ theory—he understood that it was natural that the air was filtered by the bronchi, one of the offices of which is to arrest the particles of dust inhaled, and to prevent them entering into the pulmonary vesicles. This explanation was confirmed experimentally by Tyndall, who showed that the expired air is "optically pure." The researches of MM. Straus and Dubreuille by the bacteriological methods completely confirmed the experiments of Tyndall. They tended to demonstrate that the air expired, even though optically pure, is almost completely deprived of microbes. The lungs therefore really play, for the micro-organisms, the *rôle* of a filter—a function which Lister attributed to them. Divers experimenters have endeavoured to find in the expired air pathogenic microbes, but always without result. Professor Grancher had performed a great number of experiments on the expired air of phthisical patients, but he had never been able to discover the presence of Koch's bacillus or spores. MM. Charrin and Karth had prosecuted analogous researches, but with negative results. From these facts the authors conclude that when human beings or animals are collected in a confined space, their respiration, far from contaminating the air, tends to purify it—that is,

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as far as microbes are concerned. This is what might be expected, as the air, on leaving the lungs, contains less of microbes than at its entrance. This fact does not in any way militate against that which was long ago established by MM. Pasteur, Lemaire, Miquel, &c.,—that is, that the microbes are very abundant in the air of crowded rooms such as hospital wards, barracks, &c. The act of respiration has nothing to do with this phenomenon; it is not by the air which they expire—that is, by their breath—that people crowded together charge the surrounding air with microbes; it is by their clothes, by the dust caused by their movements, by their expectoration dried on the floor and blown about in the form of powder, by which the dissemination of the microbes in the air is effected. The respiration of human beings within a closed space contributes its contingent of noxious gases, but it tends to purify the air of the microbes which it contains.

TINEA DECALVANS ("PELADE").

A discussion took place at the Academy of Medicine last week on the contagiousness or non-contagiousness of tinea decalvans ("Pelade"), but without much satisfactory result on either side. Dr. Ollivier has for the third time brought the subject to the notice of the Academy. Considering that this malady is not contagious, the author protested vehemently against the exclusion in schools of the pupils who are affected by it. Dr. Ollivier believes that tinea decalvans is caused by a sudden nervous perturbation, an unexpected emotion, or by very great sorrow. He would therefore recommend that the quarantine to which such pupils are subjected should be removed, and that they should be allowed to prosecute their studies in common with the others. Dr. Hardy, the well-known dermatologist, declared that he entertained an opinion diametrically opposed to that of Dr. Ollivier; Professor Cornil shares Dr. Ollivier's opinion, and stated that what tends to prove the non-transmissibility of tinea decalvans is that one does not find in this affection either cryptogams or micro-organisms which could produce it.

Paris, Dec. 13th.

VIENNA.

(From our own Correspondent.)

THE CHEMICAL CHANGES OF THE BLOOD IN TUBERCULOSIS.

A YEAR ago Dr. Ernst Freund, a pupil of Professor Ernst Ludwig, published the results of his chemical researches on tuberculosis in the *Wiener Medicinische Jahrbücher*, 1886. He stated that he had been able to prepare from the blood, as well as from the tuberculous growths of the organs of twenty-five tuberculous cases examined, an organic body belonging to the group of carbohydrates, exhibiting all the reactions peculiar to cellulose—viz, it was insoluble in the ordinary indifferent solvents, but readily soluble in a solution of cupric hydroxide in ammonia; it was resistant to the action of Schulze's mixture of nitric acid and chlorate of potassium; when dissolved in concentrated sulphuric acid, it was converted into sugar by boiling with diluted sulphuric acid, and when treated with nitric acid, ether, and alcohol, a collodion-like body was obtained; it assumed a blue colour when treated with iodine in presence of concentrated sulphuric acid or of a concentrated solution of chloride of zinc, and a blue colour by adding α-naphthol to its solution in concentrated sulphuric acid. For the sake of control the blood and the normal or pathological organs of thirty other cases were examined, but no trace of cellulose could be found in them. Freund's statements on the occurrence of cellulose in tuberculosis have been confirmed, as I am now informed, by recent researches carried out by Dr. Kabrhel in the laboratory of Professor Horbaszewski of Prague. In continuing his researches on the chemical basis of tubercular disposition, Dr. Freund made examinations of ashes of the blood, and found that there is a considerable increase of the potassium salts in the blood of tuberculous persons, while the sodium salts and phosphoric acid are reduced in quantity. The ash of normal blood contains, according to the researches of Jarisch, 25·31 to 28·62 per cent. of potash, 23·7 to 28·13 per cent. of soda, and 8·0 to 8·96 per cent. of anhydride of phosphoric acid; the ash of the blood of tuberculous persons was found by Freund to contain 29·84 to 37·57 per cent. (miliary tuberculosis) of potash, 12·85 to 18·26 per cent. of soda, and 4·3 to 6·79 per cent. of anhydride of phosphoric acid. The urine in these cases, however, showed no increase of potash. On these results Dr. Freund based a series of therapeutical experiments, which are being carried out in the wards of Dr. Langer. The leading idea of these experiments is to withdraw carbonate of potash from the body and to introduce sodium salts. For this purpose, large doses of phosphoric acid and phosphate of potash, soda, and lime, followed by carbonate and bicarbonate of soda and chloride of sodium, are used. Dr. Freund maintains that some of the cases treated in this way improved, especially those affected with chronic tuberculosis.

THE SERVICES.

Surgeon J. J. Lamprey has succeeded Surgeon-Major P. Connolly as Senior Medical Officer in the West Africa Settlements.

INDIA OFFICE.—The Queen has approved of the following promotions, amongst others, made by the Governments in India:—Brigade Surgeon John Charles Morice, of the Bengal Medical Establishment (dated Oct. 24th, 1887), and Brigade Surgeon William Edward Cates, of the Bombay Medical Establishment (dated Sept. 15th, 1887), to be Deputy Surgeons-General. Surgeon-Major Isidore Bernadotte Lyon, of the Bombay Medical Establishment, to be Brigade Surgeon (dated Sept. 15th, 1887). Surgeons Patrick Alexander Weir, Peter Johnston Freyer, M.D., Percy de Haga Haig, John Lewtas, and John O'Neill, M.D., of the Bengal Medical Establishment; Surgeon John Wilkins Clarkson and Surgeon Joseph Parker, M.D., of the Bombay Medical Establishment, to be Surgeons-Major, all dated Sept. 30th, 1887.

ADMIRALTY.—A good service pension of £100 a year, for medical officers of the Royal Navy, is placed at the disposal of the First Lord by the recent death of Sir W. R. E. Smart.

RIFLE VOLUNTEERS.—4th (Eton College) Volunteer Battalion, the Oxfordshire Light Infantry: Edward Stacy Norris, M.B., to be Acting Surgeon (dated Dec. 10th, 1887).—1st Midlothian (Leith): Surgeon and Honorary Surgeon-Major J. Henderson, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement (dated Dec. 10th, 1887).

Obituary.

SIR WILLIAM R. E. SMART, M.D., K.C.B., K.L.H.,

HONORARY PHYSICIAN TO THE QUEEN.

IN the recent death of Sir William Smart the Naval Medical Service and the profession have to deplore the loss of an eminent member, who was a bright illustration of what may be achieved by well-directed ability, persevering industry, and the capacity of seizing, as they occur, opportunities of distinction. Early in life, under the apprenticeship system then customary, and to which he always referred with respect and gratitude, he began his medical studies with a leading practitioner of his native town, Devonport, continuing them in London at St. Bartholomew's Hospital. He was always, and remained to the close of his life, a diligent student, taking the deepest interest in his profession and in all that concerned its welfare. He qualified in 1839, and after a brief experience of private practice joined the Royal Navy in 1841, and served for nine years as assistant surgeon in the *Cruiser* in China, in the *Sapphe* at the Cape of Good Hope and Mozambique, and in the *Trafalgar*, *Hibernia*, and *Queen* on the Channel, Lisbon, and Mediterranean stations. Hitherto Mr. Smart's service had been uneventful, but in 1850, while in the *Queen* flag-ship at Malta, a formidable epidemic of cholera broke out, in combating which his energies had full scope, and his work was so highly appreciated as to lead to his promotion to the rank of Surgeon, his first appointment being to the *Spitfire*. In 1853 he found time to take his Doctor's degree at Aberdeen, and was soon after appointed to H.M.S. *Diamond*, Captain W. Peel (the son of the great Prime Minister). When the Russian war began, and the siege of Sebastopol was determined on, Captain Peel landed with the Naval Brigade, and the ship was converted into

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porarily into a hospital until huts could be erected on shore for the reception of the sick and wounded of the brigade, who were placed in charge of Dr. Smart. This was the turning point of his career. The admirable efficiency of his arrangements, and the zeal, energy, and humanity he invariably displayed in the duties of the hospital, whither all the worst cases were sent from the front, were soon recognised by the eminent naval officers in command, and on their recommendation he obtained from Lord Raglan the rank and privileges of a first-class Staff Army Surgeon. He also received the Blane Gold Medal for his journal, the war medals, and the decoration of the Legion of Honour. As a further reward of his Crimean service, he was appointed Staff-Surgeon and Storekeeper of the Hospital ship at Hong-Kong. There he had charge of those wounded in the Canton River operations in 1858, and received the thanks of the Admiral, Sir Michael Seymour, and promotion to the rank of Deputy Inspector-General. He now went to Bermuda, and in charge of that hospital and afterwards at Greenwich the next ten years were spent. In 1869 he was advanced to be Inspector-General, and as such held command of Haslar Hospital from 1873 till his retirement in 1877. He was made a C.B. in 1867, and ten years later a K.C.B., having been previously appointed Honorary (Naval) Physician to the Queen. Only a few months ago a good service pension was conferred on him.

This accumulation of honours was fully merited by Sir William Smart for his well-proved administrative ability and his zealous discharge of duty during thirty years' active service. But he was more than a meritorious and successful naval surgeon. He never ceased to keep touch of the profession he loved so well, and of which, except in regard to practice, he continued to be an active member till the end. He joined the College of Physicians in 1860, was a conspicuous member of the British Medical Association, and some time president of its Southern branch, and took a leading part in the Epidemiological Society, as being most congenial to his tastes and former professional work. He became its president in 1874-75, and contributed both before and since several excellent and elaborate papers on the diseases of the climates in which he had served and the epidemics he had encountered. But other fields of literature were also dear to him. His was a familiar figure at the Record Office, the British Museum, and other great libraries of the metropolis, seeking material for his writings and lectures on antiquarian, geographical, and other subjects, in which he employed his learned leisure.

Here, too, mention should be made of the time and earnest anxious labour Sir W. Smart devoted to what was long a burning question of naval administration—viz., the position and emoluments of medical officers. With the late Dr. F. J. Brown of Rochester and other coadjutors, few of whom survive, he adduced evidence and arguments so cogent as in time to overcome the prejudices of the executive and effect the progressive but well-marked improvement that has taken place in the last forty years. For the great share he had in this movement his name deserves to be held in veneration and grateful regard by two generations of his brother officers. His long experience in every sort of vessel in a subordinate capacity had given Sir William an intimate knowledge of the wants and wishes of his younger brethren. "He who wears the shoe can alone tell where it pinches," and one of the happiest consolations of his declining years was the consciousness of having been instrumental in greatly ameliorating their position.

Sir William Smart's nature was eminently sympathetic. Wherever among his relatives and friends there was illness or suffering, he was to be found rendering succour and comfort regardless of his own convenience or repose. In every domestic relation he was exemplary, the most affectionate of kinsmen, and the fastest of friends. He was seen at his best in his family circle and amid his old naval comrades, who could appreciate his genial humour and rich store of anecdote. His great activity of mind and body seemed to betoken longevity. But some time ago chronic, though painless, disease began to enfeeble and emaciate him. He was only five days confined to his house at Harlesden when symptoms of pulmonary and cerebral oppression were manifested, and he died there on Dec. 2nd, having three weeks before completed his seventieth year. On the 6th he was buried in Kingsbury Neasdon churchyard, not far from Willesden. His honoured name will be long remembered with respect, gratitude, and affection.

We have been informed by his son[1] of an interesting incident in the life of Sir William Smart. In the course of duty he had never been under fire, although from indulging his curiosity as a spectator of the siege operations at Sebastopol he had run some risk. But it so happened that in China he was on one occasion accidentally wounded by a pistol bullet. It entered above the wrist, ran up the arm, and lodged between the radius and ulna just below the elbow. He said he could sometimes feel this ball get in between the bones when bending the joint, and cause sudden stoppage of the movement of flexion. With characteristic resolution, Sir William kept this a secret throughout his life, even from his family, because he feared that if known it might injure his prospects of employment as a hospital surgeon. Shortly before his death he expressed a wish that some mention should be made of this wound, the scar of which was visible, in order to show that though a man may have a bullet encysted in his right forearm, he may still be a good operator.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.B. Examination for Honours:—

MEDICINE.

FIRST CLASS.

Flemming, Percy (Scholarship and Gold Medal), Univ. Coll.
Tubby, Alfred Herbert (Gold Medal), Guy's Hospital.
Eq. Braddon, William Leonard, Guy's Hospital.
Eq. Thane, Edgar Herbert, University College.
Eq. Jecks, Cyril William, University College.
Eq. Smith, Hugh, London Hospital.
Brown, Herbert Henry, University College.

SECOND CLASS.

Moynihan, Berkeley Geo. Andrew, Yorkshire College.
Lys, Henry Grabham, London Hospital.
Eq. Deanesly, Edward, B.Sc., University College.
Eq. Thompson, J. Edwin, Owens Coll. and Manchester Roy. Infirm.
Eq. Featherstone, W. Baritrop, Queen's College, Birmingham.
Eq. Finley, Fredk. Gault, McGill Univ., London Hosp., and Vienna.
Eq. Rennie, George Edward, B.A. Sydney, University College.
Eq. Stedman, Frederic Osmund, Charing-cross Hospital.

THIRD CLASS.

Eq. Fisher, Theodore, Guy's Hospital.
Eq. Solly, Ernest, St. Thomas's Hospital.
Eq. Kelsall, Henry Truman, London Hospital.
Eq. Risdon, William Newt, Guy's Hospital.
Eq. Wheaton, Samuel Walton, St. Thomas's Hospital.
Eq. Brook, W. Henry Breffit, St. Bartholomew's Hospital.
Eq. Wynter, Walter Essex, Middlesex and St. Barthol. Hospitals.
Wheatley, James, King's College.
Eq. Caldecott, Charles, Guy's Hospital.
Eq. Godfrey, A. E., Northamp. Gen. Infirm. and St. Thomas's Hosp.
Eq. Luff, Arthur Pearson, B.Sc., St. Mary's Hospital.
Mumford, A. Alex., Owens Coll. and Manchester Royal Infirm.
Eq. Jordan, Walter Ross, Birmingham Medical School.
Eq. Taylor, Frederick Howard, London Hospital.

OBSTETRIC MEDICINE.

FIRST CLASS.

Thane, Edgar H. (Scholarship and Gold Medal), Univ. Coll.
Jecks, Cyril William (Gold Medal), University College.
Braddon, William Leonard, Guy's Hospital.

SECOND CLASS.

Thompson, J. Edwin, Owens Coll. and Manchester Roy. Infirm.
Flemming, Percy, University College.

THIRD CLASS.

Brown, Herbert Henry, University College.
Wynter, W. Essex, Middlesex and St. Bartholomew's Hospitals.

FORENSIC MEDICINE.

FIRST CLASS.

Braddon, W. Leonard (Scholarship and Gold Medal), Guy's Hosp.
Brook, W. H. Breffit (Gold Medal), St. Bartholomew's Hospital.
Thompson, J. Edwin, Owens Coll. and Manchester Roy. Infirm.
Deanesly, Edward, University College.
Eq. Featherstone, W. Baritrop, Queen's College, Birmingham.
Eq. Fisher, Theodore, Guy's Hospital.

SECOND CLASS.

Wheaton, Samuel Walton, St. Thomas's Hospital.
Luff, Arthur Pearson, St. Mary's Hospital.
Nevins, J. B., Liverpool School of Medicine and Guy's Hospital.
Tubby, Alfred Herbert, Guy's Hospital.

THIRD CLASS.

Tunstall, John Ogle, University College.
Eq. Brown, Herbert Henry, University College.
Eq. Caldecott, Charles, Guy's Hospital.
Eq. Jecks, Cyril William, University College.
Taylor, Fredk. Howard, London Hospital.
Colman, W. Stacy, University of Edin. and Univ. College.

[1] W. Herbert Smart, M.B. Camb., now House-Surgeon of the Hants County Hospital, Winchester.

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The following candidates have passed the recent M.S. Examination:—

Burghard, Frédéric François, Guy's Hospital.
Price, Alfred Edward, M.D., Guy's Hospital.
Spencer, Walter George, St. Bartholomew's Hospital.
Targett, James Henry, Guy's Hospital.

The following candidates have passed the recent B.S. Examination:—

FIRST DIVISION.

Carless, Albert, King's College.
Clarke, William Frederick, Guy's Hospital.
Flemming, Percy, University College.
Risdon, William Newt, Guy's Hospital.
Roughton, Edmund Wilkinson, M.D., St. Barthol. Hospital.
Routh, Charles Frederic, Guy's Hospital.
Tubby, Alfred Herbert, Guy's Hospital.
Vincent, Herbert Edmund, Guy's Hospital.
Wheatley, James, King's College.
Wynter, Walter Essex, St. Barthol. and Middlesex Hosps.

SECOND DIVISION.

Braddon, William Leonard, Guy's Hospital.
Brook, William Henry Breffit, St. Bartholomew's Hospital.
Brown, Herbert Henry, University College.
Caldecott, Charles, Guy's Hospital.
Gee, Frederick William, University College.
Heatherley, Francis, Guy's Hospital.
Holder, Sydney Ernest, University College.
Jones, Samuel Cromwell, University College.
Kellsall, Henry Truman, London Hospital.
Prall, Samuel Esmond, Guy's Hospital.
Stedman, Frederick Osmund, Charing-cross Hospital.
Sunder, Charles Edward, University College.
Taylor, Frederick Howard, London Hospital.
Wells, George Lee, St. Bartholomew's Hospital.

UNIVERSITY OF DURHAM.—The following candidates satisfied the examiners at the recent Examinations for degrees in Medicine and Surgery, at the College of Medicine, Newcastle-upon-Tyne:—

DOCTOR IN MEDICINE FOR PRACTITIONERS OF FIFTEEN YEARS' STANDING.

Crawford, James, L.K.Q.C.P.I., L.R.C.S.I.
Deane, Robert Edmund, L.R.C.P. Ed., L.S.A.
Jones, David Edgar, L.R.C.P. Ed., F.R.C.S. Ed.
Steele, Russell, L.R.C.P. Ed., M.R.C.S.

DOCTOR IN MEDICINE (ESSAY).

Barker, John, M.B., M.R.C.S., L.S.A.
Cripps, Charles Couper, M.B., M.S., M.R.C.S.
Davidson, Charles Robert, M.B., M.R.C.S.
Harper, Alexander, M.B., M.R.C.S.
Malden, Frank James, M.B., M.R.C.S.
Proud, Frederick, M.B., M.R.C.S.
Robinson, Alfred, M.B., M.R.C.S., L.S.A.
Walker, Francis John, M.B., L.R.C.P., M.R.C.S.

BACHELOR IN MEDICINE (FINAL EXAMINATION).

Raby, Leonard, London Hospital (Second-class Honours).

PASS-LIST.

Andrews, Octavius W., M.R.C.S., St. George's Hospital.
Berwick, Geo., Coll. of Med., Newcastle-on Tyne.
Bowlan, Marcus Marwood, Coll. of Med., Newcastle-on-Tyne.
Brewis, A. S., M.R.C.S., L.S.A., Coll. of Med., Newcastle-on-Tyne.
Davis, Geo. W., L.R.C.P., M.R.C.S., St. Thomas's Hospital.
Dixson, Chas. Fred. Lyne, M.R.C.S., St. Barthol. Hosp.
East, Charles Harry, M.R.C.S., L.S.A., King's College.
Gautby, George, College of Medicine, Newcastle-on-Tyne.
Hubbard, Daniel Lovett, M.R.C.S., L.S.A., King's College.
Jaques, William, College of Medicine, Newcastle-on-Tyne.
Lavies, Harry Brandreth, M.R.C.S., L.S.A., King's College.
Laws, Cuthbert Umfreville, M.R.C.S., Coll. of Med., Newcastle-on-Tyne.
Leech, Joseph W., Coll. of Med., Newcastle-on-Tyne.
Reily, Walter Grant, Middlesex Hospital.
Richardson, Alfred Ernest, M.R.C.S., London Hospital.
Shortt, William Rushton, Coll. of Med., Newcastle-on-Tyne.
Wilson, Joseph Harwood, Owens College.

BACHELOR IN SURGERY.

Bailes, Lewis Lamb, M.B., Coll. of Med., Newcastle on-Tyne.
Berwick, George, College of Medicine, Newcastle-on-Tyne.
Bowlan, Marcus Marwood, Coll. of Med., Newcastle-on-Tyne.
Brewis, A. S., M.R.C.S., L.S.A., Coll. of Med., Newcastle-on-Tyne.
Brodrick, H. E., M.B., M.R.C.S., L.S.A., Liverpool Royal Infir.
Davis, George W., L.R.C.P., M.R.C.S., St. Thomas's Hosptal.
East, Charles Harry, M.R.C.S., L.S.A., King's College.
Gautby, George, Coll. of Med., Newcastle-on-Tyne.
Hubbard, Daniel Lovett, M.R.C.S., L.S.A., King's College.
Jaques, William, Coll. of Med., Newcastle-on-Tyne.
Leech, Joseph William, Coll. of Med., Newcastle-on-Tyne.
Lund, Theodor, M.B., Coll. of Med., Newcastle-on-Tyne.
Morton, Thomas, M.B., Coll. of Med., Newcastle-on-Tyne.
Reily, Walter Grant, Middlesex Hospital.
Stokes, John, M.B., M.R.C.S., College of Medicine, Newcastle-on-Tyne and Sheffield School of Medicine.
Wilson, Joseph Harwood, Owens College.

THE late Madame Boucicault, of Paris, has left £700,000 in charity, of which £4000 goes to the Pasteur Institute.

THE Bath Royal United Hospital has recently received under the will of the late Mrs. Maingay of Worthing a legacy of £500.

THE general annual meeting of the subscribers to the Royal Albert Asylum was held at the Chester Town Hall on the 8th inst.

THE FRENCH HOSPITAL.—The proceeds of the concert recently given at the Opera Comique in aid of this hospital in London amounted to 32,000 francs.

THERE were 17,741 fatal cases of cholera in the North-West Provinces of India during September, against 30,700 during the previous month.

THE spectacle of children carrying bottles of boiled drinking water to school with them has been an almost everyday sight in Cincinnati since typhoid fever became prevalent there.

BEQUESTS.—Mr. M. Rinkle has left the following sums to Dublin hospitals:—Mater Misericordiæ, £200; City of Dublin, £200; St. Michael's, £200; Jervis-street, £200; and St. Vincent's, £200.

VACCINATION GRANT.—Mr. A. C. Jones, M.R.C.S., of Oakham, Public Vaccinator of the Empingham district, Oakham Union, has received a Government grant for the efficiency of vaccination in his district.

A WELL-ATTENDED meeting in connexion with the Church of England Burial, Funeral, and Mourning Reform Association was held on the 12th inst. in the Chapter-room, St. Paul's-churchyard, under the presidency of the Bishop Suffragan of Bedford.

NEW WATER SUPPLY FOR SHREWSBURY. — At a meeting of the Shrewsbury Town Council on the 13th inst., it was decided to apply to the Local Government Board for powers to borrow the sum of £25,000 upon the security of the water and other rates, for the purpose of carrying out a new scheme for improving the general water supply of the town.

UNIVERSITY OF CAMBRIDGE.—At Gonville and Caius College the Thruston Prize of the value of £54, given triennially to a member of the College who has published in the course of the preceding three years the best original investigation in physiology, pathology, or practical medicine, has been adjudged to Mr. Charles Scott Sherrington, M.A., M.B., Fellow of the College.

CENTENARIANS.—Mrs. Rachel Prussic, of Spital-fields, celebrated her 106th birthday on the 10th inst. She is stated to be in such good health that she is able to go to synagogue twice on the Sabbath. A coloured man, residing in Texas, is reported to have attained the age of 117 years. The evidence of his age is afforded by a bill of sale from a slave-trader, dated 1850, and certifying that the negro in question was then eighty years old.

THE PARKES MUSEUM.—The National Society for Aid to the Sick and Wounded in War has, through Lord Wantage, made a donation of £60 to the funds of the Parkes Museum of Hygiene. The Dyers' Company have contributed ten guineas. The response to the appeal recently made has been encouraging, but further support is, we learn, greatly needed, and the most desirable form which such support can take is an annual subscription of one guinea, which qualifies for membership.

UNIVERSITY OF OXFORD.—The Warden and Fellows of Wadham College have elected Dr. James Andrew, formerly Fellow, senior physician to St. Bartholomew's Hospital, to an Honorary Fellowship of the College. The diploma of the examination in Preventive Medicine and Public Health has been awarded to Dr. G. A. Buckmaster, M.A., of Magdalen College. The diploma has been granted only once previously since the establishment of the examination.

THE LONDON TEMPERANCE HOSPITAL.—On Thursday, Dec. 8th, a largely attended *conversazione* was held in the gallery of the Royal Society of Painters in Water-Colours, Prince's Hall, Piccadilly, to commemorate the freedom of the hospital from debt owing to a recent donation of £6000 from Mr. J. J. Tustin. Another object was to arrange for the opening of all the wards, which are capable of receiving 120 in-patients. The Duke of Westminster, who is President of the hospital, could not attend, but sent a congratulatory letter with a cheque for £100.

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VOLUNTEER MEDICAL STAFF CORPS.—A "Cinderella Dance" is to be given on the 19th inst. by the members of this corps at the Chelsea Town Hall, to which those holding boxes, stalls, and dress-circle tickets for the performance to be given in the afternoon of the same day at Terry's Theatre will have the privilege of admission.

THE FUTURE UNIVERSITY OF LONDON.—On the 12th inst. the course of Monday afternoon lectures at the London Institution was continued by Professor H. Morley, of University College, who gave the first of two lectures dealing with the question of a fitting University for London such as is likely in the future.

AT an inquest held at Wonford, near Exeter, on the 6th inst., on the body of an infant, the jury found a verdict of "Accidental death from an overdose of chlorodyne," and condemned in strong terms the practice of administering chlorodyne to children. The drug was administered by the mother of the infant.

PROTECTION OF THEATRE-GOERS FROM FIRE.—At the ordinary weekly meeting of the Metropolitan Board of Works on the 9th inst., the Parliamentary Committee submitted the draft of the Bill for the further regulation of theatres and music-halls, and of certain other buildings used for public purposes in the metropolis; and recommended that the Bill be deposited as required by the Standing Orders of Parliament, and that the committee be empowered to take all necessary measures for promoting its passage through both Houses of Parliament. It was reported that since the Board had charge of the theatres they had dealt with eighty-one, besides a very large number of music-halls. By this Bill it was proposed that the Board should have the power of inspecting the theatres and music-halls of the metropolis at least once a year; and having already power to make structural alterations, they asked power to see that such alterations were adhered to, and that no obstructions or extra seats should be placed in the theatres without the Board's permission. The Bill also provided for all houses being controlled by the Board where theatrical entertainments and such-like performances were held, as, for instance, "club houses." The recommendation of the committee was approved unanimously.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOTHAMLEY, R. BROUGHTON, M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator to No. 1 District of the Bromley (Kent) Union.

BROOK, W. H. B., M.B.Lond., M.R.C.S., has been appointed House-Surgeon to the Lincoln County Hospital, vice Johnston, resigned.

CANT, W., L.R.C.P., M.R.C.S., has been appointed Surgeon to the Lincoln County Hospital.

COLLINS, HENRY BEALE, M.R.C.S., L.S.A., Surgeon, R.N., has been elected Resident Medical Officer to the St. George's, Hanover-square, Dispensary, vice Rendell, resigned.

DAVIES, JOHN T. H., M.D., M.R.C.S., formerly Resident Medical Officer to the Denbighshire Infirmary, has been appointed Surgeon to the Leicester Dispensary.

GIBBINGS, ASHLEY, M.R.C.S., L.D.S., has been appointed Professor of Dental Surgery at King's College, and Dental Surgeon to King's College Hospital.

JEFFREE, FRANK, M.B.Dur., M.R.C.S., has been appointed Assistant Medical Officer to the Stockport Infirmary.

JOSEPH, A. HILL, M.R.C.S., has been appointed Assistant House-Physician to the Royal Hospital for Diseases of the Chest, City-road, E.C.

LOWE, SEPTIMUS, M.R.C.S., L.R.C.P. Ed., has been appointed Consulting-Surgeon to the Lincoln County Hospital, on resignation of the office of Surgeon.

MARSHALL, ARTHUR L., B.A., M.B.Cantab., M.R.C.S., L.S.A., has been appointed Resident Medical Officer to the Royal United Hospital, Bath, vice Young, resigned.

OLDHAM, MONTAGUE WILLIAMS, M.R.C.S., L.R.C.P., L.S.A., has been appointed House-Surgeon to the Burton-on-Trent Infirmary, vice A. P. Trinder, M.R.C.S., L.R.C.P., resigned.

THOMSON, THEODORE, M.A., M.B.Lond., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Borough of Sheffield.

WEAVER, JOHN J., M.R.C.S., L.S.A., has been appointed House-Surgeon to the Southport Infirmary, vice H. Grosvenor Shaw, resigned.

WHISTON, P. H., M.R.C.S., L.R.C.P., has been appointed Assistant House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

ADDENBROOKE'S HOSPITAL, Cambridge. — Resident House-Physician. Salary £65 per annum, with board, lodging, and washing in the hospital.

BIRMINGHAM GENERAL HOSPITAL.—Assistant House-Surgeon. Board, residence, and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Clinical Assistant.

DORSET COUNTY HOSPITAL, Dorchester.—House-Surgeon and Secretary. Salary as House-Surgeon £70, as Secretary £10 per annum, with board and residence in the hospital.

ESSEX AND COLCHESTER HOSPITAL. — Physician. Salary £200 per annum.

LYMINGTON UNION.—Medical and Vaccination Officer. Salary £65 per annum, with the usual extra medical and vaccination fees.

SCARBOROUGH HOSPITAL AND DISPENSARY. — House-Surgeon. Salary £80 per annum, with board and lodging.

SEAMEN'S HOSPITAL SOCIETY, Greenwich, S.E. (late *Dreadnought*).—House-Physician. Salary £75 per annum, with board, furnished rooms, and attendance.

WIGAN UNION.—Medical Officer and Public Vaccinator. Salary £130 per annum, with the usual allowance for each case of successful vaccination, and such extra fees for the treatment of surgical and midwifery cases as are authorised by the orders of the Poor Law Board.

WORCESTER AMALGAMATED FRIENDLY SOCIETY. — Assistant Medical Officer. Salary £140 per annum (without residence), with a portion of midwifery fees; also £20 per annum for cab hire.

Births, Marriages, and Deaths.

BIRTHS.

BRAND.—On the 4th inst., at Invery, Driffield, East Yorks, the wife of Alex. T. Brand, M.D., C.M.Aber., of a daughter.

BROOKS.—On the 4th inst., at Beaumont-street, Oxford, the wife of W. Tyrrell Brooks, M.B., B.A., of a daughter.

BROWN.—On the 13th inst., at Claremont House, Strood, Kent, the wife of Robert Ross Brown, L.R.C.P., of a son.

HARDWICK.—On the 5th inst., at Purlands, Charing, Kent, the wife of Fredk. S. Hardwick, M.D., of a son.

RENSHAW.—On the 10th inst., at Clarendon-terrace, Stoke, the wife of Bernard Renshaw, Staff Surgeon, Royal Navy, of a son.

MARRIAGES.

HAMMOND—GRUNDY.—On the 22nd ult., at the Cathedral, Port of Spain, Trinidad, Edward Johnston Hammond, M.R.C.S., Government Medical Officer, Savana Grande, to Marian Leigh, third daughter of the late Edmond Grundy, Esq., of Greenhill, near Manchester.

MACNAMARA—WARD.—On the 8th inst., at Christ Church, New Radford, Nottingham, by the Rev. T. C. Ward, assisted by the Rev. H. Ward (brothers of the bride), the Rev. T. Pyper, Vicar, and the Rev. C. O. Miles, Hugh Winckworth Macnamara, Surgeon, Royal Navy, son of G. H. Macnamara, Esq., formerly of Uxbridge, to Charlotte, third daughter of the late William George Ward, Esq., of Newcastle-drive, Nottingham.

WESTBROOK—WELLS.—On the 7th inst., at All Saints' Church, Lewes, Richard Talbot Westbrook, M.R.C.S., to Florence Harriot Anna, only daughter of Charles Aspull Wells, Esq., of Lewes and Preston-park, Brighton, Sussex.

DEATHS.

BURROWS.—On the 12th inst., at Cavendish-square, W., Sir George Burrows, Bart., M.D., F.R.S., Physician in Ordinary to the Queen, Consulting-Physician to St. Bartholomew's Hospital, late President of the Royal College of Physicians, in his 87th year.

COLE.—On the 7th inst., at Lymm, Cheshire, Henry Cole, M.R.C.S., aged 59.

GREENWOOD.—On the 5th inst., at his residence, Two Mile Ash, Horsham, T. Bryan Greenwood, M.R.C.S., L.S.A., formerly of Horselydown, S.E., aged 77.

KERR.—On the 10th inst., at his residence, Croft House, Crawshawbooth, near Manchester, James Kerr, L.S.A.L., aged 76.

PIGGOT.—On the 10th inst., Allen Piggot, M.R.C.S., L.R.C.P., of Beckenham, Kent, eldest son of Jas. A. Piggot, of Beckingham, Essex.

WILDE.—On the 8th inst., at Swineshead, Lincolnshire, after a few days illness, Fredk. Wilde, M.R.C.S., aged 30.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 15th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 9	29·41	N.W.	51	47	69	53	39	·25	Cloudy
,, 10	29·89	N.E.	42	41	50	41	40	...	Overcast
,, 11	30·08	N.E.	37	35	...	42	31	...	Overcast
,, 12	30·15	N.E.	34	33	...	50	33	·12	Overcast
,, 13	29·56	S.W.	50	49	...	52	33	·21	Raining
,, 14	29·56	W.	41	39	63	48	37	·04	Cloudy
,, 15	29·30	S.W.	43	42	...	47	40	·29	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

CRUELTY TO CHILDREN.

To the Editors of THE LANCET.

SIRS,—Will you kindly permit us to bring before your readers the claims of the work in which we are engaged in the London Society for the Prevention of Cruelty to Children. The following facts speak for themselves.

In our three years' history, since our founding at the Mansion House in July, 1884, we have dealt with 762 more or less cruel people, for the most part by moral influence. In 132 worst cases, many almost incredible, we have had resort to the law, and have obtained 120 convictions. Of the total number of 762 cases, we find that 333 were cases of injuries inflicted by assault, 81 of starvation (some of these of farmed-out babies and children insured), 130 of dangerous neglect, 32 of desertion, 70 of cruel exposure to excite sympathy in the streets, and 116 of other wrongs. Our efforts have not been confined to London, but have extended to many parts of the country. We do not interfere with mere parental indiscretion, but only with deeds of cruelty which render child-life unendurable, twenty-five cases ending with the victims' death. When punishment is inflicted, it is always followed by indirect, but real, supervision.

At this child-season of the year, we feel that our work must appeal very powerfully to all generous hearts. The following ladies will be glad to receive subscriptions:—The Countess of Iddesleigh, 23, Manchester-square; Lady Henderson, 4, Gledhow-gardens; Lady Whittaker Ellis, Buccleuch House, Richmond. Also at the office subscriptions will be gratefully received.—We are, Sirs, yours obediently,

R. RUTHVEN PYM, Treasurer,
BENJ. WAUGH, Hon. Sec.

Office of the Society, 7, Harpur-street, Bloomsbury.

Peripatetic.—Hoblyn's Dictionary of Terms used in Medicine and the Collateral Sciences, published by Whittaker & Co., Paternoster-square.

"ROUGH-AND-READY MEDICAMENTS."

To the Editors of THE LANCET.

SIRS,—It may interest Brigade-Surgeon Curran to know, that, on the evening before his interesting letter under the above heading appeared in THE LANCET, Dr. Howship Dickinson, at a dinner at Prof. Philipson's at Newcastle-upon-Tyne, related the case described by Sir Astley Cooper with reference to the patient with "bow shins," and told us how the late Mr. Hilton had told him that the patient eventually came under his care suffering from malignant growths of the cicatrices in both legs. This seems worth recording; for besides the curious coincidence of the double mention of the case, it is of special interest in connexion with Mr. Hutchinson's paper on Arsenic Cancer, read on Tuesday, the 6th inst., at the Pathological Society, and reported in your issue of to-day.

I am, Sirs, faithfully yours,

Holly House, Sunderland, Dec. 10th, 1887. JAMES MURPHY.

"TREATMENT OF ECZEMA AND PSORIASIS."

To the Editors of THE LANCET.

SIRS,—As the treatment of the above diseases is at present being discussed in your journal, and as I have successfully treated several hundred cases of both diseases during the past twelve years in the following manner, I beg to forward it to you for publication, should you think it worthy of a place in your journal.

In acute eczema I have found nothing to excel the oxide of zinc ointment as a local application, whilst the serum is still exuding. As this dries, equal parts of zinc ointment with vaseline or lanoline to be kept constantly applied to the diseased surface, forbidding water in any shape or form; and I may say at once that to this do I attribute a very great share of the success of the treatment, the part to be washed, only when absolutely necessary, with milk and warm water in equal parts. To allay the irritation in chronic eczema, from one to seven minims of pure carbolic acid to an ounce of the equal parts of zinc ointment and vaseline; all scales and dirt of any kind to be gently removed with the eye of a large needle (I use a small director). The impetiginous form I treat in the same way, mopping up any discharge with cotton-wool, which is far more successful than by poultice or bathing with warm water. To sum up: Keep the diseased surface dry, and constantly greased with the preparations mentioned; treat the constitution generally; try to get every organ of the body to perform its natural function. Diet plain and fresh, with a liberal allowance of vegetables and fruits; the less alcohol in any shape or form the more rapid the recovery, as also tea and coffee.

Few are the cases of psoriasis that will not yield to arsenic internally and carbolic acid externally, with alkaline baths every other day or twice a week. With regard to the external application, it is best to commence with a strength of from two to five minims to the ounce, and gradually increase till in some cases the strength of the glyc. acid. carbol. (B.P.) has been reached. In only about 1 per cent. has the carbolic acid been found to blacken the skin or in any way to act injuriously, the worst case of abnormal pigmentation being the one I reported in your columns three years ago.

I am, Sirs, yours truly,

Jermyn-street, S.W., December, 1887. W. R. CULLING.

To the Editors of THE LANCET.

SIRS,—Will Dr. Myrtle kindly give the preparation of tar he most approves, and also the strength of the quinine lotion he usually employs? His article and Sir Andrew Clark's recent one on Chlorosis are types of those most welcome to busy practitioners.

I am, Sirs, yours obliged,

Dec. 12th, 1887. CLUB.

M.R.C.S.—There is no inflexible rule. It is better to follow the custom hitherto observed in the district.

Mr. A. C. Morton.—We referred to all papers to which our remarks would justly apply.

Dr. J. D. Malcolm.—The paper is marked for insertion.

DIPHTHERIA DURING PREGNANCY.

To the Editors of THE LANCET.

SIRS,—In an annotation in your last issue I observe an extract from the *Russkaya Meditsina*, in which Dr. Korotkevich mentions that he has only been able to find four cases of diphtheria during pregnancy reported. I was not aware that it was so rare in pregnant women; but as it appears to be so, it may interest your readers to hear of an additional case.

In September last a woman about seven months advanced in pregnancy came to my house to consult me with well-marked diphtheria, the uvula and both tonsils being covered with the characteristic false membrane. She was very feeble. Two days later I was summoned on account of urgent symptoms. As I was engaged with a midwifery case, a friend and neighbour, who saw the woman for me, performed tracheotomy; but the patient died the same evening.

I am, Sirs, yours faithfully,

Bath, Dec. 12th, 1887. W. N. HEYGATE.

M. P.—The qualification mentioned does not carry the title of surgeon. Our correspondent should get a surgical qualification.

Dr. Bell Taylor.—Very shortly.

VOLUNTARY BOARDERS IN LUNATIC ASYLUMS.

To the Editors of THE LANCET.

SIRS,—In reply to the question as to voluntary boarders, will you allow me to say that both private asylums and registered hospitals for the insane can accept as voluntary boarders patients who within five years have been under medical certificates; and that registered hospitals, such as Bethlem, can receive as such any patients who voluntarily place themselves under care, provided they are not so insane as to be unable to form a judgment, or are otherwise only fit to be placed under certificates. The Commissioners in Lunacy see such patients on their visits, and advise in many cases whether such cases should be certified or allowed to remain as boarders. In Bethlem we have from ten to fifteen such boarders, and find that they fall into the regulations very well.

I am, Sirs, yours truly,

Bethlem Hospital, London, S.E., Dec. 12th, 1887. GEO. H. SAVAGE.

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INTERESTING MIDWIFERY CASE.

To the Editors of THE LANCET.

SIRS,—I read the other day in your issue of Oct. 15th, Mr. Borham's interesting account of a labour in which head, hand, and cord presented, and where he succeeded in delivering a living child. I had never seen a case of a similar kind in practice before, but yesterday, the 7th inst., I met with the following complication of presentation, which is similar to, but, I think, even more curious and rare than, Mr. Borham's case. Mrs. W——, a negress, was being attended in labour with her ninth child by a midwife. The labour had continued for twenty-four hours, during which time the pains had been slight, but regular, and the membranes had been ruptured for twelve hours. At this stage I was sent for hurriedly. I was informed on arrival that fifteen minutes before, while Mrs. W—— was passing urine, the cord had come down, and also that the child was "lying across." I found a loop of cord, about four inches in length, hanging external to the vulva. It was quite cold and pulseless. The mother stated that she had felt no movement of the child since the waters had come away, twelve hours before. On examining, I found the child's right foot presenting alongside the head and between the head and the right acetabulum. The pelvis was capacious, as is generally the case in the negress, and I was able, with great ease and with the introduction into the vagina of only two fingers and the thumb, to turn and deliver a dead male child of fair average size. The cord was not unusually long, but I did not measure it. There was no history of fall or accident in this case.

I am, Sirs, yours truly,

Tobago, W.I., Nov. 8th, 1887. JOHN P. TULLOCH, M.A., M.B.

Mr. Hackett might apply to the Secretary of the Brussels Graduates' Association, The Limes, St. Mark's-road, North Kensington.

Alpha had better apply to the Secretary of the Society which gives the subject its special attention.

A Constant Reader will see by referring to our last issue that we have noticed the matter.

VACCINATION NOTES.

To the Editors of THE LANCET.

SIRS,—It may be of service to the profession to put on record the two following cases.

CASE 1.—J. W. L——, aged about seventeen years, came before me to be examined and vaccinated before appointment as telegraph messenger. He was never vaccinated as an infant, but had had a severe attack of small-pox during the epidemic here in 1881-2, which left him liberally marked. I vaccinated him on Saturday, Nov. 19th, 1887, in four places, all of which I found four days after to have taken well.

CASE 2.—A. B——, aged thirty-four. On Nov. 21st, 1887, I revaccinated this patient, and four days later found two successful takings (I had put on two only). He was never vaccinated as an infant, but in January, 1886, I vaccinated him myself in two places, which took severely, leaving deep marks, with high fever, enlarged axillary glands, &c., necessitating confinement to the house.

In Case 2, I only report a not uncommon instance, but the time between a severe vaccination in January, 1886, and a second successful vaccination in November, 1887, seems short. Case 1, however, seems to open up a field for thought. 1. Was J. W. L. liable before revaccination to another attack of small-pox? 2. Granted, as I believe, that vaccinia prevents variola, does variola prevent vaccinia? 3. But how much of the variolla one sees in children is variola modified by non-efficient vaccinia?

I am, Sirs, yours truly,

Rochdale, Dec. 5th, 1887. WILLIAM STANWELL.

Doubtful.—Not under Clause 16. For registration of foreign degrees under this clause it is necessary that they should have been held prior to the passing of the Act. In the course of time, under other clauses, certain foreign and colonial degrees will be registrable.

Mr. J. G. Leeson.—The Australasian Medical Directory, published by Baillière, Tindall, and Cox, King William-street, Strand, will give the information desired.

A WARNING.

To the Editors of THE LANCET.

SIRS,—Will you kindly grant me space to warn members of the profession against a man who gives the name of Adams, and introduces himself with my name and recommendation to sell various kinds of cloth? He gives a false address—Dalkeith, near Edinburgh. The police have been trying to find him for some time past. As I have heard of him again to-day, I think it well to mention these facts.

I am, Sirs, yours faithfully,

Grafton-street, Piccadilly, Dec. 13th, 1887. DYCE DUCKWORTH.

Mr. William Watson.—We have no means of identifying the "Dr. Clark" mentioned in the report.

Ether.—Mr. Coxeter of University-street will no doubt give the required information.

LONG SURVIVAL OF TRIPLETS.

To the Editors of THE LANCET.

SIRS,—It may interest your readers to learn that I am attending a gentleman, aged thirty-one, whose two sisters, born on the same day that he was, are alive and well. I have never previously heard of triplets all living to any considerable age.—Yours truly,

F. TAYLOR SIMSON, L.R.C.P. Lond.

Lavender-hill, S.W., Dec. 14th, 1887.

EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—The annual report of Epsom College has just been sent to the governors, and I find that it contains certain proposed alterations in the rules and bye-laws which, I suppose, were carried at the annual meeting. If so, I should like to point out that all these alterations are not made in favour of the parents. Why should the parents have to pay for school books which become of no value after their sons have used them? The tendency of the Council is to raise the expense to parents sending their sons to Epsom. The prospectus speaks of £52 10*s.* per annum; but I found that it came to nearly £70 per annum for my son, and with the cost of books added it may come to £75. Then, again, why should a foundation scholar elected by the governors be refused admission on account of his character? Surely, the Council before admitting the boy on the list of eligible candidates might make some inquiry as to his character, so as to prevent the child being thrown back on the widow after all her anxiety and expense in procuring his election. I am well satisfied with the progress my son made at Epsom, and with the attention of the masters; but I do say the Council are forgetting the reasons for which the College was established—viz., to enable medical men to have their sons educated at a reasonable cost.

I am, Sirs, yours obediently,

December, 1887. A MEDICAL PRACTITIONER.

Surgeon.—There is no such thing, strictly speaking, as a legally qualified midwife. Various hospitals give training and certificates in midwifery, as the City of London, Queen Charlotte's and York-road. But there is as yet no legally constituted authority to regulate the education, examination, and qualification of midwives. Meantime, the best thing our correspondent can do for the "trustworthy and intelligent" nurse is to send her to some such institution.

House-Surgeon is obliged to make post-mortem examinations and attend and give evidence at inquests without receiving fee.

IMPOTENCE AND DIABETES.

To the Editors of THE LANCET.

SIRS,—I think the following case is of some interest in respect to the question of impotence and diabetes.

William A——, aged seventy, came under my care in November with a carbuncle on the back, which he had had for three weeks. On testing the urine it was found to contain an abundance of sugar. Symptoms of diabetes—i.e., thirst and the passage of a large quantity of urine—had been noticed for about four months; but it is probable that the diabetes had been present even longer. The patient had been married four times, and the last wife, who is still alive, was recently confined of twins.

I am, Sirs, yours faithfully,

Stroud Hospital, Dec. 6th, 1887. M. C. MOXHAM.

Epsilon.—Art. 156 states that no appointment shall be made under the General Consolidated Order "unless an advertisement giving notice of the consideration of such appointment shall have appeared in some public paper by direction of the guardians at least seven days before the day on which such appointment is made, provided that no advertisement shall be necessary for the appointment of an assistant or temporary substitute."

Dr. James Oliver.—Yes, the shorter paper.

TREATMENT OF TETANUS BY NITRITE OF AMYL: RECOVERY.

To the Editors of THE LANCET.

SIRS,—I was much struck, in a case of traumatic tetanus which I had under treatment this year, by the great relief given by inhalations of nitrite of amyl. The patient was treated with bromide and chloral, with the addition of morphia. After the second day, and when a paroxysm seemed coming on, he used the amyl freely with great relief, usually dropping off to sleep after two or three inhalations.

I am, Sirs, yours faithfully,

South Tottenham, December, 1887. GEO. B. BEACH.

Dr. T. Maccall.—We shall be glad to receive a specimen of the instrument when ready to be issued.

BALLIN'S FUR RESPIRATOR.

To the Editors of THE LANCET.

SIRS,—I beg the favour of your correction of the notice of the above respirator, which appeared in THE LANCET of Dec. 3rd. The leather part of this respirator is perforated with minute holes, so that the air is inhaled easily through the fur; and it is so prepared that it can be washed in cold water without being injured.

I am, Sirs, yours faithfully,

Aldersgate-street, Dec. 12th, 1887. J. S. BALLIN.

CORRIGENDA.—In Mr. Pemberton's letter on the Treatment of Cancer, published last week, for "or contamination of the adjacent glands" read "or contaminating the adjacent glands"; and in Mr. Jessett's letter on the same subject, for "In some cases of cancer of the uterus the patients have expressed themselves as 'free' from pain" read "patients have expressed themselves as *freer* from pain."

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Sansom, London; Mr. E. Owen, London; Dr. Elder, Nottingham; Sir Henry Ponsonby; Dr. W. Macewen, Glasgow; Dr. Ralfe, London; Sir Dyce Duckworth; Dr. Menzies, Venice; Mr. G. P. Atkinson, Pontefract; Dr. Cummins, Cork; Mr. L. Humphry, Cambridge; Messrs. Boulton and Paul, Norwich; Mr. O. B. Shelswell, Mitcham; Dr. Dale, King's Lynn; Dr. Taussig, Rome; Mr. Culling, London; Messrs. Rogers and Co., Wigan; Mr. Heygate, Bath; Mr. Abbott, Exeter; Dr. Hunter Mackenzie; Dr. Bernard, Farnborough; Mr. McGill, Leeds; Mr. H. Sainsbury, London; Mr. Mason, Portsmouth; Mr. Leeson; Mr. A. F. Robbins, London; Mr. A. F. Hawkins, Birmingham; Dr. J. K. Kerr, Leytonstone; Dr. Bartlet, Ipswich; Mr. A. C. Morton; Mr. Keeling, Epsom; Surg.-Major Black, London; Mr. Wilkin, London; Mrs. J. H. Stone, London; Dr. J. Murphy, Sunderland; Mr. Rogers; Mr. D. Llewellyn, Southborough; Messrs. Blackwood, Edinburgh; Dr. C. M. Campbell, London; Mr. A. C. Roper, Exeter; Prof. H. V. Carter, Bombay; Dr. Tulloch, Tobago; Dr. A. G. Macdonald; Dr. R. Bell, Glasgow; Mr. C. E. Jennings, London; Mr. W. Watson; Dr. J. K. Love, Glasgow; Mr. Soden, Dublin; Dr. Brand, Yorks; Miss Tickan, London; Mr. Eschwege, London; Mr. Taylor, Hanley; Mr. Giddy, Scarborough; Mr. Bacot, Dorset; M. Hamon, Paris; Mr. St. Dalmas, Leicester; Dr. Carnie, Bradford; Mr. Guest, Melsonbury; Mr. Fuge, Taunton; Mr. Dwelly, Dartford; Dr. Atkins, Toronto; Mr. Heoyer, Vienna; Miss Chreiman, London; Dr. Allwright; Dr. Macdonald, Auchterderran; Mr. Robinson, Coleraine; Dr. Curry; Mrs. Brown, London; Dr. Dixon, Arundel; Mr. Birchall, Liverpool; Mr. Heelas, Nottingham; Dr. Bailey; Mr. Groves, Dorchester; Mr. Lancaster, St. Helens; Dr. Freund, Varna; Mr. Poole; Mr. Parker; Mr. Gibson, Worcester; Mr. McNab; Mr. Beaumont, Bath; Mr. F. T. Simson; Dr. George Harley, London; Nullus; Justice; Volunteer Med. Staff Corps, London; M.P.; Doubtful; A Medical Practitioner; Ether; Club; M.R.C.S., L.S.A.; L. M. D.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Bastian; Mr. Adam, Liverpool; Mr. Newton, Queensland; Dr. Foreman, Virgin Islands, West Indies; Rev. E. Gabriel; Dr. Reid, Canterbury, New Zealand; Mr. Williams; Dr. Morley, Leeds; Mr. Cole; Messrs. Keith and Co.; Mr. Campbell; Mr. Hoggan, Glasgow; Messrs. Christy and Co., London; Mr. Howe; Dr. Kemp; Dr. Thomas, Christchurch, New Zealand; Mr. Parry; Dr. Bennett, Morpeth, N.S.W.; Messrs. Mason and Co., London; Dr. Caddy, Barrow-in-Furness; Mr. Hine, East Yorks; Mr. Robinson; Dr. Mann, Nottingham; Mr. Anderson, Llandudno; Dr. Potter, Cullompton; Dr. Mitchell, London; Miss Brox, Nottingham; Messrs. Stern, London; Dr. Cochrane; Mr. Kirkland, Horsham; Dr. Bower, Bedford; Mr. Ideson, Colne; Mr. Hammond, Cranleigh; Dr. Robertson; Mr. Hawley; Mrs. Cocking; Mr. Tully, Hastings; Mrs. Buxton, Buckhurst-hill; Dr. Gunn; Mr. Heywood, Manchester; Mr. Nicholls; Mr. Hogg, Bedford; Messrs. Roger and Co.; Mr. Fraser; Mr. Beddoes; Mr. Hodgson; Mr. Scrymgeour, Liverpool; Mr. Robinson; Dr. Kerr, Bury; Dr. Meadows; Miss Andrews, Jersey; Mr. Hawley; Medical Practitioner; M.D., St. Leonards; P. W.; Vigilans; H. H. H.; Medicus, Oldham; T., Bath; Victoria Infirmary, Norwich; A. H.; Medicus, Darwen; Assistant; Lady Superintendent, Bath; L.R.C.P.; M.B., Edinburgh; R. A.; M.D., Crew; Ivy; Suaviter; L.; Osteon; A.Z.; M.D., Birmingham; Guest Hospital, Dudley; A. T. H.; Studens; Forceps; Hospital; T. H., Liverpool; Beta.

Croydon Chronicle, Gospel Temperance Banner, Lincoln Gazette, Chester Chronicle, Sheffield Daily Telegraph, London Echo, Leicester Daily Post, The Literary World, &c., have been received.

Medical Diary for the ensuing Week.

Monday, December 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Edmund Owen: Two cases of Disease of the Tibia in which the Knee-joint was involved in Acute Suppuration.—Dr. Angel Money: Neuromata, with Reflex Epilepsy.—Dr. Sainsbury: A case of Early Diastolic Murmur.—Mr. Bernard Pitts: Two cases of Psoas Abscess treated by Lumbar Incision.

Tuesday, December 20.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Bull: Rare Form of Fracture of Lower End of Femur.—Mr. D'Arcy Power: Vertical Fracture of Head of Tibia.—Dr. Ormerod: Partial Perforation of Skull-cap in a case of Cerebral Tumour.—Mr. J. B. Sutton: Effects of Rickets on Lion's Skulls.—Mr. C. J. Symonds: Tubercle in Sheath of Tendon; Excision; Cure.—Prof. Roy and Mr. Adams: Experimental Observations on Certain Forms of Valvular Disease of the Heart. Card specimens:—Dr. Percy Smith: Syphilitic Arteritis from a case of General Paralysis of the Insane.—Mr. Hudson: Cirrhosis of Liver.—Mr. S. Paget: Fibro-sarcoma beneath Pectoralis Major, from a Man aged Seventy.

Wednesday, December 21.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.

Thursday, December 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, December 23.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, December 24.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Lectures
ON
FIBROID DEGENERATION AND ALLIED LESIONS OF THE HEART, AND THEIR ASSOCIATION WITH DISEASE OF THE CORONARY ARTERIES.

By JOHN LINDSAY STEVEN, M.D.,
ASSISTANT TO THE PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF GLASGOW; ASSISTANT PHYSICIAN, GLASGOW ROYAL INFIRMARY; AND ASSISTANT TO THE LECTURER ON PATHOLOGY IN THE WESTERN INFIRMARY OF GLASGOW.

LECTURE III.
SUMMARY OF CONCLUSIONS.

THE somewhat exhaustive study which we have made of the varieties of heart disease described in the foregoing lectures naturally leads me to formulate the following conclusions, which I think will be fully borne out by the facts already passed in review:—1. That a very sharp distinction must always be drawn between true atrophic fibroid degeneration and interstitial myocarditis; that, though similar in their results, they are quite different in their mode of production, and that the former is a much more common lesion than the latter. 2. That we should not be satisfied with merely opening the heart and examining the endocardium and valves, as is too often the case at post-mortem examinations, but that in all cases the muscular tissue, by numerous incisions parallel to the surface, should be carefully investigated. 3. That the anastomosis of the coronary arteries is not so free as to be of any practical moment (especially when the vessels are diseased) in preventing the occurrence of fibroid degeneration or of infarction of the heart as a result of obstruction of their branches. 4. That the influence of a morbid state of the coronary arteries must be taken into account in considering all diseases of the heart, but especially those of the myocardium, and that no examination of the heart can be regarded as complete which does not include a careful investigation of the state of these vessels. 5. That, though admittedly difficult, the possibility of diagnosing fibroid degeneration and infarction of the heart should always be kept in sight, and that by carefully passing in review the whole symptomatology and pathology of a given case of cardiac disease, a correct opinion in this regard may probably be arrived at.

RECORD OF CASES OF FIBROID DEGENERATION, INFARCTION, AND FATTY DEGENERATION OF THE HEART ASSOCIATED WITH A DISEASED CONDITION OF THE CORONARY ARTERIES.

It now only remains for me to briefly record the cases which I have investigated, and upon the examination of which the opinions I have already expressed are mainly based. For the opportunity I have had of examining many of the following cases, and for liberty to make use of the pathological records in connexion with them, I have in this place to express my obligations to my friend Dr. Joseph Coats, lecturer on Pathology in the Western Infirmary of Glasgow.

CASE 1. *Slight fibroid and fatty degeneration of left ventricle, with atheroma of the coronary arteries.*—Duncan C——, aged fifty-two, was admitted to Dr. Anderson's wards of the Western Infirmary on Jan. 28th, 1885, complaining of a common cold of a week's duration, with a sense of uneasiness in the epigastrium, and several attacks of severe pain in that region. There was some tenderness and enlargement of the left lobe of the liver; and two days after his admission he was suddenly seized with severe pain of the nature of angina pectoris, and died in about ten minutes.

A post-mortem examination was made on Feb. 1st, 1885, of which the following is a summary: Flabby and dilated heart; passive hyperæmia of lungs and other organs. With regard to the heart, it was found to be somewhat enlarged, weighing 12½ oz., and the right ventricle was considerably dilated. The cavities contained much fluid blood, and almost no clot; the mitral orifice admitted three fingers, the tricuspid six. The muscular tissue, especially that of the right ventricle, was pale, and to the touch it felt flabby. The valvular structures were normal. The internal coat of the aorta presented patches of fatty degeneration. On careful examination of the coronary arteries many small areas of atheroma were discovered, but the vessels were quite pervious. Throughout the muscular tissue of the left ventricle numerous small yellowish spots were discovered, and on its posterior wall near the apex there was a distinct fibrous area about the size of a threepenny-piece, with around it evidences of slighter degrees of the same thing. There was also a generalised, but by no means extreme, fatty degeneration of the muscular tissue. The kidneys presented nothing remarkable. On microscopic examination of the fibrous area, it was found to consist of delicate wavy lines of connective tissue, with here and there a granular appearance as if nuclei were scattered through it. In the midst of the fibrous tissue remains of muscular fibres were present; these fibres became atrophied at their extremities, and were prolonged into delicate, wavy fibrillæ, which were ultimately lost in the surrounding connective tissue. The appearances were strikingly suggestive of an atrophy of the true muscle substance having taken place. On staining with picro-carmine, the affected patch stained of a deep-red colour.

CASE 2. *Slight fibroid degeneration of left ventricle; coronary arteries pervious, but presenting evidence of hypertrophy of middle coat; granular kidneys.*—Alex. K——, aged fifty-three, a plumber, was treated in Dr. Joseph Coats' ward of the Western Infirmary. The clinical history was that of chronic Bright's disease, with two attacks of generalised œdema, one of which occurred during his residence in hospital, when fatal uræmic convulsions supervened.

The following is a summary of the post-mortem examination: Granular kidneys (atrophy of cortex); enlarged left ventricle of heart; dilatation of lateral ventricles of brain; œdema of membranes. The heart presented great hypertrophy of the left ventricle, and weighed 20 oz. The muscular tissue was of good colour and consistence. On careful examination a small area of fibroid change about the size of a split pea was discovered in the anterior wall of the left ventricle. The coronary arteries, so far as could be discovered by the naked eye, were quite healthy and pervious. A typical "soldier's spot" was present on the surface of the right ventricle, and it was also noted that the pericardium presented linear, opaque, white areas of thickening, which followed the course of, and seemed to surround, the branches of the coronary arteries. The fibroid patch and the pericardial thickenings were reserved for microscopic examination. The kidneys were extensively diseased; the cortex was much atrophied and infiltrated with round cells; uric acid infarctions were present in the pyramids. On microscopic examination the fibroid patch presented characters precisely similar to those observed in the last case. In several of the sections minute arteries were observed, and these presented very obvious signs of disease. The middle coat was very greatly hypertrophied, but no sign of the so-called arterio-capillary fibrosis could be detected. In the thickened pericardium the arteries also showed distinct thickening of the middle coat, but no exaggeration of the external.

CASE 3. *Fibroid patch in left ventricle; widespread arteritis deformans; coronaries pervious, but hypertrophy of middle coat of arterioles.*—Mrs. M——, aged thirty-five, was admitted to Dr. Anderson's wards on Nov. 3rd, 1886, complaining of palpitation and dyspnœa. The symptoms had been present for eleven years, more or less. There was a double aortic murmur, with dulness over the manubrium sterni and purring tremor in the supra-sternal notch. Hæmoptysis occurred on several occasions, and dyspnœa was always distressing.

On post-mortem examination the case was found to be one of widespread arterio-sclerosis (arteritis deformans); but with the naked eye the coronary arteries were found to be flexible and healthy throughout, with not a trace of atheromatous deposit to be seen, even in the finer ramifications. The left ventricle was greatly hypertrophied, and in the apical region a very typical patch of fibroid change, about half-an-inch in diameter, was discovered. It was depressed, white, and glistening or tendinous in appearance. On microscopic examination the fibroid patch presented the characters already described. The arterioles, however, in and around the sclerosed area presented marked hypertrophy

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of the middle coat, and in some it was also thought that there was slight thickening of the internal coat as well.

CASE 4. *Multiple areas of fibroid disease and softening due to embolism of coronary arteries; extensive aortic disease.*—Mrs. S——, aged thirty-eight, was admitted to Dr. Anderson's wards on Feb. 6th, 1885, complaining of cough, dyspnœa, and profuse expectoration of about one month's duration. There was a history of bygone rheumatic pains in the joints. Six years previously she had suffered from similar symptoms after a confinement, and the fatal attack began after her last labour. There was passive congestion of all the organs, which continued till death, and well-marked signs of aortic disease.

The heart was enlarged, weighing 17 oz.; the hypertrophy was general, but was specially well marked in the left ventricle. The aortic valve was quite incompetent, and much disorganised—the curtains being greatly deformed and the seat of massive vegetations. In some places the segments of the valve were distinctly torn. Infarctions were present in the lungs, and other organs. On more minute examination of the heart, numerous small areas of fibroid change were found scattered throughout the substance of the wall of the left ventricle. Most of these areas had the typical shining and tendinous appearance, and were depressed beneath the level of the cut surface, and irregular in outline. At two places were observed more recent patches of a brownish or hæmorrhagic appearance, and distinctly soft in consistence. The characters observed in this case very decidedly suggested multiple embolism as the cause of the condition. On microscopic examination the distinctly fibroid areas presented features quite similar to those already described, but in the recent patches the histological characters were quite in keeping with the supposition that they had been caused by an embolic process—that is to say, in the recent areas the bundles of muscular fibres, while they preserved their bulk and general outline, had lost the opaque and striated appearance of the healthy bundles; the individual fibres looked as if they had run together more or less, and they had throughout a homogeneous, glistening, transparent character—coagulation necrosis. The bundles of coagulated muscular fibres were separated from one another, just as in the case of normal bundles, by strands of fibrous tissue. These appearances were observed in one of the patches which had been cut in transverse section, and on examination of another portion cut in longitudinal section precisely similar changes were made out. The fibres were evidently coagulated, and were in many places undergoing absorption. The absorbed fibres were replaced by very beautiful fibrous tissue, and so long as any necrosed tissue could be seen it presented the translucent, bright-yellow appearance already adverted to. The affected patch was quite irregular as regards its junction with the surrounding healthy tissue, and here and there isolated normal fibres might be seen in the midst of the necrosed area. At the margins of the areas in some of the sections numerous engorged veins were seen, with slight exudation of round cells into the surrounding tissues. The muscular nuclei had disappeared from the coagulated fibres

This case seemed to me to be most important as showing the relationship existing between the acute infarction of the heart wall and the chronic fibroid change; and, clinically, it also points to a possible cause of rapid heart failure in cases of severe aortic disease.

CASE 5. *Multiple areas of fibroid degeneration and softening, probably embolic; atheroma of coronary arteries.*—John C——, aged sixty-two, died in one of Dr. Tennent's wards on March 20th, 1885. He had been suffering from cough, spit, dyspnœa, and palpitation, with pain across the chest, and œdema of the ankles. On Feb. 24th there was complaint of pain and numbness in the left leg, with painful swelling of the left thigh. On Feb. 28th he was paralysed on the left side of the body and the right side of the face. On March 7th there was a second attack of facial paralysis, and on the 20th he died.

On examining the basal vessels of the brain, the right posterior cerebral was found to be cylindrical, being distended by a dark plug, which extended to its bifurcation, where the thrombus became rather pale. The obstructed vessel crossed over the right peduncle and the third nerve; and the peduncle was much softened. Embolic infarctions were also present in the kidneys and spleen. The heart was somewhat enlarged and dilated, weighing 13½ oz.; and there were thrombi in the apex of the left ventricle. The valvular structures presented opacities and occasional calcareous infiltration. On more particular examination, it was found that the organ presented patches of fibroid change, with a well-marked area of softening in the substance of the left ventricle near the apex: the morbid condition of the muscular tissue was in all probability due to embolism of the smaller branches of the coronary arteries. The area of softening at the apex of the left ventricle was about the size of a sixpence; and on being cut into was seen to be semifluid in consistence and brown in colour: the morbid area could be easily differentiated from the surrounding healthy tissue by being depressed below its level. About the middle of the posterior wall of the left ventricle and corresponding pretty nearly in situation with the point of attachment of the musculi papillares of the posterior curtain of the mitral valve, there was an area about the size of a shilling of well-marked tendinous change, which was hard and tough on section, and which extended through the entire thickness of the ventricular wall. The coronary arteries were perhaps slightly dilated and tortuous, and presented here and there small patches of atheroma similar to those observed on the valvular curtains; but, as far as they could be traced, all the branches were pervious. The area on the posterior wall was in the region supplied by a terminal branch of the right coronary artery, that at the apex in the region of the descending branch of the left. Sections were made from several of the morbid areas in this heart, and on microscopic examination the appearances were found to be very similar to those described in connexion with Case 4—i.e., the softened areas presented well-marked signs of coagulation necrosis, and the fibroid patches showed the wavy strands of fibrous tissue. It was also noted that around the recent patches there was great dilatation with engorgement of the capillaries and veins; the arteries had thickened walls, were not engorged, and presented in their interiors a distinct fibrinous stroma, in the meshwork of which a few blood-corpuscles were entangled, this appearance being very suggestive of the presence of thrombosis in the smaller arterial branches. In addition the following features were also observed: (1) In some places a distinct cellular infiltration was observed, as if slight inflammatory reaction had been set up; (2) here and there large round cells not unlike compound granular corpuscles were seen, and it was thought that possibly these cells may have had some relationship to the muscular nuclei; and (3) in some sections, as well as the capillary engorgement, a distinct infiltration of the interstices of the tissues with red blood-corpuscles, a circumstance quite in keeping with the view that the condition was the result of embolic infarction, was noticed.

CASE 6. *Extensive fibroid degeneration of left ventricle, with extreme calcareous disease of coronary arteries.*—Duncan G——, aged seventy-four, died in one of Dr. H. C. Cameron's wards on Feb. 25th, 1885. He had been admitted on Feb. 12th on account of difficulty of micturition, which had been present in a more or less severe form for about eight years. On the 21st, on trying to get out of bed, he fell on the floor, and seemed to have lost the power of his right side to some extent; the left shoulder was also very painful. On the 24th breathing became stertorous; there seemed to be some loss of power in both arms and in the left cheek. In a few hours he died.

At the post-mortem, on examination of the head, no recent lesion could be discovered in the brain; but there was extreme atheroma of both middle cerebral arteries. The heart was considerably dilated, weighing 17¾ oz.; and on careful examination a most striking and extensive fibrous transformation of the muscular substance was found in the lower two-thirds of the posterior wall of the left ventricle. The greatest length of the patch was three inches and a half, and breadth one inch; its margin was irregular, and it stretched obliquely downwards from a point a little above the middle of the outer wall of the ventricle towards the apex. A calcareous plate causing constriction of the left coronary artery was discovered at its point of bifurcation into the descending and circumflex branch; the right coronary artery was also atheromatous.

It is interesting to note that at the time of the post-mortem examination this patch was not discovered; and it was only on more detailed investigation, after the case had been demonstrated by Dr. Joseph Coats to his pathological class, that I found it to be present. Its presence could not have been guessed by simple inspection either of the endocardial or pericardial surfaces.

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CASE 7. *Extensive fibroid degeneration of the left ventricle, with extreme disease of the coronary arteries.*—Robert W——, aged sixty, a traveller, was admitted to Dr. Tennent's wards on Feb. 13th, 1885, suffering from dyspnœa, hæmoptysis, and slight œdema of both lower extremities. There were distinct evidences of passive congestion of the lungs, and well-marked ventricular-systolic aortic and ventricular-systolic mitral murmurs were made out on auscultation, as well as accentuation of the second sound at the base. During a former residence in the hospital, December 1884, he had suffered severely from angina pectoris, which also caused much distress during his last illness. He was also occasionally seized with severe attacks of dyspnœa, during which the whole body became very cold. He died on May 22nd, 1885.

The following is a summary of the post-mortem examination: Great atheroma of aorta, with thrombosis; atheroma of the coronary arteries; fibroid transformation and dilatation of the ventricles of the heart; plugs in the pulmonary artery; infarction of the kidney. The heart was enormously enlarged, but the weight of the organ has not been recorded. The left ventricle was greatly distended, as was also the right, but to a less extent. In the right auricle and ventricle were several globular vegetations—a large one in the auricle yielding a brown juice when cut into. The first part of the aorta was in an extreme state of atheroma, with calcareous infiltration almost continuous. The wall of the left ventricle presented in various places a remarkable atrophy, accompanied by a fibrous transformation of its muscular substance. Both coronary arteries were extensively diseased. On more detailed examination the following facts with regard to the fibroid degeneration were made out. The left or posterior coronary artery presented well-marked atheroma and calcareous change, especially in its descending branch. Just beyond the origin of this branch the lumen of the vessel was very considerably narrowed (being converted into a rigid calcified tube of fully an inch in length); and on laying open the artery, an adherent reddish clot, which caused additional obstruction, was discovered. The distal branches of this vessel were also considerably narrowed and calcified. In the ventricular septum in the area supplied by this vessel there was a large patch of typical fibroid degeneration, two inches long by one broad. The glistening tendinous character of the patch was most striking towards the centre, whilst at the margin the fibrous metamorphosis insinuated itself quite irregularly between the healthy muscular fibres; the change caused distinct loss of bulk, and the cut surface of the morbid area was distinctly concave. Here and there the morbid surface presented a reddish streak, as if due to an engorged vessel or a hæmorrhagic extravasation. The relationship to the diseased vessel was in this case exceedingly well marked. In the posterior wall of the left ventricle a long, ill-defined, and diffused strand of similar change, passing downwards towards the apex from the insertion of the musculi papillares, was discovered. A similar patch was also present in the anterior wall. The right coronary artery was also extensively diseased and much dilated, but it contained no adherent clot, although there was plenty of loose débris. There was also extensive fatty infiltration of the organ.

CASE 8. *Slight fibroid disease of left ventricle, with generalised fatty degeneration; serious disease and obstruction of coronary arteries.*—James S——, aged forty-nine, was admitted to Dr. Gairdner's wards on March 13th, 1885, and died on June 18th of the same year. In December, 1884, he began to suffer from pain across the breast on any exertion, accompanied by attacks of shortness of breath. It was found to be a case of aortic regurgitation, with dilatation of the arch (possibly aneurysm). There was hypertrophy of the left ventricle, and symptoms of well-marked angina pectoris, with apparent extension of neuralgic sensations into the right lower limb, where distinct evidences of regular gout were observed. Ventricular-systolic and ventricular-diastolic murmurs were heard over the aortic area; the vessels were tortuous, and there was dull percussion over the manubrium sterni. Latterly there was a considerable amount of blood in the expectoration, with marked orthopnœa and acceleration of the pulse and respiration. There was no history of previous serious illness, but the patient had been a drinker.

Summary of post-mortem: Dilatation and hypertrophy of the left ventricle, with contraction of the aortic curtains and extreme atheroma of the aorta; passive congestion of the lungs; granular kidneys; deposits of urate of soda in the metatarso-phalangeal joints. The heart was very much enlarged, weighing 27½ oz., and the arch of the aorta was somewhat dilated. The tricuspid orifice passed five, and the mitral three, fingers. The aortic valve was quite incompetent, from its curtains being involved in the atheromatous disease. The aorta presented an extreme state of atheromatous change, and the muscular tissue of the heart was very pale, and presented considerable fatty degeneration of the left ventricle. The coronary arteries were pervious, but much diseased in several places. In the first part of the descending branch of the left coronary a calcareous plate of stony hardness was discovered; it was half an inch long by one-eighth of an inch broad, and it emitted a ringing sound on being struck with the probe; the orifice of the vessel was somewhat rigid and slightly narrowed. The orifice of the right coronary artery was greatly contracted, so that only a very fine probe could be passed through it. Beyond the obstructed orifice there was great dilatation and considerable tortuosity of the vessel; in its interior there was broken-down blood clot, at places slightly adherent to the vessel wall. In the posterior wall of the left ventricle slight traces of fibroid change, extending over an area of about the size of a shilling or more, and showing the usual microscopic characters, presented themselves; in many places, too, the muscular fibres showed great granularity, obviously due to fatty degeneration. This slightly fibroid area, the only one discovered, was in the area of distribution of the terminal branch of the right coronary artery.

(To be concluded.)

Clinical Lectures
ON
DISEASES OF THE EYE.

Delivered at the Nottingham and Midland Eye Infirmary,

BY C. BELL TAYLOR, M.D., F.R.C.S.,
HONORARY SURGEON TO THE INFIRMARY.

LECTURE VI.

GLAUCOMA.—(*Concluded.*)

GENTLEMEN,—In a former lecture on the Use and Abuse of Mydriatics,[1] I called your attention to the great danger attendant upon the instillation of atropine in all cases of possible or threatened glaucoma, and it becomes interesting now to inquire in what this danger consists. One would think *a priori* that atropine, from its sedative influence and power of checking secretion, would be a useful remedy in glaucoma, and so it would, but for its power of dilating the pupil. It is this purely mechanical action, this crowding of the iris into the angle of the anterior chamber—the main outlet for fluids from the eye,—which is the source of all the danger attending the employment of mydriatics in glaucoma. I pointed out also that in doubtful cases it was safest to use cocaine—an alkaloid which checks secretion even of tears, relieves pain, diminishes the calibre of bloodvessels, reduces tension, and, although an efficient, is still, compared to atropine, a feeble and non-persistent, mydriatic. Since then I have demonstrated over and over again that eserine, although impotent, or nearly so, as a myositic against atropine, duboisine, daturine, hyoscyamine, and the more powerful mydriatics, possesses complete control in this respect over cocaine, and that the two in succession or combination may not only be safely employed, but in this form will probably constitute one of the most valuable adjuncts to our remedies for the treatment of glaucoma. Let me illustrate my meaning. If the iris, when dilated, should be so fixed by adhesions that it could not contract, eserine, powerless to stretch apart the fibres of the ligamentum pectinatum, by reducing the size of the pupil, would probably do nothing but harm by its irritant action; and if the pupil should be contracted and occluded by adhesions, so that atropine could not crowd out the angle of the anterior chamber by dilatation, it might

[1] THE LANCET, Sept. 5th, 1885.

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do nothing but good by its sedative influence and power of checking secretion. Recollect, therefore, that the action of these drugs in glaucoma for good or ill is mainly mechanical, and that, apart from contraction or dilatation, the collateral result may prove the exact opposite of what you intended. Let us admit the correctness of the generally received views as to the causation or aggravation of glaucoma by excess of secretion or retention of fluids, owing to closure of the angle of the chamber and circumlental space by the expanded iris, and we can readily understand how the removal by operation of a portion of this both secretive and obstructive membrane may permanently relieve a condition which, unchecked, is certain to go on to destruction of the eye; and this is precisely what happens when a portion is excised, as in von Graefe's operation. Graefe had been struck, while attending the clinique of the elder Desmarres, with the remarkable results obtained by paracentesis in various affections of the eye. Mackenzie had pointed out that in glaucoma the globe became hard; it was clearly softened momentarily by tapping, and the larger the incision the better the result. Unfortunately—I should say fortunately in this case—when the wound was large the iris protruded, and to get rid of this difficulty von Graefe cut it off. (See Fig. 1.)[2]

FIG. 1.



How simple it all seems, and yet what stupendous results! Let me endeavour to bring home to you the vast benefits he has thus conferred upon suffering humanity. Sixteen years ago I was called by the late Dr. Watchorn to see a lady who had been struck with blindness some days before—in fact, both her eyes were in much the same condition as that of the poor woman with the green pupil you have just examined. She had bare perception of light with the left eye, was in an agony of pain, and the right, by reason of the longer duration of the malady, was, so far as sight was concerned, beyond the reach of art. A large iridectomy upwards, however, instantly, as if by enchantment, stopped the whole process in both eyes, and from that day to this she has with the left eye enjoyed most excellent vision, both for near and distant objects. We do not succeed like that in every case, but we do in a large proportion; and it is no exaggeration to say that hundreds of persons are every year saved from blindness by the performance of this simple operation. The one drawback to iridectomy is the mutilation of the pupil and consequent deformity with dazzling from circles of diffusion, and in order to avoid this ophthalmic surgeons have ever since 1856, the date of von Graefe's discovery, been endeavouring to improve upon the operation. Speaking on this subject, De Wecker says: "I am convinced that with the progress of knowledge some other proceeding more simple and essentially more logical will be substituted."[3] It may be so, but I am not of that opinion, nor can I recommend you to atempt any other operation in fulminating, acute, or inflammatory glaucoma. In certain specific and in some milder cases, it is true that less severe measures have sufficed, or must perforce be substituted. Sclerotomy, for instance, may take the place of iridectomy in the very incipent or doubtful stages of all forms of the disease; in hydrophthalmos, which is the glaucoma of children, where excision of the iris is so apt to be followed by rupture of the zonule, hæmorrhage, escape of vitreous, and collapse of the globe; and it must also take the place of iridectomy in adults suffering from the hæmorrhagic form of the disease, where the too sudden reduction of tension by iridectomy is apt to be followed by similar accidents. It should also be adopted in glaucoma absolutum, where it is impossible to excise the iris; and in cases of long-standing simple glaucoma, where advancing blindness is on the eve of invading the macula or point of fixation, and where any coarse operation may precipitate the impending catastrophe. Some ophthalmic surgeons (Schweigger, Wecker) even prefer sclerotomy in inflammatory cases, providing only extreme contraction of the pupil can be previously obtained by eserine, and it is undoubtedly useful as a preliminary to iridectomy when the inherent difficulties of the latter operation may be to some extent removed by a previous reduction of tension. In performing sclerotomy, the knife should enter and emerge in the corneo-sclerotic junction, precisely as if you were going to make a flap of four millimetres; pushed upward with a to-and-fro movement, and then slowly withdrawn, leaving about a fourth undivided.[4] (See Figs. 2 and 3.) But little after-treatment is needed, and although the chamber is not re-formed for some days, the patient may return home on the third. I have even in some cases, and for special reasons, discharged them at once. The great advantages of this operation are, that it may be repeated again and again, that it involves no muti-

FIG. 2. FIG. 3.



lation, and may be adopted as a supplementary procedure both before and after iridectomy.

Here is a patient, aged twenty-seven, from Ruddington, who illustrates the great advantages of these combined operations. She consulted me four years ago on account of excessively painful glaucoma consummatum of the left eye, the result of extensive iritic adhesions. As she was young and good-looking I did not like to extirpate the eyeball, and therefore divided the optic and ciliary nerves, with complete relief to all her painful symptoms. A year ago, that is three years after the neurotomy, she applied again with intense iritis of the right eye, and as I feared that there might have been some re-formation of nerve tissue and consequent sympathetic mischief, I removed the left globe.[5] Nevertheless, the right eye speedily developed glaucoma, and I found it necessary to remove the upper segment of the iris. A few weeks later, however, the symptoms returned, and I excised the lower segment, again arresting the progress of the disease. Subsequently, in consequence of recurring attacks of blindness with excessive tension, I found it necessary twice to perform sclerotomy, with the result, as you see, of perfect restoration to sight, which remains and bids fair to remain.

In attempting sclerotomy or iridectomy, it sometimes happens, owing to the extreme narrowness of the anterior chamber, that the point of the knife gets entangled in the iris, and before it can be pushed across the chamber the aqueous escapes. When this is the case it is prudent to delay the operation, or limit it *pro tem.* to a paracentesis, and I have occasionally with advantage kept the wound patent, and let out the aqueous from time to time by the daily or more frequent use of a blunt probe, or, what is better, a Weber's caniliculus knife; indeed, some surgeons have lauded paracentesis as superior in certain cases to other operations. For instance, Dr. Cuignet, Ancien Médecin Principal à Lille, records a case of glaucoma cured after seventeen evacuations of the aqueous humour, and thus expresses himself respecting the operation: "C'est à tort qu'on a laissé l'iridectomié supplanter presque complete-ment la paracentèse cornéene, dans une foule de cas où celle ci était usitée jadis et jouit, en effet d'une réelle efficacité."[6] As an operation *per se*, however, if we must be limited to tapping, the vitreous chamber appears to me to offer much greater chances of success to the surgeon—an operation which has been strongly recommended by various authors, even so long as a hundred years ago (Guérin de Lyon); again in 1830 by Mackenzie and Middlemore; since then by the elder Desmarres; and most recently by Dr. G. L. Johnson,[7] who thus writes with reference to chronic and old-standing glaucoma: "With the light which modern research has shed upon the subject, it appears to me that it is useless to seek for improvement by attacking the angle of the anterior chamber (by sclerotomy or iridectomy), since the destructive processes are in that region already too far advanced, while the relief afforded is insignificant when compared to the gravity of the operation." In performing paracentesis of the vitreous, you must turn the eye inwards as much as possible, and then thrust a Wenzel's or Beer's cataract knife to the depth of about half

[2] The incision must be made in the corneo-sclerotic junction, and the upper quadrant of the iris removed right up to its ciliary border, taking care that no portion is trapped in the angles of the woun

[3] Therapeutique Oculaire, p. 320

[4] Sclerotomy does not act, as has been supposed, by the production of a permeable scar, but probably by establishing a new path by which fluid can reach the corneal and scleral lymph-spaces from the retraction of the cut membrane of Descemet (the posterior elastic lamina of the cornea).—*Brailey.*

[5] See lecture by the author on "Optico-ciliary Neurotomy" (THE LANCET, Sept. 4th, 1886).

[6] Annales d'Oculistique, June 1886, p. 257.

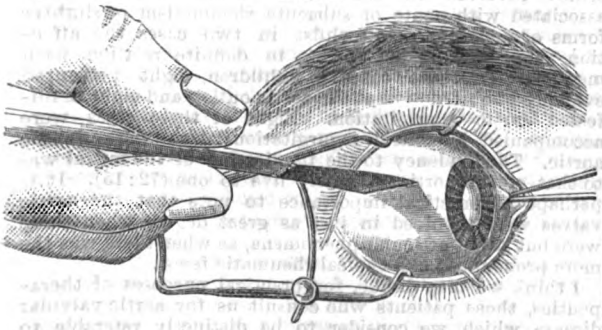
[7] Glaucoma and its Treatment. London: Lewis, 1884.

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an inch into the globe, withdraw the knife slowly, and bandage the eye with cotton wool. (See Fig. 4.)

Dr. Johnson says "the relief is always immediate and generally permanent"—a statement the latter part of which, I regret to say, I cannot endorse; for I have found that when the wound heals the patient is in much the same position as before;[8] although it is true that wounds of the sclerotic, owing to the constant movement of the ocular muscles, seldom heal firmly by the first intention; and it is well, as Dr. Dianoux has pointed out, to assist this disposition to gape by systematic massage as well as by a cross incision. Dr. Argyll Robertson taps the vitreous with a trephine, removing a small disc of sclerotic, an operation which appears to have been attended by considerable reaction (Brailey); and other surgeons, looking upon glaucoma as a spasm of the ciliary muscle, have endeavoured to relieve tension by dividing that muscle. Mr. Hancock, for instance, says: "I always looked upon glaucoma as caused by obstruction of the circulation, a strangling of the bloodvessels caused by spasmodic contraction of the ciliary muscle, analogous to the spasm so often observed in the muscular fibres of the urethra, as well as in the sphincter ani, in certain affections of those parts." In order to relieve this condition, he says: "I introduced a Beer's cataract knife at the outer and lower margin of the cornea where it joins the sclerotic; the point of the knife is then pushed obliquely backwards and downwards until the fibres of the sclerotic are divided obliquely for rather more than one-eighth of an inch; by this incision the ciliary muscle is divided, whilst the accumulated fluid flows by the edge of the knife,"[9]; Mr. Solomon has devised a similar method, which he terms "intra-ocular myotomy." This is effected "by entering a Beer's cataract knife at the corneo-sclerotic union, and then

FIG. 4.



pushing it through the pillars of the iris into the muscle, the flat surfaces of the blade being opposed on the one side to the sclerotic, and on the other to the rim of the lens. The anterior chamber is generally penetrated, and the posterior put in communication with the wound."[10] The late Mr. Nunneley used to practise a similar operation which went by his name; and quite recently Mr. George E. Walker of Liverpool has recommended a like procedure, which he terms "hypo-scleral cyclotomy." Mr. Walker contends that excessive use of the ciliary muscle is the cause of glaucoma, whether acute, subacute, or chronic; and adds, what is wanted to cure acute glaucoma is rest, perfect and profound, and this, he maintains, can be obtained in no way comparable to that of cyclotomy. He thus describes his operation: "Fix the eye by holding the conjunctiva with toothed forceps; with the narrowest knife possible pierce the cornea at a point opposite to that of fixation, about a line from the sclero-corneal junction; as soon as the point enters the anterior chamber, alter the direction of the knife so as to clear the edge of the lens, thrusting it through the iris for about a line, then, drawing back the knife, cut the tissues up to the sclerotic.[11] The results attained in these cases, when favourable, must have been greatly due to the evacuation of intra-ocular fluids, since post-mortem examinations have demonstrated that the muscle is rarely divided, as Wecker has remarked:—"Les expériences faites sur le cadavre, après avoir exécuté l'opération, prouvent qu'on ne réussit à couper qu'une partie des fibres circulaires et radiées du muscle ciliare, aussi l'opération, n'agit elle qu'à la manière des paracentèses, et c'est ainsi qu'elle peut véritablement être salutaire."[12]

Donders always maintained that glaucoma was caused by irritation of the fifth pair of nerves, and the intimate connexion of the attacks with derangements of the trigeminal and sympathetic nervous system is so marked that one can only wonder that the disease has not been attacked more frequently on that side. I have endeavoured to contribute my quota to this end by galvanising the sympathetic, and Badal proposes to alleviate the symptoms by tearing out the nasal branches of the fifth,[13] an operation spoken of in the highest terms by Lagrange, who, from an experience of eighty-one cases, declares that in glaucoma the pain disappears, tension decreases, and vision improves, even when both sclerotomy and iridectomy have failed to afford relief.[14] I have been asked whether I consider glaucoma as essentially an inflammatory disease. Well, I should say not. I look upon inflammation as an accident of glaucoma—a something superadded; and the simple form where there is no inflammation, and, what is more remarkable, often but slight tension—the old amaurosis with excavation of the optic disc,—as the real type of the disease. It is true that the greatest variety of opinions prevails upon this subject. Von Graefe, for instance, always thought that glaucoma was a serious choroiditis, pure and simple, an opinion apparently shared by Mauthner. Donders, v. Hippel, and Grünhagen hold that the hyper-secretion is caused by irritation of the fifth pair of nerves. Max Knies and Adolph Weber contend that the disease is merely one of retention, Weber believing that it is the swelling of the ciliary processes which blocks the angle of the chamber, and Brailey to a certain extent appears to adopt this view; while Priestley Smith insists that the closing up of the circumlental space is simply due to the increased size of the lens, which, he has shown, is a natural phenomenon of life which goes hand in hand with advancing years. However that may be, it is certain that glaucoma very seldom occurs under fifty years of age, and that women who suffer from climacteric congestions are the most frequent victims, whilst the class of persons most commonly afflicted are those who are naturally weak or poorly fed, who have had troubles, who have used the eyes inordinately for near objects, or whose occupation has necessitated much stooping, and consequent extra- and intra-ocular congestion. The disease is symmetrical, both eyes being affected, though I have known fifteen years to elapse before the second was attacked. The smaller the eye the greater the chance of its becoming glaucomatous, rigidity of the sclerotic being most manifest in hypermetropes—a condition you may sometimes diagnose by a full hard pulse, such as we remarked in the male patient suffering from simple glaucoma. Irregularities of the circulation, such as climacteric flushings, often precede the attacks, and patients are not unfrequently found to be suffering from atheroma, sclerosis, or hyaloid degeneration of the arteries. Whatever reduces tone and relaxes the muscular system is provocative of the disease. "Lorsque je me sens brisé de fatigue, je suis certain de voir mes arcs en ciel," is a remark recently made by one of Wecker's clinique, which contains a lesson for us all. *Per contra*, whatever braces the system, increases the muscular tone, contracts the pupils, and ensures profound sleep (when, I need hardly remind you, the pupils are normally contracted) will tend to dissipate the prodomata of an attack.

From all this it is evident that those who are threatened with glaucoma should observe certain precautions. They should retire early, avoid stimulants and excesses of all kinds, insist upon regular action of the bowels, have glasses

[8] I prefer, myself, to let out the vitreous through the pupil after removal of the lens, an operation which yields marvellous results in cases of advanced glaucoma.

[9] THE LANCET, Feb. 11th, 1860.

[10] Medical Times, May, 1861.

[11] Essays on Ophthalmology. Churchill, 1879.

[12] Traité complet d'Ophthalmologie, p. 697.

[13] The nasal nerve which we are told to divide in Badal's operation is a branch of the ophthalmic division of the fifth, and gives off a filament to the lenticular ganglion, two or three ciliary direct to the eyeball, and at the inner side a considerable branch, the infra-trochlear, which leaves the orbit at its fore part, and is really the nerve which is torn in Badal's operation. Its position is indicated by a line drawn through the centre of the nail when the finger is placed close to the supra-orbital ridge, its tip resting on the side of the nose, or by a line drawn from the angle of the mouth to the inner canthus. The nerve, which lies very deeply, is best got at by cutting down to the bone on each side of it, and then tearing it up by the roots with a strabismus hook. The effect of the operation is supposed to be due to the disruption of the sensory root of the ciliary ganglion, or to an ascending neuritis of the torn nerve extending to the ganglion. Badal's idea was to relieve pain by stretching the nerve. He found, however, as a matter of experience, that tension of the eyeball was also notably reduced. Lagrange considers the operation one of the best in ophthalmic surgery.

[14] Archives d'Ophthalmologie, June, 1887, p. 220.

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accurately adapted, use the eyes for near objects as little as possible, get out of doors, and never read or work when lying down, leaning forward, or travelling in a railway carriage. They should also cultivate excitement of a healthy and pleasurable nature, and friends should be instructed to protect them as far as possible from anxiety, worry, contradiction, and those moral emotions of a depressing character, which the cases I have quoted at the commencement of this lecture show us so frequently precede an attack. Thirty years ago the elder Desmarres wrote: "As glaucoma is incurable, it is difficult to suggest any treatment." Now, owing to the labours of von Graefe, we are able to deal successfully with the great majority of acute cases, one-half being restored to excellent sight, and the progress of the disease, as a rule, arrested in the remainder. This remark, however, does not apply to cases of simple glaucoma, for although the *status quo* may be maintained by treatment in a large proportion, and some slightly improved, still we cannot say that we have any cure for the disease, and 20 per cent. are apparently worse for operative interference. What is to be done with these cases? Gentlemen, that is "le grand problème"—the task before us. Von Graefe has conferred a boon, but it appears to me that he has also entailed an obligation; and that it behoves us, in emulation of the great master, not only to work out a rational treatment for cases of simple glaucoma, but also so far to extend a knowledge of our art as to bring within the range of science those numerous and distressing cases of acute glaucoma which are mistaken for other diseases, incorrectly diagnosed, or lost for want of treatment by qualified and experienced practitioners.

NOTES ON THE

TREATMENT OF SOME OF THE FORMS OF DISEASE INVOLVING THE AORTIC VALVES.

BY ARTHUR ERNEST SANSOM, M.D. LOND., F.R.C.P.,
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THE purpose of this communication is to consider the evidence afforded by the observation and investigation of actual cases concerning the problems of the treatment of diseased conditions of the aortic outlet. The plan adopted is what I may call the clinical method. No one can estimate more highly than myself the value of that which I may call by way of distinction the scientific method, by which I mean the investigation, by all means of precision available, of the mode of action of a given remedy. The conditions, however, presented by patients who apply to us for treatment are so varied and so varying that even when a medicinal agent has been investigated with rigid scientific accuracy, its practical value can only be tested by the experience afforded by a large number of cases. The scientific method helps us enormously, but for practical purposes it is the clinical method on which in practical therapeutics we must chiefly rely. I have already adopted this plan of observation in the case of some forms of disease affecting the mitral orifice. Perhaps the chief problem presented by these was the selection of agents which, acting as tonics to the heart, should restore and maintain compensation. I considered the action to this end especially of digitalis, caffeine, and convallaria. I concluded that digitalis was especially valuable in mitral regurgitation, with caffeine to supplant it or to enhance its action at intervals, especially when dropsy was a marked symptom; but that convallaria was more efficient for general and protracted administration when necessary in cases of mitral stenosis. I commend this question to the further investigation of practical physicians.

Now I come to consider the treatment of diseased conditions of the aortic outlet. I do not include aneurysm of the aorta nor any external conditions which may affect the vessel. I am obliged to say *in limine* that the difficulties of investigation are much greater than in mitral diseases—the conditions, especially in reference to treatment, are more complex. It is of the first importance to group [illegible] cases. I shall do this from the clinical standpoint, appe[illegible] only to the evidence of morbid anatomy when such is necessary for the elucidation of the therapeutic problems. The classification of the forms of aortic disease which I propose is (1) Rheumatic, (2) Atheromatous, (3) Traumatic, and (4) Septic or Ulcerative. Of these classes the first two comprise the largest number of cases, so that in most instances the first question which presents itself is whether a patient manifesting the physical signs of aortic obstruction or regurgitation shall be placed in the *rheumatic* or the *atheromatous* division. Of ninety-four private patients observed by myself, twenty-nine were rheumatic (30 per cent.). By this I mean that they presented evidence of disease of the aortic orifice originating in rheumatic endocarditis. In fifty necropsies in cases of hospital patients the aortic valves were thickened in twenty-five, atheromatous in eighteen, and presented vegetations in twenty-two; the changes were directly traceable to rheumatic endocarditis in twenty-two cases, and to atheroma in twenty-one. From all the evidence, therefore, I think we may conclude, if we take our observations from patients of all ages, that the *primâ-facie* chances whether the diseased conditions proceed from rheumatism or from the endarteritis which proceeds to atheroma are about equal. It is clear, however, that rheumatic endocarditis is especially a disease of early life, whilst atheroma is an affection of the later periods, though it is possible for valves which have been altered from rheumatism to undergo atheromatous changes at almost any age. Rheumatic endocarditis may involve the aortic valves in very young children, though it is in early adult life that the disease most frequently attacks them. In 173 cases of all forms of cardiac disease affecting children under twelve years of age I have found the aortic orifice involved in sixteen, of which fourteen were associated with acute or subacute rheumatism or slighter forms of articular pain, whilst in two cases the affection appeared to me to be in definite relation with measles. In these cases of children, eight presented evidence of obstruction at the aortic outlet, and eight manifested aortic regurgitation. Eight of these cases were accompanied by mitral regurgitation; two were double aortic. The tendency to the implication of the mitral was to that of the aortic as nearly five to one (72:15). It is perhaps of practical importance to note that the aortic valves were involved in just as great degree when there were but slight articular phenomena, as when there was the more pronounced and typical rheumatic fever.

I think we may divide, for practical purposes of therapeutics, those patients who consult us for aortic valvular disease which we consider to be distinctly referable to rheumatism into two categories. In the one there are no symptoms referred to the heart and circulation; in the other there *are* such symptoms. It is not very uncommon for a lad or young man to come to us for an affection in no direct way suggesting disturbance of the organs of circulation, and yet for there to be manifest disease at the aortic outlet, obstructive, regurgitant, or both combined. For instance, I have been consulted by a young man of seventeen for incontinence of urine, without the slightest complaint of any symptom to be referred to disorder of circulation or respiration, and yet I have found a loud diastolic murmur of aortic regurgitation, with the heaving impulse of a considerably hypertrophied left ventricle. In the case of a young person, even though there be no history of anterior rheumatism, it is almost safe to conclude that any change, whether of obstruction or regurgitation, at the aortic orifice is due to a rheumatic endocarditis, past or present.

In such cases as that just mentioned there has been, in all probability, a slowly progressing endocarditis, with thickening and retraction of the aortic cusps, the left ventricle gradually becoming hypertrophied and adapted to the new conditions, which have ultimately become quiescent and stationary, so that compensation is perfect. In such a case, I think we may say with confidence that all forms of heart tonics, all drugs whose action it is to enhance the force of ventricular systole, are positively hurtful. It may be well at some periods to regulate the digestive powers, and perhaps to administer such general tonics as iron, strychnia, or arsenic, but any agent which alters the rhythm of the heart should be withheld. The danger in these cases is a new manifestation of the rheumatic process, with attendant endocarditis, and the

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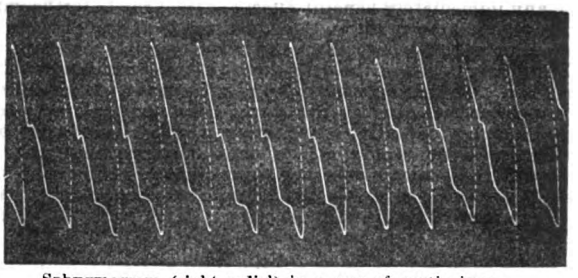
importance of preventive measures *quâ* rheumatism should be indicated.

In the greater proportion of our cases, however, of aortic valvular disease of rheumatic origin, there are symptoms which we can refer to some error of compensation—some want of adaptation to the altered physical conditions. We may ask what these signs are. In a large majority of the cases of aortic disease caused by rheumatic endocarditis, the mitral valve is also involved; there is most commonly an accompanying mitral regurgitation, but in some there is no evidence of anything except the aortic lesion. We may inquire whether these differ in their signs and symptoms from those in which the mitral lesion is manifest. I think we may conclude that in the most common cases of mitral regurgitation the failure of the heart power is manifested by a fairly definite train of symptoms—dyspnœa occurring as an early symptom and increasing in severity as time goes on, œdema appearing and gradually advancing,—but pain at heart, in my experience, though it may exist, is not a very marked and notable, and not a very early symptom. On the other hand, I have found that in the rheumatic cases in which the aortic orifice is involved, whilst there is no evidence of structural imperfection of the mitral, pain and distress directly referred to the heart are marked and notable symptoms. This pain, in some cases, graduates through many stages to a nearly constant condition of extreme distress; in others it is variable, occurring as a spasm, associated in some cases with faintness, in others with palpitation, and in rare cases presenting the character of angina. It is considered by many that signs of angina are more frequent in cases of aortic disease associated with atheroma, but I have seen some cases in distinct relation with the rheumatic forms of aortic disease. For instance, in a lady aged thirty-one, in whom the signs were those of aortic stenosis in all probability of rheumatic causation, there was the manifestation of true angina pectoris. In another case, a man aged twenty-one, long under observation with aortic obstruction and regurgitation, mitral regurgitation, and tricuspid regurgitation, after the manifestation of signs of deep distress at intervals during two years, began to exhibit signs of defined angina with intense agony. In another case a man of twenty-five, admitted into hospital with acute rheumatism, attended with signs of aortic obstruction and incompetency with mitral regurgitation, there developed whilst in hospital attacks of true angina, which were promptly arrested by the inhalation of nitrite of amyl.

It is in the rheumatic rather than the atheromatous forms that we find examples of very free regurgitation. It would seem that in many cases the fibrous change following the exudation and cellular infiltration of rheumatic endocarditis in the valve and its neighbourhood is brought about too rapidly for compensatory hypertrophy to occur *pari passu*. It is scarcely important, I think, to debate whether in case of such imperfection of the valve hypertrophy of the ventricle precedes dilatation or *vice versâ*. It appears to me most probable that this is a question of nutrition—if the nutritive needs of the ventricle are adequately supplied so that the increased intra-ventricular pressure can be antagonised, then hypertrophy, if not, then dilatation. In a large proportion of the cases, when the storm of endocarditis which has induced disease at the aortic outlet has apparently subsided, there are some signs of trouble as regards the heart or circulation. Probably our first impulse is to aid the ventricles by administering digitalis or some other cardiac tonic. Observers seem to be much divided on the question whether or not it is advisable to administer digitalis in cases manifesting aortic regurgitation. On this point I have the following observations to offer:—

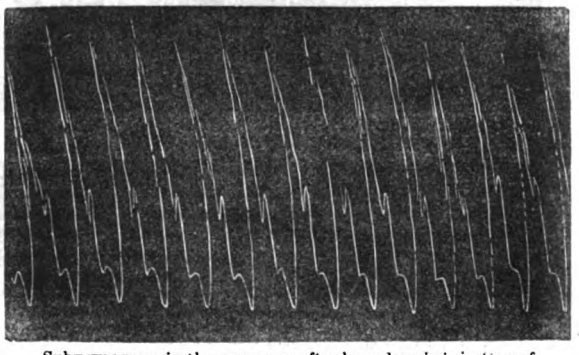
1. It has appeared to me that in some cases of aortic disease associated with rheumatism digitalis has positively increased the distresses and the dangers of the patient. For instance, in a case manifesting a systolic and diastolic murmur at the base, with systolic murmur at the apex and signs of considerable cardiac hypertrophy, but evidence of ill compensation afforded by the gradual on-come of œdema and dyspnœa, the temperature being then slightly subnormal, four minims (only) of tincture of digitalis were given in the ordinary diuretic mixture three times a day. The following day there were frequent attacks of urgent orthopnœa, intense anxiety, sweating, and pain at the heart of the character of angina. I was so convinced that in this case digitalis was likely to act as "the opium of the heart" and to allay the symptoms, that I tried the subcutaneous injection of one-fiftieth of a grain of digitaline. I soon found that the drug aggravated the distress; improvement followed the administration of five-minim doses of tincture of aconite and the occasional inhalation of nitrite of amyl (see Figs. 1, 2, 3, and 4). In another case, in which there were signs, in addition to those in the former case, of tricuspid regurgitation, no digitalis, but five-minim doses of tincture of aconite were ordered. The pulse-rate was then 140. Three doses were given during the night, and then it fell to 132, afterwards to 128, and in the morning it was 88 and the patient much relieved.

FIG. 1.



Sphygmogram (right radial) in a case of aortic insufficiency resulting from rheumatic endocarditis, treated by four-minim doses of tincture of digitalis.

FIG. 2.



Sphygmogram in the same case after hypodermic injection of one-fiftieth of a grain of digitaline.

FIG. 3.

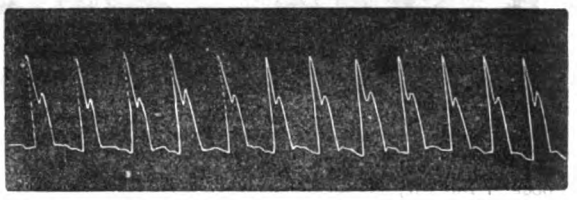
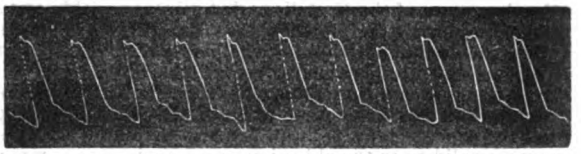


FIG. 4.



Sphygmograms after treatment by five-minim doses of tincture of aconite and occasional inhalations of amyl nitrite.

I may here mention a third case, that of a female aged thirty-eight, manifesting aortic obstruction and insufficiency and mitral regurgitation, with hypertrophy and dilatation of the heart, in whom the subsidence of all cardiac distress, and probably the establishment of good compensation, were brought about without the administration of any agent having a special action upon the heart, whether tonic or sedative. In the case I mention, rest in bed for four weeks, with an occasional purgative, and sometimes the administration of a draught of sulphuric ether, ammonia,

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and compound tincture of camphor, were the only therapeutic means adopted. (See Figs. 5 and 6.)

2. A second objection which may be urged against digitalis in rheumatic aortic disease, from the experience of my cases, is that in a few instances, though there may be no manifestly adverse signs to its employment from its action on the heart, it nevertheless causes sickness, and the patient is intolerant of it. In the case of a boy of twelve, in whom this occurred, convallaria was substituted, and the boy manifested great improvement in all ways. (See Fig. 7.)

3. A third objection which may be brought as an indictment against digitalis—and the validity of this may not be so susceptible of direct proof—is that, though no evidence of any immediately baneful effects of the drug is forthcoming, death has occurred in such manner as to give rise to the opinion that there may be some relation between the administration of the drug and the fatal termination of the case. I was led to think this possible many years ago, when a patient of mine at the Royal Chest Hospital, City-road, London, with aortic regurgitation, who had greatly improved under a course of digitalis whilst an in-patient, and was permitted to continue the course as an out-patient, died suddenly in the street. Of course it is acknowledged that in this form of cardiac disease sudden death not unfrequently

FIG. 5.

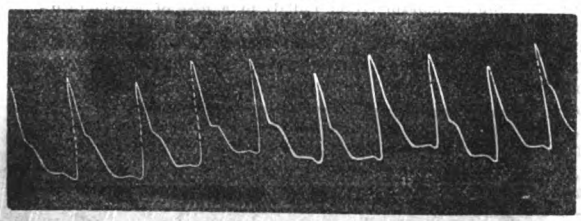
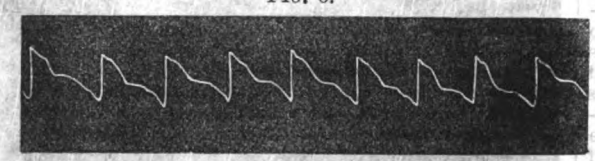
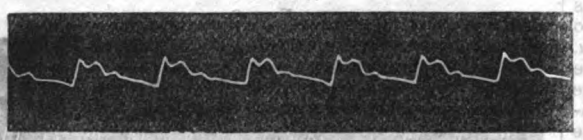


FIG. 6.



Sphygmograms in a case of aortic insufficiency from rheumatic endocarditis before and after treatment by rest, without the administration of heart tonics.

FIG. 7.



Sphygmogram showing good tension in a case of aortic disease (rheumatic) treated by extract of convallaria, with signs of much improvement.

occurs. But why should this be when there are manifest signs of improvement? I think the physiological action of digitalis affords a sufficient explanation. The slowing of the heart, the elongation of the diastolic period, salutary within certain limits, becomes baneful when these limits are overstepped. Then the individual through the imperfectly closed aortic orifice bleeds into his own left ventricle; and if he happen to be in the erect position the encephalon suffers in the greatest degree from this abstraction of blood. Thus ensues syncope, and the syncope may be fatal. My own opinion is that there is some validity to the objection urged against the employment of digitalis in aortic regurgitation when such regurgitation is considerable, even though there may be for a long period signs of improvement under its use. I think the proposition should be strongly enforced that it is undesirable for a patient with aortic regurgitation, when such exists in considerable degree, to continue to take digitalis without medical supervision for long periods. The course that is legitimate enough in cases of mitral regurgitation is to be deprecated in those of aortic regurgitation.

From the foregoing considerations, therefore, I must conclude that in certain cases of the affection we are now considering digitalis is positively hurtful. We may next inquire whether any other agents having a tonic effect upon the heart fibre may be with advantage substituted for it. I have already quoted an instance in which convallaria advantageously replaced digitalis; in others temporary relief has followed the administration of caffeine. I do not propose to consider the evidence concerning strophanthus, which may prove valuable, because I consider my data as insufficient. I shall further consider the effects of caffeine and convallaria when we come to consider the cases of aortic disease caused by atheroma.

It is appropriate now to turn our attention to a section of the rheumatic cases in which, though no adverse signs as regards the action of the special cardiac tonics employed have been manifested, all has appeared unavailing, and there has been a steady advance of the cardiac trouble without any evidence of good results from *any* of the agents employed. This has happened in a few instances, and it behoves us to investigate the cause. I will mention a case in illustration. Miss A——, aged twenty-two, with a history of subacute rheumatism, manifested loud systolic murmurs at base and apex. There was marked anæmia. Digitalis, in the form of the tincture first and the powdered leaves subsequently, together with iron, were administered carefully and regularly for five weeks. There was no improvement. The tension of the pulse continued extremely low; there was no pyrexia, but simply a general enfeeblement. Then twenty-minim doses of the tincture of convallaria majalis were tried for a fortnight, but there was no response. A suspension of the cardiac remedies, with the administration alone of iron and nux vomica and other general tonics, proved equally unavailing. Subsequently caffeine was found powerless over the failing ventricle, and, in spite of the most tender nursing and care, death took place in the course of about twelve weeks from the first observation. It is probable that other physicians have had similar painful experiences with this. To what can we attribute the absolute failure of cardiac tonics in such a case? It seems to me most probable that there is in some cases initiated by rheumatism a very protracted course of endocarditis, and that with this the cardiac muscle is impaired, for I am convinced that in the path of the endocardial inflammation there is a widely spread involvement of the muscular fibrillæ and the surrounding structures, which are infiltrated with cellular elements. The muscle cannot respond to the influence which under normal conditions stimulates its energy of contraction. Of course the question occurs, in a similar case what can we do? The first portion of the answer to this question is, I think, to treat with rest and care the slight manifestations of the anterior rheumatism. In a young subject manifesting some pyrexia with pains in the joints, even though these be very slightly marked, anæmia, and especially quick pulse with irritability of heart, one should enforce the importance of rest. I cannot resist the conclusion that the treatment by salicin or the salicylates, which so wide an experience demonstrates to contribute to the comfort of the patient in acute rheumatism, tends also to manifest a favourable influence on the cardiac complications. It is true that we have no direct statistical evidence of the value of the treatment as regards endocarditis; for the ratio of heart complications appears to be about the same in those treated by other methods, but it is probable that at the time of the available statistics the treatment had not been commenced sufficiently early, and probably the slight manifestations in the young had not been treated at all. I have been very careful in this paper, hitherto, to keep closely to the strictly legitimate conclusions from observed facts, but I may hazard the opinion, not perhaps to be substantiated by positive evidence, that the forms of cardiac disease as observed now in patients treated by the salicylates are not so extensive and severe as they were formerly, when patients were not so treated. I have distinct and indisputable evidence that in some cases manifesting aortic disease, though no articular phenomena were in existence, the administration of the salicylates in full doses has been followed by a marked amelioration of the symptoms referable to the heart. I may be permitted to formulate my conclusions as to the treatment of disease of the aortic valves resulting from rheumatic endocarditis:—

1. In all cases manifesting signs of disease at the aortic orifice, whether obstructive or regurgitant, if there be an immediate association with acute or subacute rheumatism, it is of the first importance to counsel complete rest in bed. The observance of such rest is sometimes sufficient to allow a complete compensation to be brought about.

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2. In such cases digitalis and other special cardiac tonics should not, as a rule, be employed until time has been given for observation, and for the use of appropriate means to subserve general nutrition.

3. In cases in which there is reason to believe that the lesion is chronic, in relation with a remote attack of rheumatic fever, with no evidence of the recent existence of subacute rheumatism, the administration of digitalis, convallaria, or caffeine is indicated, but a prolonged course of any or either of these agents is undesirable. It is better that they be administered for periods of one or two weeks, and then that general tonics be alone prescribed; for, the energy of the ventricles being once increased, this may be maintained without the aid of agents specially influencing the cardiac muscular fibre; and in aortic disease agents which considerably modify the rhythm of the heart are not without danger.

4. In the case of a young subject in whom there is no evident manifestation of rheumatism, and yet a very low tension of pulse, which cardiac tonics fail to modify, it is probable that rheumatic endocarditis is in progress, and absolute rest with the administration of the salicylates should be counselled. *(To be continued.)*

CASE ILLUSTRATING THE

ADVANTAGES AND RISKS OF PURGATION DURING CONVALESCENCE FROM ABDOMINAL SECTION.

BY JOHN D. MALCOLM, M.B., C.M., F.R.C.S. ED.,
ASSISTANT SURGEON, SAMARITAN FREE HOSPITAL.

LAST September Sir Spencer Wells removed a large ovarian tumour from a patient fifty-seven years of age, and he has kindly permitted me to publish the following notes of the case.

The pedicle of the tumour was very broad, and had to be secured in several pieces by stout silk ligatures; but otherwise the operation was a simple one. After operation the patient complained of much abdominal pain, and a drachm and a half of tincture of opium was administered by the bowel in the first twelve hours. The pain continued, and a drachm and a half of laudanum, gradually reduced to a drachm, in the twenty-four hours, was given for the next four days, after which the administration of laudanum was discontinued. After the operation the temperature of the patient gradually rose, and at 9.30 P.M. on the following day it was 101·4° F. in the axilla; it then gradually, but not very steadily, fell till the fifth day, when it was as low as 98·6°.

Sir Spencer Wells went abroad on the third day after the operation, leaving me in charge of the case. On the evening of the third day, and all through the fourth day, there was a tendency to sickness and abdominal distension, but flatus passed freely from the rectum. On the fifth day that portion of the bowel was found to contain fæces, and a small enema produced a copious evacuation, after which the feeling of sickness and the distension passed off. The action of the bowels was followed by considerable pain in the right groin about the position of the pedicle, and the temperature rose in a few hours to 100° in the axilla, but again gradually fell to 98° on the seventh day after operation. The bowels moved seven times between the fifth and tenth days, and much flatus also escaped. During this time, however, the pain in the right groin increased, until the patient could not bear the slightest pressure over this part. The rest of the abdomen became slightly distended, but was free from tenderness. The administration of one-sixtieth of a grain of atropia and one-twelfth of a grain of muriate of morphia, repeated every four hours, eased the pain; but the appetite became very bad, and the patient felt constantly sick after the eighth day. She also lost strength, and her pulse, which had been down to 84 and of good character, gradually rose to 100, and became very feeble. On the tenth day her temperature, which had not been above 98·6° for two days, also began to rise a little, and reached 99·6° in the axilla at 9.30 A.M.; she had been very restless all night, could not take any food, and felt very sick, while the abdomen had become more distended. This grouping of symptoms after abdominal section I have learned to associate with obstruction in the bowels, which may lead to a rapidly fatal termination of the case. In the belief therefore that my patient was in extreme danger from this cause, and that the best method of treatment of this condition at this stage is by the administration of a purgative, I gave her a pill containing one-third of a grain of calomel and as much jalap, one grain of compound extract of colocynth, one grain of extract of aloes, one-twentieth of a grain of jalapine, and a little ginger. The patient had frequently used similar pills, prescribed by her own medical attendant, Dr. Morley of Blackburn, and they had moved the bowels gently during health. On this occasion the pill produced two small loose motions, and a dose of Hunyadi water, given next morning, was followed by other loose motions. The last of these was at 5 P.M. on the eleventh day after operation. Twelve hours after the pill was given the temperature had risen to 100·6° in the axilla, perspiration was extremely profuse, and the patient had become alarmingly weak, but she was then able to take food without feeling sick. After the bowels were quiet twenty minims of tincture of opium were given by the rectum, and the patient had a good night's rest. She was much stronger next morning, and this improvement continued. The pain in the right groin, however, became more severe, and the tenderness radiated over the abdomen to some distance from this part. The temperature continued feverish but irregular till the thirteenth day, when it fell to normal and remained so. On this day also the pain shifted upwards and towards the right loin, and next morning there was only slight tenderness on pressure in the groin and none in the loin. Now, however, the patient at once complained of pain when I applied pressure over the colon in the region of the gall bladder. The seat of tenderness afterwards shifted from time to time along the course of the colon, and finally was found low down in the left groin on the fifteenth day after the operation. The bowels had then been quiet for four days, and I warned the patient that she would probably soon have an action of the bowels with considerable pain. That afternoon several large, very hard fæcal masses passed into the rectum, whence they were removed with some difficulty by the nurse, after which recovery was uninterrupted.

This case is very instructive in connexion with the question of the administration of purgatives during convalescence from operations for abdominal tumour. It is evident that the masses of fæces which were removed on the fifteenth day after operation were the cause of all the difficulty and danger in this case, by producing a partial obstruction in the bowel. The fæcal accumulation had been impacted in or near the cæcum, and the efforts of the bowel were insufficient to remove it, probably on account of the condition of paresis of the intestines which I have shown follows abdominal section, and is "an important factor in the production of obstruction of the bowels in these cases."[1] When, however, the impacted mass was dislodged by the aid of the purgative medicine, the sickness and distension at once disappeared. At the same time the temperature of the patient rose distinctly, and this in spite of a most profuse perspiration; pain in the groin became more severe and diffuse, and the patient's strength failed alarmingly. It is evident, then, that in this case purgation relieved a partial obstruction in the bowel, but at the same time increased, or rather renewed, the inflammation in and around the pedicle. Many cases have taught me that this is the way in which purgation may be beneficial during peritonitis after abdominal section. Purgation during peritonitis may therefore be necessary and proper treatment, but it is inaccurate to say that the purgation cures the peritonitis. On the contrary, the fact must be recognised that the administration of a purgative in such cases is resorted to at the risk of increasing the severity of any inflammation implicating the wall of the gut; and in severe constipation, even when there has been no recent inflammation, a smart purge may produce a great deal of inflammatory action in and around peritoneal adhesions. Might not the explanation here given apply to the interesting case published by Mr. Frank Sturges in THE LANCET of Oct. 15th (p. 757)? As in cases of large abdominal tumour it may be very difficult or impossible to thoroughly clear the bowels, so, during pregnancy, constipation is not uncommon, and women, especially of the poorer classes, are often very careless in this respect. After Mr. Sturges' patient

[1] Vide abstract of paper read before the Royal Medical and Chirurgical Society, THE LANCET, Oct. 29th, p. 860.

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took the pills under the circumstances he describes, she had "two actions of the bowels causing such intense pain that she twice fainted"; and, as in the case I have recorded, purgation was accompanied by rise of temperature and increase in the severity of the abdominal pain, while the patient became "so very ill that" Mr. Sturges "hardly thought she could recover"; but as soon as the bowel passage was made free the intestinal symptoms disappeared, and the patient steadily improved.

Bryanston-street, Portman-square, W.

A CONTRIBUTION TO THE

SURGICAL TREATMENT OF GALL-STONES.[1]

BY W. A. MACKAY, M.B., C.M.ED.

MARIA ALVAREZ G——, aged forty years, married, has had five children, of which two are still alive. She has been in the habit of suckling her children for twenty months each, but her last child she weaned at fifteen months of age. In her family history she knew no instance of jaundice or of malignant disease. But, from what I have since heard, it is probable that her father died of cancer of the stomach. In the beginning of March, 1886, the patient gave the following account of her illness. Eight months previously, while nursing her youngest child, she began to feel unwell and became very bloodless; she therefore weaned the child, and took as a tonic arsenic and iron. Still, her condition grew worse, and she began to suffer great pain in her back and chest; and about this time one of her friends remarked that her eyes were yellow. Then she took to bed. When fifteen days in bed she became jaundiced, but feeling somewhat better she began to go about again, although the pain and jaundice persisted. Last Christmas she felt a swelling in the situation of the gall bladder. Being somewhat alarmed, she drew the attention of a female friend to this region, but, to her surprise, the swelling had disappeared. The patient, seeking for an explanation of this phenomenon, soon found that the swelling was generally present at night but absent in the morning. During the three months before I saw her, menstruation, which till then had been normal, ceased to occur, being, in the patient's opinion, replaced by a flow of blood which took place from the gum near the last right lower molar on its outer aspect. The bleeding was painless, and made itself felt by flowing into the mouth. Very soon it ceased to flow and became a mere oozing. This oozing of blood from the gum lasted four or five days, as the patient's menstrual period had always done, and it occurred on each successive period during a term of four months. Afterwards fluid began to collect in the abdomen and had steadily increased.

On examination I found the patient deeply jaundiced, and suffering from great abdominal distension. I could with difficulty make out a rounded body where she had formerly observed the intermittent swelling. Examination of the chest revealed nothing abnormal. Since the patient came under observation the pulse had generally been over 100; the temperature normal; the urine free from albumen, but deeply bile-stained; the motions, generally two a day, formed and of a clayey-white colour, evidently without bile.

On March 27th I tapped the abdomen below the umbilicus and drew off 400 ounces of fluid, deeply bile-stained. The abdomen was now so flaccid that its anterior wall bulged slightly over the situation of the tumour, and a careful examination left little doubt that we had to deal with a distended gall bladder. The liver was slightly enlarged, and presented a smooth regular border. The patient was most anxious to have something done which would relieve her of pain, which was at times intense, and which she affirmed was worse after meals. Being of opinion that she suffered from impacted calculus, I determined to operate.

On March 28th the ascites had returned to such an extent that there was evidently no time to be lost. Therefore at 4 P.M. the following operation was performed in a large empty room of a private hospital. Transfixing a small fold of skin over the prominence of the tumour, along the external border of the right rectus muscle, about midway between the margin of the ribs and the umbilicus, I dissected down and exposed the peritoneum. On opening the cavity a considerable amount of ascitic bile-stained fluid escaped, and the base of the gall bladder presented itself in the wound. Here an assistant steadied it with a hook while I drew off its contents by means of a trocar. The gall bladder was distended to about the size of a large pear, and its contents seemed to consist of a sticky bile. Withdrawing the trocar, I enlarged the aperture in the fundus upwards where it seemed least vascular, and on inserting the little finger of my right hand I felt a calculus impacted in the cystic duct. With the index finger of the left hand in the abdominal cavity outside the gall bladder, acting against the little finger inside, I extracted the calculus without injury to the duct. After I had ascertained that there were no more gall-stones, the aperture in the gall bladder was secured to the lips of the abdominal incision by means of a continuous silk suture. The incision in the abdominal wall measured less than two inches, while the aperture in the fundus of the gall bladder was just enough to allow the exit of the stone. No vessel was met with which needed ligature, nor was there the smallest inconvenience from bleeding. The calculus weighed 2 grms. 60 centigrms., and was about the size of an olive. Antiseptic precautions consisted in previously boiling the needles and silk in a solution of carbolic acid. A slight dressing of absorbent cotton wool was fastened over the wound with plaster, and over all was placed a fine flannel binder. The patient rallied at once from the operation and expressed herself as feeling very well and free from pain. The anæsthetic employed was a mixture of chloroform and ether.

March 29th.—Wound dressed at 10 A.M.; temperature 99·8°; pulse 96; skin around wound deeply stained with bile, which flowed freely from the fistula, drenching the absorbent dressing and soaking through to the mattress. The patient was placed on milk diet with a little cornflour. She had passed two motions during the night, formed, but without bile. The wound healed rapidly by first intention.

With a view to ascertain the quantity of bile poured out, an abundant dressing of absorbent wool was weighed daily at 10 A.M., before putting it over the wound, and again on removal the following day at the same hour. The table annexed will show the quantity of bile excreted every twenty-four hours.

Date.	Quantity of bile in 24 hours.	No. of motions in 24 hours.	Temperature.		Pulse.	
			10 A.M.	10 P.M.	10 A.M.	10 P.M.
1886.	Grammes.		Degr.	Degr.		
March 30	112	3	99·0	100·5	80	100
,, 31	110	2	99·4	100·5	96	108
April 1	112	5	100·6	101·4	110	106
,, 2	60	2	99·0	100·4	98	112
,, 3	77	6	98·5	101·0	100	120
,, 4	62	5	98·4	101·4	114	108
,, 5	86	8	99·8	101·0	100	108
,, 6	75	7	98·5	100·4	100	100
,, 7	103	6	99·0	100·2	96	112
,, 8	67	4	99·2	99·2	104	108
,, 9	85	7	98·4	98·4	96	96
,, 10	58	3	98·4	99·8	96	104
,, 11	77	2	98·4	100·2	108	108
,, 12	77	4	98·4	100·0	104	104
,, 13	65	3	99·0	101·0	112	100
,, 14	77	3	99·2	101·0	108	110
,, 15	82	4	98·4	98·4	104	104
,, 16	73	5	99·0	101·0	100	108
,, 17	70	6	98·4	99·0	108	106
,, 18	61	5	98·4	100·8	104	98
,, 19	66	1	98·4	100·0	102	104
,, 20	80	3	98·4	99·8	104	102
,, 21	58	4	98·4	100·2	100	104
,, 22	67	3	100·0	101·2	120	125
,, 23	53	4	99·8	100·8	112	120
,, 24	1	2	99·8	100·6	96	104

On April 1st ascites was again noticed, and the patient was much troubled by flatulence. She was ordered Hunyádi Janos water. After taking some cornflour and milk she vomited, and the vomit seemed to contain bile. On the 3rd it was noted that the ascites had almost disappeared, but flatulence distressed the patient. She took Hunyádi water again. On the 6th her motions contained traces of blood, which passed off on the 9th. Then her general condition improved considerably, and she was able to sit in her chair a few hours daily. At this time she took large quantities of milk, cornflour, custard, and beef-tea. She had no pain since the operation, and was very cheerful; but fluid was

[1] Read at the annual meeting of the British Medical Association at Brighton.

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again accumulating in the abdomen. In this way she went on with, but little change, till the morning of April 23rd. On that morning the flow of bile ceased suddenly, so that the dressing removed on the morning of the 24th only contained a trace. The ascites had become so distressing that I tapped, drawing off on the afternoon of that day 294 ounces of a bile-stained fluid containing a considerable amount of blood. After this the record is that of a patient dying slowly, but without pain, of an incurable disease. On May 8th she died. The post-mortem examination revealed cancer of the pancreas and liver, especially the left lobe. The common bile duct was completely occluded, and perforation had occurred at its origin.

Remarks.—On reviewing the case, it appears to me that the tale of her illness as told by the patient is a history of biliary calculus. The intermittent character of the tumour she felt in her abdomen seemed rather to indicate calculus causing obstruction than stenosis of the duct from malignant disease; while the transitory jaundice referred to by her friend and the colicky pain shooting through to the back were alike characteristic of gall-stones. I expected to find a calculus causing obstruction of the common duct, and on finding that the only stone present was fixed in the cystic duct, I concluded that its presence had occasioned hepatitis and catarrh of the common duct. The smooth regular border which the right lobe of the liver presented favoured this view. No doubt the ascites, the frequent pulse, and evening rise of temperature indicated a malignant origin. On April 7th I telegraphed to Mr. Lawson Tait, desiring his opinion with regard to treatment of the fistulous opening in view of the excessive flow of bile. He very kindly replied at once, and wrote to me saying that the condition was new to him, but that he suspected malignant disease. The sudden stoppage of the flow of bile from the fistula was no doubt due to perforation of the common duct, and to the same cause we may attribute the presence of blood in the abdomen. The occurrence of monthly bleeding from the gums, which was noted by the patient, cannot, I think, be regarded as in any way related to menstruation, when we consider the pathological conditions presented by the case.

Huelva, Spain.

POISONING BY COCAINE ADMINISTERED SUBCUTANEOUSLY.

BY BERNARD PITTS, M.C.

WITH reference to the annotation in THE LANCET of Dec. 3rd, on Poisoning by Cocaine, the following case may prove of interest. I am indebted for the careful notes to Mr. Calvert, assistant house-surgeon to St. Thomas's Hospital. My attention was called to the case in the out-patient room by Mr. Calvert as one of cocaine poisoning. At first sight the patient's condition suggested the probability of a nervous attack, but it was soon obvious that this was not a sufficient explanation. The symptoms shortly afterwards became alarming, and gave rise to grave apprehension as to the result. There is no reason to suppose that the injection in this case was made into a vein, and the preparation of cocaine was the same as had been used in other cases in the out-patient room. The drug is now in very general use for minor operations, and few cases have been recorded where toxic effects have ensued. I have several times noticed slight indications of constitutional effect, but used the drug oftentimes much more freely than in this case, without anxiety. I can now no longer regard the drug as free from risk, and shall be more cautious for the future, especially when the patient has not had the drug tried on him before, for there must doubtless be some peculiar idiosyncrasy in the subject when such marked symptoms arise.

The patient, a boy aged thirteen, came to the out-patient room at St. Thomas's Hospital on Saturday, Oct. 22nd, suffering from a suppurating sebaceous cyst situated in the middle of the forehead. This had previously been opened by a local practitioner some time prior to his application at the hospital, but the incision having healed the matter had reaccumulated. It was therefore decided to evacuate the contents and scrape out the interior of the cavity under cocaine. For this purpose two grains of hydrochlorate of cocaine were dissolved in thirty-five minims of water, and of this solution twenty-five minims were injected through two punctures, one on each side of and close to the abscess cavity. The solution was injected at 2.30 P.M. Within five minutes of the injection, the patient became pale and very restless, with hurried respiration and a rapid pulse (120). The abscess was quickly incised, the contents evacuated, the interior scraped, and the wound dressed. The symptoms shortly afterwards became alarming. The patient was exceedingly restless, constantly shifting his position, throwing his arms and legs about, and wringing his hands. The heart's action became tumultuous; the pulse at the wrist was irregular, rapid, weak, and almost imperceptible; the respirations were rapid, shallow, and irregular; and the pupils were dilated. The patient appeared in great distress; removed his collar and unbuttoned his shirt, so as to expose the chest. Meanwhile, half a drachm of aromatic spirit of ammonia was administered, and, the symptoms continuing, the dose was repeated a few minutes afterwards. Nausea and retching, with eructations, set in at 3.15 P.M., the patient complaining of great pain in his "stomach." This pain was markedly increased on firm pressure over the epigastrium, but was relieved by friction. Half an ounce of brandy was administered, and friction applied to the epigastrium. The patient's condition improved; the pulse, though rapid, became stronger, and the respiration slower and more regular. The dose of brandy was repeated, and a mustard poultice was applied to the epigastrium for fifteen minutes. The symptoms at 4 P.M. continued as before, but were less marked. The patient still complained of pain in his stomach, and lay on his left side with his legs drawn up. He said "he felt better," and was not so restless. At 4.45 P.M. he was removed to the ward, placed in a warmed bed, and hot bottles applied to his feet. He now improved rapidly. He was sick and vomited before 6 P.M., after which there was little to record.

The patient never lost consciousness, and was quite rational when spoken to throughout the persistence of the symptoms. The local anæsthesia was certainly not well marked at the time of the operation; afterwards it was not tested. Taking twenty-five minims of the solution as injected, this would give one grain and a half of cocaine, but owing to some of the solution being spilled and some escaping from the punctures on withdrawal of the syringe, it is in excess of the amount actually injected.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CONGENITAL MALFORMATION OF FOREARMS AND HANDS, WITH CONCOMITANT ATROPHY OF THE BICEPS AND BRACHIALIS ANTICUS MUSCLES.

BY G. C. WILKIN, M.R.C.S., L.S.A.

THE following case came under my observation whilst off the coast of China on board the steamship *Palamed*:—

The man, a Chinese coolie, was about five feet in height, and in appearance remarkable for his childish expression and the absence of a pig-tail, such hair as was present on his scalp being short, grey, and stubbly. His lower limbs and body were perfectly normal. His hands, both of which were small, consisted of the four fingers and their corresponding bones and muscles, the thumbs being absent. There was a difference in the arrest of development on the two sides. *Right side:* Carpus—slight trace of trapezium and scaphoid bones; entire absence of pisiform bone. Forearm—Styloid process of the radius absent. Styloid process of the ulna hypertrophied. Both bones dislocated backwards and outwards from the humerus. Humerus normal. Biceps and brachialis anticus small, but fairly well nourished. *Left side:* Carpus—Absence of trapezium and scaphoid, also of the pisiform bone. Forearm—Radius an inch and a half long, joining the ulna at its lower extremity, its upper extremity being dislocated outwards. Ulna from the junction of the radius to the styloid process hypertrophied; above this normal. Humerus convexly curved forwards and outwards. Entire absence of the biceps and brachialis anticus muscles. There was very slight power over the movements at the wrists, but the fingers were well controlled by their muscles.

The family history was difficult to obtain. He had no

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brothers or sisters, and his father and mother, he said, were quite healthy and well developed.

The measurements of the two upper limbs are as follows:

		Right.	Left.
Arm	Length...	11 in.	10¼ in.
	Circumference ...	7½ in.	5½ in.
Forearm ...	Length...	6¾ in.	4¾ in.
	Circumference ...	6½ in.	5½ in.
Hand	Circumference round knuckles	7 in.	6 in.

Hyde-park-street, W.

ALOPECIA AREATA.

BY E. ST. GEORGE QUEELY,
MEDICAL OFFICER, MAYTOWN HOSPITAL AND PALMER DISTRICT, NORTH QUEENSLAND.

A VERY remarkable case of alopecia areata came under my notice in 1883, and although my patient thought it had disappeared some fourteen months ago, he has just returned with the disease appearing as bad as ever. As little or nothing can be derived from the different text-books on the subject, I thought some of the readers of THE LANCET might be interested in the case, and furnish me with some fresh mode of treatment. The following is the history.

J. E——, male, aged thirty-three, first came under my notice in November, 1883, and exhibited a bald spot about the size of a sixpence in the front of the scalp. It was circular, and had a peculiar ivory-white appearance, without pain or irritation. What struck him first was that the disease originally commenced under his chin and extended slowly round, removing the stubbles (he shaved regularly), and giving his lower jaw the smooth white appearance. This he overlooked, and did not get any advice until it commenced in the head. I first blistered the spot with liq. epispasticus, then used sulphurous acid and ordered tonic medicines. As the disease extended, my patient left for England. On the voyage several spots appeared, and on arriving in London he consulted Dr. J. Hutchinson, who ordered chrysophanic acid combined with white precipitate of mercury. This was used for some time, and as the spots by this time were very large, my patient had his head shaved, thinking by doing so he could better apply the ointment. From London he went to Glasgow, and there saw Dr. McCall Anderson. This gentleman examined his head carefully, and told him he thought it might be a long time before the hair would recover, and that the disease would spread further. He ordered tonics and the ungt. cantharides (P.B.). This treatment continued for some months, the head being kept shaved and the ointment applied night and morning. However, gradually the disease spread to eyebrows, moustache, pubis, and, in fact, all over the body, so that in about twelve months the man was perfectly denuded of hair, even to the few silky down ones on the fingers. Whilst in England he had a bad attack of intermittent fever, followed by herpes zoster and mumps. In 1885 white silky hairs (lanugo) appeared all over his head; these were replaced several times by a fresh growth, which became stronger and darker. In 1886 he left England for Queensland, thinking the disease cured, and each month the hair grew stronger and darker, and when I saw him on his return he had a good head of hair; his beard was also strong. Whilst in England he constantly wore a wig. He recently called on me in a great state of excitement to inform me that the disease had returned, and on examining him I found several spots again on his head having all the appearance of alopecia. I have been lately using the "liniment crinale" of Squire, but, I think, without effect.

Now, I should like to know if there is any cure for the disease, or if it is, like many others, incurable. I have examined the hairs, but could distinguish nothing to warrant it being called parasitic. The bulbs were atrophied and shrivelled, and in many the ends were split, resembling a brush. There were also some irregularities and nodular swellings of fat near the roots. The disease seems to me to be one of malnutrition of the scalp, but from what cause I know not. I should mention one peculiar fact: whenever the man bathes, or has cold or hot baths, on drying himself his skin becomes terribly itchy, this irritation lasting some time.

A RARE PRESENTATION IN MIDWIFERY.

BY T. PATTERSON DEVLIN, L.R.C.P. & S. EDIN.

A SIMILAR case to that related by Mr. Buchanan in your issue of Dec. 3rd, came under my notice. Early on the morning of Oct. 9th, 1884, I was sent for by the midwife. On arrival she informed me that the cord had been coming down, but that she had been able to keep it quite right. Upon examination I found this quite true, but that a hand was also presenting alongside the head. In a short time I was able to place the loop of the funis well up out of danger, then, having applied the forceps, I pushed the hand up over the face, and safely delivered a living child. There is no doubt that the life of the child was largely due to the midwife's early recognition of the condition of matters, promptly sending for assistance, and her close attention to the condition of the funis until I arrived.

Carlisle.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

TWO CASES OF DISEASE OF THE TIBIA IN WHICH THE KNEE-JOINT WAS INVOLVED IN ACUTE SUPPURATION; CONSERVATION; RECOVERY.

(Under the care of Mr. EDMUND OWEN.)

THESE cases were brought before the notice of the members of the Medical Society of London at the meeting on the 19th, a report of which appears on p. 1270. The notes were taken by Drs. Penrose and E. J. Lewis.

CASE 1.—A boy of seven years was admitted from an orphanage in May last, on account of a small sinus below the inner tuberosity of the right tibia, from which pus was constantly oozing. There was a good deal of thickening about the head of the tibia; the knee was flexed. On July 27th he was placed under chloroform, and Mr. Pitts scraped out an abscess cavity which started from the junction cartilage and extended into the upper epiphysis. By the middle of August the wound was almost healed, but soon after this the knee swelled up, and became hot and painful, and the boy's temperature ascended to 103·4°. It was evident that the ulceration in the epiphysis had extended through the articular lamella, and had implicated the knee joint. The boy was extremely ill, and, considering the old-standing affection of junction cartilage and epiphysis, the prospect of ultimately saving the leg did not seem bright. The suppurating joint was laid open by a bold horse-shoe incision, which passed through the ligament of the patella. The synovial membrane was found to be swollen and injected, and an ulcer was seen upon the inner articular cartilage of the tibia, through which a probe could be dropped into the original abscess cavity. The tibial abscess cavity and cloacæ were scraped out, and, together with the knee joint, were thoroughly washed with a weak mercuric solution. The joint was then drained through the head of the tibia, and through the popliteal space. Everything went on well; the wounds have entirely healed, and the boy is going about on crutches wearing a Thomas' splint. The knee is not quite straight—it could never be got so; and what may be the ultimate condition as regards movement it is at present impossible to say, for the joint has not yet been exercised in any way.

CASE 2.—A girl of nine years was admitted in July last with the following history. She had always been delicate; the school to which she had to walk every day was three miles from her home, she had consequently been much exposed to wet and cold. In February last she complained of pain at the right ankle, which showed a red

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and very tender spot; the doctor called it "erysipelas." Two days later she became delirious, and in about a week the right elbow puffed up. In the meanwhile the leg was greatly swollen, and an abscess which had formed near the ankle was opened, as was also one which had formed near the elbow. After this the child, who had been delirious for more than a fortnight, was much relieved. For three months the leg was poulticed, and in June, a month after the arm had got well, an abscess appeared under the chin. Thus the history clearly showed acute periostitis of tibia, subperiosteal abscess and pyæmia—a tolerably common sequence in children. Had the doctor compared the tibiæ at the beginning of the disease, he would have found the affected one enlarged and tender, and would not then have taken the redness of the skin for erysipelas. Then, making an incision through the swollen periosteum, he would have cut short the disease, and would also have greatly diminished the risk of necrosis.

On admission the child was very ill; the leg was swollen from knee to ankle, but the joints were free. Several cloacæ, one of which was just above the inner malleolus, and another below the head of the tibia, led through to bare bone. Mr. Owen cut down through the thickened tissues and removed a sequestrum of the tibial diaphysis four or five inches long, remarking at the time that, considering the unfavourable conditions, local and general, he feared that amputation would soon have to be resorted to. However, the child did splendidly, and in about a month the wound was almost well. But then, as in the other case, the temperature ran up almost to 104°, the knee became large, hot, and tender, and aspiration showed it to be distended with flaky pus. It was concluded that suppuration had found its way from the line of the upper junction-cartilage into the knee joint; and on opening the articulation and turning up the patella, by dividing its ligament, as in the last case, an opening was discovered below the inner semilunar fibro-cartilage, through which a probe could be passed into the sequestral cavity. The case was treated as in the former instance, except that, as the sinus passed on the inner side of the epiphysis, the drainage tube was not run through the head of the tibia itself. The child made an excellent recovery, and, like the boy, is going about in a Thomas's splint, with the sound foot raised on a patten.

Remarks by Mr. OWEN.—These are two of the most important and interesting examples of joint disease which I have ever met with, and it is probably stating the case mildly when I say that many a limb has been amputated for a far less serious condition. The successful issue is to be ascribed to several circumstances, such as the absence of delay and temporising when it was found that the joint was actually involved in suppuration, the free exposure of the interior of the joint, the efficiency of the drainage (in each case a tube was passed through the posterior ligament and through the popliteal space), and the careful scraping and irrigation of the suppurating cavity and track. The dressings were of absorbent mercurial wool.

WEST HERTS INFIRMARY.

CASES OF SURGICAL INTEREST.[1]

(Under the care of Mr. F. C. FISHER.)

CASE 1. *Ankylosis of knee joint.*—C. F——, aged twenty, housemaid, was admitted on June 18th, 1885. The patient had scarlet fever ten years ago, followed by ankylosis of the right knee. Five years ago she fractured the right femur close to the knee joint. It was put up in plaster-of-Paris, and on removal it was found that an abscess had formed about the joint. The patient had been able to walk with a crutch up to three weeks ago, when she fell and bruised the knee, afterwards she was unable to bear any weight on that foot.

On admission, the right knee was flexed and fixed at an angle of 45°; above and to the inner side of the patella was an old scar, the result of an abscess. Measurement: right femur, two inches and three-quarters shorter than the left; right leg one inch and a quarter shorter than the left; the contour of the joint was lost, the depressions on either side of the patella being replaced by bulgings, over which there was tenderness. Extension was tried, but was useless. After consultation it was decided to operate.

On July 17th an exploratory incision was made under ether. The cartilages both of femur and tibia were disorganised, and the patella ankylosed in the inter-condyloid notch. The joint was then excised with Listerian precautions, but, owing to the depth of the ulceration, a good deal of bone had to be removed, leaving a large gap. There was a good deal of subsequent bloody oozing.

The case ran an aseptic course. Highest temperature 100°. No pus. Wound healed by primary union. Tubes entirely removed on July 30th.

Sept. 1st.—No bony union; parts rubbed one on the other and limb put up in plaster-of-Paris. Patient discharged, walking on crutches.

She was re-admitted on Dec. 4th, 1885, and plaster removed. Flail-like union; patient unable to lift the limb off the bed. With the patient's consent further operation was decided on.

Jan. 12th.—With Listerian precautions, the bones were cut down on, all fibrous tissue removed, and the bones refreshed. They were then brought together by two stout pure silver wires, and the ends battered down into the bones; a strip of skin, including the old cicatrix, was removed. The soft parts were then brought together, and the limb put up in a splint made out of Gooch's material, after the pattern described by Watson Cheyne.

The case again ran an aseptic course. Highest temperature 100·6° the day after operation. No pus formed.

Jan. 30th.—Parts quite healed, except at site of tubes.

Feb. 13th.—Firm bony union. Limb removed for the *first* time out of the splint, and encased in plaster-of-Paris.

March 10th.—Plaster removed. Can bear her weight on the foot.

In July, 1887, the patient presented herself wearing a high-heeled boot. She had walked eight miles at a stretch without a stick, and was able to do all housework, being quite able to kneel down on the one knee to scrub a floor. She was greatly pleased with the result.

Remarks by Mr. FISHER.—The total length of shortening was about seven inches, four inches of which existed before operation, due to the fracture and arrest of development of the leg. The silver wires (which must be of quite pure silver) were used with two objects. First to keep the bones approximated, and secondly to prevent subsequent displacement backwards. To attain this second object, I think the following mode of insertion is worth following—viz., to make the holes in the tibial section quite near the posterior surface; those in the femoral section being more anterior in this way, when the wires are drawn together the tibia is lifted out of the popliteal space, counteracting all tendency to subsequent displacement backwards. To those who have not used the splint mentioned I can very strongly recommend it; once put on, it need not be removed, and the comfort both to patient and surgeon during dressings is immense.

CASE 2. *Vesicalcalculus; supra-pubic lithotomy.*—J. S——, aged three, was admitted on July 21st, 1887. During the last few months, whenever the child has passed urine, he has crossed his legs and complained of pain in the penis. His mother thought that he passed urine more frequently than natural.

On admission the patient was a well-nourished child, who passed urine every hour and a half, sometimes very small in quantity, crossed his legs as described, and had pain on urination. The prepuce was long and narrow. There was no blood or albumen in the urine.

July 29th.—Chloroform was administered, and a stone detected with the sound. After a consultation it was decided to perform supra-pubic lithotomy.

Aug. 4th.—Chloroform was administered; the rectum distended with a small pear-shaped indiarubber bag holding 4 oz.; the bladder emptied and injected with about 6 oz. of boric acid solution, and the penis ligatured. The bladder now formed a rounded eminence, reaching rather more than half way to the umbilicus. An incision was made from the pubes upwards for two inches and a half; having exposed the loose fat immediately above and behind the pubes, by scratching through this, the fibres of the bladder were easily seen, and then the loose tissue covering the bladder was gently pushed upwards by the finger nail, the nail scratching through any slightly resisting cellular tissue. A sharp hook was passed into the bladder, and an opening about half an inch made with a scalpel in the middle line. The contents of the bladder rapidly ran out, the forefinger of the left hand was introduced, and the stone detected and hooked upwards towards the wound; by a

[1] Read before the West Herts Medical Society on Oct. 12th, 1887.

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little manipulation with the other hand the stone was gently squeezed out of the bladder wound. No ligatures were required; the abdominal walls were brought together with silk sutures; a drainage tube was put in the bladder. The bladder was not sutured. The wound was dressed with salicylic silk and iodoform.

The bladder was daily washed out with boric acid solution by the wound and per urethram.

8th.—Drainage tube removed.

12th.—All sutures have cut their way out, leaving a healthy granulating sore.

17th.—Passes urine per urethram when standing up, free from all pain.

Sept. 15th.—The wound has now been healed for two or three days, and the boy has been running about the ward quite well. He is free from all pain, and was discharged as cured.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The so-called Hendon Cow Disease and its relation to Scarlet Fever in Man.

AT the special meeting on the 15th inst. the following discussion took place on the above subject, introduced by a paper by Professor E. Crookshank, which was published in full in our last issue.

Professor BROWN desired to state the position which he occupied with regard to this inquiry. When Mr. Power's report concerning the Hendon cow disease appeared, he criticised his conclusions on the same basis as those of any other documents which came under his notice. He found that that report was based on negation. There was absence of any evidence of contagion by human agency. If the human contagium had presented itself, Mr. Power's postulates would never have been drawn. Was it more probable that there was an undiscovered source of human contagion than that the cow herself had developed something in her system which could give rise to human scarlatina? It had been hinted that there was some friction between the various Governmental departments, but so far from that being the case, he was willing, with the sanction of the lords of the Council, to place the whole of the resources of the Agricultural Department at the disposal of the Medical Department and of the profession generally for the purposes of this investigation. Mr. Power's report had inflicted a shock on the dairy interest, and as a result he had directed the present investigation. After a great delay he was able to get intimation of several outbreaks of the disease. The cause of the delay was partly the fear of giving information after the publication of Mr. Power's report, and partly the fact that the veterinary surgeon rarely heard of the outbreak, the farmer simply coming to him for a pot of ointment to treat the sore teat. That the disease was looked upon among farmers as of no account was shown by the fact that the affected cows sold in the market at a fair price. A few brought to the metropolis with the disease had been slaughtered, but the majority went to mix with other herds in various parts of the country. The pock which developed on the teat was "spoilt" by the handling of the milkers, and developed into a filthy sore. In some six or seven outbreaks during the last two months (for it was very prevalent at the present time), this eruptive disease of the teat had not been coincident with scarlatina; this might be only a singular coincidence. He did not profess to connect this disease with the Hendon cow disease, for he never saw the latter. Recently 604 cowsheds had been inspected in the metropolis, and over 9000 cows examined, but no eruptive disease had been discovered. His experience was that in rural districts dairy farms were often very dirty, whilst dairies in town were, as a rule, patterns of neatness and cleanliness. On the bacteriological aspect of the question he was silent, but he was unprepared to hear that this disease was really cow-pox. It seemed desirable, from his point of view, that it should be put under the Contagious Diseases (Animals) Acts, which would make it an offence to sell milk from a diseased animal.

Dr. BUCHANAN said that Professor Brown seemed to take it for granted that, given two febrile diseases, each associated with a micrococcus presenting certain characters in nutrient material, the two diseases must be the same. Professor Crookshank and Professor Brown had never seen one of the diseases they affected to diagnose, and the unity of the affections had been affirmed on resemblance of some only of the characters, not all. In the Hendon cases results of the post-mortem examination had been recorded, but they had heard nothing of the necropsy of Dr. Crookshank's case. His conclusion was that Professor Crookshank was in possession of some curious cases of cow-pox arising apparently spontaneously, and the result of inoculation into human beings would be awaited with interest. He supposed there might be some varieties of this disease called by Professors Brown and Crookshank *the* disease.

Dr. KLEIN said that Professor Crookshank had compared the disease he had seen with the outbreak at Hendon on the strength of Dr. Cameron's report, but that account was based on information derived from a variety of people in different localities. Dr. Cameron says that he is informed that human inoculation has happened, but this did not occur at Hendon, for there was not a single case there of infection of a milker, and there was no fever, no primary eruption, and no vesiculation. The ulcers and sores observed on the Hendon cows were different from those on the cows from Professor Crookshank's investigation which had been placed at his disposal. The ulcers in the Hendon cows were deeper, smaller, and healed up more rapidly; in eight or ten days the crust was gone. In the Wiltshire cows there were large irregular superficial ulcers; there was no "substance" in them, merely a slight granulating surface underneath the scab. A cow sent from Edinburgh had in its lesions greater similarity with the Hendon than with the Wiltshire cows. The milk from the herd of Edinburgh cows had been supplied in a district in which between forty and fifty people had been attacked with sore-throat and fever. In regard to the organisms, he was surprised that Professor Crookshank said that these microbes, because they appeared to agree in certain particulars, were therefore the same thing. It was too short a time yet to judge of these differences; one would be found to grow a little slower, the colonies were a little smaller, and there were other small differences. As an illustration of this he would quote the micrococci of septicæmia, scarlatina, and erysipelas; all behaved much alike in cultivations, but on inoculation the septicæmic organism at once differentiated itself. There were many streptococci which, similar under the microscope, differed in rate of growth, size of colonies, opacity or translucency, and behaviour in different cultivation media. He could say positively that the organism from the Hendon cow disease was not the same as the organism from Professor Crookshank's cases. From cow No. 1, which had a mammary abscess, he got an organism which he planted in agar-agar, Brand's extract, and peptone mixture, but it refused to grow; whereas, the organism from the Hendon cows grew readily in such a mixture. Then, again, cow No. 1 had no visceral lesions; whereas, in the Hendon cases there was lung, spleen, and kidney disease. Professor Crookshank's cases looked much like real cow-pox, and were most probably so; his pictures corresponded to Ceely's figures, and it would be interesting now to test and see if the calf would not take animal vaccine. Dr. Klein quoted an instance in which two horses were affected with a disease which looked like variola equina; the eruption healed and left no pitting. One of the grooms developed a vesicle on his thumb. Inoculation of lymph from this vesicle did not produce cow-pox in calves, ponies, or donkeys. It was therefore a disease which only resembled variola in some particulars. So in the present instance, though vesiculation and ulceration were present, inoculation alone would prove the affection to be true cow-pox.

Professor CROOKSHANK, in reply, said he had not personally observed the Hendon cow disease, and Dr. Klein who had made the post-mortem on the first of his cases had already told the result. His own account had followed as closely as possible Dr. Klein's narrative of the Hendon disease. He had said that the microscopical appearances and characters on cultivation were identical with those of other streptococci. To his mind the evidence put forward by Mr. Power was a clever hypothesis, and Dr. Klein, by introducing the organism, had made that hypothesis a working one. He had yet to study the effect of inoculation in animals. He had succeeded in growing the organism in agar-agar and in broth. He regretted that no drawing had been published of the

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original Hendon disease. On the farm from which his cases were drawn were eleven milkers: four old men had had the disease before, and did not contract it again; the other seven were lads, and had all contracted it. He would be glad to give all who were interested in the subject every opportunity of working at it. If Dr. Cameron's report did not refer to the Hendon cow disease, he thought some official statement to that effect should be made by the authorities of the Local Government Board.

Sir JAMES PAGET felt sure that in the future the disease could not well be overlooked. There was a great necessity that diseases in the cow should be studied by careful pathologists, and Mr. Ceely's papers and drawings would yield most valuable material for the investigation, and were deserving of the closest study.

Rare Forms of Fracture of the Lower End of the Femur.—Vertical Fracture of Head of Tibia.—Rare Fracture of Acetabulum, with Dislocation of Head of Femur into the Pelvis.—Partial Perforations of Skull-cap in cases of Cerebral Tumour.—Pathology of Sarcoma of Sole of Foot.—Rickets in Lion's Skull.

An ordinary meeting of this Society was held on Tuesday last, Sir James Paget, Bart., F.R.S, President, in the chair.

Mr. BULL showed a specimen of Fracture of the Lower End of the Femur, extending into the knee joint. It was removed from a cabman aged fifty-six, whose thigh was amputated owing to the suppuration in the knee joint which ensued on the hæmorrhage into the joint due to the injury. A large slice of bone had been broken off the lower end of the femur from the anterior surface, the condyles being split laterally and longitudinally. The fracture had become united by callus. A somewhat similar fracture was known to occur in the patella, but its occurrence was, perhaps, unique in the femur.

Mr. D'ARCY POWER showed a specimen from the museum of St. Bartholomew's Hospital of Simple Comminuted Fracture of the Head of the Tibia, with a longitudinal fracture extending upwards through the internal tuberosity into the knee joint. The patient was a woman aged seventy-six, who fell down a flight of twenty steps and was found with her leg doubled under her. The fibula was shattered just below the neck. The main interest of the specimen consisted in its illustrating the mode of occurrence of longitudinal fracture in these cases; it was clear that the fracture resulted from the driving of the lower into the upper fragment.

Mr. TIMOTHY HOLMES showed a specimen of Fracture of the Acetabulum, with Dislocation of the Head of the Femur into the Pelvic Cavity. The man, aged about sixty, had fallen from a height of fifteen feet on to his side in the trochanteric region; the thigh could be flexed and crepitus felt; there was one inch of shortening; the great trochanter was deeply sunk, and reached just above Nélaton's line. The patient died in a few hours. The head of the femur had passed through the bottom of the acetabulum, and had broken the os innominatum into many pieces. A somewhat similar specimen was shown before the Society by Mr. Moore. Reference was made to cases quoted by Sir Astley Cooper, and also to another instance, probably of a similar nature, but not examined anatomically. In Mr. Cutler's case the head of the femur was not driven into the pelvis. An accurate diagnosis in these cases was perhaps not impossible, though it had not been made in any of the known recorded cases. The reduction of the fracture was possible.—Mr. FREDERICK TREVES thought the case exhibited the mechanism by which the fractures were produced, and this was by the force being sent through the great trochanter, the head being driven as a wedge through the quadrilateral thin portion of the acetabulum and so splitting up the two arches of the pelvis. In reply to Sir James Paget, he said he explained the difference of result in different cases by supposing that the head of the femur was in contact with different parts of the acetabulum at the moment of the receipt of injury. Sometimes the acetabulum would be merely starred, and at others the head of the femur would be driven through, according, perhaps, to the degree of violence. If the head rested against the thick part of the acetabulum, then the neck of the femur would be broken.—Mr. TIMOTHY HOLMES partially agreed with Mr. Treves, but considered that the mechanism of fractures was frequently inexplicable.—Mr. TREVES suggested that a series of artificial fractures on the dead body might point out the *rationale* of these cases.—Sir JAMES PAGET had attempted years ago to fracture bones so as to imitate ordinary solutions of continuity, but without success. He asked that some of the younger members of the Society would undertake a series of experiments of the kind suggested.

Dr. ORMEROD showed a Skull with Partial Perforations from a case of cerebral tumours. About thirty holes were scattered over the frontal and parietal regions on both sides, varying in size from a quarter of an inch in diameter downwards, extending through the inner table, and in some instances almost completely perforating the skull. Actual perforation was observed during life over the right eye; this perforation was enlarged in the course of a surgical operation for removal of the tumour, and therefore not now visible. The dura mater exhibited clean-cut perforations corresponding to those in the skull. There was roughening of the internal table between the perforations, and in some places general thinning of the skull. The holes were seen at the necropsy to be due to small soft tumours sprouting from the surface of the brain. The large surgical hole was blocked by a slough when the tumour had been removed, and behind this the frontal lobe was entirely softened. The choroid plexus of the ventricles was infiltrated with pus, which, tracking into the left temporo-sphenoidal lobe, formed a large abscess there. The patient was admitted under Dr. Andrew into St. Bartholomew's Hospital with general symptoms of cerebral tumour. Some left-sided paralysis appeared soon after. He became unconscious, and remained in that state for over a year, being kept alive by nasal feeding. Shortly before death a perforation occurred over the right eye; the hole was enlarged, and the tumour partly removed.

Mr. F. TREVES showed a Tumour from the sole of the foot as a contribution to the early history of malignant growths. The specimen came from a man aged fifty-six; in the sole of the foot the swelling had been in existence for thirty years, and had steadily increased. It had a circumference of about ten inches, and measured about three inches and a half across; the skin was sound everywhere, except at one spot near the little toe, which was softened and the seat of more active growth. Injury, irritation, and exposure to cold had all operated upon the tumour for many years, and it had been walked upon for thirty years; so that age would seem to have most influence in the development of the tumour. The malignant new growth was of the size of a horse-chestnut. The primary tumour of fibrous tissue could be seen to be infiltrated with a new growth arranged without order or method. The notion that the tumour took on a degeneration into a malignant character was not supported, for it seemed that the malignancy was due to an actual addition rather than a conversion or true metamorphosis.—Dr. COUPLAND referred to the uterine fibromata in which malignant growth was not developed from the muscular fibre.—Mr. BLAND SUTTON spoke of the tumours of tumours, as when certain dermoid tumours became the seat of malignant growths; the ovary might become the seat of epithelioma, and perhaps of other neoplasms.—Mr. GODLEE did not think that malignancy was always an addition, but an actual change might occur in the elements of a tumour, as when recurrent fibroids became more malignant.—Sir JAMES PAGET, whilst agreeing with the main argument, pointed out that a new growth takes on properties from the tissue in which it grows.—Mr. TREVES detailed the histology of certain warts, in which there appeared to be a direct conversion of the individual cells into epithelioma.

Mr. BLAND SUTTON exhibited specimens illustrating a peculiar effect of Rickets upon the Skulls of Lions. Last session he showed some similar specimens, in which the bones of the skull pre-formed in membrane were those most affected in rickets; this applied to all mammals. The carnivora possess an ossified tentorium which normally is of the thickness of writing paper. When the skull is thickened by rickets this bony tentorium is also affected, the enlargement giving rise to pressure symptoms and some curious effects on the brain. The specimens previously exhibited showed the changes which occur in the brains of cubs; the enlarged tentorium presses upon the vermiform process of the cerebellum, and this compression occludes the fourth ventricle and intercepts the inter-ventricular communications leading to hydrocephalus, with well-marked symptoms, general paralysis, and death. When the thickening of the tentorium occurs at a later date the effects upon the brain

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are somewhat different. The large tentorium presses upon the vermiform process of the cerebellum and obliterates the fourth ventricle, but instead of causing extreme dilatation of the third lateral ventricles in the cub, we find these cavities are but little larger than usual. The effects upon the floor of the fourth ventricle are somewhat different, for an examination of the cerebellum and medulla in longitudinal shows that the abnormal pressure of the vermiform process causes erosion of the floor of the fourth ventricle, and in one of the specimens this portion of the cerebellum is accommodated in a distinct shallow groove. The differences may be accounted for by the unyielding character of the cranium at the age of two years in lions, as compared with the accommodating nature of the sutures and fontanelles in the cub. The lions from which the specimens were obtained were paraplegic for many weeks before death, and in one the tail became gangrenous and sloughed. On the hind limbs were three large ulcers comparable to bed-sores. In reply to Sir James Paget, he said that rickets was not found in animals in the wild state. John Hunter's specimens were probably obtained from menageries. An extinct form of whale (Pachycanthus), found in a large tract of country near Vienna, was shown by Paul Gervais to have signs of rickets, and with a remarkable narrowing of the spinal canal to a mere chink.

The following card specimens were shown:—

Dr. PERCY SMITH: Syphilitic Arteritis from General Paralysis of the Insane.

Dr. PENROSE: 1. Multiple Renal Calculus in a child aged nine years and a half. 2. Pericellular Cirrhosis of Liver in a child aged three months, suffering from congenital syphilis.

Dr. MONTAGUE MURRAY: Infective Endocarditis affecting both sides of the Heart, with Patent Ductus Arteriosus, in a woman aged thirty-six.

Dr. D. F. DREWITT: Gangrene of Leg occurring in the fourth week of typhoid fever.

Mr. LEOPOLD HUDSON: 1. Atrophic Cirrhosis of Liver with large Prominences, due to fatty infiltration. 2. Hæmorrhage into a large Cyst in a Cirrhotic Kidney.

Mr. STEPEN PAGET: Fibro-sarcoma beneath the Pectoralis Major.

MEDICAL SOCIETY OF LONDON.

Acute Arthritis.—Gastric Ulcer.—Psoas Abscess.—Mitral Stenosis.

THE meeting on Dec. 19th was a clinical evening. The chair was taken by the President, Dr. J. Hughlings Jackson, F.R.S., at 8.30 P.M.

Mr. EDMUND OWEN gave a clinical demonstration on two cases from the Great Ormond-street Children's Hospital. These cases are described in full in our present number under the heading "Mirror of Hospital Practice."—Mr. ADAMS said that trephining the head of the tibia often prevented the abscess spreading to the joint. He looked upon the cases rather as subacute; the acute cases being either pyæmic or traumatic, usually necessitating amputation, if not, leading to ankylosis.—Mr. BOWREMAN JESSETT referred to a case of acute periostitis of the tibiæ which involved both knee joints, and in which amputation was followed by a successful result.—Mr. PAGE advocated trephining the head of the bone where symptoms of abscess existed, in order to obviate arthritic complication.—Mr. H. ALLINGHAM preferred to open the joint in such cases by a vertical incision, splitting the patella.—Mr. PYE thought osseous ankylosis would be preferable to imperfect movement in a damaged joint.

Dr. ORD demonstrated the case of a coachman, aged sixty, in whom there was a strong family history of Gastric Ulcer, and who himself presented many symptoms of that affection. He was emaciated and cachectic, suffered from pain after food, relieved by vomiting, the vomit containing blood. The symptoms had entirely disappeared under treatment, consisting of a mixture containing subnitrate of bismuth, carbonate of potash, and tincture of belladonna, with infusion of gentian, together with a soft bland diet. The diagnosis rested principally on the absence of palpable tumour, the effect of treatment, and the history of many years' gastric suffering. The ulcer differed from those found in young women, in being larger, less regular in outline, and shallower, and in possessing a rounded, rather raised, never hard edge. In cases of undoubted carcinoma he had found that a mixture of bismuth and iodide of potassium greatly mitigated the pain.—Dr. SIDNEY PHILLIPS said that cases of unduly pulsating aorta had been connected with hæmatemesis and melæna without gastric ulceration.—Mr. JESSETT had found iodide of potassium and alkalies useful in gastric catarrh.—Dr. KESER inquired if tropæolin, described by Van den Velden, had been used by Dr. Ord as a test to distinguish between the vomit of ulcer and cancer.

Mr. BERNARD PITTS exhibited two cases of Psoas Abscess treated by lumbar incision. The first was a boy aged twelve, who had pain in his lumbar spine for several months, followed by formation of abscess, which had been evacuated by a free lumbar incision. A finger introduced into the wound detected extensive carious excavation of the front of the bodies of several lumbar vertebræ. The boy was kept at rest in bed for eight months, when well-marked angular curvature was manifest. For the last six months a poroplastic jacket had been worn, and the discharge, which was now exceedingly small, was received into an iodoform dressing changed once weekly. The second case was a man aged twenty-nine, who had a fluctuating swelling in the left groins of ten weeks' duration, apparently unassociated with injury or spinal disease. The groin swelling was opened by a small incision and a large counter-opening made in the loin. Two months afterwards he left the hospital with the wound soundly healed. Both were treated antiseptically. Mr. Pitts spoke of the almost uniform success now obtained in dealing with psoas abscess, more particularly in children. In the boy the lumbar incision enabled the extent of the mischief to be accurately gauged, and prolonged rest in bed commensurate with its gravity to be decided on. It would have been difficult to have included safely and comfortably an inguinal incision in an antiseptic dressing. The abscess in the second case, he thought, was more probably due to some carious spot which the finger failed to reach than to primary suppuration in the psoas, consequent possibly on strain. He stated that he would never open a psoas abscess unless he could obtain a lumbar drain; he regarded syringing unnecessary unless the pus were offensive or curdy.—Mr. OWEN considered absolute rest in bed better treatment than supports for angular curvature.—Mr. WALSHAM had seen cases cured by two or three aspirations without incision.—Dr. ORD and Dr. S. WEST spoke of the value of aspiration in cases of empyema.

Dr. SAINSBURY showed a patient, a girl of nineteen, with cardiac disease, in whom there was at the apex a rough diastolic murmur—post-systolic—accompanied by thrill. There was likewise a blowing apex systolic bruit, and the second sound at the base was reduplicated.

CAMBRIDGE MEDICAL SOCIETY.

A MEETING of this Society was held on Nov. 4th, Mr. E. Carver, F.R.C.S., President, in the chair.

Dr. RANSOM read the notes of six cases of Diphtheria, all of considerable severity. Albumen was present in all cases, the amount varying more or less directly as the severity of the case. All were followed by paralytic symptoms. All recovered except one, a girl of fourteen, who died quite suddenly on the eighteenth day apparently from syncope, due perhaps to paralysis of the heart muscle or formation of clot; the throat had been well for several days, and the girl seemed to be rapidly recovering, when one evening she had an attack of vomiting, followed by some slight epigastric pain and dyspnœa, death occurring the next morning quite suddenly. One case was complicated with pertussis and the extension of the diphtheria into the larynx; this case recovered. Possibly the pertussis was of some use in preventing tracheal obstruction. All the cases were treated with liq. ferri perchlor. fort. in hourly doses, and hourly painting of the throat with a weak, watery, solution of glycerine of tannin. Attention was called to Löffler's researches on the bacillus of diphtheria as reported by Fraenkel, in defence of the theory of the local origin of the disease and the resemblance of the diphtheritic membrane to the primary syphilitic sore, and the treatment employed defended on this ground.

Professor HUMPHRY showed a specimen of Congenital Sacral Tumour removed from a girl, aged twelve, under his care in Addenbrooke's Hospital. It was a mass the size of the girl's head, consisting mainly of fatty tissue, with a circle of bone, thought rudely to represent a pelvis, and a long

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jointed bony part, thought rudely to represent a limb. The bony growth extended into the pelvis between the ilium and ischium, but was not connected with either. Professor Humphry did not remove the deeper portion, being of opinion that, as the mass was congenital and not increasing with the girl's growth, that which remained would not create any inconvenience.

Mr. FRANCIS read a paper on Œsophageal Diverticula, in which he classified them into the following groups: (*a*) Congenital: Reference was made to the chief theories as to their occurrence—as analogous to œsophageal diverticula occurring in some of the Sauropsida and in ruminant mammals (forming the first two compartments of the "stomach"); or as fœtal varieties, analogous to the œsophageal diverticulum from which the larynx, trachea, and lungs were formed; or as failure in closing of bronchial cleft at its pharyngeal end; and he remarked on the absence of evidence to show that these diverticula were, at any rate usually, congenital. (*b*) Diverticula associated with stagnation ectasia, depending on stricture of the tube below, and analogous to certain diverticula of the intestine, bladder, and rectum. (*c*) Pressure diverticula, usually occurring near the junction of the œsophagus and pharynx. (*d*) Traction diverticula, usually occurring near the tracheal bifurcation; analogous to diverticula occurring rarely in the bronchus or intestine. He referred to the different methods of production of these diverticula, by the contraction of inflammatory deposits outside the œsophagus, or by the action of the musculus pleuro-broncho œsophageus of Hyrtl and Cunningham, or by the absence of support to the œsophagus below the bifurcation of the trachea, as advocated by Struthers. A specimen was shown, removed from a patient in Addenbrooke's Hospital, under the care of Professor Latham, after death from phthisis, in which a large abscess cavity at the bifurcation of the trachea communicated with the œsophagus and simulated a true traction diverticulum.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Nov. 23rd, the President, Mr. Ross Jordan, in the chair.

Foreign Body in Bronchus.—Dr. HAWKES read notes of a case of a child, aged one year and eleven months, who was admitted into the Children's Hospital on Oct. 22nd with the physical signs of obstruction of the left bronchus, and collapse of that lung. On Oct. 16th, while eating a portion of rabbit, he was observed to be choking. The mother dislodged a piece of bone from the back of the mouth and the symptoms of asphyxia ceased, leaving, however, a short cough. This continued for a few days, after which time he was taken to the hospital and admitted. Tracheotomy was performed and every effort made to dislodge the obstructing body, but without success, and the child died on Oct. 26th. At the necropsy one of the caudal vertebræ of a rabbit was found in the bronchus leading into the upper part of the left lung. The left lung was much collapsed, and in a condition of croupous pneumonia.

Tumour of Superior Maxilla.—Mr. AUGUSTUS CLAY showed a tumour, the size of a hen's egg, which he had removed by enucleation from the antrum. There was a history of incessant toothache on that side for four years. Twelve months before the operation a swelling the size of a marble appeared at the upper part of the gum. In six months this had grown rather rapidly, and bulged out the cheek in the usual characteristic manner. The other cavities were not encroached upon. An exploratory puncture was made, and a piece removed for microscopic examination; it was found to be a simple fibroma. A week later the growth was turned out of the antrum, after a small skin incision and an opening through the thin bony wall had been made. The patient was discharged on the nineteenth day after the operation, and up to the present time (twelve months) there has been no recurrence.

Resection of portion of Thyroid.—Mr. MARSH showed a boy, aged fifteen, on whom he had performed resection of part of the thyroid gland. On admission to the Queen's Hospital he was found to have a large bronchocele (simple hypertrophy) of only three months' growth. Each lobe was equally enlarged, and a piece the size of a small orange was situated over the trachea. The pressure symptoms being very marked, Mr. Marsh decided to resect the portion of the gland in front of the trachea. A median incision was made, and with some little difficulty the trachea was cleared, a piece of thyroid the size of an orange being removed. The hæmorrhage was not excessive. The relief afforded was immediate, and the patient rapidly improved in health. The remaining part of the gland became much softer and visibly smaller, evidently atrophying. He was discharged with the wound healed on the nineteenth day after the operation.

Hereditary Optic Atrophy.—Dr. SUCKLING showed a man aged sixty-three suffering from double optic atrophy, entailing complete blindness. He gradually lost his sight when he was fifty, and he states that blindness runs in his mother's family. His mother became blind at the age of fifty; his sister was blind; a female cousin on his mother's side is quite blind. The pupils are small and respond to light. There is no history of syphilis or nervous disease, or any signs of locomotor ataxia.

Fracture of Spine.—Dr. SUCKLING also showed a man aged seventy-six who three months ago had fallen down two stone steps on to his back. He went about for a week without pain, and then had severe shooting pain round the left side. On examination the spine of the tenth and eleventh dorsal vertebræ were found to be prominent and tender on percussion, there being also marked angular curvature. With five weeks' rest in bed all pain and tenderness disappeared, the prominence remaining.

Papilloma of Larynx.—Mr. JORDAN LLOYD showed a papillomatous tumour which he had removed intralaryngeally from a female aged thirty-five. The woman had suffered from hoarseness and paroxysmal dyspnœa for more than seven years, and had been treated for "throat consumption" by several practitioners. The growth was pedunculated and flatly globular in shape, measuring five-eighths of an inch transversely and half an inch in depth. It grew from the lower edge of the left vocal cord. Attempts to seize it with forceps failed, and it was then rubbed off its attachment by means of a piece of dry sponge fastened to the end of a laryngeal probe. Relief to symptoms was immediate. The operation was performed last May, and there is no sign of recurrence.

Brain lacerated by "contre-coup."—Mr. LLOYD also showed a brain from a healthy young man who was supposed to have fallen downstairs on to the back of his head. The injury to the scalp was over the left lambdoidal suture. No symptoms of any kind were present for sixty hours, and then he developed typical Jacksonian epilepsy in the left face, tongue, and jaw muscles, with a progressive paralysis of the left arm. He was trephined over the right fissure of Rolando, on the opposite side of the head to the seat of injury, and a large blood-clot removed. The symptoms were relieved for a few hours; they then returned, and he died comatose about sixty hours after the operation. The necropsy revealed a separation of the right lambdoidal suture with a fracture extending from it obliquely across the right parietal bone, squamous portion of temporal, into the middle fossa of the skull, and terminating between the right lesser wing of the sphenoid and orbital plate of the frontal bone. There was no injury to the brain at the seat of external injury, but part of the right frontal and temporo-sphenoidal lobes were "pulped." There was slight crushing of the front of the right parietal lobe. There were several localised extravasations into grey matter of the convolutions about the fissure of Rolando.

Monstrosity.—Mr. H. S. COOK showed a case of fœtal monstrosity: male twins joined together from the ensiform cartilage to the umbilicus. The mother was delivered naturally, the presentation of the first being a vertex and the second a footling. One lived two days and a half, and the other three. They were both fed with milk, both micturated, but only one had a motion. The living child, after the death of the other, was so feeble that any operation of separation was out of the question.

Dr. SAVAGE read a paper on Pelvic Cellulitis.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

A MEETING of this Society was held on Nov. 10th, Dr. G. H. Hume in the chair.

Adenoid Vegetations in Pharynx.—A girl was exhibited by Dr. LIMONT who had improved under treatment.

Blocking of Central Artery had occurred in a patient exhibited by Mr. WILLIAMSON. No cardiac or kidney disease existed. There was a history of injury to the head,

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which was thought to have displaced a patch from some diseased cerebral vessel.

A specimen of *Intussuscepted Bowel* was exhibited by Dr. JAMES DRUMMOND. The symptoms resembled those of irritant poisoning.

Genu Valgum.—A man thus suffering had been successfully operated upon by Mr. MORGAN.

Dupuytren's Contraction.—A man, aged forty, in whom Mr. MORGAN had to divide the flexor tendons, had now good use of hands. The disease began fifteen months ago.

Extra-uterine Fœtus removed successfully by Gastrotomy.—A specimen was exhibited by Mr. MORGAN which was said to have been of twelve months' formation. The cyst had to be stitched to the abdominal wound, and prolonged hectic fever followed; but the patient ultimately made a good recovery. — Mr. Rutherford Morison, Drs. Murphy and Hume, and Mr. Page took part in the discussion, each alluding to cases that had occurred in his own practice.

Abscess of Brain.—Mr. BLACK exhibited a specimen removed from a boy whom he had trephined. The convulsions and left-sided paralysis present before the operations had not been relieved by it.

Liver in Phosphorus Poisoning, removed from a woman who died thirty-eight days after taking the poison, was exhibited by Dr. DRUMMOND. It showed cirrhotic changes. Leucine and tyrosine had never been present in the urine.

Cancer of Stomach.—Dr. DRUMMOND exhibited two specimens. In one the disease was at the pyloric, in the other at the cardiac, end of the stomach.

Sarcomatous Growth from Mediastinum.—Dr. OLIVER exhibited a specimen of a round-celled sarcoma removed from the body of a young man aged twenty-six, who had good health until three months ago, then dyspnœa and hæmoptysis. The growth involved the pericardium and extended to the thyroid.

Electrical Treatment of Uterine Fibroids.—Dr. OLIVER also exhibited Apostoli's apparatus, and commented upon its application in the case of a lady at present under his care suffering from a bleeding uterine myoma.

Idiopathic Tetanus.—Mr. PAGE read notes of a case at present under his care. He advocated the purely nervous nature of the disease, regarding it as dependent upon an exaltation of the polarity of some portion of the grey matter of the spinal cord. Alluding to Shakespear's experiments, he considered the medulla oblongata as the seat of the poison in traumatic tetanus, and he hoped that the experiments which Shakespear and others had carried out in regard to this affection would be repeated in the proposed comparative anatomy and pathological laboratory about to be established in the new College of Medicine in Newcastle.—Drs. Limont, Philipson, and Heath, and Mr. Clement Stephenson, joined in the discussion.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THE usual monthly meeting was held in the Faculty Hall on Wednesday evening, Nov. 23rd, Dr. Abraham Wallace, President, in the chair. J. McGregor Robertson, M.D., C.M., and H. St. Clair Gray, M.B., C.M., were duly elected members of the Society. There was a large gathering of the general profession in response to a special invitation to hear Mr. Skene Keith, of Edinburgh, who read a paper on "The Treatment of Fibroid Tumours of the Uterus by Electricity," and Dr. J. McIntyre, who gave a "Demonstration of Apparatus used for Electro-therapeutics." Mr. Keith gave the details of six fibroid cases treated successfully as to reduction of size of tumour, mitigation of pain, and cessation of metrorrhagia, and the results in fifty-eight cases (1350 applications), whereof fifty-two had been greatly benefited. Dr. McIntyre recounted the various forms of electric force and the different methods whereby these are rendered applicable to practical therapeutics, together with the methods at present used for measuring the current as to intensity, quantity, and rate, and the terms of measurement. He also gave an interesting demonstration of batteries and modes. Both papers were cordially received and discussed.

Reviews and Notices of Books.

The Life and Letters of Charles Darwin, including an Autobiographical Chapter. Edited by his Son, FRANCIS DARWIN. Three Volumes. London: John Murray. 1887.

THE appearance of these volumes will be welcomed by all those who desire to know something of the public and private life of a man whose slowly matured convictions, enunciated in measured and weighty terms, have not only effected a revolution in natural history, but have been applied with almost identical results to many other departments of human knowledge. The three volumes are respectively devoted to his early life up to 1854; to an account of the history, publication, and spread of his work on the "Origin of Species"; and to the various works which appeared in quick succession from 1863 to 1883.

The family from which Charles Darwin arose were formerly substantial yeomen residing in the northern part of Lincolnshire, close to Yorkshire. His father was a doctor, who, from the various anecdotes that are told of him, must have been a man of great acuteness of intellect; and he himself was born at Shrewsbury on February 12th, 1809. At a late period of his life a German editor appealed to him for an autobiographical notice, and thinking the subject was one that might interest his children, he drew up a short account of his life and character, which, though short, constitutes one of the most interesting parts of the work. From this it appears he had the misfortune to lose his mother at the early age of seven, just after he had been sent to school at Shrewsbury. He states that he was a lad of inquiring mind, fond of collecting all sorts of objects, such as shells, seals, coins, and minerals. Amongst his earlier recollections was his disposition to *invent*, if that term may be applied to lying; and he gives as an instance that he once gathered much valuable fruit from his father's trees, and, after concealing it in his shrubbery, ran in, in breathless haste, to spread the news that he had discovered a hoard of stolen fruit, which, after all, was not far beside the mark. It is interesting to note that although a pupil in one of the best schools in the country, and at a time when Dr. Butler was head master, he in after life considered that the school as a means of education to him was a perfect blank, and that the only qualities he possessed, which at this time promised well for the future, were that he had strong and diversified tastes, much zeal for whatever interested him, and a keen pleasure in understanding any complex subject or thing. In contrast with the modern side or department which has been established in some of the great schools in England, he observes that, on its becoming known that he worked with his brother in spare hours at chemistry, he was once publicly rebuked by Dr. Butler for wasting his time on such unprofitable subjects, and stigmatised as a *poco curante*, a term that, not being understood, troubled him greatly. On leaving school, he was sent, in 1825, to Edinburgh University, with a view of entering the medical profession, but the dreariness of the lectures, his unconquerable aversion to dissection, and his mental agony in witnessing operations, then of course performed without chloroform, led him to spend most of his time in the pursuit of natural history. He formed friendships with Dr. Coldstream, with Grant (afterwards Professor of Comparative Anatomy in University College, London), and with Macgillivray. In 1828, all thought of medicine being given up, he proceeded to Cambridge with the intention of entering the Church; and as he says himself, considering how fiercely he has been attacked by the orthodox, it seems ludicrous that he once intended to be a clergyman. This intention was never given up, but died a natural death when, on leaving Cambridge, he joined the *Beagle* as naturalist. In later life, he adds, the humorous

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of a German psychological society asked him earnestly by letter for a photograph of himself, and some time afterwards he received the Proceedings of one of the meetings, in which it appeared that, after public discussion of the shape of his head, one of the speakers had said that he had the bump of reverence developed enough for ten priests. He passed well in the poll, and obtained his first taste for scientific work from friendly personal intercourse with Henslow, the botanist, and Sedgwick, the geologist. He was appointed through Henslow's instrumentality naturalist to the *Beagle* in 1831, and was away from England for nearly five years, his impressions being recorded in "A Naturalist's Voyage round the World." In this work the dawn of his future labours is sufficiently apparent. A few years after his return from this voyage, in the course of which his health became much impaired, he settled at Down, where with his wife and family he remained till death closed the scene on April 19th, 1882. He was buried in Westminster Abbey, accompanied to the grave by many of his oldest friends, and by a large number of interested and mourning spectators.

A point that is particularly worthy of notice in Darwin's life is the relatively short period of the day he devoted to actual work. His son states that after breakfasting alone at about 7.45 he went to work at once, considering the hour and a half between 8 and 9.30 one of his best working times. An interruption for an hour followed, and then he set to work again from 10.30 to 12, by which time he considered his day's work over. The rest of the day was spent in brief exercise, and in having novels, history, and travels read aloud to him. Indeed, novels seem to have had a strong attraction for him, probably affording relaxation of the mind from the tension of severe thought.

Letters, as a rule, are dull reading, if only from their interrupted disconnected character; but we can assure our readers that Darwin's letters are exceptionally interesting. They show the whole process of development of his great theory; how earnestly he brooded over the subject; in how many aspects he viewed it; how desirous he was to obtain information on all points that might serve to illustrate or correct it; how fearful he was that he should weary his most intimate friends, Lyell, Hooker, and Henslow, by constantly reverting to it. They show his naturally lively disposition and his thorough perception of fun—as, for example, this postscript in a letter to Lyell "Our ancestor was an animal which breathed water, had a swim bladder, a great swimming tail, an imperfect skull, and undoubtedly was a hermaphrodite. Here is a pleasant genealogy for mankind!" They show at the same time the truth of Bacon's aphorism that reading makes a full man, writing an exact man, and speaking a ready man. Darwin both read and wrote much, but he on several occasions expresses his gratitude to others who replied to criticisms, declaring that they had used arguments he had forgotten, though he had forged them, and that, as in the case of Asa Gray, they knew his works better than he did himself. He did well to keep away from meetings of societies, where his temper and health would alike have been impaired; his adversaries might here have obtained a temporary victory, and he would have deprived himself of the immense advantage of submitting all adverse arguments to the calm and cold consideration of the study, where he could summon up a thousand facts to controvert the views of his opponents or to support his own.

The great work on the "Origin of Species," on which his fame mainly rests, appeared on Nov. 24th, 1859. The number of copies printed was 1250, and all were sold on the first day, when an edition of 3000 was immediately prepared. Copies were sent to Hooker, Lyell, Huxley, Wallace, Agassiz, and many other leading men, and his letters to them and their replies to him are full of interest. More than one of his friends, whilst passing high eulogiums on the manner in which he had treated his subject, warned him of the storm of criticism that was in store for him. The storm came. The book was greeted in many quarters with an outburst of wrath, scorn, and indignation, which he evidently felt, but bore up manfully against. At this time it was almost impossible for anyone who was thought likely, either by his independence of thought or by his eccentricity, to accept the new theory, to meet his friends at dinner or other social gathering without being asked whether he believed in this new-fangled nonsense, or whether he had made up his mind from what animal he was descended. To those who can recall this period, the change in the public mind which has resulted from the toning effects of familiarity and the influence of authority is very remarkable as well as encouraging.

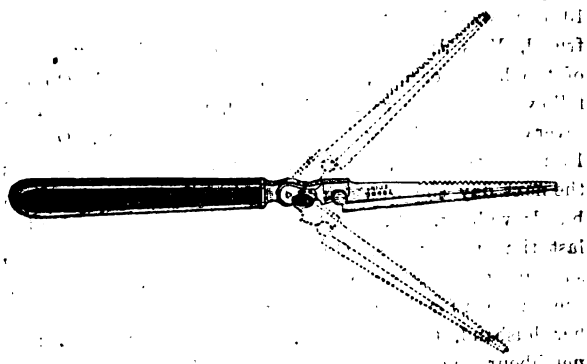
The life of Darwin shows how much may be accomplished by a man of fair but not extraordinary talents, when these are supplemented by great industry and earnest study in some one direction, and the lesson thus taught is within the power of most if not all men to practise. We recommend Mr. Darwin's life of his father to all our readers, and cordially compliment him on the way in which he has fulfilled the task that naturally devolved upon him.

Burroughs' Medical Diary.—We have received a copy of Burroughs' Medical Diary for the coming year, and are able to speak highly of its merits. Convenient in size, well bound, and containing information of special interest to members of the medical profession, it deserves and will doubtless have a large sale. Its appearance is late, and owing to this circumstance its proprietors have decided to make a large reduction from the price originally proposed.

New Inventions.

REVERSIBLE NASAL SAW.

THIS instrument has been designed for the removal of cartilaginous and bony obstructions in the nasal passages. The advantages it possesses are: fineness of the blade, and, by means of a screw at the junction of the blade and the handle, a reversibility which enables the operator to work from above or from below, or at any angle that may be



necessary. The serrated edge extends along from one-half to two-thirds of the blade, so as to avoid injuring the skin at the entrance to the nares. I have hitherto had two sizes made—one for fine, the other for coarser work. The maker is Mr. Young, Forrest-road, Edinburgh.

Edinburgh. G. HUNTER MACKENZIE.

ST. DALMAS HOSPITAL STRAPPING.

MR. DE ST. DALMAS has submitted to us a sample of his hospital strapping. It is spread on good stout "holland," is very adhesive, and appears to fulfil all the necessary conditions. The plaster is stated to be entirely free from resin, and to be unirritating.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 24, 1887.

THE trial of Surgeon-Major CROSS for the wilful murder of his wife by poison commenced on the 14th inst., and, after lasting the whole of three days and the greater part of a fourth, resulted in a verdict of guilty, prisoner being sentenced to be hanged on the 10th prox. This was almost a foregone conclusion at the preliminary stages of the case before the coroner and magistrates in August. The main facts, as disclosed in the evidence given at the trial, were briefly as follows. The accused, PHILIP HENRY EUSTACE CROSS, was a retired army surgeon-major, having obtained the L.R.C.S.I. in 1848, and being now about sixty-three years of age. He was married to the deceased lady (whose maiden name was LAURA MARY MARRIOTT) in 1869, she being at the time of her decease forty-six years of age. Soon after their marriage he left the army, and they went to live at Shandy Hall, near Cork, being in comfortable circumstances, having a family of five children, and they would appear to have lived happily together until the close of 1886. At that time the prisoner began to treat his wife with indifference; and having formed an adulterous intimacy with a Miss SKINNER, a lady who had been governess in his family for three months, he began to treat his wife with cruelty, threatening and cursing her. He left home last March, and was proved to have stayed at a hotel in Dublin with Miss SKINNER, they living as man and wife under the assumed name of OSBORNE. Up till the end of April last the deceased, though somewhat delicate, had fairly good health, and was seen by a gentleman (who had known her for twelve years) walking about a field, looking well, and expressing herself as feeling well. On May 8th she was at church; on the 9th she was out visiting; and on the 10th she was first attacked with—to use the words of a lady friend, Miss JEFFERSON, who was on a visit—"spasms of the heart, cramps, vomiting, and diarrhœa." On the following day she remained in bed, where she continued several days, suffering from the same symptoms. On the 18th she was better, and had a walk with Miss JEFFERSON; the next day she went to church, it being Ascension Day, but drove back. On the 22nd (Sunday) she was out for the last time in her life. On the 24th she was again in bed, suffering from the same symptoms as before. On that day she was seen for the first time by a medical man other than her husband, this being Dr. THOMAS GODFREY, a near neighbour, and an uncle by marriage of the prisoner. He saw her in bed, CROSS being present, his visit lasting about fifteen minutes. He had been told by CROSS that his wife was suffering from diarrhœa, and the impression conveyed to his (Dr. GODFREY'S) mind was that she was suffering from a bilious attack. He suggested that she should have three or four grains of calomel, and an aperient on the following morning. It is always easy to be wise after the event, and cases of criminal poisoning generally come to the notice of medical practitioners in so insidious a manner as to escape notice. Had Dr. GODFREY pushed his inquiries further than he appears to have done, its true nature might perhaps then have been diagnosed, possibly even in time to save the poor lady's life. She had a wet cloth round her head, and when asked by him the reason why, she made no reply. The intermittent character of the symptoms, and CROSS'S statement that the vomiting and diarrhœa were much better that day, were suspicious. Dr. GODFREY'S evidence would appear to have surprised both the learned judge and counsel for the defence, while the Attorney-General did not re-examine him. He was never asked to see her again, but, living so near, it does seem remarkable that he should never have called. No other medical practitioner saw her, no nurse was procured, and all the evidence as to symptoms came from non-professional witnesses, Miss JEFFERSON'S being especially valuable. This lady kept a diary, from which most of the preceding facts have been given, and on the 26th she began to be alarmed. On the 27th and 28th she noticed that the deceased's eyes seemed irritated and inflamed; the latter also complained that she could not see distant objects, read the paper, or write. On the 29th she was getting weaker and was drowsy; she was constantly vomiting. On Wednesday, June 1st, Miss JEFFERSON saw her alive for the last time; she was quite intelligent, able to express her wishes, give orders, and to describe her state. The exact time of death could never be ascertained, as only the prisoner was present; but according to his statement made to the servants it occurred about 1 A.M. on Thursday, June 2nd. The deceased was not dressed in the usual grave clothes, and the prisoner assisted two of the servants in laying her out. The clergyman who had visited her was not allowed to see her when he called a second time, and other friends were kept away from her from alleged reasons which were not correct. On June 3rd the prisoner registered the death as due to "typhoid fever," he being both the informant and the certifying medical attendant. Next—and this is still more remarkable—the body of the unfortunate deceased was buried on the Saturday after, at 7 o'clock in the morning, the prisoner having tried to arrange for the burial an hour earlier. He now stated to a neighbour that she had died from heart disease. On June 17th he married Miss SKINNER in London; and, the police having obtained information justifying an inquest, the body of the deceased was exhumed on July 24th, in the presence of Dr. CROWLEY (who identified it) and Dr. CHARLES YELVERTON PEARSON (Lecturer on Medical Jurisprudence in Queen's College, Cork). The result of the post-mortem examination effectually disproved that typhoid fever was the cause of death. The body was remarkably well preserved, considering the time of year and the excessive heat; the heart was found healthy, and all the appearances were consistent with death from irritant poisoning. Dr. PEARSON found crystals of white arsenic in the contents of the stomach, and obtained 1·74 grain of arsenic from this organ alone. He obtained 1·28 grain of arsenic from the liver, and found it in the spleen and kidneys. In the small intestines he found strychnine, the quantity of which he estimated at less than one-hundredth part of a grain. He was subjected to a very severe cross-examination by the prisoner's counsel, and was recalled to be questioned by the jury just before they found

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their verdict. Mr. Justice MURPHY, in his charge to the jury, paid Dr. PEARSON a very high compliment, which was well deserved. It would appear to be the first occasion on which Dr. PEARSON has been required to make a post-mortem inspection, and to chemically examine the viscera in a case of arsenical poisoning. Whilst his evidence leaves nothing to be desired, it would have been more comfortable for him, and would have strengthened the case for the Crown, had there been a second analyst with previous experience of such work, either working jointly with him or independently. Such a one could surely have been found in Dublin. In PALMER'S case Dr. SWAYNE TAYLOR worked in conjunction with Dr. OWEN REES; in LAMSON'S case Dr. THOMAS STEVENSON had the co-operation of Dr. DUPRÉ; in PRITCHARD'S case Dr. PENNY of Glasgow and Dr. (now Sir) DOUGLAS MACLAGAN were engaged; and many other instances could be adduced where the same practice has been adopted. It only remains to add to the already strong case against the prisoner CROSS that he was proved to have purchased a large quantity of arsenic for the alleged purpose of sheep-dipping.

The case affords another melancholy illustration of what has been seen before—that among members of a noble profession are to be found criminals of the deepest dye. It is some consolation to reflect that in this case, as in those of PALMER, LAMSON, and PRITCHARD, the prisoner was not in actual practice, having retired from the army and never having practised as a civil surgeon. It is satisfactory to notice that there has been no delay in bringing him to justice, or any undue leniency displayed towards him by his professional brethren. His crime resembles that of PRITCHARD in its motive, each having been led to commit it in order that he might remove out of the way a wife who was an impediment to marriage with a female with whom an adulterous intercourse had already existed. It also resembled that of LAMSON in its utter audacity and recklessness of consequences, there being less cunning and more clumsiness than are displayed by the average poisoner. But it surpasses all previous cases in its wanton cruelty, its cold-blooded deliberation, its disregard of all the decencies of social life. The marriage of the second wife almost before the first could have been cold in her grave was aggravated by the fact that it took place in the very same church in which, eighteen years ago, he had married her whom he had treated so cruelly and so foully murdered. So aggravated was the case in all its surroundings, that his counsel were almost unable to make any defence. It was truly a desperate case.

In conclusion, it is to be observed that the trial was conducted with the greatest ability by all concerned, the speeches of counsel and the summing up of the learned judge being models of what they should be. The reports of the local papers are extremely good, giving question and answer, the only means by which medical evidence can be perfectly understood.

THE debate at the Pathological Society upon Professor CROOKSHANK'S paper, although confined to a very limited number of speakers, including the heads of the two Governmental departments concerned with the health of animals and of man, was yet as much as could be expected or desired in the present stage of the subject. To a large extent the discussion turned upon the question whether the disease investigated by Professor CROOKSHANK, and stated by Professor BROWN to be widely prevalent at the present time, was the same affection as that with which the cows at Hendon were attacked, when the milk they furnished appeared so conclusively to have been the medium of scarlatinal infection. Professor CROOKSHANK boldly proclaimed his belief in their identity. Professor BROWN was less positive; but neither of them was in a position to affirm it from personal observation, since they had not actually *seen* the "Hendon cow disease." Dr. BUCHANAN was therefore within his right in declaring that the Society had no concern with this question; it could pronounce only upon the nature of the disease which Professor CROOKSHANK had apparently shown was an example of spontaneous cow-pox. Dr. BUCHANAN, however, did not ignore the question of identity, but pointed out that the two affections, although similar, did not present evidence of unity upon all points, and therefore could not be considered as identical. Dr. KLEIN, who had seen both diseases, was convinced of their essential difference on grounds to which we shall presently refer. In view of such divergent opinions, it is impossible to avoid joining in the regret expressed by Professor CROOKSHANK that the report of the Hendon cow disease was devoid of any illustrations which could convey, so far as pictorial representations can, the naked-eye characters of the affection to the minds of those who had not actually seen it.

The leading questions, then, before the Society may be resolved into these: 1. What evidence is there for and against the identity of the Wiltshire cow disease and that of Hendon? 2. What evidence is there for the Wiltshire affection being indubitable cow-pox? 3. If the new disease (which, by the way, from Professor BROWN'S remarks, would seem to be remarkably common—so common as to be thought nothing of by the dairy farmer, and thus rarely brought under the notice of the veterinarian) be neither one nor the other, under what category of bovine maladies does it come? We will deal with each of these in turn, and endeavour to show how impossible it is at present to arrive at a definite conclusion. First, then, let us consider Dr. KLEIN'S reasons for disputing the identity between the two affections. He considered that Dr. CAMERON'S description of the Hendon disease should not be taken as accurate, for it was not solely based on personal observation; and, rejecting a piece of hearsay evidence adduced by that gentleman, he denied that there was a single case of infection of the hands of a milker of the Hendon cows. Professor CROOKSHANK found in his cows very strong evidence of contagion, but the transmission to man was limited to those who were unprotected, like the lad who was brought to London with well-marked vaccinal eruption. Dr. KLEIN averred that the characters of the ulceration in the Wiltshire cows, which Professor BROWN had given him the opportunity of seeing, were different from those present in the Hendon cows, for in the latter the ulcers were deeper, smaller, and more rapid in healing. Incidentally he stated that in a cow sent lately from Edinburgh through Professor BROWN there

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was a greater approximation to these characters, and he heard that the milk of this cow was suspected of being the source of an epidemic of sore-throat. But he maintained, further, that the microbe discovered in the discharges from the ulcers was a different one in the two cases. He did not doubt the close similarity in many of their characters, but he pointed to many other forms of streptococci, which closely resembled each other, differing, however, in some points as to their mode of growth, the media in which they could be cultivated, and their effects when inoculated. Truly, to the uninitiated in bacteriology the points of difference between the two forms of streptococci in dispute seem very small indeed. Dr. KLEIN had failed to cultivate the streptococcus of the Wiltshire cow upon a special agar-agar peptone in which the streptococcus of the Hendon cow grew with avidity. Professor CROOKSHANK had not proved any difference in his cultures, and when Dr. KLEIN questioned if he had applied the crucial test of his own "Brand extract agar-agar peptone," Professor CROOKSHANK replied to the effect that Dr. KLEIN should make further trials of this medium before basing his opinion of non-identity upon such cultivations. When bacteriologists differ who shall decide? But Dr. KLEIN had other grounds for his view, which consisted in the existence of well-marked visceral lesions in the affected cows at Hendon which were absent from the other cows that had been sent to the Brown Institution by Professor BROWN. On clinical, pathological, and bacteriological grounds, then, he declared against the unity of the two diseases. Professor CROOKSHANK frankly admitted that the post-mortem appearances in those animals that had as yet been examined were not identical with those in the Hendon disease; but neither can it be held that the visceral lesions described by Dr. KLEIN were different in any essential part from those met with in septic poisoning. As to the clinical characters, Professor CROOKSHANK certainly did not see the Hendon disease, but neither did Dr. KLEIN see the Wiltshire affection in its earlier and more characteristic stage. The upshot of the contention must, then, apparently rest upon the bacteriological point, which, it will be admitted, is a very fine one, but of which the importance is not to be measured by its minuteness. The question is not decided, and we can hardly agree with Dr. BUCHANAN that it is one which ought not to have been raised, although it may well be that further evidence is likely to be adduced in the matter of the relationship to scarlet fever, which *is*, after all, *the* great issue at stake.

Apart from this knotty point, the interest of Professor CROOKSHANK'S investigation lay in the evidence he adduced to prove that the disease he investigated was true cow-pox, which Dr. BUCHANAN admitted he had long been on the look-out for, and which appears to have been singularly absent from the herds for a generation or more. Professor CROOKSHANK referred to HERING'S classification of the eruptive diseases of cattle, and showed that there were only two of the numerous affections described by that author which could be confounded with the disease he had studied, the one being cow-pox, the other the trivial blister-pox. He had no difficulty in showing that the disease was not the latter; and from the facts he gathered in his inquiries at the farms and mainly from the evidence furnished by the lad above referred to, he concluded, with some reason, that (1) the disease is common, (2) that it is highly contagious, and (3) that it is vaccinia. Professor BROWN confirmed the statement that it is extremely common, and that among the farmers it goes by the name of "cow-pox"; but yet that it is cow-pox—true vaccinia—has never been hitherto hinted. This question also is still *sub judice*. Those best informed on the characters of vaccinia declared that the pustules produced in the calf which Professor CROOKSHANK exhibited to the Society had none of the characters of vaccinia, and we understand that experiments are now in progress for crucially testing the point. We come, therefore, to the third question, If it be not vaccinia, what is it? Common as it is, contagious as are its properties, it must be a disease which, though closely simulating vaccinia, has hitherto escaped description by such faithful students of the complex diseases of the cow's udder as CEELY and HERING. If this be so, it is perhaps somewhat of a reproach to veterinarians that it has been overlooked; and we are glad to have Professor BROWN'S assurance that the disease will be placed under the provisions of the Contagious Diseases (Animals) Act, for then there is every probability of its being thoroughly described and studied. It is time, too, that such steps should be taken, for the sake of the animals and for the milk-consumer. It comes as a revelation—and by no means a pleasant one—that hitherto milk especially country milk, must have been obtained for distribution in large quantities from animals suffering from diseases of the udder, which become ulcerative from the manipulations of the milkers; but Londoners will be glad to hear that the thorough system of inspection of the metropolitan dairy-sheds is such that "real" London milk is free from the liability to contamination with the morbid secretions of the ulcerated udder. Apart from the vexed question of scarlet fever being directly transmitted from the cow, or the interest attaching to the re-discovery of vaccinia, the debate has elicited the gratifying fact that two great sanitary departments are devoting their attention to the removal of a grave source of danger to public health in the contamination of the milk supply.

THE publication of the "Life and Letters of Charles Darwin," has stimulated anew the interest always felt alike by scientific thinkers and the general public in the great doctrine with which his name will be always associated. It has been said that DARWIN was our greatest scientific genius since NEWTON, and it may be affirmed with equal truth that since the enunciation of the law of gravitation no principle has been propounded so novel so far-reaching, so pregnant with truth and suggestiveness, as the evolution hypothesis. Yet evolution remains a hypothesis, rather than a well-defined and thoroughly established doctrine. This is admitted even by Professor HUXLEY, the boldest champion of evolution in the days when it had a hard fight for a hearing, and now its greatest surviving exponent. In his recent article in the *Nineteenth Century* he claims for evolution only the position of a probable hypothesis, but a hypothesis which accumulating evidence renders every day more probable, and which has successfully withstood all the efforts put forth to accomplish its disproof and rejection.

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Yet the assertion that evolution is a hypothesis only, and not an established doctrine, may easily mislead. It is a hypothesis if we regard it as a complete scheme into which all biological and cosmological laws must be made to fit; but, on the other hand, if we define evolution as a working principle widely operative in the field of nature, but of which we cannot precisely define the scope and limits, then evolution is no longer a hypothesis, but an ascertained truth which dominates every department of the field of scientific research. In other words, there is a something—a method, a principle—which we call evolution, and of which it is no longer permissible to deny the existence, but we must await further light before we can affirm that this method or principle is all-pervading and capable of affording an adequate and final elucidation of all the phenomena of life. We may illustrate the distinction by noting the contrast afforded by the very different reception accorded to DARWIN'S two great epoch-making volumes—the "Origin of Species" and the "Descent of Man." Although his teaching excited an alarm and opposition almost unparalleled in the history of science, nothing could be more remarkable than the rapidity with which his doctrine of species gained the adhesion of the leading thinkers of the day and permeated the whole atmosphere of scientific thought. That preliminary triumph has been the gauge of a final victory. The Darwinian doctrine of origin of species, so patiently elaborated by its author and expounded with such modesty and yet with such irresistible cogency, is now, in its main outlines at least, beyond the reach of cavil. Far different has been the fate of the doctrine of the "Descent of Man." That charming volume is instinctively felt by the impartial reader to be ingenious rather than conclusive, to raise a plausible theory rather than to establish a secure doctrine. It consists, in fact, of a long chain of analogical reasoning, for which the most ardent partisan will not claim more than that it suggests a possible explanation of the facts in question. The "Origin of Species" irresistibly bears down all opposition by the mighty force of accumulated argument, and by the calm confidence with which all objections are met and overthrown. The "Descent of Man," on the other hand, rather titillates the fancy than convinces the judgment.

For the present, then, the attitude of the scientific world is one of almost universal acceptance of evolution as a working hypothesis of unparalleled value and suggestiveness, but of reserve towards it as regards its final issues and ultimate limits. Whatever may be the final form assumed by the doctrine of evolution, we owe an immense debt to DARWIN for having unlocked some of the most mysterious recesses of nature and shown us the way of future hopeful advance. His teaching has been of untold value in bringing order into the chaotic mass of scientific material, and in suggesting methods of inquiry which have proved most fruitful and profitable. In physiology, especially embryology, and in pathology, its value has been altogether incalculable. To withdraw the conception of evolution from the domain of science would now seem to us quite as impossible as to return to the Ptolemaic system of astronomy. Just as NEWTON bound the spheres together by his great hypothesis, so DARWIN has succeeded in uniting in one the multiform phenomena of life. If, as has been said, "the end of science is the detection of unity," few doctrines have so just a claim to be reckoned scientific as the doctrine of evolution.

The opposition to evolution has been due in no small measure to a mistaken notion as regards its correct interpretation. It has been often forgotten that it explains processes, not origins; that it elucidates the *method* of creation, but has no explanation to offer as to its *cause*. The recognition of evolution leaves the argument for and against a Creator just where it was, although it undoubtedly modifies our conceptions of His modes of operation. It was one of the chief merits of COMTE as a thinker that he clearly perceived that science could only explain processes and transitions, and was unable to grapple with the question of causes. Hence, quite consistently, he ruled out all inquiries into causes as unscientific. In like manner the doctrine of evolution, correctly understood, has nothing to say about causes, and the evolutionist can have just as elevated a conception of a First Cause as the man who vaguely misapprehends evolution as a sort of substitute for a Creator.

It is pleasing to note that the angry controversies which once raged round the name of DARWIN have felt the mitigating influences of the softening hand of time. No one now seriously doubts the lofty character and absolute integrity of the great naturalist; no one denies him the tribute of supreme genius. He has erected a great landmark upon the shifting sands of human progress, and amongst earnest seekers after truth his fame will ever be of the greatest.

CONGENITAL defects of sight due to visible changes in the ocular fundus or disease of the optic path are numerous. Mr. NETTLESHIP, in his lectures delivered at the Royal London Ophthalmic Hospital, has done good service by drawing attention to the varieties of congenital and infantile amblyopia. Congenital syphilis may produce hyalitis from inflammation of the choroid or retina, and cases occurring in infants a few months old were mentioned. The prognosis in choroiditis occurring in hereditary syphilis is fairly good, if treatment be begun tolerably early. Choroidal disease is not so easy to detect in infants, on account of the absence of pigmentation about the patches and the naturally pale colour of the choroid at the earliest period of life. When choroiditis occurs later in hereditary syphilis, during or after the period at which keratitis occurs, when the hair and skin, and with them the choroid, have usually darkened, there is often extreme pigmentation of the patches, even more than in choroiditis in adults. Mr. NETTLESHIP gives valuable advice on the method of testing the vision of infants, and his remarks are worth quoting. "The chief things to notice are: whether the child turns its eyes towards the window, or follows the flash of the mirror in the dark room (or, what comes to the same thing, turns its head away, or blinks its lids under the same tests); the presence or absence of nystagmus; and the state of the pupils." He believes that healthy infants usually look at a bright light thrown steadily into the eyes a day or so after birth, but that from three to six weeks' education is necessary to enable them to follow a moving object in such a way as to give the appearance of intel-

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ligence or "noticing." "If the infant's eyes oscillate rhythmically, or even wander constantly though irregularly, the sight is almost certainly bad, for we know very little of primary nystagmus from nervous disease in infants." The state of the pupils is of secondary importance, because the natural range of pupillary action in infants seems to be less than it is when the eye has attained full development. It is also pointed out that in children the light reflex may be present, even though the child be absolutely unconscious of light. A caution is given, in the examination of the pupils in infancy, not to touch the face or head, and so not to provoke movements of the head or eyelids. Besides syphilitic choroido-retinitis and hyalitis, Mr. NETTLESHIP recognises three other groups of infantile amblyopia. Microcephalous infants with premature closure of fontanelles and sutures may have gross choroiditis, apparently not syphilitic. Failure of sight may come on without papillitis during an illness diagnosed as meningitis, but not ending fatally. The fourth group comprises cases of blindness in infants without history of acute cerebral symptoms, and frequently without ophthalmoscopical change. In every case of infantile blindness it is important to observe the shape and size of the cranium as compared with the face, and the condition of the fontanelles and sutures; to inquire fully into the question of congenital syphilis, and of any acute illnesses the child may have had; of defective sight or intellect, or other cerebral or spinal disease in any kinsfolk, and of consanguinity of parents; and it must be remembered that an infant may be very well nourished, although syphilitic. The fact that in blind infantile idiots the pupils may react to light would seem to show that the optic nerve contains pupillary or reflex as well as visual fibres.

Hypermetropia, being due to imperfect development, is usually attended with defect in the acuteness of vision. It is possible for slight or even temporary defect of sight to excite nystagmus in an infant predisposed to it, and the amblyopia may be rendered permanent and possibly increased by the oscillation, and thus may be explained some embarrassing cases of nystagmus with amblyopia. Albinos also afford examples of the combination of defective acuity of vision with nystagmus, and yet probably neither condition is associated in them with any particular kind of refraction, though nearly all are more or less ametropic; albinism is not necessarily accompanied by amblyopia, but on the other hand, an albinotic infant may seem almost totally blind. Common retinitis pigmentosa, though not present at birth, invariably goes slowly on, once it has begun, to blindness, and in its later stages is complicated by posterior polar cataract and incurable progressive deafness. Mr. NETTLESHIP constructs a seventh group of cases of infantile amblyopia, having an affinity in pathogeny to retinitis pigmentosa, and not distinguishable from it if only the actual subjective symptoms be considered, but having, nevertheless, important differences. In this malady the night-blindness is stated to have been present from the earliest childhood, seems to be stationary, and does not appear to have the same pathological associations as the other disease; and some of the patients become deaf. The ophthalmoscopical appearances consist chiefly in irregularity of the pigmented epithelium and the presence of scattered minute white dots. The early presence and stationary character of the symptoms in this group of cases suggests that the choroidal and retinal changes are probably of intra-uterine date. In the eighth group of cases day-blindness of congenital origin is the chief feature, and is attended with colour-blindness as well as defective perception of form. The ophthalmoscopical changes are altogether insignificant; in these particulars it is complementary to the cases last considered.

Besides the groups above mentioned, there remains a number of cases in which defect of sight without any sign of disease is confined to one eye. In retro-bulbar neuritis and in disease of the optic nerve resulting from injury the reflex action of the pupil is interfered with, but not in the cases now being considered. The defect of vision may be very trivial, or so high that only large objects can be seen; it may be perfectly remediable with glasses, in which case there is almost always anisometropia, and the defective eye is nearly always the more ametropic of the two. Glasses may only partly remedy the defect, or they may not help at all. Squint may have been present at some period, usually convergent, but this has been cured by operation or has disappeared without treatment; in others, again, convergent or divergent squint of the amblyopic eye is still present. Finally, Mr. NETTLESHIP adduces facts and considerations to show that neither the theory that amblyopia in cases of hypermetropia is due to suppression of one image, nor the view that amblyopia is dependent on congenital imperfection of an eye or visual centre when one eye is concerned has been proved; but that whilst the former view requires proof not yet given, there is much evidence, both direct and indirect, in favour of the latter.

As the time draws nearer for the consideration of the various proposals for forming a new University or degree-granting institution in London, the various bodies interested, and the public in general, are taking a more active interest in the question. By the 16th prox. all petitions and objections must be lodged before the Privy Council, and it is understood that their consideration will begin at once, and that there will be no further delay. The next meeting of the Convocation of the University of London is fixed for January 17th, and the question is sure to be debated there also, on the motion of the Annual Committee expressing approval of the action of the Senate in opposing the movement for forming a Teaching University by the junction of University and King's Colleges with the metropolitan medical schools. Professor HENRY MORLEY has given two valuable lectures on the subject at the London Institution, and has clearly pointed out, from the sides of art and literature, how numerous, but how unorganised and chaotic, are the various educational agencies now existing in London, and has made some valuable suggestions for blending them into an organised whole. In his lecture, as in a pamphlet published some time ago, Professor MORLEY points out that he would prefer to include these bodies with the existing University by adding some new machinery to work with the present system. "The work of the London University had been done as thoroughly as any human work could be done," says Professor MORLEY; and surely this is the very best ground

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for not interfering with the present arrangement by imposing on it work of an entirely different character. If a new Teaching University were established, it should be as distinct as possible from the existing one; in fact, it must do the work which the present University threw overboard when it opened its examinations to the whole world without requiring certificates of training or attendance on lectures. Such a University would have a good and separate mission, and would not weaken or impair the one now existing. One body would ensure due training, the other would, as now, keep up a high examination standard, and many pupils would avail themselves of the advantages of both. The objections against the new Teaching University relied on in the statement by the Senate of the University of London appear to us to be singularly weak. The Privy Council is desired to stay its hand, because Convocation and the Senate are engaged "in the consideration of a plan for giving to the professors in the institutions from which graduates proceed an organisation and a larger influence in the counsels of the University."

It is not likely that this scheme will yet see the light; in fact, it cannot be passed by Convocation and the Senate until after the hearing of the petitions by the Privy Council. Again, as this scheme can only be a slight modification of those of Sir PHILIP MAGNUS and Lord Justice FRY, every one practically knows what it will amount to. It cannot be so framed as to satisfy the need for a Teaching University, managed by teachers, without at the same time arousing the jealousy of the graduates towards the teachers. In fact, nothing of the kind will be attempted, and Boards of Studies, consultative only and without any real executive powers, are the only opportunities for influence offered to the teachers. Moreover, the union of country institutions with metropolitan ones, as now proposed, is altogether contrary to the ideas suggested by the Association for forming a Teaching University *in London*. The other objections, as to the multiplication of universities and the independence of the examiners from all undue influence of the teachers, are even more absurd. A complete answer is found in the case of the Victoria University. By the formation of this University, a great and almost unexampled impetus has been given to university work and higher education in the north of England, and we should expect similar good results to follow from the establishment of Universities on similar lines, one in London, and another in the Midlands. Teaching Universities would then be within the reach of our population in England, as they now are in Scotland and in Germany. In Victoria University, as shown by a recently published list, the most eminent professors and teachers in Great Britain are chosen as external examiners, and it is little less than an insult to insinuate that they are unduly biased by their local colleagues, as if true virtue could only exist within the walls of the London University. Even there, in the Faculty of Medicine, almost every examiner at the present time is a teacher in a metropolitan school of medicine, and must necessarily, to a certain extent, examine his own pupils. If these be the highest reasons that the Senate can bring forward for opposing the new movement, we cannot expect them to have much weight with Her Majesty's advisers.

Annotations.

"Ne quid nimis."

THE EMBANKMENT BUILDINGS.

A SUB-COMMITTEE, consisting of Mr. Marshall (chairman), Dr. Burdon Sanderson, Dr. Lauder Brunton, Dr. Ralfe, Sir Joseph Lister, and Mr. J. Hutchinson, have reported to the Colleges' Land Committee that the limitation in the extent of the ground at the back of the Examination Hall precluded the possibility of erecting buildings on plans similar to those adopted elsewhere. They therefore recommended that the original idea of two lateral blocks of four storeys, each containing four large rooms, with a theatre between them, should be adopted, with the erection of two galleries of rooms over the back part of the theatre from wing to wing, at a sufficient elevation to obtain a good south light. These galleries would provide eight rooms twenty feet long and fifteen feet broad, and the theatre could be made to accommodate 410 persons. The architect's approximate estimate for the construction of such buildings amounts to £26,000; and the sub-committee consider that an outlay not exceeding £5000 would be needed for internal fittings, the precise nature of which was postponed for future consideration. The report was adopted by the Committee, and will be submitted to the Colleges in due course.

COMPARATIVE MORTALITY IN ENGLAND AND IN AMERICA.

THE imperfect system of registration of vital statistics in America prevents the possibility of a useful comparison between the rates of mortality in England and in America. The rapid growth of life assurance in the United States has accumulated, however, a mass of statistics of mortality of still greater value for estimating the duration of life in that country than the results of any system of civil registration of births and deaths yet existing. During the thirteen years 1859-72, the number of life policies existing in the United States increased from 50,000 to 800,000. After 1872 the number of policies remained comparatively stationary for some years, but more recently the number has probably again increased rapidly. Fortunately for the present purpose—a comparison of the value of life in England and in America—a valuable series of experience tables, based on the life and mortality statistics of thirty American life assurance offices, was published a few years ago. The basis of experience upon which these American tables are constructed is sufficiently large to give the results a very definite value. The tables dealt with more than half a million of policies existing at the end of 1874, as well as nearly 50,000 previously lapsed by death, and nearly an equal number that had lapsed by surrender or discontinuance of premium—in all, with more than 600,000 policies, covering considerably more than 4,000,000 of years of life under observation. Among the more interesting results shown by these tables, it may be noted that the expectation of life of insured males in America at twenty years of age is 42·1 years, and exceeds by one year the expectation of males in England by the English experience tables; this excess in the male expectation of life in America is maintained through life, although it steadily decreases, until the advanced age of eighty-four, when the difference in favour of American life disappears. With regard to female life, the expectation of life at the age of twenty is precisely the same (40·8), both by the American and English experience tables; but afterwards, and until the age of forty-seven, the American expectation somewhat exceeds the expectation according to the English tables, while after the age of forty-seven the difference is

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in favour of English life, increasing to a year at eighty years of age. One other marked feature disclosed by a comparison of these American and English experience tables is that in America expectation of life among insured females is lower than among insured males after the age of fifty-three years, while it is identical with that of males. It is well known that by all the principal English tables expectation of life among females exceeds that among males after the age of thirty-five years, and shows an increasing excess to the end of life. These differences between the expectation of life in America and in England relate, it should be remembered, solely to insured lives, mainly belonging to the middle and upper classes. If similar statistics were available for the general population, very much wider differences between the mean duration of life in America and in England would probably be shown.

ASSIMILATION OF FAT IN CATARRHAL JAUNDICE.

DR. P. A. VALTER, in a trial lecture recently delivered before the Conference (Senate) of the Military Medical Academy of St. Petersburg for the qualification of *privat-docent* or extra-mural teacher, dealt with the assimilation of fat in persons suffering from catarrhal jaundice. He detailed a number of observations and analyses he had made in several cases of this description, the results showing that the condition of catarrh of the bile ducts diminishes in a very marked degree the fat assimilated. It also produces a similar effect on the assimilation of the nitrogenous principles of the food ingested, but here the difference between the diseased and the healthy condition is not nearly so marked. He also found that when the patients were taking alkaline mineral waters the assimilation of fat was somewhat increased; the same was observed in the case of healthy persons. Thus, in a case of jaundice the percentage of fatty acids ingested which was found in the fæces, and therefore not assimilated, was 43·06 while taking the waters, and 45·95 when these had been left off, but after health had been re-established the percentage found was only 7·83. The percentage of nitrogen assimilated in a similar case was 88· while taking the waters, 77·4 after having left them off, and 91·7 after recovery of health. Dr. Valter described his observations, which were carried out in Professor Manassein's clinic, with great minuteness. The lecturer was accepted by the Senate as *privat-docent*.

MEDICINAL WARFARE.

BEFORE the first shock of the suggestion of dealing with excess of rabbits by cholera passes away, another idea reaches us which at first sight appears equally monstrous. An electrician, as quoted in the *United States Army and Navy Journal*, says: "It is well known that the nitrate (*sic*) of amyl possesses the power of causing insensibility very quickly in a human being breathing its fumes. The effect is equivalent temporarily to a paralytic stroke. Now, nitrate of amyl is very cheap and plentiful. I propose to fire shells filled with this chemical instead of gunpowder. It will not be necessary to penetrate a ship. A few gallons of this nitrate dashed on the deck of a war-ship would soon render her crew helpless. The most powerful ironclads would be even more vulnerable than the light cruisers, for they would be sucking down great draughts of air through their artificial ventilators, and the odour would thus rapidly permeate the whole ship. The whole crew being rendered helpless for an hour or two, the ship could of course be towed into a safe spot, while the captors ventilated her and removed the insensible men." This is indeed scientific warfare. Is all the fun to be on one side? What if the powerful ironclad attacked possessed similar shells? What becomes of the directions of the British Pharmacopœia about the cautious use of amyl? Is the whole suggestion based upon this, or is it a joke? The physiological effect of amyl is indisputable: the enemy, if sufficiently affected, would blush; and his arterial tension, and probably his esteem for his opponent, would be diminished.

FEVER IN LONDON.

THE continued diminution in the prevalence of scarlet fever is evidenced by the fact that only 158 cases of this disease were admitted into the hospitals of the Metropolitan Asylums Board during the week ending Dec. 16th. The number of patients discharged is now so much exceeding the admissions that a considerable amount of spare accommodation is at the disposal of the Managers; as yet, however, there is no reason for believing that this will be immediately required for any other disease. During the week under consideration enteric fever contributed 19 cases, typhus fever 2, and small-pox 2; both the typhus cases occurred in one house in Limehouse, the small-pox cases in Poplar and Mile-end. The Managers are making preparations for an accession of small-pox during next year, and have decided to provide a hospital for 728 convalescents from small-pox on the Gore Farm Estate at Darenth. The erection of this institution will, we presume, be undertaken forthwith.

THE MEDICAL JURISPRUDENCE OF INEBRIETY.

WE have received *proofs* of certain propositions which were laid before the New York Medico-Legal Society for discussion by their President, Dr. Clark Bell. In the synopsis before us we find the subject of inebriety arranged for forensic purposes under two heads—(*a*) civil obligation, and (*b*) criminal responsibility. As regards civil relations, it is noted that the definition of the fourth variety of *non compos mentis* of Lord Coke was that the individual of unsound mind was so "by his own act as a drunkard." After briefly touching on the question of delirium tremens, the author proceeds to show that when a person is wholly deprived of his reason by intoxication he cannot make a binding contract or act as a witness. It appears that the Supreme Court of every American State has in the matter of inebriety the same function which the Court of Chancery exercises in this country, but by legislative enactment the reference is made to different courts in certain States. Thus in New Jersey the Orphans' Court has the supervision whilst in South Carolina both the Common Law and Equity Courts can deal with the cases in question. "It will be observed that in many of the American States the *habitual drunkard* is classified and treated under the same provisions, and in the same manner as the lunatic and idiot." In New York, for example, it has been ruled that all contracts made by habitual drunkards, who have been so adjudged, are void, and that the civil disability continues after the committee has been appointed to supervise the estate and person, so that it remains binding even after the habitual drunkard has become perfectly sober, and fully aware of the nature and consequences of his acts. According to Dr. Clark Bell, the American law affords even greater protection still, for when a man has become so addicted to drink as to seriously interfere with the care of his estate, the court may step in and take absolute control of both person and estate. As regards criminal responsibility, we find there is little or no difference between the American and English law; both hold that drunkenness in itself is, *primâ facie*, to be considered as an aggravation rather than an extenuation of guilt—and rightly so, because, although a person may be so under the influence of drink as to be incapable of governing his acts, he is presumed when sober to have been able so to conduct himself as to avoid constructing a proximate cause of the commission of crime. The New York penal code lays

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down that "no act committed by a person while in a state of intoxication shall be deemed less criminal by reason of his having been in such a condition; but whenever the actual existence of any particular purpose, motive, or intent, is a necessary element to constitute a particular species or degree of crime, the jury may take into consideration the fact that the accused was intoxicated at the time, in determining the purpose, motive, or intent with which he committed the act." This is sound law and common sense. This principle was acted upon last week in a trial at the Old Bailey, where a man was convicted of manslaughter, and not murder, for killing his wife when he was intoxicated. The motive in such a case must be considered rather as the impulse of a madman than the conscious purpose of a sober and sound individual.

ORGANISMS IN DYSENTERY AND HEPATIC ABSCESS.

IN the current number of the *Centralblatt f. Bacteriologie* Dr. Kartulis of Alexandria announces the interesting fact of the discovery within the pus of hepatic abscesses secondary to dysentery of the amœbæ which are constantly present in the dysenteric bowel. He had previously detected these amœbæ in the walls of such abscesses, but the case he now records is the first in which they were found in the contents. The case was a fatal one of abscesses in the liver and empyema supervening upon dysentery, from which the patient had suffered for three months. One of the abscesses was drained during life. The pus from this abscess and that of the empyema contained the amœbæ, but in the second intact abscess these animalcules abounded. They could be detected with low powers of the microscope as highly refractile bodies, which under high powers were seen to have active mobility. Their protoplasm was coarsely granular, but their nuclei and vacuoles were not very clear. Some of them contained within their substance red blood-corpuscles, which moved in the currents of the protoplasm. The amœbæ corresponded for the most part in size with those found in dysentery. Dr. Kartulis says that he has examined in all twenty cases of liver abscess, nine of idiopathic, and eleven of dysenteric origin. In the former the pus of only one case revealed any micrococci, but by cultivation the pus yielded the Staphylococcus pyogenes aureus in six cases. In all fatal cases in which the pyogenic membrane was examined micrococci were found within the capillaries bounding it. Of the eleven dysenteric cases, cultivations of the pus were made four times, yielding once the Bacillus pyogenes fœtidus and once the Staphylococcus pyogenes aureus. In eight cases examined post mortem the "dysentery amœba" was found in the detritus of the pyogenic membrane, as well as between the latter and the intact liver substance. In most of the cases colonies of micrococci, and in one bacilli, were found in the capillary vessels.

DRINKING IN NEW SOUTH WALES.

WE have lately remarked with pain on the drinking habits of some of our colonies, notably of New South Wales. A Royal Commission has been occupied for many months in taking evidence on this subject, and arrives at conclusions which should excite the concern of every inhabitant of the colony. The premier colony has the distinction of drinking more intoxicating drink, and that of a worse quality, than almost any other English-speaking community in the world. This is a bad distinction, which the following figures seem to confirm. The drink bill of the United States per head is £1 13*s.* 6*d.*, of New Zealand £3, of the United Kingdom £3 7*s.* 10*d.*, of Victoria £4 13*s.* 11*d.*, of New South Wales £5 14*s.*! In the city of Sydney alone there are said to be 3000 persons known to be habitual and absolutely hopeless drunkards. Dr. Maurice O'Connor, visiting surgeon of Durlinghurst Gaol, gave evidence that of 34,266 persons in six years and a half, 5685 were under actual medical treatment for diseases caused by drink. We are informed that not only does the colony drink more than other similar communities, but that it drinks much more than it did twenty years ago. The best symptom we read of is that the commissioners and the working classes are decidedly in favour of a restriction on the number of public-houses, and the entire prohibition of Sunday traffic. There is a law for Sunday closing, but it is shamefully evaded. One explanation for this sad state of things is perhaps the number of single colonists with little home life or comfort. But nothing can justify such drinking, or the community which, in the name of liberty, sanctions t. Ministers of religion and members of the medical profession should combine to amend a state of matters so fatal to health and morals.

THE LEICESTER AND LEICESTERSHIRE PROVIDENT DISPENSARY.

The *Leicester Daily Mercury* contains the report of a meeting of members of the above institution called to consider the management of it, under the presidency of the Rev. A. A. Isaacs. The President vindicated the right of members to criticise the management of the dispensary. The chief point of his complaint was that the manager received from the funds something near £1000—partly, as we gather, from salary, and partly from commission. He related that he had communicated with the chairman of the Board of Governors, Mr. W. H. Ellis, but seemed to get little approval from him of his complaints. Another grievance was that the members had no voice in the nomination of the Board of Governors, the subscribers only having the nomination in their hands. The financial facts brought out were that the expenses of the Society amounted to £2322 1*s.* 9*d.*, of which the members contributed £1246 18*s.* 5*d.*, leaving £1075 3*s.* 4*d.* to be provided by the subscribers. The year commenced with a balance due the treasurer of £986 18*s.*; it ended with a balance of £493. The complainants do not seem to have been very successful in carrying their resolutions. The manager's merits were vindicated by members of the Board of Governors. In the end a resolution was passed calling for a scrutiny of the accounts, and the meeting was adjourned. It would be interesting to know what proportion of the receipts fall to the lot of the medical staff and what work they have to do for what they receive.

WANT OF A SANITARY SYSTEM IN RUSSIA.

THE Vice-Director of the Russian Medical Department, Dr. Bubnoff, has recently issued a report on Sanitation in Russia, in which he remarks that no working sanitary system can be said to exist in the empire. This is, indeed, only too true, as all the reports which pass into the archives of the Medical Department must impress on the minds of those who, like Dr. Bubnoff, are responsible for the sanitary condition of Russia. The death-rate in some districts ranges from 60 to 80 per 1000, of which an enormous proportion is due to mortality amongst children—in some places, indeed, as much as 79 per cent. of the total mortality. In spite of a high birth-rate, the population is increasing only at the rate of 1 per cent. Every year some 2,800,000 persons die in Russia. According to Dr. Bubnoff's statistics, something like 1,000,000 of these deaths may fairly be traced to preventable causes. There is a great paucity of medical men, of whom there are only about 5000 altogether for 100,000,000 inhabitants, and these of course tend to congregate in the towns, so that in rural districts doctors are to be met with only at long intervals.

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LOBAR ARRANGEMENT OF PHTHISICAL LESIONS.

AN examination of the literature of pulmonary phthisis will show how little attention has been paid by most writers to the question of the exact distribution of the lesions in the lungs and their relation to the chest wall. Dr. Kingston Fowler has gathered together some facts of importance, and in the *Practitioner* gives us the outcome of his own experience. He believes that there is a definite mode of extension of the lesions of phthisis through the lungs, and has found great assistance in the diagnosis and valuable aid in the prognosis from a recognition of this fact. We agree with Dr. Fowler in thinking that there probably is in most cases of phthisis a distinct "line of march." The extreme apex of the lung is not often the site of the primary lesion; it is situated from an inch to an inch and a half below the top, and rather nearer to the posterior and external borders. Lesions in this region tend to spread in the first instance backwards, possibly from inhalation of the virus whilst the patient is lying down. This accounts for the fact that an examination of the supra-spinous fossa will often give certain evidence of the presence of disease when the physical signs in front of the chest have left some doubt. From this primary focus, which in front corresponds either to the supra-clavicular fossa or to a spot immediately below the centre of the clavicle, the lesions often first spread downwards along the anterior aspect of the upper lobe, about three-fourths of an inch within its margin, frequently occurring in scattered nodules, separated by an inch or more of healthy tissue. The second and less usual site of the primary affection of the apex corresponds on the chest wall with the first and second interspaces below the outer third of the clavicle. The lines of extension are usually downwards and backwards. The lower lobe of the lung primarily diseased is usually affected at a very early period. The site of the primary infiltration of the lower lobe is generally situated about an inch below the upper and posterior extremity of the apex of the lower lobe, and this situation corresponds on the chest wall to a spot opposite the fifth dorsal spine midway between the border of the scapula and the spinous processes.

THE PROGRESS OF BOTANY IN CALCUTTA.

SURGEON-MAJOR G. KING, the Superintendent of the Royal Botanic Garden, Calcutta, has recently presented his annual report to the Secretary to the Government of Bengal. This being the hundredth annual report, he has deemed it a fitting opportunity for giving a brief history of the Garden. Founded under the advice and guidance of Colonel Robert Kyd, it originally comprised a large collection of exotic plants, chiefly from the Straits. Subsequent superintendents enlarged the original scheme of the work, and did much to further the systematic study of the plants of India. Collecting expeditions were organised, and a botanical survey of a large part of the Indian Empire was undertaken. It was originally intended that the Garden should be a source of botanical information, and a centre to which exotic plants of economic interest could be imported for experimental cultivation, and from which in turn they could be issued for distribution. It was also intended to assist in introducing indigenous Indian products to new markets, and to be not only a botanical, but also a horticultural and agricultural garden. In early days the Garden undoubtedly did service of a negative nature by demonstrating that certain desirable natural products cannot be grown in Bengal. Later the Garden bore an important part in the final establishment of the tea industry in Northern India, and also in initiating and carrying to a successful issue the cultivation of the quinine-yielding cinchonas of the Andes. Under the present superintendent much has been done to repair the ravages of cyclones in 1864 and 1867, new roads and footpaths have been made, and three new conservatories have been erected. The interchange and distribution of plants and seeds have gone on actively during the year; 8064 plants have been received, and 46,104 issued; 933 packets of seeds have been received, and 2534 packets have been distributed. The report shows very clearly the valuable character of the work carried on at the Botanic Garden, Calcutta. It is certainly desirable that such authoritative help should be given to check the needless waste of individual efforts.

ACTION TO EXTORT MONEY FROM MEDICAL MEN.

WE publish in another column an oft-told story of the risks run by medical practitioners daily in the discharge of their duties. The repetition of the publication of such cases seems needless and *ad nauseam*. But, in truth, it is only by their publication that the evils attendant on them can be exposed or arrested, and that the *moral* they convey can be sufficiently impressed on busy practitioners. Men in the midst of a day's work, and called on, perhaps unexpectedly, to consider whether a servant has typhoid or constipation, are apt to forget the amenities of procedure. There is not a day in any busy practitioner's life in which he is not almost inevitably thrown into circumstances out of which a prurient or malicious mind might construct a plot and a case for his discredit or ruin. This is no reason, however, why he should not act with excess of caution. The case we publish in full elsewhere bristles with lessons. In our profession we need "to be wise as serpents and harmless as doves." The evidence of Mr. Gittings' high character does not permit any doubt as to the propriety of the judgment against his accusers, save for its excessive leniency. But we must not the less insist that he would have exercised a just discretion in leaving the exact diagnosis of the servant's case till he could confer with her mistress. We regard his case as one for the sympathy of the profession, and as illustrating how badly we are in want of an efficient means of medical defence.

THE MICROBE OF SYPHILIS.

DR. J. DISSE, Professor of Pathological Anatomy, and Mr. K. Takaki, Professor of Normal Anatomy, in the Tokio University, Japan, publish in the first number of the Reports of the Medical Faculty an account of a series of experimental researches, on which they have been engaged for some time, dealing with the nature of the syphilitic virus. They examined chiefly the blood of syphilitic persons, especially of such as had been cured of all manifestations of the disease. They selected the skin of the face on account of its great vascularity, of course cleaning it very carefully with antiseptics before making the necessary puncture. In most of the cases spherical bodies, nearly 0·001 mm. in diameter, which could be stained by Gram's method, were found; these occurred singly or in groups between the blood-corpuscles. They were not easy to be distinguished unless the layer of blood was extremly thin. A magnifying power of 350 diameters was used, an oil-immersion lens and a good illumination being indispensable. They were, the writers believe, invested with an envelope. In non-syphilitic subjects, whose blood was examined with similar precautions, these bodies could not be found. From blood containing these organisms cultures were prepared, various media being employed. Of the cultures attempted about three-fourths were successful. Of course, extraneous organisms made their appearance, but with care pure cultures were obtained. When they were examined microscopically, there were found—1. Simple spherical forms, having a diameter of 0·0008 mm. 2. Double spheres, looking

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like short rods with rounded ends; the length of these was 0·0018, and the breadth rather less than half the length. 3. Chains and groups really formed of the double spheres. 4. Occasionally three spheres in line, measuring 0·0027 mm. All these forms were invested with envelopes which did not take the stain, and therefore were difficult to distinguish. In one culture an ovoid bacterium with a clear spot in the centre was found on the third day, but subsequently this had apparently changed into the ordinary form. The double spheres, or diplococci, as they evidently were, were found to have a movement decidedly greater than non-pathogenic cocci, with which they were compared. The single cocci had no movement, and did not multiply. The diplococci were seen in the process of multiplication, which was accomplished as follows: the two cocci separated quickly, and immediately afterwards each divided into two, which did not part company, but remained joined together, forming a new diplococcus. It was evident that the diplococcus must be the perfect individual, as it presented the phenomena of movement, growth, and multiplication. The single cocci without movement were considered to be arthrospores, and these were the only pathogenic organisms found in the blood in latent syphilis. Cultures of these arthrospores from the blood of syphilitic subjects, which consisted mainly of diplococci, were used to inoculate animals, and produced in them changes which, though not identical with the morbid changes generally found in human syphilitic subjects, bore so close a relation to them that there was little doubt that the disease was really syphilis. Hereditary syphilis was also produced, as evidenced by the examination of the placentæ and of the fœtal offspring of animals which had been inoculated. In a week's time after the inoculation the organisms could be detected in the animals' blood. Should these researches be confirmed, the discovery is of great importance; but it is as well to point out that hitherto the ape has been the only animal in which successful inoculations have been alleged to be successful (Klebs), and even in these cases the evidence that the caseous foci produced were syphilitic and not tubercular is incomplete; whilst as to micro-organisms, which have from time to time been found in syphilis, none, except those which were obviously due to septic contamination (see THE LANCET, vol. ii. 1887, p. 771), coincide with those above described, and Lustgarten's bacillus is of quite a different class.

TRADE USES OF PROFESSIONAL NAMES.

DR. JOHN WILLIAMS deserves the thanks of the profession for his attempt in the High Court of Justice to restrain a firm of surgical instrument makers from using in their trade catalogue Dr. Williams's name as the inventor of a certain vaginal syringe. It would be thought that a respectable firm would not lightly use the name of a distinguished practitioner in a common advertisement, or, at least, that on being remonstrated with for doing so they would immediately apologise and desist. This they actually refused to do, and Dr. Williams had no remedy but the costly one of law. Unfortunately this proved a broken reed. The judge admitted that Dr. Williams's request was reasonable. He even went the length of saying that the defendant had no more right to use the name of the plaintiff than to take his purse. But he did not grant an injunction. He would have done so had he been dealing with the case as a *res nova*. But he was hindered by a surprising judgment to the contrary effect in the case of Clark *v.* Freeman, in which the name of Sir James Clark was used to set off a pill which he had never heard of, and which he would never have dreamt of telling his patient to take. In that case Lord Langdale refused the injunction. This was "surprising" indeed, as the judge said. Only one thing is more so to the lay mind—that Mr. Justice Kay should have felt bound by a judgment so contrary to justice, common sense, and the interest of the public. Dr. Williams has done what he could, and no one who knows him would doubt his perfect disgust with such methods of business.

PROFESSOR LANKESTER AND THE UNIVERSITY OF OXFORD.

PROFESSOR LANKESTER has obtained a mandamus to compel the authorities of the University of Oxford to hear his defence against his dismissal from the office of examiner in Animal Morphology in June last. It would appear that Professor Lankester conducted a practical examination as well as a written one on the same day, instead of holding a written examination on one day and a *viva voce* examination on two other days, as fixed by the authorities of the University. Consequently the Vice-Chancellor summarily dismissed him. Doubtless the conditions of the examination as laid down by the authorities are obsolete, and require to be altered on more modern lines.

EXTENSION OF SMALL-POX.

SMALL-POX is still extending, especially in South Yorkshire and in the northern part of Derbyshire. The outbreak in Leeds has assumed large proportions, and it is stated that some of its diffusion is through common lodging-houses tenanted by tramps from Sheffield. The Town Council of the latter place have decided that they cannot wait for formal official inquiry and sanction, and that they must, in view of the emergency, proceed with their new small-pox hospital without the approval of the Local Government Board. We hope that sanitary authorities generally will turn their attention to this subject of small-pox isolation, before they find themselves confronted with an occurrence of this disease; for unless arrangements beyond those needed for the other current infectious fevers are decided on in advance, public bodies may find themselves beset with difficulties and opposition, that are almost certain to increase year by year.

THE COMMA BACILLUS IN NEW YORK.

IN the *New York Daily Tribune* of Nov. 27th there is a short leader setting forth that pathognomonic importance is attached to the comma bacillus by some authorities in New York. The arrival of an Italian steamer with a suspicious case resembling cholera embarrassed the medical officers of health. The Carnegie laboratory was put to its proper use. The comma bacillus was discovered, and the diagnosis of cholera was delivered with confidence. The steamer was ordered to remain in quarantine, and other preventive measures were used. A second case occurred in New York, in which the symptoms were like those of true Asiatic cholera. But a careful search for the bacillus proved unsuccessful, and the case was soon well. We are not quite so sure in this country of the value of the comma bacillus as they seem to be in New York.

A CURIOUS VERDICT.

AN inquest was recently held at Little Ilford before Mr. C. C. Lewis, touching the death of Elijah Cook, aged forty-seven. The deceased was a grave-digger at Manor-park Cemetery. He was found dead in bed. The jury found a verdict of "Death from disease, the precise nature of which was not known, but probably from heart disease." We are informed that no medical evidence was called. If this was the case, we do not hesitate to say the judicial ceremony was singularly faulty. Surely a doctor is the person best

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qualified to assist a coroner's jury in arriving at the truth as to the cause of death. If professional testimony had been adduced to the effect that the deceased had suffered from cardiac trouble, and the other facts were consistent with the supposition that death arose from syncope, we see no reason why a post-mortem examination should have been made. On the other hand, where more than reasonable doubt exists as to antecedent disease, and as the actual cause of death must be to a great extent problematical in the case of a person found dead, it would be far more satisfactory for the coroner to order the fullest investigation.

THE LATE ARTHUR FARRE, M.D.

WE regret to record the death, on the 17th inst., of Arthur Farre, M.D., F.R.S., Physician Extraordinary to the Queen. Born in 1811, Dr. Farre received his early education at the Charterhouse, and then proceeded to Caius College, Cambridge. He received his professional education at St. Bartholomew's Hospital, and took the M.B. degree at Cambridge in 1833, and that of M.D. in 1841. Becoming a Member of the Royal College of Physicians in 1838, Dr. Farre was elected a Fellow in 1843. He was lecturer on Comparative Anatomy at St. Bartholomew's Hospital in 1836 and 1837, and on Forensic Medicine from 1838 to 1840 inclusive. For the long period of twenty-two years—viz., from 1841 to 1862—Dr. Farre was Professor of Obstetric Medicine at King's College and Physician-Accoucheur to King's College Hospital, being appointed Consulting Physician to that institution in 1863. He acted as Censor, Examiner, and Councillor in the Royal College of Physicians, and was appointed Harveian Orator in 1872. For twenty-four years he was Examiner in Midwifery in the Royal College of Surgeons. In addition to being Physician Extraordinary to Her Majesty, Dr. Farre was Physician-Accoucheur to the Princess of Wales, the Duchess of Edinburgh, the Princess Christian of Schleswig-Holstein (Princess Helena of Great Britain), and the Princess of Leiningen. He also attended the lamented Princess Alice of Hesse Darmstadt in her first confinement.

EFFECTS OF PHOSPHORUS ON YOUNG ANIMALS.

DR. ALEXANDER KISEL of St. Petersbnrg, who has made a series of observations on the effect of small doses of phosphorus on young animals, has found that it never exerts any beneficial effect on the growth of bone, but that, on the other hand, the apparently slight disorder of the digestive functions which very small doses produce is liable to result in death. When given to puppies in doses of 0·0001 gramme per kilogramme of weight, symptoms of chronic poisoning were produced, with atrophy and disintegration of the bones. In doses of half this amount the development of the animal was retarded, but those equal to 0·000023 gramme per kilogramme of weight appeared to be innocuous and produced no effect at all upon the body.

THE DECLINE OF CHINESE TEA.

THE decreased consumption of Chinese tea in the English market has been ascribed to deterioration in the quality of the leaf, excessive admixture of dust, and the like. But it would seem probable that the deterioration is apparent rather than real—that it is owing to the improvement of the scientific methods adopted in India, while those in China have been in vogue for centuries. The products of the highly organised plantation system of India, with its effective and rapid treatment by machinery, must naturally beat those of the small Chinese farmer, who cultivates an acre or so, and sells the leaf to an itinerant purchaser, who keeps it till he has collected enough to make it worth his while to fire it, when it has lost much of its flavour. In this connexion, however, it must not be forgotten that other causes will influence the market. In the United States the consumption of tea has in recent years materially decreased, whilst that of coffee has undergone an almost corresponding increase.

REFUSAL OF THE BELGIAN GOVERNMENT TO LICENSE FOREIGNERS TO PRACTISE.

IT having been rumoured in Belgian professional circles that the Government were about to give licences to practise to a considerable number of foreign medical men without subjecting them to any examination, the Belgian Medical Federation asked Dr. Thiriar, the well-known Brussels surgeon, who is also a member of Parliament, to communicate with the Minister of the Interior and of Public Instruction, M. de Volder, on the subject. To this communication a reply was received, stating that he had made up his mind to abstain entirely in future from giving authorisations to practise to foreign medical men. A Bill is now before the Chambers dealing with this and other medical matters, and when this is passed it is probable that the power to give licences to practise will no longer remain with the Minister of the day.

TOXICITY OF PULMONARY EXHALATIONS.

DOES the surface lining of the lungs give off a toxic substance like the general run of glandular surfaces? MM. Brown-Séquard and d'Arsonval reply to this question in the affirmative and as the result of direct experiments performed on rabbits. If a certain quantity of water be injected into the lungs of an animal and then be immediately withdrawn, and after filtration injected into another animal, phenomena of poisoning are observed. A considerable diminution in the breathing is the chief observation, and this is attended with dilatation of the pupils. The animal died in seven hours. At the necropsy cerebral anæmia was noted, and serous effusion into the ventricles and at the base of the brain. There were no signs of embolism; the heart was contracted and the cavities on both sides contained black blood; the blood was red in the inferior vena cava, but black in the superior. Expired air contains something more than gas and water—a fact which needs in itself no further attestation than that supplied by the olfactory sense.

OCULAR SYMPTOMS OF EPILEPSY.

THE examination of a thousand cases of epilepsy by Dr. Gowers revealed but one morbid condition of frequent occurrence in the ocular fundus, and that was an unnatural equality of the size of the arteries and veins of the retina. Dr. Charles Oliver of Philadelphia has frequently observed a reduction of the visual fields for form and colour, a granular condition of the choroid in the macular region, a dirty red-grey degeneration of the optic nerve, and a thickening of the fibrous tissue of the retina.

THE PUBLIC VACCINATOR FOR CARDIFF.

THE public vaccinator for Cardiff has been deprived of his appointment on grounds which cannot be clearly understood from the account given in a local journal of the proceedings of the Cardiff guardians. The Vaccination Committee had expressed their disapproval of the conduct of this officer, who on the recent occasion of an outbreak of small-pox at Pentyrch was applied to for a supply of lymph by the medical officer of health and public vaccinator for the Pentyrch district; but the nature of this conduct, which is thus severely dealt with, does not appear. The public

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vaccinator for Cardiff has held this office for over ten years, and has, we believe, always received the grant of the Local Government Board. The circumstances therefore which could justify the termination of his contract ought to be proved to be sufficient to justify so grave a step, and we hold very strongly should be made the subject of inquiry.

KING'S COLLEGE.

THE death of Professor Bloxam has caused the following changes to be made in the Chemical Department:—J. M. Thomson, F.R.S.E., has been appointed Professor of Chemistry; G. S. Johnson, F.C.S., has become Senior Demonstrator, and H. Jackson, F.C.S., Junior Demonstrator. In the Hospital, Mr. Ashley Gibbings, M.R.C.S., L.D.S., has been appointed Professor of Dental Surgery and Dental Surgeon, in place of Mr. Hamilton Cartwright.

MENINGEAL HÆMORRHAGE.

A FEMALE patient, aged twenty-six, was admitted under the care of Mr. Croft, in St. Thomas's Hospital, about midnight on Dec. 11th, in a semi-comatose condition. She was supposed to have been knocked down and kicked by a horse. There was a scalp wound, not leading down to bone, behind and below the left parietal eminence. There was no evidence of fracture. During the night she passed into a state of absolute coma, and in the morning had complete paralysis of the right arm and leg, but not of the face. Mr. Croft trephined in the situation of the wound, removing about two ounces and a half of somewhat granular clot, which was spread out for some distance between the dura mater and the bone. The hæmorrhage was from some vessels in the dura mater (probably posterior branches of the middle meningeal), and could only be arrested by means of pressure. About six hours later the power of movement returned in the right side, and her condition gradually improved. She spoke for the first time after the injury on the 13th. Although not yet recovered, she is still restless at times, and impatient of control; there is no paralysis, the wound is quite aseptic and healing, and the improvement continuous. A severe contusion of the groin was, however, followed by sloughing and cellulitis, for which incisions were required.

THE SANITARY STATE OF SHIRLEY.

AT a lengthened meeting of the Croydon Corporation the question of the ventilation of the Shirley sewers was again discussed. It was announced that the high shaft ventilators which have been so long in coming may be expected to be in position within about a week; but on behalf of the Shirley people it was contended that this did not satisfy them. Their demand is that the existing ventilators on the road level shall be closed, and that the high shafts shall alone serve as ventilators. On the other hand, it was pressed that since the Local Government Board had only recommended that the high shaft ventilators should serve as an additional means of ventilation, the experiment of the duplicate system ought at least to be tried for a time. This proposal was much opposed by those who professed to represent the wishes of the inhabitants of the hamlet of Shirley, but in the end a large majority decided that the road man-holes should remain open.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Dr. Mehu of Madrid, author of several important works on Pharmaceutical Chemistry.—Dr. Enrique Madrazo, editor of *El Correo Médico Castellano*.—Dr. V. V. Glovachevski of Irkutsk, well known for his writings on Diseases of Children.

H.I.H. THE CROWN PRINCE OF GERMANY.

THE latest intelligence concerning the condition of H.I.H. the Crown Prince is of a satisfactory character. At the end of last week, as we learn from San Remo, a small nodule became evident in the middle of the left ventricular band, which was slightly swollen throughout. This excrescence increased, and was then about the size of a split pea. It was not strictly defined, but its base passed insensibly into the surrounding tissues. It looked more like a "false excrescence," such as Mackenzie has described in his work on "Growths in the Larynx," than a true growth. The former growth (of end of October) was considerably smaller, and had a cicatrix on its surface. There was no œdema. The submaxillary glands were absolutely normal in size, and the general health was perfect.

THE GASTRIC JUICE AFFECTED BY SLEEP.

DR. P. V. BURJINSKI, of Professor Manassein's Clinic in St. Petersburg, having enlisted the services in the cause of science of some students and other persons who managed to overcome the natural repugnance most people feel to the passage of even a soft œsophageal tube, has made some investigations on the effect of sleep upon the acidity of the gastric juice. He estimated this acidity by means of a standard solution of soda, and he tested it also for hydrochloric acid. The best test for the latter he found to be floroglucin-vanillin. As, however, this cannot be used when there is any yellow colour in the fluid to be tested, the subjects of the experiments were fed on the whites of eggs, all the yolks being carefully put aside. The result of numerous tests showed that during the night the gastric juice is less acid than during the day. Care was of course taken that the conditions regarding food were the same during the night as during the day. Dr. Burjinski also found that the amount of acidity varied directly with the amount of hydrochloric acid present.

NUISANCE FROM METROPOLITAN REFUSE.

IN a special report on the storage, collection, and conveyance of offensive substances through the streets, Dr. Dudfield points out a very prominent evil in London administration. The refuse of dustbins is conveyed through the streets in open vehicles in such a way as to allow it to blow about in people's faces; and bones, skins, and other decomposing materials are similarly carted about with the result of producing offensiveness and nuisance. Any small country town can make bye-laws to regulate such matters by adopting the model clauses issued by the Local Government Board dealing with the prevention of nuisances arising from filth, dust, ashes, rubbish, &c., but London appears as yet to be unable to control the evil. As Dr. Dudfield well puts it, all refuse matters, whether the result of trades or of ordinary housekeeping, should be stored in impermeable covered receptacles and removed frequently, and without nuisance or annoyance, in properly constructed covered vehicles.

QUININE v. OPIUM.

MR. JOHN FERGUSON, a resident of Ceylon, has drawn attention to the wide-spread use of opium in malarial districts, and he ascribes the opium craving in such places to a low type of fever. He believes that sulphate of quinine, and even the other alkaloids from cinchona bark, counteract the ill effects resulting, and his suggestion is that quinine removes the craving and acts as a substitute for laudanum. This explanation is obviously insufficient. Quinine evidently combats the malarial influence, and thus removes the low state of depression which favours the opium habit, into which the unfortunate people gradually glide in the attempt

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to forget their physical condition. In this way only does it appear probable that quinine acts in superseding the need for opium, its action being tonic and prophylactic rather than antidotal. Mr. Ferguson usefully points out that the retail prices have not fallen proportionally to the great reduction in the wholesale prices.

TETANUS.

ACCORDING to MM. Nocard and Brieger, tetanus is a disease transmitted to men and animals by the agency of a pathogenic organism which infects wounds or other suitable soils on the surface of the body. The organism does not penetrate far beyond the limits of its point of inoculation, but exercises its deleterious influence by means of certain products of an alkaloidal nature, and of which there are, according to Brieger, four kinds—tetanin, tetano-toxine, spasmo-toxine, and another not named. The alkaloids have a special affinity for certain parts of the motor nervous system, causing excessive discharges of nervous energy, on which the muscular spasms are directly dependent. M. Nocard found that dried blood and pus scraped from instruments which had been used to geld horses (all of which died of tetanus), when inoculated beneath the skin of rabbits and guinea-pigs, caused tetanus; and yet infusions made from the medulla oblongata and spinal cord of animals dead from tetanus were not capable of causing tetanus in other animals into whom some of the infusion was injected. The argument is not free from fallacy, but the conclusion drawn is that the spinal cord and medulla are acted upon by a strychnine-like substance, of course incapable of cultivation, but derived from the multiplication and growth of organisms elsewhere existing.

MENTAL DISORDER CAUSED BY JABORANDI.

DR. WAUZH of Liège, who has great belief in the efficacy of jaborandi as a stimulant of the mammary functions, mentions a case which has recently occurred in his practice, showing that inconveniences may occasionally arise from the administration of this drug. He prescribed ten drops of the fluid extract every four hours for a patient whose milk had ceased for a fortnight, with satisfactory results, the secretion being re-established. After a time, however, the patient began to suffer from extreme nervous excitement, accompanied by a fixed idea that she should murder all her family with a hatchet. On the jaborandi being stopped these alarming symptoms disappeared, and together with them the activity of the mammary glands.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda-Pesth.—The names mentioned for the Chair of Special Pathology and Therapeutics are very numerous, the best known being Dr. Jendrassik, *docent* in the University, and Professor Bókai of Clausenburg.

Marburg.—Professor Braun of Jena has been appointed to the Professorship of Surgery. He will commence his duties after Easter.

Würzburg.—Professor Scanzoni, the well-known obstetrician, is about to retire on a pension at the age of sixty-seven.

AMONG those who were ordained Priest by the Bishop of Rochester on Sunday last occurs the name of the Rev. J. E. Hine, B.A. Oxon. and M.D. Lond., formerly Fellowes Gold Medallist and Atchison Scholar of University College Hospital, and late house-surgeon of the Radcliffe Infirmary, Oxford. We understand that Dr. Hine intends before long to join the University's mission to Central Africa as a medical missionary under Bishop Smithies.

SAVE on the occurrence of exceptional floods, the variations in the character of the river water supplied to London are, for the most part, very limited in range. Within the range, however, some variation usually makes itself manifest with the approach of the month of November, and accordingly, as appears from Messrs. Crookes, Odling, and Tidy's report, a slight variation in the composition and character of the water, as prevailing with great uniformity during the previous four months, was recognisable in last month's supply. Thus the mean proportion of organic carbon in the Thames-derived supply was found to be ·145 part, with a maximum in any one sample examined of ·166 part in 100,000 parts of the water, as against a mean of ·137 part and a maximum of ·169 part in the preceding four months' supply—the variation, it is observable, being very insignificant.

THE death is announced of Professor Balfour Stewart, M.A., LL.D., F.R.S. The deceased, who had only just completed his fifty-ninth year, was educated at the Universities of St. Andrews and Edinburgh. In 1859 he was appointed to the directorship of the Kew Observatory, and in 1867 to the secretaryship of the Meteorological Committee, which last appointment he resigned on his promotion to the professor's chair of Natural Philosophy in Owens College in 1870, a post which he held until his death. In 1868 he was awarded the Rumford Medal by the Royal Society, for his discovery of the law of equality between the absorptive and radiative powers of bodies.

IN the list of successful candidates at the recent examination for the degree of M.D. at the London University appears the name of Mr. K. N. Bahdurji, a Parsi gentleman of Bombay. He is the first Parsi to gain this degree, and the second native of India, the first being the late Dr. Chukerbutty, who passed in 1845.

PROFESSOR WILLIAM ROBERTSON, the Principal of the Royal Veterinary College at Camden Town, expired suddenly a few days ago whilst correcting proofs of a work he had written on Veterinary Surgery. The deceased was fifty-seven years of age.

SENOR CALLEJA, the Spanish Director of Public Instruction having retired, this important post has been filled by the appointment of Señor Nieto, son of Señor Nieto Serrano, Director of *El Siglo Médico*, the leading Spanish medical journal.

AT a meeting of the committee for the election of officers on the 19th inst., Dr. Arthur Gamgee, F.R.C.P. Edin., F.R.S., was elected an assistant physician, and Mr. George R. Turner, F.R.C.S., an assistant surgeon to St. George's Hospital.

THE Lettsomian Lectures will be delivered at the Medical Society of London by Mr. Reginald Harrison, on Jan. 2nd, 16th, and 30th, 1888. The subject will be "On some Points in the Surgery of the Urinary Organs."

DR. PESET CERVERA and Dr. Tuñon y Lara have been appointed Directors of the Laboratories of Forensic Medicine in Madrid and Barcelona respectively.

HOSPITAL SATURDAY FUND.—The report of the Distribution Committee of this fund was adopted at a meeting of the delegates held at the board-room on Wednesday last, which recommends that £10,000 of the £11,300 collected be distributed among 76 hospitals, 39 dispensaries, and 23 convalescent homes and other institutions. The awards to the hospitals amount to £6868 1*s.* 2*d.*, the dispensaries receive £853 6*s.*, and the convalescent homes £1340 10*s.*

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Pharmacology and Therapeutics.

HYPODERMIC INJECTIONS OF ANTIPYRIN.

Two papers have just appeared on the value of subcutaneous injections of antipyrin for the relief of pain, as recommended by Professor Germain Sée—one by Dr. Hirsch of Hanover, the other by Dr. Capitan of Paris. Dr. Hirsch uses a solution made of equal weights of antipyrin and distilled water—(i.e., a 50 per cent. solution by weight). Of this he injects a Pravaz-syringeful (fifteen minims) into the painful spot, and in this way he has obtained most marked success in cases of neuralgia of the fifth, sciatica, and both muscular and articular rheumatism, some of them of long standing. In some instances the relief was both instantaneous and permanent. He advises that the syringe should after use be very carefully washed out with a 5 per cent. carbolic solution in order to prevent the lumen of the needle being stopped up by particles of antipyrin. Dr. Capitan, whose valuable paper in the *Bulletin Médical* is partly a *résumé* of the previous observations of various physicians, including a good deal of matter contained in a graduation thesis by Dr. Caravias, states that the solution of antipyrin in its own weight of water, though it may be used hypodermically, is painful, and he therefore adds fifteen parts of cocaine for every 1000 parts of antipyrin. With this solution the injection is much less painful than when no cocaine is added. The place where the needle has penetrated usually becomes slightly raised and tender, and once or twice small abscesses have formed. The usual dose employed by him is thirty minims. In dysmenorrhœa, and uterine pain generally, an enema (which is to be retained by the patient) of warm water containing seventy-five grains of antipyrin gives the best results. The action of this drug in relieving pain of very diverse kinds of origin—e.g., neuralgic, rheumatic, herpetic, &c.,—whether given by the mouth, by the bowel, or hypodermically, is very strongly praised by Dr. Capitan, who suggests that every medical man can easily verify its remarkable anodyne power by a few simple trials. The doses he recommends are somewhat higher than those frequently given; thus he puts the dose for internal use at from thirty to ninety grains, and that for hypodermic use at from fifteen to sixty grains.

STROPHANTHUS.

Some practitioners have looked with displeasure on strophanthus—the remedy so much vaunted of late as of value in heart disease. It can hardly be that the valvular lesions in different cases required a different remedy to act upon the heart muscle, unless, indeed, our present physiology is altogether wrong, and the doubt therefore arises whether the strophanthus itself is free from blame. Some false varieties of strophanthus are said to have been put upon the market, and some of the genuine strophanthus hispidus has been deteriorated by decomposition and by invasion with fungus, or immature seeds have been supplied. Such conditions must needs bring disrepute, and it behoves us to guard against them by obtaining the drug from perfectly reliable sources. Dr. John Aulde, of Philadelphia, has a paper in the *Medical and Surgical Reporter*, No. 2, vol. lvii., in which he speaks of the value of strophanthus not only as a cardiac tonic, but also as a direct diuretic, by increasing the activity of the vascular system. In cases of fever where there is great tension, with a hot and dry skin, scanty and high-coloured urine, he remarks, with truth, it is surprising how quickly we observe the diuretic action of a small dose of aconite frequently repeated. Aconite is regarded not only as increasing the secretion of the watery parts of the urine, but also of the solid parts. But while aconite reduces, digitalis increases tension, showing that strophanthus may be substituted for digitalis as a diuretic when it is desired to avoid increased blood pressure. It is suggested that this effect may be explained by assuming that in such cases there is too much tension, and that, this condition being relieved, compensation is re-established when cellular activity begins. In ordinary cases of cardiac dilatation, or in those cases dependent on typhoid fever and pneumonia in which alcoholic stimulants are indicated, strophanthus is recommended; and also in patients in the later months of pregnancy who suffer from a flabby condition of the cardiac muscle along with œdema of the lower extremities. But Dr. Aulde would not say that the presence of albumen in the urine would not be a contra-indication to the use of strophanthus. He also thinks that the drug may be used in preventing collapse during the production of anæsthesia, and as a remedy to prevent the depressing effects following the use of chloral and bromide.

GUAIACOL AS A SUBSTITUTE FOR CREASOTE IN PHTHISIS.

DR. H. SAHLI of Berne, writing on the treatment of phthisis by creasote, remarks that creasote, by which is meant that prepared from the tar obtained by the destructive distillation of beech wood, is a complex substance, the constituents of which vary considerably in different samples, and that it is surely desirable to use for therapeutical purposes some simple substance of known composition. He finds that in the beech creasote, as prescribed in the Swiss Pharmacopœia, the largest constituent is guaiacol, the methyl-ether of pyro-catechin, $OH.C_6H_4.OCH_3$, which constitutes from 60 to 90 per cent. of the whole, the rest being chiefly made up of creasol, the mono-methyl-ether of homo-pyro-catechin, $OH.C_6H_3[CH_3].OCH_3$. Guaiacol being the chief constituent of creasote, Dr. Sahli prescribed it in cases of phthisis, and found that it had an excellent effect in moderating the cough, making expectoration easier, frequently diminishing the secretion, and improving the patients' appetite and general condition. Some who were confined to bed and suffering from a considerable degree of pyrexia were unable to retain the medicine, and vomited it. In some cases, too, it brought on diarrhœa. On the whole, however, Dr. Sahli was well satisfied with the guaiacol as a substitute for creasote. It is a colourless highly refracting liquid, soluble in alcohol, ether, and fat oils, but only slightly so in water. The alcoholic solution gives with perchloride of iron an emerald-green colouration. The taste and odour of guaiacol are more agreeable than those of creasote. As solutions of guaiacol deposit resinous substances when exposed to light, they should be kept in coloured glass bottles. One or two parts of guaiacol may be dissolved in 180 parts of water and 20 of spirit. One or two teaspoonfuls of this may be ordered in a glass of water two or three times a day after meals, or the guaiacol may be dissolved in cod-liver oil, which almost completely disguises its smell. In this way larger doses can be taken than when the solution in water is prescribed. The price of guaiacol does not seem to be very much higher than that of creasote.

SENEGIN.

Polygala senega and Polygala boykinii—i.e., the northern and southern varieties of senega-root—contain, according to Dr. Joseph Atlass of Dorpat, about the same proportion of senegin which he found in one specimen of the former, amounting to 1·64 per cent. The other main active constituent, polygalic acid, however, though existing in appreciable quantity in the northern senega-root, especially after it has been kept for some time, is only to be found in traces in the Polygala boykinii. In examining the physiological action of senegin, he found that when introduced into the circulation it acted as a violent poison, causing death from asphyxia due to heart paralysis. No effect was produced when senegin was introduced into the stomach—partly, perhaps, because it was to some extent vomited, but mainly because it was not absorbed. In animals which cannot vomit, no toxic effect was observed. Of course the result might have been different if the gastric mucous membrane had been ulcerated or wounded. Again, the subcutaneous administration did not show the same toxic effects as its intravenous injection, but it produced violent local irritation. Dr. Atlass was unable to discover any therapeutic value in senegin.

UTERINE MYOMA TREATED WITH HYDRASTIS.

Dr. Schmidt of Prague has treated with remarkable success a case of long-standing myoma of the uterus, accompanied with copious hæmorrhage, by means of tincture of hydrastis canadensis. Twenty-five drops were given four times a day for three or four months. During this period the hæmorrhage stopped, the menstrual periods became normal, and the tumour decreased very markedly in size.

SAPONIN AND SAPOTOXIN.

Quillaya saponaria was recommended by Professor Kobert as a cheap and efficient substitute for senega, and has since been employed with good results by Goldschmidt, by Maslovski, chief of Professor Kuznets' clinic, and by Dr. Pachorukow of Dorpat. The last-named observer has just published some account of a principle named by Professor Kobert "sapotoxin,"

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which is contained in quillaya, and also forms part of the preparation sold as saponin, which appears, according to Dr. Pachorukow, to be a mixture of this substance, which is of a toxic character, and of another, lactosin, which is harmless. Sapotoxin has a powerful action on the blood, destroying the red corpuscles and decomposing the oxyhæmoglobin, thus interfering with the absorption of oxygen and causing death by asphyxia.

QUEBRACHO IN SURGICAL PRACTICE.

Dr. Bordeaux of Brussels, who has used quebracho a good deal during the last year or two, speaks very highly of it as a topical application for wounds and burns. The liquid extract is the preparation employed, and it is painted with a brush over the wound like collodion. The slight pain it causes is very transient; it becomes hard in an hour's time, forming a brownish crust, which can only be loosened with the aid of hot water. This crust is quite sufficient protection, no dressing being required. It promotes healing by first intention, and greatly assists the process of granulation.

HYPODERMIC INJECTIONS OF CHLORIDE OF SODIUM IN COLLAPSE.

Dr. Rosenbusch, writing in a Polish journal, describes some cases of collapse from hæmatemesis and hæmoptysis in which hypodermic injections of chloride of sodium acted most satisfactorily.

MEDICAL DEGREES FOR LONDON STUDENTS: PETITION OF THE APOTHECARIES' SOCIETY.

THE following petition, praying to be heard by counsel, in reference to the petition of the Royal College of Physicians of London and the Royal College of Surgeons of England for Charter and to grant degrees, has been forwarded to the Privy Council.

To the Queen's Most Excellent Majesty in Council.

The humble petition of the Master Wardens and Society of the Art and Mystery of Apothecaries of the City of London, humbly sheweth as follows:—

1. A petition has been presented to your Majesty by the Royal College of Physicians of London and the Royal College of Surgeons of England praying for a Charter (hereinafter referred to as the "said Charter") incorporating an equal number of the Fellows or Members of each of the said two Colleges under the name or style of the Senate of Physicians and Surgeons, with power to grant to persons who have obtained qualifications for registration under the Medical Act from either or both of the said Colleges, and shall be otherwise properly qualified, degrees in Medicine and Surgery and with other powers.

2. Your petitioners humbly submit and allege that they, as well as the general public, will be injuriously affected by the granting of the said Charter as prayed, and they object thereto for the following among other reasons.

3. Your petitioners, now known by the name of the Master Wardens and Society of the Art and Mystery of Apothecaries of the City of London, are a corporation incorporated and empowered under letters patent bearing date the 6th day of December, in the 15th year of the reign of King James the First, by the name of "The Master Wardens and Society of the Art and Mystery of Apothecaries of the City of London," and further empowered by an Act of Parliament made and passed in the 55th year of the reign of King George the Third, intituled "An Act for better regulating the Practice of Apothecaries throughout England and Wales," and by an Act of Parliament made and passed in the session of the 37th and 38th years of your Majesty's reign, intituled "The Apothecaries Act Amendment Act, 1874."

4. Under the Medical Act made and passed in the session of the 21st and 22nd years of your Majesty's reign the licentiateship of your petitioners, as well as that of each of the said two Colleges, is a qualification entitling the holder thereof to have his name entered on the Medical Register directed to be kept by the said Act.

5. Under the provisions of the Medical Act made and passed in the session of the 49th and 50th years of your Majesty's reign respecting examinations for the qualifications entitling the holders thereof to have their names placed on the Medical Register the General Medical Council have, upon the application of your petitioners, appointed examiners to assist at the examinations held by your petitioners of candidates for their licentiateship. Your petitioners, with the assistance and under the direction of the assistant examiners appointed by the General Medical Council as aforesaid, hold such qualifying examinations, and no examinations for persons about to become general practitioners are held in higher or more deserved repute.

6. The licentiates of your petitioners number nearly 10,000, nearly the whole of whom practise both Medicine and Surgery. The fees payable in respect of the qualifying examination and diploma of your petitioners are considerably less than those payable in respect of the similar examination and diploma of either of the said Colleges.

7. The qualifying examination of your petitioners is as severe a test of proficiency in Medicine, Surgery, and Midwifery as the examination conducted by the said Colleges, but if the said Colleges are enabled to grant degrees to their members to the exclusion of the licentiates of your petitioners, such prestige would thereby attach to the said Colleges that the diploma of your petitioners would necessarily su[ffer] estimation, and be regarded as of inferior value. If the [ex]penses now attending the acquisition of degrees in [Me]Surgery be removed by empowering the said Colleges to [grant] degrees, the public will expect all medical practitioners to po[ssess] as well as a qualifying diploma, with the result that if the [said] be granted as prayed, not only your petitioners, but the p[ublic] be injuriously affected; many persons who under existing c[ircum]would become candidates for your petitioners' diploma will [prefer] to be candidates instead for a diploma of the said Colleges, [and] as candidates for a degree, and others will be debarred by [the] imposed by the said Colleges from becoming medical practi[tioners].

8. Your petitioners humbly submit that it would be most unjust to their licentiates that they should be debarred fr[om] degrees in Medicine or Surgery which are open to members o[f the] Colleges. The curriculum passed through by the licentiates petitioners in no way differs from that passed through by the of the said Colleges; they attend at the same schools and hos[pitals] comply with the same conditions; and the examination for th[e] of your petitioners is as complete and satisfactory a test of pr[oficiency] as the examination of the said Colleges for a qualification for tion under the Medical Acts. Your petitioners therefore suf[fer] no rights and privileges such as those prayed should be grant[ed] members of the said Colleges which are not at the same time g[iven] the licentiates of your petitioners. Your petitioners submit Charter be granted by your Majesty to the said Colleges, it shou[ld] that all licentiates of your petitioners should be eligible for degr[ees] said Senate upon the same terms and conditions as members o[f the] Colleges, and that the examination held by your petitioners diploma should be an equal qualification for such degrees an[d ex]aminations therefor with the examination of the said Co[lleges] qualifications for registration under the Medical Acts.

9. Your petitioners submit that no new University for the co[nferring] of degrees in Medicine and Surgery is required in London University of London already satisfactorily and fully perform functions of such a university. If the said Charter is granted in prayed, which does not provide of necessity that candidates fo[r] shall be required to pass any examination beyond the examinati[ons] said Colleges for qualifications for registration under the Medi there will be constant danger that the said Colleges, in order t[o] candidates, will require a low standard of proficiency from the c[andi]for their degrees, whereby the value of and prestige attaching t[o] will be diminished and lowered.

10. Your petitioners humbly submit that the said Charter is u[n]sary, that as prayed it would unjustly exclude and prejudice the of your petitioners, deal a most severe blow to the rights and of a body who are universally allowed to be fulfilling their publ[ic] in a most satisfactory manner, as secured by existing Charter a of Parliament, and most injuriously affect the medical profes[sion] the public.

Your petitioners therefore humbly pray that your Majesty will n[ot] to the prayer of the petition of the said two Colleges except upon condition that the said Charter provides that special examinations for shall be compulsory, and that all the licentiates of your petitioner at liberty to present themselves at such examinations, and that the of your petitioners shall be deemed a qualification for candidate examinations as full and complete as any qualification for re[gistration] under the Medical Acts granted by one or both of the said Colle that any licentiate of your petitioners shall be entitled to degree from the said Senate upon the same terms and conditi person who holds a qualification for registration under the Med granted by one or both of the said Colleges. And your petitio pray that, upon the consideration by your Majesty in Council o petition of the said two Colleges, your petitioners may be at attend and be heard by counsel. And your petitioners will ever

*** We are informed that the Society of Apotheca taking active steps, if the petition of the Royal Col the Privy Council should be persevered with in its form, to obtain the assent of the licentiates to the presented by the Society, and also to convene a me the licentiates at their Hall for the like purpose at date in January.

ATTEMPTED EXTORTION FROM A MEDI PRACTITIONER.

A TRIAL of some importance to members of the profession took place on the 17th inst., at the Old before the Common Serjeant. George Wetherall was c with, and found guilty of sending a letter to Mr. A. G of Kilmarsh-road, Hammersmith, demanding £20 o dition that a charge of indecent assault which the de made against Mr. Gittings should not be proceede The facts of the case are briefly these:—

On the 10th of September last defendant's servant Power, a girl of fourteen, called at Mr. Gittings' sur medicine he had prescribed for Wetherall's child Gittings noticed that she looked ill, and learnt fr that she had been ailing for a few days with headac had a pain in the abdomen: her tongue was coated quick, and skin hot. Suspecting typhoid fever, h the girl's consent, palpated the abdomen, and satisfie self that she was suffering from constipation. He pre for her, and told her to see him again in a few

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but neglected to acquaint her employers of the facts. About three weeks after, Mr. Gittings was summoned at midnight to attend Wetherall for an attack of pleurisy, the girl being sent to fetch him. Mr. Gittings, who had gone to bed, came down and admitted the girl, directing her to wait till he was ready. He attended the defendant for a week, when, on calling at the latter's house, he found that he had gone out with his wife. On being told this by Power, Mr. Gittings stated that he said to her, "Then you are all alone," when she replied, "No, there is a lady upstairs lodging here." This person, Mrs. Mason, was, as will be seen, a material witness for the defence. The same evening Mr. Gittings received a letter from Wetherall, requesting him not to call again until he (the defendant) had consulted his legal adviser concerning something which had come to his knowledge respecting Mr. Gittings' conduct. This letter Mr. Gittings destroyed, and called next day for an explanation. He was then confronted with the charge that he had been guilty of indecently assaulting Laura Power, a charge he indignantly repudiated, as also a proposal made by Wetherall that he should pay him £25 to say no more about it. However, he agreed to meet the defendant upon another occasion, some days later, when Wetherall demanded £20, which was refused, Mr. Gittings, on his part, insisting that the charge should be unconditionally withdrawn. Wetherall then wrote a letter in which this demand was repeated, otherwise he should take proceedings, and the letter began with words to the effect that the writer was unable to accept his (Mr. Gittings') offer—an offer which Mr. Gittings swore had never been made, but which defendant's counsel, Mr. Kisch, interpreted as being an offer of £10. Mr. Gittings then placed the letter in his solicitor's hands, and proceedings were instituted against Wetherall at the Hammersmith police-court, and the case was sent for trial. Mr. Kisch subjected Mr. Gittings to a prolonged and severe cross-examination without succeeding in shaking his evidence in any material point. For the defence, Laura Power deposed that she had been indecently assaulted by Mr. Gittings, not only on Sept. 10th (when she said she was not ill, but admitted on cross-examination to having a pain in her stomach, and to being constipated), but on every occasion that she saw him subsequently, including that day on which she had been sent to fetch him for her master. She also stated that when Mr. Gittings called at Wetherall's house and found him out he kissed her; and Mrs. Mason swore to witnessing this act (which was said to have taken place in the hall) from the landing near her apartments on the second floor. Mrs. Mason further stated that she at once taxed the girl with the familiarity, and obtained from her a confession of the various assaults. This was communicated to Wetherall, who acted as stated. Several witnesses were called to give the defendant a high character. The defence was that Mr. Gittings had been guilty of indecent assault, and that he had offered Wetherall £10 before the letter was written. On behalf of the prosecutor, Mr. Grain pointed to the improbability of the story told by the girl, and the undisputed fact of the threat contained in the letter. In summing up, the judge showed how easily such a charge could be brought against a medical man, and that it would be easy to explain Mrs. Mason's evidence on the ground of imagination, and the girl's confession on her misinterpretation of the examination made by Mr. Gittings on September 10th. It was not until after Wetherall had himself been charged that, at his instance, Power applied for a summons against Mr. Gittings, which the magistrate declined to grant. The jury found the defendant guilty, but recommended him to mercy on account of the weak state of his health and his previous good character. The prosecutor joined in the recommendation of the jury, and the Common Serjeant ordered the defendant to find one surety in £100, and to enter into his own recognisances to come up for judgment when called upon. Whether such a result will act as a deterrent is perhaps open to question, and Mr. Gittings may have erred on the side of mercy in not pressing for the infliction of some punishment; but he knew the man's state of health, and on that ground concurred in the recommendation. At any rate, Mr. Gittings deserves credit for bringing the case into Court, and indeed for resisting what to a professional man must always be a great temptation—the payment of a sum of money to save his reputation from being ruined by a false and baseless charge. We understand that Mr. Gittings incurred heavy legal costs in the action before the case was taken up by the Treasury

MEDICAL TRIAL.

HIGH COURT OF JUSTICE: CHANCERY DIVISION.

(Before Mr. JUSTICE KAY.)

WILLIAMS *versus* HODGE AND CO.

THIS was a motion on behalf of the plaintiff, Dr. John Williams, the well-known obstetric physician, of 11, Queen Anne-street, for an injunction to restrain the defendants, Messrs. Hodge and Co., surgical instrument makers, of Oxford-street, from using, in their trade catalogue, the name of the plaintiff in connexion with a certain instrument of a simple character commonly used in obstetric operations, so as to lead the public to believe that it was the plaintiff's invention. On the use of his name coming to the plaintiff's knowledge, he remonstrated with the defendants, but they refused to expunge his name from their catalogue. The defendants did not appear to the motion.

Mr. RENSHAW, Q.C. (with whom was Mr. Rolls Warrington) read an affidavit by the plaintiff to the effect that it was contrary to the etiquette of the medical profession for a practitioner to advertise himself or to hold himself out to the public as an inventor, and that if he did so he injured himself in the eyes of his fellow-practitioners; and that this attempt to connect the plaintiff's name with an instrument of so simple a character as that in question would tend not only to injure him, but also to render him an object of ridicule in the profession. The plaintiff was supported by an affidavit by Sir William Jenner to the same effect.

Mr. Justice KAY.—This case seems like "Clark *v.* Freeman" (11 Beav., 112), where the Court refused to grant an injunction to prevent a chemist from selling a pill under a false and colourable representation that it was a medicine of the plaintiff, the eminent physician, Sir James Clark. That decision was no doubt a surprise to the profession; but has it ever been overruled?

Mr. RENSHAW.—It has certainly not been accepted as sound. The defendants' untrue representations are calculated to injure the plaintiff in his business, and thus the case falls within "Thorley's Cattle Food Company *v.* Massam" (14 Ch., Div. 763) and that class of cases.

Mr. Justice KAY.—That is a question for the trial. I cannot decide it on an interlocutory application. This is a simple instrument and perfectly harmless; but in "Clark *v.* Freeman" the pill advertised by the defendant was one of a dangerous kind, which the eminent physician who was the plaintiff would never have thought of prescribing.

Mr. RENSHAW.—That case is not considered to be law now.

Mr. Justice KAY.—That is a question for the trial. Supposing the name of some eminent surgeon were attached to a particular instrument, everyone would know that the name was not so used by that surgeon, but by some unscrupulous manfacturer.

Mr. RENSHAW.—I submit that in such a case the wrongful use of the name ought to be restrained. It is, in fact, libellous. In "Hill *v.* Hart Davies" (21 Ch., Div. 798) your lordship granted an injunction to restrain a libel likely to injure a friendly society.

Mr. Justice KAY, in delivering judgment, said that in this case there seemed to have been, according to the evidence, a most unwarrantable use of the name of a gentleman of great eminence in the medical profession by associating it with a particular instrument. That gentleman now asked for an injunction to restrain that use of his name. Had the matter been *res nova*, his lordship should have said that he was certainly entitled to an injunction. A gentleman in the plaintiff's position might reasonably ask, "Why should my name be taken in vain by an unscrupulous manufacturer of surgical instruments?" The defendants had no more right to use the name of this eminent medical man than to take his purse—so his lordship should have said upon his own unassisted judgment if the case had come before him for decision for the first time. But there was the case of "Clark *v.* Freeman," in which the name of Sir James Clark, one of the most eminent physicians of his day, was used by the defendant, a chemist, in connexion with a pill which Sir James had never heard of, and which he would never have dreamt of telling his patients to take. There Lord Langdale refused to grant the injunction asked for. As his lordship had said, that decision was rather a surprising one, and one which he had always thought was not sufficiently considered; but it was a decision from which he did

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not feel himself at liberty to depart, and from which, upon an interlocutory application such as the present, he had no right to depart. His lordship was not at present aware of any reported case in which "Clark *v.* Freeman" had been considered, or of any case overruling it. Accordingly, the question raised by this motion must stand over until the trial of the action, if the defendants were foolish enough to allow it to be brought on. His lordship thought it right to add that he could not conceive that anyone in the world would suppose this gentleman's professional name would be in the least damaged by this most unscrupulous use of it.—*The Times.*

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5620 births and 3919 deaths were registered during the week ending December 17th. The annual rate of mortality in these towns, which had been 23·5, 22·5, and 21·1 per 1000 in the preceding three weeks, rose again last week to 22·1. During the first eleven weeks of the current quarter the death-rate in these towns averaged 20·8 per 1000, and was 0·7 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 15·5 in Portsmouth, 16·8 in Brighton, 17·4 in Norwich, and 17·6 in Plymouth. The rates in the other towns ranged upwards to 30·3 in Wolverhampton, 32·9 in Manchester, and 35·7 in Blackburn and in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 443 and 448 in the preceding two weeks, further rose last week to 500; they included 157 from whooping-cough, 108 from scarlet fever, 80 from measles, 54 from "fever" (principally enteric), 47 from diphtheria, 35 from diarrhœa, and 19 from small-pox. These zymotic diseases caused the lowest death-rates last week in Sunderland and Brighton, and the highest rates in Oldham, Blackburn, and Preston. The greatest mortality from whooping-cough occurred in Manchester, Oldham, Leicester, and Wolverhampton; from scarlet fever in Manchester, Salford, Oldham, Norwich, and Preston; from measles in Nottingham, Bolton, Birmingham, Blackburn, and Derby; and from "fever" in Blackburn, Nottingham, and Preston. The 47 deaths from diphtheria in the twenty-eight towns included 23 in London, 5 in Liverpool, 3 in Oldham, 3 in Newcastle-upon-Tyne, 2 in Bristol, 2 in Preston, and 2 in Huddersfield. Small-pox caused 17 deaths in Sheffield, 1 in Bristol, and 1 in Preston, but not one in London or in any of the twenty-four other large provincial towns. The metropolitan hospitals receiving cases of small-pox contained 10 patients on Saturday last, corresponding with the number on the previous Saturday. The number of scarlet fever cases in the Metropolitan Asylum Board hospitals and in the London Fever Hospital at the end of the week was 2498, against 2726 and 2667 on the previous two Saturdays; the cases admitted also showed a further considerable decline from the numbers in recent weeks. The deaths referred to diseases of the respiratory organs in London, which had been 560, 455, and 408 in the preceding three weeks, were last week 413 and 129 below the corrected average. The causes of 101, or 2·5 per cent., of the 3919 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Brighton, Preston, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Hull, Sheffield, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 25·0 and 22·7 per 1000 in the preceding two weeks, was 23·0 in the week ending Dec. 17th; this rate exceeded by 0·9 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 16·4 and 16·5 in Greenock and Leith, to 24·9 in Glasgow, 27·0 in Dundee, and 35·0 in Paisley. The 574 deaths in the eight towns showed an increase of 7 upon the number in the previous week, and included 26 which were referred to whooping-cough, 15 to measles, 9 to scarlet fever, 9 to "fever" (typhus, enteric, or simple), 9 to diarrhœa, 7 to diphtheria, and not one to small-pox; in all, 75 deaths resulted from these principal zymotic diseases, against 77 and 79 in the preceding two weeks. These 75 deaths were equal to an annual rate of 3·0 per 1000, and exceeded by 0·2 the mean rate in the week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 28 and 29 in the preceding two weeks, declined last week to 26, of which 14 occurred in Glasgow, 4 in Aberdeen, 3 in Edinburgh, and 3 in Paisley. The deaths from measles, which had increased in the preceding four weeks from 8 to 14, further rose last week to 15, and included 5 in Edinburgh, 5 in Dundee, and 3 in Leith. The 9 fatal cases of scarlet fever showed a decline of 5 from the number in the previous week, 4 being returned in Glasgow, 2 in Edinburgh, and 2 in Dundee. The 9 deaths referred to "fever," on the other hand, showed an increase upon the low numbers in recent weeks, and included 3 in Glasgow, 3 in Paisley, and 2 in Edinburgh. The 9 deaths attributed to diarrhœa were below the average for the season; while the 7 fatal cases of diphtheria exceeded the numbers in recent weeks, and included 3 in Glasgow, 2 in Edinburgh, and 2 in Greenock. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 165 and 143 in the preceding two weeks, rose again last week to 163, but were 11 below the number returned in the corresponding week of last year. The causes of 65, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had increased in the preceding four weeks from 33·8 to 35·6 per 1000, further rose to 38·7 in the week ending December 17th. During the first eleven weeks of the current quarter the death-rate in the city averaged 31·7 per 1000, the mean rate during the same period being but 19·8 in London and 19·7 in Edinburgh. The 262 deaths in Dublin last week showed a further increase of 21 upon the numbers in recent weeks; they included 12 which resulted from scarlet fever, 5 from measles, 3 from whooping-cough, 2 from "fever" (typhus, enteric, or simple), 2 from diarrhœa, and not one either from small-pox or from diphtheria. Thus the deaths resulting from the principal zymotic diseases, which had been 31 in each of the previous two weeks, declined last week to 24; they were equal to an annual rate of 3·5 per 1000, the rate from the same diseases being 2·7 in London and 2·8 in Edinburgh. The fatal cases of scarlet fever, which had been 13 and 15 in the previous two weeks, declined last week to 12. The deaths last week from each of the other zymotic diseases also showed a decline from the numbers in the previous week. The deaths of infants corresponded with the number in the previous week, while those of elderly persons rose to 83 from 51 in the previous week. Three inquest cases and 3 deaths from violence were registered within the city; and 80, or nearly a third, of the deaths occurred in public institutions. The causes of 37, or 14 per cent., of the deaths in the week were not certified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Brigade Surgeon Henry Carden Herbert, M.D., F.R.C.S.I., is granted retired pay, with the honorary rank of Deputy Surgeon-General, ranking as Colonel (dated Dec. 21st, 1887).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Edward Jones Butler, B.A., M.D., has been placed on the retired list of his rank (dated Dec. 7th, 1887).

ARTILLERY VOLUNTEERS.—1st Fifeshire: Robert Balfour Graham, Gent., to be Acting Surgeon (dated Dec. 17th, 1887).

RIFLE VOLUNTEERS.—2nd Volunteer Battalion, the Worcestershire Regiment: Surgeon T. E. Underhill, from the 1st Volunteer Battalion, the South Staffordshire Regiment, to be Surgeon (dated Dec. 17th, 1887).—1st Dumbartonshire: Acting Surgeon A. Hay, M.D., resigns his appointment; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement (dated Dec. 21st, 1887).—2nd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Ernest William White, M.B., to be Acting Surgeon (dated Dec. 21st, 1887).—18th Lancashire (Liverpool Irish): Acting Surgeon G. A. Raverty resigns his appointment.

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(dated Dec. 21st, 1887).—14th Middlesex (Inns of Court): Acting Surgeon T. W. C. Jones to be Surgeon (dated Dec. 21st, 1887).—1st Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry):—John Maurice Harper, Gent., to be Acting Surgeon (dated Dec. 21st, 1887).—1st Volunteer Battalion, the South Staffordshire Regiment: Surgeon H. H. Smith, from the 1st Volunteer Battalion, the Worcestershire Regiment, to be Surgeon (dated Dec. 21st, 1887).

Correspondence.

"Audi alteram partem."

SCARLET FEVER, SMALL-POX, AND COW-POX.

To the Editors of THE LANCET.

SIRS,—In your issue of Dec. 17th you give an abstract of Dr. Klein's paper, read at the Epidemiological Society, on "Some of the Infectious Diseases common to Man and the Lower Animals," and also an abstract of Professor Crookshank's investigation into the so-called Hendon cow-disease and its relation to scarlet fever in man. With your permission, I would like to make a few remarks on some of the points referred to in these papers, as they are of some importance.

The first is with regard to the relation of human variola and cow-pox. The popular notion in this country is that cow-pox is merely small-pox modified by its passage through the cow, and Dr. Klein brings forward this notion in support of his contention that the mysterious cow disease at Hendon was scarlatina, or, at any rate, produced that malady in people who partook of the milk of the affected cattle. Now, I have for years, in your columns and elsewhere, maintained that human variola and vaccinia are not the same disease, but are quite distinct, and cannot by any known means be transformed. I still maintain this, in the face of the assertions that Ceely, Badcock, and one or two others, have succeeded in converting small-pox into cow-pox; and if Dr. Klein relies upon these to establish his position with regard to an eruptive mammary disease of cows giving rise to scarlet fever in mankind, then I am afraid he stands upon very shaky ground. As Dr. Klein himself acknowledges, he utterly failed to effect the transformation of small-pox into cow-pox, even when acting under the direction of Mr. Ceely, and experimenting under the most favourable conditions on more than thirty milch cows and heifers. And I will make bold to say that if Dr. Klein carries on experiments all his life in this direction he will be unsuccessful, as have several continental commissions (not alone the French commission under Chauveau), and every individual—myself among the number,—except the three or four above mentioned. Clinically and anatomically they differ widely, and their points of similarity are few and trivial. All attempts to convert variola into vaccinia by inoculating cows with small-pox matter have failed—have failed in the hands of careful and most able experimentalists, and they will fail. But in this case we can resort to our heart's content to experiments upon our own species to prove whether the two maladies are due to one virus—a course which we can so seldom adopt with regard to other diseases. We can inoculate human beings with vaccine virus with the view of transforming vaccinia into variola, and if the latter is the former the results in every case should not be doubtful. Transferred to its original soil, the virus should be itself again, and produce small-pox with all its well-marked features. Since the days of Jenner countless millions of persons have been subjected to this experiment, if we may so designate every-day vaccination; and I ask if there is an instance on record in which vaccinia became variola? I certainly know of none. Surely it is as reasonable—if not more so—to attempt to convert vaccinia into variola as to transform the latter into cow-pox. Compare the ease with which vaccinia can be transmitted from calf to calf, from the latter to the child, and *vice versâ*, throughout endless generations, and without the slightest tendency to become variola, with the very few recorded cases of supposed production, experimentally, of the disease from small-pox virus, which was for ever changed by implantation in the body of the cow.

The virus of cow-pox and that of small-pox differs in no respect from the viruses of other contagious diseases in regard to preserving its specific potency. The viruses of anthrax, tuberculosis, glanders, rabies, scarlatina, measles, &c., will always produce none other but these diseases, and if the symptoms produced by them when inoculated in other species of creatures than those to which they are native are somewhat different, yet when carried back to their original soil they are again the same in everything. I am quite astonished at the way medical men in this country have treated this question of identity of cow-pox and small-pox, and accepted the assertion as to this identity without resorting to proof.

With regard to the existence of scarlatina in cows, or a disease in them which will give rise to that malady in people through ingestion of milk, I am seriously inclined to doubt it. The disorders of cows have been closely studied of late years by veterinary surgeons, and nothing resembling scarlet fever has been observed. Scarlet fever in man, if derived from the cow, would also be that disorder in the bovine. I should not like to be considered dogmatic in the matter, but I think it will eventually be found that a mistake has been made as to this Hendon disease, and that Professor Crookshank is on the right track. We shall then have to express regret that such a panic should have been caused and such serious injury should have been done to a most important industry through over-anxiety and haste to protect the public from a dreaded scourge.

With regard to Professor Crookshank's statement that veterinary surgeons he inquired of informed him that the disease he saw affecting the cows' udders was very well known to them, but was not described in text-books of veterinary medicine, I may mention that in my work on "Veterinary Sanitary Science and Police," published twelve years ago, in the section on Variolous Disease in Animals, I particularly described cow-pox and the diseases of the udder with which it might be confounded. Cow-pox and horse-pox are not at all rare diseases.

I am, Sirs, yours truly,

GEORGE FLEMING,

Dec. 21st, 1887. Principal Veterinary Surgeon of the Army.

THE TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—Mr. Jennings, in your number of the 17th, asks me to give him an answer to several questions: In what sense do I use the term "cure," and whether I believe Dr. Smith's case[1] was one of cure, with non-recurrence for nineteen years? I answer: I would accept a case of cancer as having been cured that fulfilled the following conditions: that after the removal of the cancer, by whatever mode of treatment adopted—remedies, external or internal,—there being also evidence of complete restoration to health, the patient remained without any reappearance of the disease throughout the remainder of life—throughout a life in which death ultimately took place from causes common to the break-down, from ordinary wear and tear, of natural structures. I cannot therefore accept Dr. A. F. Smith's case as a "cure," deeply valuable as it may be as an instance of prolonged immunity from recurrence, and confirming, in selected cases, the extreme value of the knife. In what sense do I speak of cancer "infiltrating textures around its origin"? Well, I always speak of a cancer as almost always infiltrating the part or tissue it attacks, the natural character of the structures being either absorbed or otherwise destroyed and replaced by new material. The clinical recognition of adjacent glandular contamination is surely so obvious that I may be pardoned for not offering on the present occasion any description of its features.

I am, Sirs, yours faithfully,

Birmingham, Dec. 20th, 1887. OLIVER PEMBERTON.

To the Editors of THE LANCET.

SIRS,—Like many others, I have tried Chian turpentine, and, though not regarding it as a specific, have still been very much impressed by its effects in two or three cases of undoubted cancer. An old lady, the subject of cancer of the cervix, took the turpentine for one or two months.

[1] THE LANCET, 1887, vol. ii., p. 565.

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The changes observed were these: The pain, which was at first excessive, was decidedly relieved; the discharge changed from a thin, grumous ichor, to a more or less profuse glairy blood-speckled discharge; but, to me, the most remarkable change seemed in the melting down, to a great extent, of the encephaloid swelling, first seen in and around the os uteri. That the disease was cancer I have no doubt, this also being the opinion of my friend Dr. Marriott of Leicester, to whom I had sent the case for consultation. The patient died, however, worn out at last by pain and general exhaustion, for, like many other cancer patients, she yielded to despair and gave up all treatment. From a vaso-motor point of view, the wonder would be if Chian turpentine had not some notable effect in cancer in any of the pelvic organs. We know that the turpentines have, or seem to have, an elective affinity for the abdominal and pelvic arterioles, and in small continued doses constrict these vessels, even to infarction of mucous tissue. It might be asked, If this is so, how comes it that the diseased portions are those only acted on? But when we consider that the arterioles supplying a cancroid mass must be constantly in a state of spasm (hence the pain) from the cancer poison, we need not wonder that a little more constriction, the result of the continued doses of Chian turpentine, will bring about that wasting and death of the cancerous mass so much desired by those treating this terrible malady. Chian turpentine, like all other turpentines, appears to have a decidedly constringing effect on the arterioles and capillary vessels of the pelvic mucous membranes, and acts in the presence of cancer—unfavourable cases of cancer—much as ergot does in some fibroid diseases of the uterus.

I am, Sirs, yours truly,

Rothwell, Northampton, Dec. 19th, 1887. JAMES MORE, M.D.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of the 19th ult. Professor Clay has recorded some additional cases of the successful treatment of cancer by Chian turpentine, and in a leading article contained in your issue of the 3rd inst. you have made some comments upon this subject. The following brief record of a case of well-marked epithelioma of the tongue, in which this treatment was adopted, may, especially as the subject is again brought under discussion, be considered worth publishing. Although the patient succumbed suddenly to causes other than the disease itself, the marked influence of the treatment in checking its onward progress, in improving its appearance, and in ameliorating its symptoms, was distinctly in favour of the medicine.

Mrs. S——, aged about sixty, consulted me on Dec. 31st, 1886, suffering from a painful indurated tumour on the side of the tongue, extending from near the root to within about two inches of the tip, and occupying nearly half of the transverse diameter, with jagged, sloughing ulceration running along the centre, having hard, raised, and everted edges. I could not trace it to any local source of irritation, unless a loose, rather sharp molar tooth might have so acted. It must have grown rapidly, as I had seen her the previous September, and she had then no symptom of the malady. Its extent, especially towards the pharynx, I considered precluded the idea of operation. Encouraged by the reports of success in some cases of treatment by Chian turpentine, I determined upon giving this a fair trial. I obtained the medicine, through Mr. Grose of this town, from Messrs. Southall. The disease had produced an evident effect on her general health and appearance. She suffered acute pain, which deprived her of rest; swallowing was very difficult, often impracticable, much of the food being rejected, partly through the nose, some before, some after, reaching the stomach; speech, of course, imperfect. After some other treatment, which I need not detail, the Chian turpentine was first given on Jan. 5th, 1887. After about a fortnight, I found there had been a want of regularity in its administration, although retained by the stomach better than most other things. After this it was persevered with regularly for about six weeks before there was any perceptible improvement, and I began to anticipate failure. Soon after this, however, there was some mitigation of pain, so that the morphia draughts she had been taking at night were less required and then discontinued; the diseased mass, which had been progressively increasing, appeared to be less active, and after a further period the surface presented a less malignant aspect, the ulcer appearing less deep and its edges less raised and everted. The improvement continued to be so marked, both as to the appearance of the local disease, the diminution of pain, and the power of swallowing and of speech (which had become nearly unintelligible), that I asked my friend Dr. Rawlings to see the case, so that I might have his evidence should it end in recovery. In the night of March 23rd the patient had an attack of syncope, from which she partially rallied, but relapsed, and died at an early hour in the morning. I then found that the nourishment which was ordered had, from causes which I need not here enter into, not been regularly given, and the patient sank, I believe, from exhaustion, no doubt partly induced by the disease, but chiefly from insufficient nourishment. My impression is that the disease would have subsided if strength had been sustained. The local applications used by Professor Clay were soon discontinued—the chromic acid on account of the pain induced. Unless, therefore, the check to the onward and otherwise, I believe, inevitable progress of the malady, and the obvious amendment which followed, were due to the influence of the medicine, I do not know to what to attribute them.

The question may be asked, Is it or is it not a fact that cases of marked and, as far as our present diagnostic powers can determine it, unmistakable cancer, especially epithelioma, have yielded to this treatment—such cases as, according to all experience, would, unless surgically removed, have otherwise gone on from bad to worse? The evidence we have compels us to answer this question in the affirmative. Failures cannot destroy the force and value of such experience. In none of the cases recently referred to is it stated how long the treatment was continued before it was given up as a failure.—I am, Sirs, yours truly,

Swansea, Dec. 10th, 1887. GEORGE PADLEY.

THE NOMENCLATURE OF PHYSICAL SIGNS.

To the Editors of THE LANCET.

SIRS,—In a recent discussion in your columns on the nature of a cardiac murmur, a side issue was raised in respect of the name best adapted to describe the bruit. On this point there was difference of opinion even among those who were agreed as to mode of origin, and the names auricular systolic, presystolic, and late diastolic were severally advanced as each best adapted to name one and the same phenomenon. For the choice of any one of these three names a reasonable cause may be shown, and it is a matter of very little moment whether, by common consent, preference should be given to one of these three names, or all three should persist in use—of little moment because each name is unambiguous, is readily understood. Far otherwise is it in respect of the nomenclature of physical signs in general; here serious confusion exists, and each returning year the teacher is confronted by a very difficult problem—to wit, what terms, from a very large vocabulary, he shall select as least likely to give rise to misunderstanding in the future. The problem is becoming an increasingly difficult one, for schools are multiplying, and text-books are multiplying, and Babel is imminent. The terminology current at one hospital is not that current at another, and in the attempt to reconcile the one with the other all finer distinctions are lost. It cannot be maintained that the question is not a vital one, or that with a little patience one can, as a rule, make out the drift of the description; such contention could have but one meaning—viz., that accurate definition was superfluous and delicacy of perception unessential; it would come also with very bad grace from a department of knowledge which claims to be both a science and an art. That I should take up this question in detail will not be necessary. All of us know of the present confusion; many have felt its inconvenience keenly. How much time is spent year after year by students in mastering or endeavouring to master the terminologies of their own particular schools! How great is the disappointment when it is discovered that the currency of each is a very limited one! To add to the misfortune, it is the earnest students who suffer, not the men who are content with "râles, don't ye know," for every sound, from a tracheal rattle down to—well, the finest sounds *they* are capable of recognising. Admitting, then, the need for reform, how may it be effected? Utopian as it may at first sound, I can only suggest that it should be settled in conference. The proposal sounds formidable, but I cannot think that it really is so formidable as it sounds, or

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that it is Utopian to hold that people should ever come to agree on questions of this kind; were it, however, both the one and the other, the need appears to me so pressing that I should still feel compelled to urge the only method which can be successful. The first step towards any such conclusion would be that each school should agree upon its own teaching; the next that this teaching should be represented at a council of delegates. I believe that the proverb, "Il n'y a que le premier pas qui coûte," would prove true here; and this first step—surely it ought to be taken by each teaching body. That when all should be said and done there would remain moot points, one must of course expect; but of the multitude of terms chosen on no definite principle which we now possess, we might with advantage lose many—redundancy is a great defect of our present system. What do we want with bronchial breathing, tubular breathing, blowing breathing, tracheal breathing, &c.? And the râles—who shall name them? It is not for me to suggest a system, though I would venture to say just this much—that any nomenclature should, at all events in the first instance, be in outline rather than in detail. It is a true principle in art—be pure in your outline; the filling in is of secondary importance. Then the nomenclature should be, as far as possible, on one principle only; and, as far as possible, this principle should be descriptive, all terms implying a theory being avoided. Where possible, also, descriptive terms should be such that ready reference may be made to the analogue: e.g., a percussion sound is described as *osteal;* if asked what is meant, it will always be possible to reproduce the sound to the questioner. We should, lastly, endeavour to conform our terminology to the terminology in use in the physical sciences—always, however, to the exclusion of theory.

I do not, of course, suggest that a new language should be coined; indeed, I cannot help hoping that we should not have far to go to find a system ready to our hands which, with a modification here and there, would answer every purpose—I refer to Dr. Gee's book on "Auscultation and Percussion," for which I trust I may express the great admiration I feel.

I am, Sirs, your obedient servant,

Welbeck-street, Dec. 10th, 1887. HARRINGTON SAINSBURY.

HYDROPHOBIC VIRUS DESTROYER.

To the Editors of THE LANCET.

SIRS,—In view of the numbers of deaths there have been lately from hydrophobia, I have designed a "virus destroyer" as a preventive, which, if adopted, would go a long way towards preventing that fearful disease. It is in the form of a small case containing a very soluble prepared point composed of compressed nitrate of potash (10 parts), and corrosive sublimate (2 parts), and meant for public and police use, and to be attached to the ordinary key ring, and thus be always at hand for instant use in cases of dog-bite or poisoned wound. The composition of the virus destroyer is not the chief point. I only chose corrosive sublimate because it is the strongest at present known, and will keep without risk or loss. The main thing is to have an antidote at hand for instant use. These could be made cheaply, and be in the hands of everyone, and for the poor the police could carry them and be instructed in their use. At present it is the delay that is so fatal before aid can be got in many outskirts &c., where dogs are and no help is near. Their use is not meant to supersede medical advice, which could be sought as hitherto, but the sufferer would then be treated with the virus probably destroyed, and not, as now, after it has been absorbed. A dog-bite is usually a superficial scratch or tear, and not a sharp puncture, and even if the canine teeth be inserted deeply the saliva gets mainly or entirely rubbed off and left on the surface. The lunar caustic still used is decomposed into chloride and so rendered inert. Setting aside extreme cases (which I believe are attended with least risk on account of copious bleeding), in by far the majority of cases the virus destroyer would destroy the virus. Full directions would be given with each, and instructions that after use a doctor should be at once sought. The moral effect, too, of the use of these would be great; many of the deaths arise from fear, and I have no doubt that in these fatal cases, when even the parts bitten were excised, either it was done too late or the bad result was due to mental impression.

I may add that from the first, and all through your various reports, I have never been able to see anything but risk in Pasteur's treatment. Experiments on animals and bites on a nervous man who has heard of the ravages of rabies are widely different. It by no means follows that, for reasons stated before, all persons bitten by rabid dogs will take hydrophobia or that persons bitten by healthy dogs will not take it. Personally, were I bitten, and even when amongst dogs, my mind would be immensely relieved by knowing that always in my pocket there lay a probably immediate antidote.

As regards the strength of corrosive, R. Koch of Berlin found that the spores of anthrax, perhaps the hardiest of known forms of germ life, could be destroyed by such weak solutions as 1 in 10,000 and 1 in 20,000.[1] Risk of poisoning would be *nil.*

I am, Sirs, your obedient servant,

Morecambe, Dec. 4th, 1887. THOS. MACCALL, M.D.

*** The notion advanced by Dr. Maccall is decidedly worth entertaining; his method presents nothing which can be objected to on *a priori* grounds, and may prove of great value. There is nothing so convincing, however, as experiment. The antiseptic pencils would also be useful in rendering ordinary small wounds aseptic.—ED. L.

ALBUMINURIA IN THE APPARENTLY HEALTHY.

To the Editors of THE LANCET.

SIRS,—With reference to the letter from Dr. Ralfe in your issue of last week in connexion with my contribution to THE LANCET of Dec. 10th, I shall be obliged if you will kindly permit me to say a few words. When writing the paper, of some parts of which the contribution just referred to was a summary, I made a careful study of Dr. Ralfe's most valuable book on renal diseases, and was much rewarded thereby; but I think I am to be excused if, on reading his article in THE LANCET of Oct. 23rd, 1886, written some time after the publication of the book, I came to the erroneous conclusion that Dr. Ralfe had in the meantime found reason to modify his opinion on the subject. For these are his words: "Writers, under the terms 'intermittent albuminuria,' 'albuminuria of digestion,' 'cyclical albuminuria,' the 'albuminuria of adolescents,' &c., have described a condition in which, without any great disturbance of bodily health, and apart from any definite renal disease, albumen is found more or less continuously in the urine. Although the question, whether these forms of albuminuria, as the various terms applied would imply, are really in each instance distinct, or whether they are brought about by the same pathological factors, may still be considered by many an open one, yet I think there are many considerations which would make us decide entirely in favour of the latter supposition. In the first place, taking "any one of the above forms of albuminuria, we find that though it may occur in any sex and at any age, yet the largest proportion of recorded cases will always be among young adult males. Again, these forms of 'albuminuria' are nearly always found occurring among individuals who are either suffering from some constitutional taint, inherited or acquired—such as gout, rheumatism, syphilis, or malaria, —or in whom some disturbance of the vaso-motor system can be demonstrated. ..... The urine, too, in all cases of functional albuminuria exhibiting these features, so far as they have come under my observation, presents two characteristic features — viz., increase of urea and an abnormal amount of urinary pigment; whilst, but as a less constant phenomenon, bile pigment can also usually be detected. ..... There is always a degree of anæmia ..... sufficient to be determined by the hæmocytometer." In my original paper I had come to compare my own results with those of others, and I find there the following reference to Dr. Ralfe's: "It is the exception in my experience to find any constitutional taint, and the *demonstration* of a vaso-motor disturbance is certainly impossible in many cases, except by the presence of the albuminuria itself, though a decided want of tone in some instances is to be found. In one group of cases an increase of urea and pigment is visible, but certainly not in the larger

[1] Vide reports of the German Imperial Board of Health; also Listen on Sero-sublimate Dressings, THE LANCET, 1884.

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number, and anæmia cannot be said to be present in a considerable proportion.

Expressing my indebtedness to Dr. Ralfe for much valuable information afforded by his work on Renal Diseases, and to you for the valuable space which you have given me,

I am, Sirs, yours faithfully,

Grays, Essex, Dec. 20th, 1887. ALEX. W. STIRLING.

DEGREES FOR LONDON MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—I notice in this morning's *Daily Leader* that a Convocation will be held in Bishop Cosins' library (wherever that may be), Durham, for the purpose of submitting a petition to the Queen against the proposal to bestow upon the Royal College of Physicians, London, and the Royal College of Surgeons, England, the power to confer degrees in Surgery and Medicine. As there are no reasons given in support of the petition, I have been trying in vain to find a single one, but without success. I have, however, thought of three possibilities: (1) It may be thought that the examiners giving the degrees in London at the Royal Colleges of Physicians and Surgeons (always till now looked up to as the greatest teachers in the land) are not fit, when compared with the University of Durham teachers, to confer degrees. (2) It may be that the facilities for teaching and hospital work in London are inferior to those of the University of Durham, and that the teaching of the other provincial schools is as bad as London itself. Or (3) it may be that, if degrees are given at the College of Physicians and Surgeons, London, they will be preferred to the Durham one; or is it, again, that the house at London and Durham, divided against itself, cannot stand, or, in other words, "save me from my friends"?

We have yet to learn that the noblest examples of our profession have come from the older Universities; in fact, almost without exception they have been educated in the place, or at any rate have obtained their qualification in the place, which the petition of the University of Durham would like to stop from granting degrees.

Again, where is this great superiority of the University of Durham, and in what does it differ from other provincial medical schools? Why should not—measuring things on the same level—all provincial schools be universities? To this question I can give no answer.

I think that we often see gentlemen signing petitions far behind the times—gentlemen 500 years behind the times,—and it makes one almost believe that, had they the power, they would bring back the old-fashioned medicine of charming, anointing, embalming, and witchcraft, for they evidently think that a degree of a University cannot be improved by the greatest teachers or the largest field of material, or else they would not oppose the granting of degrees by the London Colleges of Physicians and Surgeons.

It is to be hoped that the time will come when, for the advancement of our noble calling, ability and facilities for knowledge, when found, will be assisted and pushed on rather than stopped by a narrow-minded University.

I am, Sirs, yours truly,

Newcastle-on-Tyne, Dec. 18th, 1887. JOHN WHITEHOUSE.

THE HEALTH OF NEWCASTLE-UPON-TYNE.

To the Editors of THE LANCET.

SIRS,—In last week's Northern Counties Notes your "own correspondent" recalls the familiar quotation, "Incidit in Scyllam qui vult vitare Charybdim." Whilst demurring to the circumstance of the School Board regulations having been blamed as a factor of the recently increased mortality (in which I concur with him, for in the way of cause and effect there is, to my mind, no connexion between the two), he proceeds to arraign what he terms the "bureaucratic management of the city," and affirms that "disease is often concealed for fear of notification and inspection, with removal of patients and beds." If your correspondent can give me the names and addresses of any such cases I hope he will do so. His allegation involves either a charge of concealment by a medical practitioner, or one of wilful [illegible] on the part of the householder to call in a doctor, [illegible] to wilful concealment. The former, I can [illegible] to the notes he has made [illegible] case, and occupying [illegible]

to have given the sanitary authority intima[tion] circumstances at the time of their occurrence.

How, as your correspondent seems to conject[ure] new sanitary arrangements," as he calls notificati[on] spection, have made the people neglect cleanliness[,] the reach of my imagination. I utterly fail also[,] him in his closing flight of fancy in which he att[ributes] high death-rate to a fantastic combination of h[ard] ment, poverty, and streams of infants nightly r[un] wash down raw tripe at "long bars." Such a state[ment] in Newcastle is certainly not within the range of [my] rience. I am, Sirs, yours obediently,

HENRY E. ARMSTRONG,

Dec. 21st, 1887. Medical Officer of

THE EYE INFIRMARY, NEWCASTLE-ON-T[yne]

To the Editors of THE LANCET.

SIRS,—Knowing how ready you always are to [help] anything which is of professional interest and utility[,] feel obliged if you will publish the following statem[ent]

Owing to the pressing nature of the needs of the [Eye] the committee of the above-named institution in t[he] 1885 found it necessary to purchase a site and build[a] hospital for the treatment of ophthalmic diseases. [Thanks] to the generosity of the public, who came liberally [to the] aid, they have successfully accomplished this [great] object, and the northern counties are now in posses[sion of a] model hospital, which is in full work. It has been s[aid] that one thing would add to the completeness [of the] establishment, and that is the foundation of a r[eference] library of works bearing on ophthalmic practice. [Many] medical men having old books, authors and others[,] surplus copies of their works, would, I feel sure, [be glad] when our wants are made known. We shall be h[appy to] pay the carriage of any parcel of books or periodi[cals] dressed to me at the hospital, and their receipt wi[ll] mally and thankfully acknowledged.

I am, Sirs, yours faithfully,

CHRISTOPHER S. JEAFFRESON, F.R.[C.S.]

Dec. 1887. Senior Surgeon to the Hospital.

THE RECENT TRIAL FOR MURDER AT [Newcastle]

(From our Special Correspondent.)

FOR the past week the trial of Surgeon-Major [Cl]ark of the 53rd Regiment, for the murder of his wife [Ma]ry has engrossed the attention of the inhabitants of [Newcastle] to the exclusion of every other topic of conv[ersation]. Home Rule, Plan of Campaign, Land League, [and] into insignificance in face of this one all-absorb[ing] nothing else was talked of save the probabilit[ies] verdict which the jury would bring in, whether [of] or a disagreement, the most sanguine not anticip[ating] of acquittal. That such interest should be [taken] case need not surprise us when we reflect upon [the] status of the parties concerned: Surgeon-Major [Clark] addition to his half-pay, being possessed of [some] private means; whilst his late wife was the [daughter] highly esteemed family resident in Essex. They [had] married eighteen years, and had a family of [four]. The case was tried before a special jury in the [Queen's] Mr. Justice Murphy, whose long experience as [a] lawyer eminently qualified him for the [task]. [We] forwarded you the evidence as it was [produced] day to day; it now only remains for me to [make] general comments on the case. And first of all, [I] to make some remarks on the demeanour of [Clark] who entered the dock evidently confident of [his] an appearance which he preserved on the [first] the trial. On the third day, however, he [was] nervous and anxious, an appearance which [was] on the fourth day, the last day of the trial, [when] the jury brought in the dread verdict [of] seemed to be the only unconcerned [person]. When asked why sentence of death [should] upon him, he proceeded in a [clear] consistent upon the evidence [adduced] to the notes he had made [during] case, and occupying some forty [minutes]

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The case for the Crown, as laid before the jury by the Attorney-General, was that on some three or four occasions he had administered small doses of arsenic, and that on the last occasion he gave a larger dose, supplementing its action shortly before death by strychnine. The administration of strychnine was evidently surmised from the fact that some cries were heard from deceased very shortly before her death, and this although no tetanic rigidity was at any period manifested in the corpse. The *repeated* administration of arsenic was inferred from the symptoms present during the last three weeks of her life—vomiting and purging, with periods of intermission—also on the evidence of one lady that her eyes were affected for two days, but the last few days of her life she did not observe them to be affected. No satisfactory evidence was adduced of the existence during this period of the characteristic burning pain produced by large doses of arsenic, nor yet of the presence of cramps at any period of her illness. The case for the Crown was supported by the analysis conducted by Professor Pearson, of the Queen's College, Cork, who gave his evidence in a manner that I have rarely seen equalled in a court of justice. Calm, cool, gentleman-like, he described the various tests he employed to detect the presence of arsenic, finally producing three tubes containing arsenic, each sample being the result of a different mode of analysis. There was but one blot in Professor Pearson's evidence. On August 1st, at the magisterial inquiry, he swore that, as the result of his quantitative analysis, "the liver contained over three grains." On September 5th his previous deposition was read over to him, which, with some slight corrections, he reaffirmed, leaving this statement standing; but a very few days before the trial he amended his depositions, reducing the three grains to 1·28 grains so found—a fact eagerly laid hold of by the prisoner's counsel, and upon which they principally grounded the defence. Professor Pearson's explanation of this discrepancy was that, upon the occasions when he made his depositions, he had not his notes by him—that they were at the College. Be this as it may, however, he produced before the jury in his tubes quite enough arsenic extracted from the body of the deceased to account for her death. Dr. Cross having registered his wife's death as being the result of typhoid fever, Professor Pearson swore, relying on the absence of intestinal lesions, that she did not die of typhoid fever. It is, however, a question open to interesting discussion as to the appearance which the intestines of a person who died in the earlier stages of typhoid, previously to the setting in of ulceration, would present some fifty-six days after interment. Dr. Cross was proved repeatedly to have stated that his wife had heart disease; Professor Pearson swore that the organ was sound so far as post-mortem appearances went: statements perfectly reconcilable, as every practising physician knows; and it is only fair to Dr. Cross to observe that his statement was corroborated by the evidence of several of the witnesses produced by the Crown.

The leading counsel for the prisoner, Mr. Atkinson, Q.C., opened the defence in a speech which was beautifully delivered, felicitously phrased, and closely argued, basing his defence principally on the improbability of one conscious of guilt committing the mad acts that the prisoner had done—acts certain to excite suspicion and to induce inquiry. He arraigned the skill of the analyst, dwelling at length on the blot in his evidence already alluded to, concluding his speech with a magnificent peroration which wrested from an evidently hostile audience applause, which, however, was promptly and severely silenced by his lordship, who delivered his charge to the jury in such terms as to leave but little doubt in their minds of the prisoner's guilt.

Cork, Dec. 18th.

LIVERPOOL.

(From our own Correspondent.)

LORD WOLSELEY ON ATHLETICS.

ADVANTAGE was taken of the recent visit of Lord Wolseley here, at the unveiling of the statue erected to the late General Earle, to secure his presence at a tournament held in the Liverpool Exhibition, in connexion with the National Physical Recreation Society. In distributing the prizes, his lordship said he did not think that there was any man in that great building at that moment who was more interested in athletics than he was. And he would tell them the reason why. It was because he believed that the first great necessity of man was health, and it was impossible that he could be healthy unless his body was thoroughly exercised and his muscles were kept supple and always in good working order. He could not help thinking that the good deeds and achievements that had been accomplished by the English people from time immemorial had arisen from the fact of their being a healthy and strong people. They might rest assured that men with flabby muscles, and poor, miserable constitutions never could be either the fathers of healthy children or even respectable citizens. The conditions of their life in England of late were very much changed from what they were in former times. In past generations people lived much more in the country than they did now. At this present period of the nineteenth century there was a tendency to crowd into large cities and towns, and he felt it to be the bounden duty of every man and woman and child interested in the future of England to do all that was possible to further the work of athletic instruction and to promote athletic sports. He had often thought what a great pity it was that the people who made the laws for them when they started that great scheme of education—which they did start, and which had worked such very great changes and benefits for the people of all classes in the community—did not couple their endeavours to educate the mind with some arrangement for educating and training the body. He hoped sincerely that the time was not far distant when they would have attached to every board school in the country a good drill sergeant, a good gymnast, a good gymnasium, and a good place where they could take exercise. He had been very much struck with what he had seen there that evening. That was the first time he had been in that hall, and he had wondered at its enormous size and the number of people that it held, and he could not help feeling what a loss it would be to the people of Liverpool if that building were ever allowed to be removed. Indeed, he could not help thinking that it would amount to a positive disgrace to the city if it ever allowed that magnificent building to be taken away from that place, and by doing so deprive the younger people of the possibility of going there to train, as all of them might. It was a hall which from its size alone was not only evidently intended for athletic sports, such as had taken place there that evening, but was also a hall where he was sure his friends the Volunteers would be very glad to go to parade and exercise and drill. He was told it could be had at a very small price. He therefore hoped the public spirit of the people of Liverpool would enable it to be purchased for the benefit of the Volunteer forces, and, above all things, for the benefit of those athletes. He wished them all a very good night, and was much obliged to them for the very cordial welcome they had accorded to him. He should carry away with him a very pleasant recollection of all he had seen, and only hoped that the success which had attended that meeting might be continued in the future.

THE POLICE AND NIGHT DUTY.

The night beat of the Liverpool police is from 9 P.M. till 5 A.M., and during the winter months this duty is very severe; but the men are only placed on it for short intervals, and while doing it they have the rest of the day at their disposal unless they are required in court. Many years ago an excellent arrangement was commenced, which has continued ever since, by which all the men on duty are enabled to go in detachments to the district bridewell between 1 and 2 A.M. Here facilities are ready for each man providing himself with hot coffee, thus causing an agreeable break in a long and often monotonous watch, and giving each man a wholesome stimulant to enable him to finish the remainder of his duty.

THE ROYAL INFIRMARY.

A special appeal for additional and increased donations towards the Royal Infirmary Rebuilding Fund has met with a very liberal response, and it is hoped that the whole of the required sum will be subscribed before the building is completed.

DRUG PROSECUTION IN LIVERPOOL.

A chemist was to-day fined five shillings and costs for selling sweet spirit of nitre which Dr. Campbell Brown certified to be completely decomposed by keeping.

December 21st.

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MANCHESTER.

(From our own Correspondent.)

TECHNICAL EDUCATION.

THE movement for promoting technical education has been taken up warmly in Manchester, and at a public meeting held in the Town Hall, and largely attended by a very influential and representative audience, Professor Huxley gave a very eloquent and exhaustive address, setting forth the objects and aims of the present movement in this direction. On the same day a most munificent offer tending towards the same object was made to the city by the trustees of the late Sir Joseph Whitworth, who have purchased the estate on Oxford-road known as Potter's Park, at a cost of £47,000. This estate they are willing to hand over to the corporation as a gift, to be used as an open space and park for the use of the people; but they ask that there shall be provided on one part of the property a museum of commercial products and materials, an art gallery, and a technical school on a complete scientific and practical plan.

PURE AIR.

The Noxious Vapours Abatement Society and branch of the Sanitary Association deserve much credit for their persistent efforts to abate and reduce the smoke nuisance. Amongst the lectures lately delivered under their auspices have been one by Mr. A. E. Fletcher, chief Government inspector under the Alkali &c. Act, and another by Mr. Herbert Fletcher, a large manufacturer and user of steam power at Bolton. Ample evidence was adduced by both these very competent witnesses that the pollution of our atmosphere here and in other large manufacturing towns is entirely unnecessary. Mr. H. Fletcher gave details of the arrangements now in use at his own works, whereby the commonest kinds of coal can be burnt without producing smoke, to the gain of the consumer and relief from dirt of the surrounding inhabitants. Surely it is time that those charged with carrying out the law bestirred themselves more vigorously. Lately we have had a few more prosecutions of the worst offenders, but whilst they are permitted to escape with a fine of twenty or thirty shillings we shall not see much improvement in our murky, grimy atmosphere.

OWENS COLLEGE.

This College has lost by death another of its professorial staff. Professor Balfour Stewart, who since 1870 has held the chair of Physics, died at his residence near Drogheda on Monday, quite unexpectedly. His name is known to all scientists in connexion with the radiation and absorption of heat, and with the subject of terrestrial magnetism. He took considerable interest in the proceedings of the Psychical Society, but what his own opinions were with respect to the work and inquiries initiated by that body are not very clearly known. On Saturday night the annual soirée of the College Union took place in the College buildings, the attendance at which was very large. Scientific apparatus, experiments, drawings, music, and singing were provided for the entertainment and instruction of the visitors. The concert in the chemical theatre, given by some of the members and their friends, was very enjoyable.

CHEAP MEALS.

Another good work being done, and which has been aided to a great extent by the Sanitary Association, is the provision this winter of cheap meals for the poor school children. Operations were commenced last week, when dinners were provided in the Ancoats districts to a crowd of hungry children, at a cost of a halfpenny each, consisting of pea-soup and bread, and a slice of bread-and-jam. This charge of one halfpenny defrays the actual cost of food and cooking, but the expenses of labour, room, utensils, &c., have to be met out of voluntary subscriptions, and the committee ask for a sum of £500 to enable them to do what they at present contemplate.

HOSPITAL ACCOMMODATION IN SALFORD.

The provision of a new Fever Hospital for Salford is still anything but *un fait accompli*. In the meantime scarlet fever still prevails extensively, seventy to eighty fresh cases per week being reported in the two municipalities; and it was stated publicly very recently that the present Salford Hospital [illegible] Medical Officer of Health [illegible] Captain Nicholls that [illegible] the many thousands who have [illegible]

for preventing the spread of infection, will be prosecuted under the provisions of the Public Health Act, 1875. It is of interest to note that some of the smaller health authorities are taking a real interest in their duties in this respect, as the Local Boards of both Moss Side and Crumpsall have just lately passed a resolution expressing the desirability of obtaining further powers as to the control, supervision, and reporting of infectious disease at dairies and farms.

Dec. 20th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

SCARLET FEVER AT NEWCASTLE WORKHOUSE.

IT is stated in our papers that nearly 200 cases of scarlet fever have occurred in the Newcastle Workhouse during the last outbreak there, with a mortality of only about 1 per cent. It would be interesting to the profession to know how many cases have been marked by the usual sequelæ, and it is to be hoped that the medical officer will in time give us a history of this remarkable and, in many respects, exceptionable epidemic. It is stated that Dr. Mowat, acting under instructions from the Local Government Board, has just visited the workhouse to inquire and report upon the outbreak.

TYNE PORT SANITARY AUTHORITY.

At the annual meeting of this authority, held last week, the report of the inspector stated that during the past two months the inspection of vessels had been as follows:—British steamers 1233, British sailing vessels 461, foreign steamers 301, foreign sailing vessels 179, visits to fishing vessels 10, water boats 6, extra visits 486, grand total of visits 2676. In the great majority of cases where sanitary defects were found and orders given they were complied with.

WHITE-LEAD POISONING.

At a late meeting of the Gateshead Board of Guardians the subject of lead poisoning in female workers came up for discussion, and the following resolution was adopted: "That, having regard to the great burden cast upon the union by the manufacture of white lead, the victims of such work having to be maintained for a life-long period on account of their premature decrepitude, palsy, and blindness, inevitably resulting from the present modes of manufacture, we hope the Government will insist upon machinery being used in the most dangerous parts wherever practicable." It was stated during the discussion that the system resulted in a mortality of 25 per cent. in the female workers, in spite of all sanitary precautions usually taken in the best works. It was shown that one of the most dangerous stages of the manufacture was where the girls carried the white lead in the form of liquid from the pan to the store. The workers were in a state of perspiration, and the white lead was splashed about them and absorbed through their pores, and it was contended that no medical treatment could fully neutralise that effect.

DURHAM UNIVERSITY AND MEDICAL DEGREES.

The news that the two great Colleges in London were anxious to combine to give a medical degree [illegible] received here with much favour, but the project [illegible] received even a greater welcome had the Hall been [illegible] in the proposed arrangements. As might have been expected, however, the University of Durham is [illegible], and a convocation will be held in Bishop [illegible] Durham, to-morrow, for the purpose of [illegible] to the Queen against the proposal to [illegible] Colleges of Physicians and Surgeons of England [illegible] to confer degrees in medicine and surgery. [illegible] arrangements suit the University of Durham [illegible] nexions admirably, but it forgets that [illegible] most oppressive to the English student of [illegible] felt here that the step taken by the [illegible] is against the feeling of the times, as well [illegible] broad interests of the profession [illegible]

DRUNKENNESS IN [illegible]

Some exception has been taken [illegible] in my last letter as to drunkenness [illegible] been pointed out that there has [illegible] this year—according to the [illegible] Captain Nicholls that [illegible]

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our Exhibition. This is quite true, and it speaks very well for our citizens, as well as for our visitors; but the point in my letter was directed against a certain and very large class of our working men, and we must fail to believe the evidence of our senses if we imagine that there is any diminution in intemperance or the many evils which spring from it amongst thesame class at the present day.

Newcastle-on-Tyne, Dec. 19th.

EDINBURGH.

(From our own Correspondent.)

TIME INCIDENCE OF CARDIAC MURMURS.

AT the last meeting of the Royal Society an important paper on the methods of determining the exact situation of murmurs in the cardiac rhythm, and their relation to the series of events forming one complete cycle of the heart's action, was presented by Dr. Byrom Bramwell and Dr. Milne Murray. Their investigation was an outcome of the recent discussion in the columns of the LANCET upon the exact significance of presystolic murmurs raised by Dr. Dickinson's paper upon the subject. The object of the present research was to determine at what stages of the cardiac movements the various sounds that accompany them really occur. The exact registration of the movements themselves is accomplished by the cardiograph; but an instrument of telephonic registration of the sounds is still a desideratum. In his remarks on this subject Dr. Bramwell stated that he had directed Mr. Edison's attention to this matter, and pointed out to him of what great value such an apparatus would be to the clinical observer in medical diagnosis. Failing the application of such an instrument to the solution of the problem, Drs. Bramwell and Milne Murray have in the meantime invented an apparatus that goes far towards surmounting the difficulty. While the cardiac movements are recorded graphically on a prepared surface of paper by the cardiograph, a time-recording apparatus marks the exact interval of time on the same, and in addition to this a third writing style, under the control of the observer, marks time to the rhythmically recurring sounds of the heart as he hears them through a flexible stethoscope with blindfolded eyes; thus being alike cut off from the misleading tactile impressions of the cardiac impulse and the concomitant visual impressions of the movements of the end of the stethoscope accompanying the movements of the chest wall. This record involves theoretically the "psychic loss" necessary to the sensori-motor activity on the part of the observer in hearing and recording the sounds conveyed to him through the stethoscope, and an interesting collateral series of experiments was performed for the purpose of ascertaining its equivalent expressed as a period of time. This preliminary observation, made with a seconds clock, which recorded its own beat, and had its concomitant ticking synchronously recorded by an observer as the cardiac sounds were recorded in the way described above, shows that this psychic loss is practically *nil*. After the observation had been continued for a short time the latent period due to the sensori-motor action of the observer became shortened, the nervous system, apparently becoming accustomed to the rhythmic impressions, conveys them more speedily, and the actual record of the clock's beat and that of the clock's tick, as heard and registered, were found to coincide precisely. Thus in a heart where the action is regularly rhythmic, the sounds produced in the rhythm can be recorded, after an interval of probation on the part of the observer, with absolute accuracy, and the result of this record compared with the reading of the movements recorded by the cardiograph; and any sound may be thus referred to its exact situation in the cardiac cycle. Taking a case of proved relationship in this respect, one of aortic regurgitation, it was found that the murmur was always registered exactly at that point in the cardiac cycle where its causative reflux is known to occur, showing that the method is reliable, and can be applied to the question so fully discussed recently as to where and how presystolic murmurs are occasioned. Into that question the observers have not as yet fully entered, but they hope to communicate further on the subject when a sufficient number of cases shall have come under their notice to furnish data for a reliable conclusion.

Edinburgh, Dec. 20th.

ABERDEEN.

(From our own Correspondent.)

HEALTH OF THE CITY.

FOR October, Aberdeen had the lowest death-rate of the eight principal towns in Scotland; but for November it did not occupy such a satisfactory position. For last month the death-rate was 20·4 per 1000, as compared with 19·2 in Leith and 20·2 in Edinburgh. There was a gratifying decrease in the number of cases of scarlet fever during November. In September there were 73 cases of scarlet fever, 114 in October, and 47 in November. Whooping-cough is on the increase; there were 68 cases reported in November, and during the present month 50 cases have already been reported. Since August there have been 22 deaths from whooping-cough, as against 16 from all the other zymotic diseases—viz., 1 from small-pox, 1 from measles, 10 from scarlet fever, 2 from diphtheria, and 2 from typhoid fever. In November there were 5 cases of typhus fever in St. Nicholas parish. There were 56 patients in the city hospital on Nov. 1st, and 40 were admitted during the month, making a total of 96; and of these 45 had been discharged and 1 died, leaving 50 in the hospital at the beginning of the present month.

THE MEDICAL OFFICERSHIP OF HEALTH.

Dr. Theodore Thomson, who has held the office of medical officer of health for the city since Dr. Simpson's appointment to Calcutta, was recently appointed medical officer for Sheffield. Lord Provost Henderson, at the Council meeting yesterday, expressed his regret that the city was "to lose the services of Dr. Thomson so soon, ... it looked as if Aberdeen were to be a nursery for the training of medical officers for other cities." At a meeting of the Public Health Committee held to-day, it was resolved to request Dr. M'Kenzie Booth to fill the office, *ad interim*, between the departure of Dr. Thomson and the appointment of his successor. For the vacancy, which is to be advertised, Dr. John D. Thomson is a candidate. Dr. Thomson has just returned from Berlin, where he had been studying under Professor Koch, and for some time after graduating he acted as assistant to Professor Ogston.

UNWHOLESOME FOOD.

During the month of November the sanitary inspector seized 890 lb. of beef, 177 lb. of mutton, 5417 lb. of fish, 78 lb. of fruit, and 132 lb. of vegetables, all of which were destroyed, either with the owner's consent or by order of the magistrates. There had been 458 inspections during the month.

Aberdeen, Dec. 20th.

DUBLIN.

(From our own Correspondent.)

THE EPIDEMIC OF MEASLES NEAR SKIBBEREEN.

AT a meeting last week of the Skibbereen Board of Guardians a communication was received from Dr. O'Farroll, medical inspector of the Local Government Board, in reference to the extensive and fatal epidemic of measles which has prevailed for some time in the Skibbereen district. It appears that the disease exists at Tullagh, on Hare Island, and at Baltinare. Measles was imported last September into Baltinare by a sailor returning from a training ship at Plymouth, and since then a very large number of cases have occurred through the Tullagh district, amounting to about 200, with some eighteen or twenty deaths. The deaths which have taken place have been for the most part among young children, and the mortality among them would seem to have been due not so much to any special malignity of the exanthem poison, as to the severity of those pulmonary affections which complicate measles, and which at this season of the year are often, even with the most favourable surroundings, of very serious import. But these children were nursed in a wretched room or cabin, so small that the air space is barely sufficient for a single person. In Hare Island eighteen families were affected with measles, with only one death. The water supply of this island is of a very bad kind, the water obtained from the wells by the inhabitants being constantly polluted by the excreta of cattle and other animals.

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The consideration of the report has been deferred to the first week in January.

ROYAL COLLEGE OF SURGEONS.

In consequence of a petition to the Council from some students, that body have passed a resolution calling on the committee of management of the conjoint scheme to publish at once all necessary details as to the examinations. This was urgently required, as the students have not, up to the present time, been able to learn to what extent they were required to be prepared in certain subjects.

GALWAY COUNTY INFIRMARY.

A meeting of the governors was recently held to elect a resident surgeon to the hospital, in the room of the late Dr. Browne. The following were candidates:—Messrs. Mahoin, Lambert, Kinkead, Colohan, and Pye. Eleven votes were recorded for Dr. Colohan and four for Dr. Pye, the former being declared elected. As, however, nine of those who voted had only that day paid in £21 each, constituting them life governors, a protest was lodged against the reception of their votes as illegal and contrary to the Act. Should this view of the matter be correct, it follows that Dr. Pye will be elected; at all events steps are being taken to test the legality of the election.

CANAL-STREET DISPENSARY: SOUTH DUBLIN UNION.

A meeting of the South City Dispensary Committee was held to-day (Tuesday), to elect a successor to Dr. Ball, who had resigned his appointment as medical officer to the Canal-street Dispensary, which he had held for the past seven years. There were eleven applicants for the post, Dr. Falkiner being elected, subject to the sanction of the Local Government Board.

Measles is still prevalent in Dublin, and during the past nine weeks 116 deaths have been registered from this cause.

Dublin, Dec. 20th.

PARIS.

(From our Paris Correspondent.)

THE PURIFICATION OF WATER.

IT is now generally admitted that water plays a very important *rôle* in the production and propagation of epidemic maladies. To render water really innocuous two means are generally employed: (1) By antiseptics; (2) by ebullition. In a communication recently made to the Société Française d'Hygiène, M. Charles Tellier, an engineer, stated that the first means named is uncertain, and is not within the reach of everyone. The second is good, but it has the following inconveniences:—1. The temperature of 100° C. (212° F.) is not sufficient to destroy all the microbes. 2. The air of the water is expelled by the effect of ebullition, and the water becomes heavy and indigestible. 3. The calcareous carbonates are equally precipitated, and the water becomes less sapid. 4. The earthy portions in suspension in the water are also precipitated, and the latter is rendered disagreeable to drink. To obviate these different inconveniences, the author proposes the substitution of water submitted to a higher temperature for water which has been merely boiled, and the following is the manner in which this is effected. A closed metallic recipient, perfectly air-tight, being able to support a pressure of six atmospheres, is established. At the bottom this recipient presents an enlargement, which is calculated so that by the dilatation during the heating the water completely fills the recipient. A tap placed in the lower part, surmounted by a filter, permits the drawing off of the water; another tap placed in the upper part surmounted, at the moment of its employment, by a filter in cotton wadding, allows the air to enter. When the bottle is full of water, it is placed either in a bath saturated with marine salt, or in a recipient into which steam is admitted. In the one case, as in the other, it is heated, and the water is thus raised to a temperature varying from 114° to 150° C. The following are the results of this operation: — 1. The water remains perfectly aerated, as, having been heated without pressure, the air cannot separate itself, and remains dissolved. 2. The water remains charged with its calcareous salts, as the carbonic acid is not disengaged. 3. The other salts and earthy matters are precipitated, but they separate from the water at the moment of its employment, as a filter exists in the apparatus. 4. The filter is never contaminated, as it is itself baked at each operation. 5. In fine, the water remains purified during the whole time of its employment, as the air which enters into the apparatus is itself filtered by the cotton.

ANTIPYRIN.

For some time past Dr. A. Robin has been engaged in researches respecting antipyrin, so as to assign to it its proper place as a therapeutical agent, and the following are the conclusions arrived at by him, which he formulated in a paper he recently read before the Academy of Medicine: 1. Antipyrin acts at first on the nervous system, of which it modifies the excitability, not in a purely dynamical manner, but in acting on its elementary nutrition. 2. It diminishes organic disintegration, and lowers still more organic oxidations, whence the production of an excess relative to the lithic acid and to the nitrogenous extractive materials, which are less soluble, and consequently with more difficulty eliminable, than urea. It is probable that this influence on the general nutrition immediately depends on the effects of the antipyrin on the nervous system, as the depressing medicaments of nervous activity act nearly all in the same manner. 3. Antipyrin possesses also a powerful antiseptic property, which is very marked, and which appears to manifest itself as well in the organism, and without injury to it, as in the experiments in the laboratory. In a word, antipyrin acts in the first place on the nervous system, of which it moderates the excitability in modifying its elementary nutrition; it diminishes the organic disintegration and lowers still more the organic oxidations, and may for this reason be classed among the series of medicaments to which Professor Germain Sée has given the name of "*médicaments d'épargne.*" Its action as an antipyretic is *nil*, whilst against painful affections its action is well marked. Dr. Robin would therefore suggest that the name "analgésine" should be substituted for antipyrin.

Paris, Dec. 20th.

Obituary.

SIR GEORGE BURROWS, M.D., F.R.S.

BY the death of Sir George Burrows, which occurred in his eighty-seventh year, at his residence in Cavendish-square, on the 12th inst., another, almost the last, survivor of the old school of distinguished Cambridge graduates who adopted medicine as their profession has passed away. He came of an old Kentish family, established certainly as far back as the Commonwealth at Chalk, in the neighbourhood of Gravesend, where the birth, in 1771, of his father, Dr. George Man Burrows, himself an eminent member of the medical profession, took place. Sir George Burrows was born on November 28th, 1801, in Bloomsbury-square, where his parents then resided, and received his early education at a school at that time of some note in Ealing, where he had for his fellow-scholars several who afterwards distinguished themselves, amongst them being Cardinal Newman and Mr. F. W. Newman. On leaving this establishment Sir George attended the lectures of John Abernethy at St. Bartholomew's Hospital, of Professor Brande on chemistry, and of Professor Faraday on electricity and other kindred subjects. At the end of two years he proceeded to Caius College, Cambridge, where, although he had obtained a Tancred medical studentship, he devoted himself to the special study of that University, and graduated as tenth wrangler in the Mathematical Tripos of 1825. It may be mentioned that during his undergraduate days he organised and pulled stroke in the first six-oar racing boat that floated on the Cam. Immediately after his graduation he was elected a Fellow of his College, and appointed junior Mathematical Lecturer. He occupied much of his spare time in private tuition, and was a popular and successful teacher. However, he shortly afterwards returned to St. Bartholomew's Hospital, and, as a pupil of Sir W. Lawrence and Dr. Peter Mere Latham, who, with Sir Thomas Watson, formed at that time the leading lights of that famous school, commenced the systematic study of that profession he was in later years destined to so much adorn. After taking his degree in Medicine at Cambridge and the diploma of the Royal College of Physicians of

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London, he availed himself of a favourable opportunity for foreign travel, and studied his profession for some time at the University of Pavia, in Paris, and in Germany. During his stay in Italy he had abundant opportunities for watching the epidemic of Asiatic cholera, then freshly imported into Europe; and upon its making its appearance in London in the year 1832, he was placed in charge of the auxiliary hospital established by the governors of St. Bartholomew's to meet the exigencies of the outbreak. This was his first official connexion with the institution. A little later, in 1834, he was appointed the first assistant physician, to take charge of out-patients. He first lectured on Forensic Medicine, and was subsequently associated with Dr. P. M. Latham as joint lecturer on the Science and Practice of Medicine. In 1841, upon Dr. Latham's enforced withdrawal from ill-health, he became sole lecturer, and was promoted to the full physiciancy, an office which he held with distinction till 1863, when he retired from the acting staff. On this occasion he was presented with a testimonial by his colleagues, and elected the first honorary consulting physician to the hospital. In 1832 he became a Fellow of the Royal College of Physicians, in which institution he subsequently delivered the Gulstonian, Croonian, and Lumleian lectures, in the latter of which he explained and illustrated experimentally the condition of the circulation in the brain under varying conditions of pressure. He filled in turn the offices of member of Council, Censor, College representative on the General Medical Council, and finally, in 1871, he was called by the unanimous voice of the Fellows to the presidential chair of the College, to which he was elected five times in succession. During his tenure of office as president—namely, in 1874—he was made a baronet. Having been appointed Physician Extraordinary to Her Majesty the Queen in 1870, he became Physician in Ordinary in 1873, on the death of Sir H. Holland. He was a member of the Senate of the University of London, president of the General Medical Council, of the Royal Medical and Chirurgical Society, and of the British Medical Association. Sir George was the author of a work on Disorders of the Cerebral Circulation, and the connexion between Affections of the Brain and Diseases of the Heart (the Lumleian Lectures in 1843-44), and of several articles in Tweedie's *Library of Medicine*. He was also a prominent member of the St. Albans Medical Society, of which he was at one time president. The composition of this Society was, and is, seven physicians, seven surgeons, and seven general practitioners. We believe that Professor Erichsen is at present president of the Society, which is so exclusive that one black ball suffices to ensure the rejection of a nominee for admission. Sir George Burrows was also a Fellow of the Royal Society, D.C.L. Oxon., LL.D. and Honorary Fellow of Caius College, Cambridge.

In 1834 Sir George married Elinor, the youngest daughter of his old master, John Abernethy. This lady predeceased him, but three children (two sons, and one daughter, married to Mr. Willett of St. Bartholomew's Hospital) survive him. Of commanding presence, Sir George invariably inspired confidence in his patients, and although he rarely smiled, and still more rarely laughed, he possessed a kindly heart and sympathetic mind, which caused his aid and advice to be frequently sought by those who knew him. Owing to his advanced age, he had of course for some years retired from practice, and to the younger school of medical men the name of our late *confrère*, who was a living link between the present and the giants of the past, is comparatively unknown. A correspondent who acted as his clinical clerk, and who now occupies a distinguished position in the metropolitan medical world, writes: "Next to Christison, ... I never knew in our profession a man of more solid worth and nobleness of character. He was a real leader of men, and a humble and devout Christian."

The funeral was held at Highgate Cemetery on the 17th inst., and perhaps there never was a more imposing private funeral ceremonial. The College of Physicians was represented officially by the senior Vice-President, Sir Edward Sieveking (nominated by the President, who was unable to attend), the senior Censor, Sir A. Garrod, and Sir Dyce Duckworth, treasurer, all wearing their official robes. Mr. Marshall represented the General Medical Council, Mr. Savory the Royal College of Surgeons, and Mr. Pollock the Royal Medical and Chirurgical Society; and the hospital staff of St. Bartholomew's Hospital were almost all present. The procession of carriages, nearly half a mile in length, included those of all the recognised leaders of the profession.

JOHN GEORGE FRENCH, F.R.C.S.

A LINK with the distant past has been broken by the death of this well-known surgeon, who expired suddenly on Dec. 4th, after attaining the ripe age of eighty-three.

Mr. French, who was born at Bow, Middlesex, on Oct. 13th, 1804, was the son of the Rev. William French, rector of Vange, Essex, and was educated at Christ's Hospital. Thence he proceeded to Worthing, where he served his apprenticeship with the late Mr. Morrell, a well-known medical practitioner in that town, and later entered as a student at Guy's. His teacher in surgery was Sir Astley Cooper—then in the zenith of his fame,—for whose scientific and personal qualities Mr. French always retained, in common with all the pupils of that great surgeon, a profound admiration. Having become L.S.A. in 1826 and M.R.C.S. in 1827, he was for a short time engaged in practice in Henrietta-street, Brunswick-square. In 1830 he succeeded in obtaining the post of surgeon to the workhouse infirmary of St. James's, Westminster, an appointment which he held for forty-two years. A considerable change has taken place in the administration of medical relief in the various parishes of the metropolis. For a great part of the time during which Mr. French held his post his duties not only embraced the charge of the workhouse and its infirmary, the latter including some sixty or eighty beds, but he had also, on the order of the relieving officer, to attend and provide drugs for the sick poor dwelling in various parts of the parish. The entire medical charge of the paupers was in his hands. The field of experience thus presented to a man of energy and ability was very great, and Mr. French availed himself of it very thoroughly. He proved to be a good surgeon and family practitioner in high estimation. In the year 1853 he became F.R.C.S. On his appointment to St. James's Infirmary, Mr. French at first resided in Marshall-street, Golden-square, removing in 1842 to 41, Great Marlborough-street, where he lived until 1872, the year in which he resigned his post. His last years were spent at 10, Cunningham-place, St. John's Wood.

The first outbreak of cholera in Great Britain occurred in 1831. The disease appeared in Sunderland in October, having been introduced by a vessel from Hamburg. When the metropolis was visited by the epidemic a cholera hospital was formed in St. James's, as in many other parishes, and Mr. French was appointed its medical officer. He threw himself into the duty with ardour, and employed the opportunities for the clinical study of the disease to such good purpose that a book published by him on the subject in 1835 attracted much attention from the philosophical style in which the subject was treated. In the autumn of 1848 the disease reappeared and persisted during 1849, giving further opportunities of study to Mr. French, and intensifying the enthusiasm which the subject always produced in him. Again appearing in 1853, the disease was signalised by an outbreak in the Soho district in the summer of 1854, which from its sudden and terrible mortality exceeded all experience of epidemic fatality in the metropolis since the time of the great plague. It was in this visitation that Mr. French became acquainted with the late Dr. John Snow, whose discovery of the conveyance of cholera by drinking water, first suggested by him in reference to an outbreak in South London, was confirmed by his investigations in the Soho outbreak, which he traced with unerring sagacity to a pump in Broad-street. Mr. French, who at first, like everyone else, was very sceptical as to the soundness of the position, became completely convinced by the demonstration afforded in this epidemic, and a most ardent promulgator of Dr. Snow's views. It was in this year that he published a second edition of "The Nature of Cholera Investigated," a work which, with occasional papers in the journals, served to create for him the position of an authority on the subject. His interest in this topic never failed, persisting even in his old age, in spite of the fact that it was not altogether reciprocated by those with whom he came in contact.

In 1862 Mr. French brought before the Royal Medical and Chirurgical Society a plan of treating carbuncle by a subcutaneous incision of its base, from which he had had excellent results, and which has scarcely received adequate recognition by surgeons. The paper was published in the *London Medical Review*, a periodical which has long been extinct. Although the subject of cholera was that which perhaps most strongly attracted him, he was fond of opera-

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tive surgery, opportunities for which were very numerous in the public appointment which he held. He was one of the first to excise the hip joint, following the teaching of his friend Sir William Fergusson and Mr. Jones of Jersey.

There was a certain air of the old *régime* about Mr. French which even advanced age failed to destroy, though the profound deafness from which he suffered of late years necessarily left its mark upon him. In other respects he retained even to the day preceding his death a full command of his faculties, and time had not succeeded in destroying the bright and genial qualities which those who knew him in days gone by will well remember. He was a well-read man, not only in medical but in philosophical literature, and a lover of music and of art. His tall, well-set figure, endowed with a quite exceptional activity, as it was during the greatest part of his career, was a familiar object for many years in the hunting field, for, though a true-born cockney, he was amongst the most fearless of riders, and a great lover of horses. Of kindly nature, overflowing with animal spirits, and possessed of considerable sense of humour, Mr. French enjoyed, until his infirmity interfered, the acquaintance of a large circle of friends. The passage of time has removed very many of these, but there are still left not a few to cherish the memory of one who was a skilful practitioner of medicine and a good fellow. Mr. French was buried at Paddington Cemetery, Willesden-lane. He was never married.

THOMAS GOODIER RICHMOND, F.R.C.S.

The subject of the present notice, who died at his residence, Ford House, Prestbury, Macclesfield, on the 17th inst., aged seventy-seven years, was educated at the Manchester Grammar School, and his medical studies were pursued at the Manchester School of Medicine and Surgery, in Pine-street, and subsequently at the principal London hospitals. He became a Member of the Royal College of Surgeons and Licentiate of the Apothecaries' Society in 1833. He commenced practice in his native town in Gartside-street, and subsequently in Coburg-terrace, near Zion Chapel; but it was in the township of Hulme that Mr. Richmond became a popular medical practitioner and a foremost sanitary reformer. He had the entire medical care of the township during the prevalence of cholera in the summer and autumn of 1849, and of the Irish fever in 1851-2. Following the outbreak of cholera in 1849, he issued a report on the deplorable sanitary condition of Hulme. To this report on "Cholera and Choleraic Diarrhœa," no doubt, may be attributed the measures afterwards adopted to improve the water supply, drainage, badly constructed dwellings and lodging houses, &c. When Asiatic cholera reappeared in England, in September, 1853, nearly the whole of the medical men in Manchester, with Dr. Radford at their head, assembled and drew up a code of precautionary and preventive measures. Mr. Richmond co-operated with this movement, and furnished another valuable report to the authorities of his own experiences, and made suggestions which were acted upon. As a thoroughly practical sanitary reformer Manchester is much indebted to him. In 1854 Mr. Richmond was elected a Fellow of the Royal College of Surgeons. About this time he resided in the Chorlton-road, and carried on a large practice on that side of Manchester. He retired some years ago, and lived at Prestbury. In private life Mr. Richmond was a very agreeable, pleasant companion, and he possessed some literary ability.

FREDERICK THOMAS MARRIOTT, L.S.A.

THE above-named practitioner died somewhat suddenly on Nov. 18th, 1887, at 121, Old-street, E.C., aged fifty. Possessed of some private means, he was able to gratify his artistic tastes as a musician and connoisseur of bric-à-brac, and at the same time to avoid the harassing toils and anxieties which, alas, too frequently appertain to the daily round of the general practitioner. Educated at University College, he obtained his L.S.A. diploma in 1877; subsequently he held the posts of assistant house-surgeon to the Western General Dispensary, and assistant medical officer to the Lock Hospital and Salop Infirmary; he was also for some years trumpeter-major and bugler to two corps of Volunteers. A polished man of the world, and an ardent sympathiser with the poor, his memory will remain green in the hearts of many of his brother practitioners and the more indigent of his patients.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.D. Examination:—

Arkle, Charles Joseph, University College.
Bahadhurji, Kaikhosro Nasarvanji, B.S., University College.
Barnett, Lawrence, University College.
Bright, Eustace Frederick, University College.
Carr, John Walter, B.S., University College.
*Cocking, William Tusting, University College.
Davies, William Thomas Frederick, B.S., Guy's Hospital.
Dingley, Arthur William, University College.
Evans, Willmott Henderson, B.Sc., University College.
*Gow, William John, St. Bartholomew's Hospital.
Green, Charles David, B.S., St. Thomas's Hospital.
Halstead, George Ezra, B.S., B.A., B.Sc., Guy's Hospital.
Harsant, Joseph George, B.S., Guy's Hospital.
Hichens, Frank, B.S., London Hospital.
Hull, Walter, St. Thomas's Hospital.
Jefferson, Arthur John, B.S., St. Thomas's Hospital.
Joule, John Samuel, University Coll. and St. Barth. Hosp.
Lewtas, John, St. Thomas's Hospital.
Marsh, George Ryding, Guy's Hospital.
Paley, Frederick John, St. Bartholomew's Hospital.
Randell, Reginald Maurice Henry, Guy's Hospital.
Rayne, Charles Alfred, B.S., University College.
Robinson, Henry Betham, B.S., St. Thomas's Hospital.
Swain, James, B.S., Westminster Hospital.
Thomas, John Raglan, St. Bartholomew's Hospital.
Trevelyan, Edmond Fauriel, B.Sc., St. Bartholomew's Hospital.
Turner, Philip Dymock (Gold Medal), University College.
Washbourn, John Wychenford, B.S., Guy's Hospital.
*Wild, R. Briggs, Manchester Royal Infirm. and Owens College.
Williamson, Richard Thomas, B.S., Owens College.

Logic and Psychology only.

Thomson, St. Clair, King's College.

* Obtained the number of marks qualifying for the Medal.

The following candidates have passed the recent examination in subjects relating to Public Health:—

Collins, W. Job, M.D., M.S., B.Sc. (Gold Medal)[illegible] rivate study.
Pearce, W., M.D., B.S., B.Sc., St. Mary's Hospital
Smith, Kenneth Rawlings, M.D., B.S., University College.

UNIVERSITY OF DUBLIN.—The following degrees were conferred last week by the Chancellor of the University:—

BACHELOR IN OBSTETRICS.—William Payne Birmingham, Thomas Willoughby Cole, John Cuffey, Harry Fayle, Ernest Augustus Slaughter, Armstrong Herbert Swifte Todd, William James Weir, Charles William Henry Whitestone.

BACHELOR IN SURGERY.—Henry Kingsmil Abbott, William Payne Birmingham, Thomas Willoughby Cole, John Cuffey, Alfred Russell Darley, Edwin Lindsay Dunn, Charles Grey-Edwards, William Moyle O'Conner, Ernest Augustus Slaughter, Wm. James Weir.

BACHELOR IN MEDICINE.—William Payne Birmingham, Alfred Russell Darley, Frederick William Kidd, Ernest Augustus Slaughter.

MASTER IN OBSTETRICS.—George Chadwick Kingsbury (*stip. con.*).

DOCTOR IN MEDICINE.—Thomas Guy Alexander, Benjamin Morgan Dockerell, Frederick William Kidd, Joseph William Neligan.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At examinations held last week the following was admitted a Fellow of the College:—

Waller, Thomas Bennett.

THE polling for an Assessor for St. Andrews University has resulted in the success of Lord Cross and the defeat of Dr. John Duncan.

THE University of Douai has been removed to Lille, much to the regret of the inhabitants of the former city. The first University at Douai was established in 1560.

A NEW HOSPITAL has been erected at Ruabon by Sir Watkin Williams Wynn, at a cost of £2500. The building was formally opened on the 13th inst.

VACCINATION GRANT.—Mr. P. Butler Stoney, of the Millom district of the Bootle Union, Cumberland, has been awarded the Government grant for efficient vaccination in his district (fifth time).

AT the annual meeting of the supporters of the Royal Albert Hospital, Devonport, on the 13th inst., satisfactory financial and general reports were presented and adopted.

THE GORDON HOME FOR BOYS.—After having been, by permission of the War Office, quartered for nearly two years in one of the forts on Portsdown Hill, the Gordon boys have taken possession of their own home at Chobham.

MEASURES are being taken, we understand, to ascertain the views of the local authorities in Aberdeen and district on the question of erecting for their joint use a hospital for the treatment of persons suffering from infectious diseases.

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SOME successful experiments were made at the Brown Institution on the 12th inst., as to the feasibility of saving life at sea by inflation of the skin after a method described in our columns some three years ago by Dr. Silvester.

CENTENARIAN.—Mrs. Mary Hodges of Elton, Hunts, whose death has just been recorded, attained her hundredth birthday on May 9th. She retained her faculties to the last. Her favourite beverage is reported to have been rum, and she was a habitual smoker.

THE New York Academy of Anthropology offers a prize of fifty dollars for an original essay on any subject within the domain of Anthropology. The competition is limited to active, honorary, and corresponding members of the Society at the time the award is made.

PRESENTATION.—On the 12th inst. Mr. Hedley Hill, a student at the Bristol General Hospital, was presented with the silver medal of the Royal Humane Society and an address on vellum, in recognition of the bravery exhibited by him in a successful attempt to rescue, on the 18th of October last, a woman from drowning in the Avon.

FATAL FOOTBALL ACCIDENT.—A young man belonging to Leeds was recently injured while playing in a football match at Roundhay-park, between the Trinity and Roundhay Clubs, and died at the Leeds Infirmary on Thursday last. It appears that he was knocked down and his head forced underneath his chest, so as to dislocate the cervical vertebræ.

MEASLES.—An epidemic of measles has made its appearance in Boston, and several deaths have occurred. The day and Sunday schools have been closed, and the medical officer of health has published a notice warning the parents of infected children not to attend places of worship or public entertainment. The disease is also very prevalent in the Western islands of Scotland and in Canterbury.

THE LADY STRANGFORD HOSPITAL.—It is satisfactory to learn that this institution at Port Said has now been in good working order for some months, and has been of service to many sufferers, who have been landed there from steamers passing through the Suez Canal. Last month 60·8 per cent. of the beds were filled. The committee appeal for £2200, which is still required for the building fund.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—A meeting of the members of this association was held on the 8th inst., Dr. Tatham in the chair, when a paper on "Infant Mortality in Urban Districts" was read by Dr. Welch. The paper, which was illustrated by numerous charts and tabular statements, elicited a discussion, in which Messrs. Niven, Kenyon, Vacher, Rhodes, and others took part.

BEQUESTS.—The following, amongst other legacies, have been given by the will of the late Mr. Thomas Jessop: The Jessop Hospital for Women, £4000; the Sheffield General Infirmary and the Sheffield Public Hospital, £200 each; and the Free Hospital for Children, £100.—The late Thomas Cochrane has bequeathed £200 to the Hospital for Incurables, £200 to the Mater Misericordiæ Hospital, £100 to St. Vincent's Hospital, and £50 to St. Michael's Hospital near Dublin.

THE ULSTER MEDICAL SOCIETY.—The annual dinner of this Society was held at the Royal Avenue Hotel on the 23rd ult. The President, Dr. Esler, occupied the chair, and was supported by a large and influential company. After the usual loyal toasts, the following were given: "The Belfast Medical School," "The North of Ireland Branch of the British Medical Association," "The Ulster Medical Society," and "Our Guests." The evening was enlivened by songs sung by several of the guests, and a very enjoyable *réunion* took place.

VICTORIA UNIVERSITY.—The following appointments to vacant examinerships were made by the Council at a meeting held on Dec. 15th:—Obstetrics: G. Ernest Herman, M.B., F.R.C.P., F.R.C.S., Obstetric Physician and Lecturer on Midwifery in the London Hospital. Pathology: Victor Horsley, M.B., B.S., F.R.C.S., Professor of Pathology in University College, London. Physiology: Augustus D. Waller, Lecturer on Physiology in St. Mary's Hospital Medical School, London. Surgery: A. Pearce Gould, M.B., M.S., F.R.C.S., Assistant Surgeon and Surgical Tutor at Middlesex Hospital, London. Anatomy G. D. Thane, M.D., Professor of Anatomy in University College, London. Forensic Medicine and Hygiene: G. V. Poore, M.D., F.R.C.P., Professor of Medical Jurisprudence in University College, London.

THE Sultan of Turkey has conferred upon Dr. Morris H. Henry of New York the decoration of Commander of the Order of the Medjidieh of Turkey, for "distinguished services in the cause of medical science."

MEDICAL MAGISTRATES.—Upon the recommendation of the Lord-Lieutenant, the Lord Chancellor has inserted the name of Mr. Vincent Jackson in the Commission of the Peace for the county of Staffordshire. Mr. Jackson was Mayor of Wolverhampton last year, and is also a magistrate for the borough.—Mr. David Lloyd, M.R.C.S., L.S.A., has been made a magistrate for the county of Cardiganshire.—The Lord Chancellor, upon the recommendation of the Lord-Lieutenant, the Earl of Dartmouth, has placed William Harry Cooke, M.D., of the Manor House, Aldridge, in the Commission of the Peace for the county of Stafford.

TELEPHONES IN HOSPITALS.—The authorities of the Hospital for Consumptives at Ventnor have decided to adopt telephonic communication between the different wards, the resident doctor, the porter's lodge, &c. The Equitable Telephone Association, Limited, of Queen Victoria-street, London, E.C., who have been entrusted with the order, will employ eleven of their "Swinton" telephones, and the instruments will be connected on the ordinary exchange principle, so that any one of them can be put in communication with any ther. It is anticipated that, when completed, this installation will save the hospital staff much time and trouble.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADDINSELL, AUGUSTUS W., M.B., C.M., has been appointed Administrator of Anæsthetics to the Grosvenor Hospital for Women and Children.

ALEXANDER, ADOLPHUS B., L.D.S., R.C.S. Eng., has been appointed Dental Surgeon to the Good Templar and Temperance Orphanage.

BARLOW, ARTHUR H., M.B., C.M., M.R.C.S., has been appointed Medical Officer to the Leicester Provident Dispensary, vice Douglas, resigned.

BROOMFIELD, H. J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Assistant Physician to the City of Dublin Hospital.

CARTER, GRAHAM ATHERLEY, M.D.Mar.Col.Aberd., L.R.C.S. Ed., has been reappointed Medical Officer of Health for the Lichfield Urban Sanitary District.

COWARD, R. COURTENAY, M.R.C.S., L.R.C.P.Lond., has been appointed Honorary Medical Officer to the Kilburn, St. John's-wood, and Maida-vale General Dispensary.

FERNIE, EDWARD, M.D. St. And., M.R.C.S., has been appointed Medical Officer for the Swynnerton District of the Stone Union.

GAMGEE, ARTHUR, M.D., F.R.S., has been elected Assistant Physician to St. George's Hospital, W.

MILNER, JAMES G., L.R.C.P. Ed., M.R.C.S., has been appointed Assistant Physician to the Home and Infirmary for Sick Children and Dispensary for Women, Sydenham.

PATTERSON, GEORGE HENRY, L.R.C.P.Lond., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Dalton-in-Furness Urban Sanitary District.

PLEWS, PAUL R., L.R.C.P.Ed., L.F.P.S.Glas., has been appointed Medical Officer for the Fourth District of the Parish of St. Matthew, Bethnal-green.

SAUNDERS, CHARLES EDWARD, M.D.Aber., M.R.C.P.Lond., San.Sc.Cert. Cantab., has been reappointed Medical Officer of Health for the Watford Rural Sanitary District; for the Hendon Rural Sanitary District; for the Hemel Hempstead Rural Sanitary District; for the Berkhampstead Rural Sanitary District; for the Barnet Rural Sanitary District; for the Tring Urban Sanitary District; for the Welwyn Rural Sanitary District; and for the Barnet Urban Sanitary District.

SNELL, WALTER STANNES, L.R.C.P.Ed., L.R.C.S., has been appointed Medical Officer of Health for the Okehampton Rural Sanitary District, vice Bennett, deceased.

STEELE, HENRY OCTAVIUS, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Gomersall Urban Sanitary District.

THOMSON, JOHN M., F.R.S. Ed., has been appointed Professor of Chemistry at King's College, London, vice Bloxam, deceased.

TURNER, GEORGE R., F.R.C.S., has been elected Assistant Surgeon to St. George's Hospital, W.

WATSON, THOMAS ALFRED, M.B., C.M.Edin., has been appointed House-Surgeon to the Central London Ophthalmic Hospital, vice M. C. Moxham, M.R.C.S., L.R.C.P., resigned.

WEDMORE, ERNEST, M.B. Cantab., M.R.C.S., has been appointed Obstetric Physician to the Bristol Royal Infirmary.

WILDING, JAMES, M.B., L.R.C.P., M.R.C.S., C.San.Sc., has been appointed Medical Officer to the Bristol Foresters' Institute.

WYNNE, J. DARLEY, B.A., M.B., B.Ch.Trin.Col.Dub., has been appointed Junior Assistant House-Surgeon to the Public Hospital and Dispensary, Sheffield.

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Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

ADDENBROOKE'S HOSPITAL, Cambridge. — Resident House-Physician. Salary £65 per annum, with board, lodging, and washing in the hospital.

BOOTLE CORPORATION HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Officer. Salary £100 per annum, with board, washing, and apartments at the hospital.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c.—Resident Clinical Assistant.

ESSEX AND COLCHESTER HOSPITAL. — Physician. Salary £200 per annum.

FARINGDON UNION.— Medical Officer, Public Vaccinator, and Medical Officer of Health. Salary £70 per annum, with extra fees for operations and services allowed under the orders of the Local Government Board, together with the statutable vaccination fees.

GLAMORGANSHIRE AND CARNARVONSHIRE INFIRMARY AND DISPENSARY, Cardiff.—House-Surgeon. Salary £100 a year, with board, washing, and furnished apartments.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Junior Resident Medical Officer as House-Surgeon. Salary £50 per annum, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary £50, with board and lodging.

MONSALL FEVER HOSPITAL, Manchester.—Assistant Medical Officer. Salary £100 her annum, with board and residence.

NATIONAL DENTAL HOSPITAL, Great Portland-street, W.—Lecturer on Histology.

POPLAR HOSPITAL FOR ACCIDENTS, East India-road, Poplar, E.—Two Honorary Surgeons.

ROYAL FREE HOSPITAL, Gray's-inn-road, W.C. — Junior Resident Medical Officer. Board and residence in the hospital.

ST. GEORGE'S HOSPITAL, Hyde-park-corner, W.—Curator of the Pathological Museum.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN. — Two Assistant Physicians.

WIGAN UNION.—Medical Officer, Public Vaccinator, and Dispenser. Salary £170 per annum, unfurnished residence and surgery, free of all rates and taxes, and coals, together with the usual allowance for each case of successful vaccination, and such extra fees for the treatment of surgical and midwifery cases as are authorised by the orders of the Poor Law Board.

WORCESTER AMALGAMATED FRIENDLY SOCIETY. — Assistant Medical Officer. Salary £140 per annum (without residence), with a portion of midwifery fees; also £20 per annum for cab hire.

Births, Marriages, and Deaths.

BIRTHS.

CROOKSHANK.—On the 15th inst., at The Yews, Eastbourne, the wife of Edgar Crookshank, M.B., of a daughter.

CROOM.—On the 16th inst., at 25, Charlotte-square, Edinburgh, the wife of J. Halliday Croom, M.D., F.R.C.P.E., of a daughter.

DOWNES.—On the 19th inst., at Mellerstein, Eastbourne, the wife of Dr. H. Downes, of a son.

GLENDINNING.—On the 15th inst., at Larchfield, Abergavenny, Monmouthshire, the wife of James Glendinning, M.D., Medical Superintendent, Joint Counties Asylum, Abergavenny, of a daughter.

MCGEAGH.—On the 12th inst., at Oakford, Polsloe-road, Exeter, the wife of Surgeon R. T. McGeagh, Army Medical Staff, of a son.

SAWTELL.—On the 8th inst., at Stapleton-hall-road, Stroud-green, N., the wife of T. H. Sawtell, M.D.Lond., M.R.C.S., L.R.C.P., of a son.

THOMSON.—On the 18th inst., at Coates-crescent, Edinburgh, the wife of John Thomson, M.B., C.M.Edin., of a son.

TIBERGHIEN.—On the 20th inst., at 52, Rue du Nord, Brussels, the wife of Lucien Tiberghien, M.D., of a son.

UPPLEBY.—On the 16th ult., at Port Elizabeth, South Africa, the wife of Dr. J. G. Uppleby, of a daughter.

WARNER.—On the 16th inst., at Rydal, Woodford-green, Essex, the wife of Percy Warner, M.R.C.S., L.R.C.P.Lond., of a son.

MARRIAGE.

CRIPPS—BRADLEY.—On the 15th inst., at St. Matthew's Church, by the Rev. A. H. Baynes, assisted by the Rev. T. B. B. Ferris, Vicar, Charles Couper Cripps, M.D., of Denmark-hill, London, son of Richard Cripps, of The Grove, Brislington, Somerset, to Edith Ellen, only daughter of John Bradley, of The Park, Nottingham.

DEATHS.

GARDEN.—On the 17th inst., at The Cedars, Merrow, near Guildford, Archibald MacDonald Garden, Deputy Surgeon-General, Bengal Medical Service, retired, and late Superintendent-General Vaccination, Punjab, in his 56th year.

TOLEKEN.—On the 13th inst., at Longford-terrace, Monkstown, co. Dublin, John Toleken, M.D., Ex-Senior Fellow of Trinity College, Dublin, in his 85th year.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 22nd, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 16	29·46	S.W.	52	51	61	53	42	·05	Raining
,, 17	29·80	S.W.	42	40	·65	42	40	·06	Fine
,, 18	29·81	S.W.	39	36	60	45	32	...	Cloudy
,, 19	29·52	W.	34	33	...	44	31	·11	Cloudy
,, 20	29·54	W.	35	34	...	39	31	·02	Overcast
,, 21	29·65	N.E.	35	34	...	39	33	·02	Cloudy
,, 22	29·96	N.E.	35	34	...	39	33	...	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE CLIMATE OF EGYPT.

DR. SCHLIEMANN, the celebrated archæologist, having gone outside his *métier* to disparage the climate of Egypt in relation to phthisis, has evoked from Dr. Heymann (for many years the leading German physician in Cairo) a highly effective rejoinder. Egypt, according to this eminent authority, remains what she always was—a supremely favourable winter resort for the consumptive patient in every stage of his malady. Dr. Heymann furnishes evidence that in the two requisites of a winter station for the phthisical the advantages of the Egyptian climate are pre-eminent, the first requisite being the obviating of the disposition to tuberculosis of the lung, or the correcting of this at its early stage; the second, mitigation of the distressing and wasting symptoms of the disease when advanced.

Private Practitioner.—There is no written law on the subject, and the medical officer of health cannot therefore be said to be acting illegally; but it is customary for him to obtain his information through the medical attendant, whose certificate on this subject should guide him.

F. C.—1. Fee quite reasonable.—2. Not too much, if the patient can pay. Rental small for that.—3. A guinea.—4. A guinea. The patient is liable, not the medical man.

Dr. A. G. Macdonald.—We cannot advise in the matter.

WORD-DEAFNESS AND WORD-BLINDNESS.

To the Editors of THE LANCET.

SIRS,—In the various works which treat of word-deafness and word-blindness the description of these defects is so confused as to be scarcely intelligible. They are, I believe, supposed to be due respectively to lesion of the first and second temporo-sphenoidal convolutions, and of the angular gyrus and adjoining part of the inferior parietal lobule; but I am not clear whether these defects are due solely to lesions in the left hemisphere, as in motor aphasia. Is this so? Information on this point will be much appreciated by,

Yours faithfully,

Dec. 19th, 1887. A MEMBER OF TWENTY YEARS' STANDING.

P.S.—Is hemianopsia due to lesion of the same centre as word-blindness?

*** The part of the brain concerned in the auditory perception of words is the posterior half of the first temporal convolution on the *left* side in right-handed individuals; so is the centre for word-blindness. Hemianopsia may be due to a cortical lesion.—ED. L.

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VIVISECTION.

THE *Globe* of Dec. 19th publishes the following letter:—

"*A Correction.*—Sir,—In your issue of Nov. 30th there was a short report of a speech of mine at the Anti-Vivisection Conference held the day before, in which I related an incident that had been told me by a doctor, which implied a breach of the Vivisection Act by the University College, Liverpool. At the request of the College authorities, I have still further investigated the evidence on which I made my statement, and which I believed to be perfectly accurate at the time. I now find that my recollection of what I was told was not correct in certain respects, and that therefore the impression I conveyed to my audience was wrong. Consequently, I desire to withdraw the statement; and as your paper was the only one in which I saw it published, I shall be obliged if you will insert this note.—I am, &c., "WALTER S. B. M'LAREN.

"St. James's Lodge, Delahay-street, Westminster,
December 17th."

Mr. Hubert Henry, and *C. C.* (Chichester).—We must refer our correspondents to a paragraph on the subject published in THE LANCET of Oct. 15th, p. 794.

Fairplay.—It would, we think, be far better to endeavour to arrange a meeting with the view of settling the matter amicably.

J. S. S.—The course suggested is certainly open to objection.

V. V.—Our correspondent is thanked.

VOLUNTARY BOARDERS IN ENGLISH LUNATIC ASYLUMS.

To the Editors of THE LANCET.

SIRS,—I observe in your issue of the 17th inst. the reply of Dr. Savage to the question which you were good enough to allow me to put to your readers in THE LANCET of Dec. 10th. Having since I wrote taken the opportunity of consulting the Lunacy Acts upon the matter in question, I find the first part of that reply perfectly satisfactory, being, as I believe, in accordance with the provisions of 25 and 26 Victoria, cap. iii., sec. 18. But with regard to the second part of the reply—viz., "that registered hospitals, such as Bethlem, can receive as voluntary boarders any patients [i.e., those who may not have been within five years immediately preceding certificated patients in any asylum, hospital, or licensed house, or under care as certificated single patients] who voluntarily place themselves under care, provided," &c., I have failed to find any clause in any of the existing Lunacy Acts at my disposal bearing upon it. I should feel greatly obliged if Dr. Savage or some other of your readers would kindly point out this clause, if it should happen to exist in some other Act which I have not seen, and at the same time state whether such provision extends to English licensed houses, and also whether, both in the case of hospitals and licensed houses, the previous assent in writing of two or more of the Commissioners in Lunacy is necessary before admission as a voluntary boarder under it.

I am, Sirs, your obedient servant,

Dec. 19th, 1887. QUÆRENS.

ROUGH-AND-READY SURGERY IN THE BUSH.

To the Editors of THE LANCET.

SIRS,—A friend in New South Wales, writing in July last, mentioned that on returning from an excursion he had made on Jubilee day to the Sugar Loaf mountain he passed an old man sitting at the door of his hut sewing up with a needle and thread a rather severe cut he had inflicted on the thick part of his hand with a hatchet. In a letter written in October he gives an amusing sketch of an attempted cure for snake-bite:—"The other day a man came to me to be treated for snake-bite. A snake had bitten him on the point of the thumb, and he, wishing to cut a slice off, got an old razor, which he held against the place, his wife trying to hit it with the back of a knife, in which attempt she succeeded after striking his fingers several times. An incision being made, he at last got a piece off, partly tearing and cutting, and then came to me, a distance of ten miles. I kept him here under treatment for four hours, and then, finding there was no further danger, sent him home. I expect he will lose a piece of his thumb, but think the joint will be saved. It will not, however, prevent his working. People often maim themselves unnecessarily. I knew a girl who some time ago chopped her finger off with a tomahawk after snake-bite. As long as the teeth-marks are taken out about the size of a threepenny or sixpenny piece, that is quite enough."—I am, Sirs, yours truly,

New Cross, S.E., Dec. 7th, 1887. B. CARLILE.

EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—I have read with much concern the letter of "A Medical Practitioner" in your last issue relative to Epsom College. Having meditated sending two of my sons to the College, with the hope of securing a good education at a moderate outlay preparatory to entering upon the medical curriculum, I am staggered at the prospect of £150 a year for tuition fees. My income is insufficient for such an outlay, and I must therefore abandon the idea of this school, much to my regret. It becomes an impossibility for the average medical man to avail himself of the benefits of Epsom College for his boys at such an expense.

Believe me, Sirs, faithfully yours,

Dec. 19th, 1887. A GENERAL MEDICAL PRACTITIONER.

THE HISTORY OF BLIND ASYLUMS.

A. J. B. (Hamburg).—The best authority on this subject is M. Léon Legrand, from whose "Recherches sur la Condition des Aveugles du Moyen Age" we gather that in the first centuries of our era the blind were treated like the poor and infirm, St. Laurence, for example, having, according to the Church legend, tended a blind man in the house of Narcissus. St. Jerome, writing to St. Pammachius, enjoins him to seek equality with the poor, to be an arm to the weak and an eye to the blind. St. Basil founded at Cæsarea, about the middle of the fourth century, a hospital in whose *personnel* there were "leaders of the blind," which shows that the institution harboured those deprived of sight. In the fifth century St. Linnæus retired to a mountain, where the blind were brought to him for cure, and inhabited dwellings constructed around his hermitage. A century later Jerusalem could boast of a "typhocomium," and in the ninth century the Mahometans made tendance of the blind a State duty. In 1260 St. Louis instituted the hospital of the Quinze-Vingts, not, as is believed, to accommodate 300 knights who had been made sightless by the Saracens during the sixth crusade, but, according to Joinville, to give relief to the blind of Paris. This establishment harboured 300 blind of both sexes, who shared their means in common and lived together under the style of brothers and sisters, its director being nominated by the King, whose high almoner safeguarded its interests. Thanks to donations and contributions from all France, it acquired important possessions; and in 1292 Renauld Barboult, a burgess of Chartres, founded in imitation of it, at the gates of that town, another asylum called the Six-Vingts. Caen, Meaux, Châlons, Orléans, Tournay, and probably Angers, had each their "maison des aveugles," similar to which were the blind asylums of neighbouring countries. Vienna had one in 1223, Padua another in 1377, Frankfort another in 1489. In England the Guild of the Virgin was a mutual assistance society against maladies, particularly that of blindness.

Mr. W. H. Pepler.—1. We believe the report of the German Vaccination Commission was signed by the whole Commission. They were not unanimous on all points.—2. In 1882 vaccination was not obligatory in Austria, but was "carried out as far as practicable." In the same year in France vaccination was not compulsory on the general population, but short regulations existed requiring its performance on members of the army and navy. We believe no changes have been made in the laws of these countries since that date.—3. The extract is a fair *résumé* of Dr. Creighton's observations; but he states that he does not mean a venereal chancre.

Boxer.—We do not notice communications unauthenticated with the name of the writer.

X. Y. Z.—We do not give medical advice. The ordinary medical attendant should be consulted.

M.B.—Thanks. The reply appeared in our last impression.

THE MEETING OF CONSTITUENTS OF THE HOSPITAL SUNDAY FUND.

To the Editors of THE LANCET.

SIRS,—I fear that I must have expressed myself ambiguously at the meeting of the Hospital Sunday Fund at the Mansion House, as there is an error in your report. I did not say that if "twenty years ago the accounts of Guy's Hospital had been overhauled by the critical eyes of the Council the hospital would not be in its present plight," but I pointed out that if the accounts had been published for the last twenty years the liberality of the public would probably have prevented the hospital from being in its present plight. The accounts have been drawn up accurately, not merely for twenty years, but for a very much longer period. They have been regularly submitted to the Charity Commissioners, and now that the governors have appealed for public money they will be published. It is not bad bookkeeping, but agricultural depression, that has caused the vacant beds. The whole body of chartered accountants cannot raise the value of agricultural land. I trust that you will find room for this correction, and that Guy's Hospital may meet with that support from the Hospital Sunday Fund and from the public which its great necessities require and its careful administration unquestionably deserves.

I am, Sirs, yours faithfully,

Westbourne-terrace, W., Dec. 20th, 1887. ALFRED L. COHEN.

"A WARNING."

To the Editors of THE LANCET.

SIRS,—In your issue of to-day Sir Dyce Duckworth is good enough to warn members of the profession against a man who is using his name and recommendation to sell "various kinds of cloth." I expect this is the same person who called on a distinguished London surgeon a few days ago, and sent in my card as an introduction to business. He succeeded in selling a piece of cloth, and my friend will not grieve over the purchase if he can find a tailor to "make it up." I know nothing of this man, or how he got possession of my card.

I am, Sirs, very faithfully yours,

Manchester-square, W., Dec. 17th, 1887. WILLIAM H. DAY.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Haslam, Birmingham; Dr. O. Sturges; Dr. Malcolm, London; Mr. Bernard Pitts, London; Dr. Thomas Oliver, Newcastle-on-Tyne; Sir Dyce Duckworth, London; Hon. Mary F. Howard, London; Mr. A. L. Cohen, London; Dr. J. More, Rothwell; M. Lowenthal, Vienna; Mr. H. B. Adams, London; Dr. Maccall, Morecambe; Messrs. Condy and Co.; Dr. W. H. Day, London; Dr. Groom, Wisbech; Mr. Garrett Horder, Cardiff; Mr. W. Whitehead, Manchester; Messrs. Midgeley and Sons, Manchester; Dr. Paramore, London; Messrs. Wood and Co., New York; Dr. G. Thompson, Stapleton; Mr. Forest; Dr. De Witte, Cairo; Surgeon-Major T. Robinson; Dr. Jas. Wilson, Haverfordwest; Mr. S. C. Griffith, London; Mr. A. C. C. Swinton, London; Mr. M. C. Corner, London; Mr. W. Anderson, London; Mr. Savill, Paris; Mr. Fage, Taunton; Miss Adams, St. Leonards; Dr. McCall, Pietermaritzburg; Mr. Purves; Mrs. Howard; Mr. Barrier, Sheffield; Dr. Wood; Mr. Griffiths, Bristol; Dr. Popham; Mr. Keith, Edinburgh; Dr. Jeaffreson, Newcastle; Mr. Palmer, Hanley; Mr. G. Steinkopf, Berlin; Mr. W. Johnston, Aberdeen; Mr. R. H. James, Malmo; Mr. Coleman, Cardiff; Dr. Dumay, Spezzia; Mr. Saunders, Manchester; Mrs. Mahony, Preston; Messrs. Mason; Dr. Barrabim, Trapani; Dr. Morini, Penique; Mr. Beckett, Eastbourne; Mr. J. R. Rogers, Damietta; Mr. Robinson, Harrogate; Messrs. Valeriani, Turin; Mr. Palmer, Oakham; Mr. R. Mountain; Messrs. Liberty and Co., London; Mr. O. Pemberton, Birmingham; Mr. Mark Hovell, San Remo; Surgeon-Major Boileau, Ferozepore; Dr. Steven, Glasgow; Mr. Whitehead, Newcastle-on-Tyne; Dr. Stirling, Grays; Dr. Martin, London; Mr. Khambati, London; Mr. Greenwood, London; Mr. G. Fleming, London; Mr. Bampton, Plymouth; Mr. H. Smith; Mr. N. Nicholl, London; Dr. Nicholl, Buckie; Mr. Rimbieri, Paris; Mr. R. Hilison, Pekin; M. Marochetti, Venice; Mr. Willett, London; V. V.; F. C.; Querens; H. A. L.; J. G.; W. H.; S. T.; A General Medical Practitioner.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Bond, Leicester; Mr. Clarkson, Leeds; Dr. Pearson, Seamoor, Cape of Good Hope; Dr. Crookshank, Eastbourne; Mr. Brocklehurst; Dr. Evan de Merwe, Devildrop, Cape; Mr. Pikay, Kullakurohi; Dr. Darcsha Hormusji, Drangadoe; Mr. Branthwaite, Watford; Messrs. Battle and Co., St. Louis; Dr. Mackenzie, Edinburgh; Messrs. Porteous and Co., Glasgow; Dr. Lytle, Maghera; Mr. Sergeant, London; Mr. Poole, Maldon; Mr. Eschwege, London; Dr. Thyning, Sydney; Mr. Hitch, Mollington; Dr. Glendenning, Abergavenny; Dr. Kane; Mr. Tully; Mr. Gastang; Mr. Mann; Mr. Charlesworth, Hanley; Mr. Wormald, Manchester; Dr. Garrett; Mr. Urwin; Dr. Armstrong; Dr. Taylor, Mattishall; Mr. Allwright, Maidenhead; Mr. Butcher; Mr. Dwelly, Stone; Mrs. Sharman; Mr. Palmer; Dr. H. Cask; Dr. Adams, West Malling; Mr. Jay; Mr. Heywood, Manchester; Mr. Holt; Mr. Hope; Mr. Griffith, Clifton; Mr. Brown; Mr. Monckmon; Mr. Oswald, London; Mr. Davenport, London; X. Y., Stamford-hill; H. H. H.; Practitioner; W. K., Brighton; T. B. W., Pontefract; W. P.; Las Palmas; General Hospital, Notts; V. N. X.; Matron, Weston-super-Mare; Medicus, Birmingham; Assistant, Dumfries; Medicus, Bradford; Medicus, Manchester; M.A., Cambridge; F.R.C.S.; Alpha, Yarmouth; L. W., Herts; B. G. S. L.; M. C. L.; Medicus; Fides.

Cork Constitution, Florida Times Union, Leicester Daily Mercury, Charity Record, Manchester Evening News, Cape Times, The Topaz (Christmas No. of *Church of England Temperance Chronicle*), *Church Monthly, South Wales Daily News, Night and Day*, &c., have been received.

Medical Diary for the ensuing Week.

Monday, December 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, December 27.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
ROYAL INSTITUTION.—3 P.M. Sir Robert Stawell Ball: The Sun. (Lecture adapted to a juvenile auditory.)

Wednesday, December 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.

Thursday, December 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION.—3 P.M. Sir Robert Stawell Ball: The Moon. (Lecture adapted to a juvenile auditory.)

Friday, December 30.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, December 31.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Sir Robert Stawell Ball: The Small Planets. (Lecture adapted to a juvenile auditory.)

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Agent for the Advertising Department in France—J. ARTIER, 66, Rue Caumartin, Paris.

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Lectures
ON
FIBROID DEGENERATION AND ALLIED LESIONS OF THE HEART, AND THEIR ASSOCIATION WITH DISEASE OF THE CORONARY ARTERIES.

By JOHN LINDSAY STEVEN, M.D.,
ASSISTANT TO THE PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF GLASGOW; ASSISTANT PHYSICIAN, GLASGOW ROYAL INFIRMARY; AND ASSISTANT TO THE LECTURER ON PATHOLOGY IN THE WESTERN INFIRMARY OF GLASGOW.

LECTURE III.

(*Concluded from page 1257.*)

CASE 9. *Fibroid degeneration of the left ventricle; pericardial adhesions; probably caused by embolism of the coronary artery.*—The specimen from this case is in the museum of the Western Infirmary of Glasgow; and the following is the account contained in the museum catalogue:—

"The extreme left lateral part of the left ventricle was found adherent to the pericardium over a limited area by somewhat elongated fibrous connexions. This part of the wall of the ventricle is converted into fibrous tissue, the muscular substance being almost completely replaced. This transformation extends through the entire wall, and affects a bulky papillary muscle, which is almost entirely fibrous. The affected portion of the ventricle is distinctly bulged outwards. Examination of the coronary arteries showed no obstruction, but the capillaries in the affected region are greatly diminished, as shown by injection of soluble Prussian blue. The heart as a whole is much enlarged, weighing 22 oz., and there is a deep groove between the two ventricles, producing a double apex. The aortic valve is considerably thickened, and the auriculo-ventricular orifices dilated. There was thrombosis in the veins, and pulmonary infarctions, &c.

"The origin of the fibrous transformation here is not perfectly clear, but it has probably originated in embolism of a small branch of the coronary artery, the circulation having been restored by anastomoses after the muscular tissue had already suffered softening. This is rendered the more probable by the fact that there were old embolic lesions in the spleen and kidneys, and the endocarditis of the aortic valve afforded a source of embolism when it was in the acute stage."

CASE 10. *Extensive fibroid degeneration of left ventricle, with pericardial adhesions; slight atheroma of left coronary artery; the lesion in this case inflammatory in origin (interstitial myocarditis).*—Janet B——, aged thirty-eight, died in Dr. James Finlayson's ward on June 2nd, 1887. On admission there was œdema of the ankles and eyelids, with considerable ascites. The urine was scanty, and contained abundant albumen and numerous granular tube-casts, but no blood. There was tenderness on pressure over the liver. The heart sounds were normal, and there was dulness with moist râles at both bases posteriorly. The illness had been of seventeen months' duration, and had been marked throughout by weakness and frequent inclination to faint. Swelling of the abdomen and ankles first supervened in October, 1886. The appetite had all along been bad, and vomiting occurred at intervals.

Summary of post-mortem: Considerable ascites; spleen firm, enlarged, weighing 8 oz.; deep cicatricial furrows on surface of liver, which on section present fatty areas; hepatic tissue generally fatty; organ weighs 3 lb. 7½ oz.; kidneys small, with adherent capsules, granular surfaces, and atrophied cortices; both lungs firmly adherent and œdematous. The heart is not greatly enlarged; the mitral orifice passes three, and the tricuspid four, fingers. On the anterior surface of the left ventricle near the apex, over an area of about two inches in diameter, there are firm fibrous pericardial adhesions. The muscular tissue immediately beneath the adherent surface is converted into a pearly white succulent tissue, which involves almost its entire thickness. On slicing the muscular tissue, similar patches, less extensive and evidently more recent, are found in the external and posterior walls of the left ventricle. An examination of the coronary arteries shows that, as a general rule, they are healthy and pervious; in the descending branch of the left, however, there is a very distinct patch of atheromatous thickening, which causes considerable narrowing of the lumen of the vessel. With this exception, however, no abnormality was discovered in the arteries. The wall of the aorta is practically healthy. A careful microscopic examination of this case proves it to have been distinctly inflammatory in origin. The new fibrous tissue was abundantly infiltrated with leucocytes, and at the margins of the patches the muscular fibres were separated by numerous leucocytes. This, then, seems to be an undoubted case of interstitial myocarditis, which has probably extended from the pericardium. Here and there the infiltration of leucocytes was very dense, obscuring the muscular tissue. Evidences of syphilis were present in the liver, and the unhealthy coronary artery should also be borne in mind in thinking of etiology.

CASE 11. *Slight fibroid degeneration with generalised fatty degeneration; atheromatous disease of the coronary arteries, with complete obstruction of the left at its origin.*—John Y——, aged forty-eight, died in Dr. Finlayson's ward on June 6th, 1887. He complained of a dull aching pain in the chest, which varied in severity, and which set in with an angina-like attack eighteen months before admission. When serving in India he had suffered severely from ague, and up till six years ago he had been a heavy drinker and smoker. The apex beat was displaced to the left of the nipple line, and could be felt in the sixth, seventh, and eighth interspaces. At the apex there was a loud blowing murmur with the first sound. There were signs of passive congestion.

Summary of post-mortem: Dilated heart with fibroid change; obstruction of one coronary artery; atheroma of aorta. The pericardium contained a small, and both pleural cavities a considerable, quantity of clear fluid. The heart was much enlarged, weighing 19 oz., the enlargement preponderating in the right ventricle. The aortic and pulmonary valves were competent. The left ventricle was considerably dilated, and its walls were thin; its endocardium was obviously thickened, and the muscular tissue was interspersed with tendinous patches. There was atheroma of the right coronary artery, and the orifice of the left was completely obliterated, while that of the right was also somewhat narrowed. The valvular curtains were not much thickened.

In this case the fibroid change was not extensive, and the patches were tolerably recent. On microscopic examination the usual replacement of muscular fibre by fibrous tissue was seen. There was also a slight but generalised molecular fatty degeneration of the muscular fibres. The left coronary artery was quite shut off from the aorta, but its walls were not seriously diseased. The right coronary artery was considerably dilated, even to its terminal branches, which largely supplied the posterior wall of the left ventricle. No arterial anastomosis between right and left could be discovered by tracing out the vessels.

CASE 12. *Rupture of left ventricle; serious disease of coronary arteries, with occlusion of the branches of the left passing towards the seat of rupture.*—Richard M——, aged sixty, a boat-hirer from Dunoon, was admitted to Ward 5 of the Western Infirmary, suffering from eczema of fifteen months' duration, affecting the face, neck, and body. At the time of his death, which occurred as follows, the disease of the skin, as the result of treatment, was almost completely cured. On the morning of Sept. 14th, 1884, he had gone as usual into the bath-room of the ward with his pot of ointment to anoint the skin. He was absent from the ward for about half-an-hour, during which time no one had seen him, and he was found lying quite dead at the foot of the bath-room stairs, his pot of ointment standing on the last step, where he had evidently laid it on feeling faint. He had been in his usual health up till the time of death, and had never at any time made any complaint to lead to an examination of the state of the heart.

On Sept. 16th I conducted a post-mortem examination, of which the following is a careful record:—External appearances: The body is well-nourished and muscular, and almost the entire skin is discoloured by a tarry preparation which had been applied for a somewhat generalised eczema. On the right temporal region and right side of the forehead are several contusions. Chest: The lungs are highly œdematous, but otherwise not abnormal. Heart: On opening the peri-

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cardium a large quantity of blood-red serum escapes, and on evacuating this a large mass of clot, weighing about three-quarters of a pound, is found moulded on the surface of the heart. At the free margin of the left ventricle, midway between the auriculo-ventricular septum and the apex, is found a linear ragged aperture, measuring fully an inch in length, and lying in the long axis of the ventricle. Beneath the pericardium surrounding this opening, and extending towards the front of the organ, there is considerable hæmorrhage; and on the anterior aspect of the left ventricle, about an inch from the septum and an inch from the apex, is a distinct depression of a cicatricial appearance. The ragged aperture, before mentioned, communicates with the interior of the ventricle by a much smaller opening situated to the left of and behind one of the large fleshy masses, to which several of the tendons of the mitral curtains are attached. On section, the muscular tissue of the left ventricle in the neighbourhood of the rupture, and underneath that portion of the surface the seat of subpericardial hæmorrhage, is discovered to be exceedingly disintegrated. The tissue is soft, and presents a yellowish colour; so advanced is this in some situations that a condition of liquefaction is present. In some places, too, distinct cavities or channels exist in the heart wall, from which a brownish-coloured juice may be expressed in small quantity. The valvular structures of the left side of the heart are normal. The left coronary artery is highly calcareous, and is more or less completely occluded by atheromatous deposits. About one inch from its origin, and at a point beneath which it divides into two pretty large branches, is a distinct aneurysmal dilatation filled with soft clot. The branches leading from the aneurysm pass to supply the diseased portion of the ventricular wall, and are exceedingly hard and practically occluded. The right coronary artery is much dilated and tortuous, and here and there has a rigid feeling, but is nowhere obstructed. The external fat of the organ is generally somewhat exaggerated in amount, and encroaches very largely upon the tissue of the right ventricle. The valves of the right side, with the exception of some dilatation of the tricuspid orifice, are not abnormal. The whole organ is very soft and flabby, and weighs 15¾ oz. There is slight, but not at all extreme, atheroma of the aorta. The other features of the post-mortem are unimportant, and it only remains to note the condition of the kidneys. They are somewhat enlarged, and weigh respectively 6 oz. and 7½ oz. The surface of both is distinctly granular and lobulated, the capsule adhering with a moderate degree of firmness; and in some situations the demarcation between pyramid and cortex is not very clear.

Portions of the wall of the left ventricle were hardened first in alcohol and then in chromic acid, after which they were subjected to a very careful microscopic examination—the sections having been cut with Schanze's (of Leipzig) microtome. The first point that strikes one in looking at the sections is the interpolation, if one may so speak, amongst and between the muscular fibres of a granular tissue, which is in many places distinctly associated with the course of the bloodvessels, and which often interrupts the continuity of the muscular fibres and breaks them up. In very many parts of the section the transverse markings of the muscle are distinctly preserved, but in others they are lost, and the muscular substance has apparently become hyaline or glassy. Here and there a very slight granular fatty condition of the fibre is observed, but nowhere is this at all decided or extreme. In some sections the fatty growth on the surface of the heart seems rather increased, but in no situation does it extend deeply into the cardiac tissue. Staining of the sections in a 2 per cent. solution of gentian violet in water brings out the appearances just described much more distinctly. It is then well seen that the new formation of granulation tissue is situated immediately external to the fibres—in the perimysial tissue—and this is observed both in transverse and longitudinal section of the fibres. Where the cell proliferation is very abundant the fibres are largely destroyed, and, in addition, what appear to be the nuclei of the muscular cells are seen to be actively proliferating, as if they also were partaking in the process. Where the cell proliferation is abundant, too, the cells seem to be lying in a homogeneous transparent matrix, which is coloured neither by the chromic acid nor the gentian violet. In one of the stained sections the relationship of the new growth to obstructed vessels is distinctly observed. I refer to the appearance presented by a large artery, whose internal coat was so thickened as to leave only a very small lumen, and immediately outside of which the changes I have described were very extensive. The effect of the growth on the myocardium seems to be to cause the fibres to atrophy, to split up into longitudinal fibrillæ, and to lose their transverse striæ. Under the high power the cells comprising the interstitial new growth are, for the most part, seen to be of the nature of leucocytes, but where the change is very advanced much larger cells are observed, and a careful examination of stained specimens indicates that these are in all probability nuclei of the muscle cells.

CASE 13. *Rupture of left ventricle; extensive calcareous disease of coronary arteries; occlusion of the branch of the left passing towards the rupture.*—The specimen in this case was sent to the Western Infirmary museum by Dr. Yellowlees, of Gartnavel Lunatic Asylum, and was obtained from the body of a woman seventy years of age, who had been long insane. She was apparently in her usual state of health till she sank suddenly on the floor shortly after the usual weekly warm bath, and died almost immediately.

There is a large irregular aperture of a generally oval shape, and an inch long in diameter, situated in the anterior wall of the left venticle close to the septum. The wall of the heart is somewhat bulged around it, and the edges of the aperture are everted. There is no valvular disease. A careful dissection of the coronary arteries shows that both are the seat of very extreme calcareous disease, and that a large branch of the left going towards the rupture is quite impervious, being plugged by a thrombus. Under the microscope very distinct fatty degeneration of the muscular fibre is observed. But this change is by no means extreme, being entirely confined to the centre of the cell in the neighbourhood of the nucleus, and is certainly not sufficient of itself to have caused a spontaneous rupture of the muscular tissue; with this exception, however, the changes observed in this case are very similar to those described in the account of the last case, and so need not be dwelt upon at any length. It may be mentioned, however, that the main point of difference between this case and the last seems to be that the affection is more chronic—i.e., the cellular infiltration is not quite so abundant, and the development of fibroid tissue somewhat greater. Essentially, however, the changes in the two cases are the same.

CASE 14. *Rupture of the left ventricle; serious disease of the coronary arteries, with great obstruction of branch supplying ruptured area.*—The specimen in this case was sent to me for examination by my friend Dr. John Love, of the Royal Asylum, Gartnavel. It was obtained from a managed seventy-nine, who had been several times a patient in the asylum, and who was again convalescent from an attack of acute mania, so that he was to have been discharged in a few days. He was seized with severe præcordial pain in the morning while asleep in bed. When seen he was cold and blue; the pulse was rapid, feeble, and irregular; and the cardiac sounds were very distant and feeble. The first attack abated somewhat, but about 5 P.M. of the same day he had another, and died in an hour and a half.

At the necropsy the pericardium was found filled with thin bloody serum, while around the heart itself was a layer of clot. A small rupture was found in the anterior wall of the left ventricle close to the septum, and about two inches above the apex. The fatty envelope of the organ was much increased, and the wall of the right ventricle was very thin. The wall of the aorta presented almost no trace of disease, but both coronary arteries were very seriously affected. The descending branch of the left coronary was rigid in almost its whole extent. About an inch and a half above the level of the rupture several transverse thickenings were observed, which slightly narrowed the lumen of the vessel. At the level of the rupture the calibre of the vessel was very considerably diminished by the presence of a thick calcareous concretion about one inch in length, which could be shelled out from between the coats of the vessel. The right coronary was also exceedingly calcareous. No detailed or microscopic examination of the muscular tissue of the organ was possible, as very considerable decomposition had set in before I received it.

CASE 15. *Extreme fatty and slight fibroid degeneration; complete occlusion of right and partial of left coronary artery; extreme atheroma of the aorta.*—Arthur B—, aged sixty-three, a carter, was admitted to Dr. Finlayson's ward on Nov. 24th, 1886, with attacks of pain across the front of the chest and shooting to the back and down

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both arms, of twelve months' duration. During the last ten weeks the symptoms were more severe, and were accompanied by considerable flatulence. The heart sounds and the cardiac area were normal; there was no cough or spit; the respiratory murmur was fairly good; the temperature was normal; and there was no albuminuria. He suffered from diarrhœa and melæna six years before his death, and from slight rheumatism which never laid him up.

Summary of post-mortem: Extreme atheroma of the aorta; complete occlusion of the orifice of the right coronary artery; partial obstruction of the left; thickening and incompetency of the aortic curtains; calcification of the middle coat of the femoral artery. It is unnecessary to record the report by Dr. Coats in detail, but I may simply refer to one or two of the more important points. There was the most advanced fatty degeneration of the heart muscle; and the musculi papillares presented very distinct tendinous transformation. On microscopic examination there is seen to be a very extensive fatty degeneration of the muscular fibres; in addition, where the fatty condition is less distinct, there is a clear translucent appearance presented by the muscular fibres, which in these places are devoid of transverse striæ. On testing the anastomoses with soluble Prussian blue, it is found that the pervious coronary artery communicates with the impervious somewhat freely. This is determined in the case of a branch situated close to the obstructed end; this branch is distributed to the right auricle, and it communicates freely with a branch of the other artery distributed to the left auricle. It is also determined that the branches distributed to the ventricles communicate.

CASE 16. *Generalised fatty degeneration; occlusion of one coronary artery, with narrowing of the other; atheroma of the aorta.*—John C——, aged thirty-six, a dock labourer, was admitted on Nov. 22nd, 1886, to Dr. Tennent's wards, complaining of shortness of breath and cough. Six months before he had been seized with a weight in the chest on exertion and palpitation, which were soon followed by cough and spit, tinged with blood. He died suffering from extreme orthopnœa, with œdema and dropsy. There were distinct ventricular-systolic and ventricular-diastolic murmurs over the sternum, with displacement of the apex downwards and to the left.

Summary of post-mortem: Atheroma of the aorta; complete occlusion of one coronary artery, narrowing of the other; thickening and partial destruction of aortic curtains; general venous hyperæmia. The general facts of the necropsy were similar to those recorded in connexion with the last case. Injection with soluble Prussian blue showed pretty free communications between the two arteries, and the fluid did not return by the veins. Communications were determined for the auricles and ventricles. The cardiac muscle presented the typical mottled appearance of fatty degeneration, especially that of the right ventricle.

The injection experiments described in connexion with the last two cases were carried out by Dr. Joseph Coats at the time of the post-mortem examination. Soluble Prussian blue is practically as thin as water; and hence such an experiment is liable to the objection I have previously urged, that with a thin fluid we can fill the other artery by means of the capillary or arteriolar (?) anastomoses. Therefore, unless the anastomosing branches can be actually traced with the naked eye, such an experiment does not refute Hyrtl's assertion that the coronary arteries do not anastomose by means of their primary and secondary branches.

In the foregoing lectures I have endeavoured to demonstrate the intimate etiological relationship existing between disease or obstruction of the coronary arteries, and certain lesions of the myocardium, especially fibroid degeneration, and to make it plain that the terms "chronic interstitial myocarditis" and "fibroid degeneration" (pure and simple), are not synonymous terms. I have also in the course of the lectures shown that multiple embolic lesions of the heart-wall may play a most important part (which should never be overlooked) in determining the clinical course of certain cases of valvular disease of the heart. Since the publication of my first lecture, Dr. Quain has kindly directed my attention to the articles on Connective Tissue Hypertrophy and Fibroid Disease of the Heart in the Dictionary of Medicine. The subject matter of the former article, which is by Dr. Quain himself, has scarcely come under consideration, as it refers to a general increase of the connective tissue of the whole organ; but in reading it I observe that the inflammatory theory stated in the Lumleian Lectures has been departed from. "This, and similar cases," he writes, "exhibit no appearance of chronic inflammatory action, and thus differ altogether from examples of that form of fibroid degeneration which is described under a separate heading (see Heart, Fibroid Disease of)." In the latter article by Dr. Mitchell Bruce, we have a most careful exposition of the subject of fibroid disease. The atrophic nature of the lesion and its association, in some instances, with degenerative changes in the vessels are pointed out. The term "fibroid disease," however, is still regarded as synonymous with chronic myocarditis; and the inflammatory theory of the affection seems, on the whole, to predominate in the writer's mind.

Clinical Lecture

ON

A METHOD OF EXCISING THE TONGUE.

BY RICHARD BARWELL, F.R.C.S,

SENIOR SURGEON, CHARING-CROSS HOSPITAL.

GENTLEMEN,—I removed seventeen days ago the tongue of this patient, and in a few more days he will leave the hospital cured. I will give you immediately a short history of his case, but firstly I call your attention to the fact that since the operation the man has had no high temperature, has been able to take food easily, and—remark especially this—he has virtually had no pain. All these advantages are attributable to the mode of operation which I devised and perfected about seven years ago. You saw me perform it, and will remember that it was almost entirely bloodless—a very great and decided benefit, more especially when the disease has caused difficulty in taking food, and therefore debility.

The method is this. Strictly in and along the middle line an opening is made about one-third of an inch long immediately in front of the hyoid bone, through the raphé of the mylo-hyoid. The genio-hyoid and genio-hyoglossus muscles are separated with the handle of the scapula until the deep surface of the mucous membrane forming the floor of the mouth is reached. By means of Liston's needles carried under this membrane to, or even beyond, the last molar teeth, threads are passed on each side into the buccal cavity, which in their turn draw flexible wire-twist,[1] first into, then out of, the mouth, in such wise as to surround the base of the tongue as far back as one will. An écraseur working with this wire severs that part of the organ. Then the loop of another écraseur is passed between the teeth, pressed well down on the first incision, and divides the structures beneath the tongue.

In this way then, I operated on Aug. 6th on George G——, aged forty-seven, who had a large epithelioma on the left side of the tongue, behind its middle; the induration, however, extended very far back and across to the other side of the organ. No enlarged glands could be felt. The ulcer was extremely sensitive: eating and even swallowing caused pain and trouble to him, while the very foul condition of the mouth took away all desire for food. During the operation but very few drops of blood were lost. Very soon after recovery from the anæsthetic he wrote on the slate that he was pretty comfortable.—Aug. 8th: There had been a copious flow of saliva and other secretion from the supra-hyoid wound. The patient daily took a large quantity of milk and beef-tea, with, he says, more ease than he had done for a long time. The wound was frequently syringed and the mouth rinsed with a 1 in 60 solution of carbolic acid, and the breath was hardly at all tainted.—24th: On the 16th the man could comfortably eat finely minced meat, and had gained flesh since the last report.—30th: He left the hospital, the tongue wound being firmly cicatrised on the 27th. He was able to eat very well, and for the last ten days had been able to enunciate with considerable distinctness.

I may also allude to another of my cases operated on in the same way, and which one or two of you, I believe, saw. It was that of a gentleman, aged fifty-one, who had in the

[1] See my paper in the Clinical Society's Transactions, vol. xiv., p. 147.

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early part of 1885 a large epithelioma unusually far back in the tongue; he also had an enlarged gland close to the jaw, and about the middle of its body. After excising the tongue, therefore, I made an incision over the suspicious gland and removed it; this wound healed rapidly, and did not, I think, retard convalescence, which was rapid, enabling him to sit in an easy chair on the ninth day. Throughout this case also the stump of the tongue was painless. No sign of recurrence has shown itself.

Let me explain this painlessness, and point out certain other advantages of this operation—viz., its bloodlessness and its great security against septic pneumonia. The former of these is, I conceive, a very great gain. Three or four drops of blood come from the skin of the supra-hyoid wound, and only enough should be produced from the tongue to stain slightly the saliva. It is, however, right that I should tell you of an objection that has been urged against this procedure—viz, that if in the first section by the écraseur any considerable hæmorrhage should occur, the bleeding vessel would be inaccessible, the tongue being yet in the mouth. The matter, however, lies entirely in the hands of the surgeon, for the fact is that unless the écraseur be worked with culpable rapidity there is never any bleeding worth mentioning, since no large vessels are here divided. Moreover, the tightening of the écraseur wire produces that very compression of the base of the tongue which Mr. Heath has shown can be effected by two fingers introduced into the pharynx, and which he points out will check hæmorrhage. I have operated by Whitehead's and by Baker's method, and have more often seen those operations performed. One of my objections to both is that an unnecessary amount of blood is lost. The former method especially requires a particularly good light, and a patient quiet under anæsthesia, and able to open widely the jaws—a condition not by any means always present. Moreover, neither of these operations provides for draining the cavity; therefore foul saliva and pus accumulate at its back and in the fauces, is even apt to dribble down the larynx, and at least infects the passage through which the breath passes to the lungs. In my operation the supra-hyoid wound forms, if the patient's head be slightly raised, the funnel-like bottom to a cavity perfectly drained through that opening. I have never found it followed by septic pneumonia, and am glad to hear my patients complain, as they always do, that the mouth is dry. It has also been urged that this method does not provide for excising diseased glands. Well, that is true both of this and of the other two procedures I have mentioned. Superficial glands must be removed separately; the only plan which is adapted for the removal of the tongue and of deep glands is Kocher's exceedingly severe operation.

And now about the painless condition of the stump. The chief, if not the entire, tactile sensibility of the tongue is derived from the gustatory branch of the fifth, for this sense in the glosso-pharyngeal twig is very dull and obscure. The lingual gustatory reaches the tongue by passing down on the ramus of the lower jaw, and division of it in that part of its passage is a device for rendering the organ insensitive. Now the first cut of my écraseur divides these nerves from the point where they leave the jaw, or more often the wire does not cut them, but isolates them, leaving them as branched white threads loose in the mouth, in which case they are to be snipped off with scissors close to the bone; either way the stump has no sensory nerve, and thus is painless, to the great comfort of the patient.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of the members of this Association was held at Huddersfield on the 22nd inst., when the twelfth annual report was read and adopted. The election of officers resulted as follows:—President, Dr. Britton, of Harrogate; vice-presidents, Drs. T. W. Hime, S. W. North, and J. S. Cameron; Dr. Giddings, treasurer; Dr. Wilson, secretary; and the committee as before, with the addition of Dr. Wade. Drs. Hime and Low were thanked for their services as president and treasurer during the year. Dr. Cameron read a paper on "The Relations between the Meteorological Conditions and the Respiratory Death-rates in Huddersfield during the past eight years." A discussion, in which several members joined, followed, and the meeting then closed.

AT a meeting on the 16th inst. of the Gloucester Saturday and Sunday Hospital Collections Committee, it was announced that £334 was available for distribution.

NOTES ON THE

TREATMENT OF SOME OF THE FORMS OF DISEASE INVOLVING THE AORTIC VALVES.

BY ARTHUR ERNEST SANSOM, M.D. LOND., F.R.C.P.,
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(*Concluded from p. 1263.*)

I NOW propose to consider the treatment to be adopted in the cases of disease at the aortic outlet which are induced by atheroma—aortitis deformans. In these there is no history of acute or subacute rheumatism, the subjects are, in the great majority of cases, over forty years of age, and the disease has been of slow development, with no notable signs to mark its onset. In some cases there may be some difficulty in determining whether or not there has been an anterior endocarditis of rheumatic origin, for, as I have said, this affection may develop without arthritic or other signs of acute rheumatism. Generally, however, the differentiation presents no difficulty, for there are evidences of degenerative and senile changes, the arteries are hard and tortuous, the temporals are prominent and cord-like, and, except at the later stages, the pulse possesses nothing of the Corrigan (water-hammer) character, but manifests high tension; in fact, presents the characteristics so ably described by the late Dr. Mahomed.[1] Sometimes we are able to trace by clinical observation the course of the affection as it involves the aortic outlet. For instance, I had the opportunity of observing a gentleman, aged fifty-three, in whom symptoms of enfeeblement, fluttering of heart, and gradually increasing dyspnœa had been coming on for two years. He was the subject of gout, and generally had three attacks a year. The early observations of his heart showed the systolic murmur at the base of aortic obstruction. The pulse was typically one of high tension. Under treatment by alkalies and digitalis (in the form of the leaves) there appeared to be much improvement, and the general rate of the pulse was reduced from 104 to 60. Six weeks after the first observation an attack of gout occurred, and a slight diastolic murmur at the base became evident in addition to the systolic. There was no albuminuria. The diastolic murmur became more and more pronounced, the conditions of distress aggravated, and the patient died about five months after the first observation. This is, I consider, a fair type of a certain section of the cases. In some there is a very distinct association with chronic *renal disease*: in others with gouty arthritis or with conditions associated with lithæmia; in others with syphilis.

As in the rheumatic division, there may be evidences of considerable morbid change at the aortic outlet, and yet symptoms referable to the circulation may be entirely absent. I was consulted in May, 1878, by a gentleman aged thirty-eight for a painful condition of the nature of gouty arthritis, first about the right knee and afterwards the right hip. There was no complaint whatever of disorder of circulation or respiration, but a loud systolic and diastolic murmur at the base of the heart, with signs of hypertrophy, indicated considerable aortic disease. This gentleman had come from India on furlough, and returned to India to his duties in the Civil Service. I was consulted by him again on Sept. 2nd, 1886, after his return from India, where he had passed the intervening time, for pain referred to the soles of the feet. There was increased hypertrophy of the heart, with the former signs of aortic disease, but no symptoms whatever of cardiac difficulty; indeed, the patient looked upon it as a sort of folly that his heart should be examined, and insisted that I had not done so on the former occasion. My notes taken at the time verified the fact. In this case, therefore, there was advanced disease at the aortic orifice, with compensatory hypertrophy, which to my own knowledge had been in existence more than nine years without causing symptoms.

The unequal distribution of distress and danger in this form of aortic disease is shown by the histories of two cases

[1] Cf. Guy's Hospital Reports, vol. xxiv., 1879, p. 394.

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lately under my observation almost contemporaneously. In both gentlemen the age was nearly identical—about sixty-five years; in both the physical signs were almost alike, evidencing obstructive and regurgitant conditions at the aortic outlet, with considerable hypertrophy of the heart. In one case no direct history of syphilis was obtained, but the tongue showed such losses of tissue that the affection at some remote anterior period was probable. This gentleman was exceedingly careful and temperate in his habits; he was nursed with affectionate solicitude; but, after passing through a period of much suffering, he died within two years of the manifestation of the disease. In the other case there was not only an undoubted history of remote syphilis, but an acknowledgment that the disease had been again contracted recently. The old man drank gin and whisky to the extent of at least a pint a day—probably much more. There were considerable dyspnœa and pain; but, after a few weeks' rest in bed, with a course of digitalis, recovery from all urgent symptoms took place, and the self-willed old gentleman is now apparently in very fair health, frequently in the open air pursuing his own course, and certainly not restrained by any theoretical notions of morality. Morbid anatomy, I think, enlightens us as to the cause of these seeming inconsistencies. In the aorta near the valves there may be much atheromatous change, and yet but little interference with the nutrition of the heart; but if the situation of a patch of atheroma be such that the orifice of a coronary artery is blocked, or if the vessel is obstructed in any part of its course, then efforts to promote a better ventricular force are unavailing. The præcordial pain and distress are the cry of a heart that cannot be nourished.

As to treatment. Supposing it be recognised that there is a change at the aortic outlet inducing obstruction or regurgitation, or both, and that this is associated with high tension in the arterial system, with sphygmographic evidence of a broad tidal wave, and so of effort on the part of the left ventricle, are agents which augment the force of ventricular systole to be withheld? According to my interpretation of the evidence afforded by my cases, certainly *not*. It is precisely in such that digitalis, caffeine, and convallaria are singularly beneficial, and the objections which I have so strongly urged against digitalis in the treatment of the purely rheumatic form of disease at the aortic outlet have little or no force. It is important, however, to be remembered that these objections have to be reasserted in the *advanced* conditions of atheromatous disease, when the orifice has become so distorted that regurgitation is very free. In most of the cases of aortic disease due to atheroma digitalis may be administered for long periods. It may seem, if we look at the conditions superficially, that it is illogical when the evidence indicates high tension in the arterial vessels to administer an agent which shall augment the tension, but further consideration will show that theory consorts with practice. The danger is not so much the augmentation of ventricular force, as the failure of the muscle of the ventricle to rise to the height of its requirements and so to enter upon its retrograde course of degeneration. Its more perfect systole, as brought about by the cardiac tonic, means not only a better propulsion of the blood through the obstructed terminals, but a better supply through the coronary arteries to its own structure. The only objections to digitalis in this form of disease are when it *(a)* increases the *suddenness* of the ventricular contraction, or *(b)* induces a notable perturbation of rhythm, such as the pulsus trigeminus—objections rarely manifested in the atheromatous, though often asserted in the rheumatic, form.

To supplement or supplant digitalis, caffeine is often very valuable. In cases attended with the appearance of much lithic acid or lithates in the urine, caffeine citrate in five-grain doses three times a day causes free diuresis, an increased elimination of solids, and great general improvement. In this dose the drug should not be continued more than three or four days, but one dose of five grains may be given every evening. So much relief from suffering is thus afforded that it is sometimes difficult to persuade the patient to omit the dose occasionally for a night or two. I am convinced, however, that such occasional omission is desirable: the change of one form of cardiac tonic for another is often very beneficial; I have seen great improvement when convallaria has followed digitalis.

I turn now to the evidence concerning agents of an opposite character—cardiac depressants. For the treatment of pain having the characters of angina, nitrite of amyl by inhalation, and nitro-glycerine, in solution or in tablets, are agents of the highest value; there is nothing to add to the valuable evidence of Drs. Brunton and Murrell on this point. It may, however, be an important matter for consideration whether these agents may be administered continuously for long periods. In some cases manifesting high arterial tension without evidence of valvular disease, I have seen great advantage from long-continued courses of nitro-glycerine. Often very small doses—1-200th gr. thrice daily—suffice to keep all adverse symptoms in abeyance. In the case of a female patient of mine, aged fifty-six, manifesting aortic obstruction and regurgitation but very high arterial tension, I allowed the administration of nitro-glycerine tablets for five months. For seven weeks the administration of 1-100th gr. twice a day was attended with the complete removal of all symptoms of distress; then, pain occurring, three instead of two doses were administered daily. Great improvement followed for nearly two months, when rapidly fatal œdema of the lungs occurred. In this case there were chronic renal disease and marked albuminuric retinitis. The necropsy showed acute nephritis engrafted upon the chronic. There was an atheromatous lesion of only one aortic cusp, and the left ventricle was hypertrophied. It can hardly be doubted that the immediate cause of death was renal rather than cardiac, and it is probable that the influence of the drug was wholly beneficial. I can conceive that it could be baneful, however, if regurgitation had been more free, or if there had been great and increasing obstruction of the coronary circulation; at any rate, I am sure that a caution is necessary to patients who are entrusted with a prescription for nitro-glycerine, for I have had evidence that as there is a morphinomania, so also there may be a nitro-glycerinomania. In March, 1885, I was consulted by a gentleman, aged sixty, who manifested signs of considerable dilatation of heart without murmurs, associated with copious excretion of urates. He had previously consulted a friend of mine, who, for præcordial pain, had, in a careful manner, prescribed nitro-glycerine

FIG. 8.



tablets. The patient found relief, and at every little discomfort swallowed a tablet. At the time he consulted me he was taking from six to twelve a day, probably more. He complained of pain during our interview, and at once produced his box of tablets. I begged him to refrain till I had examined his pulse, of which I took a tracing, and found extremely low tension—hyper-dicrotism. (See Fig. 8.)[2] I begged him most energetically to discard the nitro-glycerine, but, in my very presence, immediately after the prohibition, he swallowed two tablets consecutively. I have not seen that patient again. The case illustrates the importance of inculcating caution wherever a course of nitro-glycerine is prescribed. In cases manifesting high arterial tension without implication of the aortic valves, such doses—and it has been a matter of surprise that a dose of 1-200th of a grain three times a day suffices—may be continued for an indefinite time with nothing save advantage. It seems quite probable that the general arterial tension being thus relieved, atheromatous changes may be kept in abeyance. It is different, however, if disease exist about the aortic orifice; then the relaxation of tension may lead to an insufficient supply of blood through the coronary arteries to the heart. This is no valid objection to the *occasional* use of these medicaments in such a case, for heretofore I have found no treatment of greater value when pain is paroxysmal and severe.

Concurrently with these agents which immediately affect the heart and circulation, and occasionally for periods to supplant them, in cases in which the aortic valves are involved in atheromatous change, I consider that alkalies are of signal advantage. A very convenient form for protracted administration is this: of bicarbonate of potash and soda, of each ten grains; of powdered ginger, five grains; of powdered leaves of digitalis, one grain: the powder to be taken in water thrice daily one or two hours after meals. The iodides, especially the sodium iodide, have been strongly recommended in these cases, and, indeed, my friend and

[2] This tracing was taken previously to the interview here recorded. The tension was still lower on the occasion referred to.

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colleague, M. Huchard, considers that iodide of sodium is almost a specific for angina.[3] In those in whom there is a distinct history of syphilis, the administration of the sodium iodide in gradually increasing doses, five, ten, fifteen, and twenty grains, three times a day, concurrently with cardiac tonics, is indicated, and I consider that M. Huchard's estimate of the value of the drug may be justified; but in others in whom the on-come of the disease has been gradual, and in association with lithæmia or with chronic renal disease, there is no advantage over the treatment by the alkaline bicarbonates, and in some the iodide is distinctly hurtful. Certainly I have not found it so uniformly beneficial as in cases of aneurysm of the thoracic aorta.

Concurrently with these means of internal medication and friction, massage, and in some cases systematic bathing, can, I consider, be proved to be of signal advantage. Liniment of aconite and belladonna may be employed, and often distinctly relieves the pain referred to the sternum, but for protracted daily use no liniment has any advantage over massage practised with the soft portions of the thumb and palm, dusted occasionally with a little lycopodium or powdered Fuller's earth. In a case of *advanced* atheromatous disease at the aortic orifice, I should hesitate before advising thermal treatment at any of the well-known watering places; but in a lady manifesting aortic obstruction, with albuminuria, which happily passed away, together with arthritis, I found great improvement follow a course of treatment at Aix-les-Bains.

As regards (3) the therapeutics of traumatic lesions at the aortic orifice, I shall only consider the evidence which cases afford in reference to the questions of (*a*) muscular exercise and effort, and (*b*) emotion. It has seemed to me probable that in times past the policy of rest may have been too rigorously enforced. A lesion of the aortic valves of whatever kind, if only regurgitation were in evidence, being diagnosed, the danger of movement was inculcated, and probably the fears of the patient unnecessarily invoked. A great protraction of rest in the recumbent or partially recumbent position may give too much repose to the heart, and, its physiological activity being suppressed, it is ready to follow the universal law of degeneration from disuse. On the other hand, the teaching of Oertel in favour of exercise pushed to the point of distress, and especially mountain climbing, in some forms of cardiac disease, may possibly induce evil in the opposite direction.[4] It can, I think, be taken as proved that even a healthy aortic cusp can be lacerated by physical effort, and that such may not be realised as a *violent* effort at the time of its production.[5] That the damage of an already diseased orifice can be increased by an undue effort is a proposition established *a fortiori*. Yet when an aortic lesion is quiescent and compensated, we have abundant experience to show that considerable exertion can be undertaken with the maintenance of seemingly perfect health. One of my patients was an energetic cricketer. To greatly reduce the amount of physical exertion in some cases would be to impart the danger of a lessened cardiac nutrition. The middle course is the best. First let us be assured that actual disease at the aortic orifice is quiescent, not progressive. Then commence with gentle exercise, always deprecating sudden effort. Every day the dose of exercise may be a little increased until our patient may be enabled to undertake such an amount as can ordinarily be sustained by an individual of his age, only under no circumstances should he be subject to *sudden* strain.

Now as to the effect of emotion in disease of the aortic valves, an effect that I think we are in danger of underrating. It may be a novel proposition that valvular disease may be *produced* by emotion, but I believe it to be true. I have been led to this view by the observation of a large number of cases of chorea. The most notable antecedents in cases of chorea in children are (*a*) rheumatism and (*b*) fright. In Dr. Stephen Mackenzie's most valuable Report on Chorea[6] it is stated that in 439 cases of the affection fright or shock was the immediate antecedent in 115, and rheumatism, acute or subacute, in 116 cases. It has been my experience, as probably it has been the experience of many other observers, to meet with cases in which a child, to all evidence perfectly healthy, has been the subject of a sudden terror and soon after has manifested the ordinary symptoms of chorea, and in such a valvular murmur has become audible. In some cases this murmur has been discovered with difficulty; a case has been examined again and again, and afterwards, on a given occasion, an apical or basic bruit has been noticed, which has in some cases become permanent, and in others has passed away. I have found a diastolic aortic murmur to have been thus manifested. As to the disappearance of such a murmur in course of time I am quite certain, for I have known one of the most musical character to become quite inaudible, and that without any sign whatever of infarction. When one considers the phenomena attendant upon sudden terror and the delicate structure of the cardiac valvular apparatus in childhood, I think we can arrive at a reasonable explanation. At the moment of fright the heart is inhibited, the arterioles contract, the surface is blanched, and the lips perhaps become livid from injection of the venous radicles. Then follows reaction, the heart palpitates violently, and the mitral curtains and aortic cusps may reasonably be expected to suffer from the violence. Pathological anatomy demonstrates to us that it is precisely at the margin of the valves where impact and attrition can occur that vegetations form. On this occasion I do not intend to develop this hypothesis further, nor do I wish it to be implied that I accept the embolic theory as explaining the universal causation of chorea, but I put it forward as a *primâ facie* case that in the delicate endocardium of a child it is highly probable that the vegetations of a simply papular endocarditis may be initiated by the palpitation due to sudden emotion. These considerations point to the importance of keeping a patient who is suffering from aortic disease, at any rate at periods when the endocardium may be considered unusually vulnerable, from mental as well as from physical shock. I may briefly here call attention to the question of the administration of hypnotics in aortic disease. When the heart is very irritable and palpitation is frequent, a wakeful night may mean much mischief. As a hypnotic, the action of which is attended with no ill consequence whatever, I have employed urethane in a single dose of twenty grains at bedtime; but this loses its good effect by frequent repetition. Paraldehyde, in thirty-minim doses in almond mixture, may be given as an alternative, the dose being repeated in half an hour if sleep fails to come. These failing, as they do when pain and distress are severe, then the hypodermic injection of morphia and atropine is the best course, and a few nights of such treatment may suffice to tide over the peril of insomnia. That insomnia is a peril in an aortic case I am well assured, though I am equally assured that the physician must take pains that the morphia habit be not inculcated.

I must now briefly consider the treatment in Class 4—septic or ulcerative endocarditis attacking the aortic cusps. In most cases—for in the majority the attention of the physician is not called till the destructive agencies have been too long in operation—it may be that all treatment is futile, but recent experience has convinced me that in all it is not so. I have recorded a case[7] in which I administered sulpho-carbolate of sodium in thirty-grain doses three times a day for thirty days with inunction of carbolised oil, and, apparently in causal relation with this treatment, there was an extraordinary recovery, so that the patient left the hospital in perfect health, with the exception that a slight diastolic murmur was manifest at the base. Since my paper was written I have had an opportunity of following the case to its end. The patient was readmitted nine months after her discharge with a renewed attack of the disease, which proved rapidly fatal. At the necropsy we found, besides innumerable recent vegetations, a small portion of one of the aortic cusps eroded as from an old disease. Micrococci were abundant, penetrating amongst all the recent exudation, but not into the deeper layer of old inflammatory tissue. The appearances gave one the notion that the old attack had been cut short, and so the evidence of morbid anatomy seemed to confirm that of clinical observation. It is evident that for the antiseptic agent to do its work efficiently there must be a certain time given, but that the blood can be charged with an efficient amount of substance capable of acting as a poison to micro-organisms seems in the highest degree probable. In any case manifesting the signs

[3] Cf. "Semaine Médicale," March 2nd, 1887, p. 82; March 16th, p. 105; March 30th, p. 120; April 13th, p. 146; April 27th, p. 171; June 1st, p. 224.

[4] Oertel in Ziemssen's Cyclopædia, vol. iv.

[5] Cf. cases by Dr. Byrom Bramwell, "Diseases of the Heart and Thoracic Aorta," p. 501; and Dr. Thos. Oliver, "On Traumatic Aortic Regurgitation, with Remarks upon the Effects of Aortic Regurgitation in General," THE LANCET, Aug. 1st and 8th, 1885.

[6] British Medical Journal, Feb. 26th, 1887, p. 420.

[7] Practitioner, August, 1886, p. 105.

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of endocarditis, accompanied by very low arterial tension and not in definite association with rheumatism, I should advise the pretracted administration of the alkaline sulphocarbolate in large doses.

HYPERTROPHY OF THE LINGUAL TONSIL; USE OF GALVANO-CAUTERY; RECOVERY.

BY WILLIAM ROBERTSON, M.D.,
SURGEON TO THE THROAT AND EAR HOSPITAL, NEWCASTLE-ON-TYNE.

THE following case is judged worthy of reporting, both from the rarity of the affection and on account of its well-marked development. For the following notes I am indebted to Mr. P. R. Adkins, clinical assistant.

Mrs. G——, aged thirty-two (but looking ten years older), married, appeared for treatment at the hospital on Oct. 14th with the history of great distress in swallowing, readily produced difficulty in breathing, and inability long to sustain speech. The duration of these symptoms is now two years. The greatest caution has to be observed on swallowing, and she has not tasted beef for six months from fear of choking, The patient states that she has become much thinner during these two years, and has lost her colour and strength. She has, during the time stated, been forced to spend a considerable time over her meals. She complains, besides, of a feeling of foreign body in the throat, frequent swallowing, and pain shooting up to the left ear. The patient lives on a farm where the drinking water is not above suspicion, and is particularly disagreeable in summer time. A medium-sized œsophageal tube was passed readily, and withdrawn slightly tinged with blood. On examining the throat, extensive appearances of granular pharyngitis were found to exist on the oro-pharynx, and a slightly similar state was found in the naso-pharynx. On depressing the tongue, large pale œdematous granulations were brought into view, extending back over the dorsum linguæ. With the laryngoscope these were found continued back, gradually increasing in size on each side of the middle line to the epiglottis. In the neighbourhood of the epiglottis they were seen to rise to the level of its upper margin, and at the sides completely to overlap this organ, so that only a central part of it was visible. No interval or sulcus was thus seen between the epiglottis and the tongue. An effort to lift the epiglottis out of its bed in these masses effected no great separation, so close up to the epiglottis had the adenoid growths reached. These adenoid growths, as examined with the laryngoscope, were seen to be thickly set, of a pale œdematous appearance, and showed traces of blood on their surface caused by the passage of the bougie previously. Taken separately, each growth presented a bulbous extremity, three-sixteenths of an inch in diameter, with a narrowing base, and probably (some of them) six-sixteenths of an inch in length. Those in front and towards the margins of the tongue were flatter and smaller, but of the same appearance. As the patient came from a considerable distance, and the symptoms were urgent, the immediate use of the galvano-cautery was indicated. With the aid of the mirror the cautery was carried down as near as possible to the epiglottis, so as not to touch it, and the most prominent granulations destroyed, cocaine being previously used (which did not, however, ameliorate the symptoms one whit). Next day the patient expressed herself as easier, and stated that she had managed to swallow a piece of beef, a thing she had not done for six months previously. A subsequent examination showed that the cautery had been used effectually. The larynx was normal and readily surveyed, owing to the fixture of the epiglottis by the masses of the granulations.

Remarks.—According to McBride, who has given an extensive account of this affection in the September number of the *Edinburgh Medical Journal*, it would seem that cases of hypertrophy of the lingual tonsil have hitherto been very infrequently mentioned in British literature on the subject. The description here referred to leaves little for me to add. There are, however, one or two points in this case worthy of notice. The extreme difficulty in swallowing complained of led to the supposition that some obstruction existed in the œsophagus, which the passage of a bougie showed was not the case. The report shows that dysphagia was the symptom that brought the patient for treatment, and had materially affected her health and strength through interfering with due nutrition. The frequent passage of small particles of food "the wrong way" had often caused choking, and had gradually induced a dread in the patient to sit down to a meal, which was guardedly and slowly effected. The other symptoms—viz., fatigue on speaking, frequent swallowing, &c.—were well marked. The association of chronic inflammation of the adenoid tissue of other parts of the pharynx, which probably existed before implication of the same tissue in the tongue, is also suggestive, if we are to suppose that generally this process is an infective one, spreading from part to part after one locality in this region becomes affected. In this connexion it is to be observed that the drinking water used by the patient was probably polluted in some way. The unhealthy appearance of the patient also corresponded with that so frequently associated with granular pharyngitis, which I believe arises frequently (if not always) under insanitary conditions of one kind or another. As regards treatment, I know of no remedy short of galvano-cautery capable of meeting the necessities of the case. Its application is easily effected with the use of the mirror, and its action is local and precise. The pain, considerably assuaged by the previous use of cocaine, is trifling, and ends with its application, and little collateral œdema need be anticipated. The same cannot be said for chromic acid, which will spread, let it be ever so carefully used.

CASE OF PREGNANCY IN A RETROVERTED UTERUS,

WITH DISTENSION OF BLADDER AND SLOUGHING OF THE VESICAL MUCOUS MEMBRANE; RECOVERY.

BY J. G. G. CORKHILL, M.B. VICT., M.R.C.S., &c.

I HAVE to acknowledge my indebtedness to Dr. Barr, under whose care the patient was for kindly allowing me to publish this case. Although by no means unique, it is of sufficient rarity to warrant a notice by those members of the medical profession who in the performance of their daily task are liable to meet, and be compelled to cope with, the difficulties surrounding such cases. It does not in any way differ from other cases of its kind, the symptoms being straightforward and the signs unmistakable. Pregnancy, as is usual, appears to have taken place after the occurrence of the retroversion. A point in connexion with the after-treatment is that the uterus had to be washed out with an antiseptic lotion, owing to the retention of the secundines, which were not removed until the fourth day after delivery. Beyond a very slight febrile attack, lasting only about twenty-four hours, their retention appears to have been productive of no harm.

E. H——, aged twenty-eight years, married, applied as an out-door patient at the Stanley Hospital on Aug. 9th, 1886, complaining of very great difficulty in passing urine, which only came in drops, although the straining was very violent; and that her abdomen was also greatly swollen. Twelve months ago, whilst lifting a tub of water, she felt something give way in her right side, and in consequence had since not been able to lift heavy weights. Menstruation began at sixteen years; always quite regular except during pregnancy. Periods last five days; has never passed any clots, nor has she had any floodings. Has had five children, last eighteen months ago. Menstruation began three months after the last confinement, and continued regular until April, 1886. About the middle of July, during micturition, she was seized with very severe bearing-down pains, accompanied with cutting pain in the genitals and cessation of micturition. Since then micturition has always been very painful and scanty, and effected only by the most intense straining. Towards the end of July the abdomen began to enlarge, which it has continued to do until it reached its present size. Bowels are habitually constipated.

Condition on admission.—She is very anæmic and waxy-looking, and wears an expression of great anxiety. Well nourished. Areolæ of nipples somewhat pigmented, though not markedly so. In the lower part of the abdomen, but extending through the umbilical into the epigastric region, and invading laterally the lumbar regions, is a round, uniformly globular tumour, elastic, though fluctuation cannot be made out. Percussion note over tumour is absolutely dull, whilst the flanks are resonant. The top of the tumour reaches five inches and a half above the umbilicus

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abdomen at the level of the umbilicus measures forty-one inches. Per vaginum, the os cannot be felt with the finger. The whole of the Douglas pouch is blocked by a soft, globular, uniform tumour, which, pressing backwards, fills up the whole of the sacral curve. With the hand in the vagina, the os can just be felt above the pelvic brim. In front the pelvis is quite blocked by a soft, very elastic tumour. The vulva has a very congested appearance. Bowels very constipated.

An attempt was made to pass a catheter, which was unsuccessful, nor was this accomplished until after an anæsthetic had been administered on Aug. 10th., when six pints of very fetid urine were very slowly drained away.

Until Aug. 17th she appeared to be doing well, when she complained of aching pain in the lower part of the back, and in a few hours had a flooding. She was kept very quiet, and had some liquor opii sedativus; but on the 18th she had a miscarriage, the after-birth being retained. The uterus was washed out with a solution of carbolic acid (1 in 100) and tincture of iodine (one drachm to the pint).

She continued well until the 21st, when she had a rigor, the temperature rising to 103·2°, and the pulse to 132.

On Aug. 22nd the secundines were removed, and the temperature fell to normal, and the pulse to 108. Since admission the bladder has been washed out night and morning with a solution of quinine (two grains to the ounce).

Sept. 7th.—Has been fairly comfortable since last note, though the vulva has been very much swollen and exceedingly tender; catheterism has produced intense discomfort for some time, though she always feels much relieved when she settles down again. For the past week or ten days she has had incontinence of urine, not being able to hold it at all. The syphon had to be given up, and a double-eyed gum-elastic catheter substituted, as the lotion would only pass in, but not return. Since Sept. 1st a very thick, tenacious, foul-smelling discharge has followed the washings; so that on the 4th the quinine lotion was changed to one of boro-glyceride. Yesterday, protruding through the meatus urinarius, was a whitish-grey, tough, and sloughy-looking substance, on which slight traction was made, and as much withdrawn as possible, when it was cut off and the stump returned.

10th.—Night and morning since last note the same slough substance presented itself, and was treated in the same manner.

26th.—Now almost quite well; has no pain; can hold urine indefinitely; can wait about ten minutes after desire to pass it comes on.

Oct. 9th.—Up to-day. Feels weak. Urine still well retained. Slight deposit of muco-pus.

Nov. 3rd.—Feels very well. Urine still retained well; there is no deposit. Discharged cured.

Matlock.

SUPRA-PUBIC CYSTOTOMY.

BY ROBERT CRAN M.D., M.C.,
CIVIL MEDICAL OFFICER.

THE following case will probably be of sufficient interest to warrant its publication in THE LANCET.

B——, aged about thirty-five, a native of Chota Nagpore, and a new arrival in this province, was brought to my notice on April 12th last, with the following history and symptoms. As a child he had suffered every two or three months from difficult and painful micturition. As he grew older the symptoms became more pronounced and the intervals between the attacks of shorter duration, and for the last seven years he has suffered great and almost constant pain, with extreme difficulty of micturition and profuse hæmaturia. Occasionally small particles of stone were passed, and once, on taking some native medicine, a considerable quantity of grit came away. The patient is married, and has three children, all well; he is a big, powerful man, and fairly well nourished. On examination I found him passing blood in considerable quantities, and in great pain. The sound at once came in contact with a large calculus, lying across the mouth of the bladder, which I could neither move with the sound nor with my finger in the rectum, and calculated it to be about the size of a small goose's egg. Considering it too large either for lateral lithotomy or lithotrity, I decided, after consultation with M. Cantin, to perform the supra-pubic operation.

On April 24th the patient was put under the influence of chloroform, and as much carbolised water injected into the bladder as possible. A catheter was then passed and the point of it made to press against the anterior wall of the abdomen, to serve as a guide. I then made an incision about three inches long, commencing from the symphysis pubis, and in the middle line, and dissected down to the veins overlying the bladder, which I carefully separated with the handle of the knife before wounding the viscus. The stone was then seized with the forceps, but it was too large to be extracted, and the incision had to be enlarged before its removal. Small particles were broken off by the forceps. These were washed out, and the wound sewn up and dressed with carbolic dressing. A gum-elastic catheter was passed, and a dose of opium administered. Throughout the operation the peritoneum was not seen. The stone was composed of phosphate of lime, was kidney-shaped, weighed five ounces, and measured 3⅛ in. by 1¾ in. In the afternoon the patient complained of much pain, and had more opium given him.

April 25th: Morning temperature 99·8°; pulse 116. Pain somewhat less. Slept fairly well. Ordered a mixture of tincture of opium and dilute nitric acid three times a day; and to have milk, chicken soup, sago, and barley-water. Evening temperature 99·1°; pulse 108. Skin hot and dry. Passed about two ounces of urine by catheter.—26th: Temperature 99·6°; pulse quick. Slight tympanites. Tongue dry; skin hot. Ordered a warm water and castor oil enema, which moved his bowels and relieved the tympanites. Evening temperature 99·7°. Had a second stool. Tympanites less.—27th: Temperature 100°. Tympanites almost gone. Ordered another enema.—29th: Removed dressing; urine was discharged by wound, which was looking healthy and partly united. Patient well on the whole. Put in a fresh catheter, and dressed the wound with carbolic acid dressing. Appetite good. Continued the acid and opium mixture, also his milk, soup, sago, and barley-water. From this date the patient had an uninterrupted recovery. The urine was passed almost entirely by the wound for about three weeks. As the wound closed, the urine was gradually passed by the natural passage until May 28th, when the wound was closed. On June 3rd the wound was healed over, and the patient discharged on June 6th perfectly well.

Remarks.—I do not know that there is anything very worthy of remark in the above case, unless it be the persistent discharge of urine from the wound, which undoubtedly retarded the healing process. It is the first time I have had occasion to perform supra-pubic cystotomy, and I do not think it is such a satisfactory operation as lateral lithotomy where that operation can be performed. The wound is much longer in healing; the urine flowing from the wound keeps the patient continually wet and in a very miserable, filthy condition. The above case was in hospital forty-two days, whereas the longest time I have had a case of lateral lithotomy in hospital was twenty-three days, and the shortest nine days. I have operated on a good many children, and never found much difficulty in extracting the calculus with a nasal polypus forceps.

North Lakhunpur, Upper Assam.

A Mirror
OF
HOSPITAL PRACTICE
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quam plurimas particulares morborum et dissectionum historias, tam aliorum tum propias ipse diligenter habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

GUY'S HOSPITAL.

EPITHELIOMA OF THE LIP AND GLANDS [illegible] AFTER REMOVAL; EXCISION OF THE [illegible] TWO INCHES OF THE INTERNAL JUGULAR [illegible] POSURE OF THE DEEP VESSELS AND [illegible] GASTRIC SYMPTOMS; RECOVERY.

(Under the care of Mr. R. C[illegible])

We have recently given [illegible] epithelioma of the [illegible] growth [illegible] specimens of [illegible] [illegible] [illegible]

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was much less extensive, but involved the internal jugular vein (which was thrombosed above and below the invading growth), and the removal of the growth necessitated manipulation and separation of the pneumogastric nerve, which had been partly surrounded. The account of the symptoms which followed the operation and Mr. Lucas's remarks on the case will be read with much interest. We are indebted for the notes to Mr. Grosvenor.

The patient, a strongly built man, aged forty-seven, by trade an engine driver, was sent to see Mr. Lucas by Dr. Andrews on Oct. 13th, 1887, and he was admitted into Job ward on Oct. 17th. He stated that his parents lived to old age, that he was married, and had always enjoyed good health. He had never smoked or chewed tobacco. Six years ago he took a severe cold, and a sore then appeared on his lower lip, which refused to heal. Three years later he was struck on the lip by a lever of his engine, and received the blow, which knocked out a lower incisor, just on the sore. This made the lip more painful, and the superficial layer of skin and mucous membrane peeled off. About two years ago the lip became painful, and he found the sore extending. He then consulted a doctor, and the sore was burned with nitric acid. Caustic treatment was continued for fifteen months, but the glands becoming enlarged he was advised to apply to a metropolitan hospital for relief. This he did in June last, and underwent an operation for the removal of a portion of the lip and the submaxillary glands, which were enlarged, on both sides of the neck. He made a good recovery, but never was quite free from pain in the lip, and at times this was excessive, so he returned again in August, and had a V-shaped portion removed from his lower lip. He then went into the country, but whilst there he noticed the glands under the right sterno-mastoid muscle enlarging. Consequently he applied again at the same hospital, and was put under chloroform, but no operation was performed, as the disease was considered to be too extensive. This he only communicated after the operation, lest it should deter Mr. Lucas from operating, and he came determined to undergo it at all hazards.

State on admission.—He was suffering great pain, extending from the angle of the jaw to the clavicle, and shooting up on the side of his head. The lower lip was occasionally very painful, the inner side being inflamed, swollen, and tender to the touch. On the right side, extending from just above the angle of the jaw to an inch and a half below, and from under the sterno-mastoid to an inch in front of the angle of the jaw, was a large mass of glands hard to the touch, and not movable on subjacent parts.

Operation.—The pneumogastric nerve was dissected out for more than two inches, but the sympathetic nerve was not seen. At this stage of the operation the patient's breathing became very shallow, and his pulse feeble and slow. Ether was at this point substituted for the chloroform. The growth was then dissected up, and its superior posterior relations divided, the superior thyroid and lingual arteries being distinctly seen arising from the external carotid artery. The spinal accessory nerve was also dissected out, and seen to enter the sterno-mastoid muscle. The wound was then well sponged with carbolic acid lotion (1 in 40) and the edges brought together with wire sutures, a large drainage-tube, directed upward, being inserted where the incisions impinged upon each other. The wound was dressed with oiled silk protective and carbolic gauze strips sprinkled with iodoform, and a gauze bandage applied. Carbolic spray was not used, but during the operation the wound was saturated with carbolic acid lotion (1 in 40).

At 5.30 P.M. the patient was carried back to the ward and put to bed. He then had an attack of syncope, from which he was aroused by friction, during which the pulse was 44 and the respiration very shallow. Amyl nitrite inhalations were applied over the patient's mouth and nose and hot sponges to the chest, and subcutaneous injections of brandy were given. He then had an attack of vomiting, and appeared for a few minutes relieved. At 6.30 P.M. the patient's pulse was 44 beats per minute, and he was still lying in an unconscious state. At 7 P.M. the pulse quickened to 56, and he showed signs of regaining consciousness. An enema of an ounce of brandy was given, and afterwards enemata of milk and beef-tea were injected. At 11 P.M. the temperature was 99·6°, pulse 74, respiration 24, and all anxiety as to his condition was over. At 12 P.M. the temperature was 100·3°, pulse 72, respiration 22. The patient now had a sound sleep and perspired freely. At 1 A.M. the temperature was 100·4°, respiration 24, and pulse 74 (more irregular). The patient slept well, awaking about every hour. He then turned upon his side, and dosed again immediately.

Oct. 23rd.—The patient felt fairly comfortable; he had a good pulse. An attack of vomiting seized him in the morning. There was not much discharge from the wound, and it looked healthy.

24th.—The drainage-tube was withdrawn; the wound looked healthy, and there was but very slight discharge. He was put upon a liberal milk diet, with the addition of four ounces of brandy daily. The enemata were omitted.

25th.—The wound was dressed again, and an egg-and-milk diet ordered.

28th.—Five stitches were withdrawn, and patient was put upon middle diet.

30th.—The remaining stitches were removed, and a full diet ordered.

31st.—The patient left his bed for a short time during the evening.

Nov. 4th.—The wound is doing well. The incision over the anterior margin of the sterno-mastoid has quite healed, and the one under the jaw is showing signs of rapidly uniting. The patient feels uncomfortable about the condition of his lower lip, and wishes to undergo an operation "to entirely cure him."

8th.—Cocaine was injected hypodermically and also painted on the external surface of the lower lip over the old cicatrix. Mr. Lucas then made two convergent incisions, about half an inch apart, at the margin of the lip, extending to the angle of the chin, through the whole thickness of the lower lip; thus, a triangular piece of the lip was excised, including the old cicatrix; the two portions of the lip were brought together by means of two hare-lip pins, bound round with thread; four wire sutures were then inserted and the mucous membrane united by silk sutures; gauze dressing was then put over these and enclosed in a bandage.

9th.—Wound dressed, and appears to be uniting by first intention.

11th.—The pins were withdrawn and the stitches removed. The next day he left the hospital.

Description of the growth removed.—The mass removed measured an inch and a half by an inch, the long axis being vertical. It consisted partly of the carotid glands and partly of the sheath of the carotid artery, with about an inch and a half of the internal jugular vein. There were three glands, the highest being the size of a filbert, the lowest the size of a small bean. All three were hard to the touch, and on section showed hard whitish patches, which the microscope showed to be secondary deposits of an epitheliomatous nature. The glands were closely adherent to the sheath of the carotid, and this was adherent to the wall of the internal jugular vein over an area about the size of a threepenny-piece, situated about the middle of the anterior aspect of the part of the vein removed. On making a section of the vein at this point a white dense mass was seen to occupy the lumen of the vessel, which was here somewhat dilated. This mass was traceable through the vein wall directly to a small nodule situated on the carotid sheath. Microscopic examination showed these masses to be epithelioma infiltrating the wall of the vein and occluding its lumen. The rest of the vein was occupied by a partially decolourised clot, which contained no trace of growth.

Remarks.—So tedious and difficult an operation, involving the exposure of all the most important structures in the neck, and necessitating the removal of a considerable portion of the internal jugular vein, would not have been undertaken had not the patient been fully convinced that his only chance of relief was by operation, and firmly resolved to undergo anything that might lessen the pain from which he was suffering. So determined was he to submit to anything which might be prepared for his good that he kept back the fact from his surgeon how he had been under chloroform for an operation some weeks before, and it had been given up as too serious to be justifiable. The man's general health, however, was excellent, and his rapid recovery after the operation showed that no miscalculation of his recuperative powers had been made when it was resolved to attempt removal of the growth. The risks, then, depended on the immediate effects of the operation, and with these Mr. Lucas felt himself able to cope, even though the disease involved (as was proved) the main vessels and nerves of the neck. The dissection occupied two hours and a half, and it

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found necessary to remove two inches of the internal jugular vein which the growth had invaded. When dissecting out the pneumogastric nerve the patient's condition became somewhat critical, and it was found advisable to substitute ether for chloroform till the end of the operation. After the patient had been removed to bed the effect of the irritation of the pneumogastric was evidenced by syncope and a pulse of only 44. Stimulants of various kinds were administered, and he gradually regained consciousness, but it was not until five hours later that it was considered safe to leave him. It is certain that the symptoms were the direct effect of the pneumogastric irritation, as he lost scarcely any blood, and no spray was used which might have added to the shock. The pathological specimen was interesting as showing the little resistance the coats of a vein offer to the inroads of cancer, compared to those of an artery when equally exposed. The growth had not only penetrated but filled the lumen of the vein at one point, whilst clotting had taken place above and below. The sheath of the carotid artery had to be taken off, but the proper coats of the vessel were uninjured. After the first twelve hours there was never any anxiety as to his recovery, which was complete in a fortnight. Before leaving he insisted on having the old painful cicatrix in his lip re-excised, and this was done under the influence of the subcutaneous injection of cocaine.

WEST HERTS INFIRMARY.

CASES OF SURGICAL INTEREST.

(Under the care of Mr. F. C. FISHER.)

THE following cases are a continuation of those of last week:—

CASE 3. *Gunshot wounds of shoulder and of face.*—A. N——, aged twenty-four, married, was admitted on March 26th, 1887. At 5.30 A.M. on the day of admission she was fired at by her husband; she was lying in bed, and he standing by her on her right side. On attempting to shoot her she grasped the barrel of the pistol with her right hand; he, however, fired, and the bullet ran up parallel with the arm and entered the lower and anterior margin of the deltoid muscle. She then let go, and turned her head away from him, when he again fired, and hit her just in front of the junction of the helix and tragus of the right ear. She did not lose her consciousness, and walked to the infirmary, which was about a mile distant. On examining the patient at 9 A.M., the right hand between the forefinger and thumb was blackened by powder, the right cheek was swollen and shiny, and she presented wounds one-eighth of an inch in diameter at the above-named sites. She was seven months pregnant.

Operation.—On examining the wound in the head, the probe travelled downwards, forwards, and inwards through the tissues of the temporal fossa, and struck on the tuberosity of the superior maxilla. From that point the bullet had evidently bounded into the cheek. On the inside of the mouth there was a small bruise, evidently caused by counter-pressure against a tooth. An incision was made over that spot, and the bullet was believed to have been struck, but the soft parts overlapped it, and it could not be removed. On examining the shoulder, the probe passed four inches and a half upwards, backwards, and outwards, and lodged in the head of the humerus, which was splintered. The sinus was slit up sufficiently to allow the finger to examine the parts. Several small loose fragments of bone were removed, and then the bullet was seized with forceps and extracted. It was firmly wedged in the bone, and required some little force to be used. A drainage tube was inserted, and the wound treated with the usual Listerian precautions.

During the operation labour pains set in, and she was delivered of twins the next morning. A good deal of fever followed; the temperature gradually rising to 104·4° F. on the sixth day. Uterine discharges natural, no abdominal pain. Cheek much swollen and fluctuating. An abscess was opened externally on the cheek, but the bullet could not be struck by the probe. Shoulder wound healthy. The temperature rapidly fell after this, being 99° on the eighth day. From this point she went on steadily improving. On April 29th, thirty-three days after the occurrence, the bullet, now being plainly felt, was cut down on and levered out of the wound. The wound rapidly healed. On June 9th the patient was discharged, with the sinus in the shoulder not quite healed. One month afterwards she returned, the shoulder being quite sound and with good movement.

Remarks by Mr. FISHER.—I am inclined to think that the fever she had was the result of the abscess in the cheek. It certainly was perplexing to know how to deal with a woman in the parturient state and with two bad bullet wounds, accompanied by a temperature of 104·4°. The way in which the loose tissues of the cheek kept rolling over the bullet was most annoying. It seemed impossible to fix it, especially as I did not want to leave a large scar on the cheek. The resulting scar is not more than half an inch in length, and is not puckered. The bullets demonstrate by their markings the course they travelled: the one with a deep cut in one side, but otherwise fairly preserving its shape, being the one from the humerus where the hard cancellous tissue cut the bullet like a chisel; the other, with a long, smooth side, caused, I take it, by gliding past the inner surface of the zygoma or else the temporal fossa.

CASE 4. *Genu valgum on both sides; osteotomy on the left side; cure.*—G. O——, aged nineteen, was admitted on March 31st, 1887. Three years ago he was an in-patient at the infirmary for genu valgum, but declined treatment. The legs becoming worse, he reapplied to have them operated on. On admission, he presented a condition of well-marked genu valgum, the inside measurement between the heels being ten inches. The deformity was greater on the left side. On April 15th, after consultation, it was decided to operate on the left femur by Macewen's method; this was done under antiseptic precautions, and the limb brought straight. The case ran an aseptic course, finally leaving an elongated ulcer at the site of incision. This was healed by May 16th, when the limb was put up in plaster-of-Paris. He was discharged, walking with the help of a stick, on May 26th. He returned in six weeks' time, and had the plaster removed. The joint required a little passive motion, and then all the ordinary movements returned.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Trephining in Brain Disease.—Serious Brain Symptoms following Pyæmia.

THE opening meeting of the Surgical Section of the Academy was held on Nov. 11th, A. H. Corley, M.D., President, in the chair.

The PRESIDENT delivered an inaugural address outlining the history of surgery for the past fifty years.

Mr. J. DALLAS PRATT read a paper on a case of Mastoid Disease with Discharge of Pus from the Middle Ear, in which he had successfully trephined, the trephine being applied on the spot indicated by Mr. Wheeler, so that the crown of the instrument was anterior to a line bisecting the mastoid vertically and the lower border of the crown, on a level with the external auditory meatus. The membrana tympani was perforated, and there were pain and tenderness in the mastoid region, with deafness. After the operation, which opened the mastoid cells, the middle ear, and the cranial cavity, the patient's temperature only rose above normal on one evening. The pulse never exceeded 80. The patient made a good recovery. The discharge from the ear ceased, and the membrana healed up; the deafness also disappeared. Mr. Pratt drew attention to the statistics, thirteen cases having been operated on in this manner with only two deaths, or 84 per cent. of recoveries; whereas the operation of gouging, drilling, or opening the mastoid cells by means of a bit produces a mortality of about 27 per cent. He advocated the use of the trephine, even if the mastoid cells alone were to be opened, as being more manageable and safer than the other instruments, and drew attention to the fact that of eight cases in which no operation was done, there had not been a single case which recovered. He advocated the performance of this operation in cases of prolonged otorrhœa, where milder measures had failed, even when no bone disease was present.

Mr. MAYNE (Longford) read a paper on Serious Brain Symptoms following Pyæmia. A. B——, aged twenty-seven, who had a slight scratch on her finger, had been dressing a wound. A few days afterwards the finger got sore; the

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glands in the axilla also became enlarged and inflamed. These symptoms passed off, but after some days the throat got sore and an abscess formed in the tonsil, which was opened, when a quantity of pus escaped. Soon after this the parotid gland inflamed, suppurated, and burst into the external ear, through which pus freely escaped. After sitting at an open window in a draught, paralysis of the left side of the face set in, which was cured by counter-irritation and galvanism. She complained, after some days, of severe pain in the right side of the head, and was very irritable. Anodynes were given, which had very little effect in relieving the pain or procuring sleep. The vision of the right eye became impaired; she complained of tears flowing into the right eye, preventing her seeing, and the pupil was contracted. After a drive in a very easy carriage, she became more irritable, and could not sleep. She had a severe rigor, and declared she could not bear the pain of the right side of her head. There was paralysis of the right side of the face, tingling of the left arm, she dragged the left leg, the right pupil was dilated, and she misapplied words. For some days the symptoms became more marked. Mr. Fitzgibbon trephined the left mastoid, but on removal of bone there was no sign of pus. For several days all the symptoms appeared aggravated, the paralysis being well marked, and the sphincters also paralysed. After some days the paralysis passed away, but was succeeded by noisy delirium, which continued for several weeks. Counter-irritants were applied to the head. Tonics, iodide of potassium, and iron, with cod-liver oil, were given internally. Eventually health was restored, and the mind became normal. Mr. Mayne was unfavourable to the trephining of the mastoid, although the patient had had in early life otorrhœa after scarlatina, but the discharge had not been present for years, and as during that time she had not been troubled with any brain symptoms, he saw no grounds for believing that trephining the left mastoid would benefit the case. All the symptoms pointed to brain trouble on the right side, probably about the fissure of Rolando. Had there been any evidence of mastoid trouble, such as Mr. Wheeler records on p. 61, vol. i., of the Academy's Transactions, he would not have been so opposed to the operation.—Mr. HENRY FITZGIBBON regretted the want of notice of Mr. Mayne's paper, as he would have liked to consult his notes of the case, it being the subject of a paper which he himself read before the Academy last session; but speaking from memory as to the condition of the patient at the time of the operation, he was satisfied the disease had originated from inflammatory action extending from the left mastoid region. It seemed to him that the lady had had otorrhœa more recently than Mr. Mayne mentioned. At any rate, her state appeared to Mr. Wheeler and himself to be perfectly hopeless, except, as the only chance of recovery, by giving relief to some pent-up intracranial matter. While admitting that trephining the mastoid process was not unequivocally indicated, all he proposed to do was to trephine where he thought trephining would give relief.—Mr. BENNETT submitted that diagnosis should be carried forward to a greater degree of certainty than was at present attained before adopting Mr. Pratt's rule, that the trephine should be applied in almost all cases of otorrhœa where the discharge was maintained a considerable time and did not yield to other means. He had investigated two or three cases in which the path of fatal inflammation proved to be along the auditory nerve to the base of the brain.—Mr. THOMSON said Mr. Mayne's case raised some interesting points, as being one of pyæmia. The lady, from Mr. Mayne's version, seemed to be suffering from left hemiplegia, and the trephining took place on the left mastoid process, or in that region. He wished to know from Mr. Wheeler, who consented to the operation, why, having regard to the localisation of functions, that particular position was selected; and whether he considered that the removal of a piece of bone from the left mastoid region was calculated to improve hemiplegia occurring on the same side. It appeared from Mr. Henry Fitzgibbon's statement that no pus appeared until the fourth day, when it was manifest. There was nothing remarkable in that. If a piece of bone was removed and the case allowed to go on for four days, unless the wound was strictly aseptic, it was not an unlikely condition that there should be pus. The symptoms produced by pressure were explained by the pus pent up in the wound for a certain time.—Mr. WHEELER, like Dr. Fitzgibbon, regretted he had no notice of Mr. Mayne's paper, which was similar to a case operated on sixteen months ago by Dr. Fitzgibbon, who had communicated the details already to the Academy. It was difficult after so long an interval to recall in a moment the particular condition of the case. He concurred in the remark that trephining should not be used indiscriminately for the cure of otorrhœa. There were cases which could be satisfactorily treated by other means. But, in cases of prolonged discharge pressing through an opening in the membrane, the operation was indicated; as also in cases associated with bone disease, and where cerebral symptoms supervene from continued or suppressed discharge.—Mr. FRANKS said the impression left by Mr. Henry Fitzgibbon's paper was, that Mr. Mayne's case was probably a pyæmic one, and there was no reason why the patient should be trephined on the left any more than on the right. He entered a protest against wholesale trephining of the mastoid process. Dr. Myles had called attention to a skull upon which he showed that Mr. Wheeler's method would open the lateral sinus. He, too, had another skull himself, which would show that operating in the same place the trephine would go into the middle of the lateral sinus.—Mr. PRATT, in reply, said he would undertake to trephine by Mr. Wheeler's method the skulls referred to by Dr. Myles and Dr. Franks, without going into the lateral sinus at all. It should be remembered that the lateral sinus was not opened in any of the cases in which that method was adopted. The treatment was iodoform and boracic acid; injections of perchloride of mercury and boracic acid. He disagreed as to the desirability of waiting for intracranial symptoms, believing that by so waiting nine-tenths of the cases would die. No insurance company would grant a policy where there was otorrhœa, and hence the disease was looked upon as more serious than Dr. Franks thought. He did not regard abscess of the ear as a rare complication.—Mr. MAYNE also replied.

MIDLAND MEDICAL SOCIETY.

A MEETING of the above Society was held on Dec. 7th, Mr. Ross Jordan, President, in the chair.

Compound Fracture of the Femur.—Mr. A. F. MESSITER showed a boy aged fifteen, who was admitted to the Queen's Hospital on March 31st, under the care of Mr. Bennett May, with a bad compound fracture of the femur. The lower end of the upper fragment was protruding through a large wound on the outer side of the limb; the ends of both fragments were stripped of periosteum for about two inches. Under an anæsthetic the fracture was reduced, an extension apparatus applied, the trunk and limb firmly fixed on a Thomas's hip splint, and a free incision made through the muscles and skin at the back of the thigh to provide for drainage. At the end of fourteen weeks union was firm. Two sinuses led down to the necrosed bone, of which four fragments were removed at the end of five months from date of accident. After another two months all wounds had healed, and the patient was getting about with one inch of shortening.

Unilateral Facial Atrophy following Puerperal Eclampsia. Dr. BARWISE showed a woman, aged forty-three, who had been perfectly healthy until confined of her fourth child eighteen years ago. After the confinement she had convulsions, and her husband noticed that she was looking old; the hair on the right side came off in considerable quantity. She became subject to fits, which she continued to have for two years and eight months, when she was delivered of a son. This boy was an epileptic imbecile; no fits have occurred since his birth, but her face has continued to atrophy on the right side. Dr. Barwise considered that the cause of the lesion is probably pressure upon and destruction of part of the fifth nerve (as it passes from the pons along the base of the skull) by an effusion which took place during the puerperal convulsions.

Dr. SAUNDBY read a paper on Hæmaturia.

Epiphysitis of Femur.—Mr. BARLING showed a boy, aged six years, who had suffered from epiphysitis with acute inflammation of the knee joint. When admitted to hospital the knee was hot, swollen, and very painful, but there was only a small amount of fluid in the joint; the evening temperature was 102°. The limb was fixed on a McIntyre splint and the joint was kept cool, but the constitutional disturbance was severe, the temperature reaching as high as 104°. Ten days after admission some thickening was detected on the outer side of the femur immediately above the joint; two days later, the skin over this being red and œdematous, an incision was made. No pus was found, only

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granulation tissue, evidently arising in connexion with the epiphysis. The inflammatory material was scraped away and the cavity drained. This was followed by decided improvement, both local and general, but nine days later the temperature had again risen. Examination detected thickening in the popliteal space. This was incised, and a condition similar to that on the outer side found, which was treated in the same manner. From this time the joint steadily progressed to recovery, and now, three months later, the patient is free from pain, is able to flex his knee to a right angle, and gets about on it as freely as he ever did.

Aphemia.—Dr. SUCKLING showed a case of aphemia. The patient, a girl aged nineteen, was suffering from paresis of the right side of the face and right hemiplegia with late rigidity, the deep reflexes with ankle clonus being well marked on the right side. No history of syphilis, rheumatism, Bright's disease, or of the specific fevers could be obtained. On Jan. 10th last she was suddenly attacked while sitting at work, losing consciousness, and being paralysed on the right side; the coma lasted about one hour. She had complained of headache for some days before the attack. She never spoke after the attack for a week, when she said the word "mother," and later on said "yes" and "no." After a considerable stay in the hospital she could say "sister," "yes, sir"; when told to repeat a word, she would say "sister," "mother," words that she had previously recovered, and which were mainly automatic. She understands what is said to her; she can read, also write with the left hand, there being no sensory disturbance and no agraphia. Dr. Suckling pointed out that the aphasia was probably both sensory and motor at the onset, the sensory disturbance having been recovered from, it being very unusual for a pure motor aphasia to accompany severe hemiplegia. Since the onset of the hemiplegia she has had several attacks of Jacksonian epilepsy on the paralysed side (pointing to cortical mischief). Dr. Suckling considered that the lesion was probably thrombosis of the left middle cerebral artery, the branch to Broca's convolution being occluded, softening of the internal capsule and third left frontal convolution having followed. The other cortical centres for speech probably recovered from the establishment of a collateral circulation, the patient's age favouring this supposition. There was no change in either fundus oculi, and no albuminuria or heart mischief.

Obstructed Bile Duct.—Dr. HOGBEN exhibited the liver removed from a woman eighty-nine years of age. The common bile duct was widely distended by a hard mass of inspissated bile. The gall bladder contained a little bile mixed with mucus. There was no bile in the duodenum, and no jaundice was observed.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

A MEETING of this Society was held on Dec. 8th, Dr. G. H. Hume, President, in the chair.

Cicatrix on Arm of Girl.—In the absence of Dr. Heath the patient was exhibited by Dr. OLIVER, who drew attention to the fact that she was now brought for the third time before the Society to show the result of treatment. At various stages of the disease chloride of zinc paste and grafts of skin had been applied, and the result was a useful arm.

Excisions of Joints.—Dr. HUME exhibited two cases of excision of the knee; in both ivory pegs were employed, some of which, when removed, were found to be eroded. Dr. Hume also exhibited a boy whose ankle joint he had excised, also successfully, for deformity arising from injury.—Dr. ARTHUR CAMPBELL exhibited a girl whose knee joint he had excised twice. Though the operation had to be performed amidst most unhealthy surroundings, the patient made an excellent recovery.—Mr. RUTHERFORD MORISON exhibited a case showing the result of excision of the elbow joint, and another case showing the result after removal of two inches and a half of the lower end of the fibula. An extensive dissection had to be made in the latter case to allow of the removal by means of the chisel of a cartilaginous tumour. This has not returned; the patients walks quite well. In the former case movement was begun on the fourth day, and has been continued ever since.—In the discussion which followed, Dr. ARNISON alluded to some of his excisions of the knee, in one of which a movable joint had been obtained; and that whilst as a matter of fact the joint, though movable, had become stiffer of late, his opinion was that a stiff joint gave the best results.—Mr. CROFT (St. Thomas's Hospital) concurred with the previous speakers as to the advisability of the operation. He gave up some time ago the use of ivory pegs, having had excellent results from the employment of platinum wire sutures.

Traumatic Dislocation of both Lenses.—Dr. MURPHY exhibited a man from whose right eye he removed a lens dislocated by accident, and who a few months afterwards again presented himself with the lens of the other eye dislocated. This he did not remove; it is now undergoing absorption.—Mr. WILLIAMSON spoke in favour of removal of the lens in these cases.

Leucoplakia of Tongue.—Dr. MURPHY exhibited a man whose tongue presented well-marked characteristics of this disease. The patient had improved under treatment by arsenic and iodide of potassium internally. He thought that most of these cases became cancerous ultimately.—Dr. DRUMMOND regarded most of them as syphilitic.

Excision of Condyle of Lower Jaw in a Boy.—Mr. PAGE exhibited this patient. An account of the case has already appeared in the journals.

A Man whose Spinal Accessory Nerve was Stretched for Torticollis following Injury to Neck.—Mr. PAGE exhibited a patient. The result was in every way satisfactory.

Mitral Stenosis.—Dr. DRUMMOND exhibited a patient, a girl fifteen years of age. Over and internal to the apex beat could be heard a well-marked presystolic murmur. The murmur was loud, rough, and prolonged, began almost immediately after the second sound, and ran up and ended in a snap, which he regarded as the termination of the first sound of the heart. He could not accept the views which had lately been put forward in a revived form by Dr. Dickinson, that the murmur which was heard in this case was one of mitral regurgitation. To him, the murmur was heard so distinctly in the post-diastolic or presystolic period, that time could not have been given for the left ventricle to fill, much less for regurgitation to be taking place. The strong impulse felt over the apex area in many of those cases was no argument, to his mind, against the murmur being presystolic, as from the extended area of cardiac dulness noticed in many of these cases he was of opinion that the largest part of the pulsation was due to the action of a dilated and hypertrophied right ventricle.—Dr. OLIVER supported Dr. Drummond in regard to the case being one of mitral stenosis, and as to the murmur being presystolic; he considered the case to be one of pure and uncomplicated mitral stenosis; if regurgitation was present it was extremely slight. He agreed with Dr. Dickinson as to the existence of a diastolic murmur at times over the mitral area, and said that in many of his cases of heart disease, where aortic regurgitation was absent, he had frequently diagnosed mitral stenosis from the presence of a murmur there, diastolic in rhythm, and almost always associated with a systolic, and post-mortem examination had confirmed the diagnosis. But he still believed in the presystolic time of the murmur of mitral stenosis, and also pointed out that, from the murmur so closely following upon the second, time was not given for the murmur to be one of mitral regurgitation. The pathological changes found in the walls of the left auricle and right side of the heart were, in his opinion, capable of explaining the loudness of the murmur.—Dr. FINLAY (Middlesex Hospital) thought the question was only to be settled by appealing to facts. On examination the long rough murmur ceases as the systole of the ventricle is felt by the finger on the carotid artery. If the murmur therefore ceases with the beginning of the ventricular systole, he did not see how the murmur could be anything but presystolic. The point of greatest intensity of the murmur was also a matter of importance, the murmur of mitral regurgitation is heard at the inferior angle of the left scapula, never that of mitral stenosis. This, he thought, was proof of the fact that the current of blood which created the murmurs was passing in opposite directions.—Dr. DICKINSON (St. George's Hospital) thought the murmur was due in this case to mitral regurgitation. He had pushed his finger deeply into the intercostal muscles, and had felt the contracting wall of the ventricular wall before it reached the chest wall, and he heard the murmur beginning with the appearance of the ventricular impulse. He could not accept Dr. Drummond's view that the impulse was derived from the contracting right ventricle, nor did he think that any help could be got from the hypertrophied condition of the wall of the left auricle, to which Dr. Oliver had

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Whilst admitting with Dr. Finlay that the murmur of mitral regurgitation was frequently heard at the inferior angle of the scapula, he had also heard there the murmur which other observers had spoken of as presystolic. He thought that the conduction of the murmur to the angle of the scapula depended upon the volume of blood that was regurgitating through the mitral orifice.

Owing to the length of the discussions, Dr. Mantle's paper on Traumatic Tetanus and Dr. Limont's paper on Adenoid Vegetations of the Pharynx were taken as read.

Notices of Books.

St. Thomas's Hospital, Southwark. Part 2. By W. RENDLE, F.R.C.S. (Reprinted from the Transactions of the Royal Society of Literature.)—This interesting pamphlet is a continuation of "a short sketch history of St. Thomas's Hospital in Southwark, from about A.D. 1200 downwards, chiefly from original manuscripts," which we were able to notice favourably at the time of its publication a few years ago. The hospital seems to have borne several names. Mr. Rendle says—"I may note the changes, according to the whim of the time, in the name of our hospital. The Hospital of St. Thomas Overy—that is, of Thomas of Canterbury, less respectfully 'Bekket's spyttell'; the Hospital of the Holy Trinity; speedily changed, out of compliment to the generous re-founder, Edward VI., to the King's Hospital; and finally, and as it is now, the Hospital of St. Thomas the Apostle." Here is a picture of a hospital staff more than three hundred years ago: "In 1571 a 'phesyssion,' Mr. Bull, is appointed at a salary of twenty marks by the year, and to have a house in the Close; he acts as general doctor, superintends the apothecary and his drugs, but professionally is in a position subordinate to an official governor who has no pretence to a knowledge of medicine. The surgeon is at this time not much more than a curer of sore heads and a mender of broken bones, and has for competitors outsiders, curers of sore heads and bone-setters. The surgeon, as we see, works under the pressure of having his unsuccessful cases handed over to them, who *if they cure* are paid—an early instance of the 'no cure, no pay' system. In 1632 the apothecary is side by side with a herb-woman who has £4 a year for physical herbs. In 1652 a midwife is paid 2*s.* 6*d.* for her help to two poor women; long before Mother Edwyn engages to cure a boy of hernia for 13*s.* 4*d.*, half of which she will return if she fails." The surgeon comes in the list of officers between the shoemaker and the barber, and even in 1647 was not allowed to prescribe medicine, that function being restricted to the physician, who, however, in common with his surgical colleague, appears to have been considered as of infinitely less importance than not only the treasurer, but the cook, the butler, and the shoemaker!

Four Months among the Surgeons of Europe, being a series of letters to Dr. Chr. Fenger. By N. SENN, M.D., Ph.D., of Milwaukee, Wis., Chicago. 1887.—These letters were originally published in the columns of the journal of the American Medical Association, but they are well worthy of being reprinted in a separate form. They describe in a brief and pithy way what Dr. Senn saw in a four months' tour among the surgeons of Europe, and they are very useful as affording a picture of contemporary surgery. Dr. Senn is evidently a keen critic, but not an unkindly one, and his judgments are not warped by preconceived notions, by prejudice, or by the dictates of authority. At one time we find him speaking enthusiastically of a young and unknown worker, and at another running away from Thiersch because he had nothing to teach him. Dr. Senn was evidently not greatly impressed with London surgery, and he gives a painfully detailed account of an operation he witnessed. But it is only fair to add that Dr. Senn did not devote sufficient time to London, and he did not visit several of the principal hospitals, or meet many of the leading surgeons. The letters are very frank, written as probably only an American enjoying a "good time" could write them, and readers will get many a laugh from them.

Alassio: a Pearl of the Riviera. By Dr. JOSEPH SCHNEER. Pp. 80. London: Trübner and Co. 1887.—The author states in the introduction that his sole desire is to attract to this "Pearl of the Riviera" the attention of those who seek, far from the noise and bustle of the great world, a peaceful retreat amid lovely and romantic scenery. The book therefore is mainly a guide to Alassio, giving its history from the earliest periods, a description of its present condition, and an account of the various charming and easy excursions which may be made from it. The only specific information relating to its climate is contained in five pages of meteorological observations. It is, as we know, a beautiful spot, but there is little said of its sanitary condition, which, we fear, is not up to the mark. On the important subject of water the author remarks: "There is still much to be done in Alassio for the provision of a proper supply of water. Spring water is only to be had at particular spots, and the inhabitants have to content themselves for the most part with pumps. Financial difficulties have hitherto stood in the way of the laying down of pipes in order to bring a proper supply of water into the town."

The Influence of Sex in Disease. By W. ROGER WILLIAMS, F.R.C.S., Surgical Registrar to the Middlesex Hospital, Surgeon to the Western General Dispensary. London: J. and A. Churchill.—Mr. Williams has in this little work brought together a number of facts collected from the reports of the Middlesex and other hospitals bearing on the influence of sex in disease. He has compiled tables showing the diseases which affect each sex specially, in which the diseases are arranged in the order indicating relative liability. The table of female affections begins with those of the generative system and ends with phthisis, while the corresponding table for male affections commences with stricture of the urethra and ends with apoplexy. Regarding typhoid, the late Dr. Murchison believed the sexes equally liable, but, according to Mr. Williams, more males than females are attacked; on the whole, however, more females die, they being more liable to the accident of perforation than men.

Too Curious. A Novel. By EDWARD J. GOODMAN. London: Richard Bentley and Son. 1887.—The late John Stuart Mill foresaw the day when music would cease to be composed, as every possible combination of sounds had already been put together. In like manner certain critics of the "present state of the novel" are recommending young authors to try romance, as the novel of real life is dying of inanition from the exhaustion of its materials. "Too Curious" is Mr. Goodman's answer to these gentlemen. He has shown that, by making no greater demand on the credulity of his readers than others of his contemporaries, he can construct a fresh and interesting novel of real life from the people and the events that live and move around us. For the medical public "Too Curious" has special interest, not only for its sketches of hospital interiors and of every-day practitioners—Dr. Redmond is a character in point,—but for the happy use it makes of the phenomena of disease, especially of hysteria and catalepsy. Let any of our prolific young novelists do as Mr. Goodman has done—make a study of pathology as it affects real life,—and a whole world of interesting "developments" in character and situation will be revealed to him for the exercise of his flagging invention. We are not going to unravel the plot of "Too Curious." We shall have done enough if we have sent our readers to a novel of contemporary life which touches at many points on t

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profession and its subject-matter, and which is not only of keen interest as a narrative, but is written in a flowing and graceful style which enhances the pleasure of its perusal.

Illustrations. Edited by FRANCIS G. HEATH. London: W. Kent and Co.—This volume, as one of the books of the season, is worthy of praise. The engravings, as a whole, are really excellent, whilst the articles are undeniably sound and good. It is not easy to conceive of a more fitting new-year's gift than this book would prove to an intelligent juvenile of either sex, and persons of more mature growth might well occupy a little leisure in scanning its pages.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

[SECOND NOTICE.]

RECALLING the circumstance that the subject of scarlatina and its relation to disease in bovine animals, which forms an important part of Dr. Buchanan's last report, was largely dealt with in our issue of Dec. 17th in connexion with Dr. Klein's and Professor Crookshank's papers, and reminding our readers that the discussion on the subject at the Epidemiological Society will take place on January 11th next, we pass over that portion of the present report which deals with that subject and go on to advert to some of the other more purely scientific labours that are recorded in the volume.

The subject of tubercle has long been one which demanded the closest investigation in relation to public health, and owing to the allegation, during recent years, that the use of the milk of cows suffering from tuberculous disease was calculated to induce that disease in the human subject, it has become more than ever imperative that the department, having, as a duty, to maintain a general supervision over the health of the country and to guide sanitary authorities in their action, should do all it can to elucidate the circumstances under which this important infection may be communicated and spread. On the one hand, we have the serious fact that a large number of otherwise good milch cows are tuberculous, especially those which are stall fed and are kept in towns; and on the other, the more hopeful aspect of the case, that so far there is no evidence of tuberculous infection in milk itself. Dr. Klein and Mr. Lingard have made further investigations into the etiology and pathology of tuberculosis. In the direct inoculation of fowls with both human and bovine tubercle, the results now obtained are found to differ somewhat from those previously recorded. As to human tubercle, the last experiments show that it has been less readily communicable to fowls, and it can as yet only be suggested that this may be due to a difference of breed experimented on. Out of eighteen fowls infected with bovine tubercular matter five developed well-marked tubercle; whereas on the former occasion four fowls experimented on proved all of them refractory to bovine tubercle. The reversal in this case, too, may perhaps be due to the fact that the fowls last used were of a different breed to those used formerly, and this question of breed raises considerations that will have to be further examined into. Other experiments, made with a view of ascertaining whether tubercular virus by its passage through the fowl undergoes any and what alteration of virulence, go to show that by its passage through the fowl the bovine tubercular virus gains, so far as the fowl species is concerned, in virulence, fowls becoming more susceptible to it, and developing it in an exceptionally short time. It has also been ascertained that, just as in other constitutional affections the marrow of bones tends to become seriously implicated, so as regards tubercle the marrow is the seat of the earliest manifestation of induced general tuberculosis, the red marrow of long bones of rodents becoming affected before any deviation from normal conditions can be detected in any of their tissues and organs remote from the point of experimental inoculation. We have here an addition to the knowledge which pathology has supplied as regards this disease for the purposes of preventive medicine, and we find in it a further inducement to proceed with the investigation of an infection which is so widespread and so fatal in this country.

Dealing with the question of protection against infection by the agency of fluids in which infective bacteria have grown, Dr. Wooldridge records that he has obtained a "fibrogen" in which he has grown the anthrax bacillus, and after having separated the organism from the fluid in which it has grown, he is able, by introducing this fluid in considerable quantity into the venous system of an animal, to prevent the development of anthrax in its virulent form when the poison is simultaneously introduced under the skin. In fact, he hopes that he may be able soon to produce a fluid that can be trusted to furnish with constancy a complete protection against inoculated anthrax. "These researches on anthrax," writes Dr. Buchanan, "have to be regarded as introductory to observations on the material of other diseases, and the whole may be expected to be of the highest practical importance to preventive medicine."

Professor Cash, in continuing the researches as to the value of certain disinfectants, and using for his experiments the contagia of anthrax and of tubercle, finds, as regards the disinfecting abilities of chlorine, bromine, and iodine, that the degree of dilution of the agent and the thoroughness of the exposure to its influence constitute elements in the destruction of morbific properties which several viruses possess; and, estimating the relative potency of the several agents, he finds that the three agents do not show any very remarkable difference the one from the other, though iodine appears the most, and chlorine the least, potent. Both as regards these substances and sulphurous acid, Dr. Cash finds reason to prefer solutions to gases; but if a disinfectant in a gaseous form is needed, then he prefers that it should be sulphurous acid. To one important point in Dr. Cash's report Dr. Buchanan desires to give prominence—namely, where he "points out afresh the consideration, too often lost sight of in practice, that, inasmuch as quantity of the disinfectant counts for so very much in the destruction of any disease-producing material, it is necessary to take account of the assimilation, by harmless material, of the agent designed to disinfect; wherefore the quantity of the disinfectant used must be proportioned to the amount of such other material, as well as to the amount of actual morbid matter to be destroyed."

Further experiments are in progress by Dr. Klein as to the disinfection of pathogenic organisms by perchloride of mercury, he seeking to recognise the limits of attenuation available for practical use, so as to give insusceptibility to animals to whom the virulent infection of anthrax may subsequently be introduced; he is also extending similar researches to other bacilli, and to the micrococcus of scarlatina. Research is also being made into the chemistry of potable waters, with especial reference to the life history of their contained organisms; but these, together with certain related biological observations, are not yet ready for publication.

Taken as a whole, the volume under consideration must be regarded as one of the most important ever issued. Some of the matters dealt with in it, and notably that of metropolitan small-pox isolation, have been brought to a stage at which they need to be dealt with administratively, and a strong public demand in this direction can hardly fail to arise, unless the initiative is taken by those who now have the matter in hand. London must not go on blindly spending its thousands sterling on these hospitals without knowing absolutely and definitely where it is drifting. The stage reached as to the question of scarlatina and of tubercle in its relation to disease in the lower animals, is also one of grave importance to the public health; and it is clear that, if ever there was a time when the State should prosecute further research into the etiology of infectious diseases, it is the present one. The other labours we have adverted to have a different bearing on the prevention of such diseases, but the knowledge already acquired is of the utmost importance, and it promises the best results in its application to the promotion of public health. We wish that the State could understand how the prevention of disease would be advanced by placing this and similar official records in the hands of all medical officers of health, for it is of the first importance that local advisers should be placed in possession of the most recent scientific information bearing upon the duties they have to perform.

FATAL FOOTBALL ACCIDENT.—While playing on the 28th inst. at Abercarne, a football player was struck by the ball in the abdomen, and, falling to the ground, immediately expired.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 31, 1887.

THE ANNUS MEDICUS 1887.

Introductory.

THE year 1887 will be memorable in English history as the year of the Jubilee of Her Majesty Queen VICTORIA'S reign. Few arts have undergone greater development in this period than that of Medicine. In the history of Medicine itself there have been few epochs more signal than the half-century just closed, which has seen the introduction of anæsthetics, of the antiseptic treatment of wounds, of the pregnant discoveries of the part played by living germs in many diseases, and the recognition by the State and by Local Authorities of great responsibilities for the prevention of disease. This aspect of the time that is so inseparably associated with Her Majesty's reign has naturally been recognised by the various medical authorities of the kingdom. We, too, recognise it with gratitude and with pleasure, as we do the obligations of Scientific Medicine to Her Majesty and her illustrious family for constant favour and help. The year itself has not, perhaps, been signalised by any startling additions to medical knowledge, but our columns show signs of unabated energy in the profession, mingled with more care and painstaking in practice and in medical reasoning than at any prior period, with growing hopefulness and success in the treatment of hitherto almost hopeless forms of disease.

Anatomy and Physiology.

The subjects of Anatomy and Physiology have been illustrated and enriched by many original papers—the majority, as usual, proceeding from the indefatigable German workers.

In Anatomy, GRAPOW has given an excellent description of the palmar fascia in the *Archiv f. Anatomie und Physiologie*—a subject that is of great importance from a surgical point of view, and one which received the special attention of DUPUYTREN. In opposition to the statement generally made in works on anatomy, that the radicles of the venæ portæ are destitute of valves, HOCHSTETTER has demonstrated their presence in the vasa brevia of the stomach, which, however, is not perfectly new, since their occurrence in these vessels has been noted by both BAUER and SAPPEY. HOCHSTETTER gives a good description and accurate drawings of them. The muscles of the external ear have been carefully worked out by TATAROFF, and the vena saphena magna has had a long chapter devoted to it by KARL KLOTZ, dealing especially with the arrangement and disposition of its valves. BRAUNE and FISHER have published an elaborate series of tables, the result of much labour, giving the length of the fingers and metacarpal bones of the human hand.

In Physiology, Dr. WOOLDRIDGE has demonstrated the remarkable influence of the stroma of red blood-corpuscles on the coagulation of the blood, for if this be isolated by the action of an ethereal solution of an alkali and subsequent precipitation by acid, and be again dissolved in a little alkali, a fluid is obtained which, when injected into the veins of an animal, causes extensive and often fatal coagulation of the blood. On the other hand, the solution of the red colouring matter has no influence on coagulation. The remarkable action of the stroma of the blood-corpuscles appears to be due to the presence of lecithin. The observations of LANGLEY and EDKINS on pepsinogen and pepsin show that alkalies have a very destructive influence on pepsin, so that when equal parts of a solution of pepsin and a 1 per cent. solution of soda are mixed, one-half of the pepsin disappears in the course of fifteen seconds. Even a solution containing only 1-5000th of soda will in the course of an hour and a half destroy a considerable quantity of pepsin. Pepsinogen is similarly but less powerfully acted on. Acids rapidly convert pepsinogen into pepsin, and this process probably goes on in the act of digestion. Electrical stimulation of the intestines of the rabbit by constant currents has been shown by SCHILLBACH to cause active contraction of the duodenum, moderate contraction of the lower part of the small intestine, and slight contraction of the cæcum. The effects of the induced currents are much less active; the part near the anode contracts most powerfully. He has applied his experiments in cases of constipation, and has been successful in causing defecation in man by applying the cathode to the rectum and the anode to the abdominal wall. A new acid, crystallising in rectangular tablets from its ethereal solution, has been discovered by SCHOTTEN in human bile, and named fellinic acid. It gives a bluish-red tint with PETTENKOFER'S test. DEMANT finds that the quantity of glycogen contained in the liver of newly-born puppies killed by bleeding amounts to 11·4 per cent., which in the course of the few following days rapidly diminishes, so that at the expiration of eleven days it had fallen to 2·8 per cent., that of the adult dog fed upon bread and meat amounting to 1·66 per cent. LOWRY has demonstrated by experiments conducted in ZUNTZ' laboratory that respiratory movements, though much reduced in degree, still continue after complete isolation of the respiratory centre by sections carefully made through the spinal cord and medulla oblongata, which shows that the passage of non-oxygenated blood moving to the centre is alone required for respiration to be maintained. Many papers have been written on the nervous system. BORGHERINI, in curious opposition to BROWN-SÉQUARD, finds that the central grey matter of the spinal cord is incapable of conducting impressions. Section of the lateral columns he found to cause complete paralysis, notwithstanding that the anterior columns were preserved, which he attributes to the circumstance that the anterior columns gradually acquire the powers of conduction as collateral paths. SCHÄFER has repeated FERRIER'S experiments on the motor areas of the cerebral cortex in dogs, and in the main supports the conclusions arrived at by FERRIER, though somewhat extending and modifying his regions; he believes the regions to occupy the same or nearly the same relative areas in different brains. ASCH and NEISSER have endeavoured to ascertain the precise depth of the cells from which motor impulses emanate, and believe that it corresponds to that layer which is situated just external to the junction of the grey and white matter of the cortex

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cerebri. Von MONAKOW draws the conclusion from his experiments on rabbits and cats that the striæ acusticæ are to be regarded in great part as secondarily decussating paths of conduction of acoustic nerves, whilst the inferior loop constitutes the main central path which acoustic impressions pursue in their course to the brain. Dr. C. F. MARSHALL has published in the *Quarterly Journal of Microscopical Science* some new views of the structure and mode of contraction of striped and unstriped muscle. He considers the contractile part of muscle to consist of a very regular and highly modified intra-cellular network, and that contraction is caused by the active contraction of the longitudinal fibrils of the intra-cellular network, whilst the transverse networks are passively elastic, and by their elastic rebound cause the muscle to rapidly resume its relaxed condition when the longitudinal fibrils have ceased to contract. He thinks the transverse fibrils may also possibly be paths for the nervous impulse. Dr. MCWILLIAM of Aberdeen believes he has been able to demonstrate that a single muscle contraction, such as accompanies the knee jerk, is attended by a distinct sound—a point of considerable importance in regard to the causation of the first sound of the heart. KÜHN has continued his researches on the mode of termination of motor nerves, the most important result of which is that he has satisfied himself there is absolute discontinuity between the tissue of the nerve and that of the muscle in which it ends, so that there is no fusion at any point. MARCUSE'S experiments show clearly that during muscular activity lactic acid is formed at the expense of glycogen, whilst those of BOEHM prove that in rigor mortis the formation of lactic acid takes place without any diminution in the quantity of glycogen. The lactic acid normally formed in contracting muscle is destroyed at the liver. Ganglia and ganglionic nerve cells have been found by KASEM-BECK in various animals, though not in man, on the surface of the left ventricle. The cells are unipolar, pyriform, with granular protoplasm and a peripherally situated nucleus. In the calf, he has observed them, in a heart 80 mm. long, within 5 mm. from the apex. OTT was also unable to find any ganglion cells on the ventricle in man, but finds that they are abundant in the septum atriorum. A valuable paper on the Action of the Excised Mammalian Heart was contributed at the very close of last year to the Royal Society by Dr. AUGUSTUS WALLER and Mr. E. W. REID. They obtained tracings from rabbits' hearts of spontaneous beats for no less than seventy-two minutes, and of beats in response to excitation for an hour and a half after death. As a rule, the decline was found to be fairly regular as to force and frequency of contraction, and the contractions not unfrequently presented a trigeminal character. In the first few minutes after excision the sequence of auriculo-ventricular action was normal, but at a later period several auricular beats occurred to one ventricular beat. The duration of the ventricular beats after excision became prolonged from the normal 0·3 of a second to six seconds. They found also that the heart, when excised and cooled, presented some remarkable phenomena in regard to its contraction—the latent period, for example, being prolonged to as much as two seconds. Lastly, they established, by connecting two levers with the heart at its base and apex, and obtaining tracings on a revolving drum, that there is in the heart, as in other muscles, a wave of contraction the rapidity of which in the sheep was eight metres per second. The histological researches of BAUM on the cells of the liver of the horse, three, five, thirteen, thirty-six, and forty hours after food, show that in the state of rest the nuclei of the cells can be stained with hæmatoxylin; the contours of the cells are indistinct. They contain granules and vesicular eosinophilous structures, and but little glycogen. In the active state the cell contours are distinct, the nuclei are often absent, the protoplasm contains much glycogen, and the pigment granules are few. BAUM believes, from micro-chemical tests, that the cell nuclei form the biliary constituents, and the cell bodies are glycogen producers. KABRHEL'S experiments on the excretion of colouring matter, such as indigo-carmine, support the views of HEIDENHAIN in regard to the activity of the cells of the convoluted portion of the lobes in effecting the excretion of such substances, and by inference their function in eliminating certain constituents of the urine. The reaction time for sensations of temperature has been made a special subject of investigation by GOLDSCHEIDER. The temperatures experimented upon were 15° and 50° C., and it was found that the reaction time of the face was for cold 13·5 hundredths of a second, and for heat 19 hundredths; the upper extremity, for cold, 15 hundredths, and for heat 27 hundredths; the abdomen, 22·6 hundredths for cold, and 62 for heat; and the lower extremity 52·5 hundredths for cold, and 79 for heat.

Pathology.

Year by year it is becoming more apparent that the aims of pathological research are changing. The spirit of inquiry is penetrating beyond the detection and description of the characters of morbid lesions and the explanation of tissue changes. It is concerned now largely with etiological considerations—a long step further back than mere morbid anatomy or physiology. Hence arises the important position which is being rapidly assumed by bacteriology, and the interest attaching to its pursuit. Amongst the evidences of the widespread activity in this department may be taken the success which has attended the publication of a *Centralblatt für Bacteriologie und Parasitenkunde*, which commenced with the opening year, and appears every week full of matter referring to bacteriological research. There should be mentioned also the issue of the first part of Professor KLEBS' "General Pathology," which is devoted to the exposition of these etiological considerations, and the appearance of new editions of CORNIL and BABES' classical treatise, "Les Bacteries," of Professor CROOKSHANK'S "Manual of Bacteriology," and similar works by HUEPPE, FRAENKEL, and others. Regarding—as one is forced to do—the researches in this department as forming the vanguard of pathology, one may without hesitation assign the most important place in the year's work to the investigations into the etiology of Scarlet Fever carried on almost simultaneously by Dr. KLEIN in London and Dr. [illegible] in Edinburgh. The subject matter of their [illegible] is so fresh in the memory of our readers that [illegible] sary to treat it in detail. Suffice it to say [illegible] succeeded in obtaining from the discharges [illegible] udder and teats of cows, to whose milk M[illegible] the source of an epidemic of scarlet fever,

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which he subsequently isolated from the blood of scarlatinal patients; whilst, as to Dr. EDINGTON'S study of the microbes of scarlet fever, not only were various forms of microbe found but a bacillus, which was discovered in the blood before the third day, and in the desquamating cuticle at a later period. Dr. KLEIN was unable to confirm Dr. EDINGTON'S observations, and a committee of the Edinburgh Medico-Chirurgical Society reported that further evidence was needed before concluding that the bacillus was pathogenic and specific. Cognate to these researches is the very recent investigation of Professor CROOKSHANK into a contagious malady of cows, which he believed was identical with the disease investigated by Dr. KLEIN, which, according to Professor CROOKSHANK, yielded the same microbe, but with which no scarlatinal connexion could be traced. Dr. KLEIN disputed the identity of the two cow diseases, whilst Professor CROOKSHANK adduced strong evidence in support of the cases he examined being vaccinia. Several points of importance to the public health arise out of these inquiries, and we are probably on the threshold of an investigation which may prove to be of the greatest consequence. Towards the close of the year, also, it was announced from Berlin that Dr. SCHEUERLEN, assistant to Professor LEYDEN at the Charité Hospital, had discovered the "bacillus of cancer." That cancer may depend upon the presence of a microbe in the tissues has been of late years suggested in more than one quarter; but by none has the hypothesis been more philosophically or lucidly stated than it was by Sir JAMES PAGET in the Morton Lecture, delivered at the Royal College of Surgeons on Nov. 11th. Sir JAMES contrasted the mode of origin and development of cancer with that of other specific diseases, and considered the analogy close enough to warrant the inference that some "morbid substance," "microbe or ptomaine," was the source of the tissue change. However, such careful investigators as Messrs. BALLANCE and SHATTOCK reported to the Pathological Society their cultivation experiments upon morbid growths, which all yielded negative results; and in all quarters there is a tendency to accept SCHEUERLEN'S statements with reserve. The subject of Cholera has been enriched by the publication of von PETTENKOFER'S recent writings; and during the year there was issued the report of the English Commission sent in 1885 to Spain to study the subject. The conclusions arrived at were not very definite, but a new and hitherto undescribed micro-organism was reported to have been constantly found in the dejecta and intestines; whilst the comma bacillus was suggested to be a concomitant of the premonitory diarrhœa. It may be added that the practical value of the comma bacillus as a means of diagnosis of Asiatic cholera has been successfully tested in an outbreak on board an Italian emigrant ship which arrived at the port of New York. The Pasteurian treatment of Hydrophobia has been much criticised both in the Paris Academy of Medicine, chiefly by M. PETER, and in articles and monographs by various writers. The report of the English Commission was, on the other hand, highly favourable to the method adopted by M. PASTEUR, although it recommended stringent police regulations rather than the institution of preventive inoculation. The ever-interesting subject of Fever was discussed by Dr. MACALISTER in his Gulstonian Lectures, which treated it mainly as a question of the nervous mechanism concerned in heat production, regulation, and loss; and also by Professor AUSTIN FLINT before the Washington Congress, who rather avoided that line of inquiry and dealt with the febrile state from the metabolic standpoint, with especial reference to its treatment. Mr. NORTH, the Research Scholar of the Grocers' Company, gave a course of lectures upon Malarial Fevers, based upon his studies of these diseases in the Campagna, and devoted part of his course to the subject of their pathology. Beri-beri has been studied by several writers, including an interesting report by Dr. KYNSEY of Ceylon, identifying the disease with anchylostomiasis. Actinomycosis hominis has received fresh elucidation at the hands of Dr. MARKHAM SKERRITT and Dr. HEBB. Syphilis, with especial reference to its microbes, has been studied by BENDER and DOUTRELEPONT; and LUSTGARTEN'S bacillus, although sparsely distributed, has mostly been recognised. The connexion of microbes with Tetanus has received much attention in the contributions of ROSENBACH, HOCHSINGER, and SHAKESPEARE. Endocarditis has been studied by FINKEL and SÄNGER, who found micrococci in the diseased valves in several cases, the chief forms being staphylococci; and by PRUDDEN, who published details of a careful study of one case of mycotic endocarditis. KINNICUTT recorded a case of Pernicious Anæmia due to Atrophy of the Gastric Mucosa, and the same subject has received fresh contributions from HENRY and OSLER. Peripheral Neuritis has been described in Raynaud's disease by Dr. WIGLESWORTH, and further confirmation of its existence in association with tabes, diphtheria, and other diseases has been general. Dr. FINLAY contributed to the Royal Medical and Chirurgical Society a paper on Alcoholic Paralysis in which the existence of multiple neuritis was well shown. The paralytic sequelæ of fevers received an explanation in the carefully reported case by Dr. BARLOW of myelitis occurring in the exanthem stage of measles. Thrombosis has been studied by HANAU, EBERTH, SCHIMMELBUCH, and WEIGERT, chiefly as to the formation of the thrombus; whilst Dr. COLLIS WARREN published a careful memoir upon the Healing of Arteries after Ligature. Dr. METSCHNIKOFF has supplied fresh facts in support of his contention that phagocytes play a large part in morbid processes, particularly in diseases depending upon bacterial invasion. Mr. BLAND SUTTON continued at the College of Surgeons his lectures on Evolution in Pathology, and Mr. BOWLBY took for his subject that of Injuries and Repair of Nerves. Lastly may be noticed the appearance of a fifth edition of Professor ZIEGLER'S admirable text-book on Pathology, and the commencement of a new pathological serial (*Beiträge zür Path. Anat.*) under the editorship of Professors ZIEGLER and NAUWERCK, primarily intended as a medium for the publication of monographs based upon the researches carried on in the various continental laboratories.

Therapeutics.

If we may judge from the writings of the past year, the chief result of therapeutics has been to gratify the taste, rather than cure the diseases, of our patients. One most important fact is the free circulation of saccharine, brought about by manufacturing enterprise, which ever follows in the wake of physiological chemistry. Another important acquisition of the year has been the discovery that antipyrin and antifebrin are not only of value in reducing the tempera-

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ture of fever, but also have the property of relieving many cases of nerve pain. Not one of the least important contributions to the study of antipyrin is that by ALBERT ROBIN, which recently appeared in the *Gazette Médicale*, No. 50. A great deal of attention has been given to the treatment of heart and lung disease. Strophanthus has had a more extensive trial in the treatment of heart disease, and very various opinions have been expressed as to its capacities for good; the general conclusion to be arrived at from an impartial study of what has been written must be that further experience is required before we can rightly appraise its value, if it has any, or before we can determine in which class of case it can produce the best effects. The treatment of lung disease by the rectal gaseous medication has had a fair trial. It has failed to sustain the reputation with which it was launched upon the medical world, at least in regard to pulmonary phthisis; and though it may be good in some cases of bronchial disease, yet other methods of treatment are at least as efficacious. Injections of carbolic acid and of hyperosmic acid have been employed, apparently with considerable success, in cases of chronic muscular rheumatism, and that uncertain affection or affections to which the name of sciatica has been attached by clinicians. In the treatment of Skin Diseases, especially of a limited character, the method of employing a varnish so ably advocated by AUSPITZ has met with increasing favour from dermatologists and others. The chief feature of the method is to form an artificial film or cuticle. A solution of one part of purified gutta-percha in ten parts of chloroform is known as traumaticine; it forms a softer and thinner film than gelatine and collodion, and, besides, causes neither tension nor pain. This matrix may be impregnated with chrysarobin in the treatment of psoriasis. The scales should be first removed by soap and water, and the solution painted on the affected parts with a thin short-cut pencil-brush. Dermatine made of copal dissolved in turpentine is a new and valuable varnish. The value of this method is largely due to the circumstance that the atmosphere is entirely prevented from assisting at the development of the skin disease, and there cannot be the shadow of a doubt that our atmosphere possesses in its chemical, mechanical, and bacterial impurities a great power for harm. Dr. SHOEMAKER contributed an article to our columns on "Rectal Alimentation and Medication in Diseases of the Skin." In cutaneous diseases suppositories are the most convenient form of medicating the system by the rectum, since they are more slowly absorbed than solutions; whilst the ease, cleanliness, and safety of administration more than compensate for their slightly retarded action, according to this authority. The nasal treatment of Whooping-cough by various substances of an antiseptic and anæsthetic kind is one which has found some favour with the profession in England. Of the value of cocaine in congested states of the nasal mucous membrane, everyone who has employed a strong solution has satisfied himself. The treatment of Gall-stones by the use of a decoction of a well-known fern—asplenium ceterach or doradilla—and also by very large doses of olive oil, is amongst the therapeutical singularities of the year; and there are grounds for believing that each of these remedies may be found of value. On the theory that Asthma is due to spasm of the involuntary muscular tissue of the bronchial tubes, Dr. FRASER of Edinburgh tried the action of nitrite of amyl and other allied bodies. He watched the progress of the physical signs whilst these substances were operating in the system. Considerable success attended this treatment. The nitrite of amyl was given in solution, five minims in two drachms of water, or inhaled, ten minims on blotting-paper at the bottom of a small glass tumbler. The nitrite of ethyl—nitrous ether—acts well in ten-minim doses of a 25 per cent. alcoholic solution. Of the nitrite of sodium ten minims of a 10 per cent. solution, and of the nitroglycerine five minims of a 1 per cent. solution, were employed. The use of the nitrites is well known, but perhaps not so widely practised as could be wished for the welfare of our patients. The treatment of Cancer has not unnaturally been the subject of much writing in our columns, both from contributors and by ourselves. We must not despair of discovering a means for checking the growth of malignant diseases, and, in the words of Sir JAMES PAGET, "we might well be nearly content if we could find a medicine as efficient against cancer as mercury and quinine are against syphilis and ague, especially as the recurrences of these diseases are less, not more, severe than the primary." Not one of the least valuable therapeutical attempts of the year is the treatment of the "Green Diarrhœa" of infancy by means of lactic and other acids, based presumedly on the belief that this complaint is due to the growth of a chromogenic bacillus.[1] The uses of Cocaine have become better understood, whilst its employment has been extended to every department of disease, but that it must not be recklessly employed is the lesson to be learned from a consideration of the serious symptoms to which its hypodermic injection occasionally gives rise.

Papers on the treatment of Phthisis have appeared frequently in our columns, dealing with the subject from many points of view. We have already referred to the BERGEON method, but of far greater importance than it are the contributions which we have published on the climatic and antiseptic modes of treatment. Morrhuol is another product which deserves some mention, for great expectations have been raised by its introduction into therapeutics as a substitute for cod-liver oil possessing twenty-five times its weight of the crude medicament. We would draw particular attention to our articles, by a special correspondent, on the High Altitude Treatment of Phthisis. Sparteine and Nitro-glycerine have been found by Dr. OSCAR JENNINGS to have the property of relieving the craving for morphia in morphinomania. The paper on the Treatment of Typhoid Fever by the cold wet pack and alcohol, from the pen of Dr. CURNOW, was a valuable contribution to our pages at the commencement of the year. The method of employing fluid vaseline for Hypodermic Medication is coming into use in this country as on the Continent; it is contended that vaseline is absolutely harmless to the tissues, and may be employed in large doses without causing accidents, but the vaseline must be perfectly pure, which is shown by its not blackening with warm sulphuric acid. Various medicaments, such as eucalyptol, turpentine, iodoform, phenol, iodine, and camphor, may be dissolved in the pure fluid vaseline, and injected in the strength of 1 per cent. or

[1] Vide THE LANCET, p. 1029.

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Surgery.

If we look back over a period of twenty, ten, or even five years, the chief advance in the healing art has undoubtedly been made in Surgery. Whatever else this generation has done or failed to do, it must ever be famous for the introduction of the antiseptic system of treatment of wounds, which has resulted in an enormous saving of life and limb and incalculable relief of suffering, and of the application of surgical measures for the relief or cure of affections formerly considered outside their domain. He would be a rash man who would undertake to maintain that this enlargement of the field of surgery has been an unmixed good obtained without any countervailing disadvantage. The very safety now attending properly conducted surgical operations may itself be a danger, and lead the surgeon to propose or carry out operations which are not expedient. But such cases are far outnumbered by the real trophies of the healing art, and it is only the jaundiced eye that would regard the one set of facts and ignore all the other side of the question. Looking back upon the year that is just closing, it would be difficult to fix upon any one new point or fact as especially the outcome of the work of the year. We cannot speak of any new organ being made amenable to surgical interference, mainly because surgeons have not in former years refrained from carrying their knives into every region of the body. Nor have we to notice the introduction of any new form of surgical dressing. The alembroth wool and gauze have continued to advance in favour, and both the spray and the gauze of the Listerian method are now rarely seen. That this is a gain who can doubt? To many men the discomfort of the spray is very great, and all are agreed that our present plan is a great improvement upon that which preceded it. New antiseptics have been described and recommended, but for the present bichloride of mercury holds the field, and deservedly. Not that anything approaching uniformity in the dressing of wounds has been obtained. Not only in different places and institutions, but even among colleagues in the same hospital, marked divergencies in the plan of treating wounds may be witnessed. There is nothing new to record in cerebral surgery; it is not likely to advance in leaps and bounds, and the difficulties often attending the diagnosis of cerebral affections, as well as the serious late results in some cases of operation upon the brain, have deterred many surgeons from practising it. Very extensive operations have been performed upon the unyielding chest wall in cases of chronic empyema, and on the whole with very satisfactory results. The success of this operation largely depends upon its completeness, for if the unyielding part of the wall of the suppurating cavity is not wholly excised, so that its complete collapse is not ensured, a sinus is very apt to be left behind. Abdominal surgery is "consolidating" its progress. Laparotomy has recently been practised for tubercular peritonitis, and with such favourable results that it deserves a further trial. A suspicion has long existed that in some quarters laparotomy has been resorted to too often, and on insufficient grounds, and the events of the year have not dispelled this suspicion; but we seem to be approaching the time when the dazzling effects of the brilliant success of abdominal operations will have passed off, and surgeons will be able to judge more justly of their value and applicability. Many cases in our columns have attested to the strong position supra-pubic cystotomy now holds, for the removal of both large stones and of tumours. Its more extended practice has only increased the confidence felt in it when performed under the new conditions now universally laid down. Formal excisions of joints are becoming less popular, and arthrectomies, with very careful removal of all diseased structures, are largely taking their place. This is a change for the better, as many of the bad results of excisions are due to a desire to conform to the recognised mode of performing the operation, and the failure to remove all the diseased parts. Nevertheless, excision has been applied with success for the cure of hammer-toe and eversion of the great toe or bunion. Iodoform injections for cold abscesses have been found successful in many cases, and are certainly worthy of trial. Interest is still felt in the value of Chian turpentine in cancer; the most contradictory evidence as to its merits has recently appeared in our columns, and in the face of it Prof. CLAY has still to make his position good.

Ophthalmology.

The interests of ophthalmological science have been promoted by the Congresses at Heidelberg, Dublin, and Washington, at each of which places numerous memoirs were read and excellent discussions maintained. The Ophthalmological Society of the United Kingdom were fortunate enough to secure the services of Professor ZEHENDER to deliver the Bowman Lecture at the close of 1886, who discussed and showed the progress that had been made in regard to our knowledge of the parasites of the eye since the publication of the last edition of MACKENZIE'S work in 1844. The Society have also published the seventh volume of their Transactions, which is not inferior to its predecessors, though it would perhaps be improved by the inclusion of more papers like that with which it opens, on toxic amblyopia. A remarkable observation has been made by ONODI of Buda Pesth—namely, that neither in dogs nor in rabbits will the introduction of gonorrhœal pus excite any inflammation, nor can inflammation be induced even if the surface be wounded; but if the animal happen to suffer from catarrhal conjunctivitis, then the inoculation of gonorrhœal pus will immediately excite an acute attack of gonorrhœal ophthalmia, as though the condition of catarrhal inflammation weakened the power of resistance of the cells to external noxious influences. The question so much discussed some years ago in regard to the participation of the fixed corpuscles of the cornea in the process of inflammation has again been made the subject of experiment by HOFFMANN, who finds, on irritating the cornea of cats, rabbits, guinea-pigs, and frogs, and the subsequent application of strict antiphlogistic remedies (so that suppuration was entirely prevented), that complete reparation with restoration of transparency occurred, through the agency of the proliferation of the true corneal corpuscles; whereas when suppuration took place cicatricial tissue was invariably produced. Von HIPPEL of Giessen has been very successful in his efforts to effect transplantation of the cornea, being able at the Heidelberg Conference to exhibit to the Society a man who had been operated on twenty-seven months previously, and

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who could still read large type. An important memoir has been published by R. DEUTSCHMANN on Optic Neuritis and its relation to Intra-cranial Disease. The optic neuritis that accompanies coarse disease of the brain has sometimes been attributed to augmented pressure, but the experiments of DEUTSCHMANN show that injections of agar-agar into the subdural space, or run into the sheath of the optic nerve itself, will not produce true optic neuritis, whilst the injection of staphylococcus microbes quickly induces that condition. He therefore holds that optic neuritis has nothing to do with increased intra-cranial pressure, but is the effect of an inflammation-exciting microbe, which passes from the cranial cavity with the cerebro-spinal fluid into the sheath of the optic nerve. EXNER and PANETH adduce experimental evidence to show that the visual area of the cerebral hemispheres is not limited, as some maintain, to the occipital lobes, for they find, in dogs at least, that injury to the sigmoid gyrus is in almost all instances followed by a crossed impairment of vision UHTHOFF has had large experience in the effects of the abuse of alcohol on vision, and finds that complaint is usually made of amblyopia. In 63 per cent. of cases the temporal half of the disc presents abnormal pallor, and in those cases where the amblyopia had existed for more than six weeks this symptom was almost universally present. The cause of the amblyopia is retro-bulbar neuritis. In alcoholic amblyopia central scotoma for red and green, and in many instances for blue also, is of common occurrence. There seems to be a general disposition to omit the performance of iridectomy in the operation for extraction of cataract. SCHWEIGGER, LANDOLT, POWER, SCHÖLER, and many others, now only perform an iridectomy when an untoward condition is present or some accident happens—as, for example, when adhesions exist between the iris and the lens, or when return of the iris is difficult, or when it has been injured and bleeds. The stimulation of any part of the brain cortex in cats and dogs with weak electrical currents, according to MISLAWSKY, invariably causes dilatation of the pupil, and this occurs even after section of the cervical sympathetic of the spinal cord at the level of the atlas, evulsion of the superior cervical ganglion, and division of the fifth nerve at the Gasserian ganglion. STOCKER has examined the influence of mydriatics and myotics in intra-ocular pressure, and finds that under normal physiological conditions atropine slowly diminishes the tension of the eye; cocaine in most cases first slightly exalts it, then lowers it; eserine acts in a similar manner to cocaine, except that the secondary depression is greater; pilocarpine also first increases, then lowers, tension.

Obstetric Medicine.

The past year has been productive of a large number of papers, many of which represent honest, earnest, and able investigation, and among such the following may be mentioned:—Stricture of the Urethra in Women, by Dr. HERMAN; a carefully recorded case of Galactorrhœa, by Dr. GIBBONS; a series of five papers on the Third Stage of Labour, by Dr. CHAMPNEYS (this subject has also engaged attention in Edinburgh); Hæmorrhagic Parametritis (parametritis, with hæmorrhage into the abscess cavity), by Dr. MATTHEWS DUNCAN; the Frequency of Pathological Conditions of the Fallopian Tubes, as observed in the post-mortem room of the London Hospital, by Dr. LEWERS; Retroflexion of an Early Human Embryo, by Mr. LOCKWOOD; a case of Cæsarean Section, by Dr. CULLINGWORTH; Tubo-ovarian Cysts, by Dr. W. GRIFFITHS; Diabetes Insipidus in Pregnancy and Labour, by Dr. MATTHEWS DUNCAN; three papers on Extra-uterine Gestation, by Drs. WILLIAMS, HERMAN, and CHAMPNEYS; Tonic Contraction of the Uterus, without Completeness of Retraction, by Dr. MATTHEWS DUNCAN; and two papers by Dr. HERMAN on cases of Eclampsia and Bright's Disease in Pregnancy, with careful analyses of the urine. In Edinburgh the study of frozen sections illustrative of the anatomy of labour continues to occupy much attention. The above record shows a healthy state of activity affecting workers of all ages and standing, and augurs well for the future.

Royal College of Physicians.

The universal esteem in which the present President of the College of Physicians is held was reflected in his election by the Fellows for the seventh time to fill that office. Largely owing to his efforts, the College resolved almost unanimously at the close of last year to endeavour to obtain in conjunction with the College of Surgeons powers to grant medical degrees. The movement was supported by memorials presented to the College from students and teachers of the metropolitan schools, and resulted in the framing of a petition to the Privy Council with a Draft Charter for the constitution of a Senate of Physicians and Surgeons which should have these powers. The petition was not presented until some months after it had been adopted by the College and in the meantime a scheme for establishing a Teaching University which originated from University College and King's College had been set on foot with similar but wider intentions. This point, however, is treated more fully under the heading "Medical Education" in another column, to which we refer our readers. Meanwhile the Conjoint Examining Board of the Colleges of Physicians and Surgeons has become more firmly established, and in a short time no students will be examined by either College separately for their diplomas. The examinations are entirely conducted at the Examination Hall on the Embankment, which has doubtless proved a great relief to the officials of each College; but it is questionable whether the withdrawal of the candidates from the previous practice of examination in a hospital ward is calculated to maintain the efficiency of the medical clinical examination. As regards the standard set by the Colleges, we have felt it our duty to draw attention to the remarkably high rejection rate at the final examinations; but how far this depends upon faulty education or defects in the system of examination itself it is at present not easy to decide. An important change has been made in the conditions under which the Croonian Lectures are to be delivered at the College of Physicians. It consists in the annual appointment of a Fellow of the College (who shall be eligible for re-election) to the office of Croonian Lecturer, whose duty it will be to deliver a course of lectures in June upon subjects which he has investigated in connexion with disease or its treatment. Dr. D. MACALISTER has been nominated by the President as the first holder of this office, and he will lecture next year upon the Pulse. The question of the buildings to be erected on the vacant ground behind the Examination Hall has

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engaged the attention of the two Colleges, and the joint committee has decided upon a plan for providing a theatre and laboratories, which will shortly be presented to the Colleges for approval. The year of Jubilee was marked in the Royal College of Physicians by the presentation to Her Majesty the QUEEN of an address of congratulation, and by the resolution to erect a statue of Her Majesty in the Examination Hall. The Baly Medal was awarded to Dr. FERRIER; and the Harveian oration was delivered by Dr. STONE. The Bradshawe Lecture was given by Dr. S. WEST, who chose as his subject "Pneumothorax." Dr. MACALISTER delivered the Gulstonian Lectures on the Nature of Fever; Dr. BROADBENT, the Croonian, upon the Pulse; and Dr. PRIESTLEY, the Lumleian, on the Pathology of Intra-uterine Death. In the deaths of Dr. WILSON FOX, Sir GEORGE BURROWS (ex-President), and Dr. A. FARRE, the College has had to mourn the loss of three of its most distinguished Fellows.

Royal College of Surgeons.

In the year which has just terminated the College of Surgeons has manifested almost as much activity as in the year which preceded it, and this statement holds good not only of the Council, but also of the general body of Fellows and Members. Towards the end of last year the Council had issued a circular to the Fellows of the College, asking for their opinion on the following questions:—1. In your opinion should Members of the College be allowed to vote for Fellows as members of the Council? 2. In your opinion should Members of the College be eligible for seats on the Council? The result of this circular was announced to the Council at its first meeting. A definite reply was given by 700 of the Fellows, 419 voting "No" to the first question, and 276 "Yes," giving a majority of 143 "Noes." On the second question 526 voted "No," and 172 voted "Yes," the "Noes" having a majority of 354. We cannot, however, view the result of this polling as discouraging the demands of the Members and some of the Fellows to an extension of the franchise to Members of a certain standing. As the questions were put they did not mention those restrictions which the Members themselves would impose as a time-qualification of voters or candidates from their own body for seats on the Council. In combination with the Royal College of Physicians the Council of the College has applied for a Charter to give power for the Conjoint Board to grant degrees in Medicine and Surgery. The Council of the College of Surgeons has also applied for a Supplementary Charter, which does not include those alterations and amendments which were asked for at the general meeting of Fellows and Members in November of last year and previously, as the wish of the large majority then present. The resolutions which were passed at that annual meeting were again brought forward at the meeting of this year, and were forwarded to the Lord President of the Privy Council by the Council of the College at the request of the meeting. On Nov. 11th deputations from Fellows and Members waited on the Lord President of the Privy Council and placed their views and wishes before his lordship (see Second Edition of THE LANCET, Nov. 12th); they were courteously and favourably received, and on Nov. 23rd a letter was forwarded from the Lords of the Privy Council to the College, containing a copy of the statement relating to the Supplemental Charter prepared by the Association of Fellows, and "requesting any remarks thereon that the Council may have to offer." The reply to this will be given at the first meeting next year. Early this year he Conjoint Board took possession of the new Examination Hall on the Victoria Embankment, and the various examinations in connexion with the two Colleges are now held there, the College itself being deserted by those crowds of anxious students which were so marked a feature at stated periods of the year, excepting during that part of the examination (in General Surgery and Pathology) which is still held in the Library of the old College. We cannot but regret the decision of the Council to refuse admission to the Society of Apothecaries to the Conjoint Examining Board, in spite of a strong recommendation from the Medical Council; an opportunity of diminishing the number of examining bodies in London and the institution of a more uniform standard of examination for the majority of London medical students was lost which may never present itself again. The transfer of the ERASMUS WILSON bequest to the College has made it one of the richest of medical corporations, and has correspondingly increased the responsibilities of the Council, whilst it has placed it in their power the means to do more for the advancement of the science and art of surgery than any other body in the world possesses. Much money has already been spent on the College for building purposes; the Library and Museum have both been enlarged, and additional workrooms built, some of which are to be devoted to pathological investigation by Fellows and Members under the control of the Museum Committee. A pathological curator, to give his time to the pathological department of the Museum, is to be appointed next summer, and an additional assistant, to help in procuring, examining, and preparing pathological specimens, will be appointed early in the new year. And on the vacant space at the site of the Examination Hall a lecture theatre and other rooms are to be built in conjunction with the Royal College of Physicians. We would refer, in passing, to the delivery of the first Morton Lecture on Cancer and Cancerous diseases; this was given by Sir JAMES PAGET. Four Examiners in Public Health were for the first time appointed by the College with the consent of the Royal College of Physicians, and thus this most important branch of Medicine receives at last some acknowledgment of its usefulness. A notable event of the year was the election for the third time of Mr. SAVORY as President. This action on the part of the College has given general satisfaction, and it would be impossible to find anyone more capable of sustaining the dignity and honour of the College. In conclusion, we would refer to the opinion of the Council on a subject of the greatest importance to the profession—one which has been frequently brought forward in these columns and earnestly pressed on the attention of all—namely, the question of so-called "popular" medical teaching. Here there should be only one opinion; and the Council in the last resolution passed at the end of its year's labour resolved—"That, in the opinion of the Council of the Royal College of Surgeons, it is most objectionable that Fellows and Members of the College should allow their names to be advertised in connexion with medical or surgical subjects in popular journals."

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Army, Navy, and Indian Medical Services.

The past year has been one of considerable disquietude in the Army Medical Service in consequence of a very unwise step taken by the War Office authorities. To get rid of some inconvenience which was experienced from the grant of "relative rank" to certain officers on the General Staff, it was abolished by Royal Warrant in January; and the abolition was extended to all the branches and departments of the Army. A clause in the Warrant, however, specially reserved to the officers of departments not having honorary rank all the rights, privileges, and advantages which they had previously enjoyed, and thus, so far as they were concerned, it was simply the abolition of the term "relative rank." The change, however, created dissatisfaction, it having been alleged that by the terms of the Warrant medical officers were deprived of their status in the Army. This was emphatically denied by the Secretary of State for War, both in the House of Commons and to a deputation of the British Medical Association, but apparently without the effect of allaying the agitation. At the meeting of the Association in August the question was raised by a report of their Parliamentary Bills Committee, when Sir T. CRAWFORD, the Director-General, protested against the course taken by that committee, and brought forward such facts in support of his views as induced the Association to refer the report back to the committee for reconsideration. We have not yet seen any statement of the result of this reference. With a view to remove any doubt which might still remain on the subject, and to ensure the full advantages of their rank to the medical officers beyond the possibility of cavil, Mr. STANHOPE decided that in future, whenever a medical officer is gazetted on appointment or promotion, his corresponding military rank shall be announced together with his departmental. Owing to the reductions in the force employed in Egypt, there was no examination for admission into the Army Medical Department in August, and it is announced that there will be none in February. The Royal Navy and Indian Medical Services had an abundant supply of candidates. While there has been nothing requiring special note as regards these services, with the exception already stated, we regret to find that no steps have been taken to remove the real grievances under which the Army and Indian services suffer. Of these, we pointed in our last *annus medicus* to the injustice done to the Army surgeons, in their commissions bearing date four months later than those of the Indian and Naval surgeons who pass their competitive examinations at the same time; to the brigade-surgeons in India, in their being, though nominally recognised, denied the advantages of pay and allowances which ought in justice to attach to their rank; and to the service generally, in the recommendations for rewards being almost exclusively in the hands of the naval and military officers, while the heads of the Medical Departments are practically ignored and their recommendations too often set aside. These are points which should be urged on the attention of the Government, instead of sentimental questions of military titles and designations. In this connexion we may call attention to a suggestive article by our correspondent published in our present issue.

The Medical Council.

The history of the Medical Council for the year has been noticeable. The Council met three times; in February for eight days, in May for ten days, and in November for five days. The Council was the new Council as constituted by the Act of 1886, including five direct representatives of the profession, and separate representatives of the Scottish universities hitherto represented conjointly. The chief features of the February meeting were the opening address of the President, reviewing eloquently the progress of medicine and of legislation affecting medicine in the Victorian era—characterised by the grace of Sir HENRY ACLAND'S thought and that rare combination of reverence for the great ones of the past with a hopeful but slightly misgiving feeling towards the more numerous masters of the future; the action of the Council—unsuccessful, but none the less creditable—in resolving to ask the powerful medical corporations of England and Ireland respectively to admit the Apothecaries into their scheme of licensing examinations; the passing of several resolutions defining the scheme of the Council for appointing inspectors of examinations under the Act; the recognition for purposes of registration of certain diplomas in Sanitary Science, Public Health, and State Medicine, as provided for in the new Act; and the unanimous acceptance of a motion by Dr. GLOVER for a committee to consider the best means of increasing the practical element in medical education. Sir HENRY ACLAND, at the time of this session of the Council, had the honour of entertaining the Premier, Lord SALISBURY, and other distinguished guests, at a breakfast given to the Council. He expressed an intention of reluctantly retiring from the Council at this meeting, in accordance with the advice of medical friends, but was prevailed on to continue at his post till the May meeting. At this meeting he did retire, after serving the Council from its beginning, and having filled the chair with great ability and devotion for thirteen years. He was replaced with the unanimous vote of the Council by Mr. MARSHALL. Sir HENRY ACLAND received the warmest thanks of the Council for his long service, and a committee was appointed to draw up a suitable address. His last act in the Council was to propose a loyal address of congratulation to Her Majesty on her Jubilee year, in which the blessings of her reign were happily set forth. He had the disappointment of having to announce the failure of his efforts to induce the Colleges of England and Ireland o take the Apothecaries into their scheme. After this an attempt was made in the Council to struggle the Apothecaries by refusing to appoint surgical examiners. But this did not succeed, the Council believing that the Legislature, by the Act of 1886, intended the Apothecaries to have a further lease of function. Accordingly it appointed surgical examiners for the Apothecaries in both England and Ireland. One great feature of the May meeting of the Council was the discussion of schemes of devolution. Two Standing Committees were appointed: one the Education Committee, and the other the Examinations Committee. Besides this, the Executive Committee was enlarged by an additional member for Scotland and for Ireland, and it was charged to exercise the powers and duties of the Council, with certain defined limitations, as to [illegible]

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necessary or expedient. By these measures it is hoped that subjects will be digested and prepared for the consideration of a Council otherwise too large and heterogeneous for the quick and business-like discharge of its functions. At this meeting three Inspectors of examinations were appointed, with instructions to give special attention to the quality of the practical examinations. These gentlemen were—in *Medicine*, DAVID W. FINLAY, M.D. Glas., Assistant Physician at Middlesex Hospital; in *Surgery*, E. H. BENNETT, M.D. T.C.D., Professor of Surgery in Trinity College, Dublin; and in *Midwifery*, A. H. F. BARBOUR, M.D. Edin., Secretary to the Obstetrical Society of Edinburgh. The chief work of the Council at its meeting in November was of a judicial character, issuing in the removal of several names from the Medical and one from the Dental Register. At the meeting in November Sir JOHN SIMON was unfortunately absent on account of indifferent health. The honour of K.C.B. conferred by Her Majesty on this gentleman in no degree exceeds that in which he is held by the profession at home and abroad.

Medical Education.

One of the most important movements in medical education in recent times has been determined on during the past year. After a long period of incubation the Committee of Delegates of the Royal Colleges of Physicians of London and of Surgeons of England have agreed on the terms in which they would ask for a new Charter to enable the Royal Colleges to confer degrees in Medicine and Surgery on all who pass an examination under the Conjoint Examining Board of these Colleges. The question as to whether this shall be the existing examination for the conjoint Licentiateship and Membership of these Colleges, or whether additional subjects shall be added, has not yet been settled. The petition in favour and the application for a Charter were presented to the QUEEN in Council in November, and the 16th of January has been fixed for their consideration, so that all petitions for and against must be sent in to the Privy Council before that date. The object aimed at by the Royal Colleges is to remedy an injustice towards London medical students, who cannot now obtain degrees on the same terms as their competitors in Scotland and the north of England, for the severe matriculation and scientific examinations at the University of London practically prohibit most London students from obtaining a degree, in spite of a good professional training and a severely tested professional knowledge. With the exception of the Apothecaries' Society, everyone interested in the movement allows the existence of the injustice, and asks for the redress of the grievance. But objections of all kinds have been made as to the methods by which the redress is sought. The "incorporation of an equal number of Fellows of the two Royal Colleges under the name of the Senate of Physicians and Surgeons, with power to grant degrees," is strongly opposed, by those who are interested in the higher academic education in London, as forming a one-Faculty University, and as overlooking and thus probably postponing for many years, if not rendering impossible, the establishing of a full Teaching University in London with all the necessary Faculties in Arts, Science, Laws, and Medicine. It was therefore urged that the Royal Colleges should, as the representatives of the medical schools of London, combine with University and King's Colleges, as the two most important and best equipped Colleges in the metropolis, in applying for a Joint Charter on the lines of the Victoria University; but the Royal Colleges objected to combined action, plainly stating that they only sought to remove a professional grievance, and, as professional corporations, were not called on to express an opinion on the question of higher educational requirements in London. No other course then remained for the two teaching Colleges (King's and University) but to apply for a Charter to form a University, of which they would at first constitute the Faculties of Arts, Laws, and Science, and, conjointly with every other medical school in London which was to be duly represented on the Governing Board, that of Medicine. Petitions in support were drawn up by the Councils of these Colleges, and were laid before the Privy Council in July. This action alarmed the authorities of the existing University, who naturally object to the large London Colleges following the example of Owens College, and affirming their belief in the superior advantages of training in a thorough curriculum to even the highest examination results. It could hardly have been expected from the history of University College that all its supporters would approve of the new departure. Lord KIMBERLEY, the President of the Council, and some other members closely identified with the University of London, gave up their seats on the Council; but the vacancies were at once filled; Mr. ERICHSEN was elected president of the new body, and King's and University Colleges are now in complete harmony on the scheme. A petition objecting to a Charter which will exclude their examinees from obtaining degrees, without going through the ordeal of, and paying the fees for, the Conjoint Examining Board of the Royal Colleges, has also been lodged by the Apothecaries' Society; and this action is supported by the Association of General Practitioners, who point out that exclusion of the Apothecaries, and the absence of representation of the general practitioners of England on a Senate practically made up of the two Councils of the Royal Colleges, constitute in their opinion omissions fatal to the scheme, which otherwise they would support. The Scotch and Irish Colleges of Physicians and Surgeons ask for similar powers should any be conferred on the English bodies. The provincial schools also urge that the new legislation should not be confined to metropolitan students, especially if the Royal Colleges are to become the degree-granting body, as they consider that these bodies exist for the provincial schools as well as for the metropolis, and therefore the students from both should receive from them identical treatment in every respect. Under all these circumstances, and with such conflicting interests—some general and some purely selfish,—a strong Royal Commission, as we urged in the summer, must clearly be appointed to hear the petitioners, weigh evidence, and report. This will take time, but delay in this matter will be much less disastrous than any precipitate and one-sided action. Among other University matters we must mention the incorporation of the Yorkshire College at Leeds with the Victoria University, and that the scheme of internal reform of the University of London, the joint outcome of the deliberations of the Committees of Convocation pre-

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sided over by Lord Justice FRY and Sir P. MAGNUS, and of the Senate, though long promised, has not yet been put before Convocation, and it does not seem likely that it will see the light at present.

The Medical Societies.

The only change that we can suggest towards enhancing the general usefulness of our Medical Societies is an increase in the number of communications on therapeutical subjects. The Clinical meetings of the Medical Society of London have proved a great success, because of the actual exhibition and demonstration of living specimens of disease; we have always advocated their extension, and, thanks to the energy of Dr. SAMUEL WEST and Mr. BERNARD PITTS, the oldest Medical Society may be congratulated on the success of the revival. The most important or interesting papers which have appeared at the Societies during the past year may be here enumerated:—Mr. BLAND SUTTON on Suture of Divided Nerves; Dr. RALFE on Phosphatic Diabetes; Mr. PEARCE GOULD on Wound of Common Femoral Vein; Surgical Treatment of Hydatids of the Liver, by Mr. BARWELL, Dr. COUPLAND, and Mr. OWEN; Preventive Inoculations, by Dr. WILLOUGHBY; the Lettsomian Lectures on some of the Mental Affections of Childhood and Youth, by Dr. LANGDON DOWN; Pathology of Colles' Fracture, by Mr. D'ARCY POWER Multiple Perforative Necrosis of Skull of Tubercular Origin, by Mr. BILTON POLLARD; Nephro-lithotomy and Renal Surgery, by Mr. HENRY MORRIS, Mr. HOWARD MARSH, and Mr. W. H. BENNETT—papers which provoked a good discussion; Exostoses of Skull with Atrophy of Optic Nerves, by Mr. NETTLESHIP; Cases of Acute Cerebral Disease with Ocular Symptoms, by Mr. G. A. BERRY; Primary Nerve Suture, by Mr. ROWE; Tremor and Incipient Graves' Disease, by Dr. DYSON; Rare Aneurysm of Undefended Space, by Dr. ANGEL MONEY; Graves' Disease, by Mr. SNELL; Removal of both Superior Maxillæ, by Dr. LEOPOLD SERVAIS; Conservative Surgery in Diseases of Foot and Ankle, by Dr. WHEELER; Rupture of Urinary Bladder, by Mr. HENRY MORRIS; Shedding of Teeth in Tabes Dorsalis, by Dr. HALE WHITE; Endothelioma of Dura Mater, by Dr. HYLA GREVES; Mr. SHATTOCK on Ectopia Vesicæ; Mr. CLUTTON on Retro-pharyngeal Abscess; Epilepsy following an Injury to the Leg, by Dr. HADDEN; Diseases of Hip Joint in Children, by Mr. G. A. WRIGHT; Conjugate Palsy of Ocular Muscles and Nystagmus, by Dr. GOWERS; Mechanism of the Third Stage of Labour, by Dr. CHAMPNEYS; Changes in the Spinal Cord and Peripheral Nerves after Amputation, by Dr. E. S. REYNOLDS; Contraction of Metatarso-phalangeal Joint of Great Toe, by Mr. DAVIES-COLLEY; Hereditary Tremors, by Dr. S. WEST; Mr. ATKIN on Supra-pubic Suppuration; Psoriasis, Pityriasis and Rheumatism, by Sir DYCE DUCKWORTH; the Marsupial Heart, by Dr. CUNNINGHAM; Stellwag's Symptom, by Mr. WHERRY; Hypertrophic Goitre, with Secondary Tumours in the Skull, by Dr. COATS; Congenital Dislocation of Hip, by Mr. BOWLBY; Development of Hip Joint, by Mr. LOCKWOOD; Writer's Cramp, by Dr. POORE; Omental Lipoma treated by Abdominal Section, by Mr. MEREDITH; Abdominal Exploration for Chronic Intestinal Obstruction by Mr. BERNARD PITTS; Resection of Pylorus, by Mr. M'ARDLE; Œsophagotomy for Removal of Foreign Bodies, by Mr. BARTON; Double Ophthalmoplegia, by Dr. THOMAS; Enterorraphy, by Mr. BARKER and Mr. S. BISHOP; Fallopian Tube Diseases, by Mr. LAWSON TAIT and Dr. LEWERS; Artificial Globes, by Dr. MULES and Mr. LANG; Sarcoma of Recto-vesical Fascia, by Mr. LEOPOLD HUDSON; Cultivation Experiments with New Growths, by Mr. BALLANCE and Mr. SHATTOCK; Headache and Uric Acid Excretion, by Dr. HAIG; Latent Typhoid Fever and Cardiac Thrombosis, by Dr. MONTGOMERY; Ruptured Brachial Plexus, by Mr. MORRISON; Tubo-ovarian Cysts, by Dr. W. S. A. GRIFFITH; Uni-ocular Optic Atrophy and Temporal Hemianopsia, by Mr. STORY; Choroido-retinitis, by Dr. BRAILEY; Hereditary Optic Atrophy, by Dr. S. H. HABERSHON; Experimental Hæmorrhage Infarction of Liver, by Dr. WOOLDRIDGE; Fœtus with Spina Bifida Occulta, by Mr. BLAND SUTTON; Simple Stricture of Bile Duct, by Dr. SIDNEY PHILLIPS; Peritoneal Surgery, by Mr. BARWELL, Mr. LAWFORD KNAGGS, Mr. T. KILNER CLARKE and Mr. FREDERICK TREVES; Mode of Fixation of Scapula, by Mr. ARBUTHNOT LANE; the Presystolic Murmur, by Dr. BRISTOWE; Ulcerative Endocarditis, with Congenital Malformation of Heart, by Dr. SUCKLING; Cystic Tumours, by Dr. CHARLEWOOD TURNER; Supra-pubic Drainage, by Sir HENRY THOMPSON; Mr. M'GILL on Prostatectomy; Brain Disease with Hemianopia, by Dr. SHARKEY; Cholecystotomy, by Mr. KNOWSLEY THORNTON; Rupture of Trachea, by Mr. GARRARD; Acute Enlargement of Thyroid Gland in a Child, by Dr. THOMAS BARLOW; Acute Pneumoparesis, by Dr. B. W. RICHARDSON; Hereditary Defect of Ocular Movements, by Mr. LAWFORD; Eclampsia of Pregnancy, by Dr. HERMAN; and last, but by no means least, Professor CROOKSHANK's investigation into the so-called Hendon Cow Disease, and its relation to Scarlet Fever of Man.

Medical Congresses, &c.

The ninth International Medical Congress met at Washington, United States, on Sept. 5th, under the presidency of Dr. NATHAN SMITH DAVIS, M.D., LL.D. The President of the United States, Mr. CLEVELAND, graced the occasion with his presence, as did also Mr. BAYARD, Secretary of State. The Address in Medicine was delivered by Dr. DAVIS, and we had the pleasure of publishing it in full the same week. An important address on the Causes, Mechanism, and Rational Treatment of Fever was delivered by Dr. AUSTIN FLINT, whose late honoured father had been appointed to the presidency, and whose absence was so conspicuous. There were 2600 members and about 300 foreigners, representing all European countries. Our own country was well represented. The success of the Congress, in spite of adverse circumstances and prognostications, is a matter for congratulation.

We must not omit notice of a singularly successful meeting at Vienna—the Sixth International Congress of Hygiene. It was opened in a very appropriate and earnest speech by the Crown Prince RUDOLF, and attended by no less than 2400 members, amongst whom were distinguished representatives of sanitary medicine in England—which, by the way, was much honoured by many of the leading foreign speakers, notably by PETTENKOFER. Amongst our countrymen present were Sir SPENCER WELLS, Sir DOUGLAS GALTON, Dr. CAMERON, M.P., Professor HUMPHRY, Pro-

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fessor FRANKLAND, Professor CORFIELD, Dr. C. E. RICKARD (Birmingham), Dr. RUSSELL (Glasgow), and Mr. SHIRLEY MURPHY.

The Sanitary Institute of Great Britain met at Bolton under the presidency of Lord BASING. A very suggestive address was delivered by Dr. J. RUSSELL REYNOLDS on Sanitary Science and Practical Medicine. The progress of sanitary work in the provinces was illustrated by a paper read by Mr. SERGEANT, medical officer of health for Bolton, in which the notification of infectious diseases was much insisted on.

The British Medical Association had a very successful meeting in Dublin, under the genial and able presidency of Dr. BANKS. Dr. GAIRDNER of Glasgow delivered the Address on Medicine, and with much force and dignity showed that medicine had advanced greatly since HIPPOCRATES, in spite of Sir WILLIAM HAMILTON'S unbelieving question on the subject. The Address in Surgery was by Dr. HAMILTON, and had reference chiefly to the Antiseptic doctrine, the value of which he fully admitted. Sir THOMAS CRAWFORD, the head of the Medical Department, contributed much to the interest of the proceedings by a lively and successful attack on the action of the Parliamentary Committee in regard to its Report on the question of Relative Rank and the consequences to Medical Officers of the Army. Sir THOMAS also carried a resolution directing attention to the monopoly of some hospital appointments by the holders of certain English corporations as inconsistent with the spirit of the age and of the Medical Act. Amongst distinguished foreigners present was Dr. APOSTOLI of Paris, who explained his electrical treatment of fibroids, and gave illustrations.

Forensic Medicine.

During the year just terminating a number of cases of deep forensic interest have been recorded in these columns. The most sensational may be grouped under two heads—criminal abortion and poisoning. Of the former class no less than five cases were investigated by the coroner for Central Middlesex. Two of these occurred in married and three in single women. In four of them the pregnancy had been terminated by gross mechanical injury. In three the instrumentation was practised by a second person. In one there were two vaginal punctures, seemingly self-inflicted. In the fifth case the evidence was not clear as to the precise means adopted to bring on abortion. In only one of these cases was a conviction obtained—namely, that of a single woman aged twenty-two. It will be remembered that BAXTER, an unqualified medical man, and POTTS, a nurse, acting in collusion, inflicted violent instrumental injuries upon the deceased. They were tried at the Central Criminal Court, convicted, and sentenced each to fifteen years' penal servitude. The above record of cases brought to light may be taken as indicating that the crime of illegally procuring abortion is a very common one. Probably, in the majority of instances the victims escape with their lives, or, if they die, the death is attributed to natural causes. It behoves medical men, when called to cases of recent miscarriage, to be on the alert, and with discriminating inquiry look for manifestations of guilty practice. Amongst the numerous cases of poisoning two stand out in prominent relief. In each the tragic act was homicidal and marked by features of unnatural cruelty. In the Toxteth Park case a workhouse nurse was proved to have murdered her daughter, aged eleven, her apparent motive having been the obtaining of a paltry sum of money for which the life of the child was insured. The means adopted to effect the woman's guilty purpose was the administration of a corrosive poison, probably sulphuric acid. The convict was sentenced to death and hanged. The second case was fully reported in our last number. A retired surgeon-major named CROSS compassed the death of his wife by arsenical poison. The motive seems to have been the desire to possess himself of a woman with whom he had previously carried on illicit intercourse. The unhappy murderer now lies under sentence of death. We have recorded two instances of poisoning by oxalic acid. A woman aged forty-five, suffering from meningeal gumma, ended her life by taking a huge dose of the acid, which proved rapidly fatal. In the second case, as we pointed out at the time, the verdict of the coroner's jury seemed strangely inconsistent with the medical evidence; although there seemed the clearest proof that the death was suicidal, the jury ignored this in their finding. It seems to us that the law regarding the sale of poisons is wofully lax in reference to oxalic acid, since there is no difficulty in purchasing more than fatal quantities. An unfortunate mishap occurred in the death of GEORGE JAMES, aged forty-seven, who rapidly succumbed after the medical administration of a dose consisting of half a drachm each of chloral hydrate and bromide of potassium. In this case the jury returned the antiquated and unscientific verdict of "Death by the visitation of God." No chloral was detected at the post-mortem, and we took occasion to note that failure of its recognition must not be taken as proof that it had not been exhibited. Of lead poisoning not a few examples have been demonstrated. The most notable was the case of MATILDA MORGAN, aged thirty-eight, a white-lead worker, who died from coma following saturnine delirium. Mr. WYNTER BLYTH has made some interesting analyses of the viscera of persons who have died from the effects of lead. This authority detected the metal in the brain, liver, and kidneys. He supported the reasonable hypothesis that the grave saturnine cerebral symptoms so frequently manifested may be explained by assuming that the lead, entering into a combination with the structural nerve elements, prevented or annulled their function. An epidemic of lead poisoning occurred at Villemontais, St. Maurice. The lead was derived from stones used for grinding corn. In another instance some plum jam became impregnated with lead by absorption of the glazing material of preserving pans. We need only make passing mention of the death of MIRIAM ANGEL, murdered by ISRAEL LIPSKI, who expiated his guilt on the scaffold. The murderer first resorted to mechanical violence, and completed his atrocious crime by pouring nitric acid down the throat of his victim. At the Guildford Assizes a medical man was sued for damages for alleged neglect whilst attending a woman in confinement. He was accused of contributing to rupture of the perineum and of subsequent want of attention. Rightly, as we think, the verdict was given for the defendant. There are two points of interest relating to procedure in the Coroner's Court worthy of comment.

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Ipswich Mr. VULLIAMY decided to hear a case with closed doors. The decision met with violent objection from the press and jury, but the legality of the coroner's action was upheld by the Lord Chancellor, At a subsequent meeting of the Court a member of the press was committed for contempt of Court for openly advising the jury not to acquiesce in the coroner's ruling. A writ of *habeas corpus* was obtained from Mr. Justice DAY. The matter, however, did not proceed to trial, for the person committed was liberated after making apology. An Act has been passed to consolidate the laws pertaining to the jurisdiction of coroners. Amendment of the law is promised for a future session of Parliament. We would commend the interest and action taken by the Manchester Medico-Ethical Association for the reform of the procedure in Coroners' Courts. Finally, we may mention three cases illustrating the value of a complete post-mortem examination, in each of which poisoning was suspected, but in none substantiated. In the first case, there was perforating ulcer of the stomach, in the second, ulcerative perforation of the gall bladder, and in the third, mechanical obstruction of the bowels. Finally, in connexion with the subject of Forensic Medicine, we would call attention to the excellent post-graduate course of lectures by Mr. PEPPER, published in our columns in August, September, and November of the present year.

Public Health.

A general review of the health of England and Wales during that portion of 1887 for which accurate statistics are available goes to show that, apart from certain local prevalences of disease, the year has been a healthy one. During each of the first three quarters the death-rate from all causes was below the average annual rate for the preceding ten years, and apart from the third quarter, when there was an almost infinitesimal rise in the zymotic rate, that rate was also below the average. Of the diseases included in the zymotic group, diarrhœa was the one which caused the most striking increase, the death-rate per 1000 during the third quarter being 2·06, as against an average of 1·83, the rainfall being 1·44 inch below the average amount in the corresponding periods of seventy-two years, and the mean temperature being 0·9° above the average for the corresponding periods of 116 years. The "fever" death-rate was throughout below the average; indeed, as regards the second quarter, there has, since quarterly returns have been published, only once been a lower rate. During the fourth quarter of the year the most striking occurrences have been localised prevalences of scarlet fever and of small-pox, which have severely tried sanitary authorities in respect of measures of isolation. During the first three quarters the scarlet fever rate remained steadily below the average, but towards the close of the third period there were certain marked epidemics, especially in the sub-districts of Glossop, Todmorden, Sowerby, and Milford. In the metropolis the disease extended widely during the month of October, although for many weeks the number of deaths remained below the corrected average, and it became a question how far this was due to mere mildness of the epidemic, or to the increasing number of persons who voluntarily sought isolation and treatment in the hospitals of the Metropolitan Asylums Board. So far as cases were concerned, the height of the epidemic was reached about the middle of November, when 2600 cases were under treatment in the hospitals of the Asylums Board, in addition to 164 in the London Fever Hospital. The fatal attacks reached their highest point in the week ending Nov. 5th, when sixty-nine deaths were registered; but this number only exceeded the corrected average by eight. This epidemic, by no means yet concluded, will be mainly remembered by reason of the evidence it has afforded of the need for such action on the lines recommended by the Royal Commission on Small-pox and Fever Hospitals towards a reconstitution of the Metropolitan Asylums Board as will make that body a true representative of the sanitary interests of the metropolis. As to small-pox, that disease, whilst showing some general tendency to spread, has mainly appeared as an epidemic in and around Sheffield, Leeds, and Bristol, and in most of the places where it has occurred it has found sanitary authorities most imperfectly provided with the means of isolation special to the needs of that infection. Increasing attention has during the year been called to the fact that small-pox hospitals, if established at all, must be ready in advance; and that, in the case of urban, if not rural, communities, they ought to be so contrived as to secure the destruction within their own walls of all matters calculated to spread the infection beyond their area. Amongst the more important investigations into matters relating to public health that have been made during the year, we may mention the continuance of the Wimbledon scarlatina outbreak into January and February, and the circumstance that this prevalence was stated to have such relations to milk and to cow disease as practically to bring it within the same category as the now well-remembered Hendon case, which has been so much discussed during the present year in official papers, and at some of the Medical Societies. Diphtheria, too, has been the subject of repeated inquiry by local health officers and officers of the central authority; and although the views expressed by Dr. GEORGE TURNER in his report to the Local Government Board as to the relation of the human disease to certain allied affections in the lower animals can only be regarded as provisional, in so far as their acceptance is concerned, yet they are well worthy of being made the basis of further work in the same direction. At Ealing an important diphtheria prevalence occurred early in the year, but the facilities for the investigation of its causes were not such as to enable any satisfactory solution to be arrived at. The sanitary state of Margate, in reference to the relation in that place of enteric fever to the grave sanitary defects which were discovered, has been more than once discussed by us, and we are glad to say that there are now grounds for believing that the Corporation of that place have determined that their attractive town shall no longer be subject to the stigma which attaches to it. Of [illegible] the temporary damage to the borough which has resulted from the inquiry that was held will be more than compensated for. Amongst incidental matters relating to health, we would advert to the exhaustive [illegible] report by General SCOTT and Mr. W. H. POWELL [illegible] the East London Water Company's [illegible] reference to the presence of [illegible] how the fish had had access to the [illegible] interesting points relating to the [illegible]

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female gravid eel and of young eelets were discussed; and assuming that the views of the reporters was correct, the remedy to be applied is of the simplest character. During the year the question of the need for open space about human dwellings has also been very prominently brought forward, especially in the case of Oxford. There is unquestioned difficulty in dealing with the re-erection of buildings in old and crowded towns, but this difficulty ought to be got over without sacrificing the health interests of the public altogether to those of owners whose property has acquired a value apart from any special expenditure of their own; and we hope that sanitary authorities will in this matter remember that they are guardians of the public health, and that they must not transmit to their descendants difficulties that can only increase in intensity the longer a remedy is deferred. Cholera has fortunately once again been marked by its absence from our shores during another year of the European epidemic of 1884–87. It has engaged much attention at home, and, as we recently explained in dealing with its history, the past epidemic has only gone to strengthen the position which we have taken up in this country as to the futility of quarantine measures and the overwhelming importance of sanitation as a preventive of the disease. At the last moment news reaches us to the effect that official inquiries which are being made in Italy will probably, once for all, lead to the adoption in that country of a system of medical inspection largely resembling that which has so well served England, and which has had the indirect advantage of educating the public to trust for the prevention of both cholera and other preventable diseases in an improvement of the sanitary conditions by which they are surrounded.

Hospital Mirror.

During the past year in the Mirror of Hospital Practice numerous cases have been brought forward, chiefly from the more general departments of medical work, illustrative of rare diseases, diseases attended by unusual symptoms or the presence of unusual complications, new or uncommon modes of treatment either operative or medicinal, or cases of special pathological interest. Although the majority of these have been obtained from the hospitals of the United Kingdom, several have been forwarded from the colonies and British dependencies. A short summary of the more important will include the following:—A case of general tuberculosis following (? tubercular) disease of the great toe joint after injury; another of the same disease in a patient who had received extensive fractures of the skull and bones of the face three years previously; an example of Addison's disease; a fatal case of hydrophobia, the incubation period of which was apparently two years, and in which great temporary relief was obtained by the use of ether spray to the back of the neck; seven successive cases of charbon successfully treated by excision; tetanus, in which recovery followed the excision of the cicatrix and surrounding parts five weeks after the infliction of the wound; recovery after an attack of acute meningitis, and in another instance after acute cerebro-spinal meningitis, of which also a fatal case is recorded; cerebral embolism and hæmorrhage into the lateral ventricle after parturition; cerebral abscess in which trephining was unsuccessful; cerebellar abscess with obscure history; extensive diphtheritic paralysis, from which the patient recovered; early pseudo-hypertrophic paralysis; general paralysis of the insane; and cases of paraplegia; the successful treatment of empyema after long duration of the disease, and cases instancing the usefulness of intubation of the larynx. Of the diseases of the circulatory system: cardiac hypertrophy; ulcerative endocarditis; multiple aneurysms of the aorta; death after rupture of an aneurysm of the coronary artery; ligature of the external iliac for high femoral aneurysm; for inguinal aneurysm in a patient who had had a left popliteal aneurysm cured by compression of the femoral and the introduction of needles into the sac a few months previously; aneurysm of the superficial femoral in Hunter's canal, preceded by aneurysm of the common femoral of the opposite limb, both treated by ligature; compression for popliteal aneurysm; amputation of the limb for diffused aneurysm of the anterior tibial artery, also for rupture of the popliteal vessels; and ligature of the brachial for secondary hæmorrhage. It is in connexion with the digestive system that the greatest activity has been shown so far as regards the records of treatment and disease in this department of THE LANCET; and this has been especially marked in the treatment of hernia, whether strangulated or in a condition calling for radical cure. Here there are examples of suppurative gastritis; perforating ulcer of the stomach; perforation of a latent ulcer of the intestine after a fall; perforation of the gall-bladder by an ulcer due to the presence of a small gall-stone in a girl aged twenty-three; a rare case of vomiting of gall-stones; the treatment of hepatic abscess; incision and resection of a portion of rib for hydatid of the liver; three cases of non-tropical dysentery occurring at one hospital; a fatal case of intussusception (with suggestions as to the employment of abdominal section at an earlier period on the failure of air injections); three cases of acute internal strangulation by a band—one rapidly fatal; another due to a similar condition, in which the patient recovered after abdominal section and a later performance of enterectomy; a diaphragmatic hernia was found in the third, but the condition of the patient during life did not permit of operative interference. Of the major operations may be mentioned four instances of gastrostomy for malignant disease of the œsophagus, life in one case being prolonged for four months. In another the result is unknown; the patient was alive some months afterwards. The operation of pylorectomy for carcinoma of the stomach is recorded, a successful cholecystotomy for gall-stones, and colotomy in a case of scirrhus of the pancreas. We have recorded herniotomy in inguinal, femoral, and umbilical hernia when strangulated, usually combined with the radical cure, including the removal of the testis in two cases of inguinal hernia; also examples of the present method of operation when the hernia is not strangulated, and when trusses are unsuccessful in keeping the rupture in check. In a case of partial enterocele the intestine sloughed, and a fæcal fistula, which closed without operation, resulted. In one of the congenital variety, where operation was performed for strangulation seven days after its last descent, ulceration was found to have occurred, and this healed after immediate suturing by LEMBERT'S method. In a man, aged forty-eight, at

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operation five days after symptoms of strangulation, gangrenous intestine was found in the sac and left *in situ* after incision, and the resulting fæcal fistula was closed by resection about two months later. There is one record of a rupture of the rectum. As during the year 1886, there are numerous recorded cases of operation on the urinary bladder, especially by the supra-pubic method, both for calculus and tumour in the male, and in the female removal of vesical growths by the urethra and after vaginal cystotomy; in the latter the history of the disease is given for some years, and the change in the character of the growth noted after three operations. Death after the performance of external urethrotomy; traumatic stricture in a child of three; the treatment of urinary fistulæ; retention before apoplectic attacks; and a most important case of intra-peritoneal rupture of the urinary bladder, treated by perineal incision and suturing of the rent after abdominal section, which proved fatal through hæmorrhage from the perineum. A series of cases illustrative of the surgical treatment of diseases and injuries of the kidneys, including nephrotomy, nephrectomy, and nephro-lithotomy. Operations on the pelvic organs: supra-vaginal hysterectomy; and abdominal section for hæmato-salpinx, hydro-salpinx, ovaritis, ovarian dysmenorrhœa, parovarian cyst, and the removal of ovarian tumours, in one case from a patient aged thirteen, have been recorded, as well as one on excision of the thyroid gland, and the cure of its hypertrophy by injection of iodine. Also cases of parturition after amputation of the cervix, in other instances the complication of cervical emphysema or hemiplegia; acute suppurative osteomyelitis of the humerus; fatal necrosis of the lower jaw, and removal of the coccyx for coccydynia; disease of the elbow and ankle, the treatment of an unusual complication after excision of the hip, loose cartilages in the knee joint, and multiple synovial cysts around it; also, recently, cases in which the knee joint was secondarily involved and the joint successfully drained. Operation for deformity after disease of the knee, and successful operation for cleft palate in children of twelve months old. The discovery and localisation of a metallic body by means of a special induction balance and its subsequent removal; recovery after bullet wound of lung, and after penetrating wounds of the abdomen, with protrusion of intestine. Compound fractures of the skull have been frequently recorded, and the success of the antiseptic treatment fully shown in the large percentage of recoveries after severe injury or operation, either for removal of depressed fragments or for the relief of symptoms such as paralysis of the arm, spasm of the muscles of the face and arm, or for high temperature. Recovery after forcible extension for fracture of the spine; prolongation of life for ten months in a case of fracture of the fifth cervical; extensive fracture of the pelvic bones. Fractures of the femur: simple, with rupture of artery and vein; compound, in which amputation was performed and secondary hæmorrhage from the artery took place; also compound fractures into joints. Dislocations of the humerus (post-acromial and subspinous): of elbow, with wound of ulnar nerve; of hip in a child of five; of knee, ankle, astragalus, carpus, and metatarsus. In addition to the new growths of the bladder, a rare form of scirrhus of the breast; scirrhus of the pancreas; epithelial tumours of the tongue and glands, soft palate, lower jaw, and generative organs. Some operations for disease in the region of the neck and mouth called for exceptional skill and boldness, as most important structures were involved, and in one a special feature in the after treatment calls for notice. Sarcoma of the tongue, antrum, ear, knee, foot, femur, thigh, scapula (in one instance the scapula and upper extremity were removed), and secondary growths of the lungs. We must specially mention a series of these growths, as the life history was fully recorded.

"The Lancet" Sanitary Commissions and Special Articles.

THE immunity from cholera enjoyed by England at a time when other countries were suffering severely from this disease has been matter for much congratulation, but the work of THE LANCET Sanitary Commission has shown that there is still serious sanitary neglect in some districts, especially in those which are exposed to cholera introduced by the Thames. The city of Rochester, which was selected for inquiry, afforded considerable evidence that local authorities were not all inspired by the same desire for the preservation of the health of those dependent upon them. Rochester, indeed, had neglected to perform one of the primary sanitary duties—the provision of an efficient system for the removal of excremental refuse. The city is entirely dependent upon the use of cesspools, except that a few house drains are connected with those intended for storm water only. The abominable nuisance created by these cesspools was apparent at the time of our Commissioner's visit, and the inhabitants loudly complained of the offensive odours which surrounded them and freely entered their houses. Perhaps the most striking instance to which reference was made in the report was that of a house in which the wainscoating had given way, and which afforded direct communication between the cesspool and the house, swarms of flies entering the dwelling-room from the cesspool. In many of the courts the open cesspools were said to be most offensive in summer, and the inquiry left no doubt that the Rochester authority were incurring a serious responsibility in not adopting some better system than that in existence. Even in the emptying of these receptacles the townspeople receive no assistance from those who are appointed to protect their interests. This duty is undertaken by scavengers, with whom householders have themselves to arrange, and often the filth has to be carried through the houses on its way from the cesspool to the cart. Again, in regard to the condition of dwelling-houses occupied by poor persons there was the same negligence. Houses were found damp and unfit for occupation, with floors broken and window-sashes perished. Rochester had, thanks to the enterprise of public companies, a good water supply, and the local authority had by providing a hospital shown its desire to limit the prevalence of infectious disease, but in the respects to which we have referred seriously neglected to perform its duty. The water supply for the metropolis also engaged the attention of our Commissioners, who carefully inspected the river Thames from Hampton Court to Staines. The inspection showed that London water supplies derived from this river are liable to pollution from many sources, especially from cesspools, which are situated in increasing numbers near its banks, and the contents of

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which undoubtedly pass into the water which is later used for human consumption. Chemical analysis, it was admitted, would give no sufficient indication of this pollution; but chemical analysis, our Commissioners insisted, could not be trusted to decide this question, and it was urged that London should no longer rely upon supplies which were thus liable to contamination. The increased number of house-boats, particularly at the time of the Henley Regatta, added another and grave element of danger. During the previous year we had shown that these boats, draining direct into the river, were a source of contamination. The Thames Conservancy thereupon issued a new bye-law to prevent this evil; but this reform remained in abeyance, and nothing was done. We were consequently obliged to take up the subject again, and published another report during this year's regatta. The result has been satisfactory, for the QUEEN gave her assent to the new bye-law, and this, after our denunciations, was considered so urgent that the Royal signature was obtained during Jubilee week. It is now illegal for house-boats to drain into the Thames, and we trust the new bye-law will be strictly enforced. The condition of the pit-brow women had excited much public sympathy and interest. We instituted an inquiry on the spot, and found that some very young children were employed to do heavy work; and that women also worked in all weathers without shelter. That proper shelter should be provided, the work of young persons restricted, and women prevented from lifting heavy loads during the period of gestation, seemed obviously necessary.

Among the various special articles dealing with sanitary questions, may be noted a careful description of Tangier as a health resort, dealing with the climatic advantages of this favoured spot. We also gave details concerning the sanitary measures adopted at Toulon since the cessation of the cholera epidemic, the new sewers built at Monaco, the defective drainage and ventilation of the renowned Monte Carlo Casino, together with very remarkable statistics showing the exceptional climate enjoyed at Hyères during the last six years. Quite recently we published a full account of the water supply and drainage of Venice, and some details concerning the rival port of Trieste. The great gathering of sanitary reformers who, to the number of 2400, participated in the Sixth International Congress of Hygiene, was fully described in our columns. Previously to this Congress, where questions relating to drainage were naturally often discussed, we gave the results of a special investigation made on our behalf concerning the practical working of the pail system at Manchester. The opponents of drainage by gravitation and water carriage will find in this article useful suggestions for an alternate method.

Medical Ethics.

The year now closing has witnessed an attempt, as unwise as it was necessarily impossible, to degrade the very principles of medicine themselves to the level of the quack's rule of thumb and the light studies of a school for children. Happily this project, introduced as it was with all the suitable accompaniments of light popular literature, has ended in well-merited failure. We congratulate the non-medical classes on this event, which marks the extinction of what implied for them a very serious danger. We also congratulate the medical profession, and particularly the Colleges of Physicians and Surgeons, on the firmness with which they have opposed a scheme so preposterous in itself and so prejudicial to the public good. Last, but not least, we must express our appreciation of the conduct of some of our medical brethren at first connected with this undertaking, who had the candour and decision to withdraw on discerning its true character. This movement will be remembered as a daring and undesirable venture in a new field of commercial and pseudo-medical enterprise. Its effectual suppression will sufficiently vindicate, if required, the reality of a justly scrupulous ethical principle in the medical practice of our time.

Honours to the Profession.

The honours which have fallen to the profession, so far as can they can be measured by titles and State favours, have not been adequate to the occasion. The House of Lords is still poor in the absence of men of science, and our own profession has still no representative there. That is, perhaps, worse for the House than for the profession. In any case the Jubilee year was a favourable one for a new departure, and it has not been so used. Well-deserved knighthoods have been conferred on Dr. GARROD, G. H. MACLEOD, Esq., and Dr. AITKEN. One was very rightly offered to Dr. GAIRDNER of Glasgow, but was declined. The following is a list of other honours which have been during the past twelve months conferred upon members of the medical profession:—

ORDER OF THE BATH.—Knights Commanders of the Second Class:—Military Division: Surgeon-General John Harry Ker Innes; Inspector-General of Hospitals William Mackenzie, M.D., Indian Medical Service; Inspector-General of Hospitals and Fleets James Jenkins, Royal Navy. Civil Division: John Simon, Esq., M.D., late Medical Officer, Privy Council Office; Arthur Mitchell, Esq., M.D., Commissioner in Lunacy in Scotland. Ordinary Members of the Military Division of the Third Class or Companions: Inspector-General of Hospitals and Fleets James Nicholas Dick, Royal Navy; Surgeon-General Herbert Taylor Reade, V.C., Medical Staff; Deputy Surgeon-General Jeffrey Allen Marston, M.D., Medical Staff. Ordinary Member of the Civil Division of the Third Class, or Companion: Professor W. H. Flower, British Museum.

ORDER OF ST. MICHAEL AND ST. GEORGE.—Ordinary Member of the Second Class or Knight Commander: James Alexander Grant, Esq., M.D., of Ottawa, in the Dominion of Canada. Companions: Sir Oscar Clayton; Surgeon Charles William Owen.

ORDER OF THE INDIAN EMPIRE.—Knights Commanders: Sir George Christopher Molesworth Birdwood, M.D.; Surgeon-General Benjamin Simpson, M.D. Companions: Thomas Beatson Christie, Esq., M.D.; Brigade-Surgeon Henry Elmesley Busteed.

COMPANIONS OF THE DISTINGUISHED SERVICE ORDER.—Surgeon-Major Thomas William Patterson, Medical Staff; Surgeon-Major Robert de la Cour Corbett, M.D., Medical Staff; Surgeon-Major Frederick William Wright, Indian Medical Service, Bengal; Surgeon Alfred William Frederick Street, Indian Medical Service, Bombay; Surgeon Alexander

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Peers Adams, Indian Medical Service, Madras; Surgeon William Ainley Sykes, Indian Medical Service, Bengal; Fleet Surgeon Thomas D'Arcy Bromlow, M.D., Royal Navy.

Obituary.

We come to the sad part of our history. Those who do so much to abate and avert mortality in others have themselves to submit sooner or later to the enemy. The list of our obituary names will show how grievous has been his triumph in many cases. Some indeed have been translated at a fit age, and almost "more than fit." Dr. OGSTON, of Aberdeen, had been teaching medicine for more than half a century; and Dr. WALKER of Peterborough, who died at ninety-one, was descended from JOHN KNOW seven generations back, and had been "qualified" for seventy-one years. At eighty he walked by night across fen and fields to operate for hernia in a humble cottage with the light of a tallow candle. More wonderful still was the death of Dr. NEKLEWITSCH, of Loske in Poland, at the alleged age of 109, having seen a patient just a quarter of an hour before — a longevity almost paralleled by that of Mr. SYLVESTER, whose demise in his ninety-ninth year is recorded in our present number. Sir GEORGE BURROWS has at length succumbed, and his honoured history, as that of others in our record, takes us back to the days of ABERNETHY, LATHAM, and FARADAY. The death of others has been all too premature. Not a few died shortly after their graduation — as if the very process of entering the profession had been too much for them. Our obituary includes the history of a Hindu practitioner, who, to fit himself for the Indian Medical Service, came to England, took the Fellowship of the English College of Surgeons and the degree of Glasgow. The heredity of medical character has been illustrated in some of our histories, as in that of Mr. SAMUEL MOREWOOD, who held the office of dispensary doctor in Drapers-town in succession to his grandfather and father—in all for near a century. But if we dip into medical biography, with its graphic history of character and service, where shall we stop?—with a list that includes Mr. RICHARD QUAIN (whose munificent bequest to University College should not be allowed to pass unmentioned in this retrospect), WILSON FOX, W. F. TEEVAN, FRANCIS OGSTON, the two FERGUSES, R. E. CARRINGTON, ALFRED WILTSHIRE, JOHN BRADY, M.P., Dr. GREENHALGH, GUSTAVUS CHARLES PHILIP MURRAY, Dr. RUTHERFORD HALDANE, Dr. HENRY KENNEDY, Dr. LAUCHLAN AITKEN, Dr. CUMING of Armagh, JAMES THOMAS CARTER of Glasgow, Dr. ALEXANDER GORDON of Belfast, Dr. HENRY MILNE of Banff, Sir WILLIAM SMART, Dr. EVAN EVANS, who in 1842 made himself Apothecary, and in 1853 took the M.B. of London, CHARLES ROBERT THOMPSON of Westerham, and others. We must desist. The Science of Medicine is big with promise. With every wish that those who profess it may experience a higher appreciation at the hands of the public and of fellow-workers in other realms of duty, we go forward to another time, in the spirit of the faithful ones whose names would rebuke us if we did work slightly or unfaithfully.

DR. PROSSER JAMES has been unanimously elected a Corresponding Member of the Société d'Hygiène Française.

Annotations.

"Ne quid nimis."

DEGREES FOR LONDON MEDICAL STUDENTS.

THE different bodies interested in this question are preparing to support or oppose the application of the Royal Colleges which will be under consideration by the Privy Council after the 16th prox. We have still to refer to the petitions submitted by the Apothecaries' Society and by the Association of General Practitioners. The first-named petition, we regret to see, has committed the Society to the opinion "that no new university for the conferring of degrees in Medicine and Surgery is required in London, as the University of London already *satisfactorily and fully* performs all the functions of such a university." It has been shown over and over again in our columns that the University of London does not meet the wants and requirements of the London students, and it is because it has no concern except with the picked men that the present agitation has arisen. We had hoped that the Society would have had some sympathy for the just claims of students in London, independently of the question whether they became future licentiates of the Hall, or might obtain their diplomas from the Conjoint Colleges. Jealousy of the Colleges and the unwise and ill-timed neglect of the Society by the Colleges have distorted the vision of the Master and Wardens, and unfortunately driven them to submit an opinion to the Privy Council which the mass of the profession in England will repudiate. No better explanation of the need for obtaining a new degree-conferring body for London medical students has been put forward than that contained in the first paragraph of the statement addressed to the Lord President of the Privy Council by the Association of General Practitioners:—

"With the general object of obtaining for the students of the English medical schools and hospitals who pass their examination before the licensing bodies of London facilities for obtaining a degree which shall carry with it the title of 'Doctor' the Association of General Practitioners is in entire accord. There is unquestionably a great hardship at present upon the licentiates of the London medical examining bodies, who, although possessing a curriculum equivalent to that of many of the British Universities which confer medical degrees, have nevertheless no other facilities for acquiring such a degree than those afforded by the Universities of London. The standard of the University of London is expressly placed so high as to make it unattainable for more than a small minority of the London students. It is a degree of *élite*, and placed at so high a standard as to be altogether beyond the ordinary possibilities of the average student, even when thoroughly educated and carefully examined for all the necessities of general practice. In this respect, therefore, the English students are under a great disadvantage as compared with those especially of Ireland and Scotland, and this disadvantage is practically felt because, on the one hand, large numbers of students are thus attracted to the Universities of Scotland and Ireland, where they obtain on reasonable conditions the title of M.D.; and, on the other hand, because Irish and Scotch students, who have received their degrees after an examination in no way more difficult than the average examination at present carried on in London by the examining bodies, settle in England, and practise alongside the London licentiates, with the added prestige of the degree and title of M.D., and thus claim a superior social and University status."

The new examination scheme of the Apothecaries' Society has hardly been long enough in work for that body to charge the Colleges with wishing to attract candidates by a low standard of proficiency. Such an accusation is merely

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the outcome of a jealous spirit, and is ungenerous and unwise. With the contentions of both petitions otherwise—viz., that the licentiates of the Society should not be practically debarred from the privileges of a degree if this be granted to those who qualify through the Colleges, and that a wider representation, securing the presence of general practitioners on the Senate and safeguarding the interests of future graduates—we heartily sympathise, and hope that clauses will be inserted in any new Charter so that these advantages may be effectually guaranteed.

THE ROYAL COLLEGE OF PHYSICIANS AND ATTEMPTS TO POPULARISE MEDICINE.

WE understand that a certain penny weekly journal with a medical sub-title has been the subject of inquiry by the Censors Board of the Royal College of Physicians, in consequence of certain Fellows of the College having allowed their names to appear on the Council of an Association bearing a name similar to that of the journal referred to. The Censors' Board will report to a meeting of the College the result of their investigation and their opinion with reference to the attempt to popularise the science and art of medicine, by contributions to popular papers. We learn that this report was to have been placed before a meeting of the whole of the Fellows of the College in the early part of next month, but, from circumstances which have arisen, Jan. 26th is now fixed as the day on which the Censors' report will be considered, and the opinion asked of the assembled Fellows on the matter which has led to the investigation in question. We feel sure that Fellows will, at any inconvenience, attend on the occasion. We have little doubt that the respected President, Sir William Jenner, with other high office bearers, will take part in the discussion, and state their views on the causes which have brought about this inquiry. It is an open secret that the President of the Association alluded to above, after a correspondence with the College of Physicians, has unreservedly resigned all connexion both with the Association and the journal.

THE SANITARY FUTURE OF GREAT CITIES.

THERE is no more significant feature in the social history of our time than the swift and steady increase of the urban populations at the expense of that of the country. There are certainly definite advantages implied in this transference, quite apart from the question of work and wages, and these ought not to be ignored. The inborn tendency of men to congregate in towns is in itself a proof of the gain which they feel that they acquire from frequent intercourse with one another, and this may help to assure us that, with proper guidance, what seems under ordinary conditions an artificial departure from the normal mode of life may prove equally compatible with the healthy growth of mind and body. We can hardly hope to convince ourselves on this point, however, without a widespread reconstruction of our present social and sanitary arrangements. It is not to be expected that vigour of brain and muscle should characterise a people reared amid impurities, atmospheric, personal, and subterranean, such as try the endurance of those who inhabit our smoky and still overcrowded metropolis, and many another city not more happily circumstanced. The subject, as it well deserves, is attracting very general attention. Lectures and popular treatises innumerable are devoted to it year by year, and, we would fain hope in every case with some further effect than a mere inactive purpose of reform. A few days ago Mr. Frederic Harrison, in an address delivered at the Toynbee Hall, traversed almost the whole field of public sanitation as applied to cities. Necessarily his discourse was more fruitful in important generalities than in practical details; but it nevertheless conveyed some excellent advice on points which have divided the opinions both of municipal and sanitary authorities. We quite agree with his remarks on the worse than uselessness of water storage among the poorer working class of towns. The system of constant supply, notwithstanding its occasional intermissions and the possibility of waste if due care be not taken to prevent this, is certainly preferable in the interest of cleanliness and protection against disease. We should like to see it in general use among the poor, to many of whom a cistern is not very much better than a favourable specimen of cesspool. Another matter touched upon was the disposal of sewage. It must surely be allowed that the time has come to reconsider the whole of this question. The unnatural spectacle of turbid and malodorous rivers carrying with them to the sea unnumbered gallons of fluid manure, and at times mingling their impurities with water used for domestic purposes, can hardly fail, sooner or later, to impress the public mind with the advantages of any system which would convert the drain-pipe from a source of disease and offensiveness into a fertiliser of no mean order. Among the topics touched upon were the erection of model houses for artisans and the disposal of the dead. Respecting the former, there is, we allow, much to be said in favour of the tenement style in building. The suggestion that every such tenement should contain one common room for cases of infectious disease and another to act as a receiving room for the dead, though not perhaps novel, is one of evident practical value. With regard to the disposal of the dead, we trust that perseverence in the foolish and unwholesome practice of using massive, almost imperishable coffins, will not force the judgment of scientific men and of the public generally to abandon as hopeless the deserving claims of the "earth-to-earth" system. Other questions relating to sanitary reform, such as that of smoke abatement, the lighting of houses, recreation, and the like, referred to in the address before us, have been discussed in former issues of this journal, and need not now be reconsidered. Meantime we are entitled to expect that, with a stricter administration of the laws which regulate health, the extensive readjustment of population to which we have once more directed attention may prove a less doubtful benefit than it now appears to be.

MONACO AND "THE LANCET."

IN the spring of last year we published a criticism of the new sewers built in the old town of Monaco.[1] These, in consequence of the rocky nature of the ground, had cost a large sum, and were, on the whole, very satisfactorily constructed. Unfortunately, while the sewers were good in themselves, there had been no means of ventilation or flushing provided. Worse than this, there was no regulation in force to ensure that all pipes communicating with the sewers should be trapped. Yet, while these grave defects were allowed to exist, the authorities of the Principality had given manifest proofs of their desire to take all measures necessary for the preservation of public health. Subsequent events have helped to confirm this opinion. The article in question was translated *verbatim* into French by order of the Government of Monaco, and read to the Prince, who was at that time staying in France. Prince Charles at once telegraphed orders that the Commission of Hygiene of the Principality should be convoked, so as to take into consideration the criticisms published in THE LANCET, and report. This was done, with the result that the opinions we expressed were confirmed by the Commission of Hygiene. When the Prince received the report to this

[1] See THE LANCET, March 12th, 1887.

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effect, he gave orders that necessary measures should be taken to provide all that was still wanting to ensure the satisfactory working of the Monaco sewers. Further than this, our Sanitary Commissioner, who recently passed through Monaco on his way homewards from reporting on the condition of Venice and Florence, was invited by the Governor of the Principality to meet the Commission of Hygiene and discuss the whole question. It was then at once decided to make experiments for the ventilation of the sewers. The compulsory application of syphons to all drain-pipes was also adopted in principle, and the question of applying automatic flush-tanks for the sewers is now being investigated. This willingness to do the best the circumstances permit is highly commendable, particularly when compared with the attitude of sanitary authorities nearer home.

THE PERILS OF FOOTBALL.

AT an inquest held at Leeds on the 23rd inst. respecting the death of George Arthur Houghton, aged nineteen years, who had died from the results of injuries received in a football match at Roundhay Park, the evidence showed that there had been a good deal of roughness all through the game. The jury, it is reported, returned a verdict of accidental death, but wished to "draw the attention of the public to the rough play that frequently took place, that the rules were not strictly adhered to, and that rules ought to be made to put a stop to such play." We need hardly point out that (with the exception of the grammar) we entirely concur with the rider of the jury. Football as too often played nowadays is brutally and unnecessarily rough and dangerous. The game—in itself a good game and capable of much good in the interests of health—seems to be degenerating rapidly into what is little less than a "free fight," at which serious accidents are common and fatalities by no means unknown. It is not only the injured player who suffers; he is often a bread-winner who can ill be spared. As we have said before, if football cannot be very considerably "mended" it must be "ended." The authorities who preside over the two styles of the game seemed to be bestirring themselves some little time since. Have they again gone to sleep?

CATARRH OF THE ANTRUM.

IN cases of catarrh of the antrum, Dr. Schiffers of Liège, instead of extracting the second molar, gains access to the cavity through the opening in the middle meatus of the nose. Through this he inserts a director, and with the help of a curved probe-pointed bistoury he opens up a passage for the free exit of the confined secretion. By the use of cocaine the patient suffers but little during the operation. Dr. Schiffers points out that catarrh of the antrum is frequently overlooked and mistaken for an affection of the nasal mucous membrane. When an abundant fetid discharge runs from the nose, especially when it is intermittent, the existence of disease of the antrum should be suspected, and a careful search made, with the help of the nasal speculum and a good light, for the welling up of the secretion through the foramen in the middle meatus.

ARE ASSES CAPABLE OF VOMITING?

AN interesting physiological point is now being discussed in Paris. M. Zola, in his last work, "La Terre," depicts an intoxicated ass, and concludes with an account of the animal in the throes of sickness. M. Sarcey has taken offence at this unpleasant piece of realism, and in a review of the work affirmed that the ass was incapable of being sick, and brought forward the evidence of a veterinary [illegible] to the effect that the structure of the [illegible] renders vomiting impossible. M. Zola writes back and turns the tables on his adversary by stating that he had read up the principles of equine or asinine physiology before venturing to describe the matter in question, and refers the veterinary surgeon to his studies. In point of fact, M. Zola is perfectly correct. It is commonly but incorrectly asserted that the horse and ass cannot vomit. It is true that they vomit rarely and with great difficulty, the reasons being that the stomach is small, that the œsophagus opens into the stomach much nearer the pylorus than in the dog or man, so that the cardiac portion forms a large sac, against which the contents of the stomach are pressed when efforts to vomit are made. The contents of the stomach are, moreover, usually rather dry, and do not remain long in the interior of that viscus, and finally the œsophageal aperture is small and highly muscular. The latter point is undoubtedly of importance, since horses, and we presume asses also, vomit readily enough when by disease or operation the cardiac sphincter is paralysed. M. Zola, if not very delicate, at least studies his art.

THE SMALL-POX EPIDEMIC IN YORKSHIRE.

THE small-pox epidemic in Yorkshire is assuming serious proportions. In Sheffield the disease, having slumbered through the early months of summer, increased rapidly about August. In September 275 fresh cases were reported; in October there were 498; in November, 604; and up to December 19th 585 more became known, and this without compulsory notification. Indeed, it is well known that some of the mildest cases are not heard of, and since it is so difficult to control the movements of persons thus attacked, these mild cases constitute the greatest source of danger to those who are either imperfectly or not at all protected by vaccination. In view of these facts the borough hospital soon filled; then came a grave suspicion that the disease was being exceptionally diffused in the vicinity of this hospital, and under these circumstances another was established elsewhere. The Corporation were then threatened with legal proceedings, and, the case ultimately coming before the law courts, the judge, acting on the advice of Dr. Buchanan of the Local Government Board, instructed Mr. Shirley Murphy to report on the case to the Court. That report expressed the view that there was an element of danger to the inhabitants, and on this an injunction was granted. Now, at last, a site of forty-two acres within the borough has been found, and although the locality is very exposed, yet Dr. Parsons has reported to the Local Government Board that it is a suitable one. This was announced the other day at the public inquiry, when a loan of £13,000 was asked for the purchase of the site, and the erection thereon of wooden huts to accommodate sixty patients in the first instance; an instalment that can only be expected to mitigate and not prevent the extension of an existing epidemic from which 800 to 1000 persons are now suffering. The sanitary authorities comprised within the Barnsley Union are also face to face with the prospects of an epidemic, the disease being already in Wath, Worsborough, Ardsley, Hoyley, and Wombwell. The Corporation of Barnsley have offered to receive in their hospital cases from the [illegible] townships, and at a recent meeting representatives of the various authorities decided to leave the question of future extension in the hands of the Corporation. In Leeds also the disease is further extending, and in several [illegible] around the larger boroughs cases have [illegible]. Bradford is also making certain preliminary [illegible] as to isolation in case the disease [illegible] the union; and at a recent [illegible] to the effect that the structure of the [illegible] it was explained that [illegible]

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paupers should be sent to the Bradford Fever Hospital, for, quite apart from the fact that the workhouse infectious building was already full of scarlet fever and measles, that place was not a proper one in which to aggregate small-pox patients. We would earnestly urge all who have not been vaccinated within recent years, or who show imperfect marks of vaccination, at once to seek revaccination. There is no greater mistake than to leave this until the existence of small-pox is actually ascertained to be at hand. Efficient revaccination is more difficult than efficient primary vaccination, and it needs well-selected fresh lymph taken direct from the arm. Such lymph cannot be instantly manufactured, and hence it is important that the regular weekly vaccination station should be the main centre for the performance of revaccination, and this before there is a panic and a consequent run on the public vaccinator for lymph beyond that which he can properly supply.

INTESTINAL AFFECTIONS OF YOUNG INFANTS.

DR. TH. ESCHERLICH of Munich, writing on gastro-intestinal affections in children, points out that when the small intestine is the seat of the disorder, as this is inaccessible to washing out, like the stomach and colon, the best way to act upon it is to regulate the food so that the contents of the small intestine shall not easily undergo fermentation. He mentions the researches of Hirschler, which show that in a mixture of albuminoids and carbo-hydrates, such as milk, the carbo-hydrates are the first to decompose. When, therefore, acid fermentation is going on, the carbo-hydrates should be removed from the diet. Similarly, when albuminoid fermentation processes are going on, as shown by the occurrence of offensive stools, the addition of small quantities of dextrin or other carbo-hydrates to the diet may be expected to stop the albuminoid fermentation.

A FLOATING HOSPITAL FOR THE NORTH SEA.

THOSE of us who live within a stone's throw of a trusted medical practitioner can form some idea of the comparatively forsaken condition of dwellers in rural districts from whom surgical and medical aid, so needful in emergencies, is removed by several miles of indifferent country road. Can they, we would ask, have any true idea of the case of fishermen at sea, who, in the event of injury or illness, may have to suffer for days unaided save by the kind but rough-and-ready leech-craft of their fellow-smacksmen? If they can, it is hardly possible that they will refuse their support to the scheme for providing a floating hospital for the benefit of this hitherto neglected class of men. Several circumstances combine to enforce their claim upon public consideration. The number of those employed is not small. Some twelve thousand men are said to constitute the English-speaking portion of the floating population in the North Sea alone. These will constitute the allotted charge of the hospital ship. Separated they often must be over this wide cruising ground, either by the necessities of their calling or by stress of weather. The fishing vessels, however, in virtue of their very multitude, have something of the cohesion which belongs to a fleet—an important practical point in connexion with the proposed scheme. We must not forget the value to the country of those who navigate them. Whether as makers of our commercial prosperity or as pillars of national defence, their energies are well worthy of preservation, while the perils which threaten them are neither few nor light. If we grant the possession, to begin with, of more than average powers of endurance, we have at the same time to reckon with surroundings which are unusually adverse. The battle of angry elements is but one danger. From this and other sources arises a variety of causes of accident. Illnesses of the inflammatory type also have here every condition favourable to their rapid and vigorous development. Delay in such cases may—and without doubt often does—adversely turn the scale between life and death. We have, therefore, under all these circumstances, a special satisfaction in casting this project, as one of the best we have known, upon the good-will of all our fellow-countrymen. A ship cannot be acquired and fitted as a hospital without an ample outlay of money. It is equally evident, however, that the cost of such an undertaking is by no means unlimited. Its pressure when distributed over many subscribers will hardly be felt by individuals, except as a sense that "the heart grows rich in giving," and the good which it is likely to accomplish is incalculable.

FREE COOKING STOVES AND FREE BATHING PLACES.

IT is asserted, and with much show of reason, by the correspondent of a contemporary, that the two most urgent needs of the poorer classes, just now, are free cooking stoves or ranges, and free bathing places. Without doubt, these are important matters; and it is easy to see that if the poor could have ready access to a good cooking apparatus, they might be instructed and enabled to make better use of the food their limited means may procure, and thus find their meagre pittance of higher value in the way of sustenance, and it does not require any laboured argument to demonstrate they must be happier and healthier if they are less dirty. Even a penny is a large sum for a really poor person to pay for a bath. It would be well if the luxury, which is also a necessity, could be provided gratuitously. To be of practical usefulness, the free cooking stove and the free bath must be close at hand. It would be a philanthropic enterprise to provide such conveniences in the very centres of the most populous districts.

THE MEDICINE STAMP DUTY.

THE legislative duties of the year 1888 may be said in a sense to have already commenced, for although there are still a good six weeks before the meeting of Parliament, the season of Cabinet Councils has opened, and the Government has sufficiently matured its plans to be able to make public promises that the forthcoming session shall be chiefly devoted to the discussion of measures in which England, Scotland, and Wales are directly and principally interested. We hope that it may be found possible to redeem the pledge, for there is plenty of work ready to the hand of Parliament within the sphere of most strictly domestic politics. Several measures which we have long advocated await only the leisure of the House of Commons, and foremost among these we should for our own part place the repeal of the medicine stamp duty. We have so recently discussed the whole subject that it would be tedious and inopportune to renew the discussion here and now, but we notice with great satisfaction that the demand for repeal is increasing on every hand, and was recently re-echoed by our contemporary the *Saturday Review* in the eleventh of a series of special articles upon quack medicines which is now appearing in its pages. The grounds taken by this latest exponent of the sound doctrine on this point are exactly those which we have ourselves assumed—namely, (1) the enormity of the fraud to which it gives rise, and the ignominy which it brings upon the Government which in any way connives at it; and (2) the fiscal objection to a scheme of taxation which takes from the taxpayer four times the amount which it yields to the Treasury. Indeed, it is impossible that such cogent arguments should not be advanced, and advanced into the very forefront of the discussion, whenever it is brought on; and

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when these arguments have been driven home to the understanding of Parliament and the country, they will certainly make a speedy end of this barbarous relic of the Georgian era. In one respect the present time is singularly promising, for it cannot be supposed that a publicist like Mr. Goschen will fail to appreciate the weight of the objections to this tax on which we rely, and we are accordingly disposed to hope much from his next Budget provisions.

RESIGNATION OF SIR ROBERT RAWLINSON, C.B.

IT is with feelings of genuine regret that we have heard of the resignation of Sir Robert Rawlinson, C.B, Chief Engineer to the Local Government Board. It is not that he has not earned the repose of retirement from official duties, for there are few men who have reached the age of seventy-six who can look back with more pride and satisfaction to the labours of a useful life than Sir Robert Rawlinson. Our regret lies mainly in the fact that Sir Robert finds that his years are telling on him, and that a recent indisposition has given him hints that he must take more care of himself than he has hitherto found it necessary to do. Having first studied railway engineering, and then having taken the post of assistant surveyor to Liverpool, Sir Robert was next engaged by Government to advise them as to the terrible sanitary state of the camps, barracks, and military hospitals during the Crimean War. Then, during the cotton famine in 1863, he organised great relief works in Lancashire, and his extremely able services were at this time recognised by the bestowal of a C.B. Later on he was appointed to the office he now quits; he also served as Royal Commissioner on several occasions; and in every position in which he has been placed he has done good and lasting work, and won to himself a large circle of friends. His mind is too active to allow of a useless close, and we trust that he will find many an opportunity still further to advance the cause of sanitation, which he has so much at heart.

MYOPIA.

A VERY sensible decree has just been issued by the Austrian Minister of Public Instruction, forbidding the use of books printed with small type in public schools, as short-sightedness is so prevalent amongst school children in Austria. Scientific supervision might very properly be given to school books in this country, attention being especially directed to the size of the type, length of line, and spacing of letters and lines. In the works published by the Clarendon Press no fault can be found in these respects, and, speaking generally, the school books of this country are well printed. The chief fault in German books is their adherence to the very dazzling Old English shape of the letters, which certainly severely tries the eyes by necessitating very close attention, and the evil effects of this is aided by the paper being coarse and by the light supplied being usually insufficient.

CHRISTMAS FESTIVITIES AT THE METROPOLITAN HOSPITALS.

CHRISTMAS DAY was celebrated in the various metropolitan hospitals with but few exceptions by the substitution of the orthodox fare for the usual hospital rations, and the wards of the various institutions were gaily and tastefully decorated. In consequence of the festival falling on a Sunday the usual gaieties and pastimes of the season took place on the following day, and at Guy's Hospital, except for the decoration of the wards, the 25th was observed as an ordinary Sunday, the Christmas dinner being postponed until the 26th inst. Distributions of toys to the younger patients, and of clothing and useful articles to adult sufferers, [illegible] also made [illegible]

THE SENSE AND SENSES OF ANIMALS.

SIR JOHN LUBBOCK recently devoted a lecture to this subject in Queen-street Hall, Edinburgh, and pointed out that the dog was generally admitted to be a loyal, true, and affectionate friend of man, but, when the nature of the animal was considered, our knowledge, he said, was very limited, and this arose from the fact that attempts were made to teach animals rather than to learn from them. It had occurred to him that some such method as that which was followed in the case of deaf-mutes might prove instructive if adapted to the case of dogs. He had tried with a black poodle belonging to himself, and had made the following experiments:—

"He had taken two pieces of card, one blank and the other with the word "food" upon it. He had put the latter on a saucer containing some bread and milk, and the blank card he put on an empty saucer. The dog was not allowed to eat until it brought the proper card to him. This experiment was repeated over and over again, and in about ten days the dog began to distinguish the card with the letters on it from the plain card. It took a longer time to make the dog realise the difference between different words. In order to try to discover whether the dog could distinguish colours, he prepared six cards, marking two of them blue, two yellow, and two orange. He put one of each on the floor, and tried to get the dog to bring to him a card with the same colour as one which he showed the dog in his hand. After trying this for three months, he found that his experiment in this direction was a failure."

Sir John Lubbock proceeded to state that he considered it to be doubtful whether ants could hear, but that it was possible both they and bees might hear sounds so shrill as to make no impressions on the human organ of hearing; and so perhaps with colours. The world might to insects be full of music we could not hear, colours which we could not see, and sensations which we could not feel.

FEVER IN LONDON.

THE number of patients admitted into the hospitals of the Metropolitan Asylums Board during the week ending Dec. 23rd was 143 suffering from scarlet fever, and 15 from enteric fever. No case of small-pox or of typhus fever was received during this period. The deaths from scarlet fever during the preceding week were 11·6 below the corrected average for the same week of the last ten years; the deaths from diphtheria were 5·7 and from whooping-cough 5·5 above the average. It is stated that the Metropolitan Asylums Board has submitted plans to the Local Government Board for the building at Darenth of a "brick hut" hospital for 600 convalescent small-pox patients, the administrative buildings to be equal to supplying 1000 patients; it is estimated that the total cost will amount to £58,900, and it is argued that this would be a more economical method of construction than if the huts were constructed of wood instead of brick.

ISOLATION ARRANGEMENTS AT COLCHESTER.

AT Colchester the guardians very properly desire to make some arrangements with the corporation as to the isolation of infectious paupers. They have wisely decided that duplicate hospitals would be a mistake; that the workhouse is not a proper place in which to aggregate the infectious sick. They are also seeking to learn how far the demand which the Leeds guardians recently made upon the corporation of that borough, that paupers should be admitted into the sanitary hospital as a matter of right, can be maintained. So far, the demand in question is, as we [illegible] only based on counsel's opinion, but the [illegible] of the law officers of the Crown, [illegible]

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THE CROWN PRINCE.

THE latest reports from San Remo are more favourable than they have been, so far as the immediate future of the Crown Prince is concerned. A swelling noticed a short time ago has subsided, and this has given rise to optimistic rumours. This was probably œdematous in character, although Sir Morell Mackenzie is reported to have spoken of it as the cicatrisation of a cancerous growth, which he states does occur in the larynx. On the other hand, "another slight tumour" has been discovered, and this fact would seem to show the correctness of the diagnosis arrived at in November. Sir Morell Mackenzie has stated that "time only can show us the exact nature of the Prince's ailment." This statement does not very clearly indicate whether he still entertains a doubt as to the malignancy of the growth, or as to the degree of malignancy. At any rate, the evidence, so far seems to show that we may hope that the disease, if it be cancer, is of the less malignant form.

TORRENS' ACT.

AN important decision has recently been given by Mr. Baron Pollock in the Queen's Bench Division of the High Court of Justice on the question of the ownership of property concerning which a local authority had taken action under the Artisans and Labourers' Dwellings Act of 1868. A leaseholder received from the vestry of Marylebone notice relating to certain houses which he held on a long lease almost expired, but concerning which arrangements had been made for the lease to be renewed for a further term of twenty-one years. An order was then made for the demolition of the property, but this was amended on appeal, and the owner was ordered to put the premises in proper repair. For this purpose some of the work required to be done was in excess of the leaseholder's covenants to repair, and the leaseholder therefore communicated with the freeholder, carried out the work, and obtained a charging order on the premises. The freeholder subsequently appealed on the ground that the leaseholder's interest had nearly expired, and the case depended upon whether anyone who was the owner when the notice was given could cease to be the owner within the meaning of the Act when the order was subsequently made. Mr. Baron Pollock said it was impossible to suppose it was the intention of the Legislature to enable a person to whom notice had been given to get rid of his liability before the order was made by saying that his interest had run out, and that the object of the Act was to call upon the person who was the owner at the time the defective condition of the premises was discovered to put them into a proper state. He gave judgment accordingly.

UNHEALTHY HOUSES AT PLUMSTEAD.

A CORONER'S JURY at Plumstead have very properly requested that the attention of the Local Board should be directed to the disgraceful condition of some of the newer parts of the parish. It is said that there is in the neighbourhood a great demand for cheaply rented artisans' dwellings, and these have recently been run up literally by the thousand, being let or sold and inhabited before they are finished. The tenants themselves are usually so eager to enter that they do not think of stopping to make objections that the houses are built upon land which, it is alleged, has been the depository of refuse, and that the roadways are mere masses of unwholesome mud. When people will not protect themselves, it is surely necessary for the local authorities to exercise a more paternal government than they do at present. If the Plumstead Board would take counsel with their medical officer they would certainly receive some valuable hints as to the sanitary condition of many of the new streets. The jury appears to have felt somewhat strongly on the subject, as the case was not one directly due apparently to insanitary surroundings. The child seems to have died rather suddenly, medical evidence going to show that uræmic poisoning due to Bright's disease, consequent possibly on an overlooked attack of scarlatina, was the cause of death.

THE GRAND JUNCTION WATER COMPANY.

ONE of the great London water companies proposes to alter the source of its supply. The Grand Junction Company intends, we are informed, to apply for Parliamentary powers to remove its in-take to Dorney in Buckinghamshire, a spot above Windsor. It is impossible to decide offhand whether such an alteration would be an improvement. Recent pollution in water is most to be dreaded, and the surroundings of the new in-take will require careful consideration. But it seems probable that the proposed change will be beneficial, for there is comparatively little risk of pollution in a district which contains few river-side dwellings, and there is a good chance of self-purification by oxidation in water which flows to the consumer through a long channel.

THE BRITISH PHARMACOPŒIA.

EVEN the British Pharmacopœia is provided with a champion who defends its contents. Professor Redwood is that champion, and his arguments published in the *Pharmaceutical Journal* seem to have demolished the adverse statements of Professor Tichborne, who represents as fundamental errors the system of weights and measures, specific gravities, and volumetric estimation of the British Pharmacopœia.

SUFFOCATED INFANTS.

THE coroner for East Surrey seems to have held inquiries into the cases of not less than eight infants suffocated on the night of Christmas Eve or the morning of Christmas Day. This represents a serious mortality. It is extremely regrettable that those who have the care of children of tender age do not feel their responsibility sufficiently. Attention ought to be pointedly called to the need of special carefulness, and district medical officers might help in making the facts known, and giving good and warning counsel.

FOREIGN UNIVERSITY INTELLIGENCE.

Breslau.—The hundredth birthday of the celebrated veteran anatomist and physiologist, Johann Evangeliste Purkinje, has just been celebrated.

Rostock.—The Mecklenburg Landtag has voted £15,000 for the enlargement of the hospital and for the erection of an eye department.

THE PUBLIC VACCINATOR FOR CARDIFF.

THE *Western Mail* for December 26th gives an account of the meeting of the Board of Guardians of Cardiff, at which it was decided to terminate the contract with Mr. Horder, the public vaccinator for the town. The charge against Mr. Horder was that he was unwilling to supply three practitioners with lymph for the vaccination of their patients; but it is now shown that he did in fact supply two of them, and that he had ample reason on account of shortness of his own stock for not supplying the third. Mr. Spear, medical inspector of the Local Government Board, testified to the efficiency of Mr. Horder's work, but without avail, and, as we read it in the local journal, an act of very serious injustice has been done to the public vaccinator. If the guardians of Cardiff have any self-

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respect they will not leave the matter where it is, but will carefully investigate the whole circumstances of the case, and unless something far more serious can be proved against Mr. Horder than has hitherto transpired they will, we trust, feel that no public officer should be deprived of his appointment for reasons so frivolous and evidently so groundless.

SIR WILLIAM JENNER.

A REPORT has appeared in some of the morning papers to the effect that Sir William Jenner was suffering from illness. We are glad to be able to state authoritatively that he has only been labouring under what is popularly known as "a bad cold." He is now quite well.

WE regret to record the death, on the 24th inst., of Dr. Ross, of Portree, Skye, from typhus fever. The deceased, who was highly respected throughout the Island, leaves a widow and four children.

THE CONTAGIOUS DISEASES ACTS.

By J. H. PARKER WILSON,
MEDICAL OFFICER, H.M. MILITARY PRISON, BRIXTON.

HAVING watched with considerable interest the discussions that are constantly taking place in THE LANCET relative to the contagious diseases, I thought it would not be without interest to bring before the notice of the profession a carefully compiled return for the years 1884–5–6, dating from about the time when the Contagious Diseases Act ceased to be enforced. Considering the large number of men who pass through this establishment annually, and are under my medical care, an unusually favourable opportunity is afforded me of estimating how rapidly a disease,

TABLE I. (1884.)

Place where the disease was contracted.	Gonorrhœa.	Syphilis.	Total infected.	Total number of men received from each station.	Percentage infected from each station.	Been infected with both diseases.
London	18	22	40	149	26·84	3
Canterbury	3	3	6	27	22·22	—
Dover	4	6	10	235	4·25	—
Woolwich	3	15	18	129	13·95	—
Windsor	6	5	11	31	35·48	2
Chatham	17	7	24	96	25·0	—
Hounslow	—	4	4	55	7·27	—
Colchester	7	4	11	166	6·62	2
Devonport	—	1	1	8	12·50	—
Gosport	1	2	3	128	2·34	—
Brighton	5	2	7	11	63·63	1
Pembroke Dock ...	2	3	5	6	83·33	1
Aldershot	5	8	13	8	100·0	1
Swansea	—	—	—	13	—	—
Kingston-on-Thames	—	—	—	12	—	—
Shoeburyness	—	—	—	7	—	—
Maidstone	—	—	—	8	—	—
Oxford	—	—	—	4	—	—
Newport	—	—	—	2	—	—
Guildford	—	—	—	2	—	—
Outlying stations ...	13	22	35	—	—	3
	84	104	188	1097		13

which has proved to be so much under control, can break out afresh, and to show the ever-increasing ravages it may produce. In the face of so-called philanthropy and sham sentiment, it does not appear that any facts will make any alteration in the views of the question held by the public; but to my professional brethren some important items which relate to the class of men who come more especially under my observation will, I feel convinced, be of great interest. It should be borne in mind that at the early age in which soldiers are drafted into the ranks, they are easily led away by temptation, being naturally more under the influence of sexual passion, and so fall an easy prey to the miserable wretches who ply their trade about all barracks and garrison towns, and at a very early age may thus become diseased and a source of constant contagion. This being the case, it is no doubt highly desirable that stronger steps to prevent contagion than are now in force should be taken to cope with this frightful scourge. Under the old system of long service, a soldier once infected had perhaps his whole

TABLE II. (1885.)

Place where the disease was contracted.	Gonorrhœa.	Syphilis.	Total infected.	Total number of men received from each station.	Percentage infected from each station.	Been infected with both diseases.
London	22	26	48	184	26·08	6
Canterbury	8	15	23	52	44·23	1
Dover	4	7	11	188	5·85	—
Woolwich	15	21	36	132	27·27	5
Windsor	3	1	4	23	17·39	1
Chatham	5	6	11	88	12·50	1
Hounslow	7	6	13	82	15·85	—
Colchester	1	7	8	117	6·83	1
Devonport	2	4	6	42	14·28	1
Gosport	4	5	9	122	7·37	—
Brighton	1	2	3	15	20·0	—
Maidstone	—	1	1	8	12·50	—
Pembroke Dock ...	2	2	4	28	14·28	—
Exeter	—	2	2	2	100·0	—
Kingston-on-Thames	—	1	1	29	3·44	—
Oxford	—	1	1	5	20·0	—
Shoeburyness	—	1	1	6	16·66	—
Taunton	—	—	—	11	—	—
Bristol	—	—	—	4	—	—
Glencorse	—	—	—	20	—	—
Chester	—	—	—	1	—	—
Brecon	—	—	—	3	—	—
Cardiff	—	—	—	1	—	—
Newport	—	—	—	1	—	—
Lancaster	—	—	—	1	—	—
Guildford	—	—	—	1	—	—
Foreign stations ...	4	24	28	—	—	1
Outlying stations ...	32	32	64	—	—	9
	110	164	274	1166		26

life before him in the service, where he would have careful medical supervision and treatment; whereas at present he may contract the disease shortly before the expiration of his term of service, and be then a very young man; and not having had time or opportunity to be treated or in any way cured of his disease, he is cast on the community at large, where he not only has further chances of disseminating it,

TABLE III. (1886.)

Place where the disease was contracted.	Gonorrhœa.	Syphilis.	Total infected.	Total number of men received from each station.	Percentage infected from each station.	Been infected with both diseases.
London	24	36	60	145	41·37	7
Canterbury	14	9	23	73	31·50	3
Dover	10	16	26	198	13·13	1
Woolwich	13	14	27	124	21·77	1
Windsor	2	2	4	22	18·18	—
Chatham	8	5	13	64	20·03	3
Hounslow	3	3	6	87	6·89	1
Colchester	—	8	8	151	5·29	—
Devonport	2	2	4	15	26·66	—
Gosport	3	5	8	104	7·69	1
Brighton	1	—	1	16	6·25	—
Maidstone	—	1	1	5	20·0	—
Pembroke Dock ...	1	—	1	5	20·0	—
Aldershot	5	8	13	22	59·09	1
Kingston-on-Thames	—	—	—	20	—	—
Oxford	—	—	—	1	—	—
Sheerness	—	—	—	3	—	—
Hampton Court ...	—	—	—	1	—	—
Shoeburyness	—	—	—	13	—	—
Foreign stations ...	13	23	36	—	—	1
Outlying stations ...	29	32	61	—	—	3
	128	164	292	1069		17

but may marry and infect his unhappy wife, propagating a race of diseased children through many generations.

It is not my intention to enter into the several forms of the disease which have come under my care, but one cannot avoid being forcibly impressed with the fact that after the Contagious Diseases Act had been in force the diminution

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of the complaint was most marked and the more virulent forms of the disease considerably lessened.

The accompanying tables will show the different localities whence the diseases were contracted, and in their arrangement the utmost care has been exercised to ascertain that the forms of disease were typical. Some explanation of the arrangements of the tables may perhaps be advisable, otherwise there will appear to be discrepancies in more than one of the entries. For instance, in the table for 1884 (No. I.) the following entry appears: "Aldershot—gonorrhœa 5; syphilis 8; total infected 13; number of men received from the station 8." Without explanation there would at once appear to be an error in this record, the number shown as infected being greater than that received from the station. The explanation is as follows: Eight men were received from Aldershot, all of them infected; but the other five, although they contracted the disease originally at Aldershot, had been transferred to other military stations, whence they were received here. Of all the military stations from which my experience is derived, the worst forms of the disease have existed in those men who have become infected at Canterbury, and it will be seen that in 1885 the percentage was unusually high.

SUMMARY OF TABLES.

Year.	Number of men infected with gonorrhœa.	Number of men infected with syphilis.	Number of men infected with both diseases.	Percentage of men infected with gonorrhœa.	Percentage of men infected with syphilis.	Percentage of men infected with both diseases.	Number of men received each year.
1884	84	104	13	7·65	9·48	1·18	1097
1885	110	164	26	9·43	14·06	2·22	1166
1886	128	164	21	11·97	15·34	1·96	1069

REPORTS UPON LUNATIC ASYLUMS FOR 1886.

THE report of the Superintendent of the West Riding Asylum at Wakefield states that the admissions during the year numbered 447, and that the discharges and deaths together exactly balanced this number. Of the 447 fresh cases, 331 were admitted for the first time, and the remaining 116 had previously been under care in the asylum. Comment is made upon the large number of admissions of males in the last stage of general paralysis or sinking from pulmonary affections. Many of these, it would appear, did not require the special care of an asylum, but might have been judiciously treated at home or in the neighbouring workhouse. The rate of mortality was 12·64 per cent. among the males, and 8·45 among the females. One epileptic was suffocated by turning upon his face during a fit. In this case, the usual precaution had been taken by providing an epileptic pillow, but nevertheless the patient was found lying with his face upon it. The percentage of recoveries on the total admissions was 43·62. The occurrence of some cases of typhoid fever is attributed to "the disturbance, by the new drainage operations, of germs which had remained latent from former cases of typhoid."

In his report on the Kent County Asylum at Barming Heath, the Superintendent, referring to the increase in numbers, says that it is explained by the diminution of discharges. He is of opinion that the general depression in trade and industry of all kinds, which has been so severe lately, has directly conduced to this result, and this in two ways: firstly, by lowering the vital power of those affected; and, secondly, by curtailing the means of the patients' friends, thereby rendering it impossible for them to do anything towards promoting recovery, by removing the patients early and completing their cure at home. He has great faith in their early removal from an asylum. Let their wards be ever so cheerful, they lack the nameless comforts of home, and relapse but too frequently ensues if removal be unduly delayed. The death-rate was 12·1 per cent. on the average number resident; the proportion of recoveries to admissions was 43·6. No recourse was had to seclusion or mechanical restraint during the year.

The report of the Wilts County Asylum states that the county is to be congratulated on having an almost stationary insane population, and that it is further fortunate in possessing sufficient accommodation for its own lunatics. The Superintendent says that the cases admitted become of a more and more unfavourable class, especially the men. The death-rate was 12·5 per cent., and the percentage of recoveries on admissions was 27·5.

The Superintendent of the Royal Edinburgh Asylum deals in a very practical manner with many points bearing on insanity in its social relations. Dealing with the question of the nature of the habitation which an asylum ought to provide for its inmates, he says: "It is now generally admitted that for a number of patients we cannot get classification and individualisation enough, if the whole institution is under one roof. We need distinct homes, and houses of different kinds. Many of the patients are capable of living ordinary lives in ordinary houses, *plus* medical supervision and skilled attendance. We need all through the *hospital* and the *home* idea—the hospital and its special arrangements predominating for patients in one state of mind, and the home for others in a different state." The death-rate was 7·7 per cent.; and the recovery-rate on admissions was 38·5 per cent.

The report of the Superintendent of the Richmond District Lunatic Asylum reveals an almost incredible condition of things. "The sanitary state of the institution is deplorable. The watercloseets throughout are in a sad state. In the North (male) House there are in one group of wards no watercloseets whatever that are accessible for day use, and the only accommodation for 120 men is one earth chair." Under such circumstances, it is not surprising to find that out of an average population of 1076 as many as 117 were under hospital treatment for diarrhœa and dysentery during the year, or to find that these diseases caused twenty-two deaths in the same period; while for the past ten years they have caused an average of twenty-six deaths annually. "Erysipelas is rarely absent from the house, and in some years has caused a considerable number of deaths. This state of things demands remedy, and the newly appointed superintendent deserves every support in his attempt to put matters on a satisfactory footing. The percentage of deaths on the daily average numbers was 14·8, and that of recoveries on admission was 30.

The Superintendent of the Gloucester County Lunatic Asylums at Wotton and Barnwood states in his report that the admissions were fewer in number than in any year since 1878, but that they included a large proportion of male suicidals and epileptics requiring continuous supervision by night. The recovery-rate was 45 per cent. on the admissions, and the death-rate was 12·2 on the average number resident. The Superintendent is doing well in directing his attention to the supply of efficient means of warming all the dormitories and wards.

The report of the Superintendent of the Cheshire County Asylum at Macclesfield refers to a large decrease in the admissions from the Cheshire unions, and also to a very satisfactory financial condition upon a surprisingly low actual cost per head per week (little over 8*s.*). The recovery-rate was 46·2, and the death-rate was 17·7 for males and 7·9 for females. The high rate of mortality among the men is accounted for by an unusually large number of deaths from diseases of the nervous system.

The Superintendent of the City of London Asylum calls attention to the great age that had been reached by a number of the inmates who had died during the year after long periods of residence, "showing how life may be prolonged under conditions of complete rest and sufficient food."

The Superintendent of the Crichton Royal Institution at Dumfries reports that for some years he has observed what seems to be a change in the duration of general paralysis. "Ten or fifteen years ago, from two to three years was considered the limit of life in men after its symptoms were decidedly pronounced. At present there are several men, undoubted general paralytics, who have been ill for upwards of four years, and are yet in good physical condition. The less rapid course of the disease may be due to improved methods of treatment or nursing, or perhaps to its having been brought on by slighter causes than prevailed in those we were accustomed to see long ago; if so, this would account for the increase in the number of such cases. Another feature in the nature of the admissions now, as compared with ten

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years ago, is the small number of cases of acute mania and the large number of those of mental depression or melancholia." The percentage of recoveries on admission was 44, and of deaths on the average number of residents 6·4. A memorandum by the General Board of Lunacy is given with regard to an inquiry held as to the charges brought against the management of the Second House of the institution. The allegations were not borne out, but disproved, and a favourable report as to the management was presented by the Lunacy Commissioners.

The report of the Superintendent of the Leicestershire and Rutland Asylum shows that of the 64 inmates who died, 28 were between sixty and eighty years of age, and 4 between eighty and ninety. The rate of mortality was 13·9 per cent. on the average number resident. Of the deaths, 13 were due to senile decay, 21 to diseases of the brain, and 23 to pulmonary and cardiac affections.

The Superintendent of the Derbyshire Asylum reports that "all patients, when practicable, are weighed on admission, and for several years past it has been the practice to weigh all the patients in the house every month." This is a very laudable practice, and it is a great help to the medical officers in their endeavour to detect any downward tendency in the health of their patients. The recovery-rate was 43·10 per cent. on admissions. The death-rate was 12·6 per cent. on the average number resident. The high death-rate is attributed to pulmonary consumption and to the unfavourable character of the cases admitted. More than half the deaths occurred in those who had been resident under twelve months, whilst as many as eighteen were admitted and died the same year. The experience of the "special single boiler fuel economiser" has fully confirmed its usefulness, and has shown that it effects a considerable saving in fuel.

The Superintendent of the Devon Lunatic Asylum says: "The marked falling off in the number of admissions in the last two years is a noteworthy fact, but is not easily accounted for. In the present uncertain and transitional state of the Lunacy Laws, both magistrates and medical men are reluctant in many cases to make the necessary orders and certificates for admission to the asylum. The movement of population in agricultural districts may also be an important factor, as the tendency is for a certain proportion of the rural population to remove to urban districts or to emigrate." The percentage of recoveries on admissions was 35·82; that of deaths on the average number resident 10·1. A very interesting statement is given of the deaths quarterly in relation to the state of the weather, and it points to the necessity for an efficient system of warming the galleries, day rooms, and dormitories in asylums.

The Superintendent of the Wonford House Hospital for the Insane is "again able to give a favourable account of the general health of the establishment, especially in regard to the immunity from what may be termed preventable diseases." The percentage of recoveries on admissions was about 45, and of deaths on the average number resident only 3.

DURHAM UNIVERSITY AND MEDICAL DEGREES.

AT a Convocation held at Durham on the 20th inst. the following petition to the Queen was agreed to:—

To the Queen's Most Excellent Majesty in Council.

The petition of the Warden, Masters, and Scholars of the University of Durham humbly showeth:—

That, whereas the Royal College of Physicians of London and the Royal College of Surgeons of England, acting in conjunction, have applied to your Majesty's most honourable Privy Council for a Charter for power to confer degrees in Medicine and Surgery. That the united Colleges would be a degree-conferring body constituted by one faculty, namely, Medicine and Surgery in combination, hence it would be an incomplete university. That the degrees would be conferred after a course of study and examination less comprehensive and advanced than that which is in force in the existent universities of England, and in consequence, the knowledge and attainments of the recipients of the degrees would be a lower standard than that of the medical graduates of the existent universities. Such an influence would be distinctly retrogressive to the medical profession. That the proposal to confer degrees in Medicine and Surgery "on persons who, by passing the examinations formerly held by both of the said two Colleges separately, or by passing the examination held by the Examining Board of the two Colleges, or by passing any other examination to be held by the two Colleges jointly or separately, have already acquired or may hereafter acquire the qualification for registration under the Medical Act," would be an innovation on the established practice of the universities, as the degrees would apparently be conferred without any further examination than the ordinary examination for members and licentiates. That in Edinburgh, Glasgow, and Dublin there are at present institutions corresponding to the Colleges in London, and, if the privileges sought should be granted, the institutions specified, exercising usual power, might justly claim the same new privileges, to the serious detriment of the universities in their influence on medical education and examination. That an incorporated body, under the name and style of the Senate of Physicians and Surgeons, "with power to grant to persons who have obtained qualifications under the Medical Act, and shall be otherwise properly qualified, degrees in Medicine and Surgery," is unnecessary, as the existent universities of England—namely, Oxford, Cambridge, Durham, London, and Victoria—are amply sufficient for the requirements of the medical profession. Your petitioners, therefore, most humbly pray your Most Gracious Majesty not to accede to the application, in the belief that, if this privilege was conceded, it would prove to be injurious to the public and the medical profession, and that they may be heard in support of the allegations of their petition.

And your petitioners will ever pray, &c. W. C. LAKE, Warden.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5333 births and 3679 deaths were registered during the week ending December 24th. The annual rate of mortality in these towns, which had been 21·1 and 22·1 per 1000 in the preceding two weeks, declined last week to 20·8. During the first twelve weeks of the current quarter the death-rate in these towns averaged 20·8 per 1000, and was 1·1 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 15·5 in Derby, 18·6 in London, and 19·1 in Bradford and in Norwich. The rates in the other towns ranged upwards to 28·9 in Manchester, 30·4 in Plymouth, 31·3 in Leicester, and 31·7 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had increased from 443 to 500 in the preceding three weeks, declined again last week to 455; they included 145 from whooping-cough, 91 from scarlet fever, 79 from measles, 47 from "fever" (principally enteric), 47 from diphtheria, 23 from small-pox, and 23 from diarrhœa. These zymotic diseases caused the lowest death-rates last week in Brighton, Portsmouth, and Huddersfield, and the highest rates in Derby, Wolverhampton, Bolton, and Sheffield. The greatest mortality from measles occurred in Bradford, Birmingham, Bolton, and Derby; from scarlet fever in Wolverhampton, Plymouth, and Birkenhead; from whooping-cough in Salford, London, Wolverhampton, and Leicester; and from "fever" in Wolverhampton. The 47 deaths from diphtheria in the twenty-eight towns included 24 in London, 5 in Manchester, 2 in Birmingham, 2 in Liverpool, 2 in Sheffield, 2 in Hull, and 2 in Cardiff. Small-pox caused 21 deaths in Sheffield and 2 in Bristol, but not one in London or in any of the twenty-five other large provincial towns. The metropolitan hospitals receiving cases of small-pox contained 5 patients on Saturday last, against 9 and 10 on the preceding two Saturdays. The number of scarlet fever patients in the Metropolitan Asylum Board hospitals and in the London Fever Hospital at the end of the week was 2295, against numbers declining from 2764 to 2499 on the preceding four Saturdays; the cases admitted also showed a further decline from the numbers in recent weeks. The deaths referred to diseases of the respiratory organs in London, which had been 408 and 413 in the preceding two weeks, declined last week to to 357, and were as many as 185 below the corrected average. The causes of 80, or 2·2 per cent., of the 3679 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Norwich, Wolverhampton, Birkenhead, Bradford, and Sunderland. The largest proportions of uncertified deaths were recorded in Derby, Salford, Preston, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·7 and 23·0 per 1000 in the preceding two weeks, declined again to 22·4 in the week ending Dec. 24th; this rate, however, exceeded by 1·[illegible] the mean rate during the same week in the [illegible] large English towns. The rates in the Scotch [illegible] from 11·3 and 17·8 in Perth and Greenock to [illegible] in Paisley. The eight towns last week showed a decl[illegible]

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amber in the preceding week, and included 25 which were referred to whooping-cough, 17 to measles, 17 to "fever" (typhus, enteric, or simple), 13 to scarlet fever, 4 to diphtheria, 4 to diarrhœa, and not one to small-pox; in all, 80 deaths resulted from these principal zymotic diseases, against 69 and 75 in the preceding two weeks. These 80 deaths were equal to an annual rate of 3·2 per 1000, which exceeded by 0·6 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 29 and 26 in the previous two weeks, further declined to 25 last week, of which 13 occurred in Glasgow, 3 in Edinburgh, and 3 in Leith. The deaths referred to measles, which had been 12, 14, and 15 in the preceding three weeks, further rose to 17 last week, and included 11 in Edinburgh and 5 in Dundee. The fatal cases of "fever," which had been 5 and 9 in the previous two weeks, further rose last week to 17, of which 14 occurred in Paisley and 3 in Glasgow. The 13 deaths from scarlet fever exceeded by 4 the number returned in the preceding week, and included 8 in Glasgow and 3 in Dundee. The 4 fatal cases of diphtheria were all recorded in Glasgow; and the 4 deaths referred to diarrhœa showed a marked decline from recent weekly numbers. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 154 and 167 in the preceding two weeks, declined again last week to 134, and were as many as 61 below the number returned in the corresponding week of last year. The causes of 68, or more than 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had increased from 33·8 to 38·7 per 1000 in the preceding four weeks, declined to 29·4 in the week ending December 24th. During the first twelve weeks of the current quarter the death-rate in the city averaged 31·5 per 1000, the mean rate during the same period being but 19·6 in London and 19·9 in Edinburgh. The 199 deaths in Dublin showed a decline of 63 from the high number in the preceding week; they included 8 which resulted from whooping-cough, 5 from "fever" (typhus, enteric, or simple), 4 from scarlet fever, 4 from diphtheria, 4 from diarrhœa, 3 from measles, and not one from small-pox. Thus the deaths referred to the principal zymotic diseases, which had been 31 and 24 in the previous two weeks, rose to 28 last week; they were equal to an annual rate of 4·1 per 1000, the rate from the same diseases being 2·7 in London and 3·0 in Edinburgh. The 8 fatal cases of whooping-cough showed a marked increase, and exceeded those recorded in any preceding week of the year. The 5 deaths referred to different forms of fever also exceeded those returned in any recent week. The fatal cases of scarlet fever and of measles, however, showed a further decline from those recorded in recent weeks. The deaths both of infants and elderly persons showed a marked decline from those returned in the preceding week. Seven inquest cases and 6 deaths from violence were registered within the city; and 69, or more than one-third, of the deaths occurred in public institutions. The causes of 31, or more than 15 per cent., of the deaths during the week were not certified.

THE SERVICES.

MEDICAL STAFF.—Deputy Surgeon-General E. H. Roberts has been appointed an administrative Medical Officer in the Bengal Presidency, vice Deputy Surgeon-General G. M. Slaughter. Surgeon-Major McNalty, having arrived in India from England, has been posted to Agra for charge of the station hospital there.

ADMIRALTY.—We understand that the Medical Director-General of the Navy, Sir John Reid, will be succeeded on Feb. 1st by Inspector-General James N. Dick, senior medical officer on the active list.

In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Surgeon Alexander William McLeod has been placed on the retired list of his rank (dated Dec. 9th, 1887). Staff Surgeon Valentine Duke, B.A., M.B., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Dec. 22nd, 1887).

The following appointments have been made: Staff Surgeon John E. B. Maclean, to Plymouth Hospital; Staff Surgeon George B. Theevay, to the *Agincourt;* Surgeon Robert F. Yeo, to the *Hyacinth;* Surgeon James W. O. Underhill, to the *Duncan*, additional, for temporary service; and Surgeon John Dinnis, to the Haslar Hospital.

Correspondence.

"Audi alteram partem."

THE DISCUSSION ON COW DISEASE AT THE PATHOLOGICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—Not being aware that a paper was to be read by Professor Crookshank before the Pathological Society upon the so-called "Hendon Cow Disease," I was unable to be present at the meeting to hear the paper read or take part in the discussion upon it. I have read both with much interest in THE LANCET, and in due time may have to make some observations upon the subject. In the meantime I merely wish to refer to some remarks made by Dr. Klein during the discussion, when he is reported to have spoken as follows:—

"1. Professor Crookshank had made the initial mistake of assuming that Dr. Cameron's description of the disease was written from observations of the disease at Hendon. 2. Dr. Thin and the writer of an editorial article in THE LANCET had also assumed that Dr. Cameron had seen all he described, whereas his description of the disease was largely filled out from hearsay evidence. 3. Dr. Cameron had not, in fact, seen a case of communication to a man at Hendon; such communication from the cow to man had been observed in another locality in a former year and reported to Dr. Cameron. Dr. Klein wished particularly to insist on the fact that, though many cows were affected at Hendon, not one of the milkers had been infected. 4. In fact, the disease observed at Hendon was not that described by Dr. Cameron; there was no primary fever and no vesication," &c. &c.

With regard to the first assertion, if Dr. Klein will take the trouble to examine the paper read by me before the Epidemiological Society in April, 1886, he will see that I take special care to say that some of the earlier symptoms of the disease were not of my own observation, and this especially referred to the earlier constitutional symptoms and one or two of the local, such as sore throats. My dependence upon the observations of others for these symptoms was of necessity the case, because we arrived too late upon the scene to observe them; but I say that the description of the course of the disease after the eruption appeared upon the teats, udder, and skin is my own, and is carefully described from personal observation extended over a considerable time. With reference to the second statement, I reply that I saw and described all the local symptoms as mentioned above, and had to depend for the constitutional symptoms upon information derived from a person who seemed conversant with the disease, because the cowmen at the farm were unwilling to give any information lest it should injure themselves or their master.

These statements I took the greatest care to sift; every word referring to them was carefully weighed, because I felt that I was taking the first steps towards introducing this important question to the profession.

Since my paper was written I have obtained the evidence of the cowman who first noticed the disease amongst the cows. He milked those first affected, including the roan cow, which was the first one sent to the Brown Institution for Dr. Klein's investigations, and the red Haddenham cow from whose teat he took serum &c., and implanted it in agar-agar at the farm on Dec. 31st, 1885. The evidence of this cowman, which I will produce in due time, corroborates all my previous description of both the local and constitutional symptoms of the disease. Dr. Klein's third statement—viz., "Dr. Cameron had not observed a case of communication of the disease to a man at Hendon"—perhaps requires a word of explanation from me. If he looks at my paper, he will see that I never said so. I used the words, "A trustworthy informant received the virus of this disease into a recent scratch upon his finger," &c. This statement, which has caused so much discussion, did not seem to me, at the time, to be of very much importance. I considered the inoculation to be probably some

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form of septic poisoning; but, although it did not occur at the Hendon farm, the information was derived from a trustworthy source, and I considered it worthy of record in a foot note, for future corroboration or otherwise. Whether or not any such occurrence took place amongst the cowmen at the farm, neither Dr. Klein is, nor am I, in a position to state with certainty. If it did, in all probability the fact would have been withheld from me, for the same reason that other information was, at the same time, withheld by the cowmen. I am still making inquiries in this direction, but as yet my information is of a negative character. I am greatly surprised at Dr. Klein's last statement, which is a most unwarranted one, if he has been correctly reported. From his own personal knowledge, he was not in a position to make such a statement. I assert, as I have already done, that my description of the cow disease is carefully given from personal observation at the farm, and from notes taken at the time. My observations and statements have since been corroborated by those in charge of the animals; and until they are refuted by more extended observation, I hold them to be, in nearly all particulars, substantially correct.

I am, Sirs, yours very truly,

Hendon, Dec. 26th, 1887. JAMES CAMERON, M.D.

To the Editors of THE LANCET.

SIRS,—I shall be obliged by your correcting in your next issue a statement which I am reported to have made at the special meeting of the Pathological Society. Your report (Dec. 24th) makes me say: "There was no fever (in the Hendon cows), no primary eruption, and no vesiculation." I did not make any such statement; I did not say anything about the absence of a primary eruption and about vesiculation. I am, Sirs, your obedient servant,

E. KLEIN.

The Brown Institution, Wandsworth-road, S.W., Dec. 26th, 1887.

MYXŒDEMA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET'S report of the Medical Society's meeting on Nov. 28th is a case of myxœdema in a man brought forward by Dr. Savill, who spoke of the rarity of this disease in the male, only nineteen cases being published. I have now under observation an extremely well-marked case in a man aged sixty-seven, who has the usual placid, though somewhat sad, countenance, muddy complexion, harsh skin, scanty hair, waddling gait, slow utterance, and chilly feeling peculiar to this disease. Evidence certainly points to the much greater frequency of myxœdema in the female, notwithstanding the opinion formerly expressed by Sir Andrew Clark, who considered it more often met with in the male. I have had under my care during the last six years ten cases of myxœdema, and eight of these were women. Another point of interest in Dr. Savill's case is "the profuse hæmorrhage, probably from the prostate gland." Have we yet obtained sufficient evidence to place hæmorrhage amongst the symptoms of myxœdema? About a year ago I was surprised to find profuse and repeated hæmorrhage follow the extraction of two teeth in patients with myxœdema within three weeks of each other, and, thinking this more than a coincidence, I searched authorities on this disease for mention of hæmorrhage, but found none, except a remark of Sir Andrew Clark's that menorrhagia was very common. I then referred to all the cases published, from Sir William Gull's first case onwards, and found thirteen cases where hæmorrhage of one form or another had occurred, but had not, as a rule, attracted any particular attention as bearing on the disease (except in a case of Dr. James Anderson's, where the hæmorrhage was assigned as a cause). However, on grouping these cases together the fact at once assumed importance. I therefore reported my two cases and the quotations from the other thirteen in an article, "Hæmorrhagic Tendency in Myxœdema," in THE LANCET of April 2nd. In that article I ventured to hint that with more evidence the hæmorrhagic tendency might become established as a special feature in myxœdema. Dr. Savill (whose case adds one more to the list) helps to confirm this by the remark that hæmorrhage might now be regarded as one of the symptoms of the disease.

I am, Sirs, yours faithfully,

Mitcham, Dec. 1887. OSCAR B. SHELSWELL.

"THE CORK POISONING CASE."

To the Editors of THE LANCET.

SIRS,—In your leading article on the above case in week's issue, in which you were good enough to favourable mention of my evidence, you remark th would have been more comfortable for myself to hav the assistance of another analyst. This I quite admi at the same time desire to point out that I consider th gestion of procuring the aid of a second analyst in s case should in the first instance emanate from the as in this case, had such an application been made by might possibly be inferred that I did not feel myself petent to undertake the duties entrusted to me. Yo mention in your article that "it would appear to be th occasion on which Dr. Pearson has been required to post-mortem inspection, and to chemically examine th cera in a case of arsenical poisoning." This is quit so far as the human subject is concerned, but it m right to mention that I have on very numerous occ made analyses of the viscera of some of the lower a after death from arsenical and various other poisons. facts were not brought out either in my direct evi or in re-examination; they could not well be volun and were naturally avoided in cross-examination; in counsel for the defence endeavoured to make it appe there was something essentially different in the m used in extracting poisons from human remains from usually employed for their separation from other o materials. Had a medical expert been examined for t fence this matter would probably have been cleared refrain from alluding to the numerous medico-l points of interest, as I purpose to discuss them a length in connexion with a report of the medical per this most important case at no very distant date.

I am, Sirs, yours faithfully,

Cork, Dec. 27th, 1887. C. YELVERTON PEAR

ANTIPYRIN IN HEADACHE.

To the Editors of THE LANCET.

SIRS,—I firmly believe that chemistry, hae, in the drug, found a most invaluable remedy for migraine an forms of headache that seem to be due to worry and work. In those cases where I have tried it, its eff simply been marvellous. In one case of a lady w years has been the subject of most distressing pe attacks of intense pain referred to the occiput, that all ordinary remedies, this drug relieved at once, this case the depressing fear of impending attacks is thing of the past. I presume in these cases it ac powerful sedative to the nervous system, and happily no ill effects whatever—a great desideratum. Ten repeated every hour for two or three hours, is my giving it, and then at intervals of six hours for a two after, to prevent all chance of a recurrenc generally being at the desire of the sufferer.

I am, Sirs, yours faithfully

Sherborne, Dec. 24th, 1887. NATHANIEL EDWD. DA

THE TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—With a certain reservation I accept the st which Mr. Pemberton uses the term "cure." He d regard Dr. Smith's case[1] as cured, *because* the dise curred after an immunity of nineteen years, though, ing to Mr. Pemberton's own views, had Dr. Smith's died a year ago from "causes common to the bre from ordinary wear and tear of natural structures," would have regarded the patient "cured" of cancer Whilst admitting that speedy recurrence of the dise operation precludes the application of the term "c the treatment adopted, yet if a lengthy period have before the recurrence appears at the original site it i assume that the second outbreak should be consi wholly distinct from the first, the proclivity of ma disease to develop *de novo* in s[illegible] tissue favouring lief. If Mr. Pemberton perus[illegible] a paper from the

[1] THE LANCET, 188[illegible] vol. II., p. 3[illegible].

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Mr. Treves,[2] which has been adverted to in one of your recent leading articles, he will find evidence showing that malignant disease has been cured by arsenic. When a cancerous growth is removed by the knife no surgeon can positively predict freedom from recurrence; but if malignant growths resolve after a course of Chian turpentine, arsenic, or other remedies, the prognosis is most hopeful. Whilst thanking Mr. Pemberton for his courteous response to my inquiries, I would remark that I never asked him in what sense he spoke of cancer "infiltrating textures around its origin," but how that sense differed from cancer as defined by myself in your issue of the 3rd inst.[3] Neither did I ask how "adjacent glandular contamination" is recognised, but how Mr. Pemberton recognises clinically the *commencement* of that process.—I am, Sirs, yours faithfully,

Dec. 24th, 1887. CHAS. E. JENNINGS.

ARMY MEDICAL DUTIES AND ARMY MEDICAL DEATHS.

(From a Correspondent.)

THE Medical Department is fiddling while Rome is burning—analysing its own opinions on the theory of rank, while, in the words of Sir Thomas Crawford, "nearly one-half of the whole number have, during the past thirty years, been sacrificed in the public service" (4616), and while those who live by the breath of party politics are seeking to support the election cry of economy by preferring the half hour's arithmetic of an official actuary to the lifelong experience of the Director-General. Mr. H. Fowler asks: "Mr. Knox said that he thought the time would arrive, and before long, when the non-effective would be in excess of the effective pay." The Director-General replies: "Mr. Knox is a very high authority upon financial matters, but I am bound to say that I disagree with him" (4676). Thus sways the struggle of promised retrenchment against human life, and elicits from Dr. Cameron a query with regard to a statement that the rate of mortality amongst medical officers in the army is 27 per 1000. To which Sir Thomas Crawford responds: "I dare say that would be correct" (4826). "There is no branch in the whole of the public service in which the mortality is so great as it is in the medical department of the army" (4617). Still further may it be asserted that there is no trade in the whole list of English industries which, in the percentage of its victims, can equal medical service in the army. The recent statistics of Dr. Ogle upon the effect of occupation upon the life of males between twenty-five and sixty-five years of age demonstrate that the miner may labour without light, the knife-grinder may inhale the flying particles of steel, the earthenware manufacturer may breathe the dust of clay, and the publican indulge to the utmost the temptations of his calling, and yet none can equal in loss of life the medical officers of the army. Yet the only answer of the Royal Commission before whom this fact was brought to light is Mr. Stanhope's question: "Could not the medical officers be kept longer than that in the army with advantage to the public service?" Could they not be held still longer at the occupation which is killing them at a rate at which no other class of Englishmen dies? By Factory Acts and Parliamentary interference the life average of every other British subject has been lengthened, yet the same Parliament demands that when economy requires the medical officer must die. Is it not, then, the duty of the Parliamentary representatives of the profession, in precedence of all other questions, to press upon the House of Commons the demand of humanity that some investigation shall be made into the cause of this mortality, which exceeds not only that of all other public servants, but even that of the deadliest English trades? or must those who have no votes be left to perish, and the philanthropy of the closing nineteenth century confess that human life is valued only in connexion with the ballot box?

[2] A Form of Glandular Swelling that is cured by Arsenic: Clinical Soc. Trans., vol. xx., p. 176, et seq. [3] THE LANCET, p. 1142.

MR. W. M. VORES, M.B. Cantab., M.R.C.S., of Yarmouth, whilst driving, was thrown from his carriage, sustaining, we regret to learn, an injury to one of his arms.

BIRMINGHAM.

(From our own Correspondent.)

THE USE OF THE REVOLVER.

THE use of the revolver appears to be becoming more prevalent as an aggressive weapon, in spite of the monitions of judges and the examples made of those who thus practise on their fellow citizens. The recklessness which often accompanies lawlessness could hardly find a more dangerous instrument of offence. Though hitherto its use has been looked upon as foreign to our native mode of settling quarrels, it is to be feared that this fortunate belief is likely to be abolished. Two instances have occurred in this town within a few days, one in which a policeman was deliberately fired at twice, one shot wounding him in the lower jaw. Another in which a girl was wounded by shots fired at some men from whom a supposed grievance had been received. The habit of carrying revolvers is doubtless a pernicious one; it reminds us of the observation made by old obstetric writers: If you carry forceps in your pocket to a midwifery case, it very much increases the temptation to use them.

CHRISTMAS AT THE HOSPITALS.

The spirit of charity which is usually associated with this festive season finds choice ground in the attempt to make cheerful and lighten the sufferings of the inmates of these institutions. At most of these places the interior of the building has been prettily and tastefully decorated, and much time and care have been given to make the effect pleasing and agreeable to the sufferers. In addition there has been Christmas fare to all who could partake of it in a form suitable to their condition. The children have enjoyed the pleasures of Christmas trees and presents, the attendants here have their own parties and friends, while the officers have disported themselves in a manner which has left no occasion for thinking that their duties are not mixed with some degree of mirth calculated to lighten their labours and their cares.

ANTI-VARIOLE LEAGUE.

A combination of persons under this somewhat formidable title have lately been endeavouring to show the baneful results arising from vaccination, and have freely disseminated literature for the purpose of proving their position. The testimony of expert observers and the common sense of the thinking portion of the public will not be misled by the enthusiasm of extremists in this particular direction. At the same time it is necessary that accurate information should be at hand to refute the allegations of opponents to a useful and beneficent law. Argument of a definite kind should be in the possession of all medical men, and the aggression should be reasoned fairly without attempting to take refuge in the assumption of authority only. It is too often the custom to think that the question is not worth reasoning or investigating further, but in the present day people think for themselves, and often intelligently so, on medical matters. Conviction therefore is much more likely to follow from judicious exposition of knowledge than by the bare denial of statements made by those who, without reasoning, feel strongly.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE HEALTH OF NEWCASTLE-UPON-TYNE.

IN the course of this correspondence, now I believe extending considerably over twenty years, errors and mistakes will sometimes naturally occur. These, however, thanks to the facilities afforded me by THE LANCET, I am always enabled to correct and acknowledge. With regard to the health of this city and the "notes" thereon, which have called forth the spirited but not discourteous letter last week from our able and indefatigable medical officer of health, Mr. H. E. Armstrong, I cannot see by his showing that I am wrong in the opinions I have expressed, and which are shared by many others here. Certainly the allegations I made involve wilful and often ignorant

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omission on the part of many householders. In proof of which I may state that at an institution in this city with which I am connected, I frequently see patients suffering from the sequelæ of infectious diseases, for which they have had no medical attendance. And why? Because they fear the trouble notification may bring upon them, and some of them believe that the inspectors may be the carriers of worse infection than that which they are sent to inspect. I would ask our medical officer of health, May not they be right in this fear? And if not, why not? Is there anything protective in the uniform of the officials or their carbolic odour? I would gladly let our medical officer of health see the practice of this institution—in his private capacity, however, for which I have the highest respect; for I believe it very wrong, and, to my feelings, an infringement of the rights of hospitality, to allow anything in the way of *espionage* to be practised, and of course it would ruin the popularity of the hospital. I may say that I always certify infectious cases coming under my notice in private practice, which are very few, however, owing to causes which I need not specify here. I do so because it is the "law of the land" as regards this city, and also because I believe the information given may be of some service for statistical purposes. I am not very much surprised that the evils spoken of in my "Notes," and described as "fantastic" by our medical officer of health, have not come under his experience. With his multifarious duties he cannot be expected to know everything, and for many reasons he will be the last person to be cognisant of many matters affecting the health of the city; he will just know what his inspectors tell him. But when they get more experience and their powers of observation extended, they will tell him that the dissipation at the "long bars," improper feeding, clothing, and housing are important factors in the generally high death-rate which is causing our citizens so much concern. It is the candid opinion of many qualified to judge that a proper inspection of our new streets and houses, with their surroundings, before occupation, would do much to reduce this persistent high death-rate.

THE DEATH-RATE OF NEWCASTLE AND SCHOOL CHILDREN.

The sub-committee of the Board School have presented a report with regard to the high death-rate from Nov. 25th, 1886, to Nov. 25th, 1887. The number of deaths amongst scholars at the Board Schools was 34, with an average of 1000 on the books. This was rather less than 3·4 per 1000 for the year. The number of deaths from zymotic diseases was 13, or 1·3 per 1000. The statistics showed clearly that the high death-rate was not owing to the deaths of children. It was equally clear that it did not result from pressure put by the officers on the parents to send their children to school before they had fully recovered from infectious diseases.

THE UNIVERSITY OF DURHAM AND ITS DEGREES.

From all sides I hear complaints as to the late action of the University of Durham, and its opposition to the amalgamation of the London Colleges, and some spirited letters have appeared in our papers against the narrow policy of the University in this matter; but I suppose the University and its connexions mean to "hold the field" if they can, though no one will for one moment believe that a University should be allowed to stop the progress of a great medical reform.

Newcastle-on-Tyne, December 27th.

DUBLIN.

(From our own Correspondent.)

THE EPIDEMIC OF MEASLES AT CAPE CLEAR.

THE outbreak of measles at Hare Island and Cape Clear has assumed considerable proportions, and it is estimated that one-fifth of the population of the latter place are prostrated by the disease. It is satisfactory to learn, however, by recent returns, that there are no dangerous symptoms connected with the new cases, and that the disease seems less virulent, the mortality being much less than heretofore. At a meeting of the Skibbereen guardians last week Dr. O'Farrell, Local Government Board inspector, who had recently visited the island, gave a very graphic report of the prevalence of the epidemic, and adduced cases showing the malignant nature of the disease. In one case a fisherman only survived eight hours after being attacked, and some families had lost several adult members within a few days. Dr. O'Farrell suggested that a temporary hospital should be established on the island with a trained staff of nurses to attend the sick, which has been carried out, and a medical practitioner will reside there for the present, while plenty of beds, bedding, and medical comforts have been sent to the islanders.

DUBLIN HOSPITAL SUNDAY FUND.

The returns from nearly forty churches have not yet been received, but so far as can be judged it is expected that there will be a decided falling off in the total collected for the fund this year.

MERCER'S HOSPITAL, DUBLIN.

It is stated that the expenses connected with the recent litigation have amounted to upwards of £1500.

Dublin, Dec. 26th.

PARIS.

(From our Paris Correspondent.)

TINEA DECALVANS.

IN the debate opened by Dr. Ollivier, at the Academy of Medicine, on Tinea Decalvans as it occurs among school children, and which was reported in THE LANCET of December 17th, Professor Hardy, in response to the remark made by Drs. Ollivier and Cornil, as to the non-contagiousness or parasitic nature of the malady in question, could not admit that the non-discovery of the micro-organism of tinea decalvans was any proof in favour of their theory, as there are other affections in which no micro-organism or microbe has ever been seen, and yet no one could doubt their being contagious—such, for instance, as measles, scarlatina, and many others. Under the circumstances, and until proof to the contrary is adduced, Professor Hardy thought that the benefit of the doubt which exists should be accorded to the pupils in health by separating them from those who are affected with the disease. In taking up the debate at the meeting of the Academy last week, Dr. Hardy recalled, in support of his argument, that in 1875, after an epidemic of tinea decalvans that occurred at the Lycée of Vanves, it was decided by a commission that the pupils affected with the disease should be sent to their homes. Since that period, as the example was followed by other schools, the disease became much less frequent in these institutions. Dr. Hardy further observed that tinea decalvans is certainly not fatally contagious. To develop itself, the disease requires certain conditions, and of greater part of these conditions we know nothing. We know only that the disease affects particularly young subjects, debilitated and nervous persons, and those who have been under the influence of great sorrow. The Professor then cited a great number of facts, in which are found incontestable proofs of the contagiousness of the malady. Thus, when the 122nd Regiment of Infantry was stationed at Montpellier, it was joined by two recruits, last spring, who were affected with tinea decalvans. In the month of December following, there were more than eighty men affected with the disease. Dr. Coustan, surgeon-major of the regiment, who has published a very interesting report on this epidemic, considered the scissors with which the soldiers' hair is cut to have been the cause of the propagation of the malady. Measures were taken to remedy this evil, and the epidemic disappeared. At the Saint-Louis, the well-known hospital for skin diseases, it has been observed that the medical men and students attached to the hospital are much more frequently affected with tinea decalvans than medical men and students at any of the other hospitals. Bazin admitted two sorts of this affection: the one parasitic, the other due to a simple perturbation of the nervous system. This, Dr. Hardy said, was possible, but as they followed the same course and had the same symptoms, and as, in fact, they cannot be distinguished the one from the other, the pupils affected with the disease must be kept away from the schools. Dr. Hardy's discourse was frequently applauded, and although Dr. Ollivier was somewhat shaken

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in his opinion by it, yet he did not seem wholly convinced, and promised to enter more fully into the subject at the next meeting.

M. FERRY'S ASSAILANT.

The mental state of Aubertin, the would-be assassin of M. Jules Ferry, who it will be remembered fired three shots at the latter with a revolver on the 9th of this month, is quite a psychological puzzle to the alienists who have been charged to examine him; for he is at times so violent that they are obliged to have recourse to the strait-waistcoat, and at other times he is perfectly sane and quiet. In the morning he would appear to be dying, in the evening he would eat with a good appetite; at noon he would be occupied with the Muses, at four o'clock in the afternoon he would try to break his skull by knocking it against the wall. It may be remembered that on being arrested he declared himself not to be mad, but soon after his incarceration symptoms of insanity set in. On a recent visit of the officials the man declared that he perfectly recollected the scene of the 9th of December, but could not explain the motives which prompted him to commit such an act of insanity. He did not remember the insane acts he had committed since his incarceration. He believes that he has simply recovered from a long syncope. The medical men who have visited him say that they were not at all surprised at the apparent improvement that took place in the man's condition, as this frequently occurs after such violent crises. A terrible relapse is prognosticated.

Paris, Dec. 27th.

Obituary.

GEORGE SYLVESTER, M.R.C.S.

ON Dec. 26th there passed to his rest George Sylvester of Trowbridge, Wilts, the senior member of the Royal College of Surgeons of England, and, we believe, the oldest member of the medical profession. Born on March 10th, 1788, he qualified as M.R.C.S. in 1810, and so was close upon his hundredth birthday. The deceased gentleman was in early life an assistant-surgeon in the Royal Navy, and saw some active service in eastern seas, for which he received a medal. After his retirement from the service he settled in Trowbridge, and perhaps at one period of his career could boast of the largest midwifery practice in Wilts. He was one of Her Majesty's coroners for Wilts during the long period of thirty-four years. Mr. Sylvester was most precise in his habits, and a diligent student even after ninety years of age. Until the last two or three years he was a regular attendant at church, and a very keen politician. He was a wonderfully hale old gentleman, owing much of his health to his remarkably methodical habits, and it is needless to say that he enjoyed the respect of his medical brethren in no small degree. Of his four sons, one succeeded him in practice, another in the coronership. Two of his grandsons are surgeons. A third is a senior student at St. Bartholomew's Hospital; and a fourth is now about to enter. The deceased is, we believe, succeeded in his honours of seniority by his cousin, Dr. Charles Sylvester, of Bath, who qualified in 1816.—*From the pen of one of another medical family, who, for three generations, have practised side by side with the Sylvesters.*

CENTENARIANS.—Information has been received at Rochester, his native city, that Mr. Louis Lewis, of Sandhurst, New Zealand, who attained his 104th year on Sept. 24th, is still in the enjoyment of good health, and retains all his faculties.—Mr. Robert Yorston of Kirkwall attained his 101st birthday on the 17th inst.—Mrs. Mary Brown died at her residence in Grantham on the 27th inst., aged 100 years. The whole of her faculties are reported to have remained perfect to the end, her eyesight being especially good.

SEVERAL tradesmen of Ormskirk have decided, instead of giving Christmas-boxes this year, to subscribe towards the erection of a cottage hospital in the town, for the reception of accident cases, several instances having proved the great need of such an institution.

Medical News.

UNIVERSITY OF LONDON.—At the recent B.S. Examination for Honours the following satisfied the examiners:

Surgery.

FIRST CLASS.

Roughton, H. W., M.D. (Scholarship and Gold Medal), St. Bartholomew's Hospital.
Tubby, Alfred Herbert (Gold Medal), Guy's Hospital.
*Carless, Albert, King's College.
Braddon, William Leonard, Guy's Hospital.
Brown, Herbert Henry, University College.

SECOND CLASS.

Eq. { Holder, Sydney Ernest, University College.
Wynter, W. Essex, St. Barthol. and Middlesex Hospitals.
Clarke, William Frederick, Guy's Hospital.
Flemming, Percy, University College.

* Obtained the number of marks qualifying for a Gold Medal.

UNIVERSITY OF OXFORD.—At a congregation held on the 17th inst., the following degrees were conferred:—

DOCTOR IN MEDICINE.—Christopher Childs, Merton.

BACHELOR OF MEDICINE.—Francis S. Hawkins, Oriel.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 15th inst. the degree of Doctor of Medicine was conferred on

Thomas George Styan, Trinity.

On the following day the Special Board for Medicine was authorised to watch the proceedings before the Privy Council in the matter of a petition from the Royal College of Physicians of London and the Royal College of Surgeons of England for a Charter and power to grant degrees, and, if necessary, to prepare a petition to the Privy Council.

THE Earl of Derby has contributed £1000 to the funds for the rebuilding of St. Mary's Hospital, Manchester.

MARGARINE.—The Act for the Better Prevention of the Fraudulent Sale of Margarine, passed last session, comes into operation on the 1st of January, 1888.

SUPERANNUATION ALLOWANCE.—Mr. Alexander W. McLeod, late medical officer for the First District of the Fulham Union, has been granted a superannuation allowance of £35 per annum.

SEVERAL contributions have been received at the Mansion House in response to an appeal by the Lord Mayor for £20,000, to enable work to be provided for 1300 of the unemployed in making gardens and pleasure grounds in various districts of the metropolis.

MEASLES AT INGHAM.—Measles is very prevalent at Ingham in Lincolnshire, the attacks having numbered from 120 to 150. The neighbouring village of Fillingham is also invaded. A large number of adults have been attacked, but as yet without fatal result.

TRIPLETS. — The wife of a labourer, residing at Wright's-cottages, East Acton Brick-fields, was delivered by Dr. Good of Shepherd's-bush, on the 18th inst., of three children, a boy and two girls. Mother and children are doing well.

PRINCESS CHRISTIAN has consented to act as President of the Executive Committee of the British Nurses' Association. The aim of the Association is to unite and organise, under the control and with the assistance of the leaders of the medical profession, all women engaged in nursing the sick.

SMALL-POX IN PARIS.—An outbreak of small-pox is reported from Paris. Beginning among the German colony at Pantin, the disease has now spread to Aubervilliers. The source of the epidemic has been traced to the outer boulevards fair, which the municipality has allowed to become a permanent institution.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The following gentlemen passed the examination for the Certificate in Psychological Medicine, granted by the Medico-Psychological Association, at Edinburgh, on the 23rd and 24th inst.:—Frank Lang Collie, M.B. and C.M. Aber.; William Gemmell; Andrew Rowand, M.A., M.B., and C.M. Edin.; Arnold E. Thorpe, L.R.C.P. and L.R.C.S. Edin.

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LONDON TEMPERANCE HOSPITAL.—By the donation of £6000 from a benevolent friend of this charity, its pressure of debt, by which a number of wards were kept unoccupied, has been removed. Other hospital authorities would be glad to experience so happy a termination of their pecuniary difficulties.

A WEDDING PARTY POISONED.—At Great Houghton, a suburb of Northampton, a wedding party has been poisoned by partaking of tea brewed in an old copper urn. All the guests, twenty-two in number, were seriously affected by verdigris, and it was only by prompt medical assistance that fatal effects were averted.

AYR COUNTY HOSPITAL.—The annual general meeting of the supporters of this institution was held on the 12th inst., when it was reported that the number of in-patients treated during the past year was 436, and of out-patients 1334—an increase on the preceding year of 30 and 51 respectively. The income had amounted to £1851, and the expenditure to £1504.

DEATH OF DR. TOLEKEN, OF MONKSTOWN.—The death of Dr. Toleken, ex-Fellow of Trinity College, occurred at his residence in Monkstown on the 14th inst. Dr. Toleken graduated in 1825, and became a Fellow in 1836, taking the degree of M.D. in 1841. Some years ago he resigned his fellowship.

ROYAL SURREY COUNTY HOSPITAL.—The new wing at this institution was formally opened on the 19th inst. The addition contains two wards, each sixty-three feet long by eighteen wide and fifteen high, and affording accommodation in each for fifteen patients. The estimated cost of the extension, including furnishing, is £6600, and more than sufficient to cover this expenditure has been subscribed during the two years the work has been in progress.

Births, Marriages, and Deaths.

BIRTHS.

BEECH.—On the 24th inst., at Fawkham, Kent, the wife of Surgeon-Major Lionel Beech, Indian Medical Department, of a son.

BELL.—On the 23rd inst., at Louth, Lincolnshire, the wife of Chas. W. J. Bell, M.R.C.S., of a daughter.

DOWNES.—On the 19th inst., at Mellerstein, Eastbourne, the wife of E. Downes, M.D., F.R.C.S.Ed., of a son.

FRENCH.—On Christmas day, at Winterbourne, Hornsey, N., the wife of George W. H. French, F.R.C.S., of a daughter.

LUMLEY.—On the 20th inst, the wife of B. Lumley, M.R.C.S., L.A.S., L.M., of a son.

POTTER.—On the 24th inst., at Kensington Infirmary, W., the wife of Henry Percy Potter, F.R.C.S., of a daughter.

SIMPSON.—On the 28th inst., at Horton-street, Rugby, the wife of J. Herbert Simpson, M.D., of a son.

STORRY.—On the 19th inst., at Lansdown, Stroud, the wife of Fred. W. Storry, M.R.C.S., of a son, prematurely.

TREND.—On the 17th inst., at Southampton, the wife of Theophilus W. Trend, M.D., of a son.

WELLS.—On the 21st inst., at Keith House, West Kensington, the wife of Alfred G. Wells, M.R.C.S., of a son

MARRIAGES.

BURD—ATKINSON.—On the 22nd inst., at Holy Trinity Church, Meole Brace, by the Rev. Prebendary Bather, M.A., Vicar, uncle of the bride, assisted by the Rev. Prebendary Burd, M.A., Vicar of Cherbury, uncle of the bridegroom, Edward Lycett Burd, B.A. and M.B.Cantab., &c., son of Edward Burd, M.D., of Newport House, Shrewsbury, to Lilian Grace, younger daughter of the late Wm. S. Atkinson, Esq., Director of Public Instruction for Bengal.

BURNET—MORLEY.—On the 7th inst., at St. Thomas's, Portman-square, by the Rev. Canon Fleming, B.D., Canon of York, Chaplain in Ordinary to the Queen, assisted by the Rev. Henry Geary, M.A., Vicar of St. Thomas's, Robert William Burnet, M.D., M.R.C.P., of 6, Upper Wimpole-street, Cavendish-square, to Bessie Horsman, elder daughter of the late William Morley, Esq., of Streatham, and of Saltburn, Yorks, and of Mrs. Morley, 19A, Portman-street, Portman-square, W.

LISTER—BELL.—On the 20th inst., at the Parish Church, Bradford, John Henry Lister, Surgeon, to Sarah Jane, youngest daughter of John Bell, of Pateley-bridge.

STARTIN—NICHOLSON.—On the 26th inst., at St. Patrick's, Hove, Brighton, by the Vicar, the Rev. Ridley Daniel Tveson, assisted by the Rev. W. H. Backwell, Vicar of Arkley, High Barnet, Jas. Startin, Surgeon, of 17, Sackville-street, Piccadilly, to Amy, youngest daughter of Henry Nicholson, Esq., of Broughton-vale, Brigg, Lincolnshire.

DEATHS.

COUPLAND.—On the 29th inst., at 14, Weymouth-street, Sidney Newton, the beloved child of Sidney and Bessie Coupland, in his sixth year, from diphtheria.

KERR.—On the 10th inst., at Crawshawbooth, near Manchester, James Kerr, L.S.A.

TOMLINS.—On board the ss. *State of Indiana*, James Tomlins, L.R.C.P., L.M.Ed., M.R.C.S., aged 39.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ARMSTRONG, A. J. M., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Superintendent of the Plaistow Hospital of the Metropolitan Asylum District.

BRADSHAW, JAMES CHARLES, L.R.C.P.Ed., L.R.C.S.Ed., has been re-appointed Medical Officer of Health to the Brackley Rural Sanitary Authority.

BROCK, ERNEST H., M.R.C.S., has been appointed Junior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary, Greenwich-road, S.E.

BURKITT, JOHN COLLEY SMYTH, M.D. Roy. Univ. Irel., has been re-appointed Medical Officer of Health for the Whitwick Urban Sanitary District.

DACRE, JOHN, M.R.C.S., L.R.C.P.Lond., has been appointed Surgeon to the Bristol Hospital for Sick Children and Women.

FARQUHAR, JAS., M.D., C.M.Aber., has been appointed Medical Officer for the Third District of the Pewsey Union.

GOULD, JOHN E., M.R.C.S., L.R.C.P., has been appointed Resident Clinical Assistant to the City of London Hospital for Diseases of the Chest, Victoria-park, E.

GRIFFITH, W. S. A., M.B.Cantab., F.R.C.S., M.R.C.P.Lond., has been appointed Examiner in Obstetrics to the Conjoint Board of the Royal Colleges of Physicians and Surgeons.

ORMEROD, E. S., M.R.C.S., L.S.A., has been appointed Senior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary, Greenwich-road, S.E.

ROWNTREE, WILLIAM G., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Sixth District of the Parish of St. Mary, Islington.

SHELSWELL, WILLIAM A., M.R.C.S., has been appointed Medical Officer for the Hornton District of the Banbury Union.

SMITH, HORACE, L.R.C.S., L.R.C.P.Ed., has been appointed Divisional Surgeon to the S Division, Metropolitan Police.

SMITH, SAMUEL G., M.R.C.S., L.S.A., has been appointed Medical Officer for the Seventh District of the Parish of St. Mary, Islington.

STYAN, T. G., M.A., M.D.Cantab., M.R.C.S., has been appointed Medical Officer of Health to the Borough of Ramsgate, vice E. Walford, M.D., resigned.

WALKER, HENRY, has been appointed Analyst for Berwick-upon-Tweed.

WILSON, JOHN F., M.D., M.Ch.Q.U.I., has been appointed Medical Officer for the Wolston District of the Rugby Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c.

ESSEX AND COLCHESTER HOSPITAL.—Physician. Salary £200 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Junior Resident Medical Officer as House-Surgeon. Salary £50 per annum, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary £50, with board and lodging.

MONSALL FEVER HOSPITAL, Manchester.—Assistant Medical Officer. Salary £100 per annum, with board and residence.

POPLAR HOSPITAL FOR ACCIDENTS, East India-road, Poplar, E.—Two Honorary Surgeons.

RADCLIFFE INFIRMARY, Oxford.—House-Surgeon. Salary £80.

ROYAL FREE HOSPITAL, Gray's-inn-road, W.C.—Junior Resident Medical Officer. Board and residence in the hospital.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road.—Senior House-Physician. Salary £80 per annum, with rooms and board.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.—Two Assistant Physicians.

SUSSEX COUNTY LUNATIC ASYLUM, Hayward's-heath.—Medical Superintendent. Salary £600 per annum, with furnished house, coals, gas, vegetables, milk, and washing.—Junior Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

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Medical Diary for the ensuing Week.

Monday, January 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Reginald Harrison: On Some Points in the Surgery of the Urinary Organs. (Lettsomian Lectures.)

Tuesday, January 3.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

ROYAL INSTITUTION.—3 P.M. Sir Robert Stawell Ball: The Great Planets. (Lecture adapted to a juvenile auditory.)

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Annual General Meeting; Election of Officers and Council. Mr. Treves: Angeiomata of Mouth and Tongue.—Mr. Eve: Congenital Fatty Tumour of Abdominal Parietes.—Mr. Hutchinson, jun.: Fatty Tumour in the Linea Alba.—Mr. Sutton: Three cases of Bone Disease.—Dr. Hale White: Malignant Disease of Hypogastric Arteries and Umbilical Vein.—Mr. Symonds: Tubercle in Sheath of Tendon, excision, cure.—Mr. Silcock: Syringomyelia.—Dr. Ormerod: Pneumothorax in an Infant. Card Specimens:—Mr. W. H. Sibley: Symmetrical Lipomata (living subject).—Dr. Hale White: (1) Tubercular Ulceration of Tongue; (2) (for Dr. B. Rake of Trinidad) Intestine and Parasite from case of Anchylostomiasis.—Mr. Ed. Owen: Lumbar Hernia through an old Lumbar Abscess due to Spinal Caries.

Wednesday, January 4.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Dr. Lewers: Note on the Post-mortem Appearances of a Phlegmon of the Broad Ligament.—Dr. Boxall: Scarlatina during Pregnancy and the Puerperal State.

SOCIETY OF ARTS.—Juvenile Lecture.

Thursday, January 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Sir Robert Stawell Ball: The Comets. (Lecture adapted to a juvenile auditory.)

THE PARKES MUSEUM OF HYGIENE.—5 P.M. Dr. Angel Money: Hygiene in Childhood.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. Victor Horsley: Trephining in Prehistoric Times.

Friday, January 6.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, January 7.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Sir Robert Stawell Ball: The Stars. (Lecture adapted to a juvenile auditory.)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 29th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 23	29·99	W.	33	32	...	42	30	...	Overcast
,, 24	29·88	N.E.	42	40	...	43	33	·04	Overcast
,, 25	30·00	N.E.	36	34	...	44	32	...	Fine
,, 26	30·04	N.E.	32	...	...	35	30	...	Fine
,, 27	30·11	N.E.	28	...	...	36	26	...	Fine
,, 28	29·96	N.E.	35	33	47	36	26	...	Cloudy
,, 29	30·21	E.	32	...	45	36	30	...	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE CHILDREN OF THE POOR.

MR. HENRY MANNERS, Sanitary Inspector to Watford Local Board, has called the Prime Minister's attention to the practice of tramps bringing out into the streets half-starved and badly-clothed children to assist in procuring their precarious livelihood. The more inclement the weather the more children are seen out, no doubt from the knowledge vagrants have of the fact that compassion runs higher by these exhibitions of extreme misery. It is well known that these unfortunate little ones are hired for begging purposes, and Mr. Manners suggests that the Government should get a short Bill passed, making it penal for children under a certain age to be with tramps in the streets, taking part in singing or other musical exhibitions. Lord Salisbury, in his reply, promised to bring the subject under the notice of the Local Government Board.

Surgeon-Major MacLaren.—The data supplied are scarcely sufficient to form a groundwork for satisfactory comment on the case.

Dr. Jas. Barr.—Very shortly.

EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—I make it a rule never to reply to anonymous correspondents; but as in your issue of Dec. 24th "A General Medical Practitioner" is apparently prepared to sacrifice the opportunity of securing for his sons a first-rate education at a minimum of cost, I write to suggest that he should apply to the head master of Epsom College, or to the secretary at 37, Soho-square, who will give him reliable information both as to the course of education pursued in the College and the cost.

I am, Sirs, yours faithfully,

C. HOLMAN, M.D.,
Reigate, Dec. 26th, 1887. Treasurer of Epsom College.

To the Editors of THE LANCET.

SIRS,—If "A General Medical Practitioner," writing in your issue of to-day on the subject of Epsom College, will kindly apply to me for information, I have no doubt that I shall be able to convince him that there is no school at the present time more economically and, I hope, more efficiently managed, nor one that offers more advantages for those who are intending to enter the medical profession.

I am, Sirs, yours faithfully,

W. CECIL WOOD, M.A.,
The College, Epsom, Dec. 24th, 1887. Master of Epsom College.

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SUGAR AND TEA.

To the Editors of THE LANCET.

SIRS,—The excessive use of sugar in any of its forms is a predisposing cause of catarrh of mucous membranes and of eczema, and the recommendation to cease their use altogether or nearly so facilitates the cure of these diseases. I can, or think I can, support the foregoing proposition as to catarrh of the air-passages from personal experience, and as to both from observation. To avoid catarrh, rather than to relieve the actual disease, in the case of the Crown Prince may be the motive for prohibiting or restricting the use of sugar in His Imperial Highness's dietary. Regarding the drug called tea, which we all use so much of now-a-days, I will only say that, greatly as the drinking of the infusion (sometimes decoction) of Indian teas is to be desired to promote the prosperity of "our great dependency," I firmly believe that they are more conducive to constipation and nervous weakness than the old mixture of Chinese teas. The place of Indian teas is to give "body" as an adjunct to those of China. Tea is a useful drug to us, just as coca is to South Americans. But the use of both is abused; and it is a pity, I think, that fashion—more potent in this matter than even the medical press—does not exercise its powers in checking the too great use of these sister ingredients of daily fare.

I am, Sirs, yours obediently,

Liverpool, Dec. 26th, 1887. ARCHIBALD D. MACDONALD, M.D. Edin.

"A WARNING."

To the Editors of THE LANCET.

SIRS,—Will you allow me through your journal to caution medical men against a man playing them a trick, to which I fell a victim on the 19th inst. He called upon me that evening, saying he was living in the town, but gave me a fictitious address, and perhaps a false name (John Smith), that he was a carpenter by trade, that his truss had broken and he wanted another for which he would pay by instalments. Before he left he asked for a note for his club, as he could not work without a truss. I gave him a printed form like I use for my own club patients, and this, it appears, he immediately used in this town for begging purposes. I need not say he has failed to appear and claim his truss, and the police up to now have not been able to find him. I write to warn people against him. Should anyone come across him, Superintendent Childs, of this town, would be glad to be informed of his whereabouts.

I am, Sirs, yours truly,

Bridgnorth, Dec. 27th, 1887. W. THURSFIELD, M.D.

RESIDENCE FOR AN ASTHMATIC PATIENT.

To the Editors of THE LANCET.

SIRS,—I shall be extremely obliged if any of your readers will favour me with an opinion as to the suitability of Genoa or Florence as a residence for an asthmatic patient. The person in question, a girl aged about twenty, is of a gouty family, but with no phthisical history. She finds high and dry places very suitable as residences.

I am, Sirs, yours faithfully,

Dec. 20th, 1887. H. A. L.

THE VALUE OF PARAFFIN AS A HAIR RESTORER.

To the Editors of THE LANCET.

SIRS,—Perhaps some of your correspondents may be in a position to answer the following questions.

1. Is ordinary paraffin oil of any use as a hair restorer? 2. Is its use as such likely to be followed by any evil effects? 3. What is the best method of disguising its smell?

I am, Sirs, yours faithfully,

Dec. 21st, 1887. J. G.

IN consequence of the necessarily increased extent of the Index for the current volume, and the length to which our Annual Retrospect has run, we are reluctantly compelled to postpone the appearance until next week of several articles and communications of interest to the profession. Many advertisements have also for the same reason been omitted from the present issue.

Dr. Edward Jones.—There are several. The best are valve closets, which are somewhat expensive. A cheap and clean apparatus, which is not a valve, is made by Dent and Hellyer of Newcastle-street, Strand, called the "Hygienic."

S. W. has not enclosed his card. We do not reply to anonymous communications.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. C. Y. Pearson, Cork; Dr. G. Johnson, London; Mr. Christopher Heath, London; Mr. Jalland, York; Dr. Sturges, London; Dr. A. Hamilton, Windermere; Sir Coutts Lindsay, London; Dr. A. D. Macdonald, Liverpool; Dr. Holman, Reigate; Mr. Hopkins, London; Mr. W. C. Wood, Epsom; Dr. Thursfield, Bridgnorth; Dr. Rumboll; Dr. Savage, London; Dr. E. Haydon, London; Mr. Barwell, London; Mr. F. W. Joshua, Great Malvern; Herr R. Danhardt, Eisenach; Dr. Sansom, London; Mr. McKeown, Manchester; Dr. W. Russell, Edinburgh; Mr. Thos. Pardup, Manchester; Dr. Mallins, Watton; Dr. Theodore Williams, London; Mr. T. G. Paterson, Alexandria; Messrs. Dewar and Sons, Perth; Dr. Hime, Bradford; Mr. Faulkner; Mr. Berkeley Hill, London; Dr. Saul, Lancaster; Mr. Stirartian; Messrs. Dawson Bros., Montreal; Mr. Tetley, Keighley; Dr. N. H. Davies, Sherborne; Dr. Jacobsen, Havana; Mr. P. Swain, Plymouth; Mr. C. Jennings, London; Mr. Hawkins, Birmingham; Mr. Tilley, Queensland; Dr. Gooding, Barbadoes; Dr. Jas. Cameron, Hendon; Prof. G. Ria, Naples; Mr. Michelli, London; Dr. W. J. Collins, London; Mr. H. Kornfeld, Berlin; Mr. W. H. Borham, Fulham; Dr. Highmoor, Tadcaster; Mr. Freeman, Reading; Mr. Curran, Kensington; Mr. Fry, Wilts; Mr. Petter, Yeovil; Mr. Grimsley, St. Asaph; Mr. Lane, Kensington; Dr. Popham, Wellington; Mr. Burnet, London; Mr. Salter, Chard; Mr. Palmer, Peterton; Mr. Bishop, London; Dr. Hensman, Kensington; Mr. Warren, Bristol; Mr. Spence; Mr. R. H. Parker, London; Mr. H. Page, London; G. G.; Cymro; Rustic; Country General Practitioner; G. B.; Villiers; A Resident; Fides; Medicus, Manchester; K. C.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Benthall, Southsea; Mr. Tsowart, Sheffield; Mr. Burd, Shrewsbury; Mr. Smith, Aberdeen; Mr. Simpkin, Lagos; Messrs. Gwin; Messrs. Harris and Co., Birmingham; Mr. W. Smith, London; Mr. Manley; Messrs. Lee and Martin, Birmingham; Mr. Robinson, Harrogate; Mr. V. de Laprade, Lyons; Mr. Valentine, Somerset; Mr. Harper, Colombo; Mr. Fuge, Taunton; Mr. Potter, Kensington; Mr. Beckett, Eastbourne; Mr. Fernandez, Devon; Mr. Ward, London; Mr. Flemming, Wilts; Dr. Emanuel, Malta; Mrs. Manley, Croydon; Messrs. Leader, Sheffield; Dr. Cochrane, Bradford; Dr. Parker, Clifton; Mr. Hello, Nottingham; Mr. Crickmay, Lochfield; Mr. Heywood; Mr. Sampson, York; Mr. Lawrence; Mr. Stroner; Mr. Briggs; Mr. H. Johnsen, Copenhagen; Mr. F. Wyatt; Dr. Blum, Munich; Mr. Kennard; Medicus, Hereford; Harvey; Medicus, Plaistow; Oxonian; Alpha, Dublin; Iota, London; Monitas, London; Z. A., Stamford-hill; A. D., Cowes; J. B.; Leamington; J.; Lux; X., Sheffield; X.Y.; Medicus, Northwich; Scapula; Spes; M.D.; Surgeon; P.H.

Leicester Daily Mercury, Southern Times, Melbourne Herald, Western Mail Bournemouth Observer, &c., have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith & Son's Railway Bookstalls throughout the United Kingdom, and at other Advertising Agents.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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END OF THE SECOND VOLUME FOR 1887.

Printed by Ballantyne, Hanson, & Co., No. 4, Chandos-street, Covent-garden.

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